



**HL7 CDA® R2 Implementation Guide:
Quality Reporting Document Architecture Category I
(QRDA I),
Release 1, STU Release 5.2 - US Realm**

HL7 Standard for Trial Use

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1 DOCUMENT-LEVEL TEMPLATES

1.1 US Realm Header (V3)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2015-08-01 (open)]

Table 1: US Realm Header (V3) Contexts

| Contained By: | Contains: |
|----------------------|--|
| | US Realm Patient Name (PTN.US.FIELDDED) (required) US Realm Address (AD.US.FIELDDED) (optional) US Realm Address (AD.US.FIELDDED) (required) US Realm Person Name (PN.US.FIELDDED) (optional) US Realm Date and Time (DTM.US.FIELDDED) (optional) US Realm Date and Time (DTM.US.FIELDDED) (required) |

This template defines constraints that represent common administrative and demographic concepts for US Realm CDA documents. Further specification, such as ClinicalDocument/code, are provided in document templates that conform to this template.

Table 2: US Realm Header (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|---|
| ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2015-08-01) | | | | | |
| realmCode | 1..1 | SHALL | | 1198-16791 | US |
| typeId | 1..1 | SHALL | | 1198-5361 | |
| @root | 1..1 | SHALL | | 1198-5250 | 2.16.840.1.113883.1.3 |
| @extension | 1..1 | SHALL | | 1198-5251 | POCD_HD000040 |
| templateId | 1..1 | SHALL | | 1198-5252 | |
| @root | 1..1 | SHALL | | 1198-10036 | 2.16.840.1.113883.10.20.22.1.1 |
| @extension | 1..1 | SHALL | | 1198-32503 | 2015-08-01 |
| id | 1..1 | SHALL | | 1198-5363 | |
| code | 1..1 | SHALL | | 1198-5253 | |
| title | 1..1 | SHALL | | 1198-5254 | |
| effectiveTime | 1..1 | SHALL | | 1198-5256 | US Realm Date and Time (DTM.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4) |
| confidentialityCode | 1..1 | SHALL | | 1198-5259 | urn:oid:2.16.840.1.113883.1.1.1.16926 (HL7 BasicConfidentialityKind) |
| languageCode | 1..1 | SHALL | | 1198-5372 | urn:oid:2.16.840.1.113883.1.1.1.11526 (Language) |
| setId | 0..1 | MAY | | 1198-5261 | |
| versionNumber | 0..1 | MAY | | 1198-5264 | |
| recordTarget | 1..* | SHALL | | 1198-5266 | |
| patientRole | 1..1 | SHALL | | 1198-5267 | |
| id | 1..* | SHALL | | 1198-5268 | |
| addr | 1..* | SHALL | | 1198-5271 | US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--------------------------|-------|--------|-----------|----------------------------|--|
| telecom | 1..* | SHALL | | 1198-5280 | |
| @use | 0..1 | SHOULD | | 1198-5375 | urn:oid:2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header)) |
| patient | 1..1 | SHALL | | 1198-5283 | |
| name | 1..* | SHALL | | 1198-5284 | US Realm Patient Name (PTN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1) |
| administrativeGenderCode | 1..1 | SHALL | | 1198-6394 | urn:oid:2.16.840.1.113883.1.1.1.1 (Administrative Gender (HL7 V3)) |
| birthTime | 1..1 | SHALL | | 1198-5298 | |
| maritalStatusCode | 0..1 | SHOULD | | 1198-5303 | urn:oid:2.16.840.1.113883.1.1.1.12212 (Marital Status) |
| religiousAffiliationCode | 0..1 | MAY | | 1198-5317 | urn:oid:2.16.840.1.113883.1.1.1.19185 (Religious Affiliation) |
| raceCode | 1..1 | SHALL | | 1198-5322 | urn:oid:2.16.840.1.113883.3.2.074.1.1.3 (Race Category Excluding Nulls) |
| sdtc:raceCode | 0..* | MAY | | 1198-7263 | urn:oid:2.16.840.1.113883.1.1.1.14914 (Race Value Set) |
| ethnicGroupCode | 1..1 | SHALL | | 1198-5323 | urn:oid:2.16.840.1.114222.4.1.1.837 (Ethnicity) |
| sdtc:ethnicGroupCode | 0..* | MAY | | 1198-32901 | urn:oid:2.16.840.1.114222.4.1.1.877 (Detailed Ethnicity) |
| guardian | 0..* | MAY | | 1198-5325 | |
| code | 0..1 | SHOULD | | 1198-5326 | urn:oid:2.16.840.1.113883.11.20.12.1 (Personal And Legal Relationship Role Type) |
| addr | 0..* | SHOULD | | 1198-5359 | US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) |
| telecom | 0..* | SHOULD | | 1198-5382 | |
| @use | 0..1 | SHOULD | | 1198-7993 | urn:oid:2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header)) |
| guardianPerson | 1..1 | SHALL | | 1198-5385 | |
| name | 1..* | SHALL | | 1198-5386 | US Realm Person Name (PN.US.FIELDDED) (identifier: |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-----------------------|-------|--------|-----------|----------------------------|---|
| | | | | | urn:oid:2.16.840.1.113883.10.20.22.5.1.1 |
| birthplace | 0..1 | MAY | | 1198-5395 | |
| place | 1..1 | SHALL | | 1198-5396 | |
| addr | 1..1 | SHALL | | 1198-5397 | |
| country | 0..1 | SHOULD | | 1198-5404 | urn:oid:2.16.840.1.113883.3.8.8.12.80.63 (Country) |
| languageCommunication | 0..* | SHOULD | | 1198-5406 | |
| languageCode | 1..1 | SHALL | | 1198-5407 | urn:oid:2.16.840.1.113883.1.1.1.11526 (Language) |
| modeCode | 0..1 | MAY | | 1198-5409 | urn:oid:2.16.840.1.113883.1.1.1.12249 (LanguageAbilityMode) |
| proficiencyLevelCode | 0..1 | SHOULD | | 1198-9965 | urn:oid:2.16.840.1.113883.1.1.1.12199 (LanguageAbilityProficiency) |
| preferenceInd | 0..1 | SHOULD | | 1198-5414 | |
| providerOrganization | 0..1 | MAY | | 1198-5416 | |
| id | 1..* | SHALL | | 1198-5417 | |
| @root | 0..1 | SHOULD | | 1198-16820 | 2.16.840.1.113883.4.6 |
| name | 1..* | SHALL | | 1198-5419 | |
| telecom | 1..* | SHALL | | 1198-5420 | |
| @use | 0..1 | SHOULD | | 1198-7994 | urn:oid:2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header)) |
| addr | 1..* | SHALL | | 1198-5422 | US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) |
| author | 1..* | SHALL | | 1198-5444 | |
| time | 1..1 | SHALL | | 1198-5445 | US Realm Date and Time (DTM.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4) |
| assignedAuthor | 1..1 | SHALL | | 1198- | |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------------|-------|--------|-----------|----------------------------|---|
| | | | | 5448 | |
| id | 1..* | SHALL | | 1198-5449 | |
| id | 0..1 | SHOULD | | 1198-32882 | |
| @nullFlavor | 0..1 | MAY | | 1198-32883 | urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = UNK |
| @root | 1..1 | SHALL | | 1198-32884 | 2.16.840.1.113883.4.6 |
| @extension | 0..1 | SHOULD | | 1198-32885 | |
| code | 0..1 | SHOULD | | 1198-16787 | |
| @code | 1..1 | SHALL | | 1198-16788 | urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy) |
| addr | 1..* | SHALL | | 1198-5452 | US Realm Address (AD.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) |
| telecom | 1..* | SHALL | | 1198-5428 | |
| @use | 0..1 | SHOULD | | 1198-7995 | urn:oid:2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header)) |
| assignedPerson | 0..1 | SHOULD | | 1198-5430 | |
| name | 1..* | SHALL | | 1198-16789 | US Realm Person Name (PN.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) |
| assignedAuthoringDevice | 0..1 | SHOULD | | 1198-16783 | |
| manufacturerModelName | 1..1 | SHALL | | 1198-16784 | |
| softwareName | 1..1 | SHALL | | 1198-16785 | |
| dataEnterer | 0..1 | MAY | | 1198-5441 | |
| assignedEntity | 1..1 | SHALL | | 1198-5442 | |
| id | 1..* | SHALL | | 1198-5443 | |
| @root | 0..1 | SHOULD | | 1198-16821 | 2.16.840.1.113883.4.6 |
| code | 0..1 | MAY | | 1198- | urn:oid:2.16.840.1.114222.4.1 |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|----------------------------------|-------|--------|-----------|----------------------------|--|
| | | | | 32173 | 1.1066 (Healthcare Provider Taxonomy) |
| addr | 1..* | SHALL | | 1198-5460 | US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) |
| telecom | 1..* | SHALL | | 1198-5466 | |
| @use | 0..1 | SHOULD | | 1198-7996 | urn:oid:2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header)) |
| assignedPerson | 1..1 | SHALL | | 1198-5469 | |
| name | 1..* | SHALL | | 1198-5470 | US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) |
| informant | 0..* | MAY | | 1198-8001 | |
| assignedEntity | 1..1 | SHALL | | 1198-8002 | |
| id | 1..* | SHALL | | 1198-9945 | |
| code | 0..1 | MAY | | 1198-32174 | urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy) |
| addr | 1..* | SHALL | | 1198-8220 | US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) |
| assignedPerson | 1..1 | SHALL | | 1198-8221 | |
| name | 1..* | SHALL | | 1198-8222 | US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) |
| informant | 0..* | MAY | | 1198-31355 | |
| relatedEntity | 1..1 | SHALL | | 1198-31356 | |
| custodian | 1..1 | SHALL | | 1198-5519 | |
| assignedCustodian | 1..1 | SHALL | | 1198-5520 | |
| representedCustodianOrganization | 1..1 | SHALL | | 1198-5521 | |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|----------------------|-------|--------|-----------|----------------------------|---|
| id | 1..* | SHALL | | 1198-5522 | |
| @root | 0..1 | SHOULD | | 1198-16822 | 2.16.840.1.113883.4.6 |
| name | 1..1 | SHALL | | 1198-5524 | |
| telecom | 1..1 | SHALL | | 1198-5525 | |
| @use | 0..1 | SHOULD | | 1198-7998 | urn:oid:2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header)) |
| addr | 1..1 | SHALL | | 1198-5559 | US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) |
| informationRecipient | 0..* | MAY | | 1198-5565 | |
| intendedRecipient | 1..1 | SHALL | | 1198-5566 | |
| id | 0..* | MAY | | 1198-32399 | |
| informationRecipient | 0..1 | MAY | | 1198-5567 | |
| name | 1..* | SHALL | | 1198-5568 | US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) |
| receivedOrganization | 0..1 | MAY | | 1198-5577 | |
| name | 1..1 | SHALL | | 1198-5578 | |
| legalAuthenticator | 0..1 | SHOULD | | 1198-5579 | |
| time | 1..1 | SHALL | | 1198-5580 | US Realm Date and Time (DTM.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4) |
| signatureCode | 1..1 | SHALL | | 1198-5583 | |
| @code | 1..1 | SHALL | | 1198-5584 | urn:oid:2.16.840.1.113883.5.89 (HL7ParticipationSignature) = S |
| sdtc:signatureText | 0..1 | MAY | | 1198-30810 | |
| assignedEntity | 1..1 | SHALL | | 1198-5585 | |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--------------------|-------|--------|-----------|----------------------------|--|
| id | 1..* | SHALL | | 1198-5586 | |
| @root | 0..1 | MAY | | 1198-16823 | 2.16.840.1.113883.4.6 |
| code | 0..1 | MAY | | 1198-17000 | urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy) |
| addr | 1..* | SHALL | | 1198-5589 | US Realm Address (AD.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) |
| telecom | 1..* | SHALL | | 1198-5595 | |
| @use | 0..1 | SHOULD | | 1198-7999 | urn:oid:2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header)) |
| assignedPerson | 1..1 | SHALL | | 1198-5597 | |
| name | 1..* | SHALL | | 1198-5598 | US Realm Person Name (PN.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) |
| authenticator | 0..* | MAY | | 1198-5607 | |
| time | 1..1 | SHALL | | 1198-5608 | US Realm Date and Time (DTM.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4) |
| signatureCode | 1..1 | SHALL | | 1198-5610 | |
| @code | 1..1 | SHALL | | 1198-5611 | urn:oid:2.16.840.1.113883.5.89 (HL7ParticipationSignature) = S |
| sdtc:signatureText | 0..1 | MAY | | 1198-30811 | |
| assignedEntity | 1..1 | SHALL | | 1198-5612 | |
| id | 1..* | SHALL | | 1198-5613 | |
| @root | 0..1 | SHOULD | | 1198-16824 | 2.16.840.1.113883.4.6 |
| code | 0..1 | MAY | | 1198-16825 | |
| @code | 0..1 | MAY | | 1198-16826 | urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy) |
| addr | 1..* | SHALL | | 1198- | US Realm Address |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-----------------|-------|--------|-----------|----------------------------|--|
| | | | | 5616 | (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) |
| telecom | 1..* | SHALL | | 1198-5622 | |
| @use | 0..1 | SHOULD | | 1198-8000 | urn:oid:2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header)) |
| assignedPerson | 1..1 | SHALL | | 1198-5624 | |
| name | 1..* | SHALL | | 1198-5625 | US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) |
| participant | 0..* | MAY | | 1198-10003 | |
| time | 0..1 | MAY | | 1198-10004 | |
| inFulfillmentOf | 0..* | MAY | | 1198-9952 | |
| order | 1..1 | SHALL | | 1198-9953 | |
| id | 1..* | SHALL | | 1198-9954 | |
| documentationOf | 0..* | MAY | | 1198-14835 | |
| serviceEvent | 1..1 | SHALL | | 1198-14836 | |
| effectiveTime | 1..1 | SHALL | | 1198-14837 | |
| low | 1..1 | SHALL | | 1198-14838 | |
| performer | 0..* | SHOULD | | 1198-14839 | |
| @typeCode | 1..1 | SHALL | | 1198-14840 | urn:oid:2.16.840.1.113883.1.1.1.19601 (x_ServiceEventPerformer) |
| functionCode | 0..1 | MAY | | 1198-16818 | |
| @code | 0..1 | SHOULD | | 1198-32889 | urn:oid:2.16.840.1.113762.1.4.1099.30 (Care Team Member Function) |
| assignedEntity | 1..1 | SHALL | | 1198-14841 | |
| id | 1..* | SHALL | | 1198-14846 | |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-----------------------|-------|--------|-----------|----------------------------|--|
| @root | 0..1 | SHOULD | | 1198-14847 | 2.16.840.1.113883.4.6 |
| code | 0..1 | SHOULD | | 1198-14842 | urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy) |
| authorization | 0..* | MAY | | 1198-16792 | |
| consent | 1..1 | SHALL | | 1198-16793 | |
| id | 0..* | MAY | | 1198-16794 | |
| code | 0..1 | MAY | | 1198-16795 | |
| statusCode | 1..1 | SHALL | | 1198-16797 | |
| @code | 1..1 | SHALL | | 1198-16798 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = completed |
| componentOf | 0..1 | MAY | | 1198-9955 | |
| encompassingEncounter | 1..1 | SHALL | | 1198-9956 | |
| id | 1..* | SHALL | | 1198-9959 | |
| effectiveTime | 1..1 | SHALL | | 1198-9958 | |

1.1.1 Properties

1.1.1.1 realmCode

1. **SHALL** contain exactly one [1..1] **realmCode**="US" (CONF:1198-16791).
2. **SHALL** contain exactly one [1..1] **typeId** (CONF:1198-5361).
 - a. This typeId **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.1.3" (CONF:1198-5250).
 - b. This typeId **SHALL** contain exactly one [1..1] **@extension**="POCD_HD000040" (CONF:1198-5251).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-5252) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.1.1" (CONF:1198-10036).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32503).
4. **SHALL** contain exactly one [1..1] **id** (CONF:1198-5363).
 - a. This id **SHALL** be a globally unique identifier for the document (CONF:1198-9991).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1198-5253).

- a. This code **SHALL** specify the particular kind of document (e.g., History and Physical, Discharge Summary, Progress Note) (CONF:1198-9992).
 - b. This code **SHALL** be drawn from the LOINC document type ontology (LOINC codes where SCALE = DOC) (CONF:1198-32948).
6. **SHALL** contain exactly one [1..1] **title** (CONF:1198-5254).
Note: The title can either be a locally defined name or the displayName corresponding to clinicalDocument/code
 7. **SHALL** contain exactly one [1..1] US Realm Date and Time (DTM.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4) (CONF:1198-5256).
 8. **SHALL** contain exactly one [1..1] **confidentialityCode**, which **SHOULD** be selected from ValueSet HL7 BasicConfidentialityKind urn:oid:2.16.840.1.113883.1.11.16926 **DYNAMIC** (CONF:1198-5259).
 9. **SHALL** contain exactly one [1..1] **languageCode**, which **SHALL** be selected from ValueSet Language urn:oid:2.16.840.1.113883.1.11.11526 **DYNAMIC** (CONF:1198-5372).
 10. **MAY** contain zero or one [0..1] **setId** (CONF:1198-5261).
 - a. If setId is present versionNumber **SHALL** be present (CONF:1198-6380).
 11. **MAY** contain zero or one [0..1] **versionNumber** (CONF:1198-5264).
 - a. If versionNumber is present setId **SHALL** be present (CONF:1198-6387).

1.1.1.2 recordTarget

The recordTarget records the administrative and demographic data of the patient whose health information is described by the clinical document; each recordTarget must contain at least one patientRole element

12. **SHALL** contain at least one [1..*] **recordTarget** (CONF:1198-5266).
 - a. Such recordTargets **SHALL** contain exactly one [1..1] **patientRole** (CONF:1198-5267).
 - i. This patientRole **SHALL** contain at least one [1..*] **id** (CONF:1198-5268).
 - ii. This patientRole **SHALL** contain at least one [1..*] US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1198-5271).
 - iii. This patientRole **SHALL** contain at least one [1..*] **telecom** (CONF:1198-5280).
 1. Such telecoms **SHOULD** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet Telecom Use (US Realm Header) urn:oid:2.16.840.1.113883.11.20.9.20 **DYNAMIC** (CONF:1198-5375).
 - iv. This patientRole **SHALL** contain exactly one [1..1] **patient** (CONF:1198-5283).
 1. This patient **SHALL** contain at least one [1..*] US Realm Patient Name (PTN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1) (CONF:1198-5284).
 2. This patient **SHALL** contain exactly one [1..1] **administrativeGenderCode**, which **SHALL** be selected from

ValueSet [Administrative Gender \(HL7 V3\)](#)

urn:oid:2.16.840.1.113883.1.11.1 **DYNAMIC** (CONF:1198-6394).

3. This patient **SHALL** contain exactly one [1..1] **birthTime** (CONF:1198-5298).
 - a. **SHALL** be precise to year (CONF:1198-5299).
 - b. **SHOULD** be precise to day (CONF:1198-5300).

For cases where information about newborn's time of birth needs to be captured.

- c. **MAY** be precise to the minute (CONF:1198-32418).
4. This patient **SHOULD** contain zero or one [0..1] **maritalStatusCode**, which **SHALL** be selected from ValueSet [Marital Status](#) urn:oid:2.16.840.1.113883.1.11.12212 **DYNAMIC** (CONF:1198-5303).
5. This patient **MAY** contain zero or one [0..1] **religiousAffiliationCode**, which **SHALL** be selected from ValueSet [Religious Affiliation](#) urn:oid:2.16.840.1.113883.1.11.19185 **DYNAMIC** (CONF:1198-5317).
6. This patient **SHALL** contain exactly one [1..1] **raceCode**, which **SHALL** be selected from ValueSet [Race Category Excluding Nulls](#) urn:oid:2.16.840.1.113883.3.2074.1.1.3 **DYNAMIC** (CONF:1198-5322).
7. This patient **MAY** contain zero or more [0..*] **sdtc:raceCode**, which **SHALL** be selected from ValueSet [Race Value Set](#) urn:oid:2.16.840.1.113883.1.11.14914 **DYNAMIC** (CONF:1198-7263).

Note: The sdtc:raceCode is only used to record additional values when the patient has indicated multiple races or additional race detail beyond the five categories required for Meaningful Use Stage 2. The prefix sdtc: SHALL be bound to the namespace “urn:hl7-org:sdtc”. The use of the namespace provides a necessary extension to CDA R2 for the use of the additional raceCode elements.

 - a. If sdtc:raceCode is present, then the patient **SHALL** contain [1..1] raceCode (CONF:1198-31347).
8. This patient **SHALL** contain exactly one [1..1] **ethnicGroupCode**, which **SHALL** be selected from ValueSet [Ethnicity](#) urn:oid:2.16.840.1.114222.4.11.837 **DYNAMIC** (CONF:1198-5323).
9. This patient **MAY** contain zero or more [0..*] **sdtc:ethnicGroupCode**, which **SHALL** be selected from ValueSet [Detailed Ethnicity](#) urn:oid:2.16.840.1.114222.4.11.877 **DYNAMIC** (CONF:1198-32901).
10. This patient **MAY** contain zero or more [0..*] **guardian** (CONF:1198-5325).
 - a. The guardian, if present, **SHOULD** contain zero or one [0..1] **code**, which **SHALL** be selected from ValueSet [Personal And](#)

Legal Relationship Role Type

urn:oid:2.16.840.1.113883.11.20.12.1 **DYNAMIC**
(CONF:1198-5326).

- b. The guardian, if present, **SHOULD** contain zero or more [0..*]
US Realm Address (AD.US.FIELDED) (identifier:
urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1198-5359).
 - c. The guardian, if present, **SHOULD** contain zero or more [0..*]
telecom (CONF:1198-5382).
 - i. The telecom, if present, **SHOULD** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet
Telecom Use (US Realm Header)
urn:oid:2.16.840.1.113883.11.20.9.20 **DYNAMIC**
(CONF:1198-7993).
 - d. The guardian, if present, **SHALL** contain exactly one [1..1]
guardianPerson (CONF:1198-5385).
 - i. This guardianPerson **SHALL** contain at least one [1..*]
US Realm Person Name (PN.US.FIELDED)
(identifier:
urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
(CONF:1198-5386).
11. This patient **MAY** contain zero or one [0..1] **birthplace** (CONF:1198-5395).
- a. The birthplace, if present, **SHALL** contain exactly one [1..1]
place (CONF:1198-5396).
 - i. This place **SHALL** contain exactly one [1..1] **addr**
(CONF:1198-5397).
 - 1. This addr **SHOULD** contain zero or one [0..1] **country**,
which **SHALL** be selected from ValueSet Country
urn:oid:2.16.840.1.113883.3.88.12.80.63
DYNAMIC (CONF:1198-5404).
 - 2. If country is US, this addr **SHALL** contain exactly one [1..1] state, which **SHALL** be selected from ValueSet
StateValueSet 2.16.840.1.113883.3.88.12.80.1
DYNAMIC (CONF:1198-5402).
Note: A nullFlavor of 'UNK' may be used if the state is unknown.
 - 3. If country is US, this addr **MAY** contain zero or one [0..1] postalCode, which **SHALL** be selected from
ValueSet PostalCode
urn:oid:2.16.840.1.113883.3.88.12.80.2 *DYNAMIC*
(CONF:1198-5403).
12. This patient **SHOULD** contain zero or more [0..*]
languageCommunication (CONF:1198-5406).
- a. The languageCommunication, if present, **SHALL** contain exactly one [1..1] **languageCode**, which **SHALL** be selected

- ii. This assignedAuthor **SHOULD** contain zero or one [0..1] **id** (CONF:1198-32882) such that it

If id with @root="2.16.840.1.113883.4.6" National Provider Identifier is unknown then

- 1. **MAY** contain zero or one [0..1] **@nullFlavor**="UNK" Unknown (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:1198-32883).
- 2. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.4.6" National Provider Identifier (CONF:1198-32884).
- 3. **SHOULD** contain zero or one [0..1] **@extension** (CONF:1198-32885).

Only if this assignedAuthor is an assignedPerson should the assignedAuthor contain a code.

- iii. This assignedAuthor **SHOULD** contain zero or one [0..1] **code** (CONF:1198-16787).
 - 1. The code, if present, **SHALL** contain exactly one [1..1] **@code**, which **SHOULD** be selected from ValueSet [Healthcare Provider Taxonomy](#) urn:oid:2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1198-16788).
- iv. This assignedAuthor **SHALL** contain at least one [1..*] [US Realm Address \(AD.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1198-5452).
- v. This assignedAuthor **SHALL** contain at least one [1..*] **telecom** (CONF:1198-5428).
 - 1. Such telecoms **SHOULD** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet [Telecom Use \(US Realm Header\)](#) urn:oid:2.16.840.1.113883.11.20.9.20 **DYNAMIC** (CONF:1198-7995).
- vi. This assignedAuthor **SHOULD** contain zero or one [0..1] **assignedPerson** (CONF:1198-5430).
 - 1. The assignedPerson, if present, **SHALL** contain at least one [1..*] [US Realm Person Name \(PN.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1198-16789).
- vii. This assignedAuthor **SHOULD** contain zero or one [0..1] **assignedAuthoringDevice** (CONF:1198-16783).
 - 1. The assignedAuthoringDevice, if present, **SHALL** contain exactly one [1..1] **manufacturerModelName** (CONF:1198-16784).
 - 2. The assignedAuthoringDevice, if present, **SHALL** contain exactly one [1..1] **softwareName** (CONF:1198-16785).
- viii. There **SHALL** be exactly one assignedAuthor/assignedPerson or exactly one assignedAuthor/assignedAuthoringDevice (CONF:1198-16790).

1.1.1.4 dataEnterer

The dataEnterer element represents the person who transferred the content, written or dictated, into the clinical document. To clarify, an author provides the content found within the

header or body of a document, subject to their own interpretation; a dataEnterer adds an author's information to the electronic system.

14. **MAY** contain zero or one [0..1] **dataEnterer** (CONF:1198-5441).

- a. The dataEnterer, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1198-5442).
 - i. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1198-5443).
 1. Such ids **SHOULD** contain zero or one [0..1] **@root="2.16.840.1.113883.4.6" National Provider Identifier** (CONF:1198-16821).
 - ii. This assignedEntity **MAY** contain zero or one [0..1] **code**, which **SHOULD** be selected from ValueSet [Healthcare Provider Taxonomy](#) urn:oid:2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1198-32173).
 - iii. This assignedEntity **SHALL** contain at least one [1..*] [US Realm Address \(AD.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1198-5460).
 - iv. This assignedEntity **SHALL** contain at least one [1..*] **telecom** (CONF:1198-5466).
 1. Such telecoms **SHOULD** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet [Telecom Use \(US Realm Header\)](#) urn:oid:2.16.840.1.113883.11.20.9.20 **DYNAMIC** (CONF:1198-7996).
 - v. This assignedEntity **SHALL** contain exactly one [1..1] **assignedPerson** (CONF:1198-5469).
 1. This assignedPerson **SHALL** contain at least one [1..*] [US Realm Person Name \(PN.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1198-5470).

1.1.1.5 informant

The informant element describes an information source for any content within the clinical document. This informant is constrained for use when the source of information is an assigned health care provider for the patient.

15. **MAY** contain zero or more [0..*] **informant** (CONF:1198-8001) such that it

- a. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1198-8002).
 - i. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1198-9945).
 1. If assignedEntity/id is a provider then this id, **SHOULD** include zero or one [0..1] id where id/@root ="2.16.840.1.113883.4.6" National Provider Identifier (CONF:1198-9946).
 - ii. This assignedEntity **MAY** contain zero or one [0..1] **code**, which **SHOULD** be selected from ValueSet [Healthcare Provider Taxonomy](#) urn:oid:2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1198-32174).
 - iii. This assignedEntity **SHALL** contain at least one [1..*] [US Realm Address \(AD.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1198-8220).

- iv. This assignedEntity **SHALL** contain exactly one [1..1] **assignedPerson** (CONF:1198-8221).
 - 1. This assignedPerson **SHALL** contain at least one [1..*] **US Realm Person Name (PN.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1198-8222).

1.1.1.6 informant

The informant element describes an information source (who is not a provider) for any content within the clinical document. This informant would be used when the source of information has a personal relationship with the patient or is the patient.

- 16. **MAY** contain zero or more [0..*] **informant** (CONF:1198-31355) such that it
 - a. **SHALL** contain exactly one [1..1] **relatedEntity** (CONF:1198-31356).

1.1.1.7 custodian

The custodian element represents the organization that is in charge of maintaining and is entrusted with the care of the document.

There is only one custodian per CDA document. Allowing that a CDA document may not represent the original form of the authenticated document, the custodian represents the steward of the original source document. The custodian may be the document originator, a health information exchange, or other responsible party.

- 17. **SHALL** contain exactly one [1..1] **custodian** (CONF:1198-5519).
 - a. This custodian **SHALL** contain exactly one [1..1] **assignedCustodian** (CONF:1198-5520).
 - i. This assignedCustodian **SHALL** contain exactly one [1..1] **representedCustodianOrganization** (CONF:1198-5521).
 - 1. This representedCustodianOrganization **SHALL** contain at least one [1..*] **id** (CONF:1198-5522).
 - a. Such ids **SHOULD** contain zero or one [0..1] **@root="2.16.840.1.113883.4.6"** National Provider Identifier (CONF:1198-16822).
 - 2. This representedCustodianOrganization **SHALL** contain exactly one [1..1] **name** (CONF:1198-5524).
 - 3. This representedCustodianOrganization **SHALL** contain exactly one [1..1] **telecom** (CONF:1198-5525).
 - a. This telecom **SHOULD** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet **Telecom Use (US Realm Header)** urn:oid:2.16.840.1.113883.11.20.9.20 **DYNAMIC** (CONF:1198-7998).
 - 4. This representedCustodianOrganization **SHALL** contain exactly one [1..1] **US Realm Address (AD.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1198-5559).

1.1.1.8 informationRecipient

The informationRecipient element records the intended recipient of the information at the time the document was created. In cases where the intended recipient of the document is the patient's health chart, set the receivedOrganization to the scoping organization for that chart.

18. **MAY** contain zero or more [0..*] **informationRecipient** (CONF:1198-5565).

- a. The informationRecipient, if present, **SHALL** contain exactly one [1..1] **intendedRecipient** (CONF:1198-5566).
 - i. This intendedRecipient **MAY** contain zero or more [0..*] **id** (CONF:1198-32399).
 - ii. This intendedRecipient **MAY** contain zero or one [0..1] **informationRecipient** (CONF:1198-5567).
 1. The informationRecipient, if present, **SHALL** contain at least one [1..*] [US Realm Person Name \(PN.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1198-5568).
 - iii. This intendedRecipient **MAY** contain zero or one [0..1] **receivedOrganization** (CONF:1198-5577).
 1. The receivedOrganization, if present, **SHALL** contain exactly one [1..1] **name** (CONF:1198-5578).

1.1.1.9 legalAuthenticator

The legalAuthenticator identifies the single person legally responsible for the document and must be present if the document has been legally authenticated. A clinical document that does not contain this element has not been legally authenticated.

The act of legal authentication requires a certain privilege be granted to the legal authenticator depending upon local policy. Based on local practice, clinical documents may be released before legal authentication.

All clinical documents have the potential for legal authentication, given the appropriate credentials.

Local policies **MAY** choose to delegate the function of legal authentication to a device or system that generates the clinical document. In these cases, the legal authenticator is a person accepting responsibility for the document, not the generating device or system.

Note that the legal authenticator, if present, must be a person.

19. **SHOULD** contain zero or one [0..1] **legalAuthenticator** (CONF:1198-5579).

- a. The legalAuthenticator, if present, **SHALL** contain exactly one [1..1] [US Realm Date and Time \(DTM.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4) (CONF:1198-5580).
- b. The legalAuthenticator, if present, **SHALL** contain exactly one [1..1] **signatureCode** (CONF:1198-5583).
 - i. This signatureCode **SHALL** contain exactly one [1..1] **@code="S"** (CodeSystem: HL7ParticipationSignature urn:oid:2.16.840.1.113883.5.89 **STATIC**) (CONF:1198-5584).

1.1.1.10 sdtc:signatureText

The sdtc:signatureText extension provides a location in CDA for a textual or multimedia depiction of the signature by which the participant endorses and accepts responsibility for his or her participation in the Act as specified in the Participation.typeCode. Details of what goes in the field are described in the HL7 CDA Digital Signature Standard balloted in Fall 2013.

- c. The legalAuthenticator, if present, **MAY** contain zero or one [0..1] **sdtc:signatureText** (CONF:1198-30810).
Note: The signature can be represented either inline or by reference according to the ED data type. Typical cases for CDA are:
 - 1) Electronic signature: this attribute can represent virtually any electronic signature scheme.
 - 2) Digital signature: this attribute can represent digital signatures by reference to a signature data block that is constructed in accordance to a digital signature standard, such as XML-DSIG, PKCS#7, PGP, etc.
- d. The legalAuthenticator, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1198-5585).
 - i. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1198-5586).
 - 1. Such ids **MAY** contain zero or one [0..1] **@root="2.16.840.1.113883.4.6" National Provider Identifier** (CONF:1198-16823).
 - ii. This assignedEntity **MAY** contain zero or one [0..1] **code**, which **SHOULD** be selected from ValueSet [Healthcare Provider Taxonomy](#) urn:oid:2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1198-17000).
 - iii. This assignedEntity **SHALL** contain at least one [1..*] [US Realm Address \(AD.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1198-5589).
 - iv. This assignedEntity **SHALL** contain at least one [1..*] **telecom** (CONF:1198-5595).
 - 1. Such telecoms **SHOULD** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet [Telecom Use \(US Realm Header\)](#) urn:oid:2.16.840.1.113883.11.20.9.20 **DYNAMIC** (CONF:1198-7999).
 - v. This assignedEntity **SHALL** contain exactly one [1..1] **assignedPerson** (CONF:1198-5597).
 - 1. This assignedPerson **SHALL** contain at least one [1..*] [US Realm Person Name \(PN.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1198-5598).

1.1.1.11 authenticator

The authenticator identifies a participant or participants who attest to the accuracy of the information in the document.

20. **MAY** contain zero or more [0..*] **authenticator** (CONF:1198-5607) such that it

- a. **SHALL** contain exactly one [1..1] [US Realm Date and Time \(DTM.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4) (CONF:1198-5608).
- b. **SHALL** contain exactly one [1..1] **signatureCode** (CONF:1198-5610).
 - i. This signatureCode **SHALL** contain exactly one [1..1] **@code="S"** (CodeSystem: HL7ParticipationSignature urn:oid:2.16.840.1.113883.5.89 **STATIC**) (CONF:1198-5611).

The `sdtc:signatureText` extension provides a location in CDA for a textual or multimedia depiction of the signature by which the participant endorses and accepts responsibility for his or her participation in the Act as specified in the `Participation.typeCode`. Details of what goes in the field are described in the HL7 CDA Digital Signature Standard balloted in Fall of 2013.

- c. **MAY** contain zero or one [0..1] **sdtc:signatureText** (CONF:1198-30811).
 Note: The signature can be represented either inline or by reference according to the ED data type. Typical cases for CDA are:
 - 1) Electronic signature: this attribute can represent virtually any electronic signature scheme.
 - 2) Digital signature: this attribute can represent digital signatures by reference to a signature data block that is constructed in accordance to a digital signature standard, such as XML-DSIG, PKCS#7, PGP, etc.
- d. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1198-5612).
 - i. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1198-5613).
 - 1. Such ids **SHOULD** contain zero or one [0..1] **@root="2.16.840.1.113883.4.6"** National Provider Identifier (CONF:1198-16824).
 - ii. This assignedEntity **MAY** contain zero or one [0..1] **code** (CONF:1198-16825).
 - 1. The code, if present, **MAY** contain zero or one [0..1] **@code**, which **SHOULD** be selected from ValueSet [Healthcare Provider Taxonomy](#) urn:oid:2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1198-16826).
 - iii. This assignedEntity **SHALL** contain at least one [1..*] [US Realm Address \(AD.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1198-5616).
 - iv. This assignedEntity **SHALL** contain at least one [1..*] **telecom** (CONF:1198-5622).
 - 1. Such telecoms **SHOULD** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet [Telecom Use \(US Realm Header\)](#) urn:oid:2.16.840.1.113883.11.20.9.20 **DYNAMIC** (CONF:1198-8000).
 - v. This assignedEntity **SHALL** contain exactly one [1..1] **assignedPerson** (CONF:1198-5624).
 - 1. This assignedPerson **SHALL** contain at least one [1..*] [US Realm Person Name \(PN.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1198-5625).

1.1.1.12 participant

The participant element identifies supporting entities, including parents, relatives, caregivers, insurance policyholders, guarantors, and others related in some way to the patient.

A supporting person or organization is an individual or an organization with a relationship to the patient. A supporting person who is playing multiple roles would be recorded in multiple participants (e.g., emergency contact and next-of-kin).

21. **MAY** contain zero or more [0..*] **participant** (CONF:1198-10003) such that it
 - a. **MAY** contain zero or one [0..1] **time** (CONF:1198-10004).
 - b. **SHALL** contain associatedEntity/associatedPerson *AND/OR* associatedEntity/scopingOrganization (CONF:1198-10006).
 - c. When participant/@typeCode is *IND*, associatedEntity/@classCode **SHOULD** be selected from ValueSet 2.16.840.1.113883.11.20.9.33 INDRoleclassCodes *STATIC 2011-09-30* (CONF:1198-10007).

1.1.1.13 inFulfillmentOf

The inFulfillmentOf element represents orders that are fulfilled by this document such as a radiologists' report of an x-ray.

22. **MAY** contain zero or more [0..*] **inFulfillmentOf** (CONF:1198-9952).
 - a. The inFulfillmentOf, if present, **SHALL** contain exactly one [1..1] **order** (CONF:1198-9953).
 - i. This order **SHALL** contain at least one [1..*] **id** (CONF:1198-9954).

1.1.1.14 documentationOf

23. **MAY** contain zero or more [0..*] **documentationOf** (CONF:1198-14835).

A serviceEvent represents the main act being documented, such as a colonoscopy or a cardiac stress study. In a provision of healthcare serviceEvent, the care providers, PCP, or other longitudinal providers, are recorded within the serviceEvent. If the document is about a single encounter, the providers associated can be recorded in the componentOf/encompassingEncounter template.

- a. The documentationOf, if present, **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:1198-14836).
 - i. This serviceEvent **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1198-14837).
 1. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1198-14838).

1.1.1.15 performer

The performer participant represents clinicians who actually and principally carry out the serviceEvent. In a transfer of care this represents the healthcare providers involved in the current or pertinent historical care of the patient. Preferably, the patient's key healthcare care team members would be listed, particularly their primary physician and any active consulting physicians, therapists, and counselors.

- ii. This serviceEvent **SHOULD** contain zero or more [0..*] **performer** (CONF:1198-14839).
 - 1. The performer, if present, **SHALL** contain exactly one [1..1] **@typeCode**, which **SHALL** be selected from ValueSet [x_ServiceEventPerformer](#) urn:oid:2.16.840.1.113883.1.11.19601 **STATIC** (CONF:1198-14840).
 - 2. The performer, if present, **MAY** contain zero or one [0..1] **functionCode** (CONF:1198-16818).
 - a. The functionCode, if present, **SHOULD** contain zero or one [0..1] **@code**, which **SHOULD** be selected from ValueSet [Care Team Member Function](#) urn:oid:2.16.840.1.113762.1.4.1099.30 **DYNAMIC** (CONF:1198-32889).
 - 3. The performer, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1198-14841).
 - a. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1198-14846).
 - i. Such ids **SHOULD** contain zero or one [0..1] **@root**="2.16.840.1.113883.4.6" National Provider Identifier (CONF:1198-14847).
 - b. This assignedEntity **SHOULD** contain zero or one [0..1] **code**, which **SHOULD** be selected from ValueSet [Healthcare Provider Taxonomy](#) urn:oid:2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1198-14842).

1.1.1.16 authorization

The authorization element represents information about the patient's consent.

The type of consent is conveyed in consent/code. Consents in the header have been finalized (consent/statusCode must equal Completed) and should be on file. This specification does not address how 'Privacy Consent' is represented, but does not preclude the inclusion of 'Privacy Consent'.

The authorization consent is used for referring to consents that are documented elsewhere in the EHR or medical record for a health condition and/or treatment that is described in the CDA document.

- 24. **MAY** contain zero or more [0..*] **authorization** (CONF:1198-16792) such that it
 - a. **SHALL** contain exactly one [1..1] **consent** (CONF:1198-16793).
 - i. This consent **MAY** contain zero or more [0..*] **id** (CONF:1198-16794).
 - ii. This consent **MAY** contain zero or one [0..1] **code** (CONF:1198-16795).
Note: The type of consent (e.g., a consent to perform the related serviceEvent) is conveyed in consent/code.
 - iii. This consent **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-16797).

1. This statusCode **SHALL** contain exactly one [1..1]
@code="completed" Completed (CodeSystem: HL7ActClass
urn:oid:2.16.840.1.113883.5.6) (CONF:1198-16798).

1.1.1.17 componentOf

The encompassing encounter represents the setting of the clinical encounter during which the document act(s) or ServiceEvent(s) occurred. In order to represent providers associated with a specific encounter, they are recorded within the encompassingEncounter as participants. In a CCD, the encompassingEncounter may be used when documenting a specific encounter and its participants. All relevant encounters in a CCD may be listed in the encounters section.

25. **MAY** contain zero or one [0..1] **componentOf** (CONF:1198-9955).
 - a. The componentOf, if present, **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:1198-9956).
 - i. This encompassingEncounter **SHALL** contain at least one [1..*] **id** (CONF:1198-9959).
 - ii. This encompassingEncounter **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1198-9958).

Figure 1: US Realm Header (V3) Example

```

<ClinicalDocument>
  <realmCode code="US" />
  <typeId extension="POCD_HD000040" root="2.16.840.1.113883.1.3" />
  <!-- CCD template -->
  <templateId root="2.16.840.1.113883.10.20.22.1.1" extension="2015-08-01" />
  <!-- Globally unique identifier for the document -->
  <id extension="TT988" root="2.16.840.1.113883.19.5.99999.1" />
  <code code="34133-9" displayName="Summarization of Episode Note"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <!-- Title of the document -->
  <title>Patient Chart Summary</title>
  <effectiveTime value="201209151030-0800" />
  <confidentialityCode code="N" displayName="normal" codeSystem="2.16.840.1.113883.5.25"
codeSystemName="Confidentiality" />
  <languageCode code="en-US" />
  <setId extension="sTT988" root="2.16.840.1.113883.19.5.99999.19" />
  <!-- Version of the document -->
  <versionNumber value="1" />
  . . .
</ClinicalDocument>

```

Figure 2: recordTarget Example

```
<recordTarget>
  <patientRole>
    <id extension="444-22-2222" root="2.16.840.1.113883.4.1" />
    <!-- Example Social Security Number using the actual SSN OID. -->
    <addr use="HP">
      <!-- HP is "primary home" from codeSystem 2.16.840.1.113883.5.1119 -->
      <streetAddressLine>2222 Home Street</streetAddressLine>
      <city>Beaverton</city>
      <state>OR</state>
      <postalCode>97867</postalCode>
      <country>US</country>
      <!-- US is "United States" from ISO 3166-1 Country Codes: 1.0.3166.1 -->
    </addr>
    <telecom value="tel:+1(555)555-2003" use="HP" />
    <!-- HP is "primary home" from HL7 AddressUse 2.16.840.1.113883.5.1119 -->
    <patient>
      <!-- The first name element represents what the patient is known as -->
      <name use="L">
        <given>Eve</given>
        <!-- The "SP" is "Spouse" from
              HL7 Code System EntityNamePartQualifier 2.16.840.1.113883.5.43 -->
        <family qualifier="SP">Betterhalf</family>
      </name>
      <!-- The second name element represents another name
            associated with the patient -->
      <name>
        <given>Eve</given>
        <!-- The "BR" is "Birth" from
              HL7 Code System EntityNamePartQualifier 2.16.840.1.113883.5.43 -->
        <family qualifier="BR">Everywoman</family>
      </name>
      <administrativeGenderCode code="F" displayName="Female"
codeSystem="2.16.840.1.113883.5.1" codeSystemName="AdministrativeGender" />
      <!-- Date of birth need only be precise to the day -->
      <birthTime value="19750501" />
      <maritalStatusCode code="M" displayName="Married"
codeSystem="2.16.840.1.113883.5.2" codeSystemName="MaritalStatusCode" />
      <religiousAffiliationCode code="1013" displayName="Christian (non-Catholic,
non-specific)" codeSystem="2.16.840.1.113883.5.1076" codeSystemName="HL7 Religious
Affiliation" />
      <!-- CDC Race and Ethnicity code set contains the five minimum
            race and ethnicity categories defined by OMB Standards -->
      <raceCode code="2106-3" displayName="White"
codeSystem="2.16.840.1.113883.6.238" codeSystemName="Race & Ethnicity - CDC" />
      <!-- The raceCode extension is only used if raceCode is valued -->
      <sdtc:raceCode code="2076-8" displayName="Hawaiian or Other Pacific Islander"
codeSystem="2.16.840.1.113883.6.238" codeSystemName="Race & Ethnicity - CDC" />
      <ethnicGroupCode code="2186-5" displayName="Not Hispanic or Latino"
codeSystem="2.16.840.1.113883.6.238" codeSystemName="Race & Ethnicity - CDC" />
      <guardian>
        <code code="POWATT" displayName="Power of Attorney"
codeSystem="2.16.840.1.113883.1.11.19830" codeSystemName="ResponsibleParty" />
      <addr use="HP">
        <streetAddressLine>2222 Home Street</streetAddressLine>
        <city>Beaverton</city>
```



```

        <state>OR</state>
        <postalCode>97867</postalCode>
        <country>US</country>
    </addr>
    <telecom value="tel:+1(555)555-2008" use="MC" />
    <guardianPerson>
        <name>
            <given>Boris</given>
            <given qualifier="CL">Bo</given>
            <family>Betterhalf</family>
        </name>
    </guardianPerson>
</guardian>
<birthplace>
    <place>
        <addr>
            <streetAddressLine>4444 Home Street</streetAddressLine>
            <city>Beaverton</city>
            <state>OR</state>
            <postalCode>97867</postalCode>
            <country>US</country>
        </addr>
    </place>
</birthplace>
<languageCommunication>
    <languageCode code="eng" />
    <!-- "eng" is ISO 639-2 alpha-3 code for "English" -->
    <modeCode code="ESP" displayName="Expressed spoken"
codeSystem="2.16.840.1.113883.5.60" codeSystemName="LanguageAbilityMode" />
    <proficiencyLevelCode code="G" displayName="Good"
codeSystem="2.16.840.1.113883.5.61" codeSystemName="LanguageAbilityProficiency" />
    <!-- Patient's preferred language -->
    <preferenceInd value="true" />
</languageCommunication>
</patient>
<providerOrganization>
    <id extension="219BX" root="1.1.1.1.1.1.1.2" />
    <name>The DoctorsTogether Physician Group</name>
    <telecom use="WP" value="tel: +(555)-555-5000" />
    <addr>
        <streetAddressLine>1007 Health Drive</streetAddressLine>
        <city>Portland</city>
        <state>OR</state>
        <postalCode>99123</postalCode>
        <country>US</country>
    </addr>
</providerOrganization>
</patientRole>
</recordTarget>

```

Figure 3: author Example

```
<author>
  <time value="201209151030-0800" />
  <assignedAuthor>
    <id extension="5555555555" root="2.16.840.1.113883.4.6" />
    <code code="163W00000X" displayName="Registered nurse"
codeSystem="2.16.840.1.113883.5.53" codeSystemName="Health Care Provider Taxonomy" />
    <addr>
      <streetAddressLine>1004 Healthcare Drive </streetAddressLine>
      <city>Portland</city>
      <state>OR</state>
      <postalCode>99123</postalCode>
      <country>US</country>
    </addr>
    <telecom use="WP" value="tel:+1(555)555-1004" />
    <assignedPerson>
      <name>
        <given>Patricia</given>
        <given qualifier="CL">Patty</given>
        <family>Primary</family>
        <suffix qualifier="AC">M.D.</suffix>
      </name>
    </assignedPerson>
  </assignedAuthor>
</author>
```

Figure 4: dateEnterer Example

```
<dataEnterer>
  <assignedEntity>
    <id extension="333777777" root="2.16.840.1.113883.4.6" />
    <addr>
      <streetAddressLine>1007 Healthcare Drive</streetAddressLine>
      <city>Portland</city>
      <state>OR</state>
      <postalCode>99123</postalCode>
      <country>US</country>
    </addr>
    <telecom use="WP" value="tel:+1(555)555-1050" />
    <assignedPerson>
      <name>
        <given>Ellen</given>
        <family>Enter</family>
      </name>
    </assignedPerson>
  </assignedEntity>
</dataEnterer>
```

Figure 5: Assigned Health Care Provider informant Example

```
<informant>
  <assignedEntity>
    <id extension="8888888888" root="1.1.1.1.1.1.1.3" />
    <addr>
      <streetAddressLine>1007 Healthcare Drive</streetAddressLine>
      <city>Portland</city>
      <state>OR</state>
      <postalCode>99123</postalCode>
      <country>US</country>
    </addr>
    <telecom use="WP" value="tel:+1(555)555-1003" />
    <assignedPerson>
      <name>
        <given>Harold</given>
        <family>Hippocrates</family>
        <suffix qualifier="AC">M.D.</suffix>
      </name>
    </assignedPerson>
    <representedOrganization>
      <name>The DoctorsApart Physician Group</name>
    </representedOrganization>
  </assignedEntity>
</informant>
```

Figure 6: Personal Relation informant Example

```
<informant>
  <relatedEntity classCode="PRS">
    <!-- classCode "PRS" represents a person with personal relationship with the
    patient -->
    <code code="SPS" displayName="SPOUSE" codeSystem="2.16.840.1.113883.1.11.19563"
    codeSystemName="Personal Relationship Role Type Value Set" />
    <relatedPerson>
      <name>
        <given>Boris</given>
        <given qualifier="CL">Bo</given>
        <family>Betterhalf</family>
      </name>
    </relatedPerson>
  </relatedEntity>
</informant>
```

Figure 7: custodian Example

```
<custodian>
  <assignedCustodian>
    <representedCustodianOrganization>
      <id extension="321CX" root="1.1.1.1.1.1.1.1.3" />
      <name>Good Health HIE</name>
      <telecom use="WP" value="tel:+1(555)555-1009" />
      <addr use="WP">
        <streetAddressLine>1009 Healthcare Drive </streetAddressLine>
        <city>Portland</city>
        <state>OR</state>
        <postalCode>99123</postalCode>
        <country>US</country>
      </addr>
    </representedCustodianOrganization>
  </assignedCustodian>
</custodian>
```

Figure 8: informationRecipient Example

```
<informationRecipient>
  <intendedRecipient>
    <informationRecipient>
      <name>
        <given>Sara</given>
        <family>Specialize</family>
        <suffix qualifier="AC">M.D.</suffix>
      </name>
    </informationRecipient>
    <receivedOrganization>
      <name>The DoctorsApart Physician Group</name>
    </receivedOrganization>
  </intendedRecipient>
</informationRecipient>
```

Figure 9: Digital signature Example

```
<sdtc:signatureText mediaType="text/xml"
representation="B64">omSJUEdmde9j44zmMiromSJUEdmde9j44zmMirdMDSsWdIJdksIJR3373jeu83
6edjzMMIjdMDSsWdIJdksIJR3373jeu83MNYD83jmMdomSJUEdmde9j44zmMir
... MNYD83jmMdomSJUEdmde9j44zmMir6edjzMMIjdMDSsWdIJdksIJR3373jeu83
4zmMir6edjzMMIjdMDSsWdIJdksIJR3373jeu83==</sdtc:signatureText>
```

Figure 10: legalAuthenticator Example

```
<legalAuthenticator>
  <time value="20120915223615-0800" />
  <signatureCode code="S" />
  <assignedEntity>
    <id extension="5555555555" root="2.16.840.1.113883.4.6" />
    <code code="207QA0505X" displayName="Adult Medicine"
codeSystem="2.16.840.1.113883.5.53" codeSystemName="Health Care Provider Taxonomy" />
    <addr>
      <streetAddressLine>1004 Healthcare Drive </streetAddressLine>
      <city>Portland</city>
      <state>OR</state>
      <postalCode>99123</postalCode>
      <country>US</country>
    </addr>
    <telecom use="WP" value="tel:+1(555)555-1004" />
    <assignedPerson>
      <name>
        <given>Patricia</given>
        <given qualifier="CL">Patty</given>
        <family>Primary</family>
        <suffix qualifier="AC">M.D.</suffix>
      </name>
    </assignedPerson>
  </assignedEntity>
</legalAuthenticator>
```

Figure 11: authenticator Example

```
<authenticator>
  <time value="201209151030-0800" />
  <signatureCode code="S" />
  <assignedEntity>
    <id extension="5555555555" root="2.16.840.1.113883.4.6" />
    <code code="207QA0505X" displayName="Adult Medicine"
codeSystem="2.16.840.1.113883.5.53" codeSystemName="Health Care Provider Taxonomy" />
    <addr>
      <streetAddressLine>1004 Healthcare Drive</streetAddressLine>
      <city>Portland</city>
      <state>OR</state>
      <postalCode>99123</postalCode>
      <country>US</country>
    </addr>
    <telecom use="WP" value="tel:+1(555)555-1004" />
    <assignedPerson>
      <name>
        <given>Patricia</given>
        <given qualifier="CL">Patty</given>
        <family>Primary</family>
        <suffix qualifier="AC">M.D.</suffix>
      </name>
    </assignedPerson>
  </assignedEntity>
</authenticator>
```

Figure 12: Supporting Person participant Example

```
<participant typeCode="IND">
  <!-- typeCode "IND" represents an individual -->
  <associatedEntity classCode="NOK">
    <!-- classCode "NOK" represents the patient's next of kin-->
    <addr use="HP">
      <streetAddressLine>2222 Home Street</streetAddressLine>
      <city>Beaverton</city>
      <state>OR</state>
      <postalCode>97867</postalCode>
      <country>US</country>
    </addr>
    <telecom value="tel:+1(555)555-2008" use="MC" />
    <associatedPerson>
      <name>
        <given>Boris</given>
        <given qualifier="CL">Bo</given>
        <family>Betterhalf</family>
      </name>
    </associatedPerson>
  </associatedEntity>
</participant>
<!-- Entities playing multiple roles are recorded in multiple participants -->
<participant typeCode="IND">
  <associatedEntity classCode="ECON">
    <!-- classCode "ECON" represents an emergency contact -->
    <addr use="HP">
      <streetAddressLine>2222 Home Street</streetAddressLine>
      <city>Beaverton</city>
      <state>OR</state>
      <postalCode>97867</postalCode>
      <country>US</country>
    </addr>
    <telecom value="tel:+1(555)555-2008" use="MC" />
    <associatedPerson>
      <name>
        <given>Boris</given>
        <given qualifier="CL">Bo</given>
        <family>Betterhalf</family>
      </name>
    </associatedPerson>
  </associatedEntity>
</participant>
```

Figure 13: inFulfillmentOf Example

```
<inFulfillmentOf typeCode="FLFS">
  <order classCode="ACT" moodCode="RQO">
    <id root="2.16.840.1.113883.6.96" extension="1298989898" />
    <code code="388975008" displayName="Weight Reduction Consultation"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="CPT4" />
  </order>
</inFulfillmentOf>
```

Figure 14: performer Example

```
<performer typeCode="PRF">
  <functionCode code="PCP"
    displayName="Primary Care Provider"
    codeSystem="2.16.840.1.113883.5.88"
    codeSystemName="ParticipationFunction">
    <originalText>Primary Care Provider</originalText>
  </functionCode>
  <assignedEntity>
    <id extension="5555555555" root="2.16.840.1.113883.4.6" />
    <code code="207QA0505X" displayName="Adult Medicine"
codeSystem="2.16.840.1.113883.5.53" codeSystemName="Health Care Provider Taxonomy" />
    <addr>
      <streetAddressLine>1004 Healthcare Drive </streetAddressLine>
      <city>Portland</city>
      <state>OR</state>
      <postalCode>99123</postalCode>
      <country>US</country>
    </addr>
    <telecom use="WP" value="tel:+1(555)555-1004" />
    <assignedPerson>
      <name>
        <given>Patricia</given>
        <given qualifier="CL">Patty</given>
        <family>Primary</family>
        <suffix qualifier="AC">M.D.</suffix>
      </name>
    </assignedPerson>
    <representedOrganization>
      <id extension="219BX" root="1.1.1.1.1.1.1.2" />
      <name>The DoctorsTogether Physician Group</name>
      <telecom use="WP" value="tel: +(555)-555-5000" />
      <addr>
        <streetAddressLine>1004 Health Drive</streetAddressLine>
        <city>Portland</city>
        <state>OR</state>
        <postalCode>99123</postalCode>
        <country>US</country>
      </addr>
    </representedOrganization>
  </assignedEntity>
</performer>
```


Figure 15: documentationOf Example

```
<documentationOf>
  <serviceEvent classCode="PCPR">
    <!-- The effectiveTime reflects the provision of care summarized in the document.
    In this scenario, the provision of care summarized is the lifetime for the patient -->
    <effectiveTime>
      <low value="19750501" />
      <!-- The low value represents when the summarized provision of care began.
      In this scenario, the patient's date of birth -->
      <high value="20120915" />
      <!-- The high value represents when the summarized provision of care being
ended.
    In this scenario, when chart summary was created -->
    </effectiveTime>
    <performer typeCode="PRF">
      <functionCode code="PCP"
        displayName="Primary Care Provider"
        codeSystem="2.16.840.1.113883.5.88"
        codeSystemName="ParticipationFunction">
        <originalText>Primary Care Provider</originalText>
      </functionCode>
      <assignedEntity>
        <id extension="5555555555" root="2.16.840.1.113883.4.6" />
        <code code="207QA0505X" displayName="Adult Medicine"
          codeSystem="2.16.840.1.113883.5.53"
          codeSystemName="Health Care Provider Taxonomy" />
        <addr>
          <streetAddressLine>1004 Healthcare Drive </streetAddressLine>
          <city>Portland</city>
          <state>OR</state>
          <postalCode>99123</postalCode>
          <country>US</country>
        </addr>
        <telecom use="WP" value="tel:+1(555)555-1004" />
        <assignedPerson>
          <name>
            <given>Patricia</given>
            <given qualifier="CL">Patty</given>
            <family>Primary</family>
            <suffix qualifier="AC">M.D.</suffix>
          </name>
        </assignedPerson>
        <representedOrganization>
          <id extension="219BX" root="1.1.1.1.1.1.1.2" />
          <name>The DoctorsTogether Physician Group</name>
          <telecom use="WP" value="tel: +(555)-555-5000" />
          <addr>
            <streetAddressLine>1004 Health Drive</streetAddressLine>
            <city>Portland</city>
            <state>OR</state>
            <postalCode>99123</postalCode>
            <country>US</country>
          </addr>
        </representedOrganization>
      </assignedEntity>
    </performer>
  </serviceEvent>
</documentationOf>
```

```

</serviceEvent>
</documentationOf>

```

Figure 16: authorization Example

```

<authorization typeCode="AUTH">
  <consent classCode="CONS" moodCode="EVN">
    <id root="629deb70-5306-11df-9879-0800200c9a66" />
    <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" code="64293-4"
displayName="Procedure consent" />
    <statusCode code="completed" />
  </consent>
</authorization>

```

1.1.2 QRDA Category I Framework (V4)

```

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.1.1:2017-
08-01 (open)]

```

Table 3: QRDA Category I Framework (V4) Contexts

| Contained By: | Contains: |
|---------------|--|
| | Reporting Parameters Section (required) Patient Data Section (required) Measure Section (required) |

This template describes constraints that apply to the Quality Reporting Document Architecture (QRDA) Document Category I report framework. Document-level templates describe the purpose and rules for constructing a conforming CDA document. Document templates include constraints on the CDA header and identify contained section-level templates.

The document-level template contains the following information:

- Description and explanatory narrative
- Template metadata (e.g., templateId, etc.)
- Header constraints including a reference to the US Realm Clinical Document Header template and additional constraints specific to each document type
- Required section-level templates

Table 4: QRDA Category I Framework (V4) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|--|
| ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.1.1:2017-08-01) | | | | | |
| templateId | 1..1 | SHALL | | 3343-12910 | |
| @root | 1..1 | SHALL | | 3343-14613 | 2.16.840.1.113883.10.20.24.1.1 |
| @extension | 1..1 | SHALL | | 3343-27005 | 2017-08-01 |
| code | 1..1 | SHALL | | 3343-12911 | |
| @code | 1..1 | SHALL | | 3343-28137 | 55182-0 |
| @codeSystem | 1..1 | SHALL | | 3343-28138 | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| title | 1..1 | SHALL | | 3343-12912 | |
| recordTarget | 1..1 | SHALL | | 3343-12913 | |
| patientRole | 1..1 | SHALL | | 3343-28387 | |
| patient | 0..1 | MAY | | 3343-28388 | |
| sdct:ethnicGroupCode | 0..* | MAY | | 3343-28389 | urn:oid:2.16.840.1.114222.4.1.1.877 (Detailed Ethnicity) |
| custodian | 1..1 | SHALL | | 3343-12914 | |
| assignedCustodian | 1..1 | SHALL | | 3343-12915 | |
| representedCustodianOrganization | 1..1 | SHALL | | 3343-12916 | |
| component | 1..1 | SHALL | | 3343-12918 | |
| structuredBody | 1..1 | SHALL | | 3343-12919 | |
| component | 1..1 | SHALL | | 3343-12920 | |
| section | 1..1 | SHALL | | 3343-17078 | Measure Section (identifier: urn:oid:2.16.840.1.113883.10.20.24.2.2) |
| component | 1..1 | SHALL | | 3343-12923 | |
| section | 1..1 | SHALL | | 3343-17079 | Reporting Parameters Section (identifier: |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-----------|-------|-------|-----------|----------------------------|---|
| | | | | | urn:oid:2.16.840.1.113883.10.20.17.2.1 |
| component | 1..1 | SHALL | | 3343-12924 | |
| section | 1..1 | SHALL | | 3343-17080 | Patient Data Section (identifier: urn:oid:2.16.840.1.113883.10.20.17.2.4) |

1. Conforms to [US Realm Header \(V3\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2015-08-01).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:3343-12910) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.1.1" (CONF:3343-14613).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2017-08-01" (CONF:3343-27005).
3. **SHALL** contain exactly one [1..1] **code** (CONF:3343-12911).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="55182-0" Quality Measure Report (CONF:3343-28137).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3343-28138).
4. **SHALL** contain exactly one [1..1] **title** (CONF:3343-12912).
5. **SHALL** contain exactly one [1..1] **recordTarget** (CONF:3343-12913).
 - a. This recordTarget **SHALL** contain exactly one [1..1] **patientRole** (CONF:3343-28387).
 - i. This patientRole **MAY** contain zero or one [0..1] **patient** (CONF:3343-28388).
 1. The patient, if present, **MAY** contain zero or more [0..*] **sdct:ethnicGroupCode**, which **SHALL** be selected from ValueSet [Detailed Ethnicity](#) urn:oid:2.16.840.1.114222.4.11.877 **DYNAMIC** (CONF:3343-28389).
6. **SHALL** contain exactly one [1..1] **custodian** (CONF:3343-12914).
 - a. This custodian **SHALL** contain exactly one [1..1] **assignedCustodian** (CONF:3343-12915).
 - i. This assignedCustodian **SHALL** contain exactly one [1..1] **representedCustodianOrganization** (CONF:3343-12916).
 1. This assignedCustodian **SHALL** represent the organization that owns and reports the data (CONF:3343-12917).
7. **SHALL** contain exactly one [1..1] **component** (CONF:3343-12918).
 - a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:3343-12919).
 - i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3343-12920) such that it

1. **SHALL** contain exactly one [1..1] [Measure Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.24.2.2) (CONF:3343-17078).
- ii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3343-12923) such that it
 1. **SHALL** contain exactly one [1..1] [Reporting Parameters Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.17.2.1) (CONF:3343-17079).
- iii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3343-12924) such that it
 1. **SHALL** contain exactly one [1..1] [Patient Data Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.17.2.4) (CONF:3343-17080).

1.1.3 QDM-Based QRDA (V7)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.1.2:2019-12-01 (open)]

Table 5: QDM-Based QRDA (V7) Contexts

| Contained By: | Contains: |
|---------------|---|
| | Reporting Parameters Section (required) Measure Section QDM (required) Patient Data Section QDM (V7) (required) |

A QDM-Based QRDA is a QRDA where the patient data entry-level templates are derived from the Quality Data Model (QDM). A QDM-Based QRDA defines explicitly how a Health Quality Measures Format (HQMF) eMeasure (electronic Clinical Quality Measure) is referenced. This template describes an optional documentationOf/serviceEvent where multiple provider and organization ids can be represented

Table 6: QDM-Based QRDA (V7) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|--------------------------------|
| ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.1.2:2019-12-01) | | | | | |
| templateId | 1..1 | SHALL | | 4444-12972 | |
| @root | 1..1 | SHALL | | 4444-26943 | 2.16.840.1.113883.10.20.24.1.2 |
| @extension | 1..1 | SHALL | | 4444-28696 | 2019-12-01 |
| recordTarget | 1..1 | SHALL | | 4444-16598 | |
| patientRole | 1..1 | SHALL | | 4444-16856 | |
| id | 0..1 | MAY | | 4444-16857 | |
| @root | 1..1 | SHALL | | 4444-16858 | 2.16.840.1.113883.4.572 |
| id | 0..1 | MAY | | 4444-28697 | |
| @root | 1..1 | SHALL | | 4444-28698 | 2.16.840.1.113883.4.927 |
| patient | 1..1 | SHALL | | 4444-27570 | |
| administrativeGenderCode | 1..1 | SHALL | | 4444-27572 | |
| birthTime | 1..1 | SHALL | | 4444-27571 | |
| raceCode | 1..1 | SHALL | | 4444-27573 | |
| ethnicGroupCode | 1..1 | SHALL | | 4444-27574 | |
| custodian | 1..1 | SHALL | | 4444-16600 | |
| assignedCustodian | 1..1 | SHALL | | 4444-28239 | |
| representedCustodianOrganization | 1..1 | SHALL | | 4444-28240 | |
| id | 0..1 | MAY | | 4444-28241 | |
| @root | 1..1 | SHALL | | 4444-28244 | 2.16.840.1.113883.4.336 |
| @extension | 1..1 | SHALL | | 4444-28245 | |
| id | 0..1 | MAY | | 4444-28242 | |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------------|-------|--------|-----------|----------------------------|-------------------------|
| @root | 1..1 | SHALL | | 4444-28246 | 2.16.840.1.113883.4.2 |
| @extension | 1..1 | SHALL | | 4444-28247 | |
| id | 0..1 | MAY | | 4444-28243 | |
| @root | 1..1 | SHALL | | 4444-28248 | 1.3.6.1.4.1.33895 |
| @extension | 1..1 | SHALL | | 4444-28249 | |
| informationRecipient | 0..* | MAY | | 4444-16703 | |
| intendedRecipient | 1..1 | SHALL | | 4444-16704 | |
| id | 1..* | SHALL | | 4444-16705 | |
| documentationOf | 0..1 | MAY | | 4444-16579 | |
| serviceEvent | 1..1 | SHALL | | 4444-16580 | |
| @classCode | 1..1 | SHALL | | 4444-16581 | PCPR |
| performer | 1..* | SHALL | | 4444-16583 | |
| @typeCode | 1..1 | SHALL | | 4444-16584 | PRF |
| time | 0..1 | MAY | | 4444-16585 | |
| assignedEntity | 1..1 | SHALL | | 4444-16586 | |
| id | 0..1 | MAY | | 4444-16587 | |
| @root | 1..1 | SHALL | | 4444-16588 | 2.16.840.1.113883.4.6 |
| representedOrganization | 1..1 | SHALL | | 4444-16591 | |
| id | 0..1 | SHOULD | | 4444-16592 | |
| @root | 1..1 | SHALL | | 4444-16593 | 2.16.840.1.113883.4.2 |
| id | 0..1 | MAY | | 4444-16595 | |
| @root | 1..1 | SHALL | | 4444-16596 | 2.16.840.1.113883.4.336 |
| @extension | 1..1 | SHALL | | 4444- | |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|----------------|-------|-------|-----------|----------------------------|---|
| | | | | 16597 | |
| component | 1..1 | SHALL | | 4444-12973 | |
| structuredBody | 1..1 | SHALL | | 4444-17081 | |
| component | 1..1 | SHALL | | 4444-17082 | |
| section | 1..1 | SHALL | | 4444-17083 | Measure Section QDM (identifier: urn:oid:2.16.840.1.113883.10.20.24.2.3) |
| component | 1..1 | SHALL | | 4444-17090 | |
| section | 1..1 | SHALL | | 4444-17092 | Reporting Parameters Section (identifier: urn:oid:2.16.840.1.113883.10.20.17.2.1) |
| component | 1..1 | SHALL | | 4444-17091 | |
| section | 1..1 | SHALL | | 4444-17093 | Patient Data Section QDM (V7) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.2.1:2019-12-01) |

1. Conforms to [QRDA Category I Framework \(V4\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.1.1:2017-08-01).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-12972) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.1.2" (CONF:4444-26943).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-28696).
3. **SHALL** contain exactly one [1..1] **recordTarget** (CONF:4444-16598).
 - a. This recordTarget **SHALL** contain exactly one [1..1] **patientRole** (CONF:4444-16856).
 - i. This patientRole **MAY** contain zero or one [0..1] **id** (CONF:4444-16857) such that it
 1. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.4.572" Medicare HIC number (CONF:4444-16858).
 - ii. This patientRole **MAY** contain zero or one [0..1] **id** (CONF:4444-28697) such that it
 1. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.4.927" Medicare Beneficiary Identifier (MBI) (CONF:4444-28698).
 - iii. This patientRole **SHALL** contain exactly one [1..1] **patient** (CONF:4444-27570).

1. This patient **SHALL** contain exactly one [1..1] **administrativeGenderCode** (CONF:4444-27572).
Note: QDM Datatype: Patient Characteristic, Sex
 2. This patient **SHALL** contain exactly one [1..1] **birthTime** (CONF:4444-27571).
Note: QDM Datatype: Patient Characteristic, Birth Date
 3. This patient **SHALL** contain exactly one [1..1] **raceCode** (CONF:4444-27573).
Note: QDM Datatype: Patient Characteristic, Race
 4. This patient **SHALL** contain exactly one [1..1] **ethnicGroupCode** (CONF:4444-27574).
Note: QDM Datatype: Patient Characteristic, Ethnicity
4. **SHALL** contain exactly one [1..1] **custodian** (CONF:4444-16600).
- a. This custodian **SHALL** contain exactly one [1..1] **assignedCustodian** (CONF:4444-28239).
 - i. This assignedCustodian **SHALL** contain exactly one [1..1] **representedCustodianOrganization** (CONF:4444-28240).
 1. This representedCustodianOrganization **MAY** contain zero or one [0..1] **id** (CONF:4444-28241) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.4.336" CMS Certification Number (CONF:4444-28244).
 - b. **SHALL** contain exactly one [1..1] **@extension** (CONF:4444-28245).
 2. This representedCustodianOrganization **MAY** contain zero or one [0..1] **id** (CONF:4444-28242) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.4.2" Tax ID Number (CONF:4444-28246).
 - b. **SHALL** contain exactly one [1..1] **@extension** (CONF:4444-28247).
 3. This representedCustodianOrganization **MAY** contain zero or one [0..1] **id** (CONF:4444-28243) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="1.3.6.1.4.1.33895" The Joint Commission's Health Care Organization (HCO) Identification Number (CONF:4444-28248).
 - b. **SHALL** contain exactly one [1..1] **@extension** (CONF:4444-28249).
5. **MAY** contain zero or more [0..*] **informationRecipient** (CONF:4444-16703).
- a. The informationRecipient, if present, **SHALL** contain exactly one [1..1] **intendedRecipient** (CONF:4444-16704).
 - i. This intendedRecipient **SHALL** contain at least one [1..*] **id** (CONF:4444-16705).

1. IntendedRecipient ID can be used by the receiver to ensure they are processing a file that was intended to be sent to them (CONF:4444-16706).
6. **MAY** contain zero or one [0..1] **documentationOf** (CONF:4444-16579) such that it
 - a. **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:4444-16580).
 - i. This serviceEvent **SHALL** contain exactly one [1..1] **@classCode="PCPR"** Care Provision (CONF:4444-16581).
 - ii. This serviceEvent **SHALL** contain at least one [1..*] **performer** (CONF:4444-16583).
 1. Such performers **SHALL** contain exactly one [1..1] **@typeCode="PRF"** Performer (CONF:4444-16584).
 2. Such performers **MAY** contain zero or one [0..1] **time** (CONF:4444-16585).
 3. Such performers **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:4444-16586).

This assignedEntity id/@root coupled with the id/@extension represents the individual provider's National Provider Identification number (NPI).

- a. This assignedEntity **MAY** contain zero or one [0..1] **id** (CONF:4444-16587) such that it
 - i. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.4.6"** National Provider ID (CONF:4444-16588).
- b. This assignedEntity **SHALL** contain exactly one [1..1] **representedOrganization** (CONF:4444-16591).

This representedOrganization id/@root coupled with the id/@extension represents the organization's Tax Identification Number (TIN).

- i. This representedOrganization **SHOULD** contain zero or one [0..1] **id** (CONF:4444-16592) such that it
 1. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.4.2"** Tax ID Number (CONF:4444-16593).

This representedOrganization id/@root coupled with the id/@extension represents the organization's Facility CMS Certification Number (CCN).

- ii. This representedOrganization **MAY** contain zero or one [0..1] **id** (CONF:4444-16595) such that it
 1. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.4.336"** Facility CMS Certification Number (CONF:4444-16596).
 2. **SHALL** contain exactly one [1..1] **@extension** (CONF:4444-16597).

7. **SHALL** contain exactly one [1..1] **component** (CONF:4444-12973) such that it
 - a. **SHALL** contain exactly one [1..1] **structuredBody** (CONF:4444-17081).

- i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4444-17082) such that it
 1. **SHALL** contain exactly one [1..1] Measure Section QDM (identifier: urn:oid:2.16.840.1.113883.10.20.24.2.3) (CONF:4444-17083).
- ii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4444-17090) such that it
 1. **SHALL** contain exactly one [1..1] Reporting Parameters Section (identifier: urn:oid:2.16.840.1.113883.10.20.17.2.1) (CONF:4444-17092).
- iii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4444-17091) such that it
 1. **SHALL** contain exactly one [1..1] Patient Data Section QDM (V7) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.2.1:2019-12-01) (CONF:4444-17093).

Figure 17: documentationOf/serviceEvent example with identifiers

```

<documentationOf typeCode="DOC">
  <serviceEvent classCode="PCPR">
    <!-- care provision -->
    <effectiveTime>
      <low value="20190101"/>
      <high value="20191231"/>
    </effectiveTime>
    <!-- Can include multiple performers, each with identifiers such as an NPI, TIN,
    CCN. -->
    <performer typeCode="PRF">
      <assignedEntity>
        <!-- This is the provider NPI -->
        <id root="2.16.840.1.113883.4.6" extension="111111111" />
        <representedOrganization>
          <!-- This is the organization TIN -->
          <id root="2.16.840.1.113883.4.2" extension="1234567" />
          <!-- This is the organization CCN -->
          <id root="2.16.840.1.113883.4.336" extension="654321" />
        </representedOrganization>
      </assignedEntity>
    </performer>
  </serviceEvent>
</documentationOf>

```

2 SECTION-LEVEL TEMPLATES

2.1 Measure Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.24.2.2 (open)]

Table 7: Measure Section Contexts

| Contained By: | Contains: |
|---|--|
| QRDA Category I Framework (V4) (required) | Measure Reference (required) |

This section contains information about the measure or measures being reported. This section references the measure through reference to an externalDocument. The externalDocument/ids and version numbers are used to reference the measure. The measure section must contain a reference to at least one externalDocument id of all the measures being reported in the QRDA instance.

Table 8: Measure Section Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|-------|-----------|--------------------------|---|
| section (identifier: urn:oid:2.16.840.1.113883.10.20.24.2.2) | | | | | |
| templateId | 1..1 | SHALL | | 67-12801 | |
| @root | 1..1 | SHALL | | 67-12802 | 2.16.840.1.113883.10.20.24.2.2 |
| code | 1..1 | SHALL | | 67-12798 | |
| @code | 1..1 | SHALL | | 67-19230 | 55186-1 |
| @codeSystem | 1..1 | SHALL | | 67-27012 | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| title | 1..1 | SHALL | | 67-12799 | Measure Section |
| text | 1..1 | SHALL | | 67-12800 | |
| entry | 1..* | SHALL | | 67-13003 | |
| organizer | 1..1 | SHALL | | 67-16677 | Measure Reference (identifier: urn:oid:2.16.840.1.113883.10.20.24.3.98) |

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:67-12801) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.2.2" (CONF:67-12802).
2. **SHALL** contain exactly one [1..1] **code** (CONF:67-12798).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="55186-1" Measure Section (CONF:67-19230).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:67-27012).

3. **SHALL** contain exactly one [1..1] **title**="Measure Section" (CONF:67-12799).
4. **SHALL** contain exactly one [1..1] **text** (CONF:67-12800).
5. **SHALL** contain at least one [1..*] **entry** (CONF:67-13003) such that it
 - a. **SHALL** contain exactly one [1..1] [Measure Reference](#) (identifier: urn:oid:2.16.840.1.113883.10.20.24.3.98) (CONF:67-16677).

2.1.1 Measure Section QDM

[section: identifier urn:oid:2.16.840.1.113883.10.20.24.2.3 (open)]

Table 9: Measure Section QDM Contexts

| Contained By: | Contains: |
|--|---|
| QDM-Based QRDA (V7) (required) | eMeasure Reference QDM (required) |

This section contains information about the eCQM or eCQMs being reported. It must contain entries with the identifiers of all the eCQMs so that corresponding QRDA QDM data element entry templates to be instantiated in the Patient Data Section are identified. Each eCQM for which QRDA QDM data elements are being sent must reference the eCQMs act/id. Other eCQM identifiers that could be referenced are the eCQM Identifier (Measure Authoring Tool), eCQM Version Number, eCQM Title and the NQF Number.

Table 10: Measure Section QDM Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|-------|-----------|--------------------------|--|
| section (identifier: urn:oid:2.16.840.1.113883.10.20.24.2.3) | | | | | |
| templateId | 1..1 | SHALL | | 67-12803 | |
| @root | 1..1 | SHALL | | 67-12804 | 2.16.840.1.113883.10.20.24.2.3 |
| entry | 1..* | SHALL | | 67-12978 | |
| organizer | 1..1 | SHALL | | 67-13193 | eMeasure Reference QDM (identifier: urn:oid:2.16.840.1.113883.10.20.24.3.97) |

1. Conforms to [Measure Section](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.24.2.2).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:67-12803) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.2.3" (CONF:67-12804).
3. **SHALL** contain at least one [1..*] **entry** (CONF:67-12978).
 - a. Such entries **SHALL** contain exactly one [1..1] [eMeasure Reference QDM](#) (identifier: urn:oid:2.16.840.1.113883.10.20.24.3.97) (CONF:67-13193).

Figure 18: Measure Section QDM Example

```

<section>
  <!-- This is the templateId for Measure Section -->
  <templateId root="2.16.840.1.113883.10.20.24.2.2"/>
  <!-- This is the templateId for Measure Section QDM -->
  <templateId root="2.16.840.1.113883.10.20.24.2.3"/>
  <!-- This is the LOINC code for "Measure document". This stays the same for
    all measure section required by QRDA standard -->
  <code code="55186-1" codeSystem="2.16.840.1.113883.6.1"/>
  <title>Measure Section</title>
  <text>...</text>
  <!-- 1..* Organizers, each containing a reference to an eMeasure -->
  <entry>
    <organizer classCode="CLUSTER" moodCode="EVN">
      <!-- This is the templateId for Measure Reference -->
      <templateId root="2.16.840.1.113883.10.20.24.3.98"/>
      <!-- This is the templateId for eMeasure Reference QDM -->
      <templateId root="2.16.840.1.113883.10.20.24.3.97"/>
      ...
    </organizer>
  </entry>
</section>

```

2.2 Patient Data Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.17.2.4 (open)]

Table 11: Patient Data Section Contexts

| Contained By: | Contains: |
|---|-----------|
| QRDA Category I Framework (V4) (required) | |

The Patient Data Section contains clinically significant patient data and should contain patient data elements as defined by particular measure(s). At least one structured entry is required, although the QRDA Framework does not constrain what those entries should be. Data elements in a QRDA framework instance should be communicated with entry-level templates from the Implementation Guide for CDA Release 2.0 Consolidated CDA Templates IG (US Realm) published December 2011 where possible. In many cases these templates will require further constraint to convey the exact data elements required by a measure or set of measures. Data elements should always be sent with a date/time stamp.

Table 12: Patient Data Section Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|-------|-----------|--------------------------|---|
| section (identifier: urn:oid:2.16.840.1.113883.10.20.17.2.4) | | | | | |
| templateId | 1..1 | SHALL | | 67-12794 | |
| @root | 1..1 | SHALL | | 67-12795 | 2.16.840.1.113883.10.20.17.2.4 |
| code | 1..1 | SHALL | | 67-3865 | |
| @code | 1..1 | SHALL | | 67-26548 | 55188-7 |
| @codeSystem | 1..1 | SHALL | | 67-27013 | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| title | 1..1 | SHALL | | 67-3866 | Patient Data |
| text | 1..1 | SHALL | | 67-3867 | |
| entry | 1..* | SHALL | | 67-14567 | |

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:67-12794) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.17.2.4" (CONF:67-12795).
2. **SHALL** contain exactly one [1..1] **code** (CONF:67-3865).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="55188-7" (CONF:67-26548).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:67-27013).
3. **SHALL** contain exactly one [1..1] **title**="Patient Data" (CONF:67-3866).
4. **SHALL** contain exactly one [1..1] **text** (CONF:67-3867).
5. **SHALL** contain at least one [1..*] **entry** (CONF:67-14567).

2.2.1 Patient Data Section QDM (V7)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.2.1:2019-12-01
(open)]

Table 13: Patient Data Section QDM (V7) Contexts

| Contained By: | Contains: |
|---|---|
| <p>QDM-Based QRDA (V7) (required)</p> | <p>Patient Characteristic Payer (V2) (optional)</p> <p>Patient Characteristic Expired (V3) (optional)</p> <p>Patient Characteristic Clinical Trial Participant (V4) (optional)</p> <p>Adverse Event (V2) (optional)</p> <p>Assessment Performed (V3) (optional)</p> <p>Communication Performed (V2) (optional)</p> <p>Assessment Recommended (V3) (optional)</p> <p>Assessment Order (V2) (optional)</p> <p>Care Goal (V5) (optional)</p> <p>Device Applied (V6) (optional)</p> <p>Device Order Act (V3) (optional)</p> <p>Device Recommended Act (V3) (optional)</p> <p>Diagnosis Concern Act (V4) (optional)</p> <p>Diagnostic Study Order (V5) (optional)</p> <p>Diagnostic Study Performed (V5) (optional)</p> <p>Diagnostic Study Recommended (V5) (optional)</p> <p>Discharge Medication (V5) (optional)</p> <p>Encounter Order Act (V3) (optional)</p> <p>Encounter Performed Act (V3) (optional)</p> <p>Procedure Performed (V6) (optional)</p> <p>Procedure Order (V6) (optional)</p> <p>Procedure Recommended (V6) (optional)</p> <p>Symptom Concern Act (V4) (optional)</p> <p>Substance Recommended (V5) (optional)</p> <p>Laboratory Test Performed (V5) (optional)</p> <p>Laboratory Test Order (V5) (optional)</p> <p>Laboratory Test Recommended (V5) (optional)</p> <p>Allergy Intolerance (V2) (optional)</p> <p>Encounter Recommended Act (V3) (optional)</p> <p>Family History Organizer QDM (V5) (optional)</p> <p>Immunization Administered (V3) (optional)</p> <p>Immunization Order (V3) (optional)</p> <p>Patient Characteristic Observation Assertion (V5) (optional)</p> <p>Intervention Order (V5) (optional)</p> <p>Intervention Performed (V5) (optional)</p> <p>Intervention Recommended (V5) (optional)</p> <p>Physical Exam Order (V5) (optional)</p> <p>Physical Exam Recommended (V5) (optional)</p> <p>Physical Exam Performed (V5) (optional)</p> <p>Medication Active (V5) (optional)</p> |

| Contained By: | Contains: |
|---------------|--|
| | Medication Administered (V5) (optional) Medication Dispensed Act (V4) (optional) Medication Order (V6) (optional) Program Participation (V2) (optional) Patient Care Experience (V5) (optional) Provider Care Experience (V5) (optional) Related Person QDM (optional) |

The Patient Data Section QDM (V7) contains entries that conform to the QDM approach to QRDA. In contrast to a QRDA Framework Patient Data Section that requires but does not specify the structured entries, the Patient Data Section QDM contained entry templates have specific requirements to align the quality measure data element type with its corresponding QDM HQMF pattern and QDM attributes. All entries must also have time element. See Quality Data Model-Based QRDA in Volume 1 of this IG.

For time elements, a Coordinated Universal Time (UTC time) offset should not be used anywhere in a QRDA Category I file or, if a UTC time offset is needed anywhere, then it must be specified everywhere a time field is provided. Example time elements are:

- effectiveTime/@value
- effectiveTime/low/@value
- effectiveTime/high/@value
- time/@value
- time/low/@value
- time/high/@value

Table 14: Patient Data Section QDM (V7) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-------|-----------|----------------------------|---|
| section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.2.1:2019-12-01) | | | | | |
| templateId | 1..1 | SHALL | | 4444-12796 | |
| @root | 1..1 | SHALL | | 4444-12797 | 2.16.840.1.113883.10.20.24.2.1 |
| @extension | 1..1 | SHALL | | 4444-28405 | 2019-12-01 |
| entry | 0..* | MAY | | 4444-28747 | |
| @typeCode | 1..1 | SHALL | | 4444-28748 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| observation | 1..1 | SHALL | | 4444-28749 | Adverse Event (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.146:2019-12-01) |
| entry | 0..* | MAY | | 4444-28851 | |
| @typeCode | 1..1 | SHALL | | 4444-28852 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| observation | 1..1 | SHALL | | 4444-28853 | Allergy Intolerance (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.147:2019-12-01) |
| entry | 0..* | MAY | | 4444-28684 | |
| @typeCode | 1..1 | SHALL | | 4444-28685 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| observation | 1..1 | SHALL | | 4444-28686 | Assessment Performed (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.144:2019-12-01) |
| entry | 0..* | MAY | | 4444-28687 | |
| @typeCode | 1..1 | SHALL | | 4444-28688 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| observation | 1..1 | SHALL | | 4444-28689 | Assessment Recommended (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.145:2019-12-01) |
| entry | 0..* | MAY | | 4444-29626 | |
| @typeCode | 1..1 | SHALL | | 4444- | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------|-------|-------|-----------|----------------------------|---|
| | | | | 29629 | = DRIV |
| observation | 1..1 | SHALL | | 4444-29627 | Assessment Order (V2) (identifier: urn:hl7ii:2.16.840.1.113883.1 0.20.24.3.158:2019-12-01) |
| entry | 0..* | MAY | | 4444-16574 | |
| @typeCode | 1..1 | SHALL | | 4444-16676 | urn:oid:2.16.840.1.113883.5.1 002 (HL7ActRelationshipType) = DRIV |
| observation | 1..1 | SHALL | | 4444-27068 | Care Goal (V5) (identifier: urn:hl7ii:2.16.840.1.113883.1 0.20.24.3.1:2019-12-01) |
| entry | 0..* | MAY | | 4444-29624 | |
| @typeCode | 1..1 | SHALL | | 4444-29628 | urn:oid:2.16.840.1.113883.5.1 002 (HL7ActRelationshipType) = DRIV |
| act | 1..1 | SHALL | | 4444-29625 | Communication Performed (V2) (identifier: urn:hl7ii:2.16.840.1.113883.1 0.20.24.3.156:2019-12-01) |
| entry | 0..* | MAY | | 4444-13268 | |
| @typeCode | 1..1 | SHALL | | 4444-16634 | urn:oid:2.16.840.1.113883.5.1 002 (HL7ActRelationshipType) = DRIV |
| procedure | 1..1 | SHALL | | 4444-27133 | Device Applied (V6) (identifier: urn:hl7ii:2.16.840.1.113883.1 0.20.24.3.7:2019-12-01) |
| entry | 0..* | MAY | | 4444-12904 | |
| @typeCode | 1..1 | SHALL | | 4444-16604 | urn:oid:2.16.840.1.113883.5.1 002 (HL7ActRelationshipType) = DRIV |
| act | 1..1 | SHALL | | 4444-28460 | Device Order Act (V3) (identifier: urn:hl7ii:2.16.840.1.113883.1 0.20.24.3.130:2019-12-01) |
| entry | 0..* | MAY | | 4444-12906 | |
| @typeCode | 1..1 | SHALL | | 4444-16605 | urn:oid:2.16.840.1.113883.5.1 002 (HL7ActRelationshipType) = DRIV |
| act | 1..1 | SHALL | | 4444-28461 | Device Recommended Act (V3) (identifier: urn:hl7ii:2.16.840.1.113883.1 0.20.24.3.131:2019-12-01) |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------|-------|-------|-----------|----------------------------|--|
| entry | 0..* | MAY | | 4444-12908 | |
| @typeCode | 1..1 | SHALL | | 4444-16606 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| act | 1..1 | SHALL | | 4444-28549 | Diagnosis Concern Act (V4) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.137:2019-12-01) |
| entry | 0..* | MAY | | 4444-13949 | |
| @typeCode | 1..1 | SHALL | | 4444-16654 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| observation | 1..1 | SHALL | | 4444-27142 | Diagnostic Study Performed (V5) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.18:2019-12-01) |
| entry | 0..* | MAY | | 4444-13951 | |
| @typeCode | 1..1 | SHALL | | 4444-16655 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| observation | 1..1 | SHALL | | 4444-13952 | Diagnostic Study Order (V5) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.17:2019-12-01) |
| entry | 0..* | MAY | | 4444-13947 | |
| @typeCode | 1..1 | SHALL | | 4444-16653 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| observation | 1..1 | SHALL | | 4444-28956 | Diagnostic Study Recommended (V5) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.19:2019-12-01) |
| entry | 0..* | MAY | | 4444-16556 | |
| @typeCode | 1..1 | SHALL | | 4444-16675 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| act | 1..1 | SHALL | | 4444-27062 | Discharge Medication (V5) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.105:2019-12-01) |
| entry | 0..* | MAY | | 4444-13941 | |
| @typeCode | 1..1 | SHALL | | 4444- | urn:oid:2.16.840.1.113883.5.1 |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------------|-------|-------|-----------|----------------------------|--|
| | | | | 16649 | 002 (HL7ActRelationshipType) = DRIV |
| act | 1..1 | SHALL | | 4444-28496 | Encounter Performed Act (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.133:2019-12-01) |
| entry | 0..* | MAY | | 4444-13034 | |
| @typeCode | 1..1 | SHALL | | 4444-16612 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| act | 1..1 | SHALL | | 4444-28494 | Encounter Order Act (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.132:2019-12-01) |
| entry | 0..* | MAY | | 4444-13146 | |
| @typeCode | 1..1 | SHALL | | 4444-16613 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| act | 1..1 | SHALL | | 4444-28495 | Encounter Recommended Act (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.134:2019-12-01) |
| entry | 0..* | MAY | | 4444-28594 | |
| @typeCode | 1..1 | SHALL | | 4444-28595 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| substanceAdministration | 1..1 | SHALL | | 4444-29623 | Immunization Administered (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.140:2019-12-01) |
| entry | 0..* | MAY | | 4444-28648 | |
| @typeCode | 1..1 | SHALL | | 4444-28649 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| substanceAdministration | 1..1 | SHALL | | 4444-28650 | Immunization Order (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.143:2019-12-01) |
| entry | 0..* | MAY | | 4444-14565 | |
| @typeCode | 1..1 | SHALL | | 4444-16670 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| organizer | 1..1 | SHALL | | 4444- | Family History Organizer QDM |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------|-------|-------|-----------|----------------------------|--|
| | | | | 27055 | (V5) (identifier: urn:hl7ii:2.16.840.1.113883.1 0.20.24.3.12:2019-12-01) |
| entry | 0..* | MAY | | 4444-13918 | |
| @typeCode | 1..1 | SHALL | | 4444-28434 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| act | 1..1 | SHALL | | 4444-27145 | Intervention Performed (V5) (identifier: urn:hl7ii:2.16.840.1.113883.1 0.20.24.3.32:2019-12-01) |
| entry | 0..* | MAY | | 4444-13916 | |
| @typeCode | 1..1 | SHALL | | 4444-16645 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| act | 1..1 | SHALL | | 4444-27042 | Intervention Recommended (V5) (identifier: urn:hl7ii:2.16.840.1.113883.1 0.20.24.3.33:2019-12-01) |
| entry | 0..* | MAY | | 4444-13920 | |
| @typeCode | 1..1 | SHALL | | 4444-16646 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| act | 1..1 | SHALL | | 4444-27043 | Intervention Order (V5) (identifier: urn:hl7ii:2.16.840.1.113883.1 0.20.24.3.31:2019-12-01) |
| entry | 0..* | MAY | | 4444-13272 | |
| @typeCode | 1..1 | SHALL | | 4444-16636 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| observation | 1..1 | SHALL | | 4444-13273 | Laboratory Test Recommended (V5) (identifier: urn:hl7ii:2.16.840.1.113883.1 0.20.24.3.39:2019-12-01) |
| entry | 0..* | MAY | | 4444-13154 | |
| @typeCode | 1..1 | SHALL | | 4444-16617 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| observation | 1..1 | SHALL | | 4444-27076 | Laboratory Test Order (V5) (identifier: urn:hl7ii:2.16.840.1.113883.1 0.20.24.3.37:2019-12-01) |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------------|-------|-------|-----------|----------------------------|---|
| entry | 0..* | MAY | | 4444-13156 | |
| @typeCode | 1..1 | SHALL | | 4444-16618 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| observation | 1..1 | SHALL | | 4444-27156 | Laboratory Test Performed (V5) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.38:2019-12-01) |
| entry | 0..* | MAY | | 4444-13910 | |
| @typeCode | 1..1 | SHALL | | 4444-16643 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| substanceAdministration | 1..1 | SHALL | | 4444-27040 | Medication Active (V5) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.41:2019-12-01) |
| entry | 0..* | MAY | | 4444-16707 | |
| @typeCode | 1..1 | SHALL | | 4444-16708 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| substanceAdministration | 1..1 | SHALL | | 4444-28906 | Medication Administered (V5) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.42:2019-12-01) |
| entry | 0..* | MAY | | 4444-13912 | |
| @typeCode | 1..1 | SHALL | | 4444-16644 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| act | 1..1 | SHALL | | 4444-28570 | Medication Dispensed Act (V4) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.139:2019-12-01) |
| entry | 0..* | MAY | | 4444-13903 | |
| @typeCode | 1..1 | SHALL | | 4444-16642 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| substanceAdministration | 1..1 | SHALL | | 4444-27090 | Medication Order (V6) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.47:2019-12-01) |
| entry | 0..* | MAY | | 4444-13249 | |
| @typeCode | 1..1 | SHALL | | 4444- | urn:oid:2.16.840.1.113883.5.1 |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------|-------|-------|-----------|----------------------------|---|
| | | | | 16630 | 002 (HL7ActRelationshipType) = DRIV |
| observation | 1..1 | SHALL | | 4444-27136 | Physical Exam Performed (V5) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.59:2019-12-01) |
| entry | 0..* | MAY | | 4444-27079 | |
| @typeCode | 1..1 | SHALL | | 4444-27080 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| observation | 1..1 | SHALL | | 4444-27081 | Physical Exam Order (V5) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.58:2019-12-01) |
| entry | 0..* | MAY | | 4444-13294 | |
| @typeCode | 1..1 | SHALL | | 4444-16638 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| observation | 1..1 | SHALL | | 4444-13295 | Physical Exam Recommended (V5) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.60:2019-12-01) |
| entry | 0..* | MAY | | 4444-13162 | |
| @typeCode | 1..1 | SHALL | | 4444-16620 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| procedure | 1..1 | SHALL | | 4444-27084 | Procedure Order (V6) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.63:2019-12-01) |
| entry | 0..* | MAY | | 4444-13164 | |
| @typeCode | 1..1 | SHALL | | 4444-16621 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| procedure | 1..1 | SHALL | | 4444-27130 | Procedure Performed (V6) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.64:2019-12-01) |
| entry | 0..* | MAY | | 4444-13166 | |
| @typeCode | 1..1 | SHALL | | 4444-16622 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| procedure | 1..1 | SHALL | | 4444- | Procedure Recommended (V6) |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------|-------|-------|-----------|----------------------------|--|
| | | | | 27087 | (identifier: urn:hl7ii:2.16.840.1.113883.1 0.20.24.3.65:2019-12-01) |
| entry | 0..* | MAY | | 4444-13170 | |
| @typeCode | 1..1 | SHALL | | 4444-16624 | urn:oid:2.16.840.1.113883.5.1 002 (HL7ActRelationshipType) = DRIV |
| observation | 1..1 | SHALL | | 4444-27295 | Provider Care Experience (V5) (identifier: urn:hl7ii:2.16.840.1.113883.1 0.20.24.3.67:2019-12-01) |
| entry | 0..* | MAY | | 4444-13245 | |
| @typeCode | 1..1 | SHALL | | 4444-16628 | urn:oid:2.16.840.1.113883.5.1 002 (HL7ActRelationshipType) = DRIV |
| observation | 1..1 | SHALL | | 4444-27296 | Patient Care Experience (V5) (identifier: urn:hl7ii:2.16.840.1.113883.1 0.20.24.3.48:2019-12-01) |
| entry | 0..* | MAY | | 4444-14247 | |
| @typeCode | 1..1 | SHALL | | 4444-16660 | urn:oid:2.16.840.1.113883.5.1 002 (HL7ActRelationshipType) = DRIV |
| observation | 1..1 | SHALL | | 4444-27048 | Patient Characteristic Clinical Trial Participant (V4) (identifier: urn:hl7ii:2.16.840.1.113883.1 0.20.24.3.51:2017-08-01) |
| entry | 0..* | MAY | | 4444-14430 | |
| @typeCode | 1..1 | SHALL | | 4444-16666 | urn:oid:2.16.840.1.113883.5.1 002 (HL7ActRelationshipType) = DRIV |
| observation | 1..1 | SHALL | | 4444-14431 | Patient Characteristic Payer (identifier: urn:oid:2.16.840.1.113883.10.20.24.3.55) |
| entry | 0..* | MAY | | 4444-14471 | |
| @typeCode | 1..1 | SHALL | | 4444-16667 | urn:oid:2.16.840.1.113883.5.1 002 (HL7ActRelationshipType) = DRIV |
| observation | 1..1 | SHALL | | 4444-27052 | Patient Characteristic Expired (V3) (identifier: urn:hl7ii:2.16.840.1.113883.1 |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------------|-------|-------|-----------|----------------------------|---|
| | | | | | 0.20.24.3.54:2016-02-01 |
| entry | 0..* | MAY | | 4444-16548 | |
| @typeCode | 1..1 | SHALL | | 4444-16674 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| observation | 1..1 | SHALL | | 4444-16549 | Patient Characteristic Observation Assertion (V5) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.103:2019-12-01) |
| entry | 0..* | MAY | | 4444-28979 | |
| @typeCode | 1..1 | SHALL | | 4444-28980 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| observation | 1..1 | SHALL | | 4444-28981 | Program Participation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.154:2019-12-01) |
| entry | 0..* | MAY | | 4444-30002 | |
| @typeCode | 1..1 | SHALL | | 4444-30004 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| observation | 1..1 | SHALL | | 4444-30003 | Related Person QDM (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.170:2019-12-01) |
| entry | 0..* | MAY | | 4444-14428 | |
| @typeCode | 1..1 | SHALL | | 4444-16665 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| substanceAdministration | 1..1 | SHALL | | 4444-27153 | Substance Recommended (V5) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.75:2019-12-01) |
| entry | 0..* | MAY | | 4444-13172 | |
| @typeCode | 1..1 | SHALL | | 4444-16625 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| act | 1..1 | SHALL | | 4444-28550 | Symptom Concern Act (V4) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.138:2019-12-01) |

1. Conforms to [Patient Data Section](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.17.2.4).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-12796) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.2.1" (CONF:4444-12797).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-28405).
3. **MAY** contain zero or more [0..*] **entry** (CONF:4444-28747) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-28748).
 - b. **SHALL** contain exactly one [1..1] [Adverse Event \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.146:2019-12-01) (CONF:4444-28749).
4. **MAY** contain zero or more [0..*] **entry** (CONF:4444-28851) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-28852).
 - b. **SHALL** contain exactly one [1..1] [Allergy Intolerance \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.147:2019-12-01) (CONF:4444-28853).
5. **MAY** contain zero or more [0..*] **entry** (CONF:4444-28684) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-28685).
 - b. **SHALL** contain exactly one [1..1] [Assessment Performed \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.144:2019-12-01) (CONF:4444-28686).
6. **MAY** contain zero or more [0..*] **entry** (CONF:4444-28687) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-28688).
 - b. **SHALL** contain exactly one [1..1] [Assessment Recommended \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.145:2019-12-01) (CONF:4444-28689).
7. **MAY** contain zero or more [0..*] **entry** (CONF:4444-29626) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-29629).
 - b. **SHALL** contain exactly one [1..1] [Assessment Order \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.158:2019-12-01) (CONF:4444-29627).
8. **MAY** contain zero or more [0..*] **entry** (CONF:4444-16574) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16676).

- b. **SHALL** contain exactly one [1..1] [Care Goal \(V5\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.1:2019-12-01) (CONF:4444-27068).
- 9. **MAY** contain zero or more [0..*] **entry** (CONF:4444-29624) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-29628).
 - b. **SHALL** contain exactly one [1..1] [Communication Performed \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.156:2019-12-01) (CONF:4444-29625).
- 10. **MAY** contain zero or more [0..*] **entry** (CONF:4444-13268) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16634).
 - b. **SHALL** contain exactly one [1..1] [Device Applied \(V6\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.7:2019-12-01) (CONF:4444-27133).
- 11. **MAY** contain zero or more [0..*] **entry** (CONF:4444-12904) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16604).
 - b. **SHALL** contain exactly one [1..1] [Device Order Act \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.130:2019-12-01) (CONF:4444-28460).
- 12. **MAY** contain zero or more [0..*] **entry** (CONF:4444-12906) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16605).
 - b. **SHALL** contain exactly one [1..1] [Device Recommended Act \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.131:2019-12-01) (CONF:4444-28461).
- 13. **MAY** contain zero or more [0..*] **entry** (CONF:4444-12908) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16606).
 - b. **SHALL** contain exactly one [1..1] [Diagnosis Concern Act \(V4\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.137:2019-12-01) (CONF:4444-28549).
- 14. **MAY** contain zero or more [0..*] **entry** (CONF:4444-13949) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16654).
 - b. **SHALL** contain exactly one [1..1] [Diagnostic Study Performed \(V5\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.18:2019-12-01) (CONF:4444-27142).

15. **MAY** contain zero or more [0..*] **entry** (CONF:4444-13951) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16655).
 - b. **SHALL** contain exactly one [1..1] [Diagnostic Study Order \(V5\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.17:2019-12-01) (CONF:4444-13952).
16. **MAY** contain zero or more [0..*] **entry** (CONF:4444-13947) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16653).
 - b. **SHALL** contain exactly one [1..1] [Diagnostic Study Recommended \(V5\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.19:2019-12-01) (CONF:4444-28956).
17. **MAY** contain zero or more [0..*] **entry** (CONF:4444-16556) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16675).
 - b. **SHALL** contain exactly one [1..1] [Discharge Medication \(V5\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.105:2019-12-01) (CONF:4444-27062).
18. **MAY** contain zero or more [0..*] **entry** (CONF:4444-13941) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16649).
 - b. **SHALL** contain exactly one [1..1] [Encounter Performed Act \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.133:2019-12-01) (CONF:4444-28496).
19. **MAY** contain zero or more [0..*] **entry** (CONF:4444-13034) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16612).
 - b. **SHALL** contain exactly one [1..1] [Encounter Order Act \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.132:2019-12-01) (CONF:4444-28494).
20. **MAY** contain zero or more [0..*] **entry** (CONF:4444-13146) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16613).
 - b. **SHALL** contain exactly one [1..1] [Encounter Recommended Act \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.134:2019-12-01) (CONF:4444-28495).
21. **MAY** contain zero or more [0..*] **entry** (CONF:4444-28594) such that it

- a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" Is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-28595).
 - b. **SHALL** contain exactly one [1..1] [Immunization Administered \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.140:2019-12-01) (CONF:4444-29623).
22. **MAY** contain zero or more [0..*] **entry** (CONF:4444-28648) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-28649).
 - b. **SHALL** contain exactly one [1..1] [Immunization Order \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.143:2019-12-01) (CONF:4444-28650).
23. **MAY** contain zero or more [0..*] **entry** (CONF:4444-14565) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16670).
 - b. **SHALL** contain exactly one [1..1] [Family History Organizer QDM \(V5\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.12:2019-12-01) (CONF:4444-27055).
24. **MAY** contain zero or more [0..*] **entry** (CONF:4444-13918) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-28434).
 - b. **SHALL** contain exactly one [1..1] [Intervention Performed \(V5\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.32:2019-12-01) (CONF:4444-27145).
25. **MAY** contain zero or more [0..*] **entry** (CONF:4444-13916) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16645).
 - b. **SHALL** contain exactly one [1..1] [Intervention Recommended \(V5\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.33:2019-12-01) (CONF:4444-27042).
26. **MAY** contain zero or more [0..*] **entry** (CONF:4444-13920) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16646).
 - b. **SHALL** contain exactly one [1..1] [Intervention Order \(V5\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.31:2019-12-01) (CONF:4444-27043).
27. **MAY** contain zero or more [0..*] **entry** (CONF:4444-13272) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16636).

- b. **SHALL** contain exactly one [1..1] [Laboratory Test Recommended \(V5\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.39:2019-12-01) (CONF:4444-13273).
28. **MAY** contain zero or more [0..*] **entry** (CONF:4444-13154) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16617).
 - b. **SHALL** contain exactly one [1..1] [Laboratory Test Order \(V5\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.37:2019-12-01) (CONF:4444-27076).
29. **MAY** contain zero or more [0..*] **entry** (CONF:4444-13156) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16618).
 - b. **SHALL** contain exactly one [1..1] [Laboratory Test Performed \(V5\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.38:2019-12-01) (CONF:4444-27156).
30. **MAY** contain zero or more [0..*] **entry** (CONF:4444-13910) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16643).
 - b. **SHALL** contain exactly one [1..1] [Medication Active \(V5\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.41:2019-12-01) (CONF:4444-27040).
31. **MAY** contain zero or more [0..*] **entry** (CONF:4444-16707) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16708).
 - b. **SHALL** contain exactly one [1..1] [Medication Administered \(V5\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.42:2019-12-01) (CONF:4444-28906).
32. **MAY** contain zero or more [0..*] **entry** (CONF:4444-13912) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16644).
 - b. **SHALL** contain exactly one [1..1] [Medication Dispensed Act \(V4\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.139:2019-12-01) (CONF:4444-28570).
33. **MAY** contain zero or more [0..*] **entry** (CONF:4444-13903) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16642).
 - b. **SHALL** contain exactly one [1..1] [Medication Order \(V6\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.47:2019-12-01) (CONF:4444-27090).

34. **MAY** contain zero or more [0..*] **entry** (CONF:4444-13249) such that it
- SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16630).
 - SHALL** contain exactly one [1..1] [Physical Exam Performed \(V5\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.59:2019-12-01) (CONF:4444-27136).
35. **MAY** contain zero or more [0..*] **entry** (CONF:4444-27079) such that it
- SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-27080).
 - SHALL** contain exactly one [1..1] [Physical Exam Order \(V5\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.58:2019-12-01) (CONF:4444-27081).
36. **MAY** contain zero or more [0..*] **entry** (CONF:4444-13294) such that it
- SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16638).
 - SHALL** contain exactly one [1..1] [Physical Exam Recommended \(V5\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.60:2019-12-01) (CONF:4444-13295).
37. **MAY** contain zero or more [0..*] **entry** (CONF:4444-13162) such that it
- SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16620).
 - SHALL** contain exactly one [1..1] [Procedure Order \(V6\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.63:2019-12-01) (CONF:4444-27084).
38. **MAY** contain zero or more [0..*] **entry** (CONF:4444-13164) such that it
- SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16621).
 - SHALL** contain exactly one [1..1] [Procedure Performed \(V6\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.64:2019-12-01) (CONF:4444-27130).
39. **MAY** contain zero or more [0..*] **entry** (CONF:4444-13166) such that it
- SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16622).
 - SHALL** contain exactly one [1..1] [Procedure Recommended \(V6\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.65:2019-12-01) (CONF:4444-27087).
40. **MAY** contain zero or more [0..*] **entry** (CONF:4444-13170) such that it

- a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16624).
 - b. **SHALL** contain exactly one [1..1] [Provider Care Experience \(V5\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.67:2019-12-01) (CONF:4444-27295).
41. **MAY** contain zero or more [0..*] **entry** (CONF:4444-13245) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16628).
 - b. **SHALL** contain exactly one [1..1] [Patient Care Experience \(V5\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.48:2019-12-01) (CONF:4444-27296).
42. **MAY** contain zero or more [0..*] **entry** (CONF:4444-14247) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16660).
 - b. **SHALL** contain exactly one [1..1] [Patient Characteristic Clinical Trial Participant \(V4\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.51:2017-08-01) (CONF:4444-27048).
43. **MAY** contain zero or more [0..*] **entry** (CONF:4444-14430) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16666).
 - b. **SHALL** contain exactly one [1..1] [Patient Characteristic Payer](#) (identifier: urn:oid:2.16.840.1.113883.10.20.24.3.55) (CONF:4444-14431).
44. **MAY** contain zero or more [0..*] **entry** (CONF:4444-14471) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16667).
 - b. **SHALL** contain exactly one [1..1] [Patient Characteristic Expired \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.54:2016-02-01) (CONF:4444-27052).
45. **MAY** contain zero or more [0..*] **entry** (CONF:4444-16548) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" Is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16674).
 - b. **SHALL** contain exactly one [1..1] [Patient Characteristic Observation Assertion \(V5\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.103:2019-12-01) (CONF:4444-16549).
46. **MAY** contain zero or more [0..*] **entry** (CONF:4444-28979) such that it

- a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-28980).
 - b. **SHALL** contain exactly one [1..1] [Program Participation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.154:2019-12-01) (CONF:4444-28981).
47. **MAY** contain zero or more [0..*] **entry** (CONF:4444-30002) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-30004).
 - b. **SHALL** contain exactly one [1..1] [Related Person QDM](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.170:2019-12-01) (CONF:4444-30003).
48. **MAY** contain zero or more [0..*] **entry** (CONF:4444-14428) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16665).
 - b. **SHALL** contain exactly one [1..1] [Substance Recommended \(V5\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.75:2019-12-01) (CONF:4444-27153).
49. **MAY** contain zero or more [0..*] **entry** (CONF:4444-13172) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16625).
 - b. **SHALL** contain exactly one [1..1] [Symptom Concern Act \(V4\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.138:2019-12-01) (CONF:4444-28550).

2.3 Reporting Parameters Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.17.2.1 (open)]

Table 15: Reporting Parameters Section Contexts

| Contained By: | Contains: |
|---|---|
| QRDA Category I Framework (V4) (required) | Reporting Parameters Act (required) |
| QDM-Based QRDA (V7) (required) | |

The Reporting Parameters Section provides information about the reporting time interval, and may contain other information that provides context for the data being reported. The receiving organization may tell the reporting institution what information is needed in this section. The reporting parameter time interval refers to the data being sent in the document and may differ from the quality measure's measurement period or valid dates for the data set.

Table 16: Reporting Parameters Section Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|-------|-----------|--------------------------|---|
| section (identifier: urn:oid:2.16.840.1.113883.10.20.17.2.1) | | | | | |
| templateId | 1..1 | SHALL | | 23-14611 | |
| @root | 1..1 | SHALL | | 23-14612 | 2.16.840.1.113883.10.20.17.2.1 |
| code | 1..1 | SHALL | | 23-18191 | |
| @code | 1..1 | SHALL | | 23-19229 | 55187-9 |
| @codeSystem | 1..1 | SHALL | | 23-26552 | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| title | 1..1 | SHALL | | 23-4142 | Reporting Parameters |
| text | 1..1 | SHALL | | 23-4143 | |
| entry | 1..1 | SHALL | | 23-3277 | |
| @typeCode | 1..1 | SHALL | | 23-3278 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DRIV |
| act | 1..1 | SHALL | | 23-17496 | Reporting Parameters Act (identifier: urn:oid:2.16.840.1.113883.10.20.17.3.8) |

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:23-14611) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.17.2.1" (CONF:23-14612).
2. **SHALL** contain exactly one [1..1] **code** (CONF:23-18191).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="55187-9" Reporting Parameters (CONF:23-19229).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:23-26552).
3. **SHALL** contain exactly one [1..1] **title**="Reporting Parameters" (CONF:23-4142).
4. **SHALL** contain exactly one [1..1] **text** (CONF:23-4143).
5. **SHALL** contain exactly one [1..1] **entry** (CONF:23-3277) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV" Is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:23-3278).
 - b. **SHALL** contain exactly one [1..1] [Reporting Parameters Act](#) (identifier: urn:oid:2.16.840.1.113883.10.20.17.3.8) (CONF:23-17496).

3 ENTRY-LEVEL TEMPLATES

3.1 Admission Source

[participantRole: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.151:2017-08-01 (open)]

Table 17: Admission Source Contexts

| Contained By: | Contains: |
|---|-----------|
| Encounter Performed (V5) (optional) | |

This template represents the source of admission (point of origin) of an encounter.

Table 18: Admission Source Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|--------|-----------|----------------------------|---|
| participantRole (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.151:2017-08-01) | | | | | |
| @classCode | 1..1 | SHALL | | 3343-29094 | urn:oid:2.16.840.1.113883.5.111 (HL7RoleCode) = SDLOC |
| templateId | 1..1 | SHALL | | 3343-29091 | |
| @root | 1..1 | SHALL | | 3343-29093 | 2.16.840.1.113883.10.20.24.3.151 |
| @extension | 1..1 | SHALL | | 3343-29100 | 2017-08-01 |
| code | 1..1 | SHALL | | 3343-29099 | |
| addr | 0..* | SHOULD | | 3343-29095 | |
| telecom | 0..* | SHOULD | | 3343-29096 | |
| playingEntity | 0..1 | MAY | | 3343-29092 | |
| @classCode | 1..1 | SHALL | | 3343-29097 | urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = PLC |
| name | 0..1 | MAY | | 3343-29098 | |

1. **SHALL** contain exactly one [1..1] **@classCode**="SDLOC" (CodeSystem: HL7RoleCode urn:oid:2.16.840.1.113883.5.111 **STATIC**) (CONF:3343-29094).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:3343-29091) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.151" (CONF:3343-29093).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2017-08-01" (CONF:3343-29100).

3. **SHALL** contain exactly one [1..1] **code** (CONF:3343-29099).
4. **SHOULD** contain zero or more [0..*] **addr** (CONF:3343-29095).
5. **SHOULD** contain zero or more [0..*] **telecom** (CONF:3343-29096).
6. **MAY** contain zero or one [0..1] **playingEntity** (CONF:3343-29092).
 - a. The playingEntity, if present, **SHALL** contain exactly one [1..1] **@classCode="PLC"** (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41 **STATIC**) (CONF:3343-29097).
 - b. The playingEntity, if present, **MAY** contain zero or one [0..1] **name** (CONF:3343-29098).

Figure 19: Admission Source Example

```

<participantRole classCode="SDLOC">
  <templateId root="2.16.840.1.113883.10.20.24.3.151" extension="2017-08-01"/>
  <code code="42665001" codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED" displayName="Nursing home (environment)"/>
  <addr>
    <streetAddressLine>17 Daws Rd.</streetAddressLine>
    <city>Blue Bell</city>
    <state>MA</state>
    <postalCode>02368</postalCode>
    <country>US</country>
  </addr>
  <telecom use="WP" value="tel:+1(555)555-5000"/>
  <playingEntity classCode="PLC">
    <name>Nursing Home</name>
  </playingEntity>
</participantRole>

```

3.2 Adverse Event (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.146:2019-12-01 (open)]

Table 19: Adverse Event (V2) Contexts

| Contained By: | Contains: |
|--|--|
| Patient Data Section QDM (V7) (optional) | Reaction Observation (V2) (optional) Severity Observation (V2) (optional) Facility Location (V2) (optional) Adverse Event Cause Observation Assertion (required) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Author (V2) (optional) |

This template represents QDM data type: Adverse Event.

Adverse Event is used to define any untoward medical occurrence associated with the clinical care

delivery, whether or not considered drug related.

The Relevant Period references: `startTime` – the time the adverse event began, and `stopTime` – the time the adverse event completed

The cause of the adverse event is represented via an `entryRelationship` of type “CAUS” (has cause).

Table 20: Adverse Event (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|--------------|-------------|------------------|----------------------------|--|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.146:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-28773 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 4444-28774 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 0..0 | SHALL NOT | | 4444-28776 | |
| templateId | 1..1 | SHALL | | 4444-28751 | |
| @root | 1..1 | SHALL | | 4444-28761 | 2.16.840.1.113883.10.20.24.3.146 |
| @extension | 1..1 | SHALL | | 4444-28762 | 2019-12-01 |
| id | 1..* | SHALL | | 4444-28775 | |
| code | 1..1 | SHALL | | 4444-28752 | |
| @code | 1..1 | SHALL | | 4444-28763 | ASSERTION |
| @codeSystem | 1..1 | SHALL | | 4444-28764 | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL | | 4444-28753 | |
| @code | 1..1 | SHALL | | 4444-28765 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL | | 4444-28754 | |
| @value | 1..1 | SHALL | | 4444-30015 | |
| value | 1..1 | SHALL | CD | 4444-28756 | |
| @code | 1..1 | SHALL | | 4444-28771 | 281647001 |
| @codeSystem | 1..1 | SHALL | | 4444-28772 | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96 |
| author | 0..1 | MAY | | 4444-28779 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| participant | 0..1 | MAY | | 4444-28780 | Facility Location (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.100:2017-08-01) |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|---|
| participant | 0..* | MAY | | 4444-29207 | |
| @typeCode | 1..1 | SHALL | | 4444-29213 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29208 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29205 | |
| @typeCode | 1..1 | SHALL | | 4444-29212 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29206 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29203 | |
| @typeCode | 1..1 | SHALL | | 4444-29211 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29204 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-28781 | |
| @typeCode | 1..1 | SHALL | | 4444-28783 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-28782 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |
| entryRelationship | 1..1 | SHALL | | 4444-28755 | |
| @typeCode | 1..1 | SHALL | | 4444-28768 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = CAUS |
| @inversionInd | 1..1 | SHALL | | 4444-28769 | true |
| observation | 1..1 | SHALL | | 4444-28770 | Adverse Event Cause Observation Assertion (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.148:2017-08-01) |
| entryRelationship | 0..1 | MAY | | 4444-28750 | |
| @typeCode | 1..1 | SHALL | | 4444- | urn:oid:2.16.840.1.113883.5.1 |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|--|
| | | | | 28759 | 002 (HL7ActRelationshipType) = MFST |
| @inversionInd | 1..1 | SHALL | | 4444-28760 | true |
| observation | 1..1 | SHALL | | 4444-28758 | Reaction Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.1.0.20.22.4.9:2014-06-09) |
| entryRelationship | 0..1 | MAY | | 4444-28757 | |
| @typeCode | 1..1 | SHALL | | 4444-28777 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| observation | 1..1 | SHALL | | 4444-28778 | Severity Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.1.0.20.22.4.8:2014-06-09) |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-28773).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-28774).
3. **SHALL NOT** contain [0..0] **@negationInd** (CONF:4444-28776).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-28751) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.146" (CONF:4444-28761).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-28762).
5. **SHALL** contain at least one [1..*] **id** (CONF:4444-28775).
6. **SHALL** contain exactly one [1..1] **code** (CONF:4444-28752).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:4444-28763).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:4444-28764).
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:4444-28753).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:4444-28765).
8. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4444-28754).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **@value** (CONF:4444-30015).
Note: QDM Attribute: Relevant dateTime – datetime adverse event occurred
9. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:4444-28756).
 - a. This value **SHALL** contain exactly one [1..1] **@code**="281647001" Adverse reaction (CONF:4444-28771).

- b. This value **SHALL** contain exactly one [1..1]
 - @codeSystem**="2.16.840.1.113883.6.96" SNOMED CT (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:4444-28772).
- 10. **MAY** contain zero or one [0..1] **Author (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-28779).
Note: QDM Attribute: Author dateTime - the time the adverse event was recorded
- 11. **MAY** contain zero or one [0..1] **Facility Location (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.100:2017-08-01) (CONF:4444-28780).
Note: QDM Attribute: Facility Locations
- 12. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29207) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" performer (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29213).
 - b. **SHALL** contain exactly one [1..1] **Entity Practitioner** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29208).
Note: QDM Attribute: Recorder
- 13. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29205) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" performer (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29212).
 - b. **SHALL** contain exactly one [1..1] **Entity Organization** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29206).
Note: QDM Attribute: Recorder
- 14. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29203) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29211).
 - b. **SHALL** contain exactly one [1..1] **Entity Patient** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29204).
Note: QDM Attribute: Recorder
- 15. **MAY** contain zero or more [0..*] **participant** (CONF:4444-28781) such that it
Note: QDM Attribute: Recorder
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-28783).
 - b. **SHALL** contain exactly one [1..1] **Entity Care Partner** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-28782).
- 16. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:4444-28755) such that it
Note: QDM Attribute: Code
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="CAUS" Is etiology for (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-28768).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd**="true" (CONF:4444-28769).

- c. **SHALL** contain exactly one [1..1] [Adverse Event Cause Observation Assertion](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.148:2017-08-01) (CONF:4444-28770).
17. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-28750) such that it
Note: QDM Attribute: Type
- a. **SHALL** contain exactly one [1..1] **@typeCode**="MFST" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-28759).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd**="true" (CONF:4444-28760).
 - c. **SHALL** contain exactly one [1..1] [Reaction Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09) (CONF:4444-28758).
18. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-28757) such that it
Note: QDM Attribute: Severity
- a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-28777).
 - b. **SHALL** contain exactly one [1..1] [Severity Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09) (CONF:4444-28778).

Figure 20: Adverse Event (V2) Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.24.3.146" extension="2019-12-01"/>
  <id root="508d3dc6-4883-480c-bf03-419daed0b02f"/>
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" codeSystemName="ActCode"
displayName="Assertion"/>
  <statusCode code="completed"/>
  <!-- QDM Attribute: Relevant dateTime -->
  <effectiveTime value="201902021030"/>
  <value xsi:type="CD" code="281647001" codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT" displayName="Adverse reaction"/>
  <participant typeCode="LOC">
    <!-- Facility Location (V2) -->
    <templateId root="2.16.840.1.113883.10.20.24.3.100" extension="2017-08-01"/>
    <time>
      <!-- QDM Attribute: Location Period -->
      <low value="201890202"/>
      <high value="20190202"/>
    </time>
    <participantRole classCode="SDLOC">
      <code code="309905000" codeSystem="2.16.840.1.113883.6.96"
        codeSystemName="SNOMED CT" displayName="Adult Intensive Care Unit"/>
      <addr></addr>
      <telecom></telecom>
    </participantRole>
  </participant>
  <!-- QDM Attribute: Code -->
  <entryRelationship typeCode="CAUS" inversionInd="true">
    <!-- Adverse Event Cause Assertion Observation -->
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.24.3.148" extension="2017-08-01"/>
      <id root="2fbc77d3-0093-4ea3-bd78-b280f91fd765"/>
      <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="ActCode" displayName="Assertion"/>
      <value xsi:type="CD" code="444179007" codeSystem="2.16.840.1.113883.6.96"
        displayName="Insertion of dual chamber pacemaker pulse generator
(procedure)"/>
    </observation>
  </entryRelationship>
  <!-- QDM Attribute: Reaction -->
  <entryRelationship typeCode="MFST" inversionInd="true">
    <observation classCode="OBS" moodCode="EVN">
      <!-- CDA R2.1 Reaction Observation (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.9" extension="2014-06-09"/>
      <id root="80aed311-8af7-401f-ab7f-727260d2b033"/>
      <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="ActCode"
        displayName="Assertion"/>
      <statusCode code="completed"/>
      <value xsi:type="CD" code="404684003" displayName="Nausea"
        codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT"/>
    </observation>
  </entryRelationship>
</observation>
```

3.3 Adverse Event Cause Observation Assertion

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.148:2017-08-01 (open)]

Table 21: Adverse Event Cause Observation Assertion Contexts

| Contained By: | Contains: |
|---|-----------|
| Adverse Event (V2) (required) | |

This template represents the Adverse Event QDM data types' Code attribute.

Table 22: Adverse Event Cause Observation Assertion Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-----------|-----------|----------------------------|--|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.148:2017-08-01) | | | | | |
| @classCode | 1..1 | SHALL | | 3343-28741 | OBS |
| @moodCode | 1..1 | SHALL | | 3343-28742 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = EVN |
| @negationInd | 0..0 | SHALL NOT | | 3343-28745 | |
| templateId | 1..1 | SHALL | | 3343-28731 | |
| @root | 1..1 | SHALL | | 3343-28736 | 2.16.840.1.113883.10.20.24.3.148 |
| @extension | 1..1 | SHALL | | 3343-28737 | 2017-08-01 |
| code | 1..1 | SHALL | | 3343-28730 | |
| @code | 1..1 | SHALL | | 3343-28734 | ASSERTION |
| @codeSystem | 1..1 | SHALL | | 3343-28735 | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| value | 1..1 | SHALL | CD | 3343-28733 | |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CONF:3343-28741).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:3343-28742).
3. **SHALL NOT** contain [0..0] **@negationInd** (CONF:3343-28745).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3343-28731) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.148" (CONF:3343-28736).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2017-08-01" (CONF:3343-28737).
5. **SHALL** contain exactly one [1..1] **code** (CONF:3343-28730).

- a. This code **SHALL** contain exactly one [1..1] @code="ASSERTION" (CONF:3343-28734).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3343-28735).
6. **SHALL** contain exactly one [1..1] value with @xsi:type="CD" (CONF:3343-28733).

Figure 21: Adverse Event Cause Observation Assertion Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.24.3.148" extension="2017-08-01" />
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" />
  <statusCode code="completed" />
  <value xsi:type="CD" code="93880001" codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT"
    displayName="Primary malignant neoplasm of lung (disorder)" />
</observation>
```

3.4 Age Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.22.4.31 (open)]

Table 23: Age Observation Contexts

| Contained By: | Contains: |
|---|-----------|
| Family History Observation (V3) (optional) Problem Observation (V3) (optional) | |

This Age Observation represents the subject's age at onset of an event or observation. The age of a relative in a Family History Observation at the time of that observation could also be inferred by comparing RelatedSubject/subject/birthTime with Observation/effectiveTime. However, a common scenario is that a patient will know the age of a relative when the relative had a certain condition or when the relative died, but will not know the actual year (e.g., "grandpa died of a heart attack at the age of 50"). Often times, neither precise dates nor ages are known (e.g., "cousin died of congenital heart disease as an infant").

Table 24: Age Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-------|-----------|--------------------------|---|
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.31) | | | | | |
| @classCode | 1..1 | SHALL | | 81-7613 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 81-7614 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 81-7899 | |
| @root | 1..1 | SHALL | | 81-10487 | 2.16.840.1.113883.10.20.22.4.31 |
| code | 1..1 | SHALL | | 81-7615 | |
| @code | 1..1 | SHALL | | 81-16776 | 445518008 |
| @codeSystem | 1..1 | SHALL | | 81-26499 | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96 |
| statusCode | 1..1 | SHALL | | 81-15965 | |
| @code | 1..1 | SHALL | | 81-15966 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | PQ | 81-7617 | |
| @unit | 1..1 | SHALL | CS | 81-7618 | urn:oid:2.16.840.1.113883.11.20.9.21 (AgePQ_UCUM) |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:81-7613).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:81-7614).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-7899) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.31" (CONF:81-10487).
4. **SHALL** contain exactly one [1..1] **code** (CONF:81-7615).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="445518008" Age At Onset (CONF:81-16776).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:81-26499).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:81-15965).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:81-15966).
6. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="PQ" (CONF:81-7617).
 - a. This value **SHALL** contain exactly one [1..1] **@unit**, which **SHALL** be selected from ValueSet [AgePQ_UCUM](#) urn:oid:2.16.840.1.113883.11.20.9.21 **DYNAMIC** (CONF:81-7618).

Figure 22: Age Observation Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.31" />
  <!-- Age observation -->
  <code code="445518008"
    codeSystem="2.16.840.1.113883.6.96"
    displayName="Age At Onset" />
  <statusCode code="completed" />
  <value xsi:type="PQ" value="57" unit="a" />
</observation>
```

3.5 Allergy Status Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.28:2019-06-20 (open)]

Table 25: Allergy Status Observation Contexts

| Contained By: | Contains: |
|---|-----------|
| Substance or Device Allergy - Intolerance Observation [V2] (optional) | |

This template represents the clinical status attributed to the allergy or intolerance. There can be only one allergy status observation per allergy - intolerance observation.

Table 26: Allergy Status Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|-------|-----------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.28:2019-06-20) | | | | | |
| @classCode | 1..1 | SHALL | | 1198-7318 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 1198-7319 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 1198-7317 | |
| @root | 1..1 | SHALL | | 1198-10490 | 2.16.840.1.113883.10.20.22.4.28 |
| @extension | 1..1 | SHALL | | 1198-32962 | 2019-06-20 |
| code | 1..1 | SHALL | | 1198-7320 | |
| @code | 1..1 | SHALL | | 1198-19131 | 33999-4 |
| @codeSystem | 1..1 | SHALL | | 1198-32155 | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| statusCode | 1..1 | SHALL | | 1198-7321 | |
| @code | 1..1 | SHALL | | 1198-19087 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CE | 1198-7322 | urn:oid:2.16.840.1.113762.1.4.1099.29 (Allergy Clinical Status) |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-7318).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-7319).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-7317) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.28" (CONF:1198-10490).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-06-20" (CONF:1198-32962).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1198-7320).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="33999-4" Status (CONF:1198-19131).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1198-32155).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-7321).

- a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1198-19087).
- 6. **SHALL** contain exactly one [1..1] value with @xsi:type="CE", where the code **SHALL** be selected from ValueSet [Allergy Clinical Status](#) urn:oid:2.16.840.1.113762.1.4.1099.29 **DYNAMIC** (CONF:1198-7322).

3.6 Assessment Performed (V3)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.144:2019-12-01 (open)]

Table 27: Assessment Performed (V3) Contexts

| Contained By: | Contains: |
|--|--|
| Patient Data Section QDM (V7) (optional) | Reason (V3) (optional) Component (optional) Related To (optional) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Author (V2) (required) |

This template represents the QDM datatype: Assessment, Performed.

Assessment is a resource used to define specific observations that clinicians use to guide treatment of the patient. An assessment can be a single question, or observable entity with an expected response, an organized collection of questions intended to solicit information from patients, providers or other individuals, or a single observable entity that is part of such a collection of questions. The Assessment Performed template represents the completion of an assessment.

This template could also be used to represent occupational data for health such as current industry, occupation, and employment status.

QDM attribute: Component. Elements included or documented as part of assessment. Examples include: specific questions included in assessments. Each assessment may have one or more components.

QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template.

Timing:

QDM attribute: Relevant dateTime references timing for an assessment that occurs at a single point in time.

QDM Attribute: Relevant Period references a start and stop time for an assessment that occurs over a time interval.

QDM attribute: Author dateTime references the time the assessment was recorded and applies only when the record has no reference to the time the assessment was performed and only the recorded time is available. For Assessment Not Performed for a reason always use the Author dateTime attribute to reference timing and must not use Relevant Period or Relevant dateTime.

Table 28: Assessment Performed (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|--------------|-------------|------------------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.144:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-28670 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 4444-28669 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 0..1 | MAY | | 4444-28671 | |
| templateId | 1..1 | SHALL | | 4444-28652 | |
| @root | 1..1 | SHALL | | 4444-28660 | 2.16.840.1.113883.10.20.24.3.144 |
| @extension | 1..1 | SHALL | | 4444-28701 | 2019-12-01 |
| id | 1..* | SHALL | | 4444-29613 | |
| code | 1..1 | SHALL | | 4444-28656 | |
| statusCode | 1..1 | SHALL | | 4444-28653 | |
| @code | 1..1 | SHALL | | 4444-28662 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 0..1 | MAY | | 4444-29122 | |
| @value | 0..1 | SHOULD | | 4444-30016 | |
| low | 0..1 | SHOULD | | 4444-29123 | |
| high | 0..1 | MAY | | 4444-29124 | |
| value | 0..1 | MAY | | 4444-29121 | |
| methodCode | 0..1 | MAY | | 4444-29120 | |
| author | 1..1 | SHALL | | 4444-28818 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| participant | 0..* | MAY | | 4444-29134 | |
| @typeCode | 1..1 | SHALL | | 4444-29139 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29135 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-----------------------|-------|-------|-----------|----------------------------|---|
| participant | 0..* | MAY | | 4444-29132 | |
| @typeCode | 1..1 | SHALL | | 4444-29138 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29133 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29130 | |
| @typeCode | 1..1 | SHALL | | 4444-29137 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29131 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29128 | |
| @typeCode | 1..1 | SHALL | | 4444-29136 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29129 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |
| entryRelationship | 0..* | MAY | | 4444-28651 | |
| @typeCode | 1..1 | SHALL | | 4444-28659 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 4444-28658 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) |
| entryRelationship | 0..* | MAY | | 4444-28819 | |
| observation | 1..1 | SHALL | | 4444-28820 | Component (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.149:2017-08-01) |
| sdct:inFulfillmentOf1 | 0..* | MAY | | 4444-29119 | Related To (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.150:2017-08-01) |

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-28670).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-28669).

3. **MAY** contain zero or one [0..1] **@negationInd** (CONF:4444-28671).
Note: QDM Attribute: Negation Rationale – when **@negationInd**="true", this indicates Assessment Not Performed.
 - a. If **@negationInd**="true" is present, **SHALL** contain one [1..1] **entryRelationship** such that it contains exactly one [1..1] **Reason (V3)** to state the reason for **Assessment Not Performed** (CONF:4444-29563).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-28652) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.144" (CONF:4444-28660).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-28701).
5. **SHALL** contain at least one [1..*] **id** (CONF:4444-29613).
6. **SHALL** contain exactly one [1..1] **code** (CONF:4444-28656).
Note: QDM Attribute: Code
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:4444-28653).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code**="completed" (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:4444-28662).
8. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:4444-29122) such that it
Note: QDM Attribute: Relevant Period, Relevant dateTime
 - a. **SHOULD** contain zero or one [0..1] **@value** (CONF:4444-30016).
Note: QDM Attribute: Relevant dateTime – the time the assessment occurred at a single point in time
 - b. **SHOULD** contain zero or one [0..1] **low** (CONF:4444-29123).
Note: QDM Attribute: Relevant Period startTime – the time the assessment starts if the assessment occurred over a time interval.
 - c. **MAY** contain zero or one [0..1] **high** (CONF:4444-29124).
Note: QDM Attribute: Relevant Period stopTime - the time the assessment stops if the assessment occurred over a time interval
 - d. This **effectiveTime** **SHALL** contain either a **low** or a **@value** but not both (CONF:4444-29125).
Note: QDM Attributes Relevant dateTime and Relevant Period are mutually exclusive.
9. **MAY** contain zero or one [0..1] **value** (CONF:4444-29121).
Note: QDM Attribute: Result
10. **MAY** contain zero or one [0..1] **methodCode** (CONF:4444-29120).
Note: QDM Attribute: Method
11. **SHALL** contain exactly one [1..1] **Author (V2)** (**identifier**: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-28818).
Note: QDM Attribute: Author dateTime - the time the assessment was recorded, applies only when the record has no reference to the time the assessment was performed and only the recorded time is available
12. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29134) such that it
Note: QDM Attribute: Performer
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29139).

- b. **SHALL** contain exactly one [1..1] [Entity Practitioner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29135).
- 13. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29132) such that it
 - Note: QDM Attribute: Performer
 - a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29138).
 - b. **SHALL** contain exactly one [1..1] [Entity Organization](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29133).
- 14. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29130) such that it
 - Note: QDM Attribute: Performer
 - a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29137).
 - b. **SHALL** contain exactly one [1..1] [Entity Patient](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29131).
- 15. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29128) such that it
 - Note: QDM Attribute: Performer
 - a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29136).
 - b. **SHALL** contain exactly one [1..1] [Entity Care Partner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29129).
- 16. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:4444-28651) such that it
 - Note: QDM Attribute: Reason
 - a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-28659).
 - b. **SHALL** contain exactly one [1..1] [Reason \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-28658).
- 17. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:4444-28819) such that it
 - Note: QDM Attribute: Components
 - a. **SHALL** contain exactly one [1..1] [Component](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.149:2017-08-01) (CONF:4444-28820).
- 18. **MAY** contain zero or more [0..*] [Related To](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.150:2017-08-01) (CONF:4444-29119).
 - Note: QDM Attribute: relatedTo

Figure 23: Assessment Performed (V3) Example

```
<entry typeCode="DRIV">
  <observation classCode="OBS" moodCode="EVN">
    <!-- Assessment Performed (V3) -->
    <templateId root="2.16.840.1.113883.10.20.24.3.144" extension="2019-12-01"/>
    <id root="d55c711a-f958-4807-bdb6-45fe5b6195c0" />
    <code code="35088-4" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
      displayName="Glasgow Coma Scale"/>
    <text>Assessment Performed: Glasgow Coma Scale Assessment</text>
    <statusCode code="completed" />
    <author>
      <!-- QDM Attribute: Author dateTime -->
      <templateId root="2.16.840.1.113883.10.20.24.3.155" extension="2019-12-01"/>
      <time value="201906101030"/>
      <assignedAuthor>
        <id nullFlavor="NA"/>
      </assignedAuthor>
    </author>
    <entryRelationship typeCode="REFR">
      <!-- Components -->
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.149" extension="2017-08-01"/>
        <id root="bd54c4c7-49b8-47e4-b2d5-9d2b64c413b9"/>
        <code code="9267-6" codeSystem="2.16.840.1.113883.6.1"
          codeSystemName="LOINC" displayName="Glasgow Coma score eye opening"/>
        <!--<value xsi:type="INT">1</value>-->
        <value xsi:type="CD" code="LA6553-7" codeSystem="2.16.840.1.113883.6.1"
          codeSystemName="LOINC" displayName="No eye opening"/>
      </observation>
    </entryRelationship>
    <entryRelationship typeCode="REFR">
      <!-- Components -->
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.149" extension="2017-08-01"/>
        <id root="204c9596-35a9-4e71-aa65-ac638c76be7d"/>
        <code code="9268-4" codeSystem="2.16.840.1.113883.6.1"
          codeSystemName="LOINC" displayName="Glasgow Coma score motor"/>
        <!--<value xsi:type="INT">3</value>-->
        <value xsi:type="CD" code="LA6564-4" codeSystem="2.16.840.1.113883.6.1"
          codeSystemName="LOINC" displayName="Flexion to pain"/>
      </observation>
    </entryRelationship>
    <entryRelationship typeCode="REFR">
      <!-- Component -->
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.149" extension="2017-08-01"/>
        <id root="5e555fa2-72cb-45a0-9d5b-968a2d3b9b44"/>
        <code code="9270-0" codeSystem="2.16.840.1.113883.6.1"
          codeSystemName="LOINC" displayName="Glasgow Coma score verbal"/>
        <!--<value xsi:type="INT">4</value>-->
        <value xsi:type="CD" code="LA6560-2" codeSystem="2.16.840.1.113883.6.1"
          codeSystemName="LOINC" displayName="Confused"/>
      </observation>
    </entryRelationship>
  </observation>
</entry>
```

```

    </entryRelationship>
    <entryRelationship typeCode="REFR">
      <!-- Component -->
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.149" extension="2017-08-
01"/>
        <id root="63bb6f9e-fb84-4b2b-aaaa-780d2c021c12"/>
        <code code="9270-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Glasgow Coma score total"/>
        <value xsi:type="INT" value="8"/>
      </observation>
    </entryRelationship>
  </observation>
</entry>

```

3.7 Communication Performed (V2)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.156:2019-12-01
(open)]

Table 29: Communication Performed (V2) Contexts

| Contained By: | Contains: |
|--|--|
| Patient Data Section QDM (V7) (optional) | Reason (V3) (optional) Reason (V3) (required) Related To (optional) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Author (V2) (required) |

This template represents the QDM datatype: Communication, Performed.

To meet criteria using this datatype, the communication indicated by the Communication QDM category is a conveyance of information from one entity (e.g., person, organization, or device) to another.

QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template.

Timing:

sent dateTime – when the communication was sent

received dateTime – when the communication was received

author dateTime – Communication Not Performed with a reason always use the author dateTime attribute to reference timing and must not use Relevant Period.

Table 30: Communication Performed (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|--------------|-------------|------------------|----------------------------|---|
| act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.156:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-29160 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT |
| @moodCode | 1..1 | SHALL | | 4444-29161 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 0..1 | MAY | | 4444-29164 | |
| templateId | 1..1 | SHALL | | 4444-29143 | |
| @root | 1..1 | SHALL | | 4444-29151 | 2.16.840.1.113883.10.20.24.3.156 |
| @extension | 1..1 | SHALL | | 4444-29152 | 2019-12-01 |
| id | 1..* | SHALL | | 4444-29162 | |
| code | 1..1 | SHALL | | 4444-29159 | |
| statusCode | 1..1 | SHALL | | 4444-29163 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 0..1 | MAY | | 4444-29165 | |
| low | 0..1 | MAY | | 4444-29170 | |
| high | 0..1 | MAY | | 4444-29201 | |
| author | 1..1 | SHALL | | 4444-29149 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| participant | 0..* | MAY | | 4444-29180 | |
| @typeCode | 1..1 | SHALL | | 4444-29184 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = IRCP |
| participantRole | 1..1 | SHALL | | 4444-29181 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29178 | |
| @typeCode | 1..1 | SHALL | | 4444-29183 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = IRCP |
| participantRole | 1..1 | SHALL | | 4444-29179 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-----------------|-------|-------|-----------|----------------------------|---|
| participant | 0..1 | MAY | | 4444-29176 | |
| @typeCode | 1..1 | SHALL | | 4444-29182 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = IRCP |
| participantRole | 1..1 | SHALL | | 4444-29177 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29144 | |
| @typeCode | 1..1 | SHALL | | 4444-29156 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = IRCP |
| participantRole | 1..1 | SHALL | | 4444-29145 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |
| participant | 0..* | MAY | | 4444-29186 | |
| @typeCode | 1..1 | SHALL | | 4444-29194 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT |
| participantRole | 1..1 | SHALL | | 4444-29187 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29190 | |
| @typeCode | 1..1 | SHALL | | 4444-29196 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT |
| participantRole | 1..1 | SHALL | | 4444-29191 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29188 | |
| @typeCode | 1..1 | SHALL | | 4444-29195 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT |
| participantRole | 1..1 | SHALL | | 4444-29189 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29147 | |
| @typeCode | 1..1 | SHALL | | 4444-29158 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT |
| participantRole | 1..1 | SHALL | | 4444-29185 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-----------------------|-------|-------|-----------|----------------------------|--|
| | | | | | 0.20.24.3.160:2019-12-01 |
| participant | 0..1 | MAY | | 4444-29166 | |
| @typeCode | 1..1 | SHALL | | 4444-29173 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = VIA |
| participantRole | 1..1 | SHALL | | 4444-29167 | |
| code | 1..1 | SHALL | | 4444-29174 | |
| entryRelationship | 1..1 | SHALL | | 4444-29168 | |
| @typeCode | 1..1 | SHALL | | 4444-29175 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| observation | 1..1 | SHALL | | 4444-29169 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) |
| entryRelationship | 0..1 | MAY | | 4444-29192 | |
| @typeCode | 1..1 | SHALL | | 4444-29197 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 4444-29193 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) |
| sdtc:inFulfillmentOf1 | 0..* | MAY | | 4444-29150 | Related To (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.150:2017-08-01) |

1. **SHALL** contain exactly one [1..1] **@classCode**="ACT" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-29160).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-29161).
3. **MAY** contain zero or one [0..1] **@negationInd** (CONF:4444-29164).
Note: QDM Attribute: Negation Rationale – when **@negationInd**="true", this indicates Communication Not Performed.
 - a. If **@negationInd**="true" is present, **SHALL** contain one [1..1] entryRelationship (with **@typeCode**="RSON") such that it contains exactly one [1..1] **Reason (V3)** to state the reason for **Communication Not Performed** (CONF:4444-29591).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-29143) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.156" (CONF:4444-29151).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-29152).
5. **SHALL** contain at least one [1..*] **id** (CONF:4444-29162).

6. **SHALL** contain exactly one [1..1] **code** (CONF:4444-29159).
Note: QDM Attribute: Category - Category is an optional QDM attribute, but act/code is a required element, so if Category is not applicable, then use "< code nullFlavor='NA' / >"
7. **SHALL** contain exactly one [1..1] **statusCode="completed"**, which **SHALL** be selected from CodeSystem HL7ActStatus (urn:oid:2.16.840.1.113883.5.14) (CONF:4444-29163).
8. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:4444-29165).
Note: QDM Attribute: Relevant Period
 - a. The effectiveTime, if present, **MAY** contain zero or one [0..1] **low** (CONF:4444-29170).
Note: QDM Attribute: Sent dateTime - the time the communication is sent
 - b. The effectiveTime, if present, **MAY** contain zero or one [0..1] **high** (CONF:4444-29201).
Note: QDM Attribute: Received dateTime - the time the communication is received
9. **SHALL** contain exactly one [1..1] **Author (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-29149).
Note: QDM Attribute: Author dateTime
10. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29180) such that it
QDM Attribute: Recipient - The entity (e.g., person, organization, clinical information system, or device) which is the target of a communication
 - a. **SHALL** contain exactly one [1..1] **@typeCode="IRCP"** information recipient (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29184).
 - b. **SHALL** contain exactly one [1..1] **Entity Practitioner** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29181).
Note: QDM Attribute: Recipient - The entity (e.g., person, organization, clinical information system, or device) which is the target of a communication
11. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29178) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="IRCP"** information recipient (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29183).
 - b. **SHALL** contain exactly one [1..1] **Entity Organization** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29179).
Note: QDM Attribute: Recipient - The entity (e.g., person, organization, clinical information system, or device) which is the target of a communication
12. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29176) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="IRCP"** information recipient (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29182).
 - b. **SHALL** contain exactly one [1..1] **Entity Patient** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29177).
Note: QDM Attribute: Recipient - The entity (e.g., person, organization, clinical information system, or device) which is the target of a communication
13. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29144) such that it

- a. **SHALL** contain exactly one [1..1] **@typeCode**="IRCP" information recipient (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29156).
 - b. **SHALL** contain exactly one [1..1] Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29145).
Note: QDM Attribute: Recipient - The entity (e.g., person, organization, clinical information system, or device) which is the target of a communication
14. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29186) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode**="AUT" author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29194).
 - b. **SHALL** contain exactly one [1..1] Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29187).
Note: QDM Attribute: Sender - The entity (e.g., person, organization, clinical information system, or device) that is the source of a communication
15. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29190) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode**="AUT" author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29196).
 - b. **SHALL** contain exactly one [1..1] Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29191).
Note: QDM Attribute: Sender - The entity (e.g., person, organization, clinical information system, or device) that is the source of a communication
16. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29188) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode**="AUT" author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29195).
 - b. **SHALL** contain exactly one [1..1] Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29189).
Note: QDM Attribute: Sender - The entity (e.g., person, organization, clinical information system, or device) that is the source of a communication
17. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29147) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode**="AUT" author (originator) (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29158).
 - b. **SHALL** contain exactly one [1..1] Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29185).
Note: QDM Attribute: Sender - The entity (e.g., person, organization, clinical information system, or device) that is the source of a communication
18. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29166) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode**="VIA" via (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29173).
 - b. **SHALL** contain exactly one [1..1] **participantRole** (CONF:4444-29167).
 - i. This **participantRole** **SHALL** contain exactly one [1..1] **code** (CONF:4444-29174).

Note: QDM Attribute: Medium - A channel used for a communication (e.g., fax, email, etc.)

19. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:4444-29168) such that it
Note: QDM Attribute: Code
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-29175).
 - b. **SHALL** contain exactly one [1..1] **Reason (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-29169).
20. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-29192) such that it
Note: Reason for negation
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="RSON" has reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-29197).
 - b. **SHALL** contain exactly one [1..1] **Reason (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-29193).
21. **MAY** contain zero or more [0..*] **Related To** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.150:2017-08-01) (CONF:4444-29150).
Note: QDM Attribute: relatedTo

Figure 24: Communication Performed (V2) Example

```
<act classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.24.3.156" extension="2019-12-01"/>
  <id root="2d5075da-2ffc-47a9-a350-4a24e6b052d1"/>
  <code nullFlavor="NA"/>
  <statusCode code="completed"/>
  <author>
    <templateId root="2.16.840.1.113883.10.20.24.3.155" extension="2019-12-01"/>
    <time value="2019050101030"/>
    <assignedAuthor>
      <id nullFlavor="NA"/>
    </assignedAuthor>
  </author>
  <participant typeCode="AUT">
    <participantRole>
      <code code="116154003" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT" displayName="Patient"/>
    </participantRole>
  </participant>
  <!-- QDM Attribute: Code -->
  <entryRelationship typeCode="REFR">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.24.3.88" extension="2017-08-01"/>
      <code code="77301-0" codeSystem="2.16.840.1.113883.6.1"
displayName="Reason care action performed or not" codeSystemName="LOINC"/>
      <statusCode code="completed"/>
      <value xsi:type="CD" code="401270003" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT" displayName="E-mail received from patient (event)"/>
    </observation>
  </entryRelationship>
  <!-- QDM Attribute: Related to -->
  <sdtc:inFulfillmentOf1 typeCode="FLFS">
    <sdtc:templateId root="2.16.840.1.113883.10.20.24.3.150" extension="2017-08-01"/>
    <sdtc:actReference classCode="SPLY" moodCode="RQO">
      <!-- For example, the id is the same as the id of another QDM element instance
contained in the same QRDA I document being referenced -->
      <sdtc:id root="lfad091f-7b4e-4661-b61c-53f9a82515b6"/>
    </sdtc:actReference>
  </sdtc:inFulfillmentOf1>
</act>
```

3.8 Component

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.149:2017-08-01 (open)]

Table 31: Component Contexts

| Contained By: | Contains: |
|---|------------------|
| Assessment Performed (V3) (optional) Diagnostic Study Performed (V5) (optional) Procedure Performed (V6) (optional) Laboratory Test Performed (V5) (optional) Physical Exam Performed (V5) (optional) | |

Elements included or documented as part of evaluations or test panels. Examples include: specific questions included in assessments, tests included in a laboratory test panel, observations included in a cardiac exam during a physical examination. Each assessment, diagnostic study, laboratory test, physical exam or procedure may have one or more components. Laboratory test may have reference range.

Table 32: Component Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-----------|-----------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.149:2017-08-01) | | | | | |
| @classCode | 1..1 | SHALL | | 3343-28788 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 3343-28789 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 3343-28786 | |
| @root | 1..1 | SHALL | | 3343-28793 | 2.16.840.1.113883.10.20.24.3.149 |
| @extension | 1..1 | SHALL | | 3343-28796 | 2017-08-01 |
| id | 1..* | SHALL | | 3343-28797 | |
| code | 1..1 | SHALL | | 3343-28784 | |
| value | 1..1 | SHALL | | 3343-28785 | |
| referenceRange | 0..1 | MAY | | 3343-28794 | |
| observationRange | 1..1 | SHALL | | 3343-28795 | |
| code | 0..0 | SHALL NOT | | 3343-28798 | |
| value | 1..1 | SHALL | | 3343-28799 | |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:3343-28788).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:3343-28789).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:3343-28786) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.149" (CONF:3343-28793).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2017-08-01" (CONF:3343-28796).
4. **SHALL** contain at least one [1..*] **id** (CONF:3343-28797).
5. **SHALL** contain exactly one [1..1] **code** (CONF:3343-28784).
Note: QDM Attribute: Code
6. **SHALL** contain exactly one [1..1] **value** (CONF:3343-28785).
Note: QDM Attribute: Result
7. **MAY** contain zero or one [0..1] **referenceRange** (CONF:3343-28794).
 - a. The referenceRange, if present, **SHALL** contain exactly one [1..1] **observationRange** (CONF:3343-28795).

- i. This observationRange **SHALL NOT** contain [0..0] **code** (CONF:3343-28798).
- ii. This observationRange **SHALL** contain exactly one [1..1] **value** (CONF:3343-28799).

Figure 25: Component Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.24.3.149" extension="2017-08-01"/>
  <id root="63bb6f9e-fb84-4b2b-aaaa-780d2c021c12"/>
  <code code="9270-0" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
  displayName="Glasgow Coma score total"/>
  <value xsi:type="INT" value="8"/>
</observation>
```

3.9 Criticality Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.22.4.145 (open)]

Table 33: Criticality Observation Contexts

| Contained By: | Contains: |
|--|-----------|
| Substance or Device Allergy - Intolerance Observation (V2) (optional) | |

This observation represents the gravity of the potential risk for future life-threatening adverse reactions when exposed to a substance known to cause an adverse reaction in that individual. When the worst case result is assessed to have a life-threatening or organ system threatening potential, it is considered to be of high criticality.

Table 34: Criticality Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|-------|-----------|--------------------------|--|
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.145) | | | | | |
| @classCode | 1..1 | SHALL | | 81-32921 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 81-32922 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 81-32918 | |
| @root | 1..1 | SHALL | | 81-32923 | 2.16.840.1.113883.10.20.22.4.145 |
| code | 1..1 | SHALL | | 81-32919 | |
| @code | 1..1 | SHALL | | 81-32925 | 82606-5 |
| @codeSystem | 1..1 | SHALL | | 81-32926 | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| statusCode | 1..1 | SHALL | | 81-32920 | |
| @code | 1..1 | SHALL | | 81-32927 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | 81-32928 | urn:oid:2.16.840.1.113883.1.11.20549 (Criticality Observation) |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:81-32921).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:81-32922).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-32918) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.145" (CONF:81-32923).
4. **SHALL** contain exactly one [1..1] **code** (CONF:81-32919).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="82606-5" Criticality (CONF:81-32925).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:81-32926).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:81-32920).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:81-32927).
6. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD", where the code **SHALL** be selected from ValueSet [Criticality Observation](#) urn:oid:2.16.840.1.113883.1.11.20549 **DYNAMIC** (CONF:81-32928).

Figure 26: Criticality Observation Example

```

<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.145"/>
  <code code="82606-5" codeSystem="2.16.840.1.113883.6.1"
    displayName="Criticality" />
  <text>
    <reference value="#criticality"/>
  </text>
  <statusCode code="completed"/>
  <value xsi:type="CD" code="High" displayName="High Criticality - NEED PROPER
    CODE" codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT"/>
</observation>

```

3.10 Days Supplied

[supply: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.157:2018-10-01
(open)]

Table 35: Days Supplied Contexts

| Contained By: | Contains: |
|--|-----------|
| Discharge Medication (V5) (optional) Medication Dispensed (V6) (optional) Medication Order (V6) (optional) | |

This template represents QDM attribute: Days Supplied.

Amount of medication expressed as a timing amount, i.e., the number of days over which the medication is expected to last.

Table 36: Days Supplied Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|-------|-----------|----------------------------|---|
| supply (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.157:2018-10-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4388-29196 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SPLY |
| @moodCode | 1..1 | SHALL | | 4388-29197 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 4388-29179 | |
| @root | 1..1 | SHALL | | 4388-29198 | 2.16.840.1.113883.10.20.24.3.157 |
| @extension | 1..1 | SHALL | | 4388-29199 | 2018-10-01 |
| quantity | 1..1 | SHALL | | 4388-29211 | |

1. **SHALL** contain exactly one [1..1] **@classCode="SPLY"** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:4388-29196).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:4388-29197).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:4388-29179) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.24.3.157"** (CONF:4388-29198).
 - b. **SHALL** contain exactly one [1..1] **@extension="2018-10-01"** (CONF:4388-29199).
4. **SHALL** contain exactly one [1..1] **quantity** (CONF:4388-29211).

Figure 27: Days Supplied Example

```

<supply classCode="SPLY" moodCode="EVN">
  <!--Days Supplied -->
  <templateId root="2.16.840.1.113883.10.20.24.3.157" extension="2018-10-01"/>
  <id root="6fc75044-6dc4-4ef6-ble4-736c951cdf4"/>
  <quantity value="10" unit="d" />
</supply>

```

3.11 Deceased Observation (V3)

```
[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.79:2015-08-01
(open)]
```

Table 37: Deceased Observation (V3) Contexts

| Contained By: | Contains: |
|---------------|---|
| | Problem Observation (V3) (optional) |

This template represents the observation that a patient has died. It also represents the cause of death, indicated by an entryRelationship type of 'CAUS'. This template allows for more specific representation of data than is available with the use of dischargeDispositionCode.

Table 38: Deceased Observation (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|--|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.79:2015-08-01) | | | | | |
| @classCode | 1..1 | SHALL | | 1198-14851 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 1198-14852 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 1198-14871 | |
| @root | 1..1 | SHALL | | 1198-14872 | 2.16.840.1.113883.10.20.22.4.79 |
| @extension | 1..1 | SHALL | | 1198-32541 | 2015-08-01 |
| id | 1..* | SHALL | | 1198-14873 | |
| code | 1..1 | SHALL | | 1198-14853 | |
| @code | 1..1 | SHALL | | 1198-19135 | ASSERTION |
| @codeSystem | 1..1 | SHALL | | 1198-32158 | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL | | 1198-14854 | |
| @code | 1..1 | SHALL | | 1198-19095 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL | | 1198-14855 | |
| low | 1..1 | SHALL | | 1198-14874 | |
| value | 1..1 | SHALL | CD | 1198-14857 | |
| @code | 1..1 | SHALL | | 1198-15142 | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 419099009 |
| entryRelationship | 0..1 | SHOULD | | 1198-14868 | |
| @typeCode | 1..1 | SHALL | | 1198-14875 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = CAUS |
| @inversionInd | 1..1 | SHALL | | 1198-32900 | true |
| observation | 1..1 | SHALL | | 1198-14870 | Problem Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01) |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-14851).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-14852).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-14871) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.79" (CONF:1198-14872).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32541).
4. **SHALL** contain at least one [1..*] **id** (CONF:1198-14873).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1198-14853).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:1198-19135).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:1198-32158).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-14854).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1198-19095).
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1198-14855).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1198-14874).
8. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:1198-14857).
 - a. This value **SHALL** contain exactly one [1..1] **@code**="419099009" Dead (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 **STATIC**) (CONF:1198-15142).
9. **SHOULD** contain zero or one [0..1] **entryRelationship** (CONF:1198-14868) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="CAUS" Is etiology for (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1198-14875).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd**="true" True (CONF:1198-32900).
 - c. **SHALL** contain exactly one [1..1] [Problem Observation \(V3\)](#) (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01) (CONF:1198-14870).

Figure 28: Deceased Observation (V3) Example

```

<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.79" extension="2015-08-01" />
  <id root="6898fae0-5c8a-11db-b0de-0800200c9a77" />
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" />
  <statusCode code="completed" />
  <effectiveTime>
    <low value="20100303" />
  </effectiveTime>
  <value xsi:type="CD" code="419099009" codeSystem="2.16.840.1.113883.6.96"
displayName="Dead" />
  <entry typeCode="DRIV">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2015-08-01" />
      ...
    </observation>
  </entry>
</observation>

```

3.11.1 Patient Characteristic Expired (V3)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.54:2016-02-01
(open)]

Table 39: Patient Characteristic Expired (V3) Contexts

| Contained By: | Contains: |
|--|-----------|
| Patient Data Section QDM (V7) (optional) | |

This template represents the QDM datatype: Patient Characteristic, Expired.

This datatype indicates that a patient has expired. A date/time stamp is required.

Table 40: Patient Characteristic Expired (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|-----------|-----------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.54:2016-02-01) | | | | | |
| @classCode | 1..1 | SHALL | | 2228-28087 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 2228-28088 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 0..0 | SHALL NOT | | 2228-28089 | |
| templateId | 1..1 | SHALL | | 2228-12540 | |
| @root | 1..1 | SHALL | | 2228-12541 | 2.16.840.1.113883.10.20.24.3.54 |
| @extension | 1..1 | SHALL | | 2228-27014 | 2016-02-01 |

1. Conforms to [Deceased Observation \(V3\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.79:2015-08-01).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:2228-28087).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:2228-28088).
4. **SHALL NOT** contain [0..0] **@negationInd** (CONF:2228-28089).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:2228-12540) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.54" (CONF:2228-12541).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2016-02-01" (CONF:2228-27014).

Figure 29: Patient Characteristic Expired (V3) Example

```

<observation classCode="OBS" moodCode="EVN">
  <!-- C-CDA R2.1 Deceased Observation (V3) templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.79" extension="2015-08-01" />
  <!-- Patient Characteristic Expired (V3) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.54" extension="2016-02-01" />
  <id root="f3d6fd73-b2c0-4274-bfd2-a485957734db" />
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" />
  <statusCode code="completed" />
  <!-- QDM Attributes: Date and Time -->
  <effectiveTime>
    <low value="201501011030" />
  </effectiveTime>
  <value xsi:type="CD" code="419099009" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT" displayName="Dead" />
  <!-- QDM Attribute: Cause -->
  <entryRelationship typeCode="CAUS" negationInd="false">
    <observation classCode="OBS" moodCode="EVN">
      <!-- C-CDA R2.1 Problem Observation (V3) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2015-08-01" />
      <id root="d11275e7-67ae-11db-bd13-0800200c9a66" />
      <code code="64572001" displayName="Condition"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT">
        <translation code="75323-6" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Condition" />
      </code>
      <statusCode code="completed" />
      <effectiveTime>
        <low value="20151215" />
      </effectiveTime>
      <value xsi:type="CD" code="56717001" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT" displayName="Tuberculosis" />
    </observation>
  </entryRelationship>
</observation>

```

3.12 Device Order Act (V3)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.130:2019-12-01
(open)]

Table 41: Device Order Act (V3) Contexts

| Contained By: | Contains: |
|--|--|
| Patient Data Section QDM (V7) (optional) | Reason (V3) (optional) Device Order (V5) (required) |

This template along with the Device Order (V5) template represents the QDM Datatype: Device, Order. The Device Order Act is added as a wrapper to the Device Order (V5) template to allow device order to be negated.

Table 42: Device Order Act (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-------|-----------|----------------------------|---|
| act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.130:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-28444 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT |
| @moodCode | 1..1 | SHALL | | 4444-28445 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = RQO |
| @negationInd | 0..1 | MAY | | 4444-28446 | |
| templateId | 1..1 | SHALL | | 4444-28441 | |
| @root | 1..1 | SHALL | | 4444-28447 | 2.16.840.1.113883.10.20.24.3.130 |
| @extension | 1..1 | SHALL | | 4444-28918 | 2019-12-01 |
| code | 1..1 | SHALL | | 4444-28442 | |
| @code | 1..1 | SHALL | | 4444-28448 | SPLY |
| @codeSystem | 1..1 | SHALL | | 4444-28449 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) |
| entryRelationship | 1..1 | SHALL | | 4444-28443 | |
| @typeCode | 1..1 | SHALL | | 4444-28450 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ |
| supply | 1..1 | SHALL | | 4444-28451 | Device Order (V5) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.9:2019-12-01) |
| entryRelationship | 0..1 | MAY | | 4444-29619 | |
| @typeCode | 1..1 | SHALL | | 4444-29622 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 4444-29620 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) |

1. **SHALL** contain exactly one [1..1] @classCode="ACT" Act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-28444).
2. **SHALL** contain exactly one [1..1] @moodCode="RQO" Request (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-28445).
3. **MAY** contain zero or one [0..1] @negationInd (CONF:4444-28446).
Note: QDM Attribute: Negation Rationale - when @negationInd="true", this indicates Device Not Order.

- a. If **@negationInd="true"** is present, **SHALL** contain one [1..1] **entryRelationship** such that it contains exactly one [1..1] **Reason (V3)** to state the reason for **Device Not Order** (CONF:4444-29621).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-28441) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.24.3.130"** (CONF:4444-28447).
 - b. **SHALL** contain exactly one [1..1] **@extension="2019-12-01"** (CONF:4444-28918).
5. **SHALL** contain exactly one [1..1] **code** (CONF:4444-28442).
 - a. This code **SHALL** contain exactly one [1..1] **@code="SPLY"** Supply (CONF:4444-28448).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-28449).
6. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:4444-28443) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** Has subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-28450).
 - b. **SHALL** contain exactly one [1..1] **Device Order (V5)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.9:2019-12-01) (CONF:4444-28451).
7. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-29619) such that it

Note: Reason for Negation

 - a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-29622).
 - b. **SHALL** contain exactly one [1..1] **Reason (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-29620).

Figure 30: Device Order Act (V3) Example

```

<act classCode="ACT" moodCode="RQO">
  <templateId root="2.16.840.1.113883.10.20.24.3.130" extension="2019-12-01"/>
  <id root="ec8a6ff8-ed4b-4f7e-82c3-e98e58b45de7"/>
  <code code="SPLY" codeSystem="2.16.840.1.113883.5.6" displayName="Supply"
codeSystemName="ActClass"/>
  <entryRelationship typeCode="SUBJ">
    <supply classCode="SPLY" moodCode="RQO">
      <!-- Conforms to C-CDA R2.1 Planned Supply (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.43" extension="2014-06-09"/>
      <!-- Device Order (V5) -->
      <templateId root="2.16.840.1.113883.10.20.24.3.9" extension="2019-12-01"/>
      <id root="6a8d037d-f144-4071-9d1f-8a92a11dedc6"/>
      <statusCode code="active"/>
      <author>
        <templateId root="2.16.840.1.113883.10.20.24.3.155" extension="2019-12-
01"/>
        <time value="201907101030"/>
        <assignedAuthor>
          <id nullFlavor="NA"/>
        </assignedAuthor>
      </author>
      <participant typeCode="DEV">
        <participantRole classCode="MANU">
          <playingDevice classCode="DEV">
            <!-- Device -->
            <code code="401608003" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED-CT" displayName="Suprapubic catheter (physical object)"/>
          </playingDevice>
        </participantRole>
      </participant>
    </supply>
  </entryRelationship>
</act>

```

3.13 Device Recommended Act (V3)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.131:2019-12-01
(open)]

Table 43: Device Recommended Act (V3) Contexts

| Contained By: | Contains: |
|--|--|
| Patient Data Section QDM (V7) (optional) | Reason (V3) (optional) Device Recommended (V5) (required) |

This template along with the Device Recommended (V5) template represent the QDM Datatype: Device, Recommended.

This template is to add a wrapper to the Device Recommended (V5) template to allow the Device Recommended to be negated.

Table 44: Device Recommended Act (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-------|-----------|----------------------------|--|
| act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.131:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-28454 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT |
| @moodCode | 1..1 | SHALL | | 4444-28455 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = INT |
| @negationInd | 0..1 | MAY | | 4444-28657 | |
| templateId | 1..1 | SHALL | | 4444-28452 | |
| @root | 1..1 | SHALL | | 4444-28456 | 2.16.840.1.113883.10.20.24.3.131 |
| @extension | 1..1 | SHALL | | 4444-28922 | 2019-12-01 |
| id | 0..* | MAY | | 4444-29631 | |
| entryRelationship | 1..1 | SHALL | | 4444-28453 | |
| @typeCode | 1..1 | SHALL | | 4444-28458 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ |
| supply | 1..1 | SHALL | | 4444-28459 | Device Recommended (V5) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.10:2019-12-01) |
| entryRelationship | 0..1 | MAY | | 4444-29300 | |
| @typeCode | 1..1 | SHALL | | 4444-29302 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = RSON |
| observation | 1..1 | SHALL | | 4444-29301 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) |

1. **SHALL** contain exactly one [1..1] **@classCode**="ACT" Act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-28454).
2. **SHALL** contain exactly one [1..1] **@moodCode**="INT" Intent (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-28455).
3. **MAY** contain zero or one [0..1] **@negationInd** (CONF:4444-28657).
Note: QDM Attribute: Negation Rationale - when **@negationInd**="true", it indicates Device Not Recommended
 - a. If **@negationInd**="true" is present, **SHALL** contain one [1..1] entryRelationship such that it contains exactly one [1..1] **Reason (V3)** to state the reason for **Device Not Recommended** (CONF:4444-29630).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-28452) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.131" (CONF:4444-28456).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-28922).
- 5. **MAY** contain zero or more [0..*] **id** (CONF:4444-29631).
Note: QDM Attribute: id
- 6. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:4444-28453) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="SUBJ" has subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-28458).
 - b. **SHALL** contain exactly one [1..1] [Device Recommended \(V5\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.10:2019-12-01) (CONF:4444-28459).
- 7. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-29300) such that it
Note: Reason for Negation
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="RSON" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29302).
 - b. **SHALL** contain exactly one [1..1] [Reason \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-29301).

Figure 31: Device Recommended Act (V3) Example

```
<act classCode="ACT" moodCode="INT">
  <templateId root="2.16.840.1.113883.10.20.24.3.131" extension="2019-12-01"/>
  <code code="SPLY" codeSystem="2.16.840.1.113883.5.6" displayName="Supply"
codeSystemName="ActClass"/>
  <entryRelationship typeCode="SUBJ">
    <supply classCode="SPLY" moodCode="INT">
      <!-- C-CDA R2.1 : Planned Supply (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.43" extension="2014-06-09"/>
      <!-- Device Recommended (V5) -->
      <templateId root="2.16.840.1.113883.10.20.24.3.10" extension="2019-12-01"/>
      <id root="6a8d037d-f144-4071-9d1f-8a92a11dedc6"/>
      <statusCode code="active"/>
      <author>
        <templateId root="2.16.840.1.113883.10.20.24.3.9" extension="2019-12-01"/>
        <time value="201905101030"/>
        <assignedAuthor>
          <id nullFlavor="NA"/>
        </assignedAuthor>
      </author>
      <participant typeCode="DEV">
        <participantRole classCode="MANU">
          <playingDevice classCode="DEV">
            <!-- Device -->
            <code code="401608003" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED-CT" displayName="Suprapubic catheter (physical object)"/>
          </playingDevice>
        </participantRole>
      </participant>
      <!-- QDM Attribute: Reason -->
      <entryRelationship typeCode="RSON">
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.24.3.88" extension="2017-08-
01"/>
          <code code="77301-0" codeSystem="2.16.840.1.113883.6.1"
displayName="Reason care action performed or not" codeSystemName="LOINC"/>
          <value xsi:type="CD" code="125629006"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT" displayName="Injury of
colon"/>
        </observation>
      </entryRelationship>
    </supply>
  </entryRelationship>
</act>
```


3.14 Discharge Medication (V5)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.105:2019-12-01
(open)]

Table 45: Discharge Medication (V5) Contexts

| Contained By: | Contains: |
|--|--|
| Patient Data Section QDM (V7) (optional) | Medication Activity (V2) (required) Reason (V3) (optional) Days Supplied (optional) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) |

This template represents the QDM datatype: Medication, Discharge.

This template represents medications should be taken by or given to the patient after being discharged from an inpatient encounter.

QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template. Although Reason (V3) is not explicitly contained in every template, it is available for use in any template. To negate "Medication, Discharge" data type, use the act/negationInd in this template.

QDM attribute: Author dateTime is the time the discharge medication list on the discharge instruction form is authored. This is represented through the Author Participation template contained in the Medication Activity (V2) template.

Table 46: Discharge Medication (V5) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-------|-----------|----------------------------|---|
| act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.105:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-16550 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT |
| @moodCode | 1..1 | SHALL | | 4444-16551 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = RQO |
| @negationInd | 0..1 | MAY | | 4444-28065 | |
| templateId | 1..1 | SHALL | | 4444-26956 | |
| @root | 1..1 | SHALL | | 4444-26957 | 2.16.840.1.113883.10.20.24.3.105 |
| @extension | 1..1 | SHALL | | 4444-27037 | 2019-12-01 |
| id | 1..* | SHALL | | 4444-26955 | |
| code | 1..1 | SHALL | | 4444-16552 | |
| @code | 1..1 | SHALL | | 4444-28140 | 75311-1 |
| @codeSystem | 1..1 | SHALL | | 4444-28141 | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| participant | 0..* | MAY | | 4444-29369 | |
| @typeCode | 1..1 | SHALL | | 4444-29386 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29370 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29381 | |
| @typeCode | 1..1 | SHALL | | 4444-29392 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29382 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29367 | |
| @typeCode | 1..1 | SHALL | | 4444-29385 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29368 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.164:2019-12-01) |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------------|-------|-------|-----------|----------------------------|---|
| | | | | | 0.20.24.3.161:2019-12-01 |
| participant | 0..* | MAY | | 4444-29379 | |
| @typeCode | 1..1 | SHALL | | 4444-29391 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29380 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |
| participant | 0..* | MAY | | 4444-29375 | |
| @typeCode | 1..1 | SHALL | | 4444-29389 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT |
| participantRole | 1..1 | SHALL | | 4444-29376 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29373 | |
| @typeCode | 1..1 | SHALL | | 4444-29388 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT |
| participantRole | 1..1 | SHALL | | 4444-29374 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29377 | |
| @typeCode | 1..1 | SHALL | | 4444-29390 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT |
| participantRole | 1..1 | SHALL | | 4444-29378 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29371 | |
| @typeCode | 1..1 | SHALL | | 4444-29387 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT |
| participantRole | 1..1 | SHALL | | 4444-29372 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |
| entryRelationship | 1..1 | SHALL | | 4444-16553 | |
| @typeCode | 1..1 | SHALL | | 4444-16554 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ |
| substanceAdministration | 1..1 | SHALL | | 4444- | Medication Activity (V2) |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|--|
| | | | | 16555 | (identifier: urn:hl7ii:2.16.840.1.113883.1 0.20.22.4.16:2014-06-09) |
| entryRelationship | 0..1 | MAY | | 4444-29364 | |
| @typeCode | 1..1 | SHALL | | 4444-29366 | urn:oid:2.16.840.1.113883.5.1 002 (HL7ActRelationshipType) = REFR |
| supply | 1..1 | SHALL | | 4444-29365 | Days Supplied (identifier: urn:hl7ii:2.16.840.1.113883.1 0.20.24.3.157:2018-10-01) |
| entryRelationship | 0..* | MAY | | 4444-29383 | |
| @typeCode | 1..1 | SHALL | | 4444-29393 | urn:oid:2.16.840.1.113883.5.1 002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 4444-29384 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.1 0.20.24.3.88:2017-08-01) |

1. **SHALL** contain exactly one [1..1] **@classCode**="ACT" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-16550).
2. **SHALL** contain exactly one [1..1] **@moodCode**="RQO" Request (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-16551).
3. **MAY** contain zero or one [0..1] **@negationInd** (CONF:4444-28065).
Note: QDM Attribute: Negation Rationale – negationInd="true" indicates Medication Not Discharge
 - a. If **@negationInd**="true" is present, **SHALL** contain one [1..1] entryRelationship such that it contains exactly one [1..1] **Reason (V3)** to state the reason for **Medication Not Discharge** (CONF:4444-29845).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-26956) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.105" (CONF:4444-26957).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-27037).
5. **SHALL** contain at least one [1..*] **id** (CONF:4444-26955).
6. **SHALL** contain exactly one [1..1] **code** (CONF:4444-16552).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="75311-1" Discharge medications (CONF:4444-28140).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:4444-28141).
7. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29369) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29386).

- b. **SHALL** contain exactly one [1..1] [Entity Practitioner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29370).
Note: QDM Attribute: Prescriber
- 8. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29381) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29392).
 - b. **SHALL** contain exactly one [1..1] [Entity Organization](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29382).
Note: QDM Attribute: Prescriber
- 9. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29367) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29385).
 - b. **SHALL** contain exactly one [1..1] [Entity Patient](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29368).
Note: QDM Attribute: Prescriber
- 10. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29379) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29391).
 - b. **SHALL** contain exactly one [1..1] [Entity Care Partner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29380).
Note: QDM Attribute: Prescriber
- 11. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29375) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="AUT"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29389).
 - b. **SHALL** contain exactly one [1..1] [Entity Practitioner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29376).
Note: QDM Attribute: Recorder
- 12. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29373) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="AUT"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29388).
 - b. **SHALL** contain exactly one [1..1] [Entity Organization](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29374).
Note: QDM Attribute: Recorder
- 13. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29377) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="AUT"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29390).
 - b. **SHALL** contain exactly one [1..1] [Entity Patient](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-

29378).

Note: QDM Attribute: Recorder

14. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29371) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="AUT"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29387).
 - b. **SHALL** contain exactly one [1..1] **Entity Care Partner** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29372).

Note: QDM Attribute: Recorder

15. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:4444-16553) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-16554).
 - b. **SHALL** contain exactly one [1..1] **Medication Activity (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09) (CONF:4444-16555).

16. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-29364) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-29366).
 - b. **SHALL** contain exactly one [1..1] **Days Supplied** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.157:2018-10-01) (CONF:4444-29365).

Note: QDM Attribute: Days Supplied

17. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:4444-29383) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-29393).
 - b. **SHALL** contain exactly one [1..1] **Reason (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-29384).

Figure 32: Discharge Medication (V5) Example

```

<act classCode="ACT" moodCode="RQO">
  <!-- Discharge Medication (V5) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.105" extension="2019-12-01" />
  <id root="60f33340-591f-4459-9fa2-1c93e014a6e2" />
  <code code="75311-1" displayName="Discharge medications"
    codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <entryRelationship typeCode="SUBJ">
    <substanceAdministration classCode="SBADM" moodCode="EVN">
      <!-- Medication Activity (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.16" extension="2014-06-09" />
      <id root="c0ea7bf3-50e7-4e7a-83a3-e5a9ccbb8541" />
      <statusCode code="active" />
      <!-- QDM Attribute: Author dateTime -->
      <effectiveTime value="20190301" />
      <!-- QDM Attribute: Frequency -->
      <effectiveTime xsi:type="PIVL_TS" institutionSpecified="true" operator="A">
        <period value="6" unit="h" />
      </effectiveTime>
      <!-- QDM Attribute: Route -->
      <routeCode code="C38288" codeSystem="2.16.840.1.113883.3.26.1.1"
        codeSystemName="NCI Thesaurus" displayName="ORAL" />
      <!-- QDM Attribute: Dose -->
      <doseQuantity value="1" />
      <consumable>
        <manufacturedProduct classCode="MANU">
          <!-- Conforms to C-CDA R2 Medication Information (V2) -->
          <templateId root="2.16.840.1.113883.10.20.22.4.23"
            extension="2014-06-09" />
          <id root="37bfe02a-3e97-4bd6-9197-bbd0ed0de79e" />
          <manufacturedMaterial>
            <code code="105152" codeSystem="2.16.840.1.113883.6.88"
              codeSystemName="RxNorm"
              displayName="Amoxicillin 60 MG/ML Oral Suspension" />
          </manufacturedMaterial>
        </manufacturedProduct>
      </consumable>
    </substanceAdministration>
  </entryRelationship>
</act>

```

3.15 Drug Monitoring Act

[act: identifier urn:oid:2.16.840.1.113883.10.20.22.4.123 (open)]

Table 47: Drug Monitoring Act Contexts

| Contained By: | Contains: |
|---|--|
| Medication Activity (V2) (optional) | US Realm Person Name (PN.US.FIELDDED) (required) |

This template represents the act of monitoring the patient's medication and includes a participation to record the person responsible for monitoring the medication. The prescriber of the medication is not

necessarily the same person or persons monitoring the drug. The effectiveTime indicates the time when the activity is intended to take place.

For example, a cardiologist may prescribe a patient Warfarin. The patient's primary care provider may monitor the patient's INR and adjust the dosing of the Warfarin based on these laboratory results. Here the person designated to monitor the drug is the primary care provider.

Table 48: Drug Monitoring Act Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|--|
| act (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.123) | | | | | |
| @classCode | 1..1 | SHALL | | 1098-30823 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT |
| @moodCode | 1..1 | SHALL | | 1098-28656 | INT |
| templateId | 1..1 | SHALL | | 1098-28657 | |
| @root | 1..1 | SHALL | | 1098-28658 | 2.16.840.1.113883.10.20.22.4.123 |
| id | 1..* | SHALL | | 1098-31920 | |
| code | 1..1 | SHALL | | 1098-28660 | |
| @code | 1..1 | SHALL | | 1098-30818 | 395170001 |
| @codeSystem | 1..1 | SHALL | | 1098-30819 | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96 |
| statusCode | 1..1 | SHALL | | 1098-31921 | |
| @code | 1..1 | SHALL | | 1098-32358 | urn:oid:2.16.840.1.113883.1.11.15933 (ActStatus) |
| effectiveTime | 1..1 | SHALL | | 1098-31922 | |
| participant | 1..* | SHALL | | 1098-28661 | |
| @typeCode | 1..1 | SHALL | | 1098-28663 | RESP |
| participantRole | 1..1 | SHALL | | 1098-28662 | |
| @classCode | 1..1 | SHALL | | 1098-28664 | ASSIGNED |
| id | 1..* | SHALL | | 1098-28665 | |
| playingEntity | 1..1 | SHALL | | 1098-28667 | |
| @classCode | 1..1 | SHALL | | 1098-28668 | PSN |
| name | 1..1 | SHALL | | 1098-28669 | US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) |

1. **SHALL** contain exactly one [1..1] **@classCode**="ACT" act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1098-30823).
2. **SHALL** contain exactly one [1..1] **@moodCode**="INT" (CONF:1098-28656).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-28657) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.123" (CONF:1098-28658).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-31920).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-28660).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="395170001" medication monitoring (regime/therapy) (CONF:1098-30818).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:1098-30819).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-31921).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [ActStatus](#) urn:oid:2.16.840.1.113883.1.11.15933 **DYNAMIC** (CONF:1098-32358).
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-31922).
8. **SHALL** contain at least one [1..*] **participant** (CONF:1098-28661) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="RESP" (CONF:1098-28663).
 - b. **SHALL** contain exactly one [1..1] **participantRole** (CONF:1098-28662).
 - i. This participantRole **SHALL** contain exactly one [1..1] **@classCode**="ASSIGNED" (CONF:1098-28664).
 - ii. This participantRole **SHALL** contain at least one [1..*] **id** (CONF:1098-28665).
 - iii. This participantRole **SHALL** contain exactly one [1..1] **playingEntity** (CONF:1098-28667).
 1. This playingEntity **SHALL** contain exactly one [1..1] **@classCode**="PSN" (CONF:1098-28668).
 2. This playingEntity **SHALL** contain exactly one [1..1] [US Realm Person Name \(PN.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1098-28669).

Figure 33: Drug Monitoring Act Example

```

<entryRelationship typeCode="COMP">
  <!-- **DRUG MONITORING ACT **-->
  <act classCode="ACT" moodCode="INT">
    <templateId root="2.16.840.1.113883.10.20.22.4.123" />
    <id root="2a620155-9d11-439e-92b3-5d9815ff4ee8" />
    <code code="395170001" displayName="medication monitoring(regime/therapy"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED-CT" />
    <statusCode code="completed" />
    <effectiveTime xsi:type="IVL_TS">
      <low value="20130615" />
      <high value="20130715" />
    </effectiveTime>
    <participant typeCode="RESP">
      <participantRole classCode="ASSIGNED">
        <id root="2a620155-9d11-439e-92b3-5d9815ff4ee5" />
        <playingEntity classCode="PSN">
          <name>
            <given>Listener</given>
            <family>Larry</family>
            <prefix>DR</prefix>
          </name>
          </playingEntity>
        </participantRole>
      </participant>
    </act>
  </entryRelationship>

```

3.16 Drug Vehicle

[participantRole: identifier urn:oid:2.16.840.1.113883.10.20.22.4.24 (open)]

Table 49: Drug Vehicle Contexts

| Contained By: | Contains: |
|--|-----------|
| Medication Activity (V2) (optional) Immunization Activity (V3) (optional) | |

This template represents the vehicle (e.g., saline, dextrose) for administering a medication.

Table 50: Drug Vehicle Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-------|-----------|--------------------------|---|
| participantRole (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.24) | | | | | |
| @classCode | 1..1 | SHALL | | 81-7490 | urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU |
| templateId | 1..1 | SHALL | | 81-7495 | |
| @root | 1..1 | SHALL | | 81-10493 | 2.16.840.1.113883.10.20.22.4.24 |
| code | 1..1 | SHALL | | 81-19137 | |
| @code | 1..1 | SHALL | | 81-19138 | 412307009 |
| @codeSystem | 1..1 | SHALL | | 81-26502 | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96 |
| playingEntity | 1..1 | SHALL | | 81-7492 | |
| code | 1..1 | SHALL | | 81-7493 | |
| name | 0..1 | MAY | | 81-7494 | |

1. **SHALL** contain exactly one [1..1] **@classCode**="MANU" (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110 **STATIC**) (CONF:81-7490).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-7495) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.24" (CONF:81-10493).
3. **SHALL** contain exactly one [1..1] **code** (CONF:81-19137).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="412307009" Drug Vehicle (CONF:81-19138).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:81-26502).
4. **SHALL** contain exactly one [1..1] **playingEntity** (CONF:81-7492).

This playingEntity/code is used to supply a coded term for the drug vehicle.

- a. This playingEntity **SHALL** contain exactly one [1..1] **code** (CONF:81-7493).
- b. This playingEntity **MAY** contain zero or one [0..1] **name** (CONF:81-7494).
 - i. This playingEntity/name **MAY** be used for the vehicle name in text, such as Normal Saline (CONF:81-10087).

Figure 34: Drug Vehicle Example

```
<participantRole classCode="MANU">
  <templateId root="2.16.840.1.113883.10.20.22.4.24"/>
  <code code="412307009" displayName="drug vehicle"
codeSystem="2.16.840.1.113883.6.96"/>
  <playingEntity classCode="MMAT">
    <code code="324049" displayName="Aerosol"
codeSystem="2.16.840.1.113883.6.88"
codeSystemName="RxNorm"/>
    <name>Aerosol</name>
  </playingEntity>
</participantRole>
```

3.17 Encounter Activity (V3)

[encounter: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.49:2015-08-01
(open)]

Table 51: Encounter Activity (V3) Contexts

| Contained By: | Contains: |
|---------------|---|
| | Service Delivery Location (optional) Indication (V2) (optional) Encounter Diagnosis (V3) (optional) |

This clinical statement describes an interaction between a patient and clinician. Interactions may include in-person encounters, telephone conversations, and email exchanges.

Table 52: Encounter Activity (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|---|
| encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.49:2015-08-01) | | | | | |
| @classCode | 1..1 | SHALL | | 1198-8710 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC |
| @moodCode | 1..1 | SHALL | | 1198-8711 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 1198-8712 | |
| @root | 1..1 | SHALL | | 1198-26353 | 2.16.840.1.113883.10.20.22.4.49 |
| @extension | 1..1 | SHALL | | 1198-32546 | 2015-08-01 |
| id | 1..* | SHALL | | 1198-8713 | |
| code | 1..1 | SHALL | | 1198-8714 | urn:oid:2.16.840.1.113883.3.88.12.80.32 (EncounterTypeCode) |
| originalText | 0..1 | SHOULD | | 1198-8719 | |
| reference | 0..1 | SHOULD | | 1198-15970 | |
| @value | 0..1 | SHOULD | | 1198-15971 | |
| translation | 0..1 | MAY | | 1198-32323 | |
| effectiveTime | 1..1 | SHALL | | 1198-8715 | |
| sdtc:dischargeDispositionCode | 0..1 | MAY | | 1198-32176 | |
| performer | 0..* | MAY | | 1198-8725 | |
| assignedEntity | 1..1 | SHALL | | 1198-8726 | |
| code | 0..1 | MAY | | 1198-8727 | urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy) |
| participant | 0..* | SHOULD | | 1198-8738 | |
| @typeCode | 1..1 | SHALL | | 1198-8740 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC |
| participantRole | 1..1 | SHALL | | 1198-14903 | Service Delivery Location (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32) |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|---|
| entryRelationship | 0..* | MAY | | 1198-8722 | |
| @typeCode | 1..1 | SHALL | | 1198-8723 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 1198-14899 | Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) |
| entryRelationship | 0..* | MAY | | 1198-15492 | |
| act | 1..1 | SHALL | | 1198-15973 | Encounter Diagnosis (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.80:2015-08-01) |

1. **SHALL** contain exactly one [1..1] **@classCode="ENC"** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-8710).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-8711).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-8712) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.49"** (CONF:1198-26353).
 - b. **SHALL** contain exactly one [1..1] **@extension="2015-08-01"** (CONF:1198-32546).
4. **SHALL** contain at least one [1..*] **id** (CONF:1198-8713).
5. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet [EncounterTypeCode](#) urn:oid:2.16.840.1.113883.3.88.12.80.32 **DYNAMIC** (CONF:1198-8714).
 - a. This code **SHOULD** contain zero or one [0..1] **originalText** (CONF:1198-8719).
 - i. The originalText, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:1198-15970).
 1. The reference, if present, **SHOULD** contain zero or one [0..1] **@value** (CONF:1198-15971).
 - a. This reference/**@value** **SHALL** begin with a '#' and **SHALL** point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1198-15972).

The translation may exist to map the code of EncounterTypeCode (2.16.840.1.113883.3.88.12.80.32) value set to the code of Encounter Planned (2.16.840.1.113883.11.20.9.52) value set.

- b. This code **MAY** contain zero or one [0..1] **translation** (CONF:1198-32323).
6. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1198-8715).
7. **MAY** contain zero or one [0..1] **sdct:dischargeDispositionCode** (CONF:1198-32176).
 Note: The prefix sdct: SHALL be bound to the namespace "urn:hl7-org:sdct". The use of the

namespace provides a necessary extension to CDA R2 for the use of the dischargeDispositionCode element

- a. This sdtc:dischargeDispositionCode **SHOULD** contain exactly [0..1] *code*, which **SHOULD** be selected from ValueSet 2.16.840.1.113883.3.88.12.80.33 NUBC UB-04 FL17-Patient Status (code system 2.16.840.1.113883.6.301.5) *DYNAMIC* or, if access to NUBC is unavailable, from CodeSystem 2.16.840.1.113883.12.112 HL7 Discharge Disposition (CONF:1198-32177).
 - b. This sdtc:dischargeDispositionCode **SHOULD** contain exactly [0..1] *codeSystem*, which **SHOULD** be either CodeSystem: NUBC 2.16.840.1.113883.6.301.5 *OR* CodeSystem: HL7 Discharge Disposition 2.16.840.1.113883.12.112 (CONF:1198-32377).
8. **MAY** contain zero or more [0..*] **performer** (CONF:1198-8725).
- a. The performer, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1198-8726).
 - i. This assignedEntity **MAY** contain zero or one [0..1] **code**, which **SHOULD** be selected from ValueSet [Healthcare Provider Taxonomy](#) urn:oid:2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1198-8727).
9. **SHOULD** contain zero or more [0..*] **participant** (CONF:1198-8738) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="LOC"** Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1198-8740).
 - b. **SHALL** contain exactly one [1..1] [Service Delivery Location](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32) (CONF:1198-14903).
10. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-8722) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1198-8723).
 - b. **SHALL** contain exactly one [1..1] [Indication \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) (CONF:1198-14899).
11. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-15492) such that it
- a. **SHALL** contain exactly one [1..1] [Encounter Diagnosis \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.80:2015-08-01) (CONF:1198-15973).

Figure 35: Encounter Activity (V3) Example

```

<encounter classCode="ENC" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.49" extension="2015-08-01" />
  <id root="2a620155-9d11-439e-92b3-5d9815ff4de8" />
  <code code="99213" displayName="Office outpatient visit 15 minutes"
codeSystemName="CPT-4" codeSystem="2.16.840.1.113883.6.12">
    <originalText>
      <reference value="#Encounter1" />
    </originalText>
    <translation code="AMB" codeSystem="2.16.840.1.113883.5.4" displayName="Ambulatory"
codeSystemName="HL7 ActEncounterCode" />
  </code>
  <effectiveTime value="201209271300+0500" />
  <performer>
    <assignedEntity>
      . . .
    </assignedEntity>
  </performer>
  <participant typeCode="LOC">
    <participantRole classCode="SDLOC">
      <templateId root="2.16.840.1.113883.10.20.22.4.32" />
      . . .
    </participantRole>
  </participant>
  <entryRelationship typeCode="RSON">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.19" extension="2014-06-09" />
      . . .
    </observation>
  </entryRelationship>
</encounter>

```

3.17.1 Encounter Performed (V5)

[encounter: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.23:2019-12-01
(open)]

Table 53: Encounter Performed (V5) Contexts

| Contained By: | Contains: |
|---|---|
| Encounter Performed Act (V3) (required) | Facility Location (V2) (optional) Admission Source (optional) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Encounter Diagnosis QDM (optional) Author (V2) (optional) |

This template, along with the Encounter Performed Act (V2) template, represents the QDM datatype: Encounter, Performed. This template must be contained in an Encounter Performed Act (V2) template. The Encounter, Performed describes the interactions between the patient and clinicians that have been completed. Interactions include in-person encounters, telephone conversations, and email exchanges. The actStatus is constrained to “completed” and both a low and high effectiveTime are required.

Encounter id is represented using the encounter/id element, the encounter/id/@root (or combined with @extension, if @extension is present) uniquely identifies an encounter.

Each episode of care shall have one unique inpatient encounter id and if there are other types of encounters present (ICU, ED) during the same episode of care, they shall have their own unique encounter ids. If there are data for multiple episode of cares within the same QRDA category I file, then each episode of care shall have their own unique inpatient encounter id. Should there be another reference to the unique encounter id of an encounter instance in a QRDA category I file, then users should reference the previously noted encounter id of that encounter instance.

QDM Attribute: Diagnosis is a coded diagnosis/problem addressed during the encounter. Diagnosis attribute is intended to capture ALL diagnoses, including principal diagnosis. This is represented through entryRelationship to Encounter Diagnosis template as specified in the Encounter Activity (V3) parent template.

Table 54: Encounter Performed (V5) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|-------|-----------|----------------------------|--|
| encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.23:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-27532 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC |
| @moodCode | 1..1 | SHALL | | 4444-27533 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 4444-11861 | |
| @root | 1..1 | SHALL | | 4444-11862 | 2.16.840.1.113883.10.20.24.3.23 |
| @extension | 1..1 | SHALL | | 4444-26552 | 2019-12-01 |
| id | 1..* | SHALL | | 4444-29416 | |
| @root | 1..1 | SHALL | | 4444-29418 | |
| @extension | 0..1 | MAY | | 4444-29419 | |
| code | 1..1 | SHALL | | 4444-27624 | |
| statusCode | 1..1 | SHALL | | 4444-11874 | |
| @code | 1..1 | SHALL | | 4444-11875 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL | | 4444-11876 | |
| low | 1..1 | SHALL | | 4444-11877 | |
| high | 1..1 | SHALL | | 4444-11878 | |
| author | 0..1 | MAY | | 4444-29417 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| participant | 0..* | MAY | | 4444-13025 | Facility Location (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.100:2017-08-01) |
| participant | 0..1 | MAY | | 4444-29101 | |
| @typeCode | 1..1 | SHALL | | 4444-29102 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = LOC |
| participantRole | 1..1 | SHALL | | 4444-29103 | Admission Source (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.151:2017-08-01) |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|---|
| participant | 0..* | MAY | | 4444-29661 | |
| @typeCode | 1..1 | SHALL | | 4444-29668 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29662 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29665 | |
| @typeCode | 1..1 | SHALL | | 4444-29670 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29666 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29667 | |
| @typeCode | 1..1 | SHALL | | 4444-29671 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-30029 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..* | MAY | | 4444-29663 | |
| @typeCode | 1..1 | SHALL | | 4444-29669 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29664 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |
| entryRelationship | 0..* | MAY | | 4444-29958 | |
| @typeCode | 1..1 | SHALL | | 4444-29960 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| observation | 1..1 | SHALL | | 4444-29959 | Encounter Diagnosis QDM (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.168:2019-12-01) |

1. Conforms to [Encounter Activity \(V3\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.49:2015-08-01).
2. **SHALL** contain exactly one [1..1] **@classCode="ENC"** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-27532).

3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-27533).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-11861) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.23" (CONF:4444-11862).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-26552).
5. **SHALL** contain at least one [1..*] **id** (CONF:4444-29416).
 - a. Such ids **SHALL** contain exactly one [1..1] **@root** (CONF:4444-29418).
 - b. Such ids **MAY** contain zero or one [0..1] **@extension** (CONF:4444-29419).
6. **SHALL** contain exactly one [1..1] **code** (CONF:4444-27624).
Note: QDM Attribute: Code
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:4444-11874).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:4444-11875).
8. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4444-11876).
Note: QDM Attribute: Relevant Period. QDM Attribute: Length of Stay is derived from admission time and discharge time.
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:4444-11877).
Note: startTime – The time the encounter began (admission time)
 - b. This effectiveTime **SHALL** contain exactly one [1..1] **high** (CONF:4444-11878).
Note: stopTime – The time the encounter ended (discharge time)
9. **MAY** contain zero or one [0..1] **Author (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-29417).
Note: QDM Attribute: Author dateTime
10. **MAY** contain zero or more [0..*] **Facility Location (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.100:2017-08-01) (CONF:4444-13025).
Note: QDM Attribute: Facility Locations
11. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29101) such that it
Note: QDM Attribute: Admission Source
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="LOC" Location (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-29102).
 - b. **SHALL** contain exactly one [1..1] **Admission Source** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.151:2017-08-01) (CONF:4444-29103).
12. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29661) such that it
Note: QDM Attribute: Participant
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" performer (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29668).
 - b. **SHALL** contain exactly one [1..1] **Entity Practitioner** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29662).
13. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29665) such that it
Note: QDM Attribute: Participant

- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29670).
 - b. **SHALL** contain exactly one [1..1] **Entity Patient** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29666).
14. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29667) such that it
Note: QDM Attribute: Participant
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29671).
 - b. **SHALL** contain exactly one [1..1] **Entity Organization** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-30029).
15. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29663) such that it
Note: QDM Attribute: Participant
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29669).
 - b. **SHALL** contain exactly one [1..1] **Entity Care Partner** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29664).
16. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:4444-29958) such that it
Note: QDM Attribute: Diagnoses
- a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-29960).
 - b. **SHALL** contain exactly one [1..1] **Encounter Diagnosis QDM** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.168:2019-12-01) (CONF:4444-29959).
17. This template **SHALL** be contained by an **Encounter Performed Act (V3)** (CONF:4444-29420).

Figure 36: Encounter Performed (V5) Example

```

<!-- Must be contained in the Encounter Performed Act (V3) template to represent the
Encounter, Performed QDM data type -->
<encounter classCode="ENC" moodCode="EVN">
  <!-- Conforms to C-CDA R2.1 Encounter Activity (V3) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.49" extension="2015-08-01"/>
  <!-- Encounter Performed (V5) templateId-->
  <templateId root="2.16.840.1.113883.10.20.24.3.23" extension="2019-12-01"/>
  <id root="12345678-9d11-439e-92b3-5d9815ff4de1"/>
  <code code="4525004" displayName="Emergency Department visit"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT"/>
  <text>Encounter, Performed: Emergency Department Visit</text>
  <statusCode code="completed"/>
  <effectiveTime>
    <!-- QDM Attribute: Relevant Period - admission datetime -->
    <low value="20190301090000"/>
    <!-- QDM Attribute: Relevant Period - discharge datetime -->
    <high value="20190301130000"/>
  </effectiveTime>
  <!-- QDM Attribute: Dianosis -->
  <entryRelationship typeCode="REFR">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.24.3.168" extension="2019-12-01"/>
      <id root="92587992-6147-467e-8ce7-b080ef569df4"/>
      <code code="29308-4" displayName="diagnosis" codeSystem="2.16.840.1.113883.6.1"
/>
      <value xsi:type="CD" code="274100004" displayName="Cerebral hemorrhage
(disorder)" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED"/>
      <entryRelationship typeCode="REFR">
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.24.3.166" extension="2019-12-
01"/>
          <code code="263486008" displayName="Rank"
codeSystem="2.16.840.1.113883.6.96"/>
          <value xsi:type="INT" value="1"/>
        </observation>
      </entryRelationship>
    </observation>
  </entryRelationship>
</encounter>

```

3.18 Encounter Diagnosis (V3)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.80:2015-08-01 (open)]

Table 55: Encounter Diagnosis (V3) Contexts

| Contained By: | Contains: |
|--|---|
| Encounter Activity (V3) (optional) | Problem Observation (V3) (required) |

This template wraps relevant problems or diagnoses at the close of a visit or that need to be followed after the visit. If the encounter is associated with a Hospital Discharge, the Hospital Discharge Diagnosis must be used. This entry requires at least one Problem Observation entry.

Table 56: Encounter Diagnosis (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|-------|-----------|----------------------------|--|
| act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.80:2015-08-01) | | | | | |
| @classCode | 1..1 | SHALL | | 1198-14889 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT |
| @moodCode | 1..1 | SHALL | | 1198-14890 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 1198-14895 | |
| @root | 1..1 | SHALL | | 1198-14896 | 2.16.840.1.113883.10.20.22.4.80 |
| @extension | 1..1 | SHALL | | 1198-32542 | 2015-08-01 |
| code | 1..1 | SHALL | | 1198-19182 | |
| @code | 1..1 | SHALL | | 1198-19183 | 29308-4 |
| @codeSystem | 1..1 | SHALL | | 1198-32160 | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entryRelationship | 1..* | SHALL | | 1198-14892 | |
| @typeCode | 1..1 | SHALL | | 1198-14893 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ |
| observation | 1..1 | SHALL | | 1198-14898 | Problem Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01) |

1. **SHALL** contain exactly one [1..1] **@classCode**="ACT" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-14889).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-14890).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-14895) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.80" (CONF:1198-14896).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32542).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1198-19182).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="29308-4" Diagnosis (CONF:1198-19183).

- b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1198-32160).
- 5. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:1198-14892) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="SUBJ" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1198-14893).
 - b. **SHALL** contain exactly one [1..1] [Problem Observation \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01) (CONF:1198-14898).

Figure 37: Encounter Diagnosis (V3) Example

```

<act classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.80" extension="2015-08-01" />
  <code code="29308-4" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
  displayName=" DIAGNOSIS" />
  <statusCode code="active" />
  <effectiveTime>
    <low value="20903003" />
  </effectiveTime>
  <entryRelationship typeCode="SUBJ">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2015-08-01" />
      <!-- Problem Observation -->
      ...
    </observation>
  </entryRelationship>
</act>

```

3.19 Encounter Diagnosis QDM

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.168:2019-12-01 (open)]

Table 57: Encounter Diagnosis QDM Contexts

| Contained By: | Contains: |
|---|--|
| Encounter Performed (V5) (optional) | Rank (optional) Present On Admission Indicator (optional) |

This template represents the Diagnoses QDM Attribute.

Coded diagnoses/problems addressed during the encounter. The diagnoses attribute has three components

- Diagnosis (code)
- PresentOnAdmissionIndicator (code)
- Rank (positive integer)

To reference an encounter diagnosis, the expression must include the diagnosis code component. The other components are optional. The expression should only include the presentOnAdmissionIndicator code and, or the rank if it is necessary to reference present on admission or principal diagnosis. The Encounter, Performed diagnoses attribute is intended to capture ALL diagnoses, including the principal diagnosis. Principal diagnosis is represented by setting rank to 1.

Table 58: Encounter Diagnosis QDM Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|--------------|-------------|------------------|----------------------------|--|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.168:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-29937 | OBS |
| @moodCode | 1..1 | SHALL | | 4444-29938 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = EVN |
| @negationInd | 0..0 | SHALL NOT | | 4444-29939 | |
| templateId | 1..1 | SHALL | | 4444-29931 | |
| @root | 1..1 | SHALL | | 4444-29934 | 2.16.840.1.113883.10.20.24.3.168 |
| @extension | 1..1 | SHALL | | 4444-29935 | 2019-12-01 |
| code | 1..1 | SHALL | | 4444-29930 | |
| @code | 1..1 | SHALL | | 4444-29932 | 29308-4 |
| @codeSystem | 1..1 | SHALL | | 4444-29933 | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| value | 1..1 | SHALL | CD | 4444-29936 | |
| entryRelationship | 0..1 | MAY | | 4444-29940 | |
| @typeCode | 1..1 | SHALL | | 4444-29944 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| observation | 1..1 | SHALL | | 4444-29941 | Rank (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.166:2019-12-01) |
| entryRelationship | 0..1 | MAY | | 4444-29942 | |
| @typeCode | 1..1 | SHALL | | 4444-29961 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| observation | 1..1 | SHALL | | 4444-29943 | Present On Admission Indicator (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.169:2019-12-01) |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CONF:4444-29937).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-29938).
3. **SHALL NOT** contain [0..0] **@negationInd** (CONF:4444-29939).

4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-29931) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.168" (CONF:4444-29934).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-29935).
5. **SHALL** contain exactly one [1..1] **code** (CONF:4444-29930).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="29308-4" Diagnosis (CONF:4444-29932).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:4444-29933).
6. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:4444-29936).
Note: (QDM Attribute: Diagnosis) code
7. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-29940) such that it
Note: (QDM Attribute - Diagnosis) Rank. Principal diagnosis is indicated with a rank of 1.
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-29944).
 - b. **SHALL** contain exactly one [1..1] **Rank** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.166:2019-12-01) (CONF:4444-29941).
8. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-29942) such that it
Note: (QDM Attribute - Diagnosis) PresentOnAdmissionIndicator
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-29961).
 - b. **SHALL** contain exactly one [1..1] **Present On Admission Indicator** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.169:2019-12-01) (CONF:4444-29943).

Figure 38: Encounter Diagnosis QDM Example

```

<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.24.3.168" extension="2019-12-01" />
  <code code="29308-4" displayName="diagnosis" codeSystem="2.16.840.1.113883.6.1" />
  <value xsi:type="CD" code="274100004" displayName="Cerebral hemorrhage (disorder)"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED"/>
  <entryRelationship typeCode="REFR">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.24.3.166" extension="2019-12-01"/>
      <code code="263486008" displayName="Rank" codeSystem="2.16.840.1.113883.6.96"/>
      <value xsi:type="INT" value="1"/>
    </observation>
  </entryRelationship>
  <!-- Present on Admission Indicator -->
  <entryRelationship typeCode="REFR">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.24.3.169" extension="2019-12-01" />
      <code code="78026-2"
        displayName="Present on admission"
        codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC" />
      <value xsi:type="CD" code="Y" displayName="Diagnosis was present at the time of
admission" codeSystem="2.16.840.1.113883.6.301.1" codeSystemName="UB-04"/>
    </observation>
  </entryRelationship>
</observation>

```

3.20 Encounter Order Act (V3)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.132:2019-12-01
(open)]

Table 59: Encounter Order Act (V3) Contexts

| Contained By: | Contains: |
|--|---|
| Patient Data Section QDM (V7) (optional) | Reason (V3) (optional) Encounter Order (V5) (required) |

This template, along with its contained Encounter Order (V5) template, represents the QDM datatype: Encounter, Order.

The Encounter Order (V5) template itself does not support the negationInd attribute. Adding an act wrapper to the Encounter Order (V5) template allows Encounter Order to be negated.

Table 60: Encounter Order Act (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-------|-----------|----------------------------|---|
| act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.132:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-28469 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT |
| @moodCode | 1..1 | SHALL | | 4444-28470 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = RQO |
| @negationInd | 0..1 | MAY | | 4444-28483 | |
| templateId | 1..1 | SHALL | | 4444-28467 | |
| @root | 1..1 | SHALL | | 4444-28471 | 2.16.840.1.113883.10.20.24.3.132 |
| @extension | 1..1 | SHALL | | 4444-29410 | 2019-12-01 |
| id | 0..* | MAY | | 4444-29641 | |
| code | 1..1 | SHALL | | 4444-29409 | |
| @code | 1..1 | SHALL | | 4444-29411 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC |
| entryRelationship | 1..1 | SHALL | | 4444-28468 | |
| @typeCode | 1..1 | SHALL | | 4444-28473 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ |
| encounter | 1..1 | SHALL | | 4444-28474 | Encounter Order (V5) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.22:2019-12-01) |
| entryRelationship | 0..1 | MAY | | 4444-29412 | |
| @typeCode | 1..1 | SHALL | | 4444-29414 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 4444-29413 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) |

1. **SHALL** contain exactly one [1..1] @classCode="ACT" Act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-28469).
 2. **SHALL** contain exactly one [1..1] @moodCode="RQO" Request (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-28470).
 3. **MAY** contain zero or one [0..1] @negationInd (CONF:4444-28483).
- Note: QDM Attribute: Negation Rationale - negationInd="true" indicates Encounter Not Order

- a. If **@negationInd="true"** is present, **SHALL** contain one [1..1] **entryRelationship** such that it contains exactly one [1..1] **Reason (V3)** to state the reason for **Encounter Not Order** (CONF:4444-29640).
- 4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-28467) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.24.3.132"** (CONF:4444-28471).
 - b. **SHALL** contain exactly one [1..1] **@extension="2019-12-01"** (CONF:4444-29410).
- 5. **MAY** contain zero or more [0..*] **id** (CONF:4444-29641).
- 6. **SHALL** contain exactly one [1..1] **code** (CONF:4444-29409).
 - a. This code **SHALL** contain exactly one [1..1] **@code="ENC"** Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-29411).
- 7. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:4444-28468) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** has subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-28473).
 - b. **SHALL** contain exactly one [1..1] **Encounter Order (V5)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.22:2019-12-01) (CONF:4444-28474).
- 8. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-29412) such that it

Note: Reason for Negation

 - a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-29414).
 - b. **SHALL** contain exactly one [1..1] **Reason (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-29413).

Figure 39: Encounter Order Act (V3) Example

```

<!-- Encounter Not Order -->
<act classCode="ACT" moodCode="RQO" negationInd="true">
  <!-- Encounter Order Act (V3) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.132" extension="2019-12-01"/>
  <id root="ec8a6ff8-ed4b-4f7e-82c3-e98e58b45de7"/>
  <code code="ENC" codeSystem="2.16.840.1.113883.5.6" displayName="Encounter"
codeSystemName="ActClass"/>
  <entryRelationship typeCode="SUBJ">
    <encounter classCode="ENC" moodCode="RQO">
      <!-- Conforms to C-CDA R2.1 Planned Encounter (V2) template -->
      <templateId root="2.16.840.1.113883.10.20.22.4.40" extension="2014-06-09"/>
      <!-- Encounter Order (V5) template -->
      <templateId root="2.16.840.1.113883.10.20.24.3.22" extension="2019-12-01"/>
      <id root="2a620155-9d11-439e-92b3-5d9815ff4de8"/>
      <code code="185349003" displayName="encounter for check-up (procedure)"
codeSystemName="SNOMED CT" codeSystem="2.16.840.1.113883.6.96"/>
      <text>Encounter for check-up (procedure)</text>
      <statusCode code="active"/>
      <author>
        <!-- C-CDA R2 Author Participation -->
        <templateId root="2.16.840.1.113883.10.20.22.4.119"/>
        <time value="201904081130"/>
        <assignedAuthor>
          <id root="2.16.840.1.113883.4.6" extension="111111111"/>
        </assignedAuthor>
      </author>
      <participant typeCode="LOC">
        <participantRole classCode="SDLOC">
          <code code="31628002" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT"
displayName="Hospital-based outpatient family medicine clinic
(environment)"/>
          <addr>
            <streetAddressLine>17 Daws Rd.</streetAddressLine>
            <city>Blue Bell</city>
            <state>MA</state>
            <postalCode>02368</postalCode>
            <country>US</country>
          </addr>
          <telecom use="WP" value="tel:(555)555-1003"/>
          <playingEntity classCode="PLC">
            <name>Good Health Clinic</name>
          </playingEntity>
        </participantRole>
      </participant>
    </encounter>
  </entryRelationship>
  <!-- QDM Attribute: Reason -->
  <entryRelationship typeCode="RSON">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.24.3.88" extension="2017-08-01"/>
      <id root="aa348c15-ce6b-4988-b33b-7ae730c710e2"/>
      <code code="77301-0" codeSystem="2.16.840.1.113883.6.1" displayName="Reason
care action performed or not" codeSystemName="LOINC"/>
      <statusCode code="completed"/>

```



```

    <effectiveTime>
      <low value="201704081130"/>
    </effectiveTime>
    <value xsi:type="CD" code="125629006" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT" displayName="Injury of colon"/>
  </observation>
</entryRelationship>
</act>

```

3.21 Encounter Performed Act (V3)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.133:2019-12-01
(open)]

Table 61: Encounter Performed Act (V3) Contexts

| Contained By: | Contains: |
|--|---|
| Patient Data Section QDM (V7) (optional) | Reason (V3) (optional) Encounter Performed (V5) (required) |

This template, along with its contained Encounter Performed (V5) template, represents the QDM datatype: Encounter, Performed.

The Encounter Performed (V5) template itself does not support the negationInd attribute. Adding an act wrapper to the Encounter Performed (V5) template allows Encounter Performed to be negated.

Table 62: Encounter Performed Act (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-------|-----------|----------------------------|---|
| act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.133:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-28477 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT |
| @moodCode | 1..1 | SHALL | | 4444-28478 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 0..1 | MAY | | 4444-28484 | |
| templateId | 1..1 | SHALL | | 4444-28475 | |
| @root | 1..1 | SHALL | | 4444-28479 | 2.16.840.1.113883.10.20.24.3.133 |
| @extension | 1..1 | SHALL | | 4444-29422 | 2019-12-01 |
| code | 1..1 | SHALL | | 4444-29421 | |
| @code | 1..1 | SHALL | | 4444-29423 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC |
| entryRelationship | 1..1 | SHALL | | 4444-28476 | |
| @typeCode | 1..1 | SHALL | | 4444-28481 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ |
| encounter | 1..1 | SHALL | | 4444-28482 | Encounter Performed (V5) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.23:2019-12-01) |
| entryRelationship | 0..1 | MAY | | 4444-29424 | |
| @typeCode | 1..1 | SHALL | | 4444-29426 | RSON |
| observation | 1..1 | SHALL | | 4444-29425 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) |

1. **SHALL** contain exactly one [1..1] **@classCode**="ACT" Act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-28477).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-28478).
3. **MAY** contain zero or one [0..1] **@negationInd** (CONF:4444-28484).

Note: QDM Attribute: Negation Rationale

- a. If **@negationInd**="true" is present, **SHALL** contain one [1..1] entryRelationship such that it contains exactly one [1..1] **Reason (V3)** to state the reason for **Encounter Not Performed** (CONF:4444-29929).

4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-28475) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.133" (CONF:4444-28479).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-29422).
5. **SHALL** contain exactly one [1..1] **code** (CONF:4444-29421).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-29423).
6. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:4444-28476) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="SUBJ" has subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-28481).
 - b. **SHALL** contain exactly one [1..1] **Encounter Performed (V5)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.23:2019-12-01) (CONF:4444-28482).
7. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-29424) such that it
 Note: Reason for negation
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="RSON" (CONF:4444-29426).
 - b. **SHALL** contain exactly one [1..1] **Reason (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-29425).

Figure 40: Encounter Performed Act (V3) Example

```

<act classCode="ACT" moodCode="EVN">
  <!--Encounter performed Act (V3) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.133" extension="2019-12-01"/>
  <code code="ENC" codeSystem="2.16.840.1.113883.5.6" displayName="Encounter"
codeSystemName="ActClass"/>
  <entryRelationship typeCode="SUBJ">
    <encounter classCode="ENC" moodCode="EVN">
      <!-- Conforms to C-CDA R2.1 Encounter Activity (V3) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.49" extension="2015-08-01"/>
      <!-- Encounter Performed (V5) templateId-->
      <templateId root="2.16.840.1.113883.10.20.24.3.23" extension="2019-12-01"/>
      <id root="12345678-9d11-439e-92b3-5d9815ff4de1"/>
      <code code="4525004" displayName="Emergency Department visit"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT"/>
      <text>Encounter, Performed: Emergency Department Visit</text>
      <statusCode code="completed"/>
      <effectiveTime>
        <!-- QDM Attribute: Relevant Period - admission datetime -->
        <low value="20190301090000"/>
        <!-- QDM Attribute: Relevant Period - discharge datetime -->
        <high value="20190301130000"/>
      </effectiveTime>
    </encounter>
  </entryRelationship>
</act>

```

3.22 Encounter Recommended Act (V3)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.134:2019-12-01
(open)]

Table 63: Encounter Recommended Act (V3) Contexts

| Contained By: | Contains: |
|--|---|
| Patient Data Section QDM (V7) (optional) | Reason (V3) (optional) Encounter Recommended (V5) (required) |

This template, along with its contained Encounter Recommended (V5) template, represents the QDM datatype: Encounter, Recommended.

The Encounter Recommended (V5) template itself does not support the negationInd attribute. Adding an act wrapper to the Encounter Recommended (V5) template allows Encounter Recommended to be negated.

Table 64: Encounter Recommended Act (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-------|-----------|----------------------------|---|
| act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.134:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-28487 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT |
| @moodCode | 1..1 | SHALL | | 4444-28488 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = INT |
| @negationInd | 0..1 | MAY | | 4444-28489 | |
| templateId | 1..1 | SHALL | | 4444-28485 | |
| @root | 1..1 | SHALL | | 4444-28490 | 2.16.840.1.113883.10.20.24.3.134 |
| @extension | 1..1 | SHALL | | 4444-29654 | 2019-12-01 |
| id | 0..* | MAY | | 4444-29659 | |
| code | 1..1 | SHALL | | 4444-28677 | |
| @code | 1..1 | SHALL | | 4444-29655 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC |
| entryRelationship | 1..1 | SHALL | | 4444-28486 | |
| @typeCode | 1..1 | SHALL | | 4444-28492 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ |
| encounter | 1..1 | SHALL | | 4444-28493 | Encounter Recommended (V5) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.24:2019-12-01) |
| entryRelationship | 0..1 | MAY | | 4444-29656 | |
| @typeCode | 1..1 | SHALL | | 4444-29660 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 4444-29657 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) |

1. **SHALL** contain exactly one [1..1] @classCode="ACT" Act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-28487).
 2. **SHALL** contain exactly one [1..1] @moodCode="INT" Intent (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-28488).
 3. **MAY** contain zero or one [0..1] @negationInd (CONF:4444-28489).
- Note: QDM Attribute: Negation Rationale - negationInd="true" indicates Encounter Not Recommended

- a. If **@negationInd="true"** is present, **SHALL** contain one [1..1] **entryRelationship** such that it contains exactly one [1..1] **Reason (V3)** to state the reason for **Encounter Not Recommended** (CONF:4444-29658).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-28485) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.24.3.134"** (CONF:4444-28490).
 - b. **SHALL** contain exactly one [1..1] **@extension="2019-12-01"** (CONF:4444-29654).
5. **MAY** contain zero or more [0..*] **id** (CONF:4444-29659).
6. **SHALL** contain exactly one [1..1] **code** (CONF:4444-28677).
 - a. This code **SHALL** contain exactly one [1..1] **@code="ENC"** Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-29655).
7. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:4444-28486) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** has subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-28492).
 - b. **SHALL** contain exactly one [1..1] **Encounter Recommended (V5)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.24:2019-12-01) (CONF:4444-28493).
8. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-29656) such that it

Note: Reason for Negation

 - a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-29660).
 - b. **SHALL** contain exactly one [1..1] **Reason (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-29657).

Figure 41: Encounter Recommended Act (V2) Example

```

<act classCode="ACT" moodCode="INT">
  <!--Encounter Recommended Act (V3) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.134" extension="2019-12-01"/>
  <id root="ec8a6ff8-ed4b-4f7e-82c3-e98e58b45de7"/>
  <code code="ENC" codeSystem="2.16.840.1.113883.5.6" displayName="Encounter"
codeSystemName="ActClass"/>
  <entryRelationship typeCode="SUBJ">
    <encounter classCode="ENC" moodCode="INT">
      <!-- Conforms to C-CDA R2.1 Planned Encounter (V2) template -->
      <templateId root="2.16.840.1.113883.10.20.22.4.40" extension="2014-06-09"/>
      <!-- Encounter Recommended (V5) template -->
      <templateId root="2.16.840.1.113883.10.20.24.3.24" extension="2019-12-01"/>
      <id root="2a620155-9d11-439e-92b3-5d9815ff4de8"/>
      <code code="185349003" displayName="encounter for check-up (procedure)"
codeSystemName="SNOMED CT" codeSystem="2.16.840.1.113883.6.96"/>
      <text>Encounter for check-up (procedure)</text>
      <statusCode code="active"/>
      <author>
        <!-- C-CDA R2 Author Participation -->
        <templateId root="2.16.840.1.113883.10.20.22.4.119"/>
        <time value="201504081130"/>
        <assignedAuthor>
          <id root="2.16.840.1.113883.4.6" extension="111111111"/>
        </assignedAuthor>
      </author>
      <!-- QDM Attribute: Reason -->
      <entryRelationship typeCode="RSON">
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.24.3.88" extension="2017-08-
01"/>
          <id root="aa348c15-ce6b-4988-b33b-7ae730c710e2"/>
          <code code="77301-0" codeSystem="2.16.840.1.113883.6.1"
displayName="Reason care action performed or not" codeSystemName="LOINC"/>
          <statusCode code="completed"/>
          <value xsi:type="CD" code="125629006"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT" displayName="Injury of
colon"/>
        </observation>
      </entryRelationship>
    </encounter>
  </entryRelationship>
</act>

```

3.23 Entry Reference

[act: identifier urn:oid:2.16.840.1.113883.10.20.22.4.122 (open)]

Table 65: Entry Reference Contexts

| Contained By: | Contains: |
|---|-----------|
| Goal Observation (optional) | |

This template represents the act of referencing another entry in the same CDA document instance. Its purpose is to remove the need to repeat the complete XML representation of the referred entry when relating one entry to another. This template can be used to reference many types of Act class derivations, such as encounters, observations, procedures etc., as it is often necessary when authoring CDA documents to repeatedly reference other Acts of these types. For example, in a Care Plan it is necessary to repeatedly relate Health Concerns, Goals, Interventions and Outcomes. The id is required and must be the same id as the entry/id it is referencing. The id cannot be a null value. Act/Code is set to nullFlavor="NP" (Not Present). This means the value is not present in the message (in act/Code).

Table 66: Entry Reference Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|-------|-----------|----------------------------|---|
| act (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122) | | | | | |
| @classCode | 1..1 | SHALL | | 1098-31485 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT |
| @moodCode | 1..1 | SHALL | | 1098-31486 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 1098-31487 | |
| @root | 1..1 | SHALL | | 1098-31488 | 2.16.840.1.113883.10.20.22.4.122 |
| id | 1..* | SHALL | | 1098-31489 | |
| code | 1..1 | SHALL | | 1098-31490 | |
| @nullFlavor | 1..1 | SHALL | | 1098-31491 | urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NP |
| statusCode | 1..1 | SHALL | | 1098-31498 | |
| @code | 0..1 | MAY | | 1098-31499 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |

1. **SHALL** contain exactly one [1..1] **@classCode**="ACT" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1098-31485).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1098-31486).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-31487) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.122" (CONF:1098-31488).

The ID must equal another entry/id in the same document instance. Application Software must be responsible for resolving the identifier back to its original object and then rendering the information in the correct place in the containing section's narrative text. The ID cannot have Null value (e.g., nullFlavor is not allowed).

4. **SHALL** contain at least one [1..*] **id** (CONF:1098-31489).

5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-31490).
 - a. This code **SHALL** contain exactly one [1..1] **@nullFlavor**="NP" Not Present (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:1098-31491).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-31498).
 - a. This statusCode **MAY** contain zero or one [0..1] **@code**="completed" (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1098-31499).

Figure 42: Entry Reference Example

```
<!--
*****
Health Concern section
*****
-->
<act classCode="ACT" moodCode="EVN">
  <!-- Health Concern Act of a pneumonia diagnosis -->
  <templateId root="2.16.840.1.113883.10.20.22.4.132" />
  <id root="4eab0e52-dd7d-4285-99eb-72d32ddb195c" />
  <code code="75310-3" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Health Concern" />
  <statusCode code="active" />
  <effectiveTime value="20130616" />
  <entryRelationship typeCode="REFR">
    <!-- Problem Observation (V2) -->
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2014-06-09" />
      <id root="8dfacd73-1682-4cc4-9351-e54ccea83612" />
      <code code="29308-4"
        codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        displayName="Diagnosis"/>
      <statusCode code="completed" />
      <effectiveTime>
        <!-- Date of diagnosis -->
        <low value="20130616" />
      </effectiveTime>
      <value xsi:type="CD" code="233604007"
        codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED"
        displayName="Pneumonia" />
      <!-- This Entry Reference refers to a goal, intervention, actual
        outcome, or some other entry present in the Care Plan
        that the Health Concern is related to-->
      <entryRelationship typeCode="REFR">
        <act classCode="ACT" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.22.4.122" />
          <!-- This ID equals the ID of the goal of a pulse
            ox greater than 92% -->
          <id root="3700b3b0-fbed-11e2-b778-0800200c9a66" />
          <!-- The code is nulled to "NP" Not Present -->
          <code nullFlavor="NP" />
          <statusCode code="completed" />
        </act>
      </entryRelationship>
    </observation>
  </entryRelationship>
</act>
...
<!--
*****
Expected Outcomes/Goals section
*****
-->
...
<entry>
```

```

<!-- This is an observation about the expected outcome of a pulse ox reading
of 92 or greater. The Id is the same as the ID as the ID of the
pneumonia problem above -->
<observation classCode="OBS" moodCode="GOL">
  <id root="3700b3b0-fbed-11e2-b778-0800200c9a66" />
  <code code="59408-5"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="Oxygen saturation in Arterial blood by Pulse oximetry"/>
  <statusCode code="active" />
  <value xsi:type="IVL_PQ">
    <low value="92" unit="%" />
  </value>
  <!-- There could be another Entry Reference here referring to the
related health concern, actual outcome, or intervention -->
  ...

</observation>
</entry>
...

```

Figure 43: Diagnosis Reference Example

```

<!-- Show how an encounter can include a discharge diagnosis which references an
item on the problem list using the Entry Reference template -->
<!-- Problem Section -->
<observation>
  <id root="1234567" />
  <code code="123" codeSystem="1.2.3" displayName="asthma" />
</observation>
<!-- Encounter Section -->
<encounter>
  <entryRelationship typeCode="COMP">
    <act>
      <code code="145" codeSystem="4.5.6" displayName="discharge diagnosis" />
      <templateId root="2.16.840.1.113883.10.20.22.4.33" extension="2014-06-09" />
      <!-- this is for illustrative purposes only. In this particular
case, the template requires a nested Problem
Observation (V2). In the Health Concern template,
we'd need a constraint that says it's allowable to
include the Entry Reference template. -->
      <entryRelationship typeCode="SUBJ">
        <act classCode="ACT" moodCode="XXX">
          <templateId root="2.16.840.1.113883.10.20.22.4.122" />
          <id root="1234567" />
          <code nullFlavor="NP" />
        </act>
      </entryRelationship>
    </act>
  </entryRelationship>
</encounter>

```

3.24 External Document Reference

```
[externalDocument: identifier
urn:hl7ii:2.16.840.1.113883.10.20.22.4.115:2014-06-09 (open)]
```

Table 67: External Document Reference Contexts

| Contained By: | Contains: |
|---|-----------|
| Goal Observation (optional) | |

Where it is necessary to reference an external clinical document, the External Document Reference template can be used to reference this external document. However, if the containing document is appending to or replacing another document in the same set, that relationship is set in the header, using ClinicalDocument/relatedDocument.

Table 68: External Document Reference Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|--------|-----------|----------------------------|---|
| externalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.115:2014-06-09) | | | | | |
| @classCode | 1..1 | SHALL | | 1098-31931 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = DOCCLIN |
| @moodCode | 1..1 | SHALL | | 1098-31932 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 1098-32748 | |
| @root | 1..1 | SHALL | | 1098-32750 | 2.16.840.1.113883.10.20.22.4.115 |
| @extension | 1..1 | SHALL | | 1098-32749 | 2014-06-09 |
| id | 1..1 | SHALL | | 1098-32751 | |
| code | 1..1 | SHALL | | 1098-31933 | |
| setId | 0..1 | SHOULD | | 1098-32752 | |
| versionNumber | 0..1 | SHOULD | | 1098-32753 | |

1. **SHALL** contain exactly one [1..1] **@classCode**="DOCCLIN" Clinical Document (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1098-31931).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1098-31932).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-32748) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.115" (CONF:1098-32750).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32749).
4. **SHALL** contain exactly one [1..1] **id** (CONF:1098-32751).

5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-31933).
6. **SHOULD** contain zero or one [0..1] **setId** (CONF:1098-32752).
7. **SHOULD** contain zero or one [0..1] **versionNumber** (CONF:1098-32753).

Figure 44: External Document Reference Example

```
<externalDocument classCode="DOCCLIN" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.115"
    extension="2014-06-09" />
  <id root="6f1bd58b-c58f-40b7-b314-caf1294ed98b" />
  <code codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    code="57133-1"
    displayName="Referral Note" />
  <setId extension="STT988" root="2.16.840.1.113883.19.5.99999.19" />
  <versionNumber value="1" />
</externalDocument>
```

3.25 Family History Death Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.22.4.47 (open)]

Table 69: Family History Death Observation Contexts

| Contained By: | Contains: |
|--|-----------|
| Family History Observation [V3] (optional) | |

This clinical statement records whether the family member is deceased.

Table 70: Family History Death Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-------|-----------|--------------------------|--|
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.47) | | | | | |
| @classCode | 1..1 | SHALL | | 81-8621 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 81-8622 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 81-8623 | |
| @root | 1..1 | SHALL | | 81-10495 | 2.16.840.1.113883.10.20.22.4.47 |
| code | 1..1 | SHALL | | 81-19141 | |
| @code | 1..1 | SHALL | | 81-19142 | ASSERTION |
| @codeSystem | 1..1 | SHALL | | 81-26504 | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL | | 81-8625 | |
| @code | 1..1 | SHALL | | 81-19097 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | 81-8626 | |
| @code | 1..1 | SHALL | | 81-26470 | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 419099009 |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:81-8621).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:81-8622).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-8623) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.47" (CONF:81-10495).
4. **SHALL** contain exactly one [1..1] **code** (CONF:81-19141).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:81-19142).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:81-26504).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:81-8625).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:81-19097).
6. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:81-8626).
 - a. This value **SHALL** contain exactly one [1..1] **@code**="419099009" Dead (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 **STATIC**) (CONF:81-26470).

Figure 45: Family History Death Observation Example

```

<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.47"/>
  <id root="6898fae0-5c8a-11db-b0de-0800200c9a66"/>
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"/>
  <statusCode code="completed"/>
  <value xsi:type="CD"
    code="419099009"
    codeSystem="2.16.840.1.113883.6.96"
    displayName="Dead"/>
</observation>

```

3.26 Family History Observation (V3)

```
[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.46:2015-08-01
(open)]
```

Table 71: Family History Observation (V3) Contexts

| Contained By: | Contains: |
|--|---|
| Family History Organizer (V3) (required) | Age Observation (optional) Family History Death Observation (optional) |

Family History Observations related to a particular family member are contained within a Family History Organizer. The effectiveTime in the Family History Observation is the biologically or clinically relevant time of the observation. The biologically or clinically relevant time is the time at which the observation holds (is effective) for the family member (the subject of the observation).

Table 72: Family History Observation (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|--------|-----------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.46:2015-08-01) | | | | | |
| @classCode | 1..1 | SHALL | | 1198-8586 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 1198-8587 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 1198-8599 | |
| @root | 1..1 | SHALL | | 1198-10496 | 2.16.840.1.113883.10.20.22.4.46 |
| @extension | 1..1 | SHALL | | 1198-32605 | 2015-08-01 |
| id | 1..* | SHALL | | 1198-8592 | |
| code | 1..1 | SHALL | | 1198-32427 | urn:oid:2.16.840.1.113883.3.88.12.3221.7.2 (Problem Type (SNOMEDCT)) |
| translation | 1..* | SHALL | | 1198-32847 | urn:oid:2.16.840.1.113762.1.4.1099.28 (Problem Type (LOINC)) |
| statusCode | 1..1 | SHALL | | 1198-8590 | |
| @code | 1..1 | SHALL | | 1198-19098 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 0..1 | SHOULD | | 1198-8593 | |
| value | 1..1 | SHALL | CD | 1198-8591 | urn:oid:2.16.840.1.113883.3.88.12.3221.7.4 (Problem) |
| entryRelationship | 0..1 | MAY | | 1198-8675 | |
| @typeCode | 1..1 | SHALL | | 1198-8676 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = SUBJ |
| @inversionInd | 1..1 | SHALL | | 1198-8677 | true |
| observation | 1..1 | SHALL | | 1198-15526 | Age Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.31) |
| entryRelationship | 0..1 | MAY | | 1198-8678 | |
| @typeCode | 1..1 | SHALL | | 1198-8679 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = CAUS |
| observation | 1..1 | SHALL | | 1198-15527 | Family History Death Observation (identifier: urn:oid:2.16.840.1.113883.10. |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------|-------|------|-----------|-------|----------------------------|
| | | | | | 20.22.4.47 |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-8586).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-8587).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-8599) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.46" (CONF:1198-10496).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32605).
4. **SHALL** contain at least one [1..*] **id** (CONF:1198-8592).
5. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet [Problem Type \(SNOMEDCT\)](#) urn:oid:2.16.840.1.113883.3.88.12.3221.7.2 **DYNAMIC** (CONF:1198-32427).
 - a. This code **SHALL** contain at least one [1..*] **translation**, which **SHOULD** be selected from ValueSet [Problem Type \(LOINC\)](#) urn:oid:2.16.840.1.113762.1.4.1099.28 **DYNAMIC** (CONF:1198-32847).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-8590).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1198-19098).
7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1198-8593).
8. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD", where the code **SHALL** be selected from ValueSet [Problem](#) urn:oid:2.16.840.1.113883.3.88.12.3221.7.4 **DYNAMIC** (CONF:1198-8591).
9. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-8675) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="SUBJ" Subject (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1198-8676).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd**="true" True (CONF:1198-8677).
 - c. **SHALL** contain exactly one [1..1] [Age Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.31) (CONF:1198-15526).
10. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-8678) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="CAUS" Causal or Contributory (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1198-8679).
 - b. **SHALL** contain exactly one [1..1] [Family History Death Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.47) (CONF:1198-15527).

Figure 46: Family History Observation (V3) Example

```

<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.46" extension="2015-08-01" />
  <!-- Family History Observation template -->
  <id root="d42ebf70-5c89-11db-b0de-0800200c9a66" />
  <code code="75323-6" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
  displayName="Condition">
  <translation code="64572001" displayName="Condition"
  codeSystem="2.16.840.1.113883.6.96"
  codeSystemName="SNOMED CT"></translation>
  </code>
  <statusCode code="completed" />
  <effectiveTime value="1967" />
  <value xsi:type="CD" code="22298006" codeSystem="2.16.840.1.113883.6.96"
  displayName="Myocardial infarction" />
  <entryRelationship typeCode="CAUS">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.47" />
      ...
    </observation>
  </entryRelationship>
  <entryRelationship typeCode="SUBJ" inversionInd="true">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.31" />
      ....
    </observation>
  </entryRelationship>
</observation>

```

3.26.1 Family History Observation QDM (V4)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.112:2019-12-01 (open)]

Table 73: Family History Observation QDM (V4) Contexts

| Contained By: | Contains: |
|--|---|
| Family History Organizer QDM (V5) (required) | Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Author (V2) (required) |

This template (along with its containing organizer template Family History Organizer QDM (V5) represents the QDM datatype: Family History.

This datatype represents a problem, condition, or diagnosis experienced by a patient's family member whether existing currently or in the past.

Table 74: Family History Observation QDM (V4) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|--------------|-------------|------------------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.112:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-27685 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 4444-27686 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 0..0 | SHALL NOT | | 4444-28057 | |
| templateId | 1..1 | SHALL | | 4444-27675 | |
| @root | 1..1 | SHALL | | 4444-27681 | 2.16.840.1.113883.10.20.24.3.112 |
| @extension | 1..1 | SHALL | | 4444-27682 | 2019-12-01 |
| value | 1..1 | SHALL | CD | 4444-27688 | |
| author | 1..1 | SHALL | | 4444-28571 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| participant | 0..* | MAY | | 4444-29672 | |
| @typeCode | 1..1 | SHALL | | 4444-29680 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29673 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29674 | |
| @typeCode | 1..1 | SHALL | | 4444-29681 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29675 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29678 | |
| @typeCode | 1..1 | SHALL | | 4444-29683 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29679 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29676 | |
| @typeCode | 1..1 | SHALL | | 4444- | urn:oid:2.16.840.1.113883.5.9 |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-----------------|-------|-------|-----------|----------------------------|---|
| | | | | 29682 | 0 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29677 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |

1. Conforms to [Family History Observation \(V3\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.46:2015-08-01).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-27685).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-27686).
4. **SHALL NOT** contain [0..0] **@negationInd** (CONF:4444-28057).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-27675) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.112" (CONF:4444-27681).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-27682).
6. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:4444-27688).
Note: QDM Attribute: Code
7. **SHALL** contain exactly one [1..1] [Author \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-28571).
Note: QDM Attribute: Author dateTime - the time the family history item is authored (i.e., entered into the record)
8. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29672) such that it
Note: QDM Attribute: Recorder
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29680).
 - b. **SHALL** contain exactly one [1..1] [Entity Practitioner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29673).
9. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29674) such that it
Note: QDM Attribute: Recorder
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29681).
 - b. **SHALL** contain exactly one [1..1] [Entity Organization](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29675).
10. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29678) such that it
Note: QDM Attribute: Recorder
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29683).

- b. **SHALL** contain exactly one [1..1] [Entity Patient](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29679).
11. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29676) such that it
Note: QDM Attribute: Recorder
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29682).
 - b. **SHALL** contain exactly one [1..1] [Entity Care Partner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29677).
12. This template **SHALL** be contained by a **Family History Organizer QDM (V5)** (CONF:4444-28661).

Figure 47: Family History Observation QDM (V4) Example

```

<!-- Must be contained in the Family History Organizer (V5) QDM template to represent the
Family History QDM data type -->
<observation classCode="OBS" moodCode="EVN">
  <!-- Conforms to C-CDA R2.1 Family History Observation (V3) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.46" extension="2015-08-01"/>
  <!-- Family History Observation QDM (V4) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.112" extension="2019-12-01"/>
  <id root="d42ebf70-5c89-11db-b0de-0800200c9a66"/>
  <code code="75323-6" displayName="Condition" codeSystemName="LOINC"
codeSystem="2.16.840.1.113883.6.1">
    <translation code="64572001" displayName="Condition" codeSystemName="SNOMED CT"
codeSystem="2.16.840.1.113883.6.96"/>
  </code>
  <statusCode code="completed"/>
  <!-- Diagnosis/Condition/Problem -->
  <value xsi:type="CD" code="22298006" codeSystem="2.16.840.1.113883.6.96"
displayName="Myocardial infarction"/>
  <author>
    <templateId root="2.16.840.1.113883.10.20.24.3.155" extension="2019-12-01"/>
    <time value="2019020101030"/>
    <assignedAuthor>
      <id nullFlavor="NA"/>
    </assignedAuthor>
  </author>
</observation>

```

3.27 Family History Organizer (V3)

[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.45:2015-08-01
(open)]

Table 75: Family History Organizer (V3) Contexts

| Contained By: | Contains: |
|---------------|--|
| | Family History Observation (V3) (required) |

The Family History Organizer associates a set of observations with a family member. For example, the Family History Organizer can group a set of observations about the patient's father.

Table 76: Family History Organizer (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|--------|-----------|----------------------------|--|
| organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.45:2015-08-01) | | | | | |
| @classCode | 1..1 | SHALL | | 1198-8600 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER |
| @moodCode | 1..1 | SHALL | | 1198-8601 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 1198-8604 | |
| @root | 1..1 | SHALL | | 1198-10497 | 2.16.840.1.113883.10.20.22.4.45 |
| @extension | 1..1 | SHALL | | 1198-32606 | 2015-08-01 |
| id | 1..* | SHALL | | 1198-32485 | |
| statusCode | 1..1 | SHALL | | 1198-8602 | |
| @code | 1..1 | SHALL | | 1198-19099 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| subject | 1..1 | SHALL | | 1198-8609 | |
| relatedSubject | 1..1 | SHALL | | 1198-15244 | |
| @classCode | 1..1 | SHALL | | 1198-15245 | urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = PRS |
| code | 1..1 | SHALL | | 1198-15246 | urn:oid:2.16.840.1.113883.1.11.19579 (Family Member Value) |
| subject | 0..1 | SHOULD | | 1198-15248 | |
| administrativeGenderCode | 1..1 | SHALL | | 1198-15974 | urn:oid:2.16.840.1.113883.1.11.1 (Administrative Gender (HL7 V3)) |
| birthTime | 0..1 | SHOULD | | 1198-15976 | |
| component | 1..* | SHALL | | 1198-32428 | |
| observation | 1..1 | SHALL | | 1198-32429 | Family History Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.46:2015-08-01) |

1. **SHALL** contain exactly one [1..1] **@classCode**="CLUSTER" Cluster (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-8600).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-8601).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-8604) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.45" (CONF:1198-10497).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32606).
4. **SHALL** contain at least one [1..*] **id** (CONF:1198-32485).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-8602).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1198-19099).
6. **SHALL** contain exactly one [1..1] **subject** (CONF:1198-8609).
 - a. This **subject** **SHALL** contain exactly one [1..1] **relatedSubject** (CONF:1198-15244).
 - i. This **relatedSubject** **SHALL** contain exactly one [1..1] **@classCode**="PRS" Person (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41 **STATIC**) (CONF:1198-15245).
 - ii. This **relatedSubject** **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet [Family Member Value](#) urn:oid:2.16.840.1.113883.1.11.19579 **DYNAMIC** (CONF:1198-15246).
Note: QDM Attribute: Relationships
 - iii. This **relatedSubject** **SHOULD** contain zero or one [0..1] **subject** (CONF:1198-15248).
 1. The **subject**, if present, **SHALL** contain exactly one [1..1] **administrativeGenderCode**, which **SHALL** be selected from ValueSet [Administrative Gender \(HL7 V3\)](#) urn:oid:2.16.840.1.113883.1.11.1 **DYNAMIC** (CONF:1198-15974).
 2. The **subject**, if present, **SHOULD** contain zero or one [0..1] **birthTime** (CONF:1198-15976).
 3. The **subject** **SHOULD** contain zero or more [0..*] **sdtc:id**. The prefix **sdtc:** **SHALL** be bound to the namespace "urn:hl7-org:sdtc". The use of the namespace provides a necessary extension to CDA R2 for the use of the **id** element (CONF:1198-15249).
 4. The **subject** **MAY** contain zero or one [0..1] **sdtc:deceasedInd**. The prefix **sdtc:** **SHALL** be bound to the namespace "urn:hl7-org:sdtc". The use of the namespace provides a necessary extension to CDA R2 for the use of the **deceasedInd** element (CONF:1198-15981).
 5. The **subject** **MAY** contain zero or one [0..1] **sdtc:deceasedTime**. The prefix **sdtc:** **SHALL** be bound to the namespace "urn:hl7-org:sdtc". The use of the namespace provides a necessary extension to CDA R2 for the use of the **deceasedTime** element (CONF:1198-15982).
 6. The age of a relative at the time of a family history observation **SHOULD** be inferred by comparing **RelatedSubject/subject/birthTime** with **Observation/effectiveTime** (CONF:1198-15983).

7. **SHALL** contain at least one [1..*] **component** (CONF:1198-32428).
 - a. Such components **SHALL** contain exactly one [1..1] [Family History Observation \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.46:2015-08-01) (CONF:1198-32429).

Figure 48: Family History Organizer (V3) Example

```

<organizer moodCode="EVN" classCode="CLUSTER">
  <templateId root="2.16.840.1.113883.10.20.22.4.45" extension="2015-08-01" />
  <statusCode code="completed" />
  <subject>
    <relatedSubject classCode="PRS">
      <code code="FTH" displayName="Father" codeSystemName="HL7 FamilyMember"
codeSystem="2.16.840.1.113883.5.111">
        <translation code="9947008" displayName="Natural father"
codeSystemName="SNOMED" codeSystem="2.16.840.1.113883.6.96" />
      </code>
      <subject>
        <sdtc:id root="2.16.840.1.113883.19.5.99999.2" extension="99999999" />
        <id root="2.16.840.1.113883.19.5.99999.2" extension="1234" />
        <administrativeGenderCode code="M" codeSystem="2.16.840.1.113883.5.1" />
        <birthTime value="1910" />
        <!-- Example use of sdtc extensions :-->
        <!-- <sdtc:deceasedInd value="true"/><sdtc:deceasedTime value="1967"/>
        -->
      </subject>
    </relatedSubject>
  </subject>
  <component>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.46" extension="2015-08-01" />
      . . .

    </observation>
  </component>
</organizer>

```

3.27.1 Family History Organizer QDM (V5)

[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.12:2019-12-01 (open)]

Table 77: Family History Organizer QDM (V5) Contexts

| Contained By: | Contains: |
|--|--|
| Patient Data Section QDM (V7) (optional) | Family History Observation QDM (V4) (required) |

This template (along with its contained template Family History Observation QDM (V4) represents the QDM datatype: Family History.

This template is an organizer that contains the Family History Observation (V4) template and represents problems, conditions, and diagnoses experienced by a patient's family members, whether

existing currently or in the past. This organizer groups the Family History Observation by family member as expressed in the subject.

Table 78: Family History Organizer QDM (V5) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|-------|-----------|----------------------------|---|
| organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.12:2019-12-01) | | | | | |
| templateId | 1..1 | SHALL | | 4444-14175 | |
| @root | 1..1 | SHALL | | 4444-14176 | 2.16.840.1.113883.10.20.24.3.12 |
| @extension | 1..1 | SHALL | | 4444-26553 | 2019-12-01 |
| component | 1..* | SHALL | | 4444-27715 | |
| observation | 1..1 | SHALL | | 4444-27716 | Family History Observation QDM (V4) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.112:2019-12-01) |

1. Conforms to [Family History Organizer \(V3\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.45:2015-08-01).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-14175) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.12" (CONF:4444-14176).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-26553).
3. **SHALL** contain at least one [1..*] **component** (CONF:4444-27715) such that it
 - a. **SHALL** contain exactly one [1..1] [Family History Observation QDM \(V4\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.112:2019-12-01) (CONF:4444-27716).

Figure 49: Family History Organizer QDM (V5)

```
<organizer moodCode="EVN" classCode="CLUSTER">
  <!-- C-CDA R2.1 Family History Organizer (V3) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.45" extension="2015-08-01"/>
  <!-- Family History Organizer QDM (V5) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.12" extension="2019-12-01"/>
  <id root="2cc2566e-4e7f-4820-817e-31912a61eala"/>
  <statusCode code="completed"/>
  <!-- Subject of the contained Diagnosis Family History template(s) -->
  <subject>
    <relatedSubject classCode="PRS">
      <code code="FTH" displayName="Father" codeSystemName="HL7RoleCode"
codeSystem="2.16.840.1.113883.5.111"/>
    </relatedSubject>
  </subject>
  <component>
    <observation classCode="OBS" moodCode="EVN">
      <!-- Conforms to C-CDA R2.1 Family History Observation (V3) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.46" extension="2015-08-01"/>
      <!-- Family History QDM (V4) -->
      <templateId root="2.16.840.1.113883.10.20.24.3.112" extension="2019-12-01"/>
      <id root="d42ebf70-5c89-11db-b0de-0800200c9a66"/>
      <code code="75323-6" displayName="Condition" codeSystemName="LOINC"
codeSystem="2.16.840.1.113883.6.1">
        <translation code="64572001" displayName="Condition"
codeSystemName="SNOMED CT" codeSystem="2.16.840.1.113883.6.96"/>
      </code>
      <statusCode code="completed"/>
      <!-- Diagnosis/Condition/Problem -->
      <value xsi:type="CD" code="22298006" codeSystem="2.16.840.1.113883.6.96"
displayName="Myocardial infarction"/>
      <author>
        <templateId root="2.16.840.1.113883.10.20.24.3.155" extension="2019-12-
01"/>
        <time value="2019020101030"/>
        <assignedAuthor>
          <id nullFlavor="NA"/>
        </assignedAuthor>
      </author>
    </observation>
  </component>
</organizer>
```

3.28 Goal Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.22.4.121 (open)]

Table 79: Goal Observation Contexts

| Contained By: | Contains: |
|---|--|
| Goal Observation (optional) | Goal Observation (optional) Priority Preference (optional) Author Participation (optional) Entry Reference (optional) External Document Reference (optional) |

This template represents a patient health goal. A Goal Observation template may have related components that are acts, encounters, observations, procedures, substance administrations, or supplies.

A goal may be a patient or provider goal. If the author is set to the recordTarget (patient), this is a patient goal. If the author is set to a provider, this is a provider goal. If both patient and provider are set as authors, this is a negotiated goal.

A goal usually has a related health concern and/or risk.

A goal may have components consisting of other goals (milestones). These milestones are related to the overall goal through entryRelationships.

Table 80: Goal Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|---|
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.121) | | | | | |
| @classCode | 1..1 | SHALL | | 1098-30418 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 1098-30419 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = GOL |
| templateId | 1..1 | SHALL | | 1098-8583 | |
| @root | 1..1 | SHALL | | 1098-10512 | 2.16.840.1.113883.10.20.22.4.121 |
| id | 1..* | SHALL | | 1098-32332 | |
| code | 1..1 | SHALL | | 1098-30784 | urn:oid:2.16.840.1.113883.6.1 (LOINC) |
| statusCode | 1..1 | SHALL | | 1098-32333 | |
| @code | 1..1 | SHALL | | 1098-32334 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = active |
| effectiveTime | 0..1 | SHOULD | | 1098-32335 | |
| value | 0..1 | MAY | | 1098-32743 | |
| author | 0..* | SHOULD | | 1098-30995 | Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) |
| entryRelationship | 0..* | MAY | | 1098-30701 | |
| @typeCode | 1..1 | SHALL | | 1098-30702 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| act | 1..1 | SHALL | | 1098-30703 | Entry Reference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122) |
| entryRelationship | 0..* | MAY | | 1098-30704 | |
| @typeCode | 1..1 | SHALL | | 1098-30705 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| act | 1..1 | SHALL | | 1098-32879 | Entry Reference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122) |
| entryRelationship | 0..1 | SHOULD | | 1098-30785 | |
| @typeCode | 1..1 | SHALL | | 1098-30786 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|---|
| | | | | | = REFR |
| observation | 1..1 | SHALL | | 1098-30787 | Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) |
| entryRelationship | 0..* | MAY | | 1098-31448 | |
| @typeCode | 1..1 | SHALL | | 1098-31449 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| observation | 1..1 | SHALL | | 1098-32880 | Goal Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.121) |
| entryRelationship | 0..* | MAY | | 1098-31559 | |
| @typeCode | 1..1 | SHALL | | 1098-31560 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| act | 1..1 | SHALL | | 1098-31588 | Entry Reference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122) |
| reference | 0..* | MAY | | 1098-32754 | |
| @typeCode | 1..1 | SHALL | | 1098-32755 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| externalDocument | 1..1 | SHALL | | 1098-32756 | External Document Reference (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.115:2014-06-09) |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1098-30418).
2. **SHALL** contain exactly one [1..1] **@moodCode**="GOL" Goal (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1098-30419).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-8583) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.121" (CONF:1098-10512).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-32332).
5. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from CodeSystem LOINC (urn:oid:2.16.840.1.113883.6.1) (CONF:1098-30784).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-32333).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="active" (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1098-32334).
7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-32335).
8. **MAY** contain zero or one [0..1] **value** (CONF:1098-32743).

If the author is the recordTarget (patient), this is a patient goal. If the author is a provider, this is a provider goal. If both patient and provider are authors, this is a negotiated goal. If no author is present, it is assumed the document or section author(s) is the author of this goal.

9. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-30995).

The following entryRelationship represents the relationship between a Goal Observation and a Health Concern Act (Goal Observation REFERS TO Health Concern Act). As Health Concern Act is already defined in Health Concerns Section, rather than clone the whole Health Concern Act template, an Entry Reference may be used in entryRelationship to refer the template.

10. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-30701) such that it
- SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-30702).
 - SHALL** contain exactly one [1..1] [Entry Reference](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122) (CONF:1098-30703).

The following entryRelationship represents a planned component of the goal such as Planned Encounter (V2), Planned Observation (V2), Planned Procedure (V2), Planned Medication Activity (V2), Planned Supply (V2), Planned Act (V2) or Planned Immunization Activity. Because these entries are already described in the Interventions Section of the CDA document instance, rather than repeating the full content of the entries, the Entry Reference template may be used to reference the entries.

11. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-30704) such that it
- SHALL** contain exactly one [1..1] **@typeCode="COMP"** Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-30705).
 - SHALL** contain exactly one [1..1] [Entry Reference](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122) (CONF:1098-32879).

The following entryRelationship represents the priority that the patient or a provider puts on the goal.

12. **SHOULD** contain zero or one [0..1] **entryRelationship** (CONF:1098-30785) such that it
- SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-30786).
 - SHALL** contain exactly one [1..1] [Priority Preference](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) (CONF:1098-30787).

The following entryRelationship represents the relationship between two Goal Observations where the target is a component of the source (Goal Observation HAS COMPONENT Goal Observation). The component goal (target) is a Milestone.

13. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31448) such that it
- SHALL** contain exactly one [1..1] **@typeCode="COMP"** Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31449).

- b. **SHALL** contain exactly one [1..1] [Goal Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.121) (CONF:1098-32880).

Where a Goal Observation needs to reference another entry already described in the CDA document instance, rather than repeating the full content of the entry, the Entry Reference template may be used to reference this entry.

- 14. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31559) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31560).
 - b. **SHALL** contain exactly one [1..1] [Entry Reference](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122) (CONF:1098-31588).

Where it is necessary to reference an external clinical document such a Referral document, Discharge Summary document etc., the External Document Reference template can be used to reference this document. However, if this Care Plan document is replacing or appending another Care Plan document in the same set, that relationship is set in the header, using ClinicalDocument/relatedDocument.

- 15. **MAY** contain zero or more [0..*] **reference** (CONF:1098-32754).
 - a. The reference, if present, **SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32755).
 - b. The reference, if present, **SHALL** contain exactly one [1..1] [External Document Reference](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.115:2014-06-09) (CONF:1098-32756).

Figure 50: Goal Observation Example

```
<observation classCode="OBS" moodCode="GOL">
  <templateId root="2.16.840.1.113883.10.20.22.4.121" />
  <id root="3700b3b0-fbed-11e2-b778-0800200c9a66" />
  <code code="59408-5"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="Oxygen saturation in Arterial blood by Pulse oximetry" />
  <statusCode code="active" />
  <effectiveTime value="20130902" />
  <value xsi:type="IVL_PQ">
    <low value="92" unit="%" />
  </value>
  <!--
    If the author is set to the recordTarget (patient), this is a patient goal.
    If the author is set to a provider, this is a provider goal.
    If both patient and provider are set as authors, this is a negotiated goal.
  -->
  <!-- Provider Author -->
  <author>
    <templateId root="2.16.840.1.113883.10.20.22.4.119" />
    ...
  </author>
  <!-- Patient Author -->
  <author typeCode="AUT">
    <templateId root="2.16.840.1.113883.10.20.22.4.119" />
    ...
  </author>
  <!-- This entryRelationship represents the relationship "Goal REFERS TO Health Concern" -
  -->
  <entryRelationship typeCode="REFR">
    <!-- Entry Reference Concern Act -->
    <act classCode="ACT" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.122" />
      <!-- This id points to an already defined Health Concern in the Health Concerns
      Section -->
      <id root="4eab0e52-dd7d-4285-99eb-72d32ddb195c" />
      ...
    </act>
  </entryRelationship>
  <!-- Priority Preference -->
  <entryRelationship typeCode="RSON">
    <!-- Priority Preference - this is the preference that the patient
    (specified by the Author Participation template)
    places on the Goal -->
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.143" />
      ...
    </observation>
  </entryRelationship>
  <!-- Priority Preference - this is the preference that the provider
  (specified by the Author Participation template)
  places on the Goal -->
  <entryRelationship typeCode="RSON">
    <!-- Priority Preference -->
    <observation classCode="OBS" moodCode="EVN">
```

```

    <templateId root="2.16.840.1.113883.10.20.22.4.143" />
    ...
  </observation>
</entryRelationship>
</observation>

```

3.28.1 Care Goal (V5)

```

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.1:2019-12-01
(open) ]

```

Table 81: Care Goal (V5) Contexts

| Contained By: | Contains: |
|--|--|
| Patient Data Section QDM (V7) (optional) | Target Outcome (V2) (optional) Related To (optional) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Status (V2) (optional) |

This template represents the QDM datatype: Care Goal.

A goal is a defined target or measure to be achieved in the process of patient care, that is, an expected outcome. A typical goal is expressed as a change in status expected at a defined future time. That change can be an observation represented by other QDM categories (diagnostic tests, laboratory tests, symptoms, etc.) scheduled for some time in the future and with a particular value. A goal can be found in the plan of care (care plan), the structure used by all stakeholders, including the patient, to define the management actions for the various conditions, problems, or issues identified for the target of the plan. This structure, through which the goals and care-planning actions and processes can be organized, planned, communicated, and checked for completion, is represented in the QDM categories as a Record Artifact. A time/date stamp is required. moodCode is constrained to “GOL” and actStatus is constrained to “active”.

QDM Attribute: Related To. It is the problem, procedure or other class of information to which the Care Goal is related.

QDM Attribute: Relevant Period addresses the time between the start of an action to the end of an action. Relevant PeriodstartTime is when the goal is recorded, and therefore should be considered effective. Relevant PeriodstopTime is when the target outcome is expected to be met.

Table 82: Care Goal (V5) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|--------------|-------------|------------------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.1:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-11245 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 4444-11246 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = GOL |
| @negationInd | 0..0 | SHALL NOT | | 4444-28040 | |
| templateId | 1..1 | SHALL | | 4444-11247 | |
| @root | 1..1 | SHALL | | 4444-11248 | 2.16.840.1.113883.10.20.24.3.1 |
| @extension | 1..1 | SHALL | | 4444-27067 | 2019-12-01 |
| code | 1..1 | SHALL | | 4444-27576 | |
| effectiveTime | 1..1 | SHALL | | 4444-11255 | |
| low | 1..1 | SHALL | | 4444-27557 | |
| high | 0..1 | MAY | | 4444-27558 | |
| participant | 0..* | MAY | | 4444-29567 | |
| @typeCode | 1..1 | SHALL | | 4444-29575 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29568 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29569 | |
| @typeCode | 1..1 | SHALL | | 4444-29576 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29570 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29573 | |
| @typeCode | 1..1 | SHALL | | 4444-29578 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29574 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-----------------------|-------|-------|-----------|----------------------------|---|
| participant | 0..* | MAY | | 4444-29571 | |
| @typeCode | 1..1 | SHALL | | 4444-29577 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29572 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |
| entryRelationship | 0..1 | MAY | | 4444-28036 | |
| @typeCode | 1..1 | SHALL | | 4444-28037 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| observation | 1..1 | SHALL | | 4444-28038 | Target Outcome (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.119:2017-08-01) |
| entryRelationship | 0..1 | MAY | | 4444-29588 | |
| observation | 1..1 | SHALL | | 4444-29589 | Status (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.93:2019-12-01) |
| sdtc:inFulfillmentOf1 | 0..* | MAY | | 4444-29115 | Related To (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.150:2017-08-01) |

1. Conforms to [Goal Observation](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.121).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-11245).
3. **SHALL** contain exactly one [1..1] **@moodCode**="GOL" goal (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-11246).
4. **SHALL NOT** contain [0..0] **@negationInd** (CONF:4444-28040).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-11247) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.1" (CONF:4444-11248).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-27067).
6. **SHALL** contain exactly one [1..1] **code** (CONF:4444-27576).
Note: QDM Attribute: Code
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4444-11255).
Note: QDM Attribute: Relevant Period
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:4444-27557).
Note: startTime - when the goal is recorded, and therefore should be considered effective

- b. This effectiveTime **MAY** contain zero or one [0..1] **high** (CONF:4444-27558).
Note: Stop dateTime - when the target outcome is expected to be met
- 8. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29567) such that it
Note: QDM Attribute: Performer
 - a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29575).
 - b. **SHALL** contain exactly one [1..1] [Entity Practitioner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29568).
- 9. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29569) such that it
Note: QDM Attribute: Performer
 - a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29576).
 - b. **SHALL** contain exactly one [1..1] [Entity Organization](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29570).
- 10. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29573) such that it
Note: QDM Attribute: Performer
 - a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29578).
 - b. **SHALL** contain exactly one [1..1] [Entity Patient](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29574).
- 11. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29571) such that it
Note: QDM Attribute: Performer
 - a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29577).
 - b. **SHALL** contain exactly one [1..1] [Entity Care Partner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29572).
- 12. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-28036) such that it
Note: QDM Attribute: Targeted Outcome
 - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-28037).
 - b. **SHALL** contain exactly one [1..1] [Target Outcome \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.119:2017-08-01) (CONF:4444-28038).
- 13. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-29588) such that it
Note: QDM Attribute: Status Date
 - a. **SHALL** contain exactly one [1..1] [Status \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.93:2019-12-01) (CONF:4444-29589).
Note: When uses Status (V2) template to represent the Care Goal Status Date attribute, observation/effectiveTime SHALL be present. NullFlavor could be provided for the observation/value.

14. **MAY** contain zero or more [0..*] [Related To](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.150:2017-08-01) (CONF:4444-29115).
Note: QDM Attribute: Related To

Figure 51: Care Goal (V5) Example

```
<observation classCode="OBS" moodCode="GOL">
  <!-- Conforms to C-CDA R2.1 Goal Observation -->
  <templateId root="2.16.840.1.113883.10.20.22.4.121"/>
  <!-- Care Goal (V5) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.1" extension="2019-12-01"/>
  <id root="751aa255-0e10-4364-a56a-a4cf2aed0d01"/>
  <code code="44616-1" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Pulse oximetry panel"/>
  <text>Care Goal: Pulse Oximetry greater than 92%</text>
  <statusCode code="active"/>
  <effectiveTime>
    <!-- QDM Attribute: Relevant Period - Start dateTime -->
    <low value="20190101"/>
  </effectiveTime>
  <value xsi:type="IVL_PQ">
    <low value="92" unit="%" />
  </value>
  <!-- QDM Attribute: Target Outcome -->
  <entryRelationship typeCode="REFR">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.24.3.119" extension="2017-08-01"/>
      <id root="3a4aa411-78b9-484b-a0f1-33f1cf49b4ad"/>
      <code code="29463-7" displayName="Body weight"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
      <value xsi:type="PQ" unit="kg" value="65"/>
    </observation>
  </entryRelationship>
  <!-- QDM Attribute: Related to -->
  <sdtc:inFulfillmentOf1 typeCode="FLFS">
    <sdtc:templateId root="2.16.840.1.113883.10.20.24.3.150" extension="2017-08-01"/>
    <sdtc:actReference classCode="SPLY" moodCode="RQO">
      <!-- For example, the id is the same as the id of another QDM element instance
contained in the same QRDA I document being referenced -->
      <sdtc:id root="1fad091f-7b4e-4661-b61c-53f9a82515b6"/>
    </sdtc:actReference>
  </sdtc:inFulfillmentOf1>
</observation>
```

3.29 Immunization Activity (V3)

[substanceAdministration: identifier
urn:hl7ii:2.16.840.1.113883.10.20.22.4.52:2015-08-01 (open)]

Table 83: Immunization Activity (V3) Contexts

| Contained By: | Contains: |
|---------------|---|
| | Drug Vehicle (optional) Immunization Refusal Reason (optional) |

| Contained By: | Contains: |
|---------------|--|
| | <u>Reaction Observation (V2)</u> (optional) <u>Indication (V2)</u> (optional) <u>Medication Supply Order (V2)</u> (optional) <u>Medication Dispense (V2)</u> (optional) <u>Instruction (V2)</u> (optional) <u>Author Participation</u> (optional) <u>Substance Administered Act</u> (optional) <u>Immunization Medication Information (V2)</u> (required) <u>Precondition for Substance Administration (V2)</u> (optional) |

An Immunization Activity describes immunization substance administrations that have actually occurred or are intended to occur. Immunization Activities in "INT" mood are reflections of immunizations a clinician intends a patient to receive. Immunization Activities in "EVN" mood reflect immunizations actually received.

An Immunization Activity is very similar to a Medication Activity with some key differentiators. The drug code system is constrained to CVX codes. Administration timing is less complex. Patient refusal reasons should be captured. All vaccines administered should be fully documented in the patient's permanent medical record. Healthcare providers who administer vaccines covered by the National Childhood Vaccine Injury Act are required to ensure that the permanent medical record of the recipient indicates:

- Date of administration
- Vaccine manufacturer
- Vaccine lot number
- Name and title of the person who administered the vaccine and the address of the clinic or facility where the permanent record will reside
- Vaccine information statement (VIS)
- Date printed on the VIS Date VIS given to patient or parent/guardian.

This information should be included in an Immunization Activity when available. (Reference: [<https://www.cdc.gov/vaccines/pubs/pinkbook/downloads/appendices/c/vis-instruct.pdf>])

Table 84: Immunization Activity (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|--|
| substanceAdministration (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.52:2015-08-01) | | | | | |
| @classCode | 1..1 | SHALL | | 1198-8826 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SBADM |
| @moodCode | 1..1 | SHALL | | 1198-8827 | urn:oid:2.16.840.1.113883.11.20.9.18 (MoodCodeEvnInt) |
| @negationInd | 1..1 | SHALL | | 1198-8985 | |
| templateId | 1..1 | SHALL | | 1198-8828 | |
| @root | 1..1 | SHALL | | 1198-10498 | 2.16.840.1.113883.10.20.22.4.52 |
| @extension | 1..1 | SHALL | | 1198-32528 | 2015-08-01 |
| id | 1..* | SHALL | | 1198-8829 | |
| code | 0..1 | MAY | | 1198-8830 | |
| statusCode | 1..1 | SHALL | | 1198-8833 | |
| @code | 1..1 | SHALL | | 1198-32359 | urn:oid:2.16.840.1.113883.1.1.1.15933 (ActStatus) |
| effectiveTime | 1..1 | SHALL | | 1198-8834 | |
| repeatNumber | 0..1 | MAY | | 1198-8838 | |
| routeCode | 0..1 | MAY | | 1198-8839 | urn:oid:2.16.840.1.113883.3.8.8.12.3221.8.7 (SPL Drug Route of Administration Terminology) |
| translation | 0..* | SHOULD | | 1198-32960 | urn:oid:2.16.840.1.113762.1.4.1099.12 (Medication Route) |
| approachSiteCode | 0..1 | MAY | SET<CD> | 1198-8840 | urn:oid:2.16.840.1.113883.3.8.8.12.3221.8.9 (Body Site Value Set) |
| doseQuantity | 0..1 | SHOULD | | 1198-8841 | |
| @unit | 0..1 | SHOULD | | 1198-8842 | urn:oid:2.16.840.1.113883.1.1.1.12839 (UnitsOfMeasureCaseSensitive) |
| administrationUnitCode | 0..1 | MAY | | 1198-8846 | urn:oid:2.16.840.1.113762.1.4.1021.30 (AdministrationUnitDoseForm) |
| consumable | 1..1 | SHALL | | 1198-8847 | |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---------------------|-------|--------|-----------|----------------------------|---|
| manufacturedProduct | 1..1 | SHALL | | 1198-15546 | Immunization Medication Information (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09) |
| performer | 0..1 | SHOULD | | 1198-8849 | |
| author | 0..* | SHOULD | | 1198-31151 | Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) |
| participant | 0..* | MAY | | 1198-8850 | |
| @typeCode | 1..1 | SHALL | | 1198-8851 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = CSM |
| participantRole | 1..1 | SHALL | | 1198-15547 | Drug Vehicle (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.24) |
| entryRelationship | 0..* | MAY | | 1198-8853 | |
| @typeCode | 1..1 | SHALL | | 1198-8854 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 1198-15537 | Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) |
| entryRelationship | 0..1 | MAY | | 1198-8856 | |
| @typeCode | 1..1 | SHALL | | 1198-8857 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ |
| @inversionInd | 1..1 | SHALL | | 1198-8858 | true |
| act | 1..1 | SHALL | | 1198-31392 | Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) |
| entryRelationship | 0..1 | MAY | | 1198-8860 | |
| @typeCode | 1..1 | SHALL | | 1198-8861 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| supply | 1..1 | SHALL | | 1198-15539 | Medication Supply Order (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09) |
| entryRelationship | 0..1 | MAY | | 1198-8863 | |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|--------|-----------|----------------------------|---|
| @typeCode | 1..1 | SHALL | | 1198-8864 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| supply | 1..1 | SHALL | | 1198-15540 | Medication Dispense (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09) |
| entryRelationship | 0..1 | MAY | | 1198-8866 | |
| @typeCode | 1..1 | SHALL | | 1198-8867 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = CAUS |
| observation | 1..1 | SHALL | | 1198-15541 | Reaction Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09) |
| entryRelationship | 0..1 | MAY | | 1198-8988 | |
| @typeCode | 1..1 | SHALL | | 1198-8989 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 1198-15542 | Immunization Refusal Reason (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.53) |
| entryRelationship | 0..* | SHOULD | | 1198-31510 | |
| @typeCode | 1..1 | SHALL | | 1198-31511 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| @inversionInd | 1..1 | SHALL | | 1198-31512 | true |
| sequenceNumber | 0..1 | MAY | | 1198-31513 | |
| act | 1..1 | SHALL | | 1198-31514 | Substance Administered Act (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.118) |
| precondition | 0..* | MAY | | 1198-8869 | |
| @typeCode | 1..1 | SHALL | | 1198-8870 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = PRCN |
| criterion | 1..1 | SHALL | | 1198-15548 | Precondition for Substance Administration (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09) |

1. **SHALL** contain exactly one [1..1] **@classCode**="SBADM" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-8826).
2. **SHALL** contain exactly one [1..1] **@moodCode**, which **SHALL** be selected from ValueSet [MoodCodeEvnInt](#) urn:oid:2.16.840.1.113883.11.20.9.18 **STATIC** (CONF:1198-8827).
3. **SHALL** contain exactly one [1..1] **@negationInd** (CONF:1198-8985).
Note: Use negationInd="true" to indicate that the immunization was not given.
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-8828) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.52" (CONF:1198-10498).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32528).
5. **SHALL** contain at least one [1..*] **id** (CONF:1198-8829).
6. **MAY** contain zero or one [0..1] **code** (CONF:1198-8830).
Note: SubstanceAdministration.code is an optional field. Per HL7 Pharmacy Committee, "this is intended to further specify the nature of the substance administration act. To date the committee has made no use of this attribute". Because the type of substance administration is generally implicit in the routeCode, in the consumable participant, etc., the field is generally not used and there is no defined value set.
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-8833).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [ActStatus](#) urn:oid:2.16.840.1.113883.1.11.15933 **DYNAMIC** (CONF:1198-32359).
8. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1198-8834).
In "INT" (intent) mood, the repeatNumber defines the number of allowed administrations. For example, a repeatNumber of "3" means that the substance can be administered up to 3 times. In "EVN" (event) mood, the repeatNumber is the number of occurrences. For example, a repeatNumber of "3" in a substance administration event means that the current administration is the 3rd in a series.
9. **MAY** contain zero or one [0..1] **repeatNumber** (CONF:1198-8838).
10. **MAY** contain zero or one [0..1] **routeCode**, which **SHALL** be selected from ValueSet [SPL Drug Route of Administration Terminology](#) urn:oid:2.16.840.1.113883.3.88.12.3221.8.7 **DYNAMIC** (CONF:1198-8839).
 - a. The routeCode, if present, **SHOULD** contain zero or more [0..*] **translation**, which **SHALL** be selected from ValueSet [Medication Route](#) urn:oid:2.16.840.1.113762.1.4.1099.12 **DYNAMIC** (CONF:1198-32960).
11. **MAY** contain zero or one [0..1] **approachSiteCode**, where the code **SHALL** be selected from ValueSet [Body Site Value Set](#) urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 **DYNAMIC** (CONF:1198-8840).
12. **SHOULD** contain zero or one [0..1] **doseQuantity** (CONF:1198-8841).
 - a. The doseQuantity, if present, **SHOULD** contain zero or one [0..1] **@unit**, which **SHALL** be selected from ValueSet [UnitsOfMeasureCaseSensitive](#) urn:oid:2.16.840.1.113883.1.11.12839 **DYNAMIC** (CONF:1198-8842).
13. **MAY** contain zero or one [0..1] **administrationUnitCode**, which **SHALL** be selected from ValueSet [AdministrationUnitDoseForm](#) urn:oid:2.16.840.1.113762.1.4.1021.30 **DYNAMIC** (CONF:1198-8846).
14. **SHALL** contain exactly one [1..1] **consumable** (CONF:1198-8847).

- a. This consumable **SHALL** contain exactly one [1..1] [Immunization Medication Information \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09) (CONF:1198-15546).
- 15. **SHOULD** contain zero or one [0..1] **performer** (CONF:1198-8849).
- 16. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1198-31151).
- 17. **MAY** contain zero or more [0..*] **participant** (CONF:1198-8850) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="CSM"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1198-8851).
 - b. **SHALL** contain exactly one [1..1] [Drug Vehicle](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.24) (CONF:1198-15547).
- 18. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-8853) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1198-8854).
 - b. **SHALL** contain exactly one [1..1] [Indication \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) (CONF:1198-15537).
- 19. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-8856) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1198-8857).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** True (CONF:1198-8858).
 - c. **SHALL** contain exactly one [1..1] [Instruction \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) (CONF:1198-31392).
- 20. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-8860) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1198-8861).
 - b. **SHALL** contain exactly one [1..1] [Medication Supply Order \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09) (CONF:1198-15539).
- 21. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-8863) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1198-8864).
 - b. **SHALL** contain exactly one [1..1] [Medication Dispense \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09) (CONF:1198-15540).
- 22. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-8866) such that it

- a. **SHALL** contain exactly one [1..1] **@typeCode**="CAUS" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1198-8867).
 - b. **SHALL** contain exactly one [1..1] [Reaction Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09) (CONF:1198-15541).
23. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-8988) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode**="RSON" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1198-8989).
 - b. **SHALL** contain exactly one [1..1] [Immunization Refusal Reason](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.53) (CONF:1198-15542).

The following entryRelationship is used to indicate a given immunization's order in a series. The nested Substance Administered Act identifies an administration in the series. The entryRelationship/sequenceNumber shows the order of this particular administration in that series.

24. **SHOULD** contain zero or more [0..*] **entryRelationship** (CONF:1198-31510) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode**="COMP" Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1198-31511).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd**="true" (CONF:1198-31512).
 - c. **MAY** contain zero or one [0..1] **sequenceNumber** (CONF:1198-31513).
 - d. **SHALL** contain exactly one [1..1] [Substance Administered Act](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.118) (CONF:1198-31514).
25. **MAY** contain zero or more [0..*] **precondition** (CONF:1198-8869) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode**="PRCN" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1198-8870).
 - b. **SHALL** contain exactly one [1..1] [Precondition for Substance Administration \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09) (CONF:1198-15548).

Figure 52: Immunization Activity (V3) Example

```
<substanceAdministration classCode="SBADM" moodCode="EVN" negationInd="false">
  <!-- ** Immunization activity ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.52" extension="2015-08-01" />
  <id root="e6f1ba43-c0ed-4b9b-9f12-f435d8ad8f92" />
  <statusCode code="completed" />
  <effectiveTime value="19981215" />
  <routeCode code="C28161" codeSystem="2.16.840.1.113883.3.26.1.1"
codeSystemName="National Cancer Institute (NCI) Thesaurus" displayName="Intramuscular
injection" />
  <doseQuantity value="50" unit="ug" />
  <consumable>
    <manufacturedProduct classCode="MANU">
      <!-- ** Immunization medication information ** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.54" extension="2014-06-09" />
      <manufacturedMaterial>
        <code code="33" codeSystem="2.16.840.1.113883.6.59"
displayName="Pneumococcal polysaccharide vaccine" codeSystemName="CVX">
          <translation code="854981" displayName="Pneumovax 23 (Pneumococcal
vaccine polyvalent) Injectable Solution" codeSystemName="RxNORM"
codeSystem="2.16.840.1.113883.6.88" />
        </code>
        <lotNumberText>1</lotNumberText>
      </manufacturedMaterial>
      <manufacturerOrganization>
        <name>Health LS - Immuno Inc.</name>
      </manufacturerOrganization>
    </manufacturedProduct>
  </consumable>
  <performer>
    <assignedEntity>
      <id root="2.16.840.1.113883.19.5.9999.456" extension="2981824" />
      <addr>
        <streetAddressLine>1007 Health Drive</streetAddressLine>
        <city>Portland</city>
        <state>OR</state>
        <postalCode>99123</postalCode>
        <country>US</country>
      </addr>
      <telecom use="WP" value="tel: +(555)-555-1030" />
      <assignedPerson>
        <name>
          <given>Harold</given>
          <family>Hippocrates</family>
        </name>
      </assignedPerson>
      <representedOrganization>
        <id root="2.16.840.1.113883.19.5.9999.1394" />
        <name>Good Health Clinic</name>
        <telecom use="WP" value="tel: +(555)-555-1030" />
        <addr>
          <streetAddressLine>1007 Health Drive</streetAddressLine>
          <city>Portland</city>
          <state>OR</state>
          <postalCode>99123</postalCode>
          <country>US</country>
        </addr>
      </representedOrganization>
    </assignedEntity>
  </performer>
</substanceAdministration>
```

```

        </addr>
    </representedOrganization>
</assignedEntity>
</performer>
</substanceAdministration>

```

3.29.1 Immunization Administered (V3)

```

[substanceAdministration: identifier
urn:hl7ii:2.16.840.1.113883.10.20.24.3.140:2019-12-01 (open)]

```

Table 85: Immunization Administered (V3) Contexts

| Contained By: | Contains: |
|--|---|
| Patient Data Section QDM (V7) (optional) | Author Participation (required) Immunization Medication Information (V2) (required) Reason (V3) (optional) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Author (V2) (optional) |

This template represents the QDM datatypes: Immunization, Administered

Immunization represents vaccines administered to patients in healthcare settings but does not include non-vaccine agents.

QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template.

Table 86: Immunization Administered (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-----------|-----------|----------------------------|---|
| substanceAdministration (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.140:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-28588 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SBADM |
| @moodCode | 1..1 | SHALL | | 4444-28589 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 0..1 | MAY | | 4444-29684 | |
| templateId | 1..1 | SHALL | | 4444-28574 | |
| @root | 1..1 | SHALL | | 4444-28581 | 2.16.840.1.113883.10.20.24.3.140 |
| @extension | 1..1 | SHALL | | 4444-28958 | 2019-12-01 |
| statusCode | 1..1 | SHALL | | 4444-28576 | |
| @code | 1..1 | SHALL | | 4444-28585 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL | | 4444-28578 | |
| @value | 1..1 | SHALL | | 4444-28959 | |
| consumable | 1..1 | SHALL | | 4444-28957 | |
| manufacturedProduct | 1..1 | SHALL | | 4444-28960 | Immunization Medication Information (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09) |
| author | 0..1 | MAY | | 4444-29685 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| author | 0..0 | SHALL NOT | | 4444-29699 | Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) |
| participant | 0..* | MAY | | 4444-29686 | |
| @typeCode | 1..1 | SHALL | | 4444-29695 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29687 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29688 | |
| @typeCode | 1..1 | SHALL | | 4444- | urn:oid:2.16.840.1.113883.5.9 |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|---|
| | | | | 29696 | 0 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29689 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29692 | |
| @typeCode | 1..1 | SHALL | | 4444-29698 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29693 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29690 | |
| @typeCode | 1..1 | SHALL | | 4444-29697 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29691 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |
| entryRelationship | 0..* | MAY | | 4444-28577 | |
| @typeCode | 1..1 | SHALL | | 4444-28586 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 4444-28587 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) |

1. Conforms to [Immunization Activity \(V3\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.52:2015-08-01).
2. **SHALL** contain exactly one [1..1] **@classCode**="SBADM" Substance Administration (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-28588).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-28589).
4. **MAY** contain zero or one [0..1] **@negationInd** (CONF:4444-29684).
Note: QDM Attribute: Negation Rationale - negationInd="true" indicates Immunization Not Administered
 - a. If **@negationInd**="true" is present, **SHALL** contain one [1..1] entryRelationship such that it contains exactly one [1..1] **Reason (V3)** to state the reason for **Immunization Not Administered** (CONF:4444-29694).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-28574) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.140" (CONF:4444-28581).

- b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-28958).
- 6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:4444-28576).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code**="completed" (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:4444-28585).
- 7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4444-28578).

Note: QDM Attribute: Relevant dateTime – the time the immunization is administered, i.e., a single point in time, or the time it is entered into the clinical software

 - a. This **effectiveTime** **SHALL** contain exactly one [1..1] **@value** (CONF:4444-28959).
- 8. **SHALL** contain exactly one [1..1] **consumable** (CONF:4444-28957).
 - a. This **consumable** **SHALL** contain exactly one [1..1] [Immunization Medication Information \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09) (CONF:4444-28960).
- 9. **MAY** contain zero or one [0..1] [Author \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-29685).

Note: QDM Attribute: Author dateTime
- 10. **SHALL NOT** contain [0..0] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:4444-29699).
- 11. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29686) such that it

Note: QDM Attribute: Performer

 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29695).
 - b. **SHALL** contain exactly one [1..1] [Entity Practitioner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29687).
- 12. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29688) such that it

Note: QDM Attribute: Performer

 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29696).
 - b. **SHALL** contain exactly one [1..1] [Entity Organization](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29689).
- 13. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29692) such that it

Note: QDM Attribute: Performer

 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29698).
 - b. **SHALL** contain exactly one [1..1] [Entity Patient](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29693).
- 14. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29690) such that it

Note: QDM Attribute: Performer

 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29697).

- b. **SHALL** contain exactly one [1..1] Entity Care Partner (identifier: urn:hl7iii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29691).
15. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:4444-28577) such that it Note: QDM Attribute: Reason
- a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-28586).
 - b. **SHALL** contain exactly one [1..1] Reason (V3) (identifier: urn:hl7iii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-28587).

Figure 53: Immunization Administered (V3) Example

```

<substanceAdministration classCode="SBADM" moodCode="EVN" negationInd="false">
  <!-- C-CDA R2 Immunization Activity (V3) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.52" extension="2015-08-01"/>
  <!-- Immunization Administered (V3) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.140" extension="2019-12-01"/>
  <id root="lea77951-61f4-425f-bb69-dd396d63c44f"/>
  <statusCode code="completed"/>
  <effectiveTime value="20190915"/>
  <!-- QDM Attribute: Dose -->
  <doseQuantity value="1"/>
  <consumable>
    <manufacturedProduct classCode="MANU">
      <!-- C-CDA R2.1 Immunization Medication Information (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.54" extension="2014-06-09"/>
      <id root="37bfe02a-3e97-4bd6-9197-bbd0ed0de79e"/>
      <manufacturedMaterial>
        <code code="33" codeSystem="2.16.840.1.113883.6.59"
displayName="Pneumococcal polysaccharide vaccine" codeSystemName="CVX">
          </code>
          <lotNumberText>1</lotNumberText>
        </manufacturedMaterial>
      </manufacturedProduct>
    </consumable>
  </substanceAdministration>

```

3.30 Immunization Medication Information (V2)

[manufacturedProduct: identifier
urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 (open)]

Table 87: Immunization Medication Information (V2) Contexts

| Contained By: | Contains: |
|--|-----------|
| Planned Supply (V2) (optional) Medication Supply Order (V2) (optional) Medication Dispense (V2) (optional) Planned Immunization Activity (required) Immunization Activity (V3) (required) Immunization Administered (V3) (required) Immunization Supply Request (required) Medication Dispensed (V6) (optional) | |

The Immunization Medication Information represents product information about the immunization substance. The vaccine manufacturer and vaccine lot number are typically recorded in the medical record and should be included if known.

Table 88: Immunization Medication Information (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|--------|-----------|----------------------------|--|
| manufacturedProduct (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09) | | | | | |
| @classCode | 1..1 | SHALL | | 1098-9002 | urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU |
| templateId | 1..1 | SHALL | | 1098-9004 | |
| @root | 1..1 | SHALL | | 1098-10499 | 2.16.840.1.113883.10.20.22.4.54 |
| @extension | 1..1 | SHALL | | 1098-32602 | 2014-06-09 |
| id | 0..* | MAY | | 1098-9005 | |
| manufacturedMaterial | 1..1 | SHALL | | 1098-9006 | |
| code | 1..1 | SHALL | | 1098-9007 | urn:oid:2.16.840.1.113762.1.4.1010.6 (CVX Vaccines Administered Vaccine Set) |
| translation | 0..* | MAY | | 1098-31543 | urn:oid:2.16.840.1.113762.1.4.1010.8 (Vaccine Clinical Drug) |
| translation | 0..* | MAY | | 1098-31881 | |
| lotNumberText | 0..1 | SHOULD | | 1098-9014 | |
| manufacturerOrganization | 0..1 | SHOULD | | 1098-9012 | |

1. **SHALL** contain exactly one [1..1] **@classCode**="MANU" (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110 **STATIC**) (CONF:1098-9002).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-9004) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.54" (CONF:1098-10499).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32602).
3. **MAY** contain zero or more [0..*] **id** (CONF:1098-9005).
4. **SHALL** contain exactly one [1..1] **manufacturedMaterial** (CONF:1098-9006).
 - a. This **manufacturedMaterial** **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [CVX Vaccines Administered Vaccine Set](#) urn:oid:2.16.840.1.113762.1.4.1010.6 **DYNAMIC** (CONF:1098-9007).
 - i. This **code** **MAY** contain zero or more [0..*] **translation**, which **MAY** be selected from ValueSet [Vaccine Clinical Drug](#) urn:oid:2.16.840.1.113762.1.4.1010.8 **DYNAMIC** (CONF:1098-31543).
 - ii. This **code** **MAY** contain zero or more [0..*] **translation** (CONF:1098-31881).

lotNumberText should be included if known. It may not be known for historical immunizations, planned immunizations, or refused/deferred immunizations.

- b. This manufacturedMaterial **SHOULD** contain zero or one [0..1] lotNumberText (CONF:1098-9014).
- 5. **SHOULD** contain zero or one [0..1] manufacturerOrganization (CONF:1098-9012).

Figure 54: Immunization Medication Information (V2) Example

```
<manufacturedProduct classCode="MANU">
  <!-- ** Immunization medication information ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.54" extension="2014-06-09" />
  <manufacturedMaterial>
    <code code="33" codeSystem="2.16.840.1.113883.12.292" displayName="Pneumococcal polysaccharide vaccine" codeSystemName="CVX">
      <translation code="854981" displayName="Pneumovax 23 (Pneumococcal vaccine polyvalent) Injectable Solution" codeSystemName="RxNORM" codeSystem="2.16.840.1.113883.6.88" />
    </code>
    <lotNumberText>1</lotNumberText>
  </manufacturedMaterial>
  <manufacturerOrganization>
    <name>Health LS - Immuno Inc.</name>
  </manufacturerOrganization>
</manufacturedProduct>
```

3.31 Immunization Refusal Reason

[observation: identifier urn:oid:2.16.840.1.113883.10.20.22.4.53 (open)]

Table 89: Immunization Refusal Reason Contexts

| Contained By: | Contains: |
|---|-----------|
| Immunization Activity (V3) (optional) | |

The Immunization Refusal Reason documents the rationale for the patient declining an immunization.

Table 90: Immunization Refusal Reason Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-------|-----------|--------------------------|---|
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.53) | | | | | |
| @classCode | 1..1 | SHALL | | 81-8991 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 81-8992 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 81-8993 | |
| @root | 1..1 | SHALL | | 81-10500 | 2.16.840.1.113883.10.20.22.4.53 |
| id | 1..* | SHALL | | 81-8994 | |
| code | 1..1 | SHALL | | 81-8995 | urn:oid:2.16.840.1.113883.1.11.19717 (No Immunization Reason) |
| statusCode | 1..1 | SHALL | | 81-8996 | |
| @code | 1..1 | SHALL | | 81-19104 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:81-8991).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:81-8992).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-8993) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.53" (CONF:81-10500).
4. **SHALL** contain at least one [1..*] **id** (CONF:81-8994).
5. **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [No Immunization Reason](#) urn:oid:2.16.840.1.113883.1.11.19717 **DYNAMIC** (CONF:81-8995).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:81-8996).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:81-19104).

Figure 55: Immunization Refusal Reason Example

```

<observation classCode="OBS" moodCode="EVN">
<templateId root="2.16.840.1.113883.10.20.22.4.53"/>
<id root="2a620155-9d11-439e-92b3-5d9815ff4dd8"/>
<code displayName="Patient Objection" code="PATOBJ"
  codeSystemName="HL7 ActNoImmunizationReason" codeSystem="2.16.840.1.113883.5.8"/>
<statusCode code="completed"/>
</observation>

```

3.32 Incision Datetime

[procedure: identifier urn:oid:2.16.840.1.113883.10.20.24.3.89 (open)]

Table 91: Incision Datetime Contexts

| Contained By: | Contains: |
|---|-----------|
| Procedure Performed (V6) (optional) | |

This template represents the QDM Attribute Incision Datetime, which indicates the time the incision was made.

Table 92: Incision Datetime Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-------|-----------|--------------------------|---|
| procedure (identifier: urn:oid:2.16.840.1.113883.10.20.24.3.89) | | | | | |
| @classCode | 1..1 | SHALL | | 67-14559 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC |
| @moodCode | 1..1 | SHALL | | 67-11401 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 67-11402 | |
| @root | 1..1 | SHALL | | 67-11403 | 2.16.840.1.113883.10.20.24.3.89 |
| code | 1..1 | SHALL | | 67-14562 | |
| @code | 0..1 | MAY | | 67-14563 | 34896006 |
| @codeSystem | 1..1 | SHALL | | 67-27014 | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96 |
| effectiveTime | 1..1 | SHALL | | 67-14561 | |

1. **SHALL** contain exactly one [1..1] **@classCode**="PROC" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:67-14559).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:67-11401).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:67-11402) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.89" (CONF:67-11403).
4. **SHALL** contain exactly one [1..1] **code** (CONF:67-14562).
 - a. This code **MAY** contain zero or one [0..1] **@code**="34896006" incision (CONF:67-14563).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:67-27014).
5. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:67-14561).

Figure 56: Incision Datetime Example

```
<procedure classCode="PROC" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.24.3.89" />
  <code code="34896006"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT"
    displayName="incision" />
  <effectiveTime value="20120329091500+0500" />
</procedure>
```

3.33 Indication (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09 (open)]

Table 93: Indication (V2) Contexts

| Contained By: | Contains: |
|---|-----------|
| Medication Activity (V2) (optional) Procedure Activity Act (V2) (optional) Procedure Activity Procedure (V2) (optional) Procedure Activity Observation (V2) (optional) Planned Act (V2) (optional) Planned Encounter (V2) (optional) Planned Procedure (V2) (optional) Planned Observation (V2) (optional) Planned Supply (V2) (optional) Planned Medication Activity (V2) (optional) Planned Immunization Activity (optional) Immunization Activity (V3) (optional) Encounter Activity (V3) (optional) | |

This template represents the rationale for an action such as an encounter, a medication administration, or a procedure. The id element can be used to reference a problem recorded elsewhere in the document, or can be used with a code and value to record the problem. Indications for treatment are not laboratory results; rather the problem associated with the laboratory result should be cited (e.g., hypokalemia instead of a laboratory result of Potassium 2.0 mEq/L). Use the Drug Monitoring Act [templateId 2.16.840.1.113883.10.20.22.4.123] to indicate if a particular drug needs special monitoring (e.g., anticoagulant therapy). Use Precondition for Substance Administration (V2) [templateId 2.16.840.1.113883.10.20.22.4.25.2] to represent that a medication is to be administered only when the associated criteria are met.

Table 94: Indication (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|--------|-----------|----------------------------|--|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) | | | | | |
| @classCode | 1..1 | SHALL | | 1098-7480 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 1098-7481 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 1098-7482 | |
| @root | 1..1 | SHALL | | 1098-10502 | 2.16.840.1.113883.10.20.22.4.19 |
| @extension | 1..1 | SHALL | | 1098-32570 | 2014-06-09 |
| id | 1..* | SHALL | | 1098-7483 | |
| code | 1..1 | SHALL | | 1098-31229 | urn:oid:2.16.840.1.113883.3.88.12.3221.7.2 (Problem Type (SNOMEDCT)) |
| statusCode | 1..1 | SHALL | | 1098-7487 | |
| @code | 1..1 | SHALL | | 1098-19105 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 0..1 | SHOULD | | 1098-7488 | |
| value | 0..1 | MAY | CD | 1098-7489 | urn:oid:2.16.840.1.113883.3.88.12.3221.7.4 (Problem) |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7480).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-7481).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7482) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.19" (CONF:1098-10502).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32570).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-7483).
 Note: If the id element is used to reference a problem recorded elsewhere in the document then this id must equal another entry/id in the same document instance. Application Software must be responsible for resolving the identifier back to its original object and then rendering the information in the correct place in the containing section's narrative text. Its purpose is to obviate the need to repeat the complete XML representation of the referred to entry when relating one entry to another.
5. **SHALL** contain exactly one [1..1] **code**, which **MAY** be selected from ValueSet [Problem Type \(SNOMEDCT\)](#) urn:oid:2.16.840.1.113883.3.88.12.3221.7.2 **DYNAMIC** (CONF:1098-31229).

6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-7487).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-19105).
7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-7488).
8. **MAY** contain zero or one [0..1] **value** with **@xsi:type="CD"**, where the code **SHOULD** be selected from ValueSet [Problem](#) urn:oid:2.16.840.1.113883.3.88.12.3221.7.4 **DYNAMIC** (CONF:1098-7489).

Figure 57: Indication (V2) Example

```

<entry typeCode="DRIV">
  <substanceAdministration classCode="SBADM" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.16" extension="2014-06-09" />
    <!-- ** MEDICATION ACTIVITY -->
    <id root="cdbd33f0-6cde-11db-9fe1-0800200c9a66" />
    <text>
      <reference value="#Med1" /> 0.09 MG/ACTUAT inhalant solution, 2 puffs QID PRN
wheezing
    </text>
    ...
    <!-- Indication snippet inside a Medication Activity -->
    <entryRelationship typeCode="RSON">
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.19" extension="2014-06-09"
/>
<!-- Note that this id equals the problem observation/id -->
        <id root="db734647-fc99-424c-a864-7e3cda82e703" />
        <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" />
        <statusCode code="completed" />
        <value xsi:type="CD" code="32398004" displayName="Bronchitis"
codeSystem="2.16.840.1.113883.6.96" />
        </observation>
      </entryRelationship>
      ...
    </substanceAdministration>
  </entry>
  <!-- Points to a problem on the problem list -->
  <!-- Problem observation template
  <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
  Note that this id equals the Indication observation/id
  <id root="db734647-fc99-424c-a864-7e3cda82e703"/> -->

```

3.34 Instruction (V2)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 (open)]

Table 95: Instruction (V2) Contexts

| Contained By: | Contains: |
|---|-----------|
| Medication Activity (V2) (optional) Procedure Activity Act (V2) (optional) Procedure Activity Procedure (V2) (optional) Procedure Activity Observation (V2) (optional) Planned Act (V2) (optional) Planned Procedure (V2) (optional) Planned Observation (V2) (optional) Planned Supply (V2) (optional) Planned Medication Activity (V2) (optional) Medication Supply Order (V2) (optional) Planned Immunization Activity (optional) Immunization Activity (V3) (optional) | |

The Instruction template can be used in several ways, such as to record patient instructions within a Medication Activity or to record fill instructions within a supply order. The template's moodCode can only be INT. If an instruction was already given, the Procedure Activity Act template (instead of this template) should be used to represent the already occurred instruction. The act/code defines the type of instruction. Though not defined in this template, a Vaccine Information Statement (VIS) document could be referenced through act/reference/externalDocument, and patient awareness of the instructions can be represented with the generic participant and the participant/awarenessCode.

Table 96: Instruction (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|-------|-----------|----------------------------|---|
| act (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) | | | | | |
| @classCode | 1..1 | SHALL | | 1098-7391 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT |
| @moodCode | 1..1 | SHALL | | 1098-7392 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = INT |
| templateId | 1..1 | SHALL | | 1098-7393 | |
| @root | 1..1 | SHALL | | 1098-10503 | 2.16.840.1.113883.10.20.22.4.20 |
| @extension | 1..1 | SHALL | | 1098-32598 | 2014-06-09 |
| code | 1..1 | SHALL | | 1098-16884 | urn:oid:2.16.840.1.113883.11.20.9.34 (Patient Education) |
| statusCode | 1..1 | SHALL | | 1098-7396 | |
| @code | 1..1 | SHALL | | 1098-19106 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |

1. **SHALL** contain exactly one [1..1] **@classCode**="ACT" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7391).
2. **SHALL** contain exactly one [1..1] **@moodCode**="INT" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-7392).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7393) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.20" (CONF:1098-10503).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32598).
4. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet [Patient Education](#) urn:oid:2.16.840.1.113883.11.20.9.34 **DYNAMIC** (CONF:1098-16884).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-7396).
 - a. This **statusCode SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-19106).

Figure 58: Instruction (V2) Example

```
<act classCode="ACT" moodCode="INT">
<templateId root="2.16.840.1.113883.10.20.22.4.20" extension="2014-06-09" />
<code code="171044003" codeSystem="2.16.840.1.113883.6.96" displayName="immunization
education" />
<text>
  <reference value="#immunSect" />
  Possible flu-like symptoms for three days.
</text>
<statusCode code="completed" />
</act>
```

3.35 Laboratory Test Performed (V5)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.38:2019-12-01
(open)]

Table 97: Laboratory Test Performed (V5) Contexts

| Contained By: | Contains: |
|--|---|
| Patient Data Section QDM (V7) (optional) | Reason (V3) (optional) Component (optional) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Status (V2) (optional) Author (V2) (optional) Result (V4) (optional) |

This template represents the QDM datatype: Laboratory Test, Performed.

The Laboratory Test Performed template represents the medical procedure of obtaining a sample of blood, urine, or other substance from the body. This template can also describe the result of a study in the clinical laboratory (traditionally chemistry, hematology, microbiology, serology, urinalysis, blood bank). A time/date stamp is required.

QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template.

Table 98: Laboratory Test Performed (V5) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.38:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-11705 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 4444-11706 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 0..1 | MAY | | 4444-28077 | |
| templateId | 1..1 | SHALL | | 4444-11721 | |
| @root | 1..1 | SHALL | | 4444-11722 | 2.16.840.1.113883.10.20.24.3.38 |
| @extension | 1..1 | SHALL | | 4444-27021 | 2019-12-01 |
| id | 1..* | SHALL | | 4444-11707 | |
| code | 1..1 | SHALL | | 4444-27637 | |
| statusCode | 1..1 | SHALL | | 4444-11709 | |
| @code | 1..1 | SHALL | | 4444-11710 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL | | 4444-11711 | |
| @value | 0..1 | SHOULD | | 4444-30017 | |
| low | 0..1 | SHOULD | | 4444-11712 | |
| high | 0..1 | MAY | | 4444-11713 | |
| value | 0..0 | SHALL NOT | | 4444-29534 | |
| author | 0..1 | MAY | | 4444-29523 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| participant | 0..* | MAY | | 4444-29535 | |
| @typeCode | 1..1 | SHALL | | 4444-29543 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29536 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29537 | |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|---|
| @typeCode | 1..1 | SHALL | | 4444-29544 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29538 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29541 | |
| @typeCode | 1..1 | SHALL | | 4444-29546 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29542 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29539 | |
| @typeCode | 1..1 | SHALL | | 4444-29545 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29540 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |
| entryRelationship | 0..* | MAY | | 4444-11727 | |
| @typeCode | 1..1 | SHALL | | 4444-11728 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 4444-27161 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) |
| entryRelationship | 0..1 | MAY | | 4444-29524 | |
| @typeCode | 1..1 | SHALL | | 4444-29530 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| observation | 1..1 | SHALL | | 4444-30018 | Result (V4) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.87:2019-12-01) |
| entryRelationship | 0..1 | MAY | | 4444-27748 | |
| @typeCode | 1..1 | SHALL | | 4444-27749 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| observation | 1..1 | SHALL | | 4444-27750 | Status (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.93:2019-12-01) |
| entryRelationship | 0..* | MAY | | 4444- | |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|------------------|-------|--------------|-----------|----------------------------|---|
| | | | | 29528 | |
| @typeCode | 1..1 | SHALL | | 4444-29533 | REFR |
| observation | 1..1 | SHALL | | 4444-29529 | Component (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.149:2017-08-01) |
| referenceRange | 0..1 | MAY | | 4444-29526 | |
| observationRange | 1..1 | SHALL | | 4444-29527 | |
| code | 0..0 | SHALL NOT | | 4444-29531 | |
| value | 1..1 | SHALL | IVL_PQ | 4444-29532 | |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-11705).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-11706).
3. **MAY** contain zero or one [0..1] **@negationInd** (CONF:4444-28077).
Note: QDM Attribute: Negation Rationale- when @negationInd="true", this indicates Laboratory Test Not Performed.
 - a. If **@negationInd**="true" is present, **SHALL** contain one [1..1] entryRelationship such that it contains exactly one [1..1] **Reason (V3)** to state the reason for **Laboratory Test Not Performed** (CONF:4444-29564).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-11721) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.38" (CONF:4444-11722).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-27021).
5. **SHALL** contain at least one [1..*] **id** (CONF:4444-11707).
6. **SHALL** contain exactly one [1..1] **code** (CONF:4444-27637).
Note: QDM Attribute: Code
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:4444-11709).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:4444-11710).
8. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4444-11711) such that it
Note: QDM Attribute: Relevant Period, Relevant dateTime
 - a. **SHOULD** contain zero or one [0..1] **@value** (CONF:4444-30017).
Note: QDM Attribute: Relevant dateTime – the time the laboratory test is performed when the laboratory test occurs at a single point in time
 - b. **SHOULD** contain zero or one [0..1] **low** (CONF:4444-11712).
Note: QDM Attribute: Relevant Period startTime - the time the laboratory test is

initiated if it occurs over a time interval (i.e., the time the specimen collection begins).

- c. **MAY** contain zero or one [0..1] **high** (CONF:4444-11713).
Note: QDM Attribute: Relevant Period stopTime - the time the laboratory test ends (i.e., the time the specimen collection ends)
 - d. This effectiveTime **SHALL** contain either a **low** or a **@value** but not both (CONF:4444-29548).
Note: QDM Attributes Relevant date`Time` and Relevant Period are mutually exclusive.
9. **SHALL NOT** contain [0..0] **value** (CONF:4444-29534).
Note: Use Result (V4) to represent Result and Result date`Time`
10. **MAY** contain zero or one [0..1] [Author \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-29523).
Note: QDM Attribute: Author date`Time` - the time the action was recorded
11. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29535) such that it
Note: QDM Attribute: Performer
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29543).
 - b. **SHALL** contain exactly one [1..1] [Entity Practitioner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29536).
12. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29537) such that it
Note: QDM Attribute: Performer
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29544).
 - b. **SHALL** contain exactly one [1..1] [Entity Organization](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29538).
13. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29541) such that it
Note: QDM Attribute: Performer
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29546).
 - b. **SHALL** contain exactly one [1..1] [Entity Patient](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29542).
14. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29539) such that it
Note: QDM Attribute: Performer
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29545).
 - b. **SHALL** contain exactly one [1..1] [Entity Care Partner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29540).
15. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:4444-11727) such that it
Note: QDM Attribute: Reason; Reason for Laboratory Test Not Performed

- a. **SHALL** contain exactly one [1..1] **@typeCode**="RSON" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-11728).
 - b. **SHALL** contain exactly one [1..1] **Reason (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-27161).
16. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-29524) such that it
 Note: QDM Attribute: Result, QDM Attribute: Result dateTime
- a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-29530).
 - b. **SHALL** contain exactly one [1..1] **Result (V4)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.87:2019-12-01) (CONF:4444-30018).
17. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-27748) such that it
 Note: QDM Attribute: Status
- a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-27749).
 - b. **SHALL** contain exactly one [1..1] **Status (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.93:2019-12-01) (CONF:4444-27750).
18. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:4444-29528) such that it
 Note: QDM Attribute: Components
- a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" Refers to (CONF:4444-29533).
 - b. **SHALL** contain exactly one [1..1] **Component** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.149:2017-08-01) (CONF:4444-29529).
19. **MAY** contain zero or one [0..1] **referenceRange** (CONF:4444-29526).
 Note: QDM Attribute: Reference Range Low, QDM Attribute: Reference Range High
- a. The referenceRange, if present, **SHALL** contain exactly one [1..1] **observationRange** (CONF:4444-29527).
 - i. This observationRange **SHALL NOT** contain [0..0] **code** (CONF:4444-29531).
 - ii. This observationRange **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="IVL_PQ" (CONF:4444-29532).

Figure 59: Laboratory Test Performed (V5) Example

```

<observation classCode="OBS" moodCode="EVN">
  <!-- Laboratory Test Performed (V5) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.38" extension="2019-12-01" />
  <id root="1fad091f-7b4e-4661-b61c-53f9a82515b6" />
  <!-- Laboratory Test -->
  <code code="4544-3" displayName="Hematocrit [Volume Fraction] of Blood by Automated
count" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <text>Laboratory Test, Hematocrit</text>
  <statusCode code="completed" />
  <!-- QDM Attribute: Relevant dateTime -->
  <effectiveTime value="20190329090000" />
  <!-- QDM Attribute: Status -->
  <entryRelationship typeCode="REFR">
    <observation classCode="OBS" moodCode="EVN">
      <!-- Status (V2) -->
      <templateId root="2.16.840.1.113883.10.20.24.3.93" extension="2019-12-01" />
      ...
    </observation>
  </entryRelationship>
  <!-- QDM Attribute: Reason -->
  <entryRelationship typeCode="RSON">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.24.3.88" extension="2017-08-01" />
      ...
    </observation>
  </entryRelationship>
  <entryRelationship typeCode="REFR">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.2" extension="2015-08-01"/>
      <!-- Result (V4) -->
      <templateId root="2.16.840.1.113883.10.20.24.3.87" extension="2019-12-01"/>
      <id root="3fad091f-7b4e-4661-b61c-53f9a825198b" />
      <code code="4544-3" displayName="Hematocrit" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC"/>
      <statusCode code="completed"/>
      <effectiveTime value="20190329090000">
      <value xsi:type="PQ" value="35.3" unit="%" />
    </observation>
  </entryRelationship>
</observation>

```

3.36 Measure Reference

[organizer: identifier urn:oid:2.16.840.1.113883.10.20.24.3.98 (open)]

Table 99: Measure Reference Contexts

| Contained By: | Contains: |
|--|-----------|
| Measure Section (required) | |

This template defines the way that a Measure should be referenced. Measures are referenced through externalAct reference to an externalDocument. The externalDocument/ids and version numbers are used to reference the measure.

Table 100: Measure Reference Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|--------|-----------|--------------------------|--|
| organizer (identifier: urn:oid:2.16.840.1.113883.10.20.24.3.98) | | | | | |
| @classCode | 1..1 | SHALL | | 67-12979 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER |
| @moodCode | 1..1 | SHALL | | 67-12980 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 67-19532 | |
| @root | 1..1 | SHALL | | 67-19533 | 2.16.840.1.113883.10.20.24.3.98 |
| id | 1..* | SHALL | | 67-26992 | |
| statusCode | 1..1 | SHALL | | 67-12981 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) |
| @code | 1..1 | SHALL | | 67-27020 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| reference | 1..1 | SHALL | | 67-12982 | |
| @typeCode | 1..1 | SHALL | | 67-12983 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| externalDocument | 1..1 | SHALL | | 67-12984 | |
| @classCode | 1..1 | SHALL | | 67-19534 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = DOC |
| id | 1..* | SHALL | | 67-12985 | |
| @root | 1..1 | SHALL | | 67-12986 | |
| @extension | 0..1 | MAY | | 67-27007 | |
| text | 0..1 | SHOULD | | 67-12997 | |

1. **SHALL** contain exactly one [1..1] **@classCode**="CLUSTER" cluster (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:67-12979).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:67-12980).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:67-19532) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.98" (CONF:67-19533).
4. **SHALL** contain at least one [1..*] **id** (CONF:67-26992).
5. **SHALL** contain exactly one [1..1] **statusCode** (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:67-12981).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:67-27020).

- 6. **SHALL** contain exactly one [1..1] **reference** (CONF:67-12982) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:67-12983).
 - b. **SHALL** contain exactly one [1..1] **externalDocument** (CONF:67-12984).
 - i. This externalDocument **SHALL** contain exactly one [1..1] **@classCode="DOC"** Document (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:67-19534).
 - ii. This externalDocument **SHALL** contain at least one [1..*] **id** (CONF:67-12985) such that it
 - 1. **SHALL** contain exactly one [1..1] **@root** (CONF:67-12986).
 - 2. **MAY** contain zero or one [0..1] **@extension** (CONF:67-27007).
 - 3. This ID references an ID of the Quality Measure (CONF:67-27008).
 - iii. This externalDocument **SHOULD** contain zero or one [0..1] **text** (CONF:67-12997).
 - 1. This text is the title of the Quality Measure (CONF:67-12998).

Figure 60: Measure Reference Example

```

<organizer classCode="CLUSTER" moodCode="EVN">
  <!-- Measure reference -->
  <templateId root="2.16.840.1.113883.10.20.24.3.98"/>
  <statusCode code="completed"/>
  <reference typeCode="REFR">
    <externalDocument classCode="DOC" moodCode="EVN">
      <!-- This is the eCQM version specific id for an eCQM -->
      <id root="40280382-6240-b6b9-0162-4e22168a0727"/>
      <!-- SHOULD This is the title of the eCQM-->
      <text>Median Time from ED Arrival to ED Departure for Discharged ED Patients </text>
    </externalDocument>
  </reference>
</organizer>

```

3.36.1 eMeasure Reference QDM

[organizer: identifier urn:oid:2.16.840.1.113883.10.20.24.3.97 (open)]

Table 101: eMeasure Reference QDM Contexts

| Contained By: | Contains: |
|--|-----------|
| Measure Section QDM (required) | |

This template defines the way that a QDM eMeasure should be referenced in a QDM-Based QRDA. An eMeasure is referenced through externalAct reference to an externalDocument. The externalDocument/ids and version numbers are used to reference the measure. The eMeasure Reference QDM template must contain a reference to the version specific identifier for each eMeasure: the QualityMeasureDocument/id.

In addition to referencing an eMeasure, this template allows one to assert whether or not the included

patient data is believed by the sender to satisfy the various population criteria of the referenced eMeasure. For each population defined in a referenced eMeasure, the sender can assert “true” (set negationInd="false") or “false” (set negationInd="true"), that the criteria are met by the included data. For outcome measures, the sender can also assert the predicted probability that the patient would meet particular population criteria. For instance, based on an outcome measure’s risk model, one might calculate that the patient has a 27% probability of meeting the numerator criteria.

Table 102: eMeasure Reference QDM Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|--------------|-------------|------------------|--------------------------|--|
| organizer (identifier: urn:oid:2.16.840.1.113883.10.20.24.3.97) | | | | | |
| @classCode | 1..1 | SHALL | | 67-12805 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER |
| @moodCode | 1..1 | SHALL | | 67-12806 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 67-27018 | |
| @root | 1..1 | SHALL | | 67-27019 | 2.16.840.1.113883.10.20.24.3.97 |
| statusCode | 1..1 | SHALL | | 67-12807 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| reference | 1..1 | SHALL | | 67-12808 | |
| @typeCode | 1..1 | SHALL | | 67-12809 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| externalDocument | 1..1 | SHALL | | 67-12810 | |
| @classCode | 1..1 | SHALL | | 67-27017 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = DOC |
| id | 1..1 | SHALL | | 67-12811 | |
| @root | 1..1 | SHALL | | 67-12812 | 2.16.840.1.113883.4.738 |
| @extension | 1..1 | SHALL | | 67-12813 | |
| code | 0..1 | SHOULD | | 67-12864 | |
| @code | 0..1 | SHOULD | | 67-27015 | 57024-2 |
| @codeSystem | 0..1 | SHOULD | | 67-27016 | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| text | 0..1 | SHOULD | | 67-12865 | |
| setId | 0..1 | SHOULD | | 67-12867 | |
| versionNumber | 0..1 | SHOULD | | 67-12869 | |
| component | 0..* | MAY | | 67-16678 | |
| observation | 1..1 | SHALL | | 67-16679 | |
| @negationInd | 1..1 | SHALL | | 67-16680 | |
| code | 1..1 | SHALL | | 67-16681 | |
| @code | 1..1 | SHALL | | 67-16682 | ASSERTION |
| @codeSystem | 1..1 | SHALL | | 67-27010 | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| value | 1..1 | SHALL | CD | 67-16683 | |
| reference | 1..1 | SHALL | | 67-16684 | |
| @typeCode | 1..1 | SHALL | | 67-16685 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---------------------|-------|-------|-----------|--------------------------|---|
| externalObservation | 1..1 | SHALL | | 67-16686 | |
| @classCode | 1..1 | SHALL | | 67-16693 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 67-16694 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| id | 1..1 | SHALL | | 67-16687 | |
| referenceRange | 0..1 | MAY | | 67-16689 | |
| observationRange | 1..1 | SHALL | | 67-16690 | |
| value | 1..1 | SHALL | REAL | 67-16691 | |

1. Conforms to [Measure Reference](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.24.3.98).
2. **SHALL** contain exactly one [1..1] **@classCode**="CLUSTER" cluster (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:67-12805).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:67-12806).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:67-27018) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.97" (CONF:67-27019).
5. **SHALL** contain exactly one [1..1] **statusCode**="completed" completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:67-12807).
6. **SHALL** contain exactly one [1..1] **reference** (CONF:67-12808) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:67-12809).
 - b. **SHALL** contain exactly one [1..1] **externalDocument** (CONF:67-12810).
 - i. This externalDocument **SHALL** contain exactly one [1..1] **@classCode**="DOC" Document (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:67-27017).
 - ii. This externalDocument **SHALL** contain exactly one [1..1] **id** (CONF:67-12811) such that it
 1. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.4.738" (CONF:67-12812).
Note: This OID indicates that the **@extension** contains the version specific identifier for the eMeasure.
 2. **SHALL** contain exactly one [1..1] **@extension** (CONF:67-12813).
Note: This **@extension** SHALL equal the version specific identifier for eMeasure (i.e., QualityMeasureDocument/id)
 - iii. This externalDocument **SHOULD** contain zero or one [0..1] **code** (CONF:67-12864).

1. The code, if present, **SHOULD** contain zero or one [0..1] `@code="57024-2"` Health Quality Measure Document (CONF:67-27015).
2. The code, if present, **SHOULD** contain zero or one [0..1] `@codeSystem="2.16.840.1.113883.6.1"` (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:67-27016).
- iv. This externalDocument **SHOULD** contain zero or one [0..1] **text** (CONF:67-12865).
 1. This text **SHALL** equal the title of the eMeasure (CONF:67-12866).
- v. This externalDocument **SHOULD** contain zero or one [0..1] **setId** (CONF:67-12867).
 1. This setId **SHALL** equal the QualityMeasureDocument/setId which is the eMeasure version neutral id (CONF:67-12868).
- vi. This externalDocument **SHOULD** contain zero or one [0..1] **versionNumber** (CONF:67-12869).

There is a known data type mismatch issue between the CDA R2 and HQMF for the versionNumber attribute. This guide is based on CDA R2, which is derived from the HL7 Reference Information Model (RIM) Version 2.07. In RIM 2.07, the versionNumber attribute is specified as INT data type. HQMF, however, is derived from HL7 RIM, Version 2.44, where versionNumber is specified as ST data type. Since 2015, the MAT tool assigns a string value such as 4.0.000 as the version number for eMeasures that are authored by the MAT. If versionNumber="4.0.000" were sent in a QRDA Category I file, it will fail the CDA_SDTC.xsd schema validation.

To avoid this problem, since versionNumber is an optional data element (CONF:67-12869), this guide recommends eMeasure version number not be submitted in a QRDA Category I report. Version specific identifier for an eMeasure can be used to uniquely identify an eMeasure and it is a required data element for QRDA I.

1. The version number **SHALL** equal the sequential eMeasure Version number (CONF:67-12870).
7. **MAY** contain zero or more [0..*] **component** (CONF:67-16678).
 - a. The component, if present, **SHALL** contain exactly one [1..1] **observation** (CONF:67-16679).

Set negationInd="false" to assert true (that the criteria are met by the included data). Set negationInd="true" to assert false (that the criteria are not met by the included data).

- i. This observation **SHALL** contain exactly one [1..1] `@negationInd` (CONF:67-16680).
- ii. This observation **SHALL** contain exactly one [1..1] **code** (CONF:67-16681).
 1. This code **SHALL** contain exactly one [1..1] `@code="ASSERTION"` Assertion (CONF:67-16682).
 2. This code **SHALL** contain exactly one [1..1] `@codeSystem="2.16.840.1.113883.5.4"` (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:67-27010).
- iii. This observation **SHALL** contain exactly one [1..1] **value** with `@xsi:type="CD"` (CONF:67-16683).

- iv. This observation **SHALL** contain exactly one [1..1] **reference** (CONF:67-16684).
 - 1. This reference **SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:67-16685).
 - 2. This reference **SHALL** contain exactly one [1..1] **externalObservation** (CONF:67-16686).
 - a. This externalObservation **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:67-16693).
 - b. This externalObservation **SHALL** contain exactly one [1..1] **@moodCode="EVN"** (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:67-16694).
 - c. This externalObservation **SHALL** contain exactly one [1..1] **id** (CONF:67-16687).
 - i. This identifier **SHALL** be equal to a population criterion identifier in the referenced eMeasure. (This is necessary because a referenced eMeasure can have multiple numerator populations) (CONF:67-16688).
- v. This observation **MAY** contain zero or one [0..1] **referenceRange** (CONF:67-16689).
 - 1. The referenceRange, if present, **SHALL** contain exactly one [1..1] **observationRange** (CONF:67-16690).
 - a. This observationRange **SHALL** contain exactly one [1..1] **value** with **@xsi:type="REAL"** (CONF:67-16691).
 - 2. The referenceRange is used to indicate the probability that the patient would meet the corresponding population criteria. It is relevant for outcome measures, where predictive models allow for calculating the probability that a patient would meet the criteria of a given population (CONF:67-16692).

Figure 61: eMeasure Reference QDM Example

```
<!-- 1..* Organizers, each containing a reference to an eMeasure -->
<entry>
  <organizer classCode="CLUSTER" moodCode="EVN">
    <!-- This is the templateId for Measure Reference -->
    <templateId root="2.16.840.1.113883.10.20.24.3.98"/>
    <!-- This is the templateId for eMeasure Reference QDM -->
    <templateId root="2.16.840.1.113883.10.20.24.3.97"/>
    <id root="77acf01e-c554-4b23-9224-b9a47442ad88"/>
    <statusCode code="completed"/>
    <reference typeCode="REFR">
      <externalDocument classCode="DOC" moodCode="EVN">
        <!-- SHALL: This is the version specific identifier for eMeasure:
        QualityMeasureDocument/id - the OID in the @root indicates that
        the @extension (which is a GUID) contains the version specific identifier for
        eMeasure -->
        <id root="2.16.840.1.113883.4.738" extension="8a4d92b2-373f-82e2-0137-
        7b9e21cc5c8f"/>
        <!-- SHOULD: This is the NQF Number, root is an NQF OID and for
        eMeasure Number and extension is the eMeasure's NQF number -->
        <id root="2.16.840.1.113883.3.560.1" extension="0143"/>
        <!-- SHOULD: eMeasure Measure Authoring Tool Identifier (not the real
        root yet-->
        <id root="2.16.840.1.113883.3.560.101.2" extension="93"/>
        <!-- SHOULD This is the title of the eMeasure -->
        <text>Children's Asthma Care (CAC-1) Relievers for Inpatient
        Asthma</text>
        <!-- SHOULD: setId is the eMeasure version neutral id -->
        <setId root="dc78ee5d-1487-4d79-84c3-1dfdaff0781c"/>
      </externalDocument>
    </reference>
  <component>
    <!-- assert whether the patient did/didn't meet the criteria -->
    <!-- Set negationInd="false" to assert true (that the criteria are
    met by the included data).
    Set negationInd="true" to assert false (that the criteria are not
    met by the included data). -->
    <observation classCode="OBS" moodCode="EVN" negationInd="true|false">
      <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"/>
      <value xsi:type="CD"
      code="DENEXCEP"
      codeSystem="2.16.840.1.113883.5.4"
      codeSystemName="ActCode"
      displayName="Denominator Exception"/>
      <!-- Explicit reference to the eMeasure population (because some
      eMeasures have multiple Numerators, etc. -->
      <reference typeCode="REFR">
        <externalObservation classCode="OBS" moodCode="EVN">
          <id root="0C13A447-B884-4C09-8374-09D2E4264034"/>
        </externalObservation>
      </reference>
      <!-- predicted probability that patient would meet the criteria -->
      <referenceRange>
        <observationRange>
          <value xsi:type="REAL" value="0.27"/>
        </observationRange>
      </referenceRange>
    </observation>
  </component>
</organizer>
</entry>
```

```

    </referenceRange>
  </observation>
</component>
</organizer>
</entry>

```

3.37 Medication Activity (V2)

[substanceAdministration: identifier
urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09 (open)]

Table 103: Medication Activity (V2) Contexts

| Contained By: | Contains: |
|--|--|
| Reaction Observation (V2) (optional) Procedure Activity Act (V2) (optional) Procedure Activity Procedure (V2) (optional) Procedure Activity Observation (V2) (optional) Discharge Medication (V5) (required) | Drug Vehicle (optional) Drug Monitoring Act (optional) Reaction Observation (V2) (optional) Indication (V2) (optional) Medication Supply Order (V2) (optional) Medication Information (V2) (required) Medication Dispense (V2) (optional) Instruction (V2) (optional) Author Participation (optional) Substance Administered Act (optional) Precondition for Substance Administration (V2) (optional) Medication Free Text Sig (optional) |

A Medication Activity describes substance administrations that have actually occurred (e.g., pills ingested or injections given) or are intended to occur (e.g., "take 2 tablets twice a day for the next 10 days"). Medication activities in "INT" mood are reflections of what a clinician intends a patient to be taking. For example, a clinician may intend that a patient be administered Lisinopril 20 mg PO for blood pressure control. If what was actually administered was Lisinopril 10 mg., then the Medication activities in the "EVN" mood would reflect actual use.

A moodCode of INT is allowed, but it is recommended that the Planned Medication Activity (V2) template be used for moodCodes other than EVN if the document type contains a section that includes Planned Medication Activity (V2) (for example a Care Plan document with Plan of Treatment, Intervention, or Goal sections).

At a minimum, a Medication Activity shall include an effectiveTime indicating the duration of the administration (or single-administration timestamp). Ambulatory medication lists generally provide a summary of use for a given medication over time - a medication activity in event mood with the duration reflecting when the medication started and stopped. Ongoing medications will not have a stop date (or will have a stop date with a suitable NULL value). Ambulatory medication lists will generally also have a frequency (e.g., a medication is being taken twice a day). Inpatient medications generally record each administration as a separate act.

The dose (doseQuantity) represents how many of the consumables are to be administered at each administration event. As a result, the dose is always relative to the consumable and the interval of administration. Thus, a patient consuming a single "metoprolol 25mg tablet" per administration will have a doseQuantity of "1", whereas a patient consuming "metoprolol" will have a dose of "25 mg".

Table 104: Medication Activity (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|--|
| substanceAdministration (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09) | | | | | |
| @classCode | 1..1 | SHALL | | 1098-7496 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SBADM |
| @moodCode | 1..1 | SHALL | | 1098-7497 | urn:oid:2.16.840.1.113883.11.20.9.18 (MoodCodeEvnInt) |
| templateId | 1..1 | SHALL | | 1098-7499 | |
| @root | 1..1 | SHALL | | 1098-10504 | 2.16.840.1.113883.10.20.22.4.16 |
| @extension | 1..1 | SHALL | | 1098-32498 | 2014-06-09 |
| id | 1..* | SHALL | | 1098-7500 | |
| code | 0..1 | MAY | | 1098-7506 | |
| statusCode | 1..1 | SHALL | | 1098-7507 | |
| @code | 1..1 | SHALL | | 1098-32360 | urn:oid:2.16.840.1.113762.1.4.1099.11 (Medication Status) |
| effectiveTime | 1..1 | SHALL | | 1098-7508 | |
| @value | 0..1 | SHOULD | | 1098-32775 | |
| low | 0..1 | SHOULD | | 1098-32776 | |
| high | 0..1 | MAY | | 1098-32777 | |
| effectiveTime | 0..1 | SHOULD | | 1098-7513 | |
| @operator | 1..1 | SHALL | | 1098-9106 | A |
| repeatNumber | 0..1 | MAY | | 1098-7555 | |
| routeCode | 0..1 | SHOULD | | 1098-7514 | urn:oid:2.16.840.1.113883.3.8.8.12.3221.8.7 (SPL Drug Route of Administration Terminology) |
| translation | 0..* | SHOULD | | 1098-32950 | urn:oid:2.16.840.1.113762.1.4.1099.12 (Medication Route) |
| approachSiteCode | 0..1 | MAY | SET<C D> | 1098-7515 | urn:oid:2.16.840.1.113883.3.8.8.12.3221.8.9 (Body Site Value Set) |
| doseQuantity | 1..1 | SHALL | | 1098-7516 | |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|------------------------|-------|--------|-----------------|----------------------------|--|
| @unit | 0..1 | SHOULD | | 1098-7526 | urn:oid:2.16.840.1.113883.1.11.12839 (UnitsOfMeasureCaseSensitive) |
| rateQuantity | 0..1 | MAY | | 1098-7517 | |
| @unit | 1..1 | SHALL | | 1098-7525 | urn:oid:2.16.840.1.113883.1.11.12839 (UnitsOfMeasureCaseSensitive) |
| maxDoseQuantity | 0..1 | MAY | RTO<P Q, PQ> | 1098-7518 | |
| administrationUnitCode | 0..1 | MAY | | 1098-7519 | urn:oid:2.16.840.1.113762.1.4.1021.30 (AdministrationUnitDoseForm) |
| consumable | 1..1 | SHALL | | 1098-7520 | |
| manufacturedProduct | 1..1 | SHALL | | 1098-16085 | Medication Information (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09) |
| performer | 0..1 | MAY | | 1098-7522 | |
| author | 0..* | SHOULD | | 1098-31150 | Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) |
| participant | 0..* | MAY | | 1098-7523 | |
| @typeCode | 1..1 | SHALL | | 1098-7524 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = CSM |
| participantRole | 1..1 | SHALL | | 1098-16086 | Drug Vehicle (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.24) |
| entryRelationship | 0..* | MAY | | 1098-7536 | |
| @typeCode | 1..1 | SHALL | | 1098-7537 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 1098-16087 | Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) |
| entryRelationship | 0..1 | MAY | | 1098-7539 | |
| @typeCode | 1..1 | SHALL | | 1098-7540 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|--|
| @inversionInd | 1..1 | SHALL | | 1098-7542 | true |
| act | 1..1 | SHALL | | 1098-31387 | Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.1.0.20.22.4.20:2014-06-09) |
| entryRelationship | 0..1 | MAY | | 1098-7543 | |
| @typeCode | 1..1 | SHALL | | 1098-7547 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| supply | 1..1 | SHALL | | 1098-16089 | Medication Supply Order (V2) (identifier: urn:hl7ii:2.16.840.1.113883.1.0.20.22.4.17:2014-06-09) |
| entryRelationship | 0..* | MAY | | 1098-7549 | |
| @typeCode | 1..1 | SHALL | | 1098-7553 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| supply | 1..1 | SHALL | | 1098-16090 | Medication Dispense (V2) (identifier: urn:hl7ii:2.16.840.1.113883.1.0.20.22.4.18:2014-06-09) |
| entryRelationship | 0..* | MAY | | 1098-7552 | |
| @typeCode | 1..1 | SHALL | | 1098-7544 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = CAUS |
| observation | 1..1 | SHALL | | 1098-16091 | Reaction Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.1.0.20.22.4.9:2014-06-09) |
| entryRelationship | 0..1 | MAY | | 1098-30820 | |
| @typeCode | 1..1 | SHALL | | 1098-30821 | COMP |
| act | 1..1 | SHALL | | 1098-30822 | Drug Monitoring Act (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.123) |
| entryRelationship | 0..* | MAY | | 1098-31515 | |
| @typeCode | 1..1 | SHALL | | 1098-31516 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| @inversionInd | 1..1 | SHALL | | 1098-31517 | true |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------------|-------|-------|-----------|----------------------------|---|
| sequenceNumber | 0..1 | MAY | | 1098-31518 | |
| act | 1..1 | SHALL | | 1098-31519 | Substance Administered Act (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.118) |
| entryRelationship | 0..* | MAY | | 1098-32907 | |
| @typeCode | 1..1 | SHALL | | 1098-32908 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| substanceAdministration | 1..1 | SHALL | | 1098-32909 | Medication Free Text Sig (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.147) |
| precondition | 0..* | MAY | | 1098-31520 | |
| @typeCode | 1..1 | SHALL | | 1098-31882 | PRCN |
| criterion | 1..1 | SHALL | | 1098-31883 | Precondition for Substance Administration (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09) |

1. **SHALL** contain exactly one [1..1] **@classCode**="SBADM" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7496).
2. **SHALL** contain exactly one [1..1] **@moodCode**, which **SHALL** be selected from ValueSet [MoodCodeEvnInt](#) urn:oid:2.16.840.1.113883.11.20.9.18 **STATIC** 2011-04-03 (CONF:1098-7497).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7499) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.16" (CONF:1098-10504).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32498).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-7500).
5. **MAY** contain zero or one [0..1] **code** (CONF:1098-7506).
 Note: SubstanceAdministration.code is an optional field. Per HL7 Pharmacy Committee, "this is intended to further specify the nature of the substance administration act. To date the committee has made no use of this attribute". Because the type of substance administration is generally implicit in the routeCode, in the consumable participant, etc., the field is generally not used, and there is no defined value set.
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-7507).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [Medication Status](#) urn:oid:2.16.840.1.113762.1.4.1099.11 **DYNAMIC** (CONF:1098-32360).

The substance administration effectiveTime field can repeat, in order to represent varying levels of complex dosing. effectiveTime can be used to represent the duration of administration (e.g., "10 days"), the frequency of administration (e.g., "every 8 hours"), and more. Here, we require that there **SHALL** be an effectiveTime documentation of the duration (or single-administration timestamp), and that there **SHOULD** be an effectiveTime documentation of the frequency. Other timing nuances, supported by the base CDA R2 standard, may also be included.

7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-7508) such that it
Note: This effectiveTime represents either the medication duration (i.e., the time the medication was started and stopped) or the single-administration timestamp.
 - a. **SHOULD** contain zero or one [0..1] **@value** (CONF:1098-32775).
Note: indicates a single-administration timestamp.
(for Medication Active) QDM Attribute: Relevant dateTime – the time the medication is active if it was given or taken at a single point in time
(for Medication Administered) QDM Attribute: Relevant dateTime – the time the medication is administered if it was given or taken at a single point in time
(for Medication Discharge) QDM Attribute: Author dateTime – the time the discharge medication list on the discharge instruction form is authored
 - b. **SHOULD** contain zero or one [0..1] **low** (CONF:1098-32776).
Note: indicates when medication started
(for Medication Active) QDM Attribute: Relevant Period startTime – start time for an active medication that is given or taken over a time interval.
(for Medication Administered) QDM Attribute: Relevant Period startTime – start time for medication administration that is given or taken over a time interval.
Not applicable to Medication Discharge.
 - c. **MAY** contain zero or one [0..1] **high** (CONF:1098-32777).
Note: indicates when medication stopped
(for Medication Active) QDM Attribute: Relevant Period stopTime – stop time for an active medication that is given or taken over a time interval.
(for Medication Administered) QDM Attribute: Relevant Period stopTime – stop time for medication administration that is given or taken over a time interval.
Not applicable to Medication Discharge.
 - d. This effectiveTime **SHALL** contain either a low or a @value but not both (CONF:1098-32890).
Note: For Medication Active and Medication Administered, QDM Attributes Relevant dateTime and Relevant Period are mutually exclusive. For Medication Discharge, it shall contain the QDM Attribute Author dateTime.
8. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-7513) such that it
Note: This effectiveTime represents the medication frequency (e.g., administration times per day).
QDM Attribute: Frequency
 - a. **SHALL** contain exactly one [1..1] **@operator="A"** (CONF:1098-9106).
 - b. **SHALL** contain exactly one [1..1] **@xsi:type="PIVL_TS" or "EIVL_TS"** (CONF:1098-28499).

In "INT" (intent) mood, the repeatNumber defines the number of allowed administrations. For example, a repeatNumber of "3" means that the substance can be administered up to 3 times.

In "EVN" (event) mood, the repeatNumber is the number of occurrences. For example, a repeatNumber of "3" in a substance administration event means that the current administration is the 3rd in a series.

9. **MAY** contain zero or one [0..1] **repeatNumber** (CONF:1098-7555).
10. **SHOULD** contain zero or one [0..1] **routeCode**, which **SHALL** be selected from ValueSet [SPL Drug Route of Administration Terminology](#)
urn:oid:2.16.840.1.113883.3.88.12.3221.8.7 **DYNAMIC** (CONF:1098-7514).
Note: QDM Attribute: Frequency
 - a. The routeCode, if present, **SHOULD** contain zero or more [0..*] **translation**, which **SHALL** be selected from ValueSet [Medication Route](#)
urn:oid:2.16.840.1.113762.1.4.1099.12 **DYNAMIC** (CONF:1098-32950).
11. **MAY** contain zero or one [0..1] **approachSiteCode**, where the code **SHALL** be selected from ValueSet [Body Site Value Set](#) urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 **DYNAMIC** (CONF:1098-7515).
12. **SHALL** contain exactly one [1..1] **doseQuantity** (CONF:1098-7516).

Note: QDM Attribute: Dosage

- a. This doseQuantity **SHOULD** contain zero or one [0..1] **@unit**, which **SHALL** be selected from ValueSet [UnitsOfMeasureCaseSensitive](#)
urn:oid:2.16.840.1.113883.1.11.12839 **DYNAMIC** (CONF:1098-7526).
 - b. Pre-coordinated consumable: If the consumable code is a pre-coordinated unit dose (e.g., "metoprolol 25mg tablet") then doseQuantity is a unitless number that indicates the number of products given per administration (e.g., "2", meaning 2 x "metoprolol 25mg tablet" per administration) (CONF:1098-16878).
 - c. Not pre-coordinated consumable: If the consumable code is not pre-coordinated (e.g., is simply "metoprolol"), then doseQuantity must represent a physical quantity with @unit, e.g., "25" and "mg", specifying the amount of product given per administration (CONF:1098-16879).
13. **MAY** contain zero or one [0..1] **rateQuantity** (CONF:1098-7517).
 - a. The rateQuantity, if present, **SHALL** contain exactly one [1..1] **@unit**, which **SHALL** be selected from ValueSet [UnitsOfMeasureCaseSensitive](#)
urn:oid:2.16.840.1.113883.1.11.12839 **DYNAMIC** (CONF:1098-7525).
 14. **MAY** contain zero or one [0..1] **maxDoseQuantity** (CONF:1098-7518).

administrationUnitCode@code describes the units of medication administration for an item using a code that is pre-coordinated to include a physical unit form (ointment, powder, solution, etc.) which differs from the units used in administering the consumable (capful, spray, drop, etc.). For example when recording medication administrations, "metric drop (C48491)" would be appropriate to accompany the RxNorm code of 198283 (Timolol 0.25% Ophthalmic Solution) where the number of drops would be specified in doseQuantity@value.

15. **MAY** contain zero or one [0..1] **administrationUnitCode**, which **SHALL** be selected from ValueSet [AdministrationUnitDoseForm](#) urn:oid:2.16.840.1.113762.1.4.1021.30 **DYNAMIC** (CONF:1098-7519).
16. **SHALL** contain exactly one [1..1] **consumable** (CONF:1098-7520).
 - a. This consumable **SHALL** contain exactly one [1..1] [Medication Information \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09) (CONF:1098-16085).

17. **MAY** contain zero or one [0..1] **performer** (CONF:1098-7522).
18. **SHOULD** contain zero or more [0..*] **Author Participation** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-31150).
19. **MAY** contain zero or more [0..*] **participant** (CONF:1098-7523) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="CSM"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1098-7524).
 - b. **SHALL** contain exactly one [1..1] **Drug Vehicle** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.24) (CONF:1098-16086).
20. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-7536) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7537).
 - b. **SHALL** contain exactly one [1..1] **Indication (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) (CONF:1098-16087).
21. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-7539) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7540).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** True (CONF:1098-7542).
 - c. **SHALL** contain exactly one [1..1] **Instruction (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) (CONF:1098-31387).
22. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-7543) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7547).
 - b. **SHALL** contain exactly one [1..1] **Medication Supply Order (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09) (CONF:1098-16089).
23. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-7549) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7553).
 - b. **SHALL** contain exactly one [1..1] **Medication Dispense (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09) (CONF:1098-16090).
24. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-7552) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="CAUS"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7544).
 - b. **SHALL** contain exactly one [1..1] **Reaction Observation (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09) (CONF:1098-16091).

25. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-30820) such that it
- SHALL** contain exactly one [1..1] **@typeCode="COMP"** Has component (CONF:1098-30821).
 - SHALL** contain exactly one [1..1] [Drug Monitoring Act](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.123) (CONF:1098-30822).

The following entryRelationship is used to indicate a given medication's order in a series. The nested Substance Administered Act identifies an administration in the series. The entryRelationship/sequenceNumber shows the order of this particular administration in that series.

26. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31515) such that it
- SHALL** contain exactly one [1..1] **@typeCode="COMP"** Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31516).
 - SHALL** contain exactly one [1..1] **@inversionInd="true"** (CONF:1098-31517).
 - MAY** contain zero or one [0..1] **sequenceNumber** (CONF:1098-31518).
 - SHALL** contain exactly one [1..1] [Substance Administered Act](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.118) (CONF:1098-31519).
27. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32907) such that it
- SHALL** contain exactly one [1..1] **@typeCode="COMP"** Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32908).
 - SHALL** contain exactly one [1..1] [Medication Free Text Sig](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.147) (CONF:1098-32909).
28. **MAY** contain zero or more [0..*] **precondition** (CONF:1098-31520).
- The precondition, if present, **SHALL** contain exactly one [1..1] **@typeCode="PRCN"** (CONF:1098-31882).
 - The precondition, if present, **SHALL** contain exactly one [1..1] [Precondition for Substance Administration \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09) (CONF:1098-31883).
29. Medication Activity **SHOULD** include doseQuantity **OR** rateQuantity (CONF:1098-30800).

Figure 62: Medication Activity (V2) Example

```
<substanceAdministration classCode="SBADM" moodCode="EVN">
  <!-- ** Medication Activity (V2) ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.16"
    extension="2014-06-09"/>
  <id root="6c844c75-aa34-411c-b7bd-5e4a9f206e29"/>
  <statusCode code="active"/>
  <effectiveTime xsi:type="IVL_TS">
    <low value="20120318"/>
  </effectiveTime>
  <effectiveTime xsi:type="PIVL_TS" institutionSpecified="true" operator="A">
    <period value="12" unit="h"/>
  </effectiveTime>
  <routeCode code="C38288"
    codeSystem="2.16.840.1.113883.3.26.1.1"
    codeSystemName="NCI Thesaurus"
    displayName="ORAL"/>
  <doseQuantity value="1"/>
  <consumable>
    <manufacturedProduct classCode="MANU">
      <!-- ** Medication information ** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.23"
        extension="2014-06-09"/>
      <id root="2a620155-9d11-439e-92b3-5d9815ff4ee8"/>
      <manufacturedMaterial>
        <code code="197380"
          displayName="Atenolol 25 MG Oral Tablet"
          codeSystem="2.16.840.1.113883.6.88" codeSystemName="RxNorm"/>
      </manufacturedMaterial>
    </manufacturedProduct>
  </consumable>
  <entryRelationship typeCode="RSON">
    <observation classCode="OBS" moodCode="EVN">
      <!-- ** Indication ** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.19"
        extension="2014-06-09"/>
      <id root="e63166c7-6482-4a44-83a1-37ccdbde725b"/>
      <code code="75321-0"
        codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        displayName="Clinical finding"/>
      <statusCode code="completed"/>
      <value xsi:type="CD"
        code="38341003"
        displayName="Hypertension"
        codeSystem="2.16.840.1.113883.6.96"/>
    </observation>
  </entryRelationship>
</substanceAdministration>
```

Figure 63: No Known Medications Example

```

<substanceAdministration classCode="SBADM" moodCode="EVN" negationInd="true">
  <!-- ** Medication activity ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.16" extension="2014-06-09" />
  <id root="072f00fc-4f9d-4516-8d6f-ed00ed523fe0" />
  <statusCode code="active" />
  <effectiveTime xsi:type="IVL_TS">
    <low value="20110103" />
  </effectiveTime>
  <consumable>
    <manufacturedProduct classCode="MANU">
      <!-- ** Medication information ** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.23" extension="2014-06-09" />
      <manufacturedMaterial>
        <code nullFlavor="OTH" codeSystem="2.16.840.1.113883.6.88">
          <translation code="410942007" displayName="drug or medication"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT" />
        </code>
      </manufacturedMaterial>
    </manufacturedProduct>
  </consumable>
</substanceAdministration>

```

3.37.1 Medication Active (V5)

[substanceAdministration: identifier
urn:hl7ii:2.16.840.1.113883.10.20.24.3.41:2019-12-01 (open)]

Table 105: Medication Active (V5) Contexts

| Contained By: | Contains: |
|--|---|
| Patient Data Section QDM (V7) (optional) | Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) |

This template represents the QDM datatype: Medication, Active.

Data elements that meet criteria using this datatype should document that the medication indicated by the QDM category and its corresponding value set is being taken by the patient. Keep in mind that when this datatype is used with timing relationships, the criterion is looking for a medication being taken for the time frame indicated by the timing relationships (which could be in the past).

This datatype represents a period of time when a medication is considered active for an individual. This may be medications that the patient has taken in the past and is no longer taking or medications that the patient is currently taking. For medications that a patient has taken in the past the effectiveTime will represent the period of time over which the patient was actively taking the medication. A time/date stamp is required. For currently active medications the effectiveTime will contain a low value which equates to the time the patient started taking medication and a nullFlavored high value. ActStatus is constrained to “active” and moodCode is constrained to “EVN”.

Quality measures are sometimes interested in the total time a patient has been on a medication over

time (for example, how many total years a patient has been on birth control hormones in the past 5 years). This cumulative medication duration would be represented as separate substance administration and the cumulative duration calculated. For example, the sum of the number of medication dispensed days x number of medication refills over a set period of time, excluding any gaps during which a medication was not dispensed. For example, if a medication was prescribed for 30 days with three refills, followed by a gap of three months, then prescribed again for 60 days with two refills, the cumulative medication duration for would be $(30 \times 3) + (60 \times 2) = 210$ days over the 10-month period.

Table 106: Medication Active (V5) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|---|
| substanceAdministration (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.41:2019-12-01) | | | | | |
| @moodCode | 1..1 | SHALL | | 4444-28861 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 0..0 | SHALL NOT | | 4444-28079 | |
| templateId | 1..1 | SHALL | | 4444-28858 | |
| @root | 1..1 | SHALL | | 4444-28860 | 2.16.840.1.113883.10.20.24.3.41 |
| @extension | 1..1 | SHALL | | 4444-28654 | 2019-12-01 |
| statusCode | 1..1 | SHALL | | 4444-28859 | |
| @code | 1..1 | SHALL | | 4444-28655 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = active |
| participant | 0..* | MAY | | 4444-29833 | |
| @typeCode | 1..1 | SHALL | | 4444-29841 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29834 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29835 | |
| @typeCode | 1..1 | SHALL | | 4444-29842 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29836 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29839 | |
| @typeCode | 1..1 | SHALL | | 4444-29844 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29840 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29837 | |
| @typeCode | 1..1 | SHALL | | 4444-29843 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444- | Entity Care Partner (identifier: |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------|-------|------|-----------|-----------------------|--|
| | | | | 29838 | urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09 urn:oid:2.16.840.1.113883.5.1001 0.20.24.3.160:2019-12-01 |

1. Conforms to [Medication Activity \(V2\)](#) template (identifier: <urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09>).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood <urn:oid:2.16.840.1.113883.5.1001>) (CONF:4444-28861).
3. **SHALL NOT** contain [0..0] **@negationInd** (CONF:4444-28079).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-28858) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.41" (CONF:4444-28860).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-28654).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:4444-28859).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="active" (CodeSystem: HL7ActStatus <urn:oid:2.16.840.1.113883.5.14>) (CONF:4444-28655).
6. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29833) such that it
Note: QDM Attribute: Recorder
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType <urn:oid:2.16.840.1.113883.5.90>) (CONF:4444-29841).
 - b. **SHALL** contain exactly one [1..1] [Entity Practitioner](#) (identifier: <urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01>) (CONF:4444-29834).
7. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29835) such that it
Note: QDM Attribute: Recorder
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType <urn:oid:2.16.840.1.113883.5.90>) (CONF:4444-29842).
 - b. **SHALL** contain exactly one [1..1] [Entity Organization](#) (identifier: <urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01>) (CONF:4444-29836).
8. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29839) such that it
Note: QDM Attribute: Recorder
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType <urn:oid:2.16.840.1.113883.5.90>) (CONF:4444-29844).
 - b. **SHALL** contain exactly one [1..1] [Entity Patient](#) (identifier: <urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01>) (CONF:4444-29840).
9. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29837) such that it
Note: QDM Attribute: Recorder
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType <urn:oid:2.16.840.1.113883.5.90>) (CONF:4444-29843).
 - b. **SHALL** contain exactly one [1..1] [Entity Care Partner](#) (identifier: <urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01>) (CONF:4444-29838).

Figure 64: Medication Active (V5) Example

```

<substanceAdministration classCode="SBADM" moodCode="EVN">
  <!-- Conforms to C-CDA R2 Medication Activity (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.16" extension="2014-06-09"/>
  <!-- Medication Active (V5) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.41" extension="2019-12-01"/>
  <id root="c0ea7bf3-50e7-4e7a-83a3-e5a9ccbb8541"/>
  <statusCode code="active"/>
  <!-- QDM Attribute: Relevant dateTime -->
  <effectiveTime value="20190301"/>
  <!-- QDM Attribute: Frequency -->
  <effectiveTime xsi:type="PIVL_TS" institutionSpecified="true" operator="A">
    <period value="6" unit="h"/>
  </effectiveTime>
  <!-- QDM Attribute: Route -->
  <routeCode code="C38288" codeSystem="2.16.840.1.113883.3.26.1.1" codeSystemName="NCI
Thesaurus" displayName="ORAL"/>
  <!-- QDM Attribute: Dose -->
  <doseQuantity value="1"/>
  <consumable>
    <manufacturedProduct classCode="MANU">
      <!-- Conforms to C-CDA R2 Medication Information (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.23" extension="2014-06-09"/>
      <id root="37bfe02a-3e97-4bd6-9197-bbd0ed0de79e"/>
      <manufacturedMaterial>
        <code code="105152" codeSystem="2.16.840.1.113883.6.88"
codeSystemName="RxNorm" displayName="Amoxicillin 60 MG/ML Oral Suspension"/>
      </manufacturedMaterial>
    </manufacturedProduct>
  </consumable>
</substanceAdministration>

```

3.37.2 Medication Administered (V5)

[substanceAdministration: identifier
urn:hl7ii:2.16.840.1.113883.10.20.24.3.42:2019-12-01 (open)]

Table 107: Medication Administered (V5) Contexts

| Contained By: | Contains: |
|--|--|
| Patient Data Section QDM (V7) (optional) | Author Participation (required) Reason (V3) (optional) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Author (V2) (optional) |

This template represents both QDM data types: Medication Administered and Substance Administered.

It represents substance administrations that have actually occurred (e.g., pills ingested or injections

given)

QDM Attribute: Relevant Period. The start`Time` of relevant period corresponds to when a single medication administration event starts (e.g., the initiation of an intravenous infusion, or administering a pill or IM injection to a patient). The stop`Time` of relevant period corresponds to when a single medication administration event ends (e.g., the end time of the intravenous infusion, or the administration of a pill or IM injection is completed - for pills and IM injections, the start and stop times are the same)

Quality measures are sometimes interested in the total time a patient has been on a medication over time (for example, how many total years a patient has been on birth control hormones in the past 5 years). This cumulative medication duration would be represented as separate contained substance administrations and the cumulative duration calculated. For example, the sum of the number of medication dispensed days x number of medication refills over a set period of time, excluding any gaps during which a medication was not dispensed. For example, if a medication was prescribed for 30 days with three refills, followed by a gap of three months, then prescribed again for 60 days with two refills, the cumulative medication duration for would be $(30 \times 3) + (60 \times 2) = 210$ days over the 10-month period.

QDM Attribute: Negation Rationale is represented by setting `negationInd="true"` and stating the reason (rationale) in a contained Reason (V3) template.

Table 108: Medication Administered (V5) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|-----------|-----------|----------------------------|---|
| substanceAdministration (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.42:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-12444 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SBADM |
| @moodCode | 1..1 | SHALL | | 4444-12445 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 0..1 | MAY | | 4444-28080 | |
| templateId | 1..1 | SHALL | | 4444-12446 | |
| @root | 1..1 | SHALL | | 4444-12447 | 2.16.840.1.113883.10.20.24.3.42 |
| @extension | 1..1 | SHALL | | 4444-27023 | 2019-12-01 |
| statusCode | 1..1 | SHALL | | 4444-12452 | |
| @code | 1..1 | SHALL | | 4444-13241 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| author | 0..1 | MAY | | 4444-30031 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| author | 0..0 | SHALL NOT | | 4444-30032 | Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) |
| participant | 0..* | MAY | | 4444-29846 | |
| @typeCode | 1..1 | SHALL | | 4444-29855 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29847 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29848 | |
| @typeCode | 1..1 | SHALL | | 4444-29856 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29849 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29852 | |
| @typeCode | 1..1 | SHALL | | 4444-29858 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|---|
| participantRole | 1..1 | SHALL | | 4444-29853 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29850 | |
| @typeCode | 1..1 | SHALL | | 4444-29857 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29851 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |
| entryRelationship | 0..* | MAY | | 4444-27022 | |
| @typeCode | 1..1 | SHALL | | 4444-27024 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 4444-27162 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) |

1. Conforms to [Medication Activity \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="SBADM" Substance Administration (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-12444).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-12445).
4. **MAY** contain zero or one [0..1] **@negationInd** (CONF:4444-28080).
Note: QDM Attribute: Negation Rationale - negationInd="true" indicates Medication Not Administered
 - a. If **@negationInd**="true" is present, **SHALL** contain one [1..1] entryRelationship such that it contains exactly one [1..1] **Reason (V3)** to state the reason for **Medication Not Administered** (CONF:4444-29854).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-12446) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.42" (CONF:4444-12447).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-27023).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:4444-12452).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:4444-13241).
7. **MAY** contain zero or one [0..1] [Author \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-30031).
Note: QDM Attribute: Author dateTime
8. **SHALL NOT** contain [0..0] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:4444-30032).

9. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29846) such that it
 Note: QDM Attribute: Performer
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29855).
 - b. **SHALL** contain exactly one [1..1] **Entity Practitioner** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29847).
10. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29848) such that it
 Note: QDM Attribute: Performer
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29856).
 - b. **SHALL** contain exactly one [1..1] **Entity Organization** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29849).
11. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29852) such that it
 Note: QDM Attribute: Performer
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29858).
 - b. **SHALL** contain exactly one [1..1] **Entity Patient** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29853).
12. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29850) such that it
 Note: QDM Attribute: Performer
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29857).
 - b. **SHALL** contain exactly one [1..1] **Entity Care Partner** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29851).
13. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:4444-27022) such that it
 Note: QDM Attribute: Reason
- a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-27024).
 - b. **SHALL** contain exactly one [1..1] **Reason (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-27162).

Figure 65: Medication Administered (V5) Example

```

<substanceAdministration classCode="SBADM" moodCode="EVN">
  <!-- C-CDA R2.1 Medication Activity -->
  <templateId root="2.16.840.1.113883.10.20.22.4.16" extension="2014-06-09"/>
  <!-- Medication Administered (V5) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.42" extension="2019-12-01"/>
  <id root="9069c123-80ad-47c8-a633-9dc02018ae56"/>
  <statusCode code="completed"/>
  <effectiveTime value="20190301150000"/>
  <!-- QDM Attribute: Frequency -->
  <effectiveTime xsi:type="PIVL_TS" institutionSpecified="true" operator="A">
    <period value="6" unit="h"/>
  </effectiveTime>
  <!-- QDM Attribute: Route -->
  <routeCode code="C38288" codeSystem="2.16.840.1.113883.3.26.1.1" codeSystemName="NCI
Thesaurus" displayName="ORAL"/>
  <!-- QDM Attribute: Dosage -->
  <doseQuantity value="1"/>
  <consumable>
    <manufacturedProduct classCode="MANU">
      <!-- Conforms to C-CDA R2 Medication Information (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.23" extension="2014-06-09"/>
      <id root="37bfe02a-3e97-4bd6-9197-bbd0ed0de79e"/>
      <manufacturedMaterial>
        <code code="105152" codeSystem="2.16.840.1.113883.6.88"
codeSystemName="RxNorm" displayName="Amoxicillin 60 MG/ML Oral Suspension"/>
      </manufacturedMaterial>
    </manufacturedProduct>
  </consumable>
</substanceAdministration>

```

3.38 Medication Dispense (V2)

[supply: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09
(open)]

Table 109: Medication Dispense (V2) Contexts

| Contained By: | Contains: |
|--|--|
| Medication Activity (V2) (optional) Immunization Activity (V3) (optional) | US Realm Address (AD.US.FIELDDED) (optional) Medication Supply Order (V2) (optional) Medication Information (V2) (optional) Immunization Medication Information (V2) (optional) |

This template records the act of supplying medications (i.e., dispensing).

Table 110: Medication Dispense (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|--------------|-------------|------------------|----------------------------|---|
| supply (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09) | | | | | |
| @classCode | 1..1 | SHALL | | 1098-7451 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SPLY |
| @moodCode | 1..1 | SHALL | | 1098-7452 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 1098-7453 | |
| @root | 1..1 | SHALL | | 1098-10505 | 2.16.840.1.113883.10.20.22.4.18 |
| @extension | 1..1 | SHALL | | 1098-32580 | 2014-06-09 |
| id | 1..* | SHALL | | 1098-7454 | |
| statusCode | 1..1 | SHALL | | 1098-7455 | |
| @code | 1..1 | SHALL | | 1098-32361 | urn:oid:2.16.840.1.113883.3.88.12.80.64 (Medication Fill Status) |
| effectiveTime | 0..1 | SHOULD | | 1098-7456 | |
| repeatNumber | 0..1 | SHOULD | | 1098-7457 | |
| quantity | 0..1 | SHOULD | | 1098-7458 | |
| product | 0..1 | MAY | | 1098-7459 | |
| manufacturedProduct | 1..1 | SHALL | | 1098-15607 | Medication Information (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09) |
| product | 0..1 | MAY | | 1098-9331 | |
| manufacturedProduct | 1..1 | SHALL | | 1098-31696 | Immunization Medication Information (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09) |
| performer | 0..1 | MAY | | 1098-7461 | |
| assignedEntity | 1..1 | SHALL | | 1098-7467 | |
| addr | 0..1 | SHOULD | | 1098-7468 | US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) |
| entryRelationship | 0..1 | MAY | | 1098- | |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-----------|-------|-------|-----------|----------------------------|---|
| | | | | 7473 | |
| @typeCode | 1..1 | SHALL | | 1098-7474 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| supply | 1..1 | SHALL | | 1098-15606 | Medication Supply Order (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09) |

1. **SHALL** contain exactly one [1..1] **@classCode**="SPLY" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7451).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-7452).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7453) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.18" (CONF:1098-10505).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32580).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-7454).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-7455).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [Medication Fill Status](#) urn:oid:2.16.840.1.113883.3.88.12.80.64 **STATIC** 2014-04-23 (CONF:1098-32361).
6. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-7456).

In "INT" (intent) mood, the repeatNumber defines the number of allowed administrations. For example, a repeatNumber of "3" means that the substance can be administered up to 3 times. In "EVN" (event) mood, the repeatNumber is the number of occurrences. For example, a repeatNumber of "3" in a substance administration event means that the current administration is the 3rd in a series.

7. **SHOULD** contain zero or one [0..1] **repeatNumber** (CONF:1098-7457).
8. **SHOULD** contain zero or one [0..1] **quantity** (CONF:1098-7458).
9. **MAY** contain zero or one [0..1] **product** (CONF:1098-7459) such that it
 - a. **SHALL** contain exactly one [1..1] [Medication Information \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09) (CONF:1098-15607).
10. **MAY** contain zero or one [0..1] **product** (CONF:1098-9331) such that it
 - a. **SHALL** contain exactly one [1..1] [Immunization Medication Information \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09) (CONF:1098-31696).
11. **MAY** contain zero or one [0..1] **performer** (CONF:1098-7461).
 - a. The performer, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1098-7467).

- i. This assignedEntity **SHOULD** contain zero or one [0..1] US Realm Address (AD.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1098-7468).
 - 1. The content of addr **SHALL** be a conformant US Realm Address (AD.US.FIELDED) (2.16.840.1.113883.10.20.22.5.2) (CONF:1098-10565).
- 12. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-7473) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7474).
 - b. **SHALL** contain exactly one [1..1] Medication Supply Order (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09) (CONF:1098-15606).
- 13. A supply act **SHALL** contain one product/Medication Information *OR* one product/Immunization Medication Information template (CONF:1098-9333).

Figure 66: Medication Dispense (V2) Example

```

<supply classCode="SPLY" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.18" extension="2014-06-09" />
  <id root="1.2.3.4.56789.1" extension="cb734647-fc99-424c-a864-7e3cda82e704" />
  <statusCode code="completed" />
  <effectiveTime value="201208151450-0800" />
  <repeatNumber value="1" />
  <quantity value="75" />
  <product>
    <manufacturedProduct classCode="MANU">
      <templateId root="2.16.840.1.113883.10.20.22.4.23" extension="2014-06-09" />
      . . .
    </manufacturedProduct>
  </product>
  <performer>
    <assignedEntity>
      . . .
    </assignedEntity>
  </performer>
</supply>

```

3.38.1 Medication Dispensed (V6)

[supply: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.45:2019-12-01
(open)]

Table 111: Medication Dispensed (V6) Contexts

| Contained By: | Contains: |
|--|--|
| Medication Dispensed Act (V4) (required) | Immunization Medication Information (V2) (optional) Days Supplied (optional) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Author (V2) (required) |

Together with the Medication Dispensed Act (V3) template, this template represents the QDM datatype: Medication, Dispensed. This template must be contained within the Medication Dispensed Act (V3) template.

This datatype represents that a medication prescription has been filled by a pharmacy and the medication has been provided to the patient or patient proxy. In the ambulatory setting, medications are primarily taken directly by patients and not directly observed. Hence, dispensed is the closest health provider documentation of medication compliance. In settings where patients attest to taking medications in electronic format (perhaps a Personal Health Record), patient attestation of “medication taken” may be available.

Relevant dateTime references the dateTime the prescription dispensing event occurred, i.e., the time the prescription was handed over to the patient or patient’s representative.

Relevant Period references the validity period, i.e., the time period for which the ordered supply is authorized by the prescription authorizing the dispensing event.

Author dateTime references the date and time the dispensing event is recorded.

Table 112: Medication Dispensed (V6) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-----------|-----------|----------------------------|---|
| supply (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.45:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-27528 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SPLY |
| @moodCode | 1..1 | SHALL | | 4444-27529 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 4444-13851 | |
| @root | 1..1 | SHALL | | 4444-13852 | 2.16.840.1.113883.10.20.24.3.45 |
| @extension | 1..1 | SHALL | | 4444-26555 | 2019-12-01 |
| statusCode | 1..1 | SHALL | | 4444-19440 | |
| @code | 1..1 | SHALL | | 4444-19441 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 0..1 | MAY | IVL_TS | 4444-29859 | |
| @value | 0..1 | SHOULD | | 4444-29899 | |
| low | 0..1 | SHOULD | | 4444-29864 | |
| high | 0..1 | MAY | | 4444-29865 | |
| product | 0..0 | MAY | | 4444-29897 | |
| manufacturedProduct | 0..0 | SHALL NOT | | 4444-29898 | Immunization Medication Information (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09) |
| author | 1..1 | SHALL | | 4444-28910 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| participant | 0..* | MAY | | 4444-29877 | |
| @typeCode | 1..1 | SHALL | | 4444-29889 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29878 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29875 | |
| @typeCode | 1..1 | SHALL | | 4444-29888 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-----------------|-------|-------|-----------|----------------------------|---|
| participantRole | 1..1 | SHALL | | 4444-29876 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29873 | |
| @typeCode | 1..1 | SHALL | | 4444-29887 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29874 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29871 | |
| @typeCode | 1..1 | SHALL | | 4444-29886 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29872 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |
| participant | 0..* | MAY | | 4444-29869 | |
| @typeCode | 1..1 | SHALL | | 4444-29885 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = DIST |
| participantRole | 1..1 | SHALL | | 4444-29870 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29883 | |
| @typeCode | 1..1 | SHALL | | 4444-29892 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = DIST |
| participantRole | 1..1 | SHALL | | 4444-29884 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29881 | |
| @typeCode | 1..1 | SHALL | | 4444-29891 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = DIST |
| participantRole | 1..1 | SHALL | | 4444-29882 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29879 | |
| @typeCode | 1..1 | SHALL | | 4444-29890 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------------|-------|-------|-----------|----------------------------|---|
| | | | | | DIST |
| participantRole | 1..1 | SHALL | | 4444-29880 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |
| entryRelationship | 0..1 | MAY | | 4444-28022 | |
| @typeCode | 1..1 | SHALL | | 4444-28023 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| substanceAdministration | 1..1 | SHALL | | 4444-28224 | |
| @classCode | 1..1 | SHALL | | 4444-28226 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SBADM |
| @moodCode | 1..1 | SHALL | | 4444-28227 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| effectiveTime | 0..1 | MAY | | 4444-28909 | |
| @operator | 1..1 | SHALL | | 4444-28911 | A |
| routeCode | 0..1 | MAY | | 4444-28225 | |
| doseQuantity | 0..1 | MAY | | 4444-28913 | |
| consumable | 1..1 | SHALL | | 4444-28229 | |
| manufacturedProduct | 1..1 | SHALL | | 4444-28230 | |
| manufacturedMaterial | 1..1 | SHALL | | 4444-28231 | |
| @nullFlavor | 1..1 | SHALL | | 4444-28232 | urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NA |
| entryRelationship | 0..1 | MAY | | 4444-29862 | |
| @typeCode | 1..1 | SHALL | | 4444-29868 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| supply | 1..1 | SHALL | | 4444-29863 | Days Supplied (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.157:2018-10-01) |

1. Conforms to [Medication Dispense \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="SPLY" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-27528).

3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-27529).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-13851) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.45" (CONF:4444-13852).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-26555).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:4444-19440).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:4444-19441).
6. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:4444-29859).
 Note: QDM Attribute: Relevant Period, Relevant dateTime
 - a. The effectiveTime, if present, **SHOULD** contain zero or one [0..1] **@value** (CONF:4444-29899).
 Note: QDM Attribute: Relevant dateTime - the dateTime the prescription dispensing event occurred, i.e., the time the prescription was handed over to the patient or patient's representative.
 - b. The effectiveTime, if present, **SHOULD** contain zero or one [0..1] **low** (CONF:4444-29864).
 Note: QDM Attribute: Relevant Period - startTime - when the first administration of the medication is expected. If not specified. the startTime defaults to the Author dateTime (the time the medication dispensing event occurs).
 - c. The effectiveTime, if present, **MAY** contain zero or one [0..1] **high** (CONF:4444-29865).
 Note: QDM Attribute: Relevant Period - stopTime - when the medication supply provided by the dispensing event is expected to be completed.
 - d. This effectiveTime **SHALL** contain either a **low** or a **@value** but not both (CONF:4444-30019).
 Note: QDM Attributes Relevant dateTime and Relevant Period are mutually exclusive.
7. **MAY** contain [0..0] **product** (CONF:4444-29897) such that it
 - a. **SHALL NOT** contain [0..0] Immunization Medication Information (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09) (CONF:4444-29898).
8. **SHALL** contain exactly one [1..1] Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-28910).
 Note: QDM Attribute: Author dateTime – the datetime the dispensing event recorded
9. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29877) such that it
 Note: QDM Attribute: Prescriber
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29889).
 - b. **SHALL** contain exactly one [1..1] Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29878).
10. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29875) such that it
 Note: QDM Attribute: Prescriber

- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29888).
 - b. **SHALL** contain exactly one [1..1] **Entity Organization** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29876).
11. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29873) such that it
Note: QDM Attribute: Prescriber
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29887).
 - b. **SHALL** contain exactly one [1..1] **Entity Patient** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29874).
12. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29871) such that it
Note: QDM Attribute: Prescriber
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29886).
 - b. **SHALL** contain exactly one [1..1] **Entity Care Partner** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29872).
13. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29869) such that it
Note: QDM Attribute: Dispenser
- a. **SHALL** contain exactly one [1..1] **@typeCode="DIST"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29885).
 - b. **SHALL** contain exactly one [1..1] **Entity Practitioner** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29870).
14. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29883) such that it
Note: QDM Attribute: Dispenser
- a. **SHALL** contain exactly one [1..1] **@typeCode="DIST"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29892).
 - b. **SHALL** contain exactly one [1..1] **Entity Organization** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29884).
15. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29881) such that it
Note: QDM Attribute: Dispenser
- a. **SHALL** contain exactly one [1..1] **@typeCode="DIST"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29891).
 - b. **SHALL** contain exactly one [1..1] **Entity Patient** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29882).
16. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29879) such that it
Note: QDM Attribute: Dispenser
- a. **SHALL** contain exactly one [1..1] **@typeCode="DIST"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29890).

- b. **SHALL** contain exactly one [1..1] [Entity Care Partner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29880).
17. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-28022) such that it
Note: QDM Attribute: Dosage, Frequency, Route
- a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-28023).
 - b. **SHALL** contain exactly one [1..1] **substanceAdministration** (CONF:4444-28224).
 - i. This **substanceAdministration** **SHALL** contain exactly one [1..1] **@classCode**="SBADM" Substance Administration (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-28226).
 - ii. This **substanceAdministration** **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-28227).
 - iii. This **substanceAdministration** **MAY** contain zero or one [0..1] **effectiveTime** (CONF:4444-28909) such that it
Note: QDM Attribute: Frequency - (e.g., administration times per day).
 - 1. **SHALL** contain exactly one [1..1] **@operator**="A" (CONF:4444-28911).
 - 2. **SHALL** contain exactly one [1..1] **@xsi:type**="PIVL_TS" or "EIVL_TS" (CONF:1098-28499) (CONF:4444-28912).
 - iv. This **substanceAdministration** **MAY** contain zero or one [0..1] **routeCode** (CONF:4444-28225).
Note: QDM Attribute: Route
 - v. This **substanceAdministration** **MAY** contain zero or one [0..1] **doseQuantity** (CONF:4444-28913).
Note: QDM Attribute: Dosage
 - vi. This **substanceAdministration** **SHALL** contain exactly one [1..1] **consumable** (CONF:4444-28229).
 - 1. This **consumable** **SHALL** contain exactly one [1..1] **manufacturedProduct** (CONF:4444-28230).
 - a. This **manufacturedProduct** **SHALL** contain exactly one [1..1] **manufacturedMaterial** (CONF:4444-28231).
 - i. This **manufacturedMaterial** **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:4444-28232).
18. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-29862) such that it
Note: QDM Attribute: Days Supplied
- a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-29868).
 - b. **SHALL** contain exactly one [1..1] [Days Supplied](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.157:2018-10-01) (CONF:4444-29863).

19. This template **SHALL** be contained by a **Medication Dispensed Act (V4)** (CONF:4444-28908).

Figure 67: Medication Dispensed (V6) Example

```
<!-- Must be contained in the Medication Dispensed Act (V4) template to represent the
Medication, Dispensed QDM data type -->
<supply classCode="SPLY" moodCode="EVN">
  <!-- Conforms to C-CDA R2.1 Medication Dispense (V2) template -->
  <templateId root="2.16.840.1.113883.10.20.22.4.18" extension="2014-06-09"/>
  <!-- Medication Dispensed (V6) template -->
  <templateId root="2.16.840.1.113883.10.20.24.3.45" extension="2019-12-01"/>
  <id root="50ed595a-dfb6-49f0-8b19-1901b5d01c1a"/>
  <statusCode code="completed"/>
  <author>
    <templateId root="2.16.840.1.113883.10.20.24.3.155" extension="2019-12-01"/>
    <time value="2019050101030"/>
    <assignedAuthor>
      <id nullFlavor="NA"/>
    </assignedAuthor>
  </author>
  <!-- QDM Attribute: Refills -->
  <repeatNumber value="4"/>
  <product>
    <manufacturedProduct classCode="MANU">
      <!-- C-CDA R2 Medication Information (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.23" extension="2014-06-09"/>
      <id root="37bfe02a-3e97-4bd6-9197-bbd0ed0de79e"/>
      <manufacturedMaterial>
        <code code="329498" codeSystem="2.16.840.1.113883.6.88"
displayName="Albuterol 0.09 MG/ACTUAT inhalant solution" codeSystemName="RxNorm"/>
      </manufacturedMaterial>
    </manufacturedProduct>
  </product>
  <entryRelationship typeCode="REFR">
    <substanceAdministration classCode="SBADM" moodCode="EVN">
      <!-- QDM Attribute: Frequency -->
      <effectiveTime xsi:type="PIVL_TS" institutionSpecified="true" operator="A">
        <period value="6" unit="h"/>
      </effectiveTime>
      <!-- QDM Attribute: Route -->
      <routeCode code="C38288" codeSystem="2.16.840.1.113883.3.26.1.1"
codeSystemName="NCI Thesaurus" displayName="ORAL"/>
      <!-- QDM Attribute: Dosage -->
      <doseQuantity value="1"/>
      <consumable>
        <manufacturedProduct>
          <manufacturedMaterial nullFlavor="NA"/>
        </manufacturedProduct>
      </consumable>
    </substanceAdministration>
  </entryRelationship>
</supply>
```

3.39 Medication Dispensed Act (V4)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.139:2019-12-01
(open)]

Table 113: Medication Dispensed Act (V4) Contexts

| Contained By: | Contains: |
|--|--|
| Patient Data Section QDM (V7) (optional) | Reason (V3) (optional) Medication Dispensed (V6) (required) |

Table 114: Medication Dispensed Act (V4) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-------|-----------|----------------------------|--|
| act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.139:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-28562 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT |
| @moodCode | 1..1 | SHALL | | 4444-28563 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 0..1 | MAY | | 4444-28565 | |
| templateId | 1..1 | SHALL | | 4444-28558 | |
| @root | 1..1 | SHALL | | 4444-28560 | 2.16.840.1.113883.10.20.24.3.139 |
| @extension | 1..1 | SHALL | | 4444-28907 | 2018-10-01 |
| id | 1..* | SHALL | | 4444-28564 | |
| code | 1..1 | SHALL | | 4444-28567 | |
| @code | 1..1 | SHALL | | 4444-28568 | SPLY |
| @codeSystem | 1..1 | SHALL | | 4444-28569 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = 2.16.840.1.113883.5.6 |
| entryRelationship | 1..1 | SHALL | | 4444-28557 | |
| @typeCode | 1..1 | SHALL | | 4444-28561 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ |
| supply | 1..1 | SHALL | | 4444-28566 | Medication Dispensed (V6) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.45:2019-12-01) |
| entryRelationship | 0..1 | MAY | | 4444-29893 | |
| @typeCode | 1..1 | SHALL | | 4444-29896 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = RSON |
| observation | 1..1 | SHALL | | 4444-29894 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) |

1. **SHALL** contain exactly one [1..1] **@classCode**="ACT" Act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-28562).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-28563).

3. **MAY** contain zero or one [0..1] **@negationInd** (CONF:4444-28565).
Note: QDM Attribute: Negation Rationale - negationInd="true" indicates Medication Not Dispensed
 - a. If **@negationInd="true"** is present, **SHALL** contain one [1..1] **entryRelationship** such that it contains exactly one [1..1] **Reason (V3)** to state the reason for **Medication Not Dispensed** (CONF:4444-29895).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-28558) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.24.3.139"** (CONF:4444-28560).
 - b. **SHALL** contain exactly one [1..1] **@extension="2018-12-01"** (CONF:4444-28907).
5. **SHALL** contain at least one [1..*] **id** (CONF:4444-28564).
6. **SHALL** contain exactly one [1..1] **code** (CONF:4444-28567).
 - a. This code **SHALL** contain exactly one [1..1] **@code="SPLY"** supply (CONF:4444-28568).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.5.6"** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-28569).
7. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:4444-28557) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** has subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-28561).
 - b. **SHALL** contain exactly one [1..1] **Medication Dispensed (V6)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.45:2019-12-01) (CONF:4444-28566).
8. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-29893) such that it
Note: Reason for Negation
 - a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29896).
 - b. **SHALL** contain exactly one [1..1] **Reason (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-29894).

Figure 68: Medication Dispensed Act (V3) Example

```

<act classCode="ACT" moodCode="EVN">
  <!-- Medication Dispensed Act (V3)-->
  <templateId root="2.16.840.1.113883.10.20.24.3.139" extension="2018-10-01"/>
  <id root="ec8a6ff8-ed4b-4f7e-82c3-e98e58b45de7"/>
  <code code="SPLY" codeSystem="2.16.840.1.113883.5.6" displayName="supply"
codeSystemName="ActClass"/>
  <entryRelationship typeCode="SUBJ">
    <supply classCode="SPLY" moodCode="EVN">
      <!-- Conforms to C-CDA R2.1 Medication Dispense (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.18" extension="2014-06-09"/>
      <!-- Medication Dispensed (V5) -->
      <templateId root="2.16.840.1.113883.10.20.24.3.45" extension="2018-10-01"/>
      <id root="50ed595a-dfb6-49f0-8b19-1901b5d01c1a"/>
      <statusCode code="completed"/>
      <!-- QDM Attribute: Refills -->
      <repeatNumber value="4"/>
      <product>
        <manufacturedProduct classCode="MANU">
          <!-- C-CDA R2 Medication Information (V2) -->
          <templateId root="2.16.840.1.113883.10.20.22.4.23" extension="2014-06-
09"/>
          <id root="37bfe02a-3e97-4bd6-9197-bbd0ed0de79e"/>
          <manufacturedMaterial>
            <code code="329498" codeSystem="2.16.840.1.113883.6.88"
displayName="Albuterol 0.09 MG/ACTUAT inhalant solution"
codeSystemName="RxNorm"/>
          </manufacturedMaterial>
        </manufacturedProduct>
      </product>
    </supply>
  </entryRelationship>
</act>

```

3.40 Medication Free Text Sig

[substanceAdministration: identifier urn:oid:2.16.840.1.113883.10.20.22.4.147 (closed)]

Table 115: Medication Free Text Sig Contexts

| Contained By: | Contains: |
|---|-----------|
| Medication Activity (V2) (optional) | |

The template is available to explicitly identify the free text Sig within each medication. An example free text sig: Thyroxin 150 ug, take one tab by mouth every morning.

Table 116: Medication Free Text Sig Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|--------|-----------|--------------------------|---|
| substanceAdministration (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.147) | | | | | |
| @classCode | 1..1 | SHALL | | 81-32770 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SBADM |
| @moodCode | 1..1 | SHALL | | 81-32771 | urn:oid:2.16.840.1.113883.11.20.9.18 (MoodCodeEvnInt) |
| templateId | 1..1 | SHALL | | 81-32753 | |
| @root | 1..1 | SHALL | | 81-32772 | 2.16.840.1.113883.10.20.22.4.147 |
| code | 1..1 | SHALL | | 81-32775 | urn:oid:2.16.840.1.113883.6.1 (LOINC) |
| @code | 1..1 | SHALL | | 81-32780 | 76662-6 |
| @codeSystem | 1..1 | SHALL | | 81-32781 | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| text | 1..1 | SHALL | | 81-32754 | |
| reference | 1..1 | SHALL | | 81-32755 | |
| @value | 0..1 | SHOULD | | 81-32756 | |
| consumable | 1..1 | SHALL | | 81-32776 | |
| manufacturedProduct | 1..1 | SHALL | | 81-32777 | |
| manufacturedLabeledDrug | 1..1 | SHALL | | 81-32778 | |
| @nullFlavor | 1..1 | SHALL | | 81-32779 | NA |

1. **SHALL** contain exactly one [1..1] **@classCode**="SBADM" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:81-32770).
2. **SHALL** contain exactly one [1..1] **@moodCode**, which **SHALL** be selected from ValueSet [MoodCodeEvnInt](#) urn:oid:2.16.840.1.113883.11.20.9.18 **STATIC** 2011-04-03 (CONF:81-32771).
Note: moodCode must match the parent substanceAdministration EVN or INT
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-32753) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.147" (CONF:81-32772).
4. **SHALL** contain exactly one [1..1] **code** (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:81-32775).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="76662-6" Instructions Medication (CONF:81-32780).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1 **STATIC**) (CONF:81-32781).
5. **SHALL** contain exactly one [1..1] **text** (CONF:81-32754).

Reference into the section/text to a tag that only contains free text sig.

- a. This text **SHALL** contain exactly one [1..1] **reference** (CONF:81-32755).
 - i. This reference **SHOULD** contain zero or one [0..1] **@value** (CONF:81-32756).
 - 1. This reference/@value **SHALL** begin with a '#' and **SHALL** point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:81-32774).
- 6. **SHALL** contain exactly one [1..1] **consumable** (CONF:81-32776).
 - a. This consumable **SHALL** contain exactly one [1..1] **manufacturedProduct** (CONF:81-32777).
 - i. This **manufacturedProduct** **SHALL** contain exactly one [1..1] **manufacturedLabeledDrug** (CONF:81-32778).
 - 1. This **manufacturedLabeledDrug** **SHALL** contain exactly one [1..1] **@nullFlavor="NA"** Not Applicable (CONF:81-32779).

Figure 69: Medication Free Text Sig Example

```

<!-- moodCode matches the parent substanceAdministration EVN or INT -->
<substanceAdministration classCode="SBADM" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.147" />
  <code code="76662-6"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="Medication Instructions" />
  <text>
    <!-- Reference into the section.text to a tag that ONLY contains free text SIG -->
    <reference value="#AD1" />
  </text>
  <consumable>
    <manufacturedProduct>
      <manufacturedLabeledDrug nullFlavor="NA" />
    </manufacturedProduct>
  </consumable>
</substanceAdministration>

```

3.41 Medication Information (V2)

[manufacturedProduct: identifier
 urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 (open)]

Table 117: Medication Information (V2) Contexts

| Contained By: | Contains: |
|---|-----------|
| Medication Activity (V2) (required) Planned Supply (V2) (optional) Planned Medication Activity (V2) (required) Medication Supply Order (V2) (optional) Medication Dispense (V2) (optional) Medication Supply Request (V3) (required) | |

A medication should be recorded as a pre-coordinated ingredient + strength + dose form (e.g., “metoprolol 25mg tablet”, “amoxicillin 400mg/5mL suspension”) where possible. This includes RxNorm codes whose Term Type is SCD (semantic clinical drug), SBD (semantic brand drug), GPCK (generic pack), BPCCK (brand pack).

The dose (doseQuantity) represents how many of the consumables are to be administered at each administration event. As a result, the dose is always relative to the consumable. Thus, a patient consuming a single "metoprolol 25mg tablet" per administration will have a doseQuantity of "1", whereas a patient consuming "metoprolol" will have a dose of "25 mg".

Table 118: Medication Information (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|-------|-----------|----------------------------|---|
| manufacturedProduct (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09) | | | | | |
| @classCode | 1..1 | SHALL | | 1098-7408 | urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU |
| templateId | 1..1 | SHALL | | 1098-7409 | |
| @root | 1..1 | SHALL | | 1098-10506 | 2.16.840.1.113883.10.20.22.4.23 |
| @extension | 1..1 | SHALL | | 1098-32579 | 2014-06-09 |
| id | 0..* | MAY | | 1098-7410 | |
| manufacturedMaterial | 1..1 | SHALL | | 1098-7411 | |
| code | 1..1 | SHALL | | 1098-7412 | urn:oid:2.16.840.1.113762.1.4.1010.4 (Medication Clinical Drug) |
| translation | 0..* | MAY | | 1098-31884 | urn:oid:2.16.840.1.113762.1.4.1010.2 (Clinical Substance) |
| manufacturerOrganization | 0..1 | MAY | | 1098-7416 | |

1. **SHALL** contain exactly one [1..1] **@classCode**="MANU" (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110 **STATIC**) (CONF:1098-7408).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7409) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.23" (CONF:1098-10506).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32579).
3. **MAY** contain zero or more [0..*] **id** (CONF:1098-7410).
4. **SHALL** contain exactly one [1..1] **manufacturedMaterial** (CONF:1098-7411).
 Note: A medication should be recorded as a pre-coordinated ingredient + strength + dose form (e.g., “metoprolol 25mg tablet”, “amoxicillin 400mg/5mL suspension”) where possible. This includes RxNorm codes whose Term Type is SCD (semantic clinical drug), SBD (semantic brand drug), GPCK (generic pack), BPCCK (brand pack).

- a. This manufacturedMaterial **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [Medication Clinical Drug](#) urn:oid:2.16.840.1.113762.1.4.1010.4 **DYNAMIC** (CONF:1098-7412).
 - i. This code **MAY** contain zero or more [0..*] **translation**, which **MAY** be selected from ValueSet [Clinical Substance](#) urn:oid:2.16.840.1.113762.1.4.1010.2 **DYNAMIC** (CONF:1098-31884).
- 5. **MAY** contain zero or one [0..1] **manufacturerOrganization** (CONF:1098-7416).

Figure 70: Medication Information (V2) Example

```

<manufacturedProduct classCode="MANU">
  <!-- ** Medication information ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.23" extension="2014-06-09" />
  <id root="2a620155-9d11-439e-92b3-5d9815ff4ee8" />
  <manufacturedMaterial>
    <code code="745679" displayName="200 ACTUAT Albuterol 0.09 MG/ACTUAT Metered Dose Inhaler" codeSystem="2.16.840.1.113883.6.88" codeSystemName="RxNorm" />
  </manufacturedMaterial>
  <manufacturerOrganization>
    <name>Medication Factory Inc.</name>
  </manufacturerOrganization>
</manufacturedProduct>

```

3.42 Medication Supply Order (V2)

[supply: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09 (open)]

Table 119: Medication Supply Order (V2) Contexts

| Contained By: | Contains: |
|---|---|
| Medication Activity (V2) (optional) | Medication Information (V2) (optional) |
| Medication Dispense (V2) (optional) | Instruction (V2) (optional) |
| Immunization Activity (V3) (optional) | Immunization Medication Information (V2) (optional) |

This template records the intent to supply a patient with medications.

Table 120: Medication Supply Order (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|--------------|-------------|------------------|----------------------------|---|
| supply (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09) | | | | | |
| @classCode | 1..1 | SHALL | | 1098-7427 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SPLY |
| @moodCode | 1..1 | SHALL | | 1098-7428 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = INT |
| templateId | 1..1 | SHALL | | 1098-7429 | |
| @root | 1..1 | SHALL | | 1098-10507 | 2.16.840.1.113883.10.20.22.4.17 |
| @extension | 1..1 | SHALL | | 1098-32578 | 2014-06-09 |
| id | 1..* | SHALL | | 1098-7430 | |
| statusCode | 1..1 | SHALL | | 1098-7432 | |
| @code | 1..1 | SHALL | | 1098-32362 | urn:oid:2.16.840.1.113883.1.11.15933 (ActStatus) |
| effectiveTime | 0..1 | SHOULD | IVL_TS | 1098-15143 | |
| high | 1..1 | SHALL | | 1098-15144 | |
| repeatNumber | 0..1 | SHOULD | | 1098-7434 | |
| quantity | 0..1 | SHOULD | | 1098-7436 | |
| product | 0..1 | MAY | | 1098-7439 | |
| manufacturedProduct | 1..1 | SHALL | | 1098-16093 | Medication Information (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09) |
| product | 0..1 | MAY | | 1098-9334 | |
| manufacturedProduct | 1..1 | SHALL | | 1098-31695 | Immunization Medication Information (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09) |
| author | 0..1 | MAY | | 1098-7438 | |
| entryRelationship | 0..1 | MAY | | 1098-7442 | |
| @typeCode | 1..1 | SHALL | | 1098-7444 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---------------|-------|-------|-----------|----------------------------|---|
| @inversionInd | 1..1 | SHALL | | 1098-7445 | true |
| act | 1..1 | SHALL | | 1098-31391 | Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) |

1. **SHALL** contain exactly one [1..1] **@classCode**="SPLY" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7427).
2. **SHALL** contain exactly one [1..1] **@moodCode**="INT" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-7428).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7429) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.17" (CONF:1098-10507).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32578).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-7430).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-7432).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [ActStatus](#) urn:oid:2.16.840.1.113883.1.11.15933 **DYNAMIC** (CONF:1098-32362).
6. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-15143) such that it
 - a. **SHALL** contain exactly one [1..1] **high** (CONF:1098-15144).

In "INT" (intent) mood, the repeatNumber defines the number of allowed administrations. For example, a repeatNumber of "3" means that the substance can be administered up to 3 times. In "EVN" (event) mood, the repeatNumber is the number of occurrences. For example, a repeatNumber of "3" in a substance administration event means that the current administration is the 3rd in a series.

7. **SHOULD** contain zero or one [0..1] **repeatNumber** (CONF:1098-7434).
8. **SHOULD** contain zero or one [0..1] **quantity** (CONF:1098-7436).
9. **MAY** contain zero or one [0..1] **product** (CONF:1098-7439) such that it
 - a. **SHALL** contain exactly one [1..1] [Medication Information \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09) (CONF:1098-16093).
10. **MAY** contain zero or one [0..1] **product** (CONF:1098-9334) such that it
 - a. **SHALL** contain exactly one [1..1] [Immunization Medication Information \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09) (CONF:1098-31695).
 - i. A supply act **SHALL** contain one product/Medication Information *OR* one product/Immunization Medication Information template (CONF:1098-16870).
11. **MAY** contain zero or one [0..1] **author** (CONF:1098-7438).
12. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-7442).

- a. The entryRelationship, if present, **SHALL** contain exactly one [1..1] **@typeCode**="SUBJ" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7444).
- b. The entryRelationship, if present, **SHALL** contain exactly one [1..1] **@inversionInd**="true" True (CONF:1098-7445).
- c. The entryRelationship, if present, **SHALL** contain exactly one [1..1] [Instruction \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) (CONF:1098-31391).

Figure 71: Medication Supply Order (V2) Example

```

<supply classCode="SPLY" moodCode="INT">
  <templateId root="2.16.840.1.113883.10.20.22.4.17" extension="2014-06-09" />
  <id root="aba2fc75-1a43-435f-8309-d24e4be5f1cd" />
  <statusCode code="completed" />
  <effectiveTime xsi:type="IVL_TS">
    <low value="20070103" />
    <high nullFlavor="UNK" />
  </effectiveTime>
  <repeatNumber value="1" />
  <quantity value="75" />
  <product>
    <manufacturedProduct classCode="MANU">
      <templateId root="2.16.840.1.113883.10.20.22.4.23" extension="2014-06-09" />
      . . .
    </manufacturedProduct>
  </product>
  <author>
    . . .
  </author>
  <entryRelationship typeCode="SUBJ" inversionInd="true">
    <act classCode="ACT" moodCode="INT">
      <templateId root="2.16.840.1.113883.10.20.22.4.20" extension="2014-06-09" />
      . . .
    </act>
  </entryRelationship>
</supply>

```

3.43 Patient Care Experience (V5)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.48:2019-12-01 (open)]

Table 121: Patient Care Experience (V5) Contexts

| Contained By: | Contains: |
|--|---|
| Patient Data Section QDM (V7) (optional) | Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Author (V2) (required) |

This template represents the QDM Datatype: Patient Care Experience.

Patient Care Experience describes information collected from patients about their perceptions of the care they received. It is usually measured with a validated survey tool. The most common tool is the Consumer Assessment of Healthcare Providers and Systems.

QDM Attribute: Author dateTime is the time that the care experience is recorded.

Table 122: Patient Care Experience (V5) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|-----------|-----------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.48:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-12464 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 4444-12465 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 0..0 | SHALL NOT | | 4444-28085 | |
| templateId | 1..1 | SHALL | | 4444-12466 | |
| @root | 1..1 | SHALL | | 4444-12467 | 2.16.840.1.113883.10.20.24.3.48 |
| @extension | 1..1 | SHALL | | 4444-27290 | 2019-12-01 |
| id | 1..* | SHALL | | 4444-12469 | |
| code | 1..1 | SHALL | | 4444-12470 | |
| @code | 1..1 | SHALL | | 4444-13037 | 77218-6 |
| @codeSystem | 1..1 | SHALL | | 4444-27555 | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| statusCode | 1..1 | SHALL | | 4444-12471 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | 4444-13038 | |
| author | 1..1 | SHALL | | 4444-28932 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| participant | 0..* | MAY | | 4444-29962 | |
| @typeCode | 1..1 | SHALL | | 4444-29970 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29963 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29964 | |
| @typeCode | 1..1 | SHALL | | 4444-29971 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29965 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-----------------|-------|-------|-----------|----------------------------|---|
| participant | 0..1 | MAY | | 4444-29968 | |
| @typeCode | 1..1 | SHALL | | 4444-29973 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29969 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29966 | |
| @typeCode | 1..1 | SHALL | | 4444-29972 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29967 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" observation, which **SHALL** be selected from CodeSystem HL7ActClass (urn:oid:2.16.840.1.113883.5.6) (CONF:4444-12464).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" event, which **SHALL** be selected from CodeSystem HL7ActMood (urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-12465).
3. **SHALL NOT** contain [0..0] **@negationInd** (CONF:4444-28085).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-12466) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.48" (CONF:4444-12467).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-27290).
5. **SHALL** contain at least one [1..*] **id** (CONF:4444-12469).
6. **SHALL** contain exactly one [1..1] **code** (CONF:4444-12470).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="77218-6" Patient satisfaction with healthcare delivery (CONF:4444-13037).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:4444-27555).
7. **SHALL** contain exactly one [1..1] **statusCode**="completed", which **SHALL** be selected from CodeSystem HL7ActStatus (urn:oid:2.16.840.1.113883.5.14) (CONF:4444-12471).
8. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:4444-13038).
9. **SHALL** contain exactly one [1..1] [Author \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-28932).
Note: QDM Attribute: Author dateTime - the time that the care experience is recorded
10. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29962) such that it
Note: QDM Attribute: Recorder
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29970).

- b. **SHALL** contain exactly one [1..1] [Entity Practitioner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29963).
11. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29964) such that it
Note: QDM Attribute: Recorder
- a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29971).
 - b. **SHALL** contain exactly one [1..1] [Entity Organization](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29965).
12. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29968) such that it
Note: QDM Attribute: Recorder
- a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29973).
 - b. **SHALL** contain exactly one [1..1] [Entity Patient](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29969).
13. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29966) such that it
Note: QDM Attribute: Recorder
- a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29972).
 - b. **SHALL** contain exactly one [1..1] [Entity Care Partner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29967).

Figure 72: Patient Care Experience (V5) Example

```

<observation classCode="OBS" moodCode="EVN">
  <!-- Patient Care Experience (V5) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.48" extension="2019-12-01"/>
  <id root="ee6d068d-f209-4913-b999-9efa74358914"/>
  <code code="77218-6" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
  displayName="Patient satisfaction with healthcare delivery"/>
  <statusCode code="completed"/>
  <value xsi:type="CD" code="185481008" displayName="Dissatisfied with doctor (finding)"
  codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT"/>
  <author>
    <templateId root="2.16.840.1.113883.10.20.24.3.155" extension="2019-12-01"/>
    <time value="2019050101030"/>
    <assignedAuthor>
      <id nullFlavor="NA"/>
    </assignedAuthor>
  </author>
</observation>

```

3.44 Patient Characteristic Clinical Trial Participant (V4)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.51:2017-08-01
(open)]

Table 123: Patient Characteristic Clinical Trial Participant (V4) Contexts

| Contained By: | Contains: |
|--|--|
| Patient Data Section QDM (V7) (optional) | Reason (V3) (optional) |

This template represents the QDM datatype: Patient Characteristic, Clinical Trial Participant. This datatype indicates that the patient is a clinical trial participant. MoodCode is constrained to “EVN” and statusCode is constrained to “active”.

Table 124: Patient Characteristic Clinical Trial Participant (V4) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|-----------|-----------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.51:2017-08-01) | | | | | |
| @classCode | 1..1 | SHALL | | 3343-16711 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 3343-12526 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 0..0 | SHALL NOT | | 3343-28086 | |
| templateId | 1..1 | SHALL | | 3343-12537 | |
| @root | 1..1 | SHALL | | 3343-12538 | 2.16.840.1.113883.10.20.24.3.51 |
| @extension | 1..1 | SHALL | | 3343-27026 | 2017-08-01 |
| id | 1..* | SHALL | | 3343-26996 | |
| code | 1..1 | SHALL | | 3343-13041 | |
| @code | 1..1 | SHALL | | 3343-28130 | ASSERTION |
| @codeSystem | 1..1 | SHALL | | 3343-28131 | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL | | 3343-13042 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = active |
| effectiveTime | 1..1 | SHALL | | 3343-12536 | |
| low | 1..1 | SHALL | | 3343-27668 | |
| high | 0..1 | MAY | | 3343-27669 | |
| value | 1..1 | SHALL | CD | 3343-16712 | |
| entryRelationship | 0..1 | MAY | | 3343-12531 | |
| @typeCode | 1..1 | SHALL | | 3343-12532 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 3343-12533 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:3343-16711).

2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" event, which **SHALL** be selected from CodeSystem HL7ActMood (urn:oid:2.16.840.1.113883.5.1001) (CONF:3343-12526).
3. **SHALL NOT** contain [0..0] **@negationInd** (CONF:3343-28086).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3343-12537) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.51" (CONF:3343-12538).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2017-08-01" (CONF:3343-27026).
5. **SHALL** contain at least one [1..*] **id** (CONF:3343-26996).
6. **SHALL** contain exactly one [1..1] **code** (CONF:3343-13041).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:3343-28130).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3343-28131).
7. **SHALL** contain exactly one [1..1] **statusCode**="active" (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3343-13042).
8. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:3343-12536).
Note: QDM Attribute: Relevant Period
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:3343-27668).
Note: startTime - the time the clinical trial started
 - b. This effectiveTime **MAY** contain zero or one [0..1] **high** (CONF:3343-27669).
Note: stopTime - the time the clinical trial ended
9. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:3343-16712).
10. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:3343-12531) such that it
Note: QDM Attribute: Reason
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="RSON" has reason, which **SHALL** be selected from CodeSystem HL7ActRelationshipType (urn:oid:2.16.840.1.113883.5.1002) (CONF:3343-12532).
 - b. **SHALL** contain exactly one [1..1] **Reason (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:3343-12533).

Figure 73: Patient Characteristic Clinical Trial Participant (V4) Example

```

<observation classCode="OBS" moodCode="EVN">
  <!-- Patient Characteristic Clinical Trial Participant (V4) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.51" extension="2017-08-01"/>
  <id root="b42132cb-9ea4-4d84-93ce-4b5cd2d2ac3d"/>
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"/>
  <statusCode code="active"/>
  <effectiveTime>
    <low value="201706151030"/>
  </effectiveTime>
  <value xsi:type="CD" code="428024001" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT" displayName="clinical trial participant"/>
</observation>

```

3.45 Patient Characteristic Observation Assertion (V5)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.103:2019-12-01 (open)]

Table 125: Patient Characteristic Observation Assertion (V5) Contexts

| Contained By: | Contains: |
|--|--|
| Patient Data Section QDM (V7) (optional) | Author (V2) (optional) |

This template represents the QDM datatype: Patient Characteristic.

Patient Characteristic represents specific factors about a patient. Included are demographics, behavioral factors, social or cultural factors, available resources, and preferences. Behaviors reference responses or actions that affect (either positively or negatively) health or healthcare. Included in this category are mental health issues, adherence issues unrelated to other factors or resources, coping ability, grief issues, and substance use/abuse. Social/cultural factors are characteristics of an individual related to family/caregiver support, education, and literacy (including health literacy), primary language, cultural beliefs (including health beliefs), persistent life stressors, spiritual and religious beliefs, immigration status, and history of abuse or neglect. Resources are means available to a patient to meet health and healthcare needs, which might include caregiver support, insurance coverage, financial resources, and community resources to which the patient is already connected and from which the patient is receiving benefit. Preferences are choices made by patients and their caregivers relative to options for care or treatment (including scheduling, care experience, and meeting of personal health goals) and the sharing and disclosure of their health information.

This is a pattern that can be used for any simple assertion observation of a patient characteristic that is not represented by one of the specific Patient Characteristics (Birth Date, Clinical Trial Participant, Ethnicity, Expired, Payer, Race or Sex).

This template is to be used to represent the retired QDM Datatypes, Patient Characteristic, Gestational Age, Patient Characteristic Estimated Date of Conception, Patient Characteristic, ECOG Performance Status Poor and Patient Characteristic, Tobacco User and Non-User.

Table 126: Patient Characteristic Observation Assertion (V5) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-----------|-----------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.103:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-16536 | OBS |
| @moodCode | 1..1 | SHALL | | 4444-16537 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = EVN |
| @negationInd | 0..0 | SHALL NOT | | 4444-28623 | |
| templateId | 1..1 | SHALL | | 4444-26962 | |
| @root | 1..1 | SHALL | | 4444-26963 | 2.16.840.1.113883.10.20.24.3.103 |
| @extension | 1..1 | SHALL | | 4444-27781 | 2019-12-01 |
| id | 1..* | SHALL | | 4444-16538 | |
| code | 1..1 | SHALL | | 4444-16544 | |
| @code | 1..1 | SHALL | | 4444-16545 | ASSERTION |
| @codeSystem | 1..1 | SHALL | | 4444-28135 | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| value | 1..1 | SHALL | CD | 4444-16541 | |
| author | 0..1 | MAY | | 4444-29726 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CONF:4444-16536).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-16537).
3. **SHALL NOT** contain [0..0] **@negationInd** (CONF:4444-28623).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-26962) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.103" (CONF:4444-26963).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-27781).
5. **SHALL** contain at least one [1..*] **id** (CONF:4444-16538).
6. **SHALL** contain exactly one [1..1] **code** (CONF:4444-16544).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" (CONF:4444-16545).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:4444-28135).

7. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (CONF:4444-16541).
8. **MAY** contain zero or one [0..1] **Author (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-29726).
Note: QDM Attribute: Author dateTime

Figure 74: Patient Characteristic Observation Assertion (V5) Example

```

<observation classCode="OBS" moodCode="EVN">
  <!-- Patient Characteristic Observation Assertion (V5) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.103" extension="2019-12-01"/>
  <id root="94de1700-9629-40b4-b56d-a4eac5f48726"/>
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"/>
  <!-- Patient Characteristic -->
  <value xsi:type="CD" code="422894000" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT"
displayName="Eastern Cooperative Oncology Group performance status - grade 2 (finding)"/>
  <author>
    <templateId root="2.16.840.1.113883.10.20.24.3.155" extension="2019-12-01" />
    <time value="201908111235"/>
    <assignedAuthor>
      <id nullFlavor="NA" />
    </assignedAuthor>
  </author>
</observation>

```

3.46 Patient Characteristic Payer

[observation: identifier urn:oid:2.16.840.1.113883.10.20.24.3.55 (open)]

Table 127: Patient Characteristic Payer Contexts

| Contained By: | Contains: |
|--|-----------|
| Patient Data Section QDM (V7) (optional) | |

This template represents the QDM Datatype: Patient Characteristic, Payer. This datatype represents the policy or program providing the coverage for the patient.

Table 128: Patient Characteristic Payer Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|--------|-----------|--------------------------|---|
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.24.3.55) | | | | | |
| @classCode | 1..1 | SHALL | | 67-14213 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 67-14214 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 67-12561 | |
| @root | 1..1 | SHALL | | 67-12562 | 2.16.840.1.113883.10.20.24.3.55 |
| id | 1..* | SHALL | | 67-12564 | |
| code | 1..1 | SHALL | | 67-12565 | |
| @code | 1..1 | SHALL | | 67-14029 | 48768-6 |
| @codeSystem | 1..1 | SHALL | | 67-27009 | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| effectiveTime | 1..1 | SHALL | | 67-26933 | |
| low | 1..1 | SHALL | | 67-26934 | |
| high | 0..1 | SHOULD | | 67-26935 | |
| value | 1..1 | SHALL | CD | 67-16710 | urn:oid:2.16.840.1.114222.4.1.1.3591 (Payer) |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:67-14213).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:67-14214).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:67-12561) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.55" (CONF:67-12562).
4. **SHALL** contain at least one [1..*] **id** (CONF:67-12564).
5. **SHALL** contain exactly one [1..1] **code** (CONF:67-12565).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="48768-6" Payment source (CONF:67-14029).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:67-27009).
6. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:67-26933).
 Note: QDM Attribute: Relevant Period
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:67-26934).
 Note: startTime – The first day of insurance coverage with the referenced payer
 - b. This effectiveTime **SHOULD** contain zero or one [0..1] **high** (CONF:67-26935).
 Note: stopTime – The last day of insurance coverage with the referenced payer

7. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD", where the code **SHALL** be selected from ValueSet [Payer](#) urn:oid:2.16.840.1.114222.4.11.3591 **DYNAMIC** (CONF:67-16710).

Figure 75: Patient Characteristic Payer Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- Patient Characteristic Payer -->
  <templateId root="2.16.840.1.113883.10.20.24.3.55" />
  <id root="4ddf1cc3-e325-472e-ad76-b2c66a5ee164" />
  <code code="48768-6" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
    displayName="Payment source" />
  <statusCode code="completed" />
  <effectiveTime>
    <!-- QDM Attribute: Start Datetime -->
    <low value="20110303" />
    <!-- QDM Attribute: Stop Datetime -->
    <high value="20160303" />
  </effectiveTime>
  <!-- Payer -->
  <value xsi:type="CD" code="1" codeSystem="2.16.840.1.113883.3.221.5"
    codeSystemName="Source of Payment Typology" displayName="Medicare" />
</observation>
```

3.47 Planned Act (V2)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.39:2014-06-09 (open)]

Table 129: Planned Act (V2) Contexts

| Contained By: | Contains: |
|---------------|--|
| | Indication (V2) (optional) Priority Preference (optional) Instruction (V2) (optional) Author Participation (optional) |

This template represents planned acts that are not classified as an observation or a procedure according to the HL7 RIM. Examples of these acts are a dressing change, the teaching or feeding of a patient or the providing of comfort measures.

The priority of the activity to the patient and provider is communicated through Priority Preference. The effectiveTime indicates the time when the activity is intended to take place.

Table 130: Planned Act (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|--|
| act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.39:2014-06-09) | | | | | |
| @classCode | 1..1 | SHALL | | 1098-8538 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT |
| @moodCode | 1..1 | SHALL | | 1098-8539 | urn:oid:2.16.840.1.113883.11.20.9.23 (Planned moodCode (Act/Encounter/Procedure)) |
| templateId | 1..1 | SHALL | | 1098-30430 | |
| @root | 1..1 | SHALL | | 1098-30431 | 2.16.840.1.113883.10.20.22.4.39 |
| @extension | 1..1 | SHALL | | 1098-32552 | 2014-06-09 |
| id | 1..* | SHALL | | 1098-8546 | |
| code | 1..1 | SHALL | | 1098-31687 | |
| statusCode | 1..1 | SHALL | | 1098-30432 | |
| @code | 1..1 | SHALL | | 1098-32019 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = active |
| effectiveTime | 0..1 | SHOULD | | 1098-30433 | |
| performer | 0..* | MAY | | 1098-30435 | |
| author | 0..1 | SHOULD | | 1098-32020 | Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) |
| entryRelationship | 0..* | MAY | | 1098-31067 | |
| @typeCode | 1..1 | SHALL | | 1098-31068 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| observation | 1..1 | SHALL | | 1098-31069 | Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) |
| entryRelationship | 0..* | MAY | | 1098-32021 | |
| @typeCode | 1..1 | SHALL | | 1098-32022 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 1098-32023 | Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) |
| entryRelationship | 0..* | MAY | | 1098- | |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-----------|-------|-------|-----------|----------------------------|---|
| | | | | 32024 | |
| @typeCode | 1..1 | SHALL | | 1098-32025 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ |
| act | 1..1 | SHALL | | 1098-32026 | Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) |

1. **SHALL** contain exactly one [1..1] **@classCode="ACT"** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8538).
2. **SHALL** contain exactly one [1..1] **@moodCode**, which **SHALL** be selected from ValueSet [Planned moodCode \(Act/Encounter/Procedure\)](#) urn:oid:2.16.840.1.113883.11.20.9.23 **STATIC** 2014-09-01 (CONF:1098-8539).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-30430) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.39"** (CONF:1098-30431).
 - b. **SHALL** contain exactly one [1..1] **@extension="2014-06-09"** (CONF:1098-32552).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-8546).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-31687).
 - a. This code in a Planned Act **SHOULD** be selected from LOINC (CodeSystem: 2.16.840.1.113883.6.1) OR SNOMED CT (CodeSystem: 2.16.840.1.113883.6.96) (CONF:1098-32030).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-30432).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="active"** Active (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1098-32019).

The effectiveTime in a planned act represents the time that the act should occur.

7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-30433).

The clinician who is expected to carry out the act could be identified using act/performer.

8. **MAY** contain zero or more [0..*] **performer** (CONF:1098-30435).

The author in a planned act represents the clinician who is requesting or planning the act.

9. **SHOULD** contain zero or one [0..1] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-32020).

The following entryRelationship represents the priority that a patient or a provider places on the activity.

10. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31067) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31068).

- b. **SHALL** contain exactly one [1..1] [Priority Preference](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) (CONF:1098-31069).

The following entryRelationship represents the indication for the act.

- 11. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32021) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32022).
 - b. **SHALL** contain exactly one [1..1] [Indication \(V2\)](#) (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) (CONF:1098-32023).

The following entryRelationship captures any instructions associated with the planned act.

- 12. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32024) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** Has subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32025).
 - b. **SHALL** contain exactly one [1..1] [Instruction \(V2\)](#) (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) (CONF:1098-32026).

Figure 76: Planned Act (V2) Example

```

<act classCode="ACT" moodCode="INT">
  <templateId root="2.16.840.1.113883.10.20.22.4.39" extension="2014-06-09" />
  <id root="7658963e-54da-496f-bf18-dealddaa3b0" />
  <code code="423171007" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT"
  displayName="Elevate head of bed" />
  <statusCode code="active" />
  <effectiveTime value="20130902" />
  <author typeCode="AUT">
    <!-- Author Participation -->
  </author>
  <entryRelationship typeCode="RSON">
    <!-- Patient Priority Preference -->
    ...
  </entryRelationship>
  <entryRelationship typeCode="RSON">
    <!-- Provider Priority Preference -->
    ...
  </entryRelationship>
  <entryRelationship typeCode="RSON">
    <!-- Indication (V2) -->
    ...
  </entryRelationship>
  <entryRelationship typeCode="SUBJ">
    <!-- Instruction (V2) -->
    ...
  </entryRelationship>
  <entryRelationship typeCode="COMP">
    <!-- Planned Coverage -->
    ...
  </entryRelationship>
</act>

```

3.47.1 Intervention Order (V5)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.31:2019-12-01 (open)]

Table 131: Intervention Order (V5) Contexts

| Contained By: | Contains: |
|--|---|
| Patient Data Section QDM (V7) (optional) | Reason (V3) (optional) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Author (V2) (required) |

This template represents the QDM datatype: Intervention, Order.

An intervention order is a request by a physician or appropriately licensed care provider to an appropriate provider or facility to perform a service and/or other type of action necessary for care. An example of this is an order for smoking cessation counseling or physical therapy.

The moodCode is constrained to "RQO", an author is required to represent the ordering clinician and an author time/date stamp is required.

QDM Attribute: Author dateTime corresponds to when the order was signed. The time the activity is intended to take place is represented by effectiveTime.

QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template.

Table 132: Intervention Order (V5) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|---|
| act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.31:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-27353 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT |
| @moodCode | 1..1 | SHALL | | 4444-13742 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = RQO |
| @negationInd | 0..1 | MAY | | 4444-28071 | |
| templateId | 1..1 | SHALL | | 4444-13743 | |
| @root | 1..1 | SHALL | | 4444-13744 | 2.16.840.1.113883.10.20.24.3.31 |
| @extension | 1..1 | SHALL | | 4444-26556 | 2019-12-01 |
| code | 1..1 | SHALL | | 4444-13746 | |
| author | 1..1 | SHALL | | 4444-27343 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| participant | 0..* | MAY | | 4444-29727 | |
| @typeCode | 1..1 | SHALL | | 4444-29736 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29728 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29729 | |
| @typeCode | 1..1 | SHALL | | 4444-29737 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29730 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29733 | |
| @typeCode | 1..1 | SHALL | | 4444-29739 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29734 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29731 | |
| @typeCode | 1..1 | SHALL | | 4444- | urn:oid:2.16.840.1.113883.5.9 |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|---|
| | | | | 29738 | 0 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29732 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |
| entryRelationship | 0..* | MAY | | 4444-13756 | |
| @typeCode | 1..1 | SHALL | | 4444-13757 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 4444-27159 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) |

1. Conforms to [Planned Act \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.39:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="ACT" Act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-27353).
3. **SHALL** contain exactly one [1..1] **@moodCode**="RQO" Request (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-13742).
4. **MAY** contain zero or one [0..1] **@negationInd** (CONF:4444-28071).
Note: QDM Attribute: Negation Rationale - negationInd="true" indicates Intervention Not Order
 - a. If **@negationInd**="true" is present, **SHALL** contain one [1..1] entryRelationship such that it contains exactly one [1..1] **Reason (V3)** to state the reason for **Intervention Not Order** (CONF:4444-29735).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-13743) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.31" (CONF:4444-13744).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-26556).
6. **SHALL** contain exactly one [1..1] **code** (CONF:4444-13746).
Note: QDM Attribute: Code
7. **SHALL** contain exactly one [1..1] [Author \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-27343).
Note: QDM Attribute: Author dateTime – the time the intervention order was signed
8. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29727) such that it
Note: QDM Attribute: Requester
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29736).
 - b. **SHALL** contain exactly one [1..1] [Entity Practitioner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29728).
9. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29729) such that it
Note: QDM Attribute: Requester

- a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29737).
 - b. **SHALL** contain exactly one [1..1] **Entity Organization** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29730).
10. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29733) such that it
Note: QDM Attribute: Requester
- a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29739).
 - b. **SHALL** contain exactly one [1..1] **Entity Patient** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29734).
11. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29731) such that it
Note: QDM Attribute: Requester
- a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29738).
 - b. **SHALL** contain exactly one [1..1] **Entity Care Partner** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29732).
12. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:4444-13756) such that it
Note: QDM Attribute: Reason
- a. **SHALL** contain exactly one [1..1] **@typeCode**="RSON" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-13757).
 - b. **SHALL** contain exactly one [1..1] **Reason (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-27159).

Figure 77: Intervention Order (V5) Example

```

<act classCode="ACT" moodCode="RQO">
  <!-- Conforms to C-CDA R2 Planned Act (V2) template -->
  <templateId root="2.16.840.1.113883.10.20.22.4.39" extension="2014-06-09"/>
  <!-- Intervention Order (V5) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.31" extension="2019-12-01"/>
  <id root="db734647-fc99-424c-a864-7e3cda82e703"/>
  <!-- Intervention -->
  <code code="419553002" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CD"
  displayName="diet education"/>
  <statusCode code="active"/>
  <author>
    <!-- QDM Attribute: Author dateTime - the time the intervention order was signed --
  >
    <templateId root="2.16.840.1.113883.10.20.24.3.155" extension="2019-12-01"/>
    <time value="201904081130"/>
    <assignedAuthor>
      <id nullFlavor="NA"/>
    </assignedAuthor>
  </author>
  <!-- QDM Attribute: Reason -->
  <entryRelationship typeCode="RSON">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.24.3.88" extension="2017-08-01"/>
      <code code="77301-0" codeSystem="2.16.840.1.113883.6.1" displayName="Reason
  care action performed or not" codeSystemName="LOINC"/>
      <statusCode code="completed"/>
      <value xsi:type="CD" code="254838004" codeSystem="2.16.840.1.113883.6.96"
  codeSystemName="SNOMED CT" displayName="Carcinoma of breast"/>
    </observation>
  </entryRelationship>
</act>

```

3.47.2 Intervention Recommended (V5)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.33:2019-12-01 (open)]

Table 133: Intervention Recommended (V5) Contexts

| Contained By: | Contains: |
|--|---|
| Patient Data Section QDM (V7) (optional) | Reason (V3) (optional) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Author (V2) (required) |

This template represents the QDM datatype: Intervention, Recommended.

An intervention recommendation is a recommendation for an influencing force or act to modify a given state of affairs. An intervention is any action carried out (by a healthcare provider or a consumer) to

improve or maintain the health of a subject of care with the expectation of producing an outcome. An example of this is a recommendation for smoking cessation counseling.

The moodCode is constrained to "INT", an author is required to represent the recommending clinician and an author time/date stamp is required.

QDM Attribute: Author dateTime corresponds to when the recommendation was signed, which is a single point in time. The time the activity is recommended to take place is represented by effectiveTime.

QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template.

Table 134: Intervention Recommended (V5) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|---|
| act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.33:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-27355 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT |
| @moodCode | 1..1 | SHALL | | 4444-13763 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = INT |
| @negationInd | 0..1 | MAY | | 4444-28073 | |
| templateId | 1..1 | SHALL | | 4444-13764 | |
| @root | 1..1 | SHALL | | 4444-13765 | 2.16.840.1.113883.10.20.24.3.33 |
| @extension | 1..1 | SHALL | | 4444-26557 | 2019-12-01 |
| code | 1..1 | SHALL | | 4444-13767 | |
| author | 1..1 | SHALL | | 4444-27349 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| participant | 0..* | MAY | | 4444-29754 | |
| @typeCode | 1..1 | SHALL | | 4444-29763 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29755 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29756 | |
| @typeCode | 1..1 | SHALL | | 4444-29764 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29757 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29760 | |
| @typeCode | 1..1 | SHALL | | 4444-29766 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29761 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29758 | |
| @typeCode | 1..1 | SHALL | | 4444- | urn:oid:2.16.840.1.113883.5.9 |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|---|
| | | | | 29765 | 0 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29759 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |
| entryRelationship | 0..* | MAY | | 4444-13777 | |
| @typeCode | 1..1 | SHALL | | 4444-13778 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 4444-27160 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) |

1. Conforms to [Planned Act \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.39:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="ACT" Act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-27355).
3. **SHALL** contain exactly one [1..1] **@moodCode**="INT" Intent (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-13763).
4. **MAY** contain zero or one [0..1] **@negationInd** (CONF:4444-28073).
Note: QDM Attribute: Negation Rationale - negationInd="true" indicates Intervention Not Recommended
 - a. If **@negationInd**="true" is present, **SHALL** contain one [1..1] entryRelationship such that it contains exactly one [1..1] **Reason (V3)** to state the reason for **Intervention Not Recommended** (CONF:4444-29762).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-13764) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.33" (CONF:4444-13765).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-26557).
6. **SHALL** contain exactly one [1..1] **code** (CONF:4444-13767).
Note: QDM Attribute: Code
7. **SHALL** contain exactly one [1..1] [Author \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-27349).
Note: QDM Attribute: Author dateTime – the time the recommendation was authored (i.e., provided to the patient)
8. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29754) such that it
Note: QDM Attribute: Requester
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29763).
 - b. **SHALL** contain exactly one [1..1] [Entity Practitioner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29755).

9. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29756) such that it
Note: QDM Attribute: Requester
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29764).
 - b. **SHALL** contain exactly one [1..1] **Entity Organization** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29757).
10. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29760) such that it
Note: QDM Attribute: Requester
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29766).
 - b. **SHALL** contain exactly one [1..1] **Entity Patient** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29761).
11. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29758) such that it
Note: QDM Attribute: Requester
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29765).
 - b. **SHALL** contain exactly one [1..1] **Entity Care Partner** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29759).
12. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:4444-13777) such that it
Note: QDM Attribute: Reason
- a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-13778).
 - b. **SHALL** contain exactly one [1..1] **Reason (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-27160).

Figure 78: Intervention Recommended (V5) Example

```

<act classCode="ACT" moodCode="INT">
  <!-- Conforms to C-CDA R2.1 Planned Act (V2) template -->
  <templateId root="2.16.840.1.113883.10.20.22.4.39" extension="2014-06-09"/>
  <!-- Intervention Recommended (V5) template -->
  <templateId root="2.16.840.1.113883.10.20.24.3.33" extension="2019-12-01"/>
  <id root="db734647-fc99-424c-a864-7e3cda82e703"/>
  <!-- Intervention -->
  <code code="225323000" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CD"
  displayName="Smoking cessation education (procedure)"/>
  <statusCode code="active"/>
  <author>
    <templateId root="2.16.840.1.113883.10.20.24.3.155" extension="2019-12-01"/>
    <time value="201904081130"/>
    <assignedAuthor>
      <id nullFlavor="NA"/>
    </assignedAuthor>
  </author>
  <!-- QDM Attribute: Reason -->
  <entryRelationship typeCode="RSON">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.24.3.88" extension="2017-08-01"/>
      <code code="77301-0" codeSystem="2.16.840.1.113883.6.1"
      displayName="Reason care action performed or not" codeSystemName="LOINC"/>
      <value xsi:type="CD" code="160605003" codeSystem="2.16.840.1.113883.6.96"
      codeSystemName="SNOMED CT" displayName="Heavy cigarette smoker (20-39 cigs/day)
      (finding)"/>
    </observation>
  </entryRelationship>
</act>

```

3.48 Planned Coverage

[act: identifier urn:oid:2.16.840.1.113883.10.20.22.4.129 (open)]

Table 135: Planned Coverage Contexts

| Contained By: | Contains: |
|--|---|
| Planned Procedure (V2) (optional) Planned Observation (V2) (optional) Planned Supply (V2) (optional) | Author Participation (optional) |

This template represents the insurance coverage intended to cover an act or procedure.

Table 136: Planned Coverage Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|---|
| act (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.129) | | | | | |
| @classCode | 1..1 | SHALL | | 1098-31945 | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = ACT |
| @moodCode | 1..1 | SHALL | | 1098-31946 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = INT |
| templateId | 1..1 | SHALL | | 1098-31947 | |
| @root | 1..1 | SHALL | | 1098-31948 | 2.16.840.1.113883.10.20.22.4.129 |
| id | 1..* | SHALL | | 1098-31950 | |
| code | 1..1 | SHALL | | 1098-31951 | |
| @code | 1..1 | SHALL | | 1098-31952 | 48768-6 |
| @codeSystem | 1..1 | SHALL | | 1098-31953 | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| statusCode | 1..1 | SHALL | | 1098-31954 | |
| @code | 1..1 | SHALL | | 1098-31955 | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = active |
| author | 0..* | MAY | | 1098-32178 | Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) |
| entryRelationship | 1..1 | SHALL | | 1098-31967 | |
| @typeCode | 1..1 | SHALL | | 1098-31968 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| act | 1..1 | SHALL | | 1098-31969 | |
| @classCode | 1..1 | SHALL | | 1098-31970 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT |
| @moodCode | 1..1 | SHALL | | 1098-31971 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = INT |
| id | 1..* | SHALL | | 1098-31972 | |
| code | 1..1 | SHALL | | 1098-31973 | urn:oid:2.16.840.1.114222.4.11.3591 (Payer) |
| statusCode | 1..1 | SHALL | | 1098-31974 | |
| @code | 1..1 | SHALL | | 1098- | urn:oid:2.16.840.1.113883.5.1 |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------|-------|------|-----------|-----------------------|---------------------------|
| | | | | 31975 | 4 (HL7ActStatus) = active |

1. **SHALL** contain exactly one [1..1] **@classCode="ACT"** act (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:1098-31945).
2. **SHALL** contain exactly one [1..1] **@moodCode="INT"** Intent (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1098-31946).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-31947) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.129"** (CONF:1098-31948).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-31950).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-31951).
 - a. This code **SHALL** contain exactly one [1..1] **@code="48768-6"** Payment Sources (CONF:1098-31952).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.6.1"** (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1098-31953).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-31954).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="active"** Active (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:1098-31955).
7. **MAY** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-32178).
8. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:1098-31967) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31968).
 - b. **SHALL** contain exactly one [1..1] **act** (CONF:1098-31969).
 - i. This act **SHALL** contain exactly one [1..1] **@classCode="ACT"** ACT (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1098-31970).
 - ii. This act **SHALL** contain exactly one [1..1] **@moodCode="INT"** intent (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1098-31971).

These act/identifiers are unique identifiers for the policy or program providing the coverage.

- iii. This act **SHALL** contain at least one [1..*] **id** (CONF:1098-31972).
- iv. This act **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [Payer](#) urn:oid:2.16.840.1.114222.4.11.3591 **DYNAMIC** (CONF:1098-31973).
- v. This act **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-31974).
 1. This statusCode **SHALL** contain exactly one [1..1] **@code="active"** Active (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1098-31975).

Figure 79: Planned Coverage Example

```

<act classCode="ACT" moodCode="INT">
  <templateId root="2.16.840.1.113883.10.20.22.4.129" />
  <id root="03f5e10b-7e79-4610-9626-d2984ff10cc1" />
  <code code="48768-6" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Payment Sources" />
  <statusCode code="active" />
  <entryRelationship typeCode="COMP">
    <act classCode="ACT" moodCode="INT">
      <!-- These act/identifiers are unique identifiers
for the policy or program providing the coverage. -->
      <id root="4c9a3be1-5f09-46dd-88e7-14c8ec612e4c" />
      <code code="111" displayName="Medicare HMO"
codeSystemName="Source of Payment Typology (PHDSC)"
codeSystem="2.16.840.1.113883.3.221.5" />
      <statusCode code="active" />
    </act>
  </entryRelationship>
</act>

```

3.49 Planned Encounter (V2)

[encounter: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.40:2014-06-09
(open)]

Table 137: Planned Encounter (V2) Contexts

| Contained By: | Contains: |
|---------------|---|
| | Service Delivery Location (optional) Indication (V2) (optional) Priority Preference (optional) Author Participation (optional) |

This template represents a planned or ordered encounter. The type of encounter (e.g., comprehensive outpatient visit) is represented. Clinicians participating in the encounter and the location of the planned encounter may be captured. The priority that the patient and providers place on the encounter may be represented.

Table 138: Planned Encounter (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|--------|-----------|----------------------------|---|
| encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.40:2014-06-09) | | | | | |
| @classCode | 1..1 | SHALL | | 1098-8564 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC |
| @moodCode | 1..1 | SHALL | | 1098-8565 | urn:oid:2.16.840.1.113883.11.20.9.23 (Planned moodCode (Act/Encounter/Procedure)) |
| templateId | 1..1 | SHALL | | 1098-30437 | |
| @root | 1..1 | SHALL | | 1098-30438 | 2.16.840.1.113883.10.20.22.4.40 |
| @extension | 1..1 | SHALL | | 1098-32553 | 2014-06-09 |
| id | 1..* | SHALL | | 1098-8567 | |
| code | 0..1 | SHOULD | | 1098-31032 | urn:oid:2.16.840.1.113883.11.20.9.52 (Encounter Planned) |
| statusCode | 1..1 | SHALL | | 1098-30439 | |
| @code | 1..1 | SHALL | | 1098-31880 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = active |
| effectiveTime | 0..1 | SHOULD | | 1098-30440 | |
| performer | 0..* | MAY | | 1098-30442 | |
| assignedEntity | 1..1 | SHALL | | 1098-31874 | |
| author | 0..* | SHOULD | | 1098-32045 | Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) |
| participant | 0..* | MAY | | 1098-30443 | |
| @typeCode | 1..1 | SHALL | | 1098-31875 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC |
| participantRole | 1..1 | SHALL | | 1098-31876 | Service Delivery Location (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32) |
| entryRelationship | 0..1 | MAY | | 1098-31033 | |
| @typeCode | 1..1 | SHALL | | 1098-31034 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| observation | 1..1 | SHALL | | 1098- | Priority Preference (identifier: |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|--|
| | | | | 31035 | urn:oid:2.16.840.1.113883.10.20.22.4.143 |
| entryRelationship | 0..* | MAY | | 1098-31877 | |
| @typeCode | 1..1 | SHALL | | 1098-31878 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 1098-31879 | Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) |

1. **SHALL** contain exactly one [1..1] **@classCode="ENC"** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8564).
2. **SHALL** contain exactly one [1..1] **@moodCode**, which **SHALL** be selected from ValueSet [Planned moodCode \(Act/Encounter/Procedure\)](#) urn:oid:2.16.840.1.113883.11.20.9.23 **STATIC** 2014-09-01 (CONF:1098-8565).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-30437) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.40"** (CONF:1098-30438).
 - b. **SHALL** contain exactly one [1..1] **@extension="2014-06-09"** (CONF:1098-32553).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-8567).

Records the type of encounter ordered or recommended.

5. **SHOULD** contain zero or one [0..1] **code**, which **SHOULD** be selected from ValueSet [Encounter Planned](#) urn:oid:2.16.840.1.113883.11.20.9.52 **DYNAMIC** (CONF:1098-31032).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-30439).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="active"** Active (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1098-31880).
7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-30440).

Performers represent clinicians who are responsible for assessing and treating the patient.

8. **MAY** contain zero or more [0..*] **performer** (CONF:1098-30442) such that it
 - a. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1098-31874).

The author in a planned encounter represents the clinician who is requesting or planning the encounter.

9. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-32045).

This location participation captures where the planned or ordered encounter may take place.

10. **MAY** contain zero or more [0..*] **participant** (CONF:1098-30443) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="LOC"** Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:1098-31875).

- b. **SHALL** contain exactly one [1..1] [Service Delivery Location](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32) (CONF:1098-31876).

The following entryRelationship represents the priority that a patient or a provider places on the encounter.

- 11. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-31033) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31034).
 - b. **SHALL** contain exactly one [1..1] [Priority Preference](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) (CONF:1098-31035).

The following entryRelationship captures the reason for the planned or ordered encounter

- 12. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31877) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31878).
 - b. **SHALL** contain exactly one [1..1] [Indication \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) (CONF:1098-31879).

Figure 80: Planned Encounter (V2) Example

```

<entry>
  <encounter moodCode="INT" classCode="ENC">
    <templateId root="2.16.840.1.113883.10.20.22.4.40" extension="2014-06-09" />
    <!-- Planned Encounter V2 template -->
    <id root="9a6dlbac-17d3-4195-89a4-1121bc809b4d" />
    <code code="185349003" displayName="encounter for check-up (procedure)"
codeSystemName="SNOMED CT" codeSystem="2.16.840.1.113883.6.96"> </code>
    <statusCode code="active" />
    <effectiveTime value="20130615" />
    <performer>
      <assignedEntity>
        ...
      </assignedEntity>
    </performer>
    <entryRelationship typeCode="REFR">
      <observation classCode="OBS" moodCode="EVN">
        <!-- Patient Priority Preference-->
        <templateId root="2.16.840.1.113883.10.20.22.4.142" />
        ...
      </observation>
    </entryRelationship>
    <entryRelationship typeCode="REFR">
      <observation classCode="OBS" moodCode="EVN">
        <!-- Provider Priority Preference-->
        ...
      </observation>
    </entryRelationship>
  </encounter>
</entry>

```

3.49.1 Encounter Order (V5)

[encounter: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.22:2019-12-01 (open)]

Table 139: Encounter Order (V5) Contexts

| Contained By: | Contains: |
|---|--|
| Encounter Order Act (V3) (required) | Facility Location (V2) (optional) Reason (V3) (optional) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Author (V2) (required) |

This template, along with Encounter Order Act (V3) template, represents the QDM datatype: Encounter, Order. This template must be contained in an Encounter Order Act (V3) template. This datatype describes an order for an encounter. This clinical statement describes the ordered interactions between the patient and clinicians. Interactions include in-person encounters, telephone

conversations, and email exchanges.

The moodCode is constrained to “RQO”, an author is required to represent the ordering clinician and an author time/date stamp is required.

QDM attribute: Author dateTime corresponds to when the order was signed. The time the activity is intended to take place is represented by effectiveTime.

QDM attribute: Facility Location is represented through the Service Delivery Location template specified in the Planned Encounter (V2) parent template.

Table 140: Encounter Order (V5) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|--|
| encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.22:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-27534 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC |
| @moodCode | 1..1 | SHALL | | 4444-11932 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = RQO |
| templateId | 1..1 | SHALL | | 4444-11933 | |
| @root | 1..1 | SHALL | | 4444-11934 | 2.16.840.1.113883.10.20.24.3.22 |
| @extension | 1..1 | SHALL | | 4444-27064 | 2019-12-01 |
| code | 1..1 | SHALL | | 4444-11936 | |
| priorityCode | 0..1 | MAY | | 4444-29404 | |
| author | 1..1 | SHALL | | 4444-27341 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29395 | Facility Location (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.100:2017-08-01) |
| participant | 0..* | MAY | | 4444-29402 | |
| @typeCode | 1..1 | SHALL | | 4444-29408 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29403 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29400 | |
| @typeCode | 1..1 | SHALL | | 4444-29407 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29401 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29396 | |
| @typeCode | 1..1 | SHALL | | 4444-29405 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29397 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.164:2019-12-01) |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|--|
| | | | | | 0.20.24.3.161:2019-12-01 |
| participant | 0..* | MAY | | 4444-29398 | |
| @typeCode | 1..1 | SHALL | | 4444-29406 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29399 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.1.0.20.24.3.160:2019-12-01) |
| entryRelationship | 0..1 | MAY | | 4444-11950 | |
| @typeCode | 1..1 | SHALL | | 4444-11951 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 4444-11952 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.1.0.20.24.3.88:2017-08-01) |

1. Conforms to [Planned Encounter \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.40:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-27534).
3. **SHALL** contain exactly one [1..1] **@moodCode**="RQO" Request (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-11932).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-11933) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.22" (CONF:4444-11934).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-27064).
5. **SHALL** contain exactly one [1..1] **code** (CONF:4444-11936).
Note: QDM Attribute: Code
6. **MAY** contain zero or one [0..1] **priorityCode** (CONF:4444-29404).
Note: QDM Attribute: Priority - urgency of the encounter referenced.
7. **SHALL** contain exactly one [1..1] [Author \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-27341).
Note: QDM Attribute: Author dateTime - the time the order was signed
8. **MAY** contain zero or one [0..1] [Facility Location \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.100:2017-08-01) (CONF:4444-29395).
Note: QDM Attribute: Facility Locations
9. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29402) such that it
Note: QDM Attribute: Requester
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29408).

- b. **SHALL** contain exactly one [1..1] [Entity Practitioner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29403).
10. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29400) such that it
Note: QDM Attribute: Requester
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29407).
 - b. **SHALL** contain exactly one [1..1] [Entity Organization](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29401).
11. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29396) such that it
Note: QDM Attribute: Requester
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29405).
 - b. **SHALL** contain exactly one [1..1] [Entity Patient](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29397).
12. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29398) such that it
Note: QDM Attribute: Requester
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29406).
 - b. **SHALL** contain exactly one [1..1] [Entity Care Partner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29399).
13. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-11950) such that it
Note: QDM Attribute: Reason
- a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-11951).
 - b. **SHALL** contain exactly one [1..1] [Reason \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-11952).
14. This template **SHALL** be contained by an **Encounter Order Act (V3)** (CONF:4444-28668).

Figure 81: Encounter Order (V5) Example

```

<!-- Must be contained in the Encounter Order Act (V3) template to represent the Encounter,
Order QDM data type -->
<encounter classCode="ENC" moodCode="RQO">
  <!-- Conforms to C-CDA R2.1 Planned Encounter (V2) template -->
  <templateId root="2.16.840.1.113883.10.20.22.4.40" extension="2014-06-09"/>
  <!-- Encounter Order (V5) template -->
  <templateId root="2.16.840.1.113883.10.20.24.3.22" extension="2019-12-01"/>
  <id root="2a620155-9d11-439e-92b3-5d9815ff4de8"/>
  <code code="185349003" displayName="encounter for check-up (procedure)"
codeSystemName="SNOMED CT" codeSystem="2.16.840.1.113883.6.96"/>
  <text>Encounter for check-up (procedure)</text>
  <statusCode code="active"/>
  <author>
    <templateId root="2.16.840.1.113883.10.20.24.3.155" extension="2019-12-01"/>
    <time value="201904281130"/>
    <assignedAuthor>
      <id nullFlavor="NA"/>
    </assignedAuthor>
  </author>
  ...
</encounter>

```

3.49.2 Encounter Recommended (V5)

```
[encounter: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.24:2019-12-01
(open)]
```

Table 141: Encounter Recommended (V5) Contexts

| Contained By: | Contains: |
|---|--|
| Encounter Recommended Act (V3) (required) | Facility Location (V2) (optional) Reason (V3) (optional) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Author (V2) (required) |

This template, along with the Encounter Recommended Act (V3) template, represents the QDM datatype: Encounter, Recommended. This template must be contained in an Encounter Recommended Act (V3) template.

The Encounter Recommended template itself does not support the negationInd attribute. Adding an act wrapper to the Encounter Recommended template allows Encounter Recommended to be negated. This datatype describes a recommendation for an encounter. This clinical statement describes the recommended interaction between the patient and clinicians. Interactions include in-person encounters, telephone conversations, and email exchanges.

The moodCode is constrained to “INT”, an author is required to represent the recommending clinician and an author time/date stamp is required.

QDM Attribute: attributes: Start Datetime and Stop Datetime are represented by author/time (a single

point in time) and Author dateTime corresponds to when the recommendation was signed/authored (i.e., provided to the patient). The time the activity is recommended to take place is represented by effectiveTime.

QDM Attribute: Facility Location is represented through the Service Delivery Location template specified in the Planned Encounter (V2) parent template.

QDM Attribute: Author dateTime corresponds to when the recommendation was authored (i.e., provided to the patient). The time the activity is recommended to take place is represented by effectiveTime.

QDM Attribute: Facility Location is represented through the Service Delivery Location template specified in the Planned Encounter (V2) parent template.

Table 142: Encounter Recommended (V5) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|--|
| encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.24:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-27549 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC |
| @moodCode | 1..1 | SHALL | | 4444-11911 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = INT |
| templateId | 1..1 | SHALL | | 4444-11912 | |
| @root | 1..1 | SHALL | | 4444-11913 | 2.16.840.1.113883.10.20.24.3.24 |
| @extension | 1..1 | SHALL | | 4444-27066 | 2019-12-01 |
| code | 1..1 | SHALL | | 4444-11915 | |
| author | 1..1 | SHALL | | 4444-27347 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29495 | Facility Location (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.100:2017-08-01) |
| participant | 0..* | MAY | | 4444-29642 | |
| @typeCode | 1..1 | SHALL | | 4444-29650 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29643 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29648 | |
| @typeCode | 1..1 | SHALL | | 4444-29653 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29649 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29646 | |
| @typeCode | 1..1 | SHALL | | 4444-29652 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29647 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444- | |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|---|
| | | | | 29644 | |
| @typeCode | 1..1 | SHALL | | 4444-29651 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29645 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |
| entryRelationship | 0..1 | MAY | | 4444-11929 | |
| @typeCode | 1..1 | SHALL | | 4444-11930 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 4444-27065 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) |

1. Conforms to [Planned Encounter \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.40:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-27549).
3. **SHALL** contain exactly one [1..1] **@moodCode**="INT" Intent (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-11911).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-11912) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.24" (CONF:4444-11913).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-27066).
5. **SHALL** contain exactly one [1..1] **code** (CONF:4444-11915).
6. **SHALL** contain exactly one [1..1] [Author \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-27347).
Note: QDM Attribute: Author dateTime - the time the recommendation is authored (i.e., provided to the patient)
7. **MAY** contain zero or one [0..1] [Facility Location \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.100:2017-08-01) (CONF:4444-29495).
Note: QDM Attribute: Facility Locations
8. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29642) such that it
Note: QDM Attribute: Requester
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29650).
 - b. **SHALL** contain exactly one [1..1] [Entity Practitioner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29643).
9. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29648) such that it
Note: QDM Attribute: Requester

- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29653).
 - b. **SHALL** contain exactly one [1..1] **Entity Organization** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29649).
10. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29646) such that it
Note: QDM Attribute: Requester
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29652).
 - b. **SHALL** contain exactly one [1..1] **Entity Patient** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29647).
11. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29644) such that it
Note: QDM Attribute: Requester
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29651).
 - b. **SHALL** contain exactly one [1..1] **Entity Care Partner** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29645).
12. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-11929) such that it
Note: QDM Attribute: Reason
- a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-11930).
 - b. **SHALL** contain exactly one [1..1] **Reason (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-27065).
13. This template **SHALL** be contained by an **Encounter Recommended Act (V3)** (CONF:4444-29496).

Figure 82: Encounter Recommended (V5) Example

```

<!-- Must be contained in the Encounter Recommended Act (V3) to represent Encounter,
Recommended QDM data type -->
<encounter classCode="ENC" moodCode="INT">
  <!-- Conforms to C-CDA R2.1 Planned Encounter (V2) template -->
  <templateId root="2.16.840.1.113883.10.20.22.4.40" extension="2014-06-09"/>
  <!-- Encounter Recommended (V5) template -->
  <templateId root="2.16.840.1.113883.10.20.24.3.24" extension="2019-12-01"/>
  <id root="2a620155-9d11-439e-92b3-5d9815ff4de8"/>
  <code code="185349003" displayName="encounter for check-up (procedure)"
codeSystemName="SNOMED CT" codeSystem="2.16.840.1.113883.6.96"/>
  <text>Encounter for check-up (procedure)</text>
  <statusCode code="active"/>
  <author>
    <templateId root="2.16.840.1.113883.10.20.24.3.155" extension="2019-12-01"/>
    <time value="201904081130"/>
    <assignedAuthor>
      <id nullFlavor="NA"/>
    </assignedAuthor>
  </author>
  ...
</encounter>

```

3.50 Planned Immunization Activity

[substanceAdministration: identifier urn:oid:2.16.840.1.113883.10.20.22.4.120 (open)]

Table 143: Planned Immunization Activity Contexts

| Contained By: | Contains: |
|---------------|--|
| | Indication (V2) (optional) Priority Preference (optional) Instruction (V2) (optional) Author Participation (optional) Immunization Medication Information (V2) (required) Precondition for Substance Administration (V2) (optional) |

This template represents planned immunizations. Planned Immunization Activity is very similar to Planned Medication Activity with some key differences, for example, the drug code system is constrained to CVX codes.

The priority of the immunization activity to the patient and provider is communicated through Priority Preference. The effectiveTime indicates the time when the immunization activity is intended to take place and authorTime indicates when the documentation of the plan occurred.

Table 144: Planned Immunization Activity Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|---|
| substanceAdministration (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.120) | | | | | |
| @classCode | 1..1 | SHALL | | 1098-32091 | SBADM |
| @moodCode | 1..1 | SHALL | | 1098-32097 | urn:oid:2.16.840.1.113883.11.20.9.24 (Planned moodCode (SubstanceAdministration/Supply)) |
| templateId | 1..1 | SHALL | | 1098-32098 | |
| @root | 1..1 | SHALL | | 1098-32099 | 2.16.840.1.113883.10.20.22.4.120 |
| id | 1..* | SHALL | | 1098-32100 | |
| statusCode | 1..1 | SHALL | | 1098-32101 | |
| @code | 1..1 | SHALL | | 1098-32102 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = active |
| effectiveTime | 1..1 | SHALL | | 1098-32103 | |
| repeatNumber | 0..1 | MAY | | 1098-32126 | |
| routeCode | 0..1 | MAY | | 1098-32127 | urn:oid:2.16.840.1.113883.3.88.12.3221.8.7 (SPL Drug Route of Administration Terminology) |
| translation | 0..* | SHOULD | | 1098-32951 | urn:oid:2.16.840.1.113762.1.4.1099.12 (Medication Route) |
| approachSiteCode | 0..* | MAY | | 1098-32128 | urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 (Body Site Value Set) |
| doseQuantity | 0..1 | MAY | | 1098-32129 | |
| @unit | 0..1 | SHOULD | | 1098-32130 | urn:oid:2.16.840.1.113883.1.11.12839 (UnitsOfMeasureCaseSensitive) |
| consumable | 1..1 | SHALL | | 1098-32131 | |
| manufacturedProduct | 1..1 | SHALL | | 1098-32132 | Immunization Medication Information (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09) |
| performer | 0..* | MAY | | 1098-32104 | |
| author | 0..* | MAY | | 1098- | Author Participation |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|---|
| | | | | 32105 | (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) |
| entryRelationship | 0..* | MAY | | 1098-32108 | |
| @typeCode | 1..1 | SHALL | | 1098-32109 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| observation | 1..1 | SHALL | | 1098-32110 | Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) |
| entryRelationship | 0..* | MAY | | 1098-32114 | |
| @typeCode | 1..1 | SHALL | | 1098-32115 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 1098-32116 | Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) |
| entryRelationship | 0..* | MAY | | 1098-32117 | |
| @typeCode | 1..1 | SHALL | | 1098-32118 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ |
| act | 1..1 | SHALL | | 1098-32119 | Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) |
| precondition | 0..* | MAY | | 1098-32123 | |
| @typeCode | 1..1 | SHALL | | 1098-32124 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = PRCN |
| criterion | 1..1 | SHALL | | 1098-32125 | Precondition for Substance Administration (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09) |

1. **SHALL** contain exactly one [1..1] **@classCode**="SBADM" (CONF:1098-32091).
2. **SHALL** contain exactly one [1..1] **@moodCode**, which **SHALL** be selected from ValueSet [Planned moodCode \(SubstanceAdministration/Supply\)](#) urn:oid:2.16.840.1.113883.11.20.9.24 **STATIC** 2014-09-01 (CONF:1098-32097).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-32098) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.120" (CONF:1098-32099).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-32100).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-32101).

- a. This statusCode **SHALL** contain exactly one [1..1] @code="active" Active (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1098-32102).

The effectiveTime in a planned immunization activity represents the time that the immunization activity should occur.

6. **SHALL** contain exactly one [1..1] effectiveTime (CONF:1098-32103).

In a Planned Immunization Activity, repeatNumber defines the number of allowed administrations. For example, a repeatNumber of "3" means that the substance can be administered up to 3 times.

7. **MAY** contain zero or one [0..1] repeatNumber (CONF:1098-32126).
8. **MAY** contain zero or one [0..1] routeCode, which **SHALL** be selected from ValueSet [SPL Drug Route of Administration Terminology](#) urn:oid:2.16.840.1.113883.3.88.12.3221.8.7 **DYNAMIC** (CONF:1098-32127).
 - a. The routeCode, if present, **SHOULD** contain zero or more [0..*] translation, which **SHALL** be selected from ValueSet [Medication Route](#) urn:oid:2.16.840.1.113762.1.4.1099.12 **DYNAMIC** (CONF:1098-32951).
9. **MAY** contain zero or more [0..*] approachSiteCode, which **SHALL** be selected from ValueSet [Body Site Value Set](#) urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 **DYNAMIC** (CONF:1098-32128).
10. **MAY** contain zero or one [0..1] doseQuantity (CONF:1098-32129).
 - a. The doseQuantity, if present, **SHOULD** contain zero or one [0..1] @unit, which **SHALL** be selected from ValueSet [UnitsOfMeasureCaseSensitive](#) urn:oid:2.16.840.1.113883.1.11.12839 **DYNAMIC** (CONF:1098-32130).
11. **SHALL** contain exactly one [1..1] consumable (CONF:1098-32131).
 - a. This consumable **SHALL** contain exactly one [1..1] [Immunization Medication Information \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09) (CONF:1098-32132).

The clinician who is expected to perform the planned immunization activity could be identified using substanceAdministration/performer.

12. **MAY** contain zero or more [0..*] performer (CONF:1098-32104).

The author in a planned immunization activity represents the clinician who is requesting or planning the immunization activity.

13. **MAY** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-32105).

The following entryRelationship represents the priority that a patient or a provider places on the immunization activity.

14. **MAY** contain zero or more [0..*] entryRelationship (CONF:1098-32108) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32109).

- b. **SHALL** contain exactly one [1..1] [Priority Preference](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) (CONF:1098-32110).

The following entryRelationship represents the indication for the immunization activity.

- 15. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32114) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32115).
 - b. **SHALL** contain exactly one [1..1] [Indication \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) (CONF:1098-32116).

The following entryRelationship captures any instructions associated with the planned immunization activity.

- 16. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32117) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** Has Subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32118).
 - b. **SHALL** contain exactly one [1..1] [Instruction \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) (CONF:1098-32119).
- 17. **MAY** contain zero or more [0..*] **precondition** (CONF:1098-32123) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="PRCN"** Precondition (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32124).
 - b. **SHALL** contain exactly one [1..1] [Precondition for Substance Administration \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09) (CONF:1098-32125).

Figure 83: Planned Immunization Activity

```
<substanceAdministration classCode="SBADM" moodCode="INT">
  <!-- Planned Immunization Activity -->
  <templateId root="2.16.840.1.113883.10.20.22.4.120" />
  <id root="81505d5e-2305-42b3-9273-f579d622000d" />
  <statusCode code="active" />
  <effectiveTime xsi:type="IVL_TS" value="20131115" />
  <repeatNumber value="1" />
  <routeCode code="IM" codeSystem="2.16.840.1.113883.5.112"
codeSystemName="RouteOfAdministration" displayName="Intramuscular injection" />
  <consumable>
    <!-- Immunization Medication Information (V2) -->
  </consumable>
  <performer>
    ...
  </performer>
  <author>
    <!-- Author Participation -->
  </author>
  <entryRelationship typeCode="REFR">
    <!-- Patient Priority Preference -->
    ...
  </entryRelationship>
  <entryRelationship typeCode="REFR">
    <!-- Provider Priority Preference -->
    ...
  </entryRelationship>
  <entryRelationship typeCode="RSON">
    <!-- Indication (V2) -->
    ...
  </entryRelationship>
  <entryRelationship typeCode="SUBJ">
    <!-- Instruction (V2) -->
    ...
  </entryRelationship>
  <precondition typeCode="PRCN">
    <!-- Precondition for Substance Administration (V2) -->
    ...
  </precondition>
</substanceAdministration>
```

3.50.1 Immunization Order (V3)

[substanceAdministration: identifier
urn:hl7ii:2.16.840.1.113883.10.20.24.3.143:2019-12-01 (open)]

Table 145: Immunization Order (V3) Contexts

| Contained By: | Contains: |
|--|---|
| Patient Data Section QDM (V7) (optional) | Reason (V3) (optional) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Immunization Supply Request (optional) Author (V2) (required) |

This template represents the QDM datatypes: Immunization, Order.

This datatype represents a request by a clinician or appropriately licensed care provider to a pharmacy to provide immunization to a patient.

The moodCode is constrained to “RQO”, an author is required to represent the ordering clinician and an author time/date stamp is required.

QDM Attribute: Author dateTime corresponds to when the order was signed.

QDM Attribute: Active dateTime is the date and time at which an order becomes active (intended to take place), this is represented by effectiveTime. In most cases, this is the same as the author (signed) dateTime, but with advance orders it may be after the signed dateTime. This is represented by effectiveTime.

QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template. Although Reason (V3) is not explicitly contained in every template, it is available for use in any template.

Table 146: Immunization Order (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|--------------|-------------|------------------|----------------------------|---|
| substanceAdministration (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.143:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-28645 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SBADM |
| @moodCode | 1..1 | SHALL | | 4444-28644 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = RQO |
| @negationInd | 0..1 | MAY | | 4444-28647 | |
| templateId | 1..1 | SHALL | | 4444-28627 | |
| @root | 1..1 | SHALL | | 4444-28634 | 2.16.840.1.113883.10.20.24.3.143 |
| @extension | 1..1 | SHALL | | 4444-28923 | 2019-12-01 |
| effectiveTime | 1..1 | SHALL | IVL_TS | 4444-28924 | |
| @value | 1..1 | SHALL | | 4444-29702 | |
| author | 1..1 | SHALL | | 4444-28646 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| participant | 0..* | MAY | | 4444-29714 | |
| @typeCode | 1..1 | SHALL | | 4444-29722 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29715 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29716 | |
| @typeCode | 1..1 | SHALL | | 4444-29723 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29717 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29720 | |
| @typeCode | 1..1 | SHALL | | 4444-29725 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29721 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444- | |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|---|
| | | | | 29718 | |
| @typeCode | 1..1 | SHALL | | 4444-29724 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29719 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |
| entryRelationship | 0..* | MAY | | 4444-28626 | |
| @typeCode | 1..1 | SHALL | | 4444-28641 | RSON |
| observation | 1..1 | SHALL | | 4444-28633 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) |
| entryRelationship | 0..1 | MAY | | 4444-29700 | |
| @typeCode | 1..1 | SHALL | | 4444-29703 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = REFR |
| supply | 1..1 | SHALL | | 4444-29704 | Immunization Supply Request (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.167:2019-12-01) |

1. Conforms to [Planned Immunization Activity](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.120).
2. **SHALL** contain exactly one [1..1] **@classCode**="SBADM" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-28645).
3. **SHALL** contain exactly one [1..1] **@moodCode**="RQO" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-28644).
4. **MAY** contain zero or one [0..1] **@negationInd** (CONF:4444-28647).
Note: QDM Attribute: Negation Rationale - negationInd="true" indicates Immunization Not Order
 - a. If **@negationInd="true"** is present, **SHALL** contain one [1..1] entryRelationship such that it contains exactly one [1..1] **Reason (V3)** to state the reason for **Immunization Not Order** (CONF:4444-29701).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-28627) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.143" (CONF:4444-28634).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-28923).
6. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4444-28924).
Note: QDM Attribute: Active dateTime - the date and time at which an order becomes active
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **@value** (CONF:4444-29702).

7. **SHALL** contain exactly one [1..1] [Author \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-28646).
Note: QDM Attribute: Author dateTime – the time the order was signed
8. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29714).
Note: QDM Attribute: Requester
 - a. The participant, if present, **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29722).
 - b. The participant, if present, **SHALL** contain exactly one [1..1] [Entity Practitioner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29715).
9. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29716).
Note: QDM Attribute: Requester
 - a. The participant, if present, **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29723).
 - b. The participant, if present, **SHALL** contain exactly one [1..1] [Entity Organization](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29717).
10. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29720).
Note: QDM Attribute: Requester
 - a. The participant, if present, **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29725).
 - b. The participant, if present, **SHALL** contain exactly one [1..1] [Entity Patient](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29721).
11. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29718).
Note: QDM Attribute: Requester
 - a. The participant, if present, **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29724).
 - b. The participant, if present, **SHALL** contain exactly one [1..1] [Entity Care Partner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29719).
12. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:4444-28626) such that it
Note: QDM Attribute: Reason
 - a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has reason (CONF:4444-28641).
 - b. **SHALL** contain exactly one [1..1] [Reason \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-28633).
13. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-29700) such that it
Note: QDM Attribute: Supply
 - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29703).

- b. **SHALL** contain exactly one [1..1] [Immunization Supply Request](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.167:2019-12-01) (CONF:4444-29704).

Figure 84: Immunization Order (V3) Example

```
<substanceAdministration classCode="SBADM" moodCode="RQO">
  <!-- Conforms to C-CDA R2.1 Planned Immunization Activity -->
  <templateId root="2.16.840.1.113883.10.20.22.4.120"/>
  <!-- Immunization Order (V3) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.143" extension="2019-12-01"/>
  <id root="9a5f4d94-ccad-4d57-80ea-27737545c7bb"/>
  <statusCode code="active"/>
  <!-- Active dateTime: the date and time at which an order becomes active (intended to
take place)-->
  <effectiveTime value="20190708"/>
  <!-- QDM Attribute: Route -->
  <routeCode code="IM" codeSystem="2.16.840.1.113883.5.112"
codeSystemName="RouteOfAdministration" displayName="Intramuscular injection"/>
  <!-- QDM Attribute: Dose -->
  <doseQuantity value="1"/>
  <consumable>
    <manufacturedProduct classCode="MANU">
      <!-- Conforms to C-CDA R2.1 Immunization Medication Information (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.54" extension="2014-06-09"/>
      <id root="37bfe02a-3e97-4bd6-9197-bbd0ed0de79e"/>
      <manufacturedMaterial>
        <code code="33" codeSystem="2.16.840.1.113883.12.292"
displayName="Pneumococcal polysaccharide vaccine" codeSystemName="CVX"/>
        <lotNumberText>1</lotNumberText>
      </manufacturedMaterial>
    </manufacturedProduct>
  </consumable>
  <author>
    <templateId root="2.16.840.1.113883.10.20.24.3.155" extension="2019-12-01"/>
    <time value="201907081130"/>
    <assignedAuthor>
      <id nullFlavor="NA"/>
    </assignedAuthor>
  </author>
</substanceAdministration>
```

3.51 Planned Medication Activity (V2)

[substanceAdministration: identifier
urn:hl7ii:2.16.840.1.113883.10.20.22.4.42:2014-06-09 (open)]

Table 147: Planned Medication Activity (V2) Contexts

| Contained By: | Contains: |
|---------------|--|
| | Indication (V2) (optional) Medication Information (V2) (required) Priority Preference (optional) |

| Contained By: | Contains: |
|---------------|---|
| | Instruction (V2) (optional) Author Participation (optional) Precondition for Substance Administration (V2) (optional) |

This template represents planned medication activities. The priority of the medication activity to the patient and provider is communicated through Priority Preference. The effectiveTime indicates the time when the medication activity is intended to take place. The authorTime indicates when the documentation of the plan occurred.

Table 148: Planned Medication Activity (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|---|
| substanceAdministration (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.42:2014-06-09) | | | | | |
| @classCode | 1..1 | SHALL | | 1098-8572 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SBADM |
| @moodCode | 1..1 | SHALL | | 1098-8573 | urn:oid:2.16.840.1.113883.11.20.9.24 (Planned moodCode (SubstanceAdministration/Supply)) |
| templateId | 1..1 | SHALL | | 1098-30465 | |
| @root | 1..1 | SHALL | | 1098-30466 | 2.16.840.1.113883.10.20.22.4.42 |
| @extension | 1..1 | SHALL | | 1098-32557 | 2014-06-09 |
| id | 1..* | SHALL | | 1098-8575 | |
| statusCode | 1..1 | SHALL | | 1098-32087 | |
| @code | 1..1 | SHALL | | 1098-32088 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = active |
| effectiveTime | 1..1 | SHALL | IVL_TS | 1098-30468 | |
| @value | 0..1 | SHOULD | | 1098-32944 | |
| low | 0..1 | SHOULD | | 1098-32948 | |
| high | 0..1 | MAY | | 1098-32949 | |
| effectiveTime | 1..1 | SHOULD | | 1098-32943 | |
| @operator | 1..1 | SHALL | | 1098-32945 | A |
| repeatNumber | 0..1 | MAY | | 1098-32066 | |
| routeCode | 0..1 | MAY | | 1098-32067 | urn:oid:2.16.840.1.113883.3.88.12.3221.8.7 (SPL Drug Route of Administration Terminology) |
| translation | 0..* | SHOULD | | 1098-32952 | urn:oid:2.16.840.1.113762.1.4.1099.12 (Medication Route) |
| approachSiteCode | 0..* | MAY | | 1098-32078 | urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 (Body Site Value Set) |
| doseQuantity | 0..1 | MAY | | 1098-32068 | |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|------------------------|-------|--------|-----------|----------------------------|--|
| @unit | 0..1 | SHOULD | | 1098-32133 | urn:oid:2.16.840.1.113883.1.11.12839 (UnitsOfMeasureCaseSensitive) |
| rateQuantity | 0..1 | MAY | | 1098-32079 | |
| @unit | 0..1 | SHOULD | | 1098-32134 | urn:oid:2.16.840.1.113883.1.11.12839 (UnitsOfMeasureCaseSensitive) |
| maxDoseQuantity | 0..1 | MAY | | 1098-32080 | |
| administrationUnitCode | 0..1 | MAY | | 1098-32081 | urn:oid:2.16.840.1.113762.1.4.1021.30 (AdministrationUnitDoseForm) |
| consumable | 1..1 | SHALL | | 1098-32082 | |
| manufacturedProduct | 1..1 | SHALL | | 1098-32083 | Medication Information (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09) |
| performer | 0..* | MAY | | 1098-30470 | |
| author | 0..1 | SHOULD | | 1098-32046 | Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) |
| entryRelationship | 0..* | MAY | | 1098-31104 | |
| @typeCode | 1..1 | SHALL | | 1098-31105 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| observation | 1..1 | SHALL | | 1098-31106 | Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) |
| entryRelationship | 0..* | MAY | | 1098-32069 | |
| @typeCode | 1..1 | SHALL | | 1098-32070 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 1098-32071 | Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) |
| entryRelationship | 0..* | MAY | | 1098-32072 | |
| @typeCode | 1..1 | SHALL | | 1098-32073 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--------------|-------|-------|-----------|----------------------------|---|
| act | 1..1 | SHALL | | 1098-32074 | Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) |
| precondition | 0..* | MAY | | 1098-32084 | |
| @typeCode | 1..1 | SHALL | | 1098-32085 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = PRCN |
| criterion | 1..1 | SHALL | | 1098-32086 | Precondition for Substance Administration (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09) |

1. **SHALL** contain exactly one [1..1] **@classCode**="SBADM" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8572).
2. **SHALL** contain exactly one [1..1] **@moodCode**, which **SHALL** be selected from ValueSet [Planned moodCode \(SubstanceAdministration/Supply\)](#) urn:oid:2.16.840.1.113883.11.20.9.24 **STATIC** 2011-09-30 (CONF:1098-8573).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-30465) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.42" (CONF:1098-30466).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32557).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-8575).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-32087).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="active" Active (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1098-32088).

The effectiveTime in a planned medication activity represents the time that the medication activity should occur.

6. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-30468) such that it

Note: This effectiveTime represents either the medication duration (i.e., the time the medication should be started and stopped) or the timestamp when the single-administration should occur.

 - a. **SHOULD** contain zero or one [0..1] **@value** (CONF:1098-32944).
Note: indicates a single-administration timestamp
 - b. **SHOULD** contain zero or one [0..1] **low** (CONF:1098-32948).
Note: indicates when medication started
 - c. **MAY** contain zero or one [0..1] **high** (CONF:1098-32949).
Note: indicates when medication stopped
 - d. This effectiveTime **SHALL** contain either a low or a **@value** but not both (CONF:1098-32947).

The effectiveTime in a planned medication activity represents the time that the medication activity should occur.

7. **SHOULD** contain exactly one [1..1] **effectiveTime** (CONF:1098-32943) such that it
 - a. **SHALL** contain exactly one [1..1] **@operator="A"** (CONF:1098-32945).
 - b. **SHALL** contain exactly one [1..1] **@xsi:type="PIVL_TS" or "EIVL_TS"** (CONF:1098-32946).

In a Planned Medication Activity, repeatNumber defines the number of allowed administrations. For example, a repeatNumber of "3" means that the substance can be administered up to 3 times.

8. **MAY** contain zero or one [0..1] **repeatNumber** ([CONF:1098-32066](#)).
Note: QDM Attribute: Refills
9. **MAY** contain zero or one [0..1] **routeCode**, which **SHALL** be selected from ValueSet [SPL Drug Route of Administration Terminology](#) urn:oid:2.16.840.1.113883.3.88.12.3221.8.7 **DYNAMIC** ([CONF:1098-32067](#)).
Note: QDM Attribute: Route
 - a. The routeCode, if present, **SHOULD** contain zero or more [0..*] **translation**, which **SHALL** be selected from ValueSet [Medication Route](#) urn:oid:2.16.840.1.113762.1.4.1099.12 **DYNAMIC** (CONF:1098-32952).
10. **MAY** contain zero or more [0..*] **approachSiteCode**, which **SHALL** be selected from ValueSet [Body Site Value Set](#) urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 **DYNAMIC** (CONF:1098-32078).
11. **MAY** contain zero or one [0..1] **doseQuantity** ([CONF:1098-32068](#)).
Note: QDM Attribute: Dosage
 - a. The doseQuantity, if present, **SHOULD** contain zero or one [0..1] **@unit**, which **SHALL** be selected from ValueSet [UnitsOfMeasureCaseSensitive](#) urn:oid:2.16.840.1.113883.1.11.12839 **DYNAMIC** (CONF:1098-32133).
12. **MAY** contain zero or one [0..1] **rateQuantity** (CONF:1098-32079).
 - a. The rateQuantity, if present, **SHOULD** contain zero or one [0..1] **@unit**, which **SHALL** be selected from ValueSet [UnitsOfMeasureCaseSensitive](#) urn:oid:2.16.840.1.113883.1.11.12839 **DYNAMIC** (CONF:1098-32134).
13. **MAY** contain zero or one [0..1] **maxDoseQuantity** (CONF:1098-32080).
14. **MAY** contain zero or one [0..1] **administrationUnitCode**, which **SHALL** be selected from ValueSet [AdministrationUnitDoseForm](#) urn:oid:2.16.840.1.113762.1.4.1021.30 **DYNAMIC** (CONF:1098-32081).
15. **SHALL** contain exactly one [1..1] **consumable** (CONF:1098-32082).
 - a. This consumable **SHALL** contain exactly one [1..1] [Medication Information \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09) (CONF:1098-32083).

The clinician who is expected to perform the medication activity could be identified using substanceAdministration/performer.

16. **MAY** contain zero or more [0..*] **performer** (CONF:1098-30470).

The author in a planned medication activity represents the clinician who is requesting or planning the medication activity.

17. **SHOULD** contain zero or one [0..1] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-32046).

The following entryRelationship represents the priority that a patient or a provider places on the planned medication activity.

18. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31104) such that it
- SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31105).
 - SHALL** contain exactly one [1..1] [Priority Preference](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) (CONF:1098-31106).

The following entryRelationship represents the indication for the planned medication activity.

19. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32069) such that it
- SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32070).
 - SHALL** contain exactly one [1..1] [Indication \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) (CONF:1098-32071).

The following entryRelationship captures any instructions associated with the planned medication activity.

20. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32072) such that it
- SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** Has Subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32073).
 - SHALL** contain exactly one [1..1] [Instruction \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) (CONF:1098-32074).
21. **MAY** contain zero or more [0..*] **precondition** (CONF:1098-32084).
- The precondition, if present, **SHALL** contain exactly one [1..1] **@typeCode="PRCN"** Precondition (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32085).
 - The precondition, if present, **SHALL** contain exactly one [1..1] [Precondition for Substance Administration \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09) (CONF:1098-32086).

Figure 85: Planned Medication Activity (V2) Example

```
<substanceAdministration moodCode="INT" classCode="SBADM">
  <templateId root="2.16.840.1.113883.10.20.22.4.42" extension="2014-06-09" />
  <!-- Planned Medication Activity (V2)-->
  <id root="cdbc33f0-6cde-11db-9fe1-0800200c9a66" />
  <text>Heparin 0.25 ml Prefilled Syringe</text>
  <statusCode code="active" />
  <!-- The effectiveTime in a planned medication activity
       represents the time that the medication activity should occur. -->
  <effectiveTime value="20130905" />
  <consumable>
    <manufacturedProduct classCode="MANU">
      <!-- Medication Information (V2) -->
      ...
    </manufacturedProduct>
  </consumable>
  <entryRelationship typeCode="REFR">
    <observation classCode="OBS" moodCode="EVN">
      <!-- Patient Priority Preference-->
      ...
    </observation>
  </entryRelationship>
  <entryRelationship typeCode="REFR">
    <observation classCode="OBS" moodCode="EVN">
      <!-- Provider Priority Preference-->
      ...
    </observation>
  </entryRelationship>
  <entryRelationship typeCode="RSON">
    <!-- Indication (V2) -->
    ...
  </entryRelationship>
  <entryRelationship typeCode="SUBJ">
    <!-- Instruction (V2) -->
    ...
  </entryRelationship>
</substanceAdministration>
```

3.51.1 Medication Order (V6)

[substanceAdministration: identifier
urn:hl7ii:2.16.840.1.113883.10.20.24.3.47:2019-12-01 (open)]

Table 149: Medication Order (V6) Contexts

| Contained By: | Contains: |
|--|--|
| Patient Data Section QDM (V7) (optional) | Reason (V3) (optional) Days Supplied (optional) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Medication Supply Request (V3) (optional) Author (V2) (required) |

This template represents the QDM datatypes: Medication, Order and Substance, Order.

This datatype represents a request by a clinician or appropriately licensed care provider to a pharmacy to provide medication to a patient. The request is in the form of prescriptions or other medication orders with detail adequate for correct filling and administration. This template is broader than a pharmacy supply order and may include a supply order.

The moodCode is constrained to "RQO", an author is required to represent the ordering clinician and an author time/date stamp is required.

QDM Attribute: Author dateTime corresponds to when the order was signed.

QDM Attribute: Relevant Period. Relevant Period startTime is when the first administration of the medication is expected. The first administration may be expected at the time of the order or at a specified future date (i.e., the active time for the order); such information should be identified in the medication order. If the startTime is not specified in the order, the startTime defaults to the Author dateTime (the time the order is signed). The stopTime is when the medication supply provided by the medication order is expected to be completed, including all fulfillments covered by the number of refills.

QDM Attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template.

Table 150: Medication Order (V6) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|---|
| substanceAdministration (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.47:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-27377 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SBADM |
| @moodCode | 1..1 | SHALL | | 4444-12639 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = RQO |
| @negationInd | 0..1 | MAY | | 4444-28084 | |
| templateId | 1..1 | SHALL | | 4444-12585 | |
| @root | 1..1 | SHALL | | 4444-12586 | 2.16.840.1.113883.10.20.24.3.47 |
| @extension | 1..1 | SHALL | | 4444-27089 | 2019-12-01 |
| effectiveTime | 1..1 | SHALL | IVL_TS | 4444-27740 | |
| low | 1..1 | SHALL | | 4444-27742 | |
| high | 1..1 | SHALL | | 4444-29901 | |
| effectiveTime | 0..1 | MAY | | 4444-27741 | |
| @operator | 1..1 | SHALL | | 4444-28914 | A |
| author | 1..1 | SHALL | | 4444-27745 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29900 | |
| @typeCode | 1..1 | SHALL | | 4444-29232 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC |
| participantRole | 1..1 | SHALL | | 4444-29227 | |
| code | 1..1 | SHALL | | 4444-29233 | |
| participant | 0..* | MAY | | 4444-29902 | |
| @typeCode | 1..1 | SHALL | | 4444-29911 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29903 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444- | |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|---|
| | | | | 29908 | |
| @typeCode | 1..1 | SHALL | | 4444-29914 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29909 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29906 | |
| @typeCode | 1..1 | SHALL | | 4444-29913 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29907 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29904 | |
| @typeCode | 1..1 | SHALL | | 4444-29912 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29905 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |
| entryRelationship | 0..* | MAY | | 4444-28008 | |
| @typeCode | 1..1 | SHALL | | 4444-28009 | RSON |
| observation | 1..1 | SHALL | | 4444-28010 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) |
| entryRelationship | 0..1 | MAY | | 4444-29228 | |
| @typeCode | 1..1 | SHALL | | 4444-29234 | REFR |
| supply | 1..1 | SHALL | | 4444-29229 | Days Supplied (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.157:2018-10-01) |
| entryRelationship | 0..1 | MAY | | 4444-29230 | |
| @typeCode | 1..1 | SHALL | | 4444-29235 | COMP |
| supply | 1..1 | SHALL | | 4444-29231 | Medication Supply Request (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.99:2019-12-01) |

1. Conforms to [Planned Medication Activity \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.42:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="SBADM" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-27377).
3. **SHALL** contain exactly one [1..1] **@moodCode**="RQO" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-12639).
4. **MAY** contain zero or one [0..1] **@negationInd** (CONF:4444-28084).
Note: QDM Attribute: Negation Rationale - negationInd="true" indicates Medication Not Order
 - a. If **@negationInd**="true" is present, **SHALL** contain one [1..1] entryRelationship such that it contains exactly one [1..1] **Reason (V3)** to state the reason for **Medication Not Order** (CONF:4444-29910).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-12585) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.47" (CONF:4444-12586).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-27089).
6. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4444-27740) such that it
Note: QDM Attribute: Relevant Period
 - a. **SHALL** contain exactly one [1..1] **low** (CONF:4444-27742).
Note: startTime = when the first administration of the medication is expected. The first administration may be expected at the time of the order or at a specified future date (i.e., the active time for the order); such information should be identified in the medication order. If the startTime is not specified in the order, the startTime defaults to the Author dateTime (the time the order is signed).
 - b. **SHALL** contain exactly one [1..1] **high** (CONF:4444-29901).
Note: stopTime = when the medication supply provided by the medication order is expected to be completed, including all fulfillments covered by the number of refills.
7. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:4444-27741) such that it
Note: QDM Attribute: Frequency - e.g., administration times per day
 - a. **SHALL** contain exactly one [1..1] **@operator**="A" (CONF:4444-28914).
 - b. **SHALL** contain exactly one [1..1] **@xsi:type**="PIVL_TS" or "EIVL_TS" (CONF:4444-28915).
8. **SHALL** contain exactly one [1..1] [Author \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-27745).
Note: QDM Attribute: Author dateTime – the time the order was signed; QDM Attribute: prescriberId is represented using author/assignedAuthor/id
9. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29900) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="LOC" location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29232).
 - b. **SHALL** contain exactly one [1..1] **participantRole** (CONF:4444-29227).
 - i. This participantRole **SHALL** contain exactly one [1..1] **code** (CONF:4444-29233).
Note: QDM Attribute:Setting - Where the medication is expected to be consumed or administered.

10. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29902) such that it
 Note: QDM Attribute: Prescriber
- SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29911).
 - SHALL** contain exactly one [1..1] **Entity Practitioner** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29903).
11. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29908) such that it
 Note: QDM Attribute: Prescriber
- SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29914).
 - SHALL** contain exactly one [1..1] **Entity Organization** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29909).
12. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29906) such that it
 Note: QDM Attribute: Prescriber
- SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29913).
 - SHALL** contain exactly one [1..1] **Entity Patient** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29907).
13. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29904) such that it
 Note: QDM Attribute: Prescriber
- SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29912).
 - SHALL** contain exactly one [1..1] **Entity Care Partner** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29905).
14. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:4444-28008) such that it
 Note: QDM Attribute: Reason
- SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has reason (CONF:4444-28009).
 - SHALL** contain exactly one [1..1] **Reason (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-28010).
15. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-29228) such that it
 Note: QDM Attribute: Days Supplied
- SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CONF:4444-29234).
 - SHALL** contain exactly one [1..1] **Days Supplied** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.157:2018-10-01) (CONF:4444-29229).
16. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-29230) such that it
 Note: QDM Attribute: Supply
- SHALL** contain exactly one [1..1] **@typeCode="COMP"** Component of (CONF:4444-29235).

- b. **SHALL** contain exactly one [1..1] [Medication Supply Request \(V3\)](#)
 (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.99:2019-12-01)
 (CONF:4444-29231).

Figure 86: Medication Order (V6) Example

```

<substanceAdministration classCode="SBADM" moodCode="RQO">
  <!-- Conforms to C-CDA R2.1 Planned Medication Activity (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.42" extension="2014-06-09"/>
  <!-- Medication Order (V6) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.47" extension="2019-12-01"/>
  <id root="9a5f4d94-ccad-4d57-80ea-27737545c7bb"/>
  <text>Medication active: 0.09 MG/ACTUAT inhalant solution, 2 puffs QID PRN
wheezing</text>
  <statusCode code="active"/>
  <effectiveTime xsi:type="IVL_TS">
    <low value="20190408"/>
    <high value="20190608"/>
  </effectiveTime>
  <!-- QDM Attribute: Frequency -->
  <effectiveTime xsi:type="PIVL_TS" institutionSpecified="true" operator="A">
    <period value="6" unit="h"/>
  </effectiveTime>
  <!-- QDM Attribute: Refill -->
  <repeatNumber value="2"/>
  <!-- QDM Attribute: Route -->
  <routeCode code="C38216" codeSystem="2.16.840.1.113883.3.26.1.1" codeSystemName="NCI
Thesaurus" displayName="RESPIRATORY (INHALATION)"/>
  <!-- QDM Attribute: Dose -->
  <doseQuantity value="1"/>
  <consumable>
    <manufacturedProduct classCode="MANU">
      <!-- Conforms to C-CDA R2.1 Medication Information (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.23" extension="2014-06-09"/>
      <id root="37bfe02a-3e97-4bd6-9197-bbd0ed0de79e"/>
      <manufacturedMaterial>
        <code code="329498" codeSystem="2.16.840.1.113883.6.88"
codeSystemName="RxNorm" displayName="Albuterol 0.09 MG/ACTUAT inhalant solution"/>
      </manufacturedMaterial>
    </manufacturedProduct>
  </consumable>
  <author>
    <templateId root="2.16.840.1.113883.10.20.24.3.155" extension="2019-12-01"/>
    <time value="201904081130"/>
    <assignedAuthor>
      <id nullFlavor="NA"/>
    </assignedAuthor>
  </author>
</substanceAdministration>

```


3.51.2 Substance Recommended (V5)

[substanceAdministration: identifier
urn:hl7ii:2.16.840.1.113883.10.20.24.3.75:2019-12-01 (open)]

Table 151: Substance Recommended (V5) Contexts

| Contained By: | Contains: |
|--|---|
| Patient Data Section QDM (V7) (optional) | Reason (V3) (optional) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Author (V2) (required) |

This template represents the QDM datatype: Substance, Recommended.

This Substance Recommended template represents a material or consumable that is not considered a clinical drug, such as infant formula, breast milk, other enteral feeding, or a non-prescription lotion or ointment.

The moodCode is constrained to "INT", an author is required to represent the recommending clinician and an author time/date stamp is required.

QDM Attribute: Author dateTime corresponds to when the recommendation was signed. The time the activity is recommended to take place is represented by effectiveTime.

QDM Attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template.

Table 152: Substance Recommended (V5) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|---|
| substanceAdministration (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.75:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-27495 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SBADM |
| @moodCode | 1..1 | SHALL | | 4444-13784 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = INT |
| @negationInd | 0..1 | MAY | | 4444-28112 | |
| templateId | 1..1 | SHALL | | 4444-13785 | |
| @root | 1..1 | SHALL | | 4444-13786 | 2.16.840.1.113883.10.20.24.3.75 |
| @extension | 1..1 | SHALL | | 4444-27152 | 2019-12-01 |
| effectiveTime | 0..1 | MAY | | 4444-28942 | |
| @operator | 1..1 | SHALL | | 4444-29509 | A |
| consumable | 1..1 | SHALL | | 4444-27988 | |
| manufacturedProduct | 1..1 | SHALL | | 4444-27989 | |
| manufacturedMaterial | 1..1 | SHALL | | 4444-27990 | |
| code | 1..1 | SHALL | | 4444-27991 | |
| author | 1..1 | SHALL | | 4444-27720 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| participant | 0..* | MAY | | 4444-29510 | |
| @typeCode | 1..1 | SHALL | | 4444-29518 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29511 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29512 | |
| @typeCode | 1..1 | SHALL | | 4444-29519 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29513 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|---|
| participant | 0..1 | MAY | | 4444-29516 | |
| @typeCode | 1..1 | SHALL | | 4444-29521 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29517 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29514 | |
| @typeCode | 1..1 | SHALL | | 4444-29520 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29515 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |
| entryRelationship | 0..* | MAY | | 4444-13867 | |
| @typeCode | 1..1 | SHALL | | 4444-13868 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 4444-13869 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) |

1. Conforms to [Planned Medication Activity \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.42:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="SBADM" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-27495).
3. **SHALL** contain exactly one [1..1] **@moodCode**="INT" intent (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-13784).
4. **MAY** contain zero or one [0..1] **@negationInd** (CONF:4444-28112).
Note: QDM Attribute: Negation Rationale - negationInd="true" indicates Substance Not Recommended
 - a. If **@negationInd**="true" is present, **SHALL** contain one [1..1] entryRelationship such that it contains exactly one [1..1] **Reason (V3)** to state the reason for **Substance Not Recommended** (CONF:4444-29832).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-13785) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.75" (CONF:4444-13786).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-27152).
6. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:4444-28942) such that it
Note: QDM Attribute: Frequency - e.g., administration times per day
 - a. **SHALL** contain exactly one [1..1] **@operator**="A" (CONF:4444-29509).

- b. **SHALL** contain exactly one [1..1] `@xsi:type="PIVL_TS" or "EIVL_TS"` (CONF:4444-28944).
- 7. **SHALL** contain exactly one [1..1] **consumable** (CONF:4444-27988).
 - a. This consumable **SHALL** contain exactly one [1..1] **manufacturedProduct** (CONF:4444-27989).
 - i. This manufacturedProduct **SHALL** contain exactly one [1..1] **manufacturedMaterial** (CONF:4444-27990).
 - 1. This manufacturedMaterial **SHALL** contain exactly one [1..1] **code** (CONF:4444-27991).
Note: QDM Attribute: Code
- 8. **SHALL** contain exactly one [1..1] Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-27720).
Note: QDM Attribute: Author dateTime - the time the recommendation was authored
- 9. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29510) such that it
Note: QDM Attribute: Requester
 - a. **SHALL** contain exactly one [1..1] `@typeCode="PRF"` (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29518).
 - b. **SHALL** contain exactly one [1..1] Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29511).
- 10. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29512) such that it
Note: QDM Attribute: Requester
 - a. **SHALL** contain exactly one [1..1] `@typeCode="PRF"` (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29519).
 - b. **SHALL** contain exactly one [1..1] Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29513).
- 11. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29516) such that it
Note: QDM Attribute: Requester
 - a. **SHALL** contain exactly one [1..1] `@typeCode="PRF"` (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29521).
 - b. **SHALL** contain exactly one [1..1] Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29517).
- 12. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29514) such that it
Note: QDM Attribute: Requester
 - a. **SHALL** contain exactly one [1..1] `@typeCode="PRF"` (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29520).
 - b. **SHALL** contain exactly one [1..1] Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29515).
- 13. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:4444-13867) such that it
Note: QDM Attribute: Reason

- a. **SHALL** contain exactly one [1..1] @**typeCode**="RSON" has reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-13868).
- b. **SHALL** contain exactly one [1..1] [Reason \(V3\)](#) (identifier: urn:h17ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-13869).

Figure 87: Substance Recommended (V5) Example

```

<substanceAdministration classCode="SBADM" moodCode="INT">
  <!-- Conforms to C-CDA R2.1 Planned Medication Activity (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.42" extension="2014-06-09"/>
  <!-- Substance Recommended (V5) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.75" extension="2019-12-01"/>
  <id root="df154906-9aaa-4651-a244-412cef74b8d5"/>
  <text>Substance Recommended: Dietary fiber</text>
  <statusCode code="active"/>
  <effectiveTime value="201904081130"/>
  <effectiveTime xsi:type="PIVL_TS" operator="A">
    <period value="8" unit="h"/>
  </effectiveTime>
  <consumable>
    <manufacturedProduct classCode="MANU">
      <!-- Conforms to C-CDA R2.1 Medication Information (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.23" extension="2014-06-09"/>
      <id root="39e2bc57-295f-4c81-82dd-38ede1463830"/>
      <manufacturedMaterial>
        <code code="116272000" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED" displayName="Dietary Fiber" />
        </manufacturedMaterial>
        <manufacturerOrganization>
          <name>Medication Factory Inc.</name>
        </manufacturerOrganization>
      </manufacturedProduct>
    </consumable>
  <author>
    <templateId root="2.16.840.1.113883.10.20.24.3.155" extension="2019-12-01"/>
    <time value="201904081130"/>
    <assignedAuthor>
      <id nullFlavor="NA"/>
    </assignedAuthor>
  </author>
  <!-- QDM Attribute: Reason -->
  <entryRelationship typeCode="RSON">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.24.3.88" extension="2017-08-01"/>
      ...
    </observation>
  </entryRelationship>
</substanceAdministration>

```

3.52 Planned Observation (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.44:2014-06-09 (open)]

Table 153: Planned Observation (V2) Contexts

| Contained By: | Contains: |
|---------------|---|
| | Indication (V2) (optional) Priority Preference (optional) Instruction (V2) (optional) Author Participation (optional) Planned Coverage (optional) |

This template represents planned observations that result in new information about the patient which cannot be classified as a procedure according to the HL7 RIM, i.e., procedures alter the patient's body. Examples of these observations are laboratory tests, diagnostic imaging tests, EEGs, and EKGs. The importance of the planned observation to the patient and provider is communicated through Priority Preference. The effectiveTime indicates the time when the observation is intended to take place and authorTime indicates when the documentation of the plan occurred. The Planned Observation template may also indicate the potential insurance coverage for the observation.

Table 154: Planned Observation (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.44:2014-06-09) | | | | | |
| @classCode | 1..1 | SHALL | | 1098-8581 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 1098-8582 | urn:oid:2.16.840.1.113883.11.20.9.25 (Planned moodCode (Observation)) |
| templateId | 1..1 | SHALL | | 1098-30451 | |
| @root | 1..1 | SHALL | | 1098-30452 | 2.16.840.1.113883.10.20.22.4.44 |
| @extension | 1..1 | SHALL | | 1098-32555 | 2014-06-09 |
| id | 1..* | SHALL | | 1098-8584 | |
| code | 1..1 | SHALL | | 1098-31030 | urn:oid:2.16.840.1.113883.6.1 (LOINC) |
| statusCode | 1..1 | SHALL | | 1098-30453 | |
| @code | 1..1 | SHALL | | 1098-32032 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = active |
| effectiveTime | 0..1 | SHOULD | | 1098-30454 | |
| value | 0..1 | MAY | | 1098-31031 | |
| methodCode | 0..1 | MAY | | 1098-32043 | |
| targetSiteCode | 0..* | SHOULD | | 1098-32044 | urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 (Body Site Value Set) |
| performer | 0..* | MAY | | 1098-30456 | |
| author | 0..* | SHOULD | | 1098-32033 | Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) |
| entryRelationship | 0..* | MAY | | 1098-31073 | |
| @typeCode | 1..1 | SHALL | | 1098-31074 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| observation | 1..1 | SHALL | | 1098-31075 | Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) |
| entryRelationship | 0..* | MAY | | 1098-32034 | |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|---|
| @typeCode | 1..1 | SHALL | | 1098-32035 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 1098-32036 | Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) |
| entryRelationship | 0..* | MAY | | 1098-32037 | |
| @typeCode | 1..1 | SHALL | | 1098-32038 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ |
| act | 1..1 | SHALL | | 1098-32039 | Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) |
| entryRelationship | 0..* | MAY | | 1098-32040 | |
| @typeCode | 1..1 | SHALL | | 1098-32041 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| act | 1..1 | SHALL | | 1098-32042 | Planned Coverage (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.129) |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8581).
2. **SHALL** contain exactly one [1..1] **@moodCode**, which **SHALL** be selected from ValueSet [Planned moodCode \(Observation\)](#) urn:oid:2.16.840.1.113883.11.20.9.25 **STATIC** 2011-09-30 (CONF:1098-8582).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-30451) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.44" (CONF:1098-30452).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32555).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-8584).
5. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from CodeSystem LOINC (urn:oid:2.16.840.1.113883.6.1) (CONF:1098-31030).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-30453).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="active" Active (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1098-32032).

The effectiveTime in a planned observation represents the time that the observation should occur.

7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-30454).
8. **MAY** contain zero or one [0..1] **value** (CONF:1098-31031).

In a planned observation the provider may suggest that an observation should be performed using a particular method.

9. **MAY** contain zero or one [0..1] **methodCode** (CONF:1098-32043).

The **targetSiteCode** is used to identify the part of the body of concern for the planned observation.

10. **SHOULD** contain zero or more [0..*] **targetSiteCode**, which **SHALL** be selected from ValueSet [Body Site Value Set](#) urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 **DYNAMIC** (CONF:1098-32044).

The clinician who is expected to perform the observation could be identified using procedure/performer.

11. **MAY** contain zero or more [0..*] **performer** (CONF:1098-30456).

The author in a planned observation represents the clinician who is requesting or planning the observation.

12. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-32033).

The following entryRelationship represents the priority that a patient or a provider places on the observation.

13. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31073) such that it

- SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31074).
- SHALL** contain exactly one [1..1] [Priority Preference](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) (CONF:1098-31075).

The following entryRelationship represents the indication for the observation.

14. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32034) such that it

- SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32035).
- SHALL** contain exactly one [1..1] [Indication \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) (CONF:1098-32036).

The following entryRelationship captures any instructions associated with the planned observation.

15. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32037) such that it

- SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** Has subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32038).
- SHALL** contain exactly one [1..1] [Instruction \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) (CONF:1098-32039).

The following entryRelationship represents the insurance coverage the patient may have for the observation.

16. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32040) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** Has Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32041).
 - b. **SHALL** contain exactly one [1..1] **Planned Coverage** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.129) (CONF:1098-32042).

Figure 88: Planned Observation (V2) Example

```
<observation classCode="OBS" moodCode="INT">
  <templateId root="2.16.840.1.113883.10.20.22.4.44"
    extension="2014-06-09" />
  <id root="b52bee94-c34b-4e2c-8c15-5ad9d6def205" />
  <code code="59408-5"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="Oxygen saturation in Arterial blood by Pulse oximetry" />
  <statusCode code="active" />
  <effectiveTime value="20130903" />
  <author typeCode="AUT">
    <!-- Author Participation -->
  </author>
  <entryRelationship typeCode="REFR">
    <!-- Priority Preference -->
    ...
  </entryRelationship>
  <entryRelationship typeCode="RSON">
    <!-- Indication (V2) -->
    ...
  </entryRelationship>
  <entryRelationship typeCode="SUBJ">
    <!-- Instruction (V2) -->
    ...
  </entryRelationship>
  <entryRelationship typeCode="COMP">
    <!-- Planned Coverage -->
    ...
  </entryRelationship>
</observation>
```

3.52.1 Assessment Order (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.158:2019-12-01 (open)]

Table 155: Assessment Order (V2) Contexts

| Contained By: | Contains: |
|--|---|
| Patient Data Section QDM (V7) (optional) | Reason (V3) (optional) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Author (V2) (required) |

This template represents the QDM datatype: Assessment, Order.

Assessment is a resource used to define specific observations that clinicians use to guide treatment of the patient. An assessment can be a single question, or observable entity with an expected response, an organized collection of questions intended to solicit information from patients, providers or other individuals, or a single observable entity that is part of such a collection of questions.

Data elements that meet these criteria using the Assessment, Order data type should document an order by a clinician or appropriately licensed care provider to a patient or an appropriate provider or organization to perform an assessment indicated by the Assessment category and its corresponding value set.

Timing: The time the recommendation is authored (i.e., provided to the patient).

QDM attribute: Author dateTime is represented by author/time and correspond to when the order was authored (i.e., provided to the patient). Orders address the time that the order is authored, a single point in time. Some assessment orders will be addressed as components of a care plan which incorporates the period (or timing) when the order is to be carried out.

For Assessment Not Order, use Author dateTime to reference the timing.

QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template.

Table 156: Assessment Order (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|--------------|-------------|------------------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.158:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-29249 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 4444-29248 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = RQO |
| @negationInd | 0..1 | MAY | | 4444-29250 | |
| templateId | 1..1 | SHALL | | 4444-29241 | |
| @root | 1..1 | SHALL | | 4444-29244 | 2.16.840.1.113883.10.20.24.3.158 |
| @extension | 1..1 | SHALL | | 4444-29245 | 2019-12-01 |
| code | 1..1 | SHALL | | 4444-29246 | |
| author | 1..1 | SHALL | | 4444-29242 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| participant | 0..* | MAY | | 4444-29255 | |
| @typeCode | 1..1 | SHALL | | 4444-29259 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29256 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29253 | |
| @typeCode | 1..1 | SHALL | | 4444-29258 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29254 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29610 | |
| @typeCode | 1..1 | SHALL | | 4444-29612 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29611 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29251 | |
| @typeCode | 1..1 | SHALL | | 4444- | urn:oid:2.16.840.1.113883.5.9 |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|---|
| | | | | 29257 | 0 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29252 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |
| entryRelationship | 0..* | MAY | | 4444-29239 | |
| @typeCode | 1..1 | SHALL | | 4444-29243 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 4444-29240 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) |

1. Conforms to [Planned Observation \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.44:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-29249).
3. **SHALL** contain exactly one [1..1] **@moodCode**="RQO" request (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-29248).
4. **MAY** contain zero or one [0..1] **@negationInd** (CONF:4444-29250).
Note: QDM Attribute: Negation Rationale - when **@negationInd**="true", this indicates Assessment Not Order.
 - a. If **@negationInd**="true" is present, **SHALL** contain one [1..1] entryRelationship such that it contains exactly one [1..1] **Reason (V3)** to state the reason for **Assessment Not Order** (CONF:4444-29565).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-29241) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.158" (CONF:4444-29244).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-29245).
6. **SHALL** contain exactly one [1..1] **code** (CONF:4444-29246).
Note: QDM Attribute: Code
7. **SHALL** contain exactly one [1..1] [Author \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-29242).
Note: QDM Attribute: Author dateTime - the time the order is authored (i.e., provided to the patient)
8. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29255) such that it
Note: QDM Attribute: Requester
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29259).
 - b. **SHALL** contain exactly one [1..1] [Entity Practitioner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29256).

9. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29253) such that it
Note: QDM Attribute: Requester
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29258).
 - b. **SHALL** contain exactly one [1..1] **Entity Organization** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29254).
10. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29610) such that it
Note: QDM Attribute: Requester
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29612).
 - b. **SHALL** contain exactly one [1..1] **Entity Patient** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29611).
11. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29251) such that it
Note: QDM Attribute: Requester
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29257).
 - b. **SHALL** contain exactly one [1..1] **Entity Care Partner** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29252).
12. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:4444-29239) such that it
Note: QDM Attribute: Reason
- a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-29243).
 - b. **SHALL** contain exactly one [1..1] **Reason (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-29240).

Figure 89: Assessment Order (V2) Example

```

<observation classCode="OBS" moodCode="RQO">
  <!-- Conforms to C-CDA R2.1 Planned Observation (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.44" extension="2014-06-09" />
  <!-- Assessment Order -->
  <templateId root="2.16.840.1.113883.10.20.24.3.158" extension="2019-12-01"/>
  <id root="f07d6d5e-cbb3-4306-b572-5d79069ec165" />
  <code code="72195-1" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
  displayName="Physical limitation score [KCCQ]" />
  <text>Assessment Order: Physical limitation score [KCCQ]</text>
  <statusCode code="active" />
  <author>
    <templateId root="2.16.840.1.113883.10.20.24.3.155" extension="2019-12-01"/>
    <time value="201904081130" />
    <assignedAuthor>
      <id nullFlavor="NA"/>
    </assignedAuthor>
  </author>
</observation>

```

3.52.2 Assessment Recommended (V3)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.145:2019-12-01 (open)]

Table 157: Assessment Recommended (V3) Contexts

| Contained By: | Contains: |
|--|---|
| Patient Data Section QDM (V7) (optional) | Reason (V3) (optional) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Author (V2) (required) |

This template represents the QDM datatype: Assessment, Recommended.

Assessment is a resource used to define specific observations that clinicians use to guide treatment of the patient. An assessment can be a single question, or observable entity with an expected response, an organized collection of questions intended to solicit information from patients, providers or other individuals, or a single observable entity that is part of such a collection of questions.

The moodCode is constrained to “INT”, an author is required to represent the recommending clinician and an author time/date stamp is required.

QDM attribute: Author dateTime is represented by author/time and correspond to when the recommendation was authored (i.e., provided to the patient). The time the activity is recommended to take place is represented by effectiveTime.

QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template.

Table 158: Assessment Recommended (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|--------------|-------------|------------------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.145:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-28682 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 4444-28681 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = INT |
| @negationInd | 0..1 | MAY | | 4444-28683 | |
| templateId | 1..1 | SHALL | | 4444-28673 | |
| @root | 1..1 | SHALL | | 4444-28676 | 2.16.840.1.113883.10.20.24.3.145 |
| @extension | 1..1 | SHALL | | 4444-28702 | 2019-12-01 |
| code | 1..1 | SHALL | | 4444-28674 | |
| author | 1..1 | SHALL | | 4444-28680 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| participant | 0..* | MAY | | 4444-29221 | |
| @typeCode | 1..1 | SHALL | | 4444-29226 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29222 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29219 | |
| @typeCode | 1..1 | SHALL | | 4444-29225 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29220 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29217 | |
| @typeCode | 1..1 | SHALL | | 4444-29224 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29218 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29215 | |
| @typeCode | 1..1 | SHALL | | 4444- | urn:oid:2.16.840.1.113883.5.9 |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|---|
| | | | | 29223 | 0 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29216 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |
| entryRelationship | 0..* | MAY | | 4444-28672 | |
| @typeCode | 1..1 | SHALL | | 4444-28678 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 4444-28675 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) |

1. Conforms to [Planned Observation \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.44:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-28682).
3. **SHALL** contain exactly one [1..1] **@moodCode**="INT" Intent (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-28681).
4. **MAY** contain zero or one [0..1] **@negationInd** (CONF:4444-28683).
Note: QDM Attribute: Negation Rationale when **@negationInd**="true", this indicates Assessment Not Recommended.
 - a. If **@negationInd**="true" is present, **SHALL** contain one [1..1] entryRelationship such that it contains exactly one [1..1] **Reason (V3)** to state the reason for **Assessment Not Recommended** (CONF:4444-29566).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-28673) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.145" (CONF:4444-28676).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-28702).
6. **SHALL** contain exactly one [1..1] **code** (CONF:4444-28674).
Note: QDM Attribute: Code
7. **SHALL** contain exactly one [1..1] [Author \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-28680).
Note: QDM Attribute: Author dateTime - the time the recommendation is authored (i.e., provided to the patient)
8. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29221) such that it
Note: QDM Attribute: Requester
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29226).
 - b. **SHALL** contain exactly one [1..1] [Entity Practitioner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29222).

9. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29219) such that it
 Note: QDM Attribute: Requester
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29225).
 - b. **SHALL** contain exactly one [1..1] **Entity Organization** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29220).
10. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29217) such that it
 Note: QDM Attribute: Requester
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29224).
 - b. **SHALL** contain exactly one [1..1] **Entity Patient** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29218).
11. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29215) such that it
 Note: QDM Attribute: Requester
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29223).
 - b. **SHALL** contain exactly one [1..1] **Entity Care Partner** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29216).
12. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:4444-28672) such that it
 Note: QDM Attribute: Reason
- a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-28678).
 - b. **SHALL** contain exactly one [1..1] **Reason (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-28675).

Figure 90: Assessment Recommended (V3) Example

```

<observation classCode="OBS" moodCode="INT">
  <!-- Conforms to C-CDA R2.1 Planned Observation (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.44" extension="2014-06-09" />
  <!-- Assessment Recommended (V3) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.145" extension="2019-12-01"/>
  <id root="41c3513a-a3eb-468d-b537-9b9bebe11807" />
  <code code="72195-1" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
  displayName="Physical limitation score [KCCQ]" />
  <text>Assessment Recommended: Physical limitation score [KCCQ]</text>
  <statusCode code="active" />
  <author>
    <templateId root="2.16.840.1.113883.10.20.24.3.155" extension="2019-12-01"/>
    <time value="201904081130" />
    <assignedAuthor>
      <id nullFlavor="NA"/>
    </assignedAuthor>
  </author>
  <!-- QDM Attribute: Reason -->
  <entryRelationship typeCode="RSON">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.24.3.88" extension="2017-08-01" />
      ...
    </observation>
  </entryRelationship>
</observation>

```

3.52.3 Diagnostic Study Order (V5)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.17:2019-12-01 (open)]

Table 159: Diagnostic Study Order (V5) Contexts

| Contained By: | Contains: |
|--|---|
| Patient Data Section QDM (V7) (optional) | Reason (V3) (optional) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Author (V2) (required) |

This template represents the QDM datatype: Diagnostic Study, Order.

This datatype represents that a diagnostic study has been ordered. Diagnostic studies are those that are not performed in the clinical laboratory. Such studies include but are not limited to imaging studies, cardiology studies (electrocardiogram, treadmill stress testing), pulmonary function testing, vascular laboratory testing, and others.

The moodCode is constrained to “RQO”, an author is required to represent the ordering clinician and an author time/date stamp is required.

QDM attribute: Author dateTime corresponds to when the order was signed.

For Diagnostic Study Not Order, use Author dateTime to reference timing.
QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template.

Table 160: Diagnostic Study Order (V5) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.17:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-27408 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 4444-13411 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = RQO |
| @negationInd | 0..1 | MAY | | 4444-28062 | |
| templateId | 1..1 | SHALL | | 4444-13412 | |
| @root | 1..1 | SHALL | | 4444-13413 | 2.16.840.1.113883.10.20.24.3.17 |
| @extension | 1..1 | SHALL | | 4444-27069 | 2019-12-01 |
| code | 1..1 | SHALL | | 4444-27615 | |
| author | 1..1 | SHALL | | 4444-27340 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| participant | 0..* | MAY | | 4444-29318 | |
| @typeCode | 1..1 | SHALL | | 4444-29327 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29319 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29324 | |
| @typeCode | 1..1 | SHALL | | 4444-29330 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29325 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29316 | |
| @typeCode | 1..1 | SHALL | | 4444-29326 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29317 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29320 | |
| @typeCode | 1..1 | SHALL | | 4444- | urn:oid:2.16.840.1.113883.5.9 |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|---|
| | | | | 29328 | 0 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29321 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |
| entryRelationship | 0..* | MAY | | 4444-13430 | |
| @typeCode | 1..1 | SHALL | | 4444-13431 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 4444-13432 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) |

1. Conforms to [Planned Observation \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.44:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-27408).
3. **SHALL** contain exactly one [1..1] **@moodCode**="RQO" Request (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-13411).
4. **MAY** contain zero or one [0..1] **@negationInd** (CONF:4444-28062).
Note: QDM Attribute: Negation Rationale – when **@negationInd**="true", this indicates Diagnostic Not Order.
 - a. If **@negationInd**="true" is present, **SHALL** contain one [1..1] entryRelationship such that it contains exactly one [1..1] **Reason (V3)** to state the reason for **Diagnostic Not Order** (CONF:4444-29637).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-13412) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.17" (CONF:4444-13413).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-27069).
6. **SHALL** contain exactly one [1..1] **code** (CONF:4444-27615).
Note: QDM Attribute: Code
7. **SHALL** contain exactly one [1..1] [Author \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-27340).
Note: QDM Attribute: Author dateTime - the time the order is signed
8. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29318) such that it
Note: QDM Attribute: Requester
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29327).
 - b. **SHALL** contain exactly one [1..1] [Entity Practitioner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29319).
9. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29324) such that it
Note: QDM Attribute: Requester

- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29330).
 - b. **SHALL** contain exactly one [1..1] **Entity Organization** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29325).
10. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29316) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29326).
 - b. **SHALL** contain exactly one [1..1] **Entity Patient** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29317).
- Note: QDM Attribute: Requester
11. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29320) such that it
- Note: QDM Attribute: Requester
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29328).
 - b. **SHALL** contain exactly one [1..1] **Entity Care Partner** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29321).
12. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:4444-13430) such that it
- Note: QDM Attribute: Reason
- a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-13431).
 - b. **SHALL** contain exactly one [1..1] **Reason (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-13432).

Figure 91: Diagnostic Study Order (V5) Example

```

<observation classCode="OBS" moodCode="RQO">
  <!-- Conforms to C-CDA R2.1 Planned Observation (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.44" extension="2014-06-09"/>
  <!-- Diagnostic Study Order (V5) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.17" extension="2019-12-01"/>
  <id root="1fad091f-7b4e-4661-b61c-53f9a82515b6"/>
  <code code="24605-8" codeSystem="2.16.840.1.113883.6.1"
  displayName="Breast Mammogram diagnostic" codeSystemName="LOINC"/>
  <text>Diagnostic Study, Order: Breast Mammogram Diagnostic</text>
  <statusCode code="active"/>
  <value xsi:type="CD" nullFlavor="NA"/>
  <!-- author/time indicates the time the diagnostic order was signed -->
  <author>
    <templateId root="2.16.840.1.113883.10.20.24.3.155" extension="2019-12-01"/>
    <time value="201906081130"/>
    <assignedAuthor>
      <id nullFlavor="NA"/>
    </assignedAuthor>
  </author>
  <!-- QDM Attribute: Reason -->
  <entryRelationship typeCode="RSON">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.24.3.88" extension="2017-08-01"/>
      <code code="77301-0" codeSystem="2.16.840.1.113883.6.1"
      displayName="Reason care action performed or not"
      codeSystemName="LOINC"/>
      <value xsi:type="CD" code="254838004" codeSystem="2.16.840.1.113883.6.96"
      codeSystemName="SNOMED CT" displayName="Carcinoma of breast"/>
    </observation>
  </entryRelationship>
</observation>

```

3.52.4 Diagnostic Study Recommended (V5)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.19:2019-12-01
(open)]

Table 161: Diagnostic Study Recommended (V5) Contexts

| Contained By: | Contains: |
|--|---|
| Patient Data Section QDM (V7) (optional) | Reason (V3) (optional) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Author (V2) (required) |

This template represents the QDM datatype: Diagnostic Study, Recommended. Diagnostic studies are those that are not performed in the clinical laboratory. Such studies include but are not limited to imaging studies, cardiology studies (electrocardiogram, treadmill stress testing),

pulmonary function testing, vascular laboratory testing, and others.

The moodCode is constrained to "INT", an author is required to represent the recommending clinician and an author time/date stamp is required.

QDM attribute: Author dateTime is represented by author/time and correspond to when the recommendation was authored (i.e., provided to the patient). The time the activity is recommended to take place is represented by effectiveTime.

For Diagnostic Study Not Recommended, use Author dateTime to reference timing.

QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template. Although Reason (V3) is not explicitly contained in every template, it is available for use in any template.

Table 162: Diagnostic Study Recommended (V5) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.19:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-27406 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 4444-13392 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = INT |
| @negationInd | 0..1 | MAY | | 4444-28064 | |
| templateId | 1..1 | SHALL | | 4444-13393 | |
| @root | 1..1 | SHALL | | 4444-13394 | 2.16.840.1.113883.10.20.24.3.19 |
| @extension | 1..1 | SHALL | | 4444-27070 | 2019-12-01 |
| code | 1..1 | SHALL | | 4444-27619 | |
| author | 1..1 | SHALL | | 4444-13400 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| participant | 0..* | MAY | | 4444-29349 | |
| @typeCode | 1..1 | SHALL | | 4444-29358 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29350 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29355 | |
| @typeCode | 1..1 | SHALL | | 4444-29362 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29356 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29347 | |
| @typeCode | 1..1 | SHALL | | 4444-29357 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29348 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29353 | |
| @typeCode | 1..1 | SHALL | | 4444- | urn:oid:2.16.840.1.113883.5.9 |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|---|
| | | | | 29361 | 0 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29354 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |
| entryRelationship | 0..* | MAY | | 4444-29351 | |
| @typeCode | 1..1 | SHALL | | 4444-29359 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = RSON |
| observation | 1..1 | SHALL | | 4444-29352 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) |

1. Conforms to [Planned Observation \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.44:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-27406).
3. **SHALL** contain exactly one [1..1] **@moodCode**="INT" Intent (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-13392).
4. **MAY** contain zero or one [0..1] **@negationInd** (CONF:4444-28064).
Note: QDM Attribute: Negation Rationale – when **@negationInd**="true", this indicates Diagnostic Study Not Recommended.
 - a. If **@negationInd**="true" is present, **SHALL** contain one [1..1] entryRelationship such that it contains exactly one [1..1] **Reason (V3)** to state the reason for **Diagnostic Not Recommended** (CONF:4444-29639).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-13393) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.19" (CONF:4444-13394).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-27070).
6. **SHALL** contain exactly one [1..1] **code** (CONF:4444-27619).
Note: QDM Attribute: Code
7. **SHALL** contain exactly one [1..1] [Author \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-13400).
Note: Autor dateTime - the time the diagnostic recommendation was authored (i.e., provided to the patient)
8. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29349) such that it
Note: QDM Attribute: Requester
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29358).
 - b. **SHALL** contain exactly one [1..1] [Entity Practitioner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29350).

9. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29355) such that it
Note: QDM Attribute: Requester
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29362).
 - b. **SHALL** contain exactly one [1..1] **Entity Organization** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29356).
10. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29347) such that it
Note: QDM Attribute: Requester
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29357).
 - b. **SHALL** contain exactly one [1..1] **Entity Patient** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29348).
11. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29353) such that it
Note: QDM Attribute: Requester
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29361).
 - b. **SHALL** contain exactly one [1..1] **Entity Care Partner** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29354).
12. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:4444-29351) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29359).
 - b. **SHALL** contain exactly one [1..1] **Reason (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-29352).

Figure 92: Diagnostic Study Recommended (V5) Example

```

<observation classCode="OBS" moodCode="INT">
  <!-- Conforms to C-CDA R2.1 Planned Observation (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.44" extension="2014-06-09"/>
  <!-- Diagnostic Study Recommended (V5) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.19" extension="2019-12-01"/>
  <id root="1fad091f-7b4e-4661-b61c-53f9a82515b6"/>
  <code code="24605-8" codeSystem="2.16.840.1.113883.6.1"
  displayName="Breast Mammogram diagnostic" codeSystemName="LOINC"/>
  <text>Diagnostic Study, Recommended: Breast Mammogram Diagnostic</text>
  <statusCode code="active"/>
  <value xsi:type="CD" nullFlavor="NA"/>
  <author>
    <templateId root="2.16.840.1.113883.10.20.24.3.155" extension="2019-12-01"/>
    <time value="201906181130"/>
    <assignedAuthor>
      <id nullFlavor="NA"/>
    </assignedAuthor>
  </author>
  <!-- QDM Attribute: Reason -->
  <entryRelationship typeCode="RSON">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.24.3.88" extension="2017-08-01"/>
      <code code="77301-0" codeSystem="2.16.840.1.113883.6.1" displayName="Reason
  care action performed or not" codeSystemName="LOINC"/>
      <value xsi:type="CD" code="254838004" codeSystem="2.16.840.1.113883.6.96"
  codeSystemName="SNOMED CT" displayName="Carcinoma of breast"/>
    </observation>
  </entryRelationship>
</observation>

```

3.52.5 Laboratory Test Order (V5)

```
[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.37:2019-12-01
(open)]
```

Table 163: Laboratory Test Order (V5) Contexts

| Contained By: | Contains: |
|--|---|
| Patient Data Section QDM (V7) (optional) | Reason (V3) (optional) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Author (V2) (required) |

This template represents the QDM datatype: Laboratory Test, Order.

This datatype represents an order for a laboratory test. A laboratory test is a medical procedure that involves testing a sample of blood, urine, or other substance from the body. Tests can help determine a diagnosis, plan treatment, check if treatment is working, or monitor the disease over time.

The moodCode is constrained to “RQO”, an author is required to represent the ordering clinician and

an author time/date stamp is required.

QDM Attribute: Author dateTime corresponds to when the order was signed. The time the activity is intended to take place is represented by effectiveTime.

QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template.

Table 164: Laboratory Test Order (V5) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|-------|-----------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.37:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-27417 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 4444-11953 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = RQO |
| @negationInd | 0..1 | MAY | | 4444-28076 | |
| templateId | 1..1 | SHALL | | 4444-11954 | |
| @root | 1..1 | SHALL | | 4444-11955 | 2.16.840.1.113883.10.20.24.3.37 |
| @extension | 1..1 | SHALL | | 4444-27075 | 2019-12-01 |
| code | 1..1 | SHALL | | 4444-11957 | |
| author | 1..1 | SHALL | | 4444-27344 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| participant | 0..* | MAY | | 4444-29550 | |
| @typeCode | 1..1 | SHALL | | 4444-29559 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29551 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29552 | |
| @typeCode | 1..1 | SHALL | | 4444-29560 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29553 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29556 | |
| @typeCode | 1..1 | SHALL | | 4444-29562 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29557 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29554 | |
| @typeCode | 1..1 | SHALL | | 4444- | urn:oid:2.16.840.1.113883.5.9 |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|---|
| | | | | 29561 | 0 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29555 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |
| entryRelationship | 0..* | MAY | | 4444-11969 | |
| @typeCode | 1..1 | SHALL | | 4444-11970 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 4444-27074 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) |

1. Conforms to [Planned Observation \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.44:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-27417).
3. **SHALL** contain exactly one [1..1] **@moodCode**="RQO" Request (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-11953).
4. **MAY** contain zero or one [0..1] **@negationInd** (CONF:4444-28076).
Note: QDM Attribute: Negation Rationale - when **@negationInd**="true", this indicates Laboratory Test Not Order
 - a. If **@negationInd**="true" is present, **SHALL** contain one [1..1] entryRelationship such that it contains exactly one [1..1] **Reason (V3)** to state the reason for **Laboratory Test Not Order** (CONF:4444-29558).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-11954) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.37" (CONF:4444-11955).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-27075).
6. **SHALL** contain exactly one [1..1] **code** (CONF:4444-11957).
Note: QDM Attribute: Code
7. **SHALL** contain exactly one [1..1] [Author \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-27344).
Note: QDM Attribute: Author dateTime - time the order was signed
8. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29550) such that it
Note: QDM Attribute: Requester
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29559).
 - b. **SHALL** contain exactly one [1..1] [Entity Practitioner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29551).
9. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29552) such that it
Note: QDM Attribute: Requester

- a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29560).
 - b. **SHALL** contain exactly one [1..1] **Entity Organization** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29553).
10. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29556) such that it
Note: QDM Attribute: Requester
- a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29562).
 - b. **SHALL** contain exactly one [1..1] **Entity Patient** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29557).
11. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29554) such that it
Note: QDM Attribute: Requester
- a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29561).
 - b. **SHALL** contain exactly one [1..1] **Entity Care Partner** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29555).
12. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:4444-11969) such that it
Note: QDM Attribute: Reason; Reason for Laboratory Test Not Order
- a. **SHALL** contain exactly one [1..1] **@typeCode**="RSON" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-11970).
 - b. **SHALL** contain exactly one [1..1] **Reason (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-27074).

Figure 93: Laboratory Test Order (V5) Example

```

<observation classCode="OBS" moodCode="RQO">
  <!-- Conforms to C-CDA R2.1 Planned Observation (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.44" extension="2014-06-09"/>
  <!-- Laboratory Test, Order (V5) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.37" extension="2019-12-01"/>
  <id root="1fad091f-7b4e-4661-b61c-53f9a82515b6"/>
  <!-- Laboratory Test -->
  <code code="4544-3" displayName="Hematocrit" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC"/>
  <statusCode code="active"/>
  <author>
    <templateId root="2.16.840.1.113883.10.20.24.3.155" extension="2019-12-01"/>
    <time value="201908031130"/>
    <assignedAuthor>
      <id nullFlavor="NA"/>
    </assignedAuthor>
  </author>
  <!-- QDM Attribute: Reason -->
  <entryRelationship typeCode="RSON">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.24.3.88" extension="2017-08-01"/>
      <code code="77301-0" codeSystem="2.16.840.1.113883.6.1"
displayName="Reason care action performed or not" codeSystemName="LOINC"/>
      <value xsi:type="CD" code="254838004" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT" displayName="Carcinoma of breast"/>
    </observation>
  </entryRelationship>
</observation>

```

3.52.6 Laboratory Test Recommended (V5)

```
[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.39:2019-12-01
(open)]
```

Table 165: Laboratory Test Recommended (V5) Contexts

| Contained By: | Contains: |
|--|---|
| Patient Data Section QDM (V7) (optional) | Reason (V3) (optional) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Author (V2) (required) |

This template represents the QDM datatype: Laboratory Test, Recommended.

This datatype represents a recommendation for a laboratory test. A laboratory test is a medical procedure that involves testing a sample of blood, urine, or other substance from the body. Tests can help determine a diagnosis, plan treatment, check if treatment is working, or monitor the disease over time.

The moodCode is constrained to “INT”, an author is required to represent the recommending clinician

and an author time/date stamp is required.

QDM attributes: Author dateTime corresponds to when the recommendation was signed, it is expected that the two values will be the same. The time the activity is recommended to take place is represented by effectiveTime.

QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template.

Table 166: Laboratory Test Recommended (V5) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.39:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-27416 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 4444-11793 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = INT |
| @negationInd | 0..1 | MAY | | 4444-28078 | |
| templateId | 1..1 | SHALL | | 4444-11794 | |
| @root | 1..1 | SHALL | | 4444-11795 | 2.16.840.1.113883.10.20.24.3.39 |
| @extension | 1..1 | SHALL | | 4444-27077 | 2019-12-01 |
| code | 1..1 | SHALL | | 4444-27639 | |
| author | 1..1 | SHALL | | 4444-27350 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| participant | 0..* | MAY | | 4444-29768 | |
| @typeCode | 1..1 | SHALL | | 4444-29777 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29769 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29770 | |
| @typeCode | 1..1 | SHALL | | 4444-29778 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29771 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29774 | |
| @typeCode | 1..1 | SHALL | | 4444-29780 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29775 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29772 | |
| @typeCode | 1..1 | SHALL | | 4444- | urn:oid:2.16.840.1.113883.5.9 |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|---|
| | | | | 29779 | 0 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29773 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |
| entryRelationship | 0..* | MAY | | 4444-11811 | |
| @typeCode | 1..1 | SHALL | | 4444-11812 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 4444-11813 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) |

1. Conforms to [Planned Observation \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.44:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-27416).
3. **SHALL** contain exactly one [1..1] **@moodCode**="INT" Intent (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-11793).
4. **MAY** contain zero or one [0..1] **@negationInd** (CONF:4444-28078).
Note: QDM Attribute: Negation Rationale - negationInd="true" indicates Laboratory Test Not Recommended
 - a. If **@negationInd**="true" is present, **SHALL** contain one [1..1] entryRelationship such that it contains exactly one [1..1] **Reason (V3)** to state the reason for **Laboratory Test Not Recommended** (CONF:4444-29776).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-11794) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.39" (CONF:4444-11795).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-27077).
6. **SHALL** contain exactly one [1..1] **code** (CONF:4444-27639).
Note: QDM Attribute: Code
7. **SHALL** contain exactly one [1..1] [Author \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-27350).
Note: QDM Attribute: Author dateTime - the time the recommendation was signed
8. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29768) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29777).
 - b. **SHALL** contain exactly one [1..1] [Entity Practitioner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29769).
Note: QDM Attribute: Requester
9. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29770) such that it

- a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29778).
 - b. **SHALL** contain exactly one [1..1] **Entity Organization** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29771).
Note: QDM Attribute: Requester
10. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29774) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29780).
 - b. **SHALL** contain exactly one [1..1] **Entity Patient** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29775).
Note: QDM Attribute: Requester
11. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29772) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29779).
 - b. **SHALL** contain exactly one [1..1] **Entity Care Partner** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29773).
Note: QDM Attribute: Requester
12. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:4444-11811) such that it
Note: QDM Attribute: Reason
- a. **SHALL** contain exactly one [1..1] **@typeCode**="RSON" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-11812).
 - b. **SHALL** contain exactly one [1..1] **Reason (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-11813).

Figure 94: Laboratory Test Recommended (V5) Example

```

<observation classCode="OBS" moodCode="INT">
  <!-- Conforms to C-CDA R2.1 Planned Observation (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.44" extension="2014-06-09"/>
  <!-- Laboratory Test, Recommended (V5) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.39" extension="2019-12-01"/>
  <id root="1fad091f-7b4e-4661-b61c-53f9a82515b4"/>
  <!-- Laboratory Test -->
  <code code="4544-3" displayName="Hematocrit" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC"/>
  <statusCode code="active"/>
  <author>
    <templateId root="2.16.840.1.113883.10.20.24.3.155" extension="2019-12-01"/>
    <time value="201903211130"/>
    <assignedAuthor>
      <id nullFlavor="NA"/>
    </assignedAuthor>
  </author>
</observation>

```

3.52.7 Physical Exam Order (V5)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.58:2019-12-01
(open)]

Table 167: Physical Exam Order (V5) Contexts

| Contained By: | Contains: |
|--|---|
| Patient Data Section QDM (V7) (optional) | Reason (V3) (optional) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Author (V2) (required) |

This template represents the QDM datatype: Physical Exam, Order.

This datatype represents a request by a physician or appropriately licensed care provider to order a physical exam for the patient.

The moodCode is constrained to “RQO”, an author is required to represent the ordering clinician and an author time/date stamp is required.

QDM Attribute: Author dateTime corresponds to when the order was signed. The time the activity is intended to take place is represented by effectiveTime.

QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template.

Table 168: Physical Exam Order (V5) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.58:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-27550 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 4444-12685 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = RQO |
| @negationInd | 0..1 | MAY | | 4444-28092 | |
| templateId | 1..1 | SHALL | | 4444-12686 | |
| @root | 1..1 | SHALL | | 4444-12687 | 2.16.840.1.113883.10.20.24.3.58 |
| @extension | 1..1 | SHALL | | 4444-27078 | 2019-12-01 |
| code | 1..1 | SHALL | | 4444-12689 | |
| @code | 1..1 | SHALL | | 4444-13242 | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 29545-1 |
| value | 1..1 | SHALL | CD | 4444-13254 | |
| author | 1..1 | SHALL | | 4444-27345 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| participant | 0..* | MAY | | 4444-29781 | |
| @typeCode | 1..1 | SHALL | | 4444-29790 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29782 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29783 | |
| @typeCode | 1..1 | SHALL | | 4444-29791 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29784 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29787 | |
| @typeCode | 1..1 | SHALL | | 4444-29793 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29788 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.164:2019-12-01) |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|--|
| | | | | | 0.20.24.3.161:2019-12-01 |
| participant | 0..* | MAY | | 4444-29785 | |
| @typeCode | 1..1 | SHALL | | 4444-29792 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29786 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.1.0.20.24.3.160:2019-12-01) |
| entryRelationship | 0..* | MAY | | 4444-12701 | |
| @typeCode | 1..1 | SHALL | | 4444-12702 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 4444-12703 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.1.0.20.24.3.88:2017-08-01) |

1. Conforms to [Planned Observation \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.44:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-27550).
3. **SHALL** contain exactly one [1..1] **@moodCode**="RQO" Request (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-12685).
4. **MAY** contain zero or one [0..1] **@negationInd** (CONF:4444-28092).
Note: QDM Attribute: Negation Rationale - negationInd="true" indicates Physical Exam Not Order
 - a. If **@negationInd**="true" is present, **SHALL** contain one [1..1] entryRelationship such that it contains exactly one [1..1] **Reason (V3)** to state the reason for **Physical Exam Not Order** (CONF:4444-29789).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-12686) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.58" (CONF:4444-12687).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-27078).
6. **SHALL** contain exactly one [1..1] **code** (CONF:4444-12689).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="29545-1" physical examination (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:4444-13242).
7. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:4444-13254).
Note: QDM Attribute: Code
8. **SHALL** contain exactly one [1..1] [Author \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-27345).
Note: QDM Attribute: Author dateTime – the time the physical exam order was signed
9. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29781) such that it
Note: QDM Attribute: Requester

- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29790).
 - b. **SHALL** contain exactly one [1..1] **Entity Practitioner** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29782).
10. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29783) such that it
 Note: QDM Attribute: Requester
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29791).
 - b. **SHALL** contain exactly one [1..1] **Entity Organization** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29784).
11. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29787) such that it
 Note: QDM Attribute: Requester
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29793).
 - b. **SHALL** contain exactly one [1..1] **Entity Patient** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29788).
12. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29785) such that it
 Note: QDM Attribute: Requester
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29792).
 - b. **SHALL** contain exactly one [1..1] **Entity Care Partner** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29786).
13. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:4444-12701) such that it
 Note: QDM Attribute: Reason
- a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-12702).
 - b. **SHALL** contain exactly one [1..1] **Reason (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-12703).

Figure 95: Physical Exam Order (V5) Example

```

<observation classCode="OBS" moodCode="RQO">
  <!-- Conforms to C-CDA R2.1 Planned Observation (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.44" extension="2014-06-09"/>
  <!-- Physical Exam Order (V5) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.58" extension="2019-12-01"/>
  <id root="1fad091f-7b4e-4661-b61c-53f9a82515b6"/>
  <code code="29545-1" codeSystem="2.16.840.1.113883.6.1" displayName="physical
examination" codeSystemName="LOINC"/>
  <statusCode code="active"/>
  <value xsi:type="CD" code="29463-7" codeSystem="2.16.840.1.113883.6.1"/>
  <author>
    <templateId root="2.16.840.1.113883.10.20.24.3.155" extension="2019-12-01"/>
    <time value="201904081130"/>
    <assignedAuthor>
      <id nullFlavor="NA"/>
    </assignedAuthor>
  </author>
  <!-- QDM Attribute: Reason -->
  <entryRelationship typeCode="RSON">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.24.3.88" extension="2017-08-01"/>
      <code code="77301-0" codeSystem="2.16.840.1.113883.6.1"
displayName="Reason care action performed or not" codeSystemName="LOINC"/>
      <value xsi:type="CD" code="238131007" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT" displayName="Overweight (finding)"/>
    </observation>
  </entryRelationship>
</observation>

```

3.52.8 Physical Exam Recommended (V5)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.60:2019-12-01 (open)]

Table 169: Physical Exam Recommended (V5) Contexts

| Contained By: | Contains: |
|--|---|
| Patient Data Section QDM (V7) (optional) | Reason (V3) (optional) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Author (V2) (required) |

This template represents the QDM datatype: Physical Exam, Recommended.

This datatype represents a recommendation by a physician or appropriately licensed care provider for a physical exam to be performed on the patient.

The moodCode is constrained to “INT”, an author is required to represent the recommending clinician and an author time/date stamp is required.

QDM Attribute: Author dateTime corresponds to when the recommendation was signed. The time the

activity is recommended to take place is represented by effectiveTime.
QDM Attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template.

Table 170: Physical Exam Recommended (V5) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.60:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-27556 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 4444-12665 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = INT |
| @negationInd | 0..1 | MAY | | 4444-28094 | |
| templateId | 1..1 | SHALL | | 4444-12666 | |
| @root | 1..1 | SHALL | | 4444-12667 | 2.16.840.1.113883.10.20.24.3.60 |
| @extension | 1..1 | SHALL | | 4444-27082 | 2019-12-01 |
| code | 1..1 | SHALL | | 4444-12669 | |
| @code | 1..1 | SHALL | | 4444-13274 | 29545-1 |
| @codeSystem | 1..1 | SHALL | | 4444-28132 | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| value | 1..1 | SHALL | CD | 4444-13275 | |
| author | 1..1 | SHALL | | 4444-27351 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| participant | 0..* | MAY | | 4444-29794 | |
| @typeCode | 1..1 | SHALL | | 4444-29803 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29795 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29796 | |
| @typeCode | 1..1 | SHALL | | 4444-29804 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29797 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29800 | |
| @typeCode | 1..1 | SHALL | | 4444-29806 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|---|
| | | | | | PRF |
| participantRole | 1..1 | SHALL | | 4444-29801 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29798 | |
| @typeCode | 1..1 | SHALL | | 4444-29805 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29799 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |
| entryRelationship | 0..* | MAY | | 4444-12679 | |
| @typeCode | 1..1 | SHALL | | 4444-12680 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 4444-12681 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) |

1. Conforms to [Planned Observation \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.44:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-27556).
3. **SHALL** contain exactly one [1..1] **@moodCode**="INT" Intent (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-12665).
4. **MAY** contain zero or one [0..1] **@negationInd** (CONF:4444-28094).
Note: QDM Attribute: Negation Rationale - negationInd="true" indicates Physical Exam Not Recommended
 - a. If **@negationInd**="true" is present, **SHALL** contain one [1..1] entryRelationship such that it contains exactly one [1..1] **Reason (V3)** to state the reason for **Physical Exam Not Recommended** (CONF:4444-29802).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-12666) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.60" (CONF:4444-12667).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-27082).
6. **SHALL** contain exactly one [1..1] **code** (CONF:4444-12669).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="29545-1" physical examination (CONF:4444-13274).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:4444-28132).

7. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (CONF:4444-13275).
Note: QDM Attribute: Code
8. **SHALL** contain exactly one [1..1] [Author \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-27351).
Note: QDM Attribute: Author dateTime – the time the recommendation is authored (i.e., provided to the patient)
9. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29794) such that it
Note: QDM Attribute: Requester
 - a. **SHALL** contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29803).
 - b. **SHALL** contain exactly one [1..1] [Entity Practitioner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29795).
10. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29796) such that it
Note: QDM Attribute: Requester
 - a. **SHALL** contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29804).
 - b. **SHALL** contain exactly one [1..1] [Entity Organization](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29797).
11. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29800) such that it
Note: QDM Attribute: Requester
 - a. **SHALL** contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29806).
 - b. **SHALL** contain exactly one [1..1] [Entity Patient](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29801).
12. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29798) such that it
Note: QDM Attribute: Requester
 - a. **SHALL** contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29805).
 - b. **SHALL** contain exactly one [1..1] [Entity Care Partner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29799).
13. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:4444-12679) such that it
Note: QDM Attribute: Reason
 - a. **SHALL** contain exactly one [1..1] @typeCode="RSON" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-12680).
 - b. **SHALL** contain exactly one [1..1] [Reason \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-12681).

Figure 96: Physical Exam Recommended (V5) Example

```

<observation classCode="OBS" moodCode="INT">
  <!-- Conforms to C-CDA R2.1 Planned Observation (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.44" extension="2014-06-09"/>
  <!-- Physical Exam Recommended (V5) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.60" extension="2019-12-01"/>
  <id root="1fad091f-7b4e-4661-b61c-53f9a82515b6"/>
  <code code="29545-1" codeSystem="2.16.840.1.113883.6.1"
  displayName="physical examination" codeSystemName="LOINC"/>
  <statusCode code="active"/>
  <value xsi:type="CD" code="29463-7" codeSystem="2.16.840.1.113883.6.1"
  displayName="Body weight" codeSystemName="LOINC"/>
  <author>
    <templateId root="2.16.840.1.113883.10.20.24.3.155" extension="2019-12-01"/>
    <time value="201907281130"/>
    <assignedAuthor>
      <id nullFlavor="NA"/>
    </assignedAuthor>
  </author>
  <!-- QDM Attribute: Reason -->
  <entryRelationship typeCode="RSON">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.24.3.88" extension="2017-08-01"/>
      <code code="77301-0" codeSystem="2.16.840.1.113883.6.1"
      displayName="Reason care action performed or not" codeSystemName="LOINC"/>
      <value xsi:type="CD" code="238131007" codeSystem="2.16.840.1.113883.6.96"
      codeSystemName="SNOMED CT" displayName="Overweight (finding)"/>
    </observation>
  </entryRelationship>
</observation>

```

3.53 Planned Procedure (V2)

[procedure: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.41:2014-06-09 (open)]

Table 171: Planned Procedure (V2) Contexts

| Contained By: | Contains: |
|---------------|---|
| | Indication (V2) (optional) Priority Preference (optional) Instruction (V2) (optional) Author Participation (optional) Planned Coverage (optional) |

This template represents planned alterations of the patient's physical condition. Examples of such procedures are tracheostomy, knee replacement, and craniectomy. The priority of the procedure to the patient and provider is communicated through Priority Preference. The effectiveTime indicates the time when the procedure is intended to take place and authorTime indicates when the documentation of the plan occurred. The Planned Procedure Template may also indicate the potential insurance coverage for the procedure.

Table 172: Planned Procedure (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|---|
| procedure (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.41:2014-06-09) | | | | | |
| @classCode | 1..1 | SHALL | | 1098-8568 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC |
| @moodCode | 1..1 | SHALL | | 1098-8569 | urn:oid:2.16.840.1.113883.11.20.9.23 (Planned moodCode (Act/Encounter/Procedure)) |
| templateId | 1..1 | SHALL | | 1098-30444 | |
| @root | 1..1 | SHALL | | 1098-30445 | 2.16.840.1.113883.10.20.22.4.41 |
| @extension | 1..1 | SHALL | | 1098-32554 | 2014-06-09 |
| id | 1..* | SHALL | | 1098-8571 | |
| code | 1..1 | SHALL | | 1098-31976 | |
| statusCode | 1..1 | SHALL | | 1098-30446 | |
| @code | 1..1 | SHALL | | 1098-31978 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = active |
| effectiveTime | 0..1 | SHOULD | | 1098-30447 | |
| methodCode | 0..* | MAY | | 1098-31980 | |
| targetSiteCode | 0..* | MAY | | 1098-31981 | urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 (Body Site Value Set) |
| performer | 0..* | MAY | | 1098-30449 | |
| author | 0..1 | SHOULD | | 1098-31979 | Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) |
| entryRelationship | 0..* | MAY | | 1098-31079 | |
| @typeCode | 1..1 | SHALL | | 1098-31080 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| observation | 1..1 | SHALL | | 1098-31081 | Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) |
| entryRelationship | 0..* | MAY | | 1098-31982 | |
| @typeCode | 1..1 | SHALL | | 1098-31983 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|---|
| | | | | | = RSON |
| observation | 1..1 | SHALL | | 1098-31984 | Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) |
| entryRelationship | 0..* | MAY | | 1098-31985 | |
| @typeCode | 1..1 | SHALL | | 1098-31986 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ |
| @inversionInd | 1..1 | SHALL | | 1098-31987 | true |
| act | 1..1 | SHALL | | 1098-31989 | Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) |
| entryRelationship | 0..* | MAY | | 1098-31990 | |
| @typeCode | 1..1 | SHALL | | 1098-31991 | COMP |
| act | 1..1 | SHALL | | 1098-31992 | Planned Coverage (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.129) |

1. **SHALL** contain exactly one [1..1] **@classCode**="PROC" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8568).
2. **SHALL** contain exactly one [1..1] **@moodCode**, which **SHALL** be selected from ValueSet [Planned moodCode \(Act/Encounter/Procedure\)](#) urn:oid:2.16.840.1.113883.11.20.9.23 **STATIC** 2011-09-30 (CONF:1098-8569).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-30444) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.41" (CONF:1098-30445).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32554).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-8571).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-31976).
 - a. The procedure/code in a planned procedure **SHOULD** be selected from LOINC (codeSystem 2.16.840.1.113883.6.1) **OR** SNOMED CT (CodeSystem: 2.16.840.1.113883.6.96), and **MAY** be selected from CPT-4 (CodeSystem: 2.16.840.1.113883.6.12) **OR** ICD10 PCS (CodeSystem: 2.16.840.1.113883.6.4) (CONF:1098-31977).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-30446).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="active" Active (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1098-31978).

The effectiveTime in a planned procedure represents the time that the procedure should occur.

7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-30447).

In a planned procedure the provider may suggest that a procedure should be performed using a particular method.

MethodCode *SHALL NOT* conflict with the method inherent in Procedure / code.

8. **MAY** contain zero or more [0..*] **methodCode** (CONF:1098-31980).

The targetSiteCode is used to identify the part of the body of concern for the planned procedure.

9. **MAY** contain zero or more [0..*] **targetSiteCode**, which **SHALL** be selected from ValueSet [Body Site Value Set](#) urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 **DYNAMIC** (CONF:1098-31981).

The clinician who is expected to perform the procedure could be identified using procedure/performer.

10. **MAY** contain zero or more [0..*] **performer** (CONF:1098-30449).

The author in a planned procedure represents the clinician who is requesting or planning the procedure.

11. **SHOULD** contain zero or one [0..1] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-31979).

The following entryRelationship represents the priority that a patient or a provider places on the procedure.

12. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31079) such that it

- SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31080).
- SHALL** contain exactly one [1..1] [Priority Preference](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) (CONF:1098-31081).

The following entryRelationship represents the indication for the procedure.

13. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31982) such that it

- SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31983).
- SHALL** contain exactly one [1..1] [Indication \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) (CONF:1098-31984).

The following entryRelationship captures any instructions associated with the planned procedure.

14. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31985) such that it

- SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** Has Subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31986).
- SHALL** contain exactly one [1..1] **@inversionInd="true"** True (CONF:1098-31987).

- c. **SHALL** contain exactly one [1..1] [Instruction \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) (CONF:1098-31989).

The following entryRelationship represents the insurance coverage the patient may have for the procedure.

- 15. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31990) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** Has component (CONF:1098-31991).
 - b. **SHALL** contain exactly one [1..1] [Planned Coverage](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.129) (CONF:1098-31992).

Figure 97: Planned Procedure (V2) Example

```
<entry>
  <procedure moodCode="RQO" classCode="PROC">
    <templateId root="2.16.840.1.113883.10.20.22.4.41" extension="2014-06-09" />
    <!-- **Planned Procedure (V2) template ** -->
    <id root="9a6d1bac-17d3-4195-89c4-1121bc809b5a" />
    <code code="73761001" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED
CT" displayName="Colonoscopy" />
    <statusCode code="active" />
    <effectiveTime value="20130613" />
    <!-- Author Participation -->
    <author typeCode="AUT">
      ...
    </author>
    <entryRelationship typeCode="REFR">
      <observation classCode="OBS" moodCode="EVN">
        <!-- Patient Priority Preference-->
        <templateId root="2.16.840.1.113883.10.20.22.4.142" />
        ...
      </observation>
    </entryRelationship>
    <entryRelationship typeCode="REFR">
      <observation classCode="OBS" moodCode="EVN">
        <!-- Provider Priority Preference-->
        <templateId root="2.16.840.1.113883.10.20.22.4.143" />
        ...
      </observation>
    </entryRelationship>
    <entryRelationship typeCode="RSON">
      <observation classCode="OBS" moodCode="EVN">
        <!-- Indication-->
        <templateId root="2.16.840.1.113883.10.20.22.4.19" extension="2014-06-09"
/>
        ...
      </observation>
    </entryRelationship>
    <entryRelationship typeCode="SUBJ">
      <act classCode="ACT" moodCode="INT">
        <!-- Instruction-->
        <templateId root="2.16.840.1.113883.10.20.22.4.20" extension="2014-06-09"
/>
        ...
      </act>
    </entryRelationship>
    <entryRelationship typeCode="COMP">
      <observation classCode="ACT" moodCode="INT">
        <!-- Planned Coverage -->
        <templateId root="2.16.840.1.113883.10.20.22.4.129" />
        ...
      </observation>
    </entryRelationship>
  </procedure>
</entry>
```

3.53.1 Procedure Order (V6)

[procedure: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.63:2019-12-01 (open)]

Table 173: Procedure Order (V6) Contexts

| Contained By: | Contains: |
|--|--|
| Patient Data Section QDM (V7) (optional) | Reason (V3) (optional) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Rank (optional) Author (V2) (required) |

This template represents the QDM datatype: Procedure, Order.

Procedure Order describes an order for a procedure. A procedure is a course of action intended to achieve a result in the care of persons with health problems. It is generally invasive and involves physical contact. A procedure may be a surgery or other type of physical manipulation of a person’s body in whole or in part for purposes of making observations and diagnoses and/or providing treatment. Note that procedure is distinct from intervention.

The moodCode is constrained to “RQO”, an author is required to represent the ordering clinician and an author time/date stamp is required.

QDM Attribute: Author dateTime corresponds to when the order was signed. The time the activity is intended to take place is represented by effectiveTime.

QDM Attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template.

Table 174: Procedure Order (V6) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|---|
| procedure (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.63:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-27323 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC |
| @moodCode | 1..1 | SHALL | | 4444-11097 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = RQO |
| @negationInd | 0..1 | MAY | | 4444-28097 | |
| templateId | 1..1 | SHALL | | 4444-11098 | |
| @root | 1..1 | SHALL | | 4444-11099 | 2.16.840.1.113883.10.20.24.3.63 |
| @extension | 1..1 | SHALL | | 4444-27083 | 2019-12-01 |
| code | 1..1 | SHALL | | 4444-27324 | |
| priorityCode | 0..1 | MAY | | 4444-14551 | |
| targetSiteCode | 0..1 | MAY | | 4444-27328 | |
| author | 1..1 | SHALL | | 4444-27346 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| participant | 0..* | MAY | | 4444-29464 | |
| @typeCode | 1..1 | SHALL | | 4444-29474 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29465 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29466 | |
| @typeCode | 1..1 | SHALL | | 4444-29475 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29467 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29470 | |
| @typeCode | 1..1 | SHALL | | 4444-29477 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29471 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.164:2019-12-01) |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|--|
| | | | | | 0.20.24.3.161:2019-12-01 |
| participant | 0..* | MAY | | 4444-29468 | |
| @typeCode | 1..1 | SHALL | | 4444-29476 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29469 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.1.0.20.24.3.160:2019-12-01) |
| entryRelationship | 0..* | MAY | | 4444-11616 | |
| @typeCode | 1..1 | SHALL | | 4444-11617 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 4444-11618 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.1.0.20.24.3.88:2017-08-01) |
| entryRelationship | 0..1 | MAY | | 4444-29825 | |
| @typeCode | 1..1 | SHALL | | 4444-29829 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = REFR |
| observation | 1..1 | SHALL | | 4444-29826 | Rank (identifier: urn:hl7ii:2.16.840.1.113883.1.0.20.24.3.166:2019-12-01) |

1. Conforms to [Planned Procedure \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.41:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-27323).
3. **SHALL** contain exactly one [1..1] **@moodCode**="RQO" Request (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-11097).
4. **MAY** contain zero or one [0..1] **@negationInd** (CONF:4444-28097).
Note: QDM Attribute: Negation Rationale - negationInd="true" indicates Procedure Not Order
 - a. If **@negationInd**="true" is present, **SHALL** contain one [1..1] entryRelationship such that it contains exactly one [1..1] **Reason (V3)** to state the reason for **Procedure Not Order** (CONF:4444-29827).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-11098) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.63" (CONF:4444-11099).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-27083).
6. **SHALL** contain exactly one [1..1] **code** (CONF:4444-27324).
Note: QDM Attribute: Code

7. **MAY** contain zero or one [0..1] **priorityCode** (CONF:4444-14551).
Note: QDM Attribute: Priority
8. **MAY** contain zero or one [0..1] **targetSiteCode** (CONF:4444-27328).
Note: QDM Attribute: Anatomical Location Site
9. **SHALL** contain exactly one [1..1] **Author (V2)** (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-27346).
Note: QDM Attribute: Author dateTime – the time the order is signed
10. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29464) such that it
Note: QDM Attribute: Requester
 - a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem:
HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29474).
 - b. **SHALL** contain exactly one [1..1] **Entity Practitioner** (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29465).
11. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29466) such that it
Note: QDM Attribute: Requester
 - a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem:
HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29475).
 - b. **SHALL** contain exactly one [1..1] **Entity Organization** (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29467).
12. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29470) such that it
Note: QDM Attribute: Requester
 - a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem:
HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29477).
 - b. **SHALL** contain exactly one [1..1] **Entity Patient** (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29471).
13. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29468) such that it
Note: QDM Attribute: Requester
 - a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem:
HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29476).
 - b. **SHALL** contain exactly one [1..1] **Entity Care Partner** (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29469).
14. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:4444-11616) such that it
Note: QDM Attribute: Reason
 - a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** (CodeSystem:
HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-11617).
 - b. **SHALL** contain exactly one [1..1] **Reason (V3)** (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-11618).
15. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-29825) such that it
Note: QDM Attribute: Rank

- a. **SHALL** contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29829).
- b. **SHALL** contain exactly one [1..1] [Rank](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.166:2019-12-01) (CONF:4444-29826).

Figure 98: Procedure Order (V6) Example

```

<procedure classCode="PROC" moodCode="RQO">
  <!-- Conforms to C-CDA R2 Planned Procedure (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.41" extension="2014-06-09"/>
  <!-- Procedure Order (V6) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.63" extension="2019-12-01"/>
  <id root="5bc8cc9d-d59a-4dda-99d8-1463b2e71d06"/>
  <code code="235326000" displayName="Right hemicolectomy"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT"/>
  <text>Procedure, Order: Right hemicolectomy </text>
  <statusCode code="active"/>
  <!-- QDM Attribute: Anatomical Location Site -->
  <targetSiteCode code="71854001" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT" displayName="colon"/>
  <author>
    <templateId root="2.16.840.1.113883.10.20.24.3.155" extension="2019-12-01"/>
    <time value="20190329090000"/>
    <assignedAuthor>
      <id nullFlavor="NA"/>
    </assignedAuthor>
  </author>
</procedure>

```

3.53.2 Procedure Recommended (V6)

[procedure: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.65:2019-12-01 (open)]

Table 175: Procedure Recommended (V6) Contexts

| Contained By: | Contains: |
|--|--|
| Patient Data Section QDM (V7) (optional) | Reason (V3) (optional) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Rank (optional) Author (V2) (required) |

This template represents the QDM datatype: Procedure, Recommended.

Procedure Recommended describes a recommendation for a procedure. A procedure is a course of action intended to achieve a result in the care of persons with health problems. It is generally invasive and involves physical contact. A procedure may be a surgery or other type of physical manipulation of a person’s body in whole or in part for purposes of making observations and diagnoses and/or

providing treatment. Note that procedure is distinct from intervention.

The moodCode is constrained to "INT", an author is required to represent the recommending clinician and an author time/date stamp is required.

QDM attributes: Author dateTime corresponds to when the recommendation was signed. The time the activity is recommended to take place is represented by effectiveTime.

QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template.

Table 176: Procedure Recommended (V6) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|---|
| procedure (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.65:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-27337 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC |
| @moodCode | 1..1 | SHALL | | 4444-11103 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = INT |
| @negationInd | 0..1 | MAY | | 4444-28099 | |
| templateId | 1..1 | SHALL | | 4444-11104 | |
| @root | 1..1 | SHALL | | 4444-11105 | 2.16.840.1.113883.10.20.24.3.65 |
| @extension | 1..1 | SHALL | | 4444-27086 | 2018-09-01 |
| code | 1..1 | SHALL | | 4444-11107 | |
| priorityCode | 0..1 | MAY | | 4444-14553 | |
| targetSiteCode | 0..1 | MAY | | 4444-27726 | |
| author | 1..1 | SHALL | | 4444-27352 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| participant | 0..* | MAY | | 4444-29479 | |
| @typeCode | 1..1 | SHALL | | 4444-29489 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29480 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29481 | |
| @typeCode | 1..1 | SHALL | | 4444-29490 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29482 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..* | MAY | | 4444-29483 | |
| @typeCode | 1..1 | SHALL | | 4444-29491 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29484 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.164:2019-12-01) |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|---|
| | | | | | 0.20.24.3.160:2019-12-01 |
| participant | 0..1 | MAY | | 4444-29485 | |
| @typeCode | 1..1 | SHALL | | 4444-29492 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29486 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.1.0.20.24.3.161:2019-12-01) |
| entryRelationship | 0..* | MAY | | 4444-11592 | |
| @typeCode | 1..1 | SHALL | | 4444-11593 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 4444-27085 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.1.0.20.24.3.88:2017-08-01) |
| entryRelationship | 0..1 | MAY | | 4444-29487 | |
| @typeCode | 1..1 | SHALL | | 4444-29494 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| observation | 1..1 | SHALL | | 4444-29488 | Rank (identifier: urn:hl7ii:2.16.840.1.113883.1.0.20.24.3.166:2019-12-01) |

1. Conforms to [Planned Procedure \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.41:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-27337).
3. **SHALL** contain exactly one [1..1] **@moodCode**="INT" Intent (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-11103).
4. **MAY** contain zero or one [0..1] **@negationInd** (CONF:4444-28099).
Note: QDM Attribute: Negation Rationale - negationInd="true" indicates Procedure Not Recommended
 - a. If **@negationInd**="true" is present, **SHALL** contain one [1..1] entryRelationship such that it contains exactly one [1..1] **Reason (V3)** to state the reason for **Procedure Not Recommended** (CONF:4444-29830).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-11104) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.65" (CONF:4444-11105).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2018-09-01" (CONF:4444-27086).
6. **SHALL** contain exactly one [1..1] **code** (CONF:4444-11107).
Note: QDM Attribute: Code
7. **MAY** contain zero or one [0..1] **priorityCode** (CONF:4444-14553).

8. **MAY** contain zero or one [0..1] **targetSiteCode** (CONF:4444-27726).
Note: QDM Attribute: Anatomical Location Site
9. **SHALL** contain exactly one [1..1] **Author (V2)** (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-27352).
Note: QDM Attribute: Author dateTime - the time the recommendation was signed
10. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29479) such that it
Note: QDM Attribute: Requester
 - a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem:
HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29489).
 - b. **SHALL** contain exactly one [1..1] **Entity Practitioner** (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29480).
11. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29481) such that it
Note: QDM Attribute: Requester
 - a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem:
HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29490).
 - b. **SHALL** contain exactly one [1..1] **Entity Organization** (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29482).
12. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29483) such that it
Note: QDM Attribute: Requester
 - a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem:
HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29491).
 - b. **SHALL** contain exactly one [1..1] **Entity Care Partner** (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29484).
13. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29485) such that it
Note: QDM Attribute: Requester
 - a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem:
HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29492).
 - b. **SHALL** contain exactly one [1..1] **Entity Patient** (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29486).
14. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:4444-11592) such that it
Note: QDM Attribute: Reason
 - a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** (CodeSystem:
HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-11593).
 - b. **SHALL** contain exactly one [1..1] **Reason (V3)** (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-27085).
15. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-29487) such that it
Note: QDM Attribute: Rank

- a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-29494).
- b. **SHALL** contain exactly one [1..1] **Rank** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.166:2019-12-01) (CONF:4444-29488).

Figure 99: Procedure Recommended (V6) Example

```

<procedure classCode="PROC" moodCode="INT">
  <!-- Conforms to C-CDA R2.1 Planned Procedure (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.41" extension="2014-06-09"/>
  <!-- Procedure Recommended (V6) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.65" extension="2019-12-01"/>
  <id root="5a132c58-bd4f-4c46-b082-b7f84909834f"/>
  <!-- Procedure -->
  <code code="235326000" displayName="Right hemicolectomy"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT"/>
  <text>Procedure, Recommended: Right hemicolectomy </text>
  <statusCode code="active"/>
  <!-- QDM Attribute: Anatomical Location Site -->
  <targetSiteCode code="71854001" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT" displayName="colon"/>
  <author>
    <templateId root="2.16.840.1.113883.10.20.24.3.155" extension="2019-12-01"/>
    <time value="20190329090000"/>
    <assignedAuthor>
      <id nullFlavor="NA"/>
    </assignedAuthor>
  </author>
</procedure>

```

3.54 Planned Supply (V2)

[supply: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.43:2014-06-09 (open)]

Table 177: Planned Supply (V2) Contexts

| Contained By: | Contains: |
|---------------|---|
| | Product Instance (optional) Indication (V2) (optional) Medication Information (V2) (optional) Priority Preference (optional) Instruction (V2) (optional) Author Participation (optional) Immunization Medication Information (V2) (optional) Planned Coverage (optional) |

This template represents both medicinal and non-medicinal supplies ordered, requested, or intended for the patient (e.g., medication prescription, order for wheelchair). The importance of the supply order

or request to the patient and provider may be indicated in the Priority Preference.

The effective time indicates the time when the supply is intended to take place and author time indicates when the documentation of the plan occurred. The Planned Supply template may also indicate the potential insurance coverage for the procedure.

Depending on the type of supply, the product or participant will be either a Medication Information product (medication), an Immunization Medication Information product (immunization), or a Product Instance participant (device/equipment).

Table 178: Planned Supply (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|--------------|-------------|------------------|----------------------------|---|
| supply (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.43:2014-06-09) | | | | | |
| @classCode | 1..1 | SHALL | | 1098-8577 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SPLY |
| @moodCode | 1..1 | SHALL | | 1098-8578 | urn:oid:2.16.840.1.113883.11.20.9.24 (Planned moodCode (SubstanceAdministration/Supply)) |
| templateId | 1..1 | SHALL | | 1098-30463 | |
| @root | 1..1 | SHALL | | 1098-30464 | 2.16.840.1.113883.10.20.22.4.43 |
| @extension | 1..1 | SHALL | | 1098-32556 | 2014-06-09 |
| id | 1..* | SHALL | | 1098-8580 | |
| statusCode | 1..1 | SHALL | | 1098-30458 | |
| @code | 1..1 | SHALL | | 1098-32047 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = active |
| effectiveTime | 0..1 | SHOULD | | 1098-30459 | |
| repeatNumber | 0..1 | MAY | | 1098-32063 | |
| quantity | 0..1 | MAY | | 1098-32064 | |
| product | 0..1 | MAY | | 1098-32049 | |
| manufacturedProduct | 1..1 | SHALL | | 1098-32050 | Medication Information (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09) |
| product | 0..1 | MAY | | 1098-32051 | |
| manufacturedProduct | 1..1 | SHALL | | 1098-32052 | Immunization Medication Information (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09) |
| product | 0..1 | SHOULD | | 1098-32325 | |
| performer | 0..* | MAY | | 1098-32048 | |
| author | 0..1 | SHOULD | | 1098-31129 | Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|---|
| participant | 0..1 | MAY | | 1098-32094 | |
| participantRole | 1..1 | SHALL | | 1098-32095 | Product Instance (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.37) |
| entryRelationship | 0..* | MAY | | 1098-31110 | |
| @typeCode | 1..1 | SHALL | | 1098-31111 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| observation | 1..1 | SHALL | | 1098-31112 | Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) |
| entryRelationship | 0..* | MAY | | 1098-32054 | |
| @typeCode | 1..1 | SHALL | | 1098-32055 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 1098-32056 | Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) |
| entryRelationship | 0..* | MAY | | 1098-32057 | |
| @typeCode | 1..1 | SHALL | | 1098-32058 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ |
| act | 1..1 | SHALL | | 1098-32059 | Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) |
| entryRelationship | 0..* | MAY | | 1098-32060 | |
| @typeCode | 1..1 | SHALL | | 1098-32061 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| act | 1..1 | SHALL | | 1098-32062 | Planned Coverage (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.129) |

1. **SHALL** contain exactly one [1..1] @classCode="SPLY" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8577).
2. **SHALL** contain exactly one [1..1] @moodCode, which **SHALL** be selected from ValueSet [Planned moodCode \(SubstanceAdministration/Supply\)](#) urn:oid:2.16.840.1.113883.11.20.9.24 **STATIC** 2011-09-30 (CONF:1098-8578).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1098-30463) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.43" (CONF:1098-30464).

- b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32556).
- 4. **SHALL** contain at least one [1..*] **id** (CONF:1098-8580).
- 5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-30458).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code**="active" Active (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1098-32047).

The **effectiveTime** in a planned supply represents the time that the supply should occur.

- 6. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-30459).

In a Planned Supply, **repeatNumber** indicates the number of times the supply event can occur. For example, if a medication is filled at a pharmacy and the prescription may be refilled 3 more times, the supply **RepeatNumber** equals 4.

- 7. **MAY** contain zero or one [0..1] **repeatNumber** (CONF:1098-32063).
- 8. **MAY** contain zero or one [0..1] **quantity** (CONF:1098-32064).

This product represents medication that is ordered, requested or intended for the patient.

- 9. **MAY** contain zero or one [0..1] **product** (CONF:1098-32049) such that it
 - a. **SHALL** contain exactly one [1..1] [Medication Information \(V2\)](#) (**identifier**: urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09) (CONF:1098-32050).
 - b. If the product is Medication Information (V2) (2.16.840.1.113883.10.20.22.4.23.2) then the product **SHALL NOT** be Immunization Medication Information (2.16.840.1.113883.10.20.22.4.54.2) and the participant **SHALL NOT** be Product Instance (CONF:1098-32092).

This product represents immunization medication that is ordered, requested or intended for the patient.

- 10. **MAY** contain zero or one [0..1] **product** (CONF:1098-32051) such that it
 - a. **SHALL** contain exactly one [1..1] [Immunization Medication Information \(V2\)](#) (**identifier**: urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09) (CONF:1098-32052).
 - b. If the product is Medication Information (V2) (2.16.840.1.113883.10.20.22.4.23.2) then the product **SHALL NOT** be Immunization Medication Information (2.16.840.1.113883.10.20.22.4.54.2) and the participant **SHALL NOT** be Product Instance (CONF:1098-32093).

A product is recommended or even required under certain implementations. This IG makes product as recommended (SHOULD).

- 11. **SHOULD** contain zero or one [0..1] **product** (CONF:1098-32325).

The clinician who is expected to perform the supply could be identified using supply/performer.

- 12. **MAY** contain zero or more [0..*] **performer** (CONF:1098-32048).

The author in a supply represents the clinician who is requesting or planning the supply.

- 13. **SHOULD** contain zero or one [0..1] [Author Participation](#) (**identifier**: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-31129).

This participant represents a device that is ordered, requested or intended for the patient.

14. **MAY** contain zero or one [0..1] **participant** (CONF:1098-32094) such that it
- SHALL** contain exactly one [1..1] **Product Instance** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.37) (CONF:1098-32095).
 - If the participant is Product Instance then the product **SHALL NOT** be Medication Information (V2) (2.16.840.1.113883.10.20.22.4.23.2) and the product **SHALL NOT** be Immunization Medication Information (V2) (2.16.840.1.113883.10.20.22.4.54.2) (CONF:1098-32096).

The following entryRelationship represents the priority that a patient or a provider places on the supply.

15. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31110) such that it
- SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31111).
 - SHALL** contain exactly one [1..1] **Priority Preference** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) (CONF:1098-31112).

The following entryRelationship represents the indication for the supply.

16. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32054) such that it
- SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32055).
 - SHALL** contain exactly one [1..1] **Indication (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) (CONF:1098-32056).

The following entryRelationship captures any instructions associated with the planned supply.

17. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32057) such that it
- SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** Has Subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32058).
 - SHALL** contain exactly one [1..1] **Instruction (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) (CONF:1098-32059).

The following entryRelationship represents the insurance coverage the patient may have for the supply.

18. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32060) such that it
- SHALL** contain exactly one [1..1] **@typeCode="COMP"** Has Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32061).
 - SHALL** contain exactly one [1..1] **Planned Coverage** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.129) (CONF:1098-32062).

Figure 100: Planned Supply (V2) Example

```
<supply moodCode="INT" classCode="SPLY">
  <templateId root="2.16.840.1.113883.10.20.22.4.43" extension="2014-06-09" />
  <!-- Planned Supply (V2) -->
  <id root="9a6d1bac-17d3-4195-89c4-1121bc809b5d" />
  <statusCode code="active" />
  <!-- The effectiveTime in a planned supply represents
the time that the supply should occur. -->
  <effectiveTime value="20130615" />
  <repeatNumber value="1" />
  <quantity value="3" />
  <!-- This product represents medication that is ordered,
requested or intended for the patient. -->
  <product>
    <manufacturedProduct classCode="MANU">
      <!-- Medication Information (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.23" extension="2014-06-09" />
      <id root="2a620155-9d11-439e-92b3-5d9815ff4ee8" />
      <manufacturedMaterial>
        <code code="573621" codeSystem="2.16.840.1.113883.6.88"
displayName="Proventil 0.09 MG/ACTUAT inhalant solution">
          <originalText>
            <reference value="#MedSec_1" />
          </originalText>
          <translation code="573621" displayName="Proventil 0.09 MG/ACTUAT
inhalant solution" codeSystem="2.16.840.1.113883.6.88" codeSystemName="RxNorm" />
        </code>
      </manufacturedMaterial>
      <manufacturerOrganization>
        <name>Medication Factory Inc.</name>
      </manufacturerOrganization>
    </manufacturedProduct>
  </product>
  <!-- The clinician who is expected to perform the supply
could be identified using supply/performer. -->
  <performer>
    ...
  </performer>
  <!-- The author in a supply represents the clinician
who is requesting or planning the supply. -->
  <author typeCode="AUT">
    ...
  </author>
  <entryRelationship typeCode="REFR">
    <!-- Patient Priority Preference -->
    ...
  </entryRelationship>
  <entryRelationship typeCode="REFR">
    <!-- Provider Priority Preference -->
    ...
  </entryRelationship>
  <entryRelationship typeCode="RSON">
```

```

        <!-- Indication (V2) -->
    ...

</entryRelationship>
<entryRelationship typeCode="SUBJ">
    <!-- Instruction (V2) -->
    ...

</entryRelationship>
<entryRelationship typeCode="COMP">
    <!-- Planned Coverage -->
    ...

</entryRelationship>
</supply>

```

3.54.1 Device Order (V5)

[supply: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.9:2019-12-01 (open)]

Table 179: Device Order (V5) Contexts

| Contained By: | Contains: |
|--|---|
| Device Order Act (V3) (required) | Reason (V3) (optional) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Author (V2) (required) |

This template, along with the Device Order Act (V3) template, represents the QDM datatype: Device, Order. This template must be contained by a Device Order Act (V3) template.

This datatype represents an order for equipment designed to treat, monitor, or diagnose a patient's condition.

The moodCode is constrained to "RQO", an author is required to represent the ordering clinician and an author time/date stamp is required.

QDM Attribute: Author dateTime corresponds to when the order was signed.

For Device Not Ordered, use author dateTime to reference the timing.

Table 180: Device Order (V5) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|---|
| supply (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.9:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-27723 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SPLY |
| @moodCode | 1..1 | SHALL | | 4444-12343 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = RQO |
| templateId | 1..1 | SHALL | | 4444-12344 | |
| @root | 1..1 | SHALL | | 4444-12345 | 2.16.840.1.113883.10.20.24.3.9 |
| @extension | 1..1 | SHALL | | 4444-27091 | 2019-12-01 |
| author | 1..1 | SHALL | | 4444-27721 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| participant | 1..1 | SHALL | | 4444-12349 | |
| @typeCode | 1..1 | SHALL | | 4444-12350 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = DEV |
| participantRole | 1..1 | SHALL | | 4444-12351 | |
| @classCode | 1..1 | SHALL | | 4444-12352 | urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU |
| playingDevice | 1..1 | SHALL | | 4444-12353 | |
| @classCode | 1..1 | SHALL | | 4444-12354 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = DEV |
| code | 1..1 | SHALL | | 4444-12355 | |
| participant | 0..* | MAY | | 4444-29282 | |
| @typeCode | 1..1 | SHALL | | 4444-29287 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29283 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29278 | |
| @typeCode | 1..1 | SHALL | | 4444-29285 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29279 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.1 |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|---|
| | | | | | 0.20.24.3.163:2019-12-01 |
| participant | 0..1 | MAY | | 4444-29276 | |
| @typeCode | 1..1 | SHALL | | 4444-29284 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29277 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29280 | |
| @typeCode | 1..1 | SHALL | | 4444-29286 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29281 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |
| entryRelationship | 0..1 | MAY | | 4444-12356 | |
| @typeCode | 1..1 | SHALL | | 4444-12359 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 4444-12360 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) |

1. Conforms to [Planned Supply \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.43:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="SPLY" Supply (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-27723).
3. **SHALL** contain exactly one [1..1] **@moodCode**="RQO" Request, which **SHALL** be selected from CodeSystem HL7ActMood (urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-12343).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-12344) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.9" (CONF:4444-12345).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-27091).
5. **SHALL** contain exactly one [1..1] [Author \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-27721).
Note: QDM Attribute: Author dateTime - the device order was signed
6. **SHALL** contain exactly one [1..1] **participant** (CONF:4444-12349) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="DEV" device, which **SHALL** be selected from CodeSystem HL7ParticipationType (urn:oid:2.16.840.1.113883.5.90) (CONF:4444-12350).
 - b. **SHALL** contain exactly one [1..1] **participantRole** (CONF:4444-12351).

- i. This participantRole **SHALL** contain exactly one [1..1] @classCode="MANU" manufactured product, which **SHALL** be selected from CodeSystem HL7RoleClass (urn:oid:2.16.840.1.113883.5.110) (CONF:4444-12352).
 - ii. This participantRole **SHALL** contain exactly one [1..1] playingDevice (CONF:4444-12353).
 - 1. This playingDevice **SHALL** contain exactly one [1..1] @classCode="DEV" device, which **SHALL** be selected from CodeSystem HL7ParticipationType (urn:oid:2.16.840.1.113883.5.90) (CONF:4444-12354).
 - 2. This playingDevice **SHALL** contain exactly one [1..1] code (CONF:4444-12355).
Note: QDM Attribute: Code
- 7. **MAY** contain zero or more [0..*] participant (CONF:4444-29282) such that it
Note: QDM Attribute: Requester
 - a. **SHALL** contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29287).
 - b. **SHALL** contain exactly one [1..1] [Entity Practitioner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29283).
- 8. **MAY** contain zero or more [0..*] participant (CONF:4444-29278) such that it
Note: QDM Attribute: Requester
 - a. **SHALL** contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29285).
 - b. **SHALL** contain exactly one [1..1] [Entity Organization](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29279).
- 9. **MAY** contain zero or one [0..1] participant (CONF:4444-29276) such that it
Note: QDM Attribute: Requester
 - a. **SHALL** contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29284).
 - b. **SHALL** contain exactly one [1..1] [Entity Patient](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29277).
- 10. **MAY** contain zero or more [0..*] participant (CONF:4444-29280) such that it
Note: QDM Attribute: Requester
 - a. **SHALL** contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29286).
 - b. **SHALL** contain exactly one [1..1] [Entity Care Partner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29281).
- 11. **MAY** contain zero or one [0..1] entryRelationship (CONF:4444-12356) such that it
Note: QDM Attribute: Reason
 - a. **SHALL** contain exactly one [1..1] @typeCode="RSON" has reason, which **SHALL** be selected from CodeSystem HL7ActRelationshipType (urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-12359).

- b. **SHALL** contain exactly one [1..1] [Reason \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-12360).

12. This template **SHALL** be contained by a **Device Order Act (V3)** (CONF:4444-28665).

Figure 101: Device Order (V5) Example

```

<!-- Must be contained in the Device Order Act (V2) template to represent the Device, Order
QDM data type -->
<supply classCode="SPLY" moodCode="RQO">
  <!-- Conforms to C-CDA R2.1 Planned Supply (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.43" extension="2014-06-09"/>
  <!-- Device Order (V5) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.9" extension="2019-12-01"/>
  <id root="6a8d037d-f144-4071-9d1f-8a92a11dedc6"/>
  <statusCode code="active"/>
  <author>
    <templateId root="2.16.840.1.113883.10.20.24.3.155" extension="2019-12-01"/>
    <time value="201910101030"/>
    <assignedAuthor>
      <id nullFlavor="NA"/>
    </assignedAuthor>
  </author>
  <participant typeCode="DEV">
    <participantRole classCode="MANU">
      <playingDevice classCode="DEV">
        <!-- Device -->
        <code code="401608003" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED-CT" displayName="Suprapubic catheter (physical object)"/>
      </playingDevice>
    </participantRole>
  </participant>
  ...
</supply>

```

3.54.2 Device Recommended (V5)

[supply: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.10:2019-12-01 (open)]

Table 181: Device Recommended (V5) Contexts

| Contained By: | Contains: |
|--|---|
| Device Recommended Act (V3) (required) | Reason (V3) (optional) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Author (V2) (required) |

This template along with the Device Recommended Act (V3) represents the QDM datatype: Device, Recommended. This template must be contained by a Device Recommended Act (V3) template.

This datatype represents a recommendation for equipment designed to treat, monitor, or diagnose a patient's condition.

The moodCode is constrained to "INT", an author is required to represent the recommending clinician and an author time/date stamp is required.

QDM Attribute: Author dateTime corresponds to when the recommendation was signed.

For Device Not Recommended use Author dateTime to reference timing.

Table 182: Device Recommended (V5) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-------|-----------|----------------------------|---|
| supply (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.10:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-27722 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SPLY |
| @moodCode | 1..1 | SHALL | | 4444-12368 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = INT |
| templateId | 1..1 | SHALL | | 4444-12369 | |
| @root | 1..1 | SHALL | | 4444-12370 | 2.16.840.1.113883.10.20.24.3.10 |
| @extension | 1..1 | SHALL | | 4444-27094 | 2019-12-01 |
| author | 1..1 | SHALL | | 4444-27719 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| participant | 1..1 | SHALL | | 4444-12374 | |
| @typeCode | 1..1 | SHALL | | 4444-12375 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = DEV |
| participantRole | 1..1 | SHALL | | 4444-12376 | |
| @classCode | 1..1 | SHALL | | 4444-12377 | urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU |
| playingDevice | 1..1 | SHALL | | 4444-12378 | |
| @classCode | 1..1 | SHALL | | 4444-12379 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = DEV |
| code | 1..1 | SHALL | | 4444-12380 | |
| participant | 0..* | MAY | | 4444-29294 | |
| @typeCode | 1..1 | SHALL | | 4444-29299 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29295 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29290 | |
| @typeCode | 1..1 | SHALL | | 4444-29297 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29291 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.1 |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|---|
| | | | | | 0.20.24.3.163:2019-12-01 |
| participant | 0..1 | MAY | | 4444-29288 | |
| @typeCode | 1..1 | SHALL | | 4444-29296 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29289 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29292 | |
| @typeCode | 1..1 | SHALL | | 4444-29298 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29293 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |
| entryRelationship | 0..1 | MAY | | 4444-12381 | |
| @typeCode | 1..1 | SHALL | | 4444-12382 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 4444-27093 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) |

1. Conforms to [Planned Supply \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.43:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="SPLY" Supply (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-27722).
3. **SHALL** contain exactly one [1..1] **@moodCode**="INT" Intent, which **SHALL** be selected from CodeSystem HL7ActMood (urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-12368).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-12369) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.10" (CONF:4444-12370).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-27094).
5. **SHALL** contain exactly one [1..1] [Author \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-27719). Note: QDM Attribute: Author dateTime – the time the device recommendation is authored (i.e., provided to the patient)
6. **SHALL** contain exactly one [1..1] **participant** (CONF:4444-12374) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="DEV" device, which **SHALL** be selected from CodeSystem HL7ParticipationType (urn:oid:2.16.840.1.113883.5.90) (CONF:4444-12375).
 - b. **SHALL** contain exactly one [1..1] **participantRole** (CONF:4444-12376).

- i. This participantRole **SHALL** contain exactly one [1..1] @classCode="MANU" manufactured product, which **SHALL** be selected from CodeSystem HL7RoleClass (urn:oid:2.16.840.1.113883.5.110) (CONF:4444-12377).
 - ii. This participantRole **SHALL** contain exactly one [1..1] playingDevice (CONF:4444-12378).
 - 1. This playingDevice **SHALL** contain exactly one [1..1] @classCode="DEV" device, which **SHALL** be selected from CodeSystem HL7ParticipationType (urn:oid:2.16.840.1.113883.5.90) (CONF:4444-12379).
 - 2. This playingDevice **SHALL** contain exactly one [1..1] code (CONF:4444-12380).
Note: QDM Attribute: Code
- 7. **MAY** contain zero or more [0..*] participant (CONF:4444-29294) such that it
Note: QDM Attribute: Requester
 - a. **SHALL** contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29299).
 - b. **SHALL** contain exactly one [1..1] [Entity Practitioner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29295).
- 8. **MAY** contain zero or more [0..*] participant (CONF:4444-29290) such that it
Note: QDM Attribute: Requester
 - a. **SHALL** contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29297).
 - b. **SHALL** contain exactly one [1..1] [Entity Organization](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29291).
- 9. **MAY** contain zero or one [0..1] participant (CONF:4444-29288) such that it
Note: QDM Attribute: Requester
 - a. **SHALL** contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29296).
 - b. **SHALL** contain exactly one [1..1] [Entity Patient](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29289).
- 10. **MAY** contain zero or more [0..*] participant (CONF:4444-29292) such that it
Note: QDM Attribute: Requester
 - a. **SHALL** contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29298).
 - b. **SHALL** contain exactly one [1..1] [Entity Care Partner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29293).
- 11. **MAY** contain zero or one [0..1] entryRelationship (CONF:4444-12381) such that it
Note: QDM Attribute: Reason
 - a. **SHALL** contain exactly one [1..1] @typeCode="RSON" has reason, which **SHALL** be selected from CodeSystem HL7ActRelationshipType (urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-12382).

- b. **SHALL** contain exactly one [1..1] [Reason \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-27093).
12. This template **SHALL** be contained by a **Device Recommended Act (V3)** (CONF:4444-28666).

Figure 102: Device Recommended (V5) Example

```

<!-- Must be contained in the Device Recommended Act (V3) template to represent the Device,
Recommended QDM data type -->
<supply classCode="SPLY" moodCode="INT">
  <!-- C-CDA R2.1 : Planned Supply (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.43" extension="2014-06-09"/>
  <!-- Device Recommended (V5) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.10" extension="2019-12-01"/>
  <id root="6a8d037d-f144-4071-9d1f-8a92a11dedc6"/>
  <statusCode code="active"/>
  <author>
    <templateId root="2.16.840.1.113883.10.20.24.3.155" extension="2019-12-01"/>
    <time value="201905101030"/>
    <assignedAuthor>
      <id nullFlavor="NA"/>
    </assignedAuthor>
  </author>
  <participant typeCode="DEV">
    <participantRole classCode="MANU">
      <playingDevice classCode="DEV">
        <!-- Device -->
        <code code="401608003" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED-CT" displayName="Suprapubic catheter (physical object)"/>
      </playingDevice>
    </participantRole>
  </participant>
  ...
</supply>

```

3.54.3 Immunization Supply Request

[supply: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.167:2019-12-01 (open)]

Table 183: Immunization Supply Request Contexts

| Contained By: | Contains: |
|--|---|
| Immunization Order (V3) (optional) | Immunization Medication Information (V2) (required) |

This template represents a request to a pharmacy to supply an immunization medication.

Table 184: Immunization Supply Request Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|-------|-----------|----------------------------|---|
| supply (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.167:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-29713 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SPLY |
| @moodCode | 1..1 | SHALL | | 4444-29712 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = RQO |
| templateId | 1..1 | SHALL | | 4444-29707 | |
| @root | 1..1 | SHALL | | 4444-29710 | 2.16.840.1.113883.10.20.24.3.167 |
| @extension | 1..1 | SHALL | | 4444-29711 | 2019-12-01 |
| product | 1..1 | SHALL | | 4444-29708 | |
| manufacturedProduct | 1..1 | SHALL | | 4444-29709 | Immunization Medication Information (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09) |

1. Conforms to [Planned Supply \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.43:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="SPLY" Supply (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-29713).
3. **SHALL** contain exactly one [1..1] **@moodCode**="RQO" Request (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-29712).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-29707) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.167" (CONF:4444-29710).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-29711).
5. **SHALL** contain exactly one [1..1] **product** (CONF:4444-29708) such that it
 - a. **SHALL** contain exactly one [1..1] [Immunization Medication Information \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09) (CONF:4444-29709).

Figure 103: Immunization Supply Request

```

<supply classCode="SPLY" moodCode="RQO">
  <!-- Immunization Supply Request template -->
  <templateId root="2.16.840.1.113883.10.20.24.3.167"
    extension="2019-12-01"/>
  <!-- Conforms to C-CDA R2 Planned Supply (V2) template-->
  <templateId root="2.16.840.1.113883.10.20.22.4.43"
    extension="2014-06-09" />
  <id root="50ed595a-dfb6-49f0-8b19-1901b5d01c1a"/>
  <statusCode code="active"/>
  <!-- Attribute: Supply -->
  <quantity value="3"/>
  <product>
    <manufacturedProduct classCode="MANU">
      <!-- Conforms to C-CDA R2 Immunization Medication Information (V2) template -->
      <templateId root="2.16.840.1.113883.10.20.22.4.54"
        extension="2014-06-09" />
      <id root="37bfe02a-3e97-4bd6-9197-bbd0ed0de79e" />
      <manufacturedMaterial>
        <code code="33" codeSystem="2.16.840.1.113883.12.292" displayName="Pneumococcal
        polysaccharide vaccine" codeSystemName="CVX"/>
      </manufacturedMaterial>
      <manufacturerOrganization>
        <name>Medication Factory Inc.</name>
      </manufacturerOrganization>
    </manufacturedProduct>
  </product>
</supply>

```

3.54.4 Medication Supply Request (V3)

[supply: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.99:2019-12-01
(open)]

Table 185: Medication Supply Request (V3) Contexts

| Contained By: | Contains: |
|--|--|
| Medication Order (V6) (optional) | Medication Information (V2) (required) |

This template represents a request to a pharmacy to supply a medication.

Table 186: Medication Supply Request (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-------|-----------|----------------------------|--|
| supply (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.99:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-28373 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SPLY |
| @moodCode | 1..1 | SHALL | | 4444-13820 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = RQO |
| templateId | 1..1 | SHALL | | 4444-13821 | |
| @root | 1..1 | SHALL | | 4444-13822 | 2.16.840.1.113883.10.20.24.3.99 |
| @extension | 1..1 | SHALL | | 4444-28374 | 2019-12-01 |
| product | 1..1 | SHALL | | 4444-29705 | |
| manufacturedProduct | 1..1 | SHALL | | 4444-29706 | Medication Information (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09) |

1. Conforms to [Planned Supply \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.43:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="SPLY" Supply (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-28373).
3. **SHALL** contain exactly one [1..1] **@moodCode**="RQO" Request (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-13820).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-13821) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.99" (CONF:4444-13822).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-28374).
5. **SHALL** contain exactly one [1..1] **product** (CONF:4444-29705) such that it
 - a. **SHALL** contain exactly one [1..1] [Medication Information \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09) (CONF:4444-29706).

Figure 104: Medication Supply Request (V3)

```

<supply classCode="SPLY" moodCode="RQO">
  <!-- Medication Supply Request (V3) template -->
  <templateId root="2.16.840.1.113883.10.20.24.3.99"
    extension="2019-12-01"/>
  <!-- Conforms to C-CDA R2 Planned Supply (V2) template-->
  <templateId root="2.16.840.1.113883.10.20.22.4.43"
    extension="2014-06-09" />
  <id root="50ed595a-dfb6-49f0-8b19-1901b5d01c1a"/>
  <statusCode code="active"/>
  <repeatNumber value="4"/>
  <!-- Attribute: Supply -->
  <quantity value="150"/>
  <product>
    <manufacturedProduct classCode="MANU">
      <!-- Conforms to C-CDA R2 Medication Information (V2) template -->
      <templateId root="2.16.840.1.113883.10.20.22.4.23"
        extension="2014-06-09" />
      <id root="37bfe02a-3e97-4bd6-9197-bbd0ed0de79e" />
      <manufacturedMaterial>
        <code code="329498"
          codeSystem="2.16.840.1.113883.6.88"
          displayName="Albuterol 0.09 MG/ACTUAT inhalant solution"/>
      </manufacturedMaterial>
      <manufacturerOrganization>
        <name>Medication Factory Inc.</name>
      </manufacturerOrganization>
    </manufacturedProduct>
  </product>
</supply>

```

3.55 Precondition for Substance Administration (V2)

[criterion: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09 (open)]

Table 187: Precondition for Substance Administration (V2) Contexts

| Contained By: | Contains: |
|---|-----------|
| Medication Activity (V2) (optional) Planned Medication Activity (V2) (optional) Planned Immunization Activity (optional) Immunization Activity (V3) (optional) | |

A criterion for administration can be used to record that the medication is to be administered only when the associated criteria are met.

Table 188: Precondition for Substance Administration (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|-------|-----------|----------------------------|--|
| criterion (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09) | | | | | |
| templateId | 1..1 | SHALL | | 1098-7372 | |
| @root | 1..1 | SHALL | | 1098-10517 | 2.16.840.1.113883.10.20.22.4.25 |
| @extension | 1..1 | SHALL | | 1098-32603 | 2014-06-09 |
| code | 1..1 | SHALL | CD | 1098-32396 | |
| @code | 1..1 | SHALL | | 1098-32397 | ASSERTION |
| @codeSystem | 1..1 | SHALL | | 1098-32398 | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| value | 1..1 | SHALL | CD | 1098-7369 | urn:oid:2.16.840.1.113883.3.88.12.3221.7.4 (Problem) |

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7372) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.25" (CONF:1098-10517).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32603).
2. **SHALL** contain exactly one [1..1] **code** with **@xsi:type**="CD" (CONF:1098-32396).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:1098-32397).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:1098-32398).
3. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD", where the code **SHALL** be selected from ValueSet [Problem](#) urn:oid:2.16.840.1.113883.3.88.12.3221.7.4 **DYNAMIC** (CONF:1098-7369).

Figure 105: Precondition for Substance Administration (V2) Example

```

<criterion>
  <templateId root="2.16.840.1.113883.10.20.22.4.25"
    extension="2014-06-09" />
  <code code="ASSERTION"
    codeSystem="2.16.840.1.113883.5.4" />
  <value xsi:type="CD"
    code="56018004"
    codeSystem="2.16.840.1.113883.6.96"
    displayName="Wheezing" />
</criterion>

```

3.56 Present On Admission Indicator

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.169:2019-12-01 (open)]

Table 189: Present On Admission Indicator Contexts

| Contained By: | Contains: |
|--|-----------|
| Encounter Diagnosis QDM (optional) | |

This template represents the diagnosis Present On Admission (POA) Indicator.

The Diagnosis Present On Admission (POA) is an indicator assigned to Inpatient Encounter diagnoses and is used in quality and patient safety measures. The full set of allowable values in the UB-04 standard include:

Y - Diagnosis was present at the time of admission

N - Diagnosis was not present at the time of admission

U - Documentation insufficient to determine if condition was present at the time of inpatient admission

W - Clinically undetermined. Provider unable to clinically determine whether the condition was present at the time of inpatient admission

1- Unreported/not used (exempt from POA reporting – equivalent to a blank on the UB-04 form)

Table 190: Present On Admission Indicator Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-------|-----------|----------------------------|--|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.169:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-29956 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 4444-29957 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 4444-29945 | |
| @root | 1..1 | SHALL | | 4444-29949 | 2.16.840.1.113883.10.20.24.3.169 |
| @extension | 1..1 | SHALL | | 4444-29950 | 2019-12-01 |
| code | 1..1 | SHALL | | 4444-29947 | |
| @code | 1..1 | SHALL | | 4444-29952 | 78026-2 |
| @codeSystem | 1..1 | SHALL | | 4444-29953 | 2.16.840.1.113883.6.1 |
| value | 1..1 | SHALL | CD | 4444-29948 | urn:oid:2.16.840.1.113883.6.301.5 (NUBC UB-04 Patient Discharge Status code set) |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-29956).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-29957).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-29945) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.169" (CONF:4444-29949).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-29950).
4. **SHALL** contain exactly one [1..1] **code** (CONF:4444-29947).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="78026-2" Present on admission (CONF:4444-29952).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CONF:4444-29953).
5. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD", where the code **SHOULD** be selected from CodeSystem NUBC UB-04 Patient Discharge Status code set (urn:oid:2.16.840.1.113883.6.301.5) **DYNAMIC** (CONF:4444-29948).

Figure 106: Present On Admission Indicator Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.24.3.169" extension="2019-12-01" />
  <code code="78026-2"
    displayName="Present on admission"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" />
  <value xsi:type="CD" code="Y" displayName="Diagnosis was present at the time of admission" codeSystem="2.16.840.1.113883.6.301.1" codeSystemName="UB-04" />
</observation>
```

3.57 Priority Preference

[observation: identifier urn:oid:2.16.840.1.113883.10.20.22.4.143 (open)]

Table 191: Priority Preference Contexts

| Contained By: | Contains: |
|--|--|
| Goal Observation (V2) (optional) Planned Act (V2) (optional) Planned Encounter (V2) (optional) Planned Procedure (V2) (optional) Planned Observation (V2) (optional) Planned Supply (V2) (optional) Planned Medication Activity (V2) (optional) Planned Immunization Activity (V2) (optional) Problem Observation (V3) (optional) Problem Concern Act (V3) (optional) | Author Participation (V2) (optional) |

This template represents priority preferences chosen by a patient or a care provider. Priority preferences are choices made by care providers or patients or both relative to options for care or treatment (including scheduling, care experience, and meeting of personal health goals), the sharing and disclosure of health information, and the prioritization of concerns and problems.

Table 192: Priority Preference Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|--------|-----------|----------------------------|---|
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) | | | | | |
| @classCode | 1..1 | SHALL | | 1098-30949 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 1098-30950 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMod) = EVN |
| templateId | 1..1 | SHALL | | 1098-30951 | |
| @root | 1..1 | SHALL | | 1098-30952 | 2.16.840.1.113883.10.20.22.4.143 |
| id | 1..* | SHALL | | 1098-30953 | |
| code | 1..1 | SHALL | | 1098-30954 | |
| @code | 1..1 | SHALL | | 1098-30955 | 225773000 |
| @codeSystem | 1..1 | SHALL | | 1098-30956 | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96 |
| effectiveTime | 0..1 | SHOULD | | 1098-32327 | |
| value | 1..1 | SHALL | CD | 1098-30957 | urn:oid:2.16.840.1.113883.11.20.9.60 (Priority Level) |
| author | 0..* | SHOULD | | 1098-30958 | Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1098-30949).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1098-30950).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-30951) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.143" (CONF:1098-30952).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-30953).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-30954).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="225773000" Preference (CONF:1098-30955).

- b. This code **SHALL** contain exactly one [1..1] `@codeSystem="2.16.840.1.113883.6.96"` (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:1098-30956).
- 6. **SHOULD** contain zero or one [0..1] `effectiveTime` (CONF:1098-32327).
- 7. **SHALL** contain exactly one [1..1] `value` with `@xsi:type="CD"`, where the code **SHALL** be selected from ValueSet [Priority Level](#) urn:oid:2.16.840.1.113883.11.20.9.60 **DYNAMIC** (CONF:1098-30957).
- 8. **SHOULD** contain zero or more [0..*] `Author Participation` (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-30958).

Figure 107: Priority Preference Example

```

<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.143" />
  <id root="7d66f448-ba82-4291-a9da-9e5db5e58803" />
  <code code="225773000"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT"
    displayName="preference" />
  <value xsi:type="CD"
    code="394849002"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED"
    displayName="High priority" />
  <!--
    Author Participation Template
    In this case, the author is the same as a participant already described in the
    header.
    However, the author could be a the record target (patient), a different provider -
    someone else in the header, or a new provider not elsewhere specified.
  -->
  <author>
    <templateId root="2.16.840.1.113883.10.20.22.4.119" />
    <time value="20130801" />
    <assignedAuthor>
      <!-- This id points back to a participant in the header -->
      <id root="20cf14fb-b65c-4c8c-a54d-b0cca834c18c" />
    </assignedAuthor>
  </author>
</observation>

```

3.58 Problem Concern Act (V3)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.3:2015-08-01 (open)]

Table 193: Problem Concern Act (V3) Contexts

| Contained By: | Contains: |
|---------------|--|
| | Priority Preference (optional) Author Participation (optional) Problem Observation (V3) (required) |

This template reflects an ongoing concern on behalf of the provider that placed the concern on a patient's problem list. So long as the underlying condition is of concern to the provider (i.e., as long as the condition, whether active or resolved, is of ongoing concern and interest to the provider), the statusCode is "active". Only when the underlying condition is no longer of concern is the statusCode set to "completed". The effectiveTime reflects the time that the underlying condition was felt to be a concern; it may or may not correspond to the effectiveTime of the condition (e.g., even five years later, the clinician may remain concerned about a prior heart attack).

The statusCode of the Problem Concern Act is the definitive indication of the status of the concern, whereas the effectiveTime of the nested Problem Observation is the definitive indication of whether or not the underlying condition is resolved.

The effectiveTime/low of the Problem Concern Act asserts when the concern became active. The effectiveTime/high asserts when the concern was completed (e.g., when the clinician deemed there is no longer any need to track the underlying condition).

A Problem Concern Act can contain many Problem Observations (templateId 2.16.840.1.113883.10.20.22.4.4). Each Problem Observation is a discrete observation of a condition, and therefore will have a statusCode of "completed". The many Problem Observations nested under a Problem Concern Act reflect the change in the clinical understanding of a condition over time. For instance, a Concern may initially contain a Problem Observation of "chest pain":

- Problem Concern 1
 - Problem Observation: Chest Pain
 - Later, a new Problem Observation of "esophagitis" will be added, reflecting a better understanding of the nature of the chest pain. The later problem observation will have a more recent author time stamp.
- Problem Concern 1
 - Problem Observation (author/time Jan 3, 2012): Chest Pain
 - Problem Observation (author/time Jan 6, 2012): Esophagitis
 - Many systems display the nested Problem Observation with the most recent author time stamp, and provide a mechanism for viewing prior observations.

Table 194: Problem Concern Act (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|--------------|-------------|------------------|----------------------------|--|
| act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.3:2015-08-01) | | | | | |
| @classCode | 1..1 | SHALL | | 1198-9024 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT |
| @moodCode | 1..1 | SHALL | | 1198-9025 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 1198-16772 | |
| @root | 1..1 | SHALL | | 1198-16773 | 2.16.840.1.113883.10.20.22.4.3 |
| @extension | 1..1 | SHALL | | 1198-32509 | 2015-08-01 |
| id | 1..* | SHALL | | 1198-9026 | |
| code | 1..1 | SHALL | | 1198-9027 | |
| @code | 1..1 | SHALL | | 1198-19184 | CONC |
| @codeSystem | 1..1 | SHALL | | 1198-32168 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = 2.16.840.1.113883.5.6 |
| statusCode | 1..1 | SHALL | | 1198-9029 | |
| @code | 1..1 | SHALL | | 1198-31525 | urn:oid:2.16.840.1.113883.11.20.9.19 (ProblemAct statusCode) |
| effectiveTime | 1..1 | SHALL | | 1198-9030 | |
| low | 1..1 | SHALL | | 1198-9032 | |
| high | 0..1 | MAY | | 1198-9033 | |
| author | 0..* | SHOULD | | 1198-31146 | Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) |
| entryRelationship | 1..* | SHALL | | 1198-9034 | |
| @typeCode | 1..1 | SHALL | | 1198-9035 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ |
| observation | 1..1 | SHALL | | 1198-15980 | Problem Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01) |
| entryRelationship | 0..* | MAY | | 1198- | |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------|-------|-------|-----------|----------------------------|--|
| | | | | 31638 | |
| @typeCode | 1..1 | SHALL | | 1198-31639 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| observation | 1..1 | SHALL | | 1198-31640 | Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) |

1. **SHALL** contain exactly one [1..1] **@classCode**="ACT" Act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-9024).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-9025).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-16772) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.3" (CONF:1198-16773).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32509).
4. **SHALL** contain at least one [1..*] **id** (CONF:1198-9026).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1198-9027).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="CONC" Concern (CONF:1198-19184).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.6" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1198-32168).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-9029).

The statusCode of the Problem Concern Act is the definitive indication of the status of the concern, whereas the effectiveTime of the nested Problem Observation is the definitive indication of whether or not the underlying condition is resolved.

- a. This statusCode **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [ProblemAct statusCode](#) urn:oid:2.16.840.1.113883.11.20.9.19 **STATIC** (CONF:1198-31525).
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1198-9030).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1198-9032).
Note: The effectiveTime/low of the Problem Concern Act asserts when the concern became active.
 - b. This effectiveTime **MAY** contain zero or one [0..1] **high** (CONF:1198-9033).
Note: The effectiveTime/high asserts when the concern was completed (e.g., when the clinician deemed there is no longer any need to track the underlying condition).
8. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1198-31146).
9. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:1198-9034) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="SUBJ" Has subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1198-9035).

- b. **SHALL** contain exactly one [1..1] [Problem Observation \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01) (CONF:1198-15980).

The following entryRelationship represents the importance of the concern to a provider.

- 10. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31638) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1198-31639).
 - b. **SHALL** contain exactly one [1..1] [Priority Preference](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) (CONF:1198-31640).

Figure 108: Problem Concern Act (V3) Example

```
<act classCode="ACT" moodCode="EVN">
  <!-- ** Problem Concern Act (V3) ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.3"
    extension="2015-08-01" />
  <id root="ec8a6ff8-ed4b-4f7e-82c3-e98e58b45de7" />
  <code code="CONC" codeSystem="2.16.840.1.113883.5.6" displayName="Concern" />
  <!-- The statusCode represents the need to continue tracking the problem -->
  <!-- This is of ongoing concern to the provider -->
  <statusCode code="active" />
  <effectiveTime>
    <!-- The low value represents when the problem was first recorded in the patient's
chart -->
    <!-- Concern was documented on July 6, 2013 -->
    <low value="201307061145-0800" />
  </effectiveTime>
  <author typeCode="AUT">
    <templateId root="2.16.840.1.113883.10.20.22.4.119" />
    <!-- Same as Concern effectiveTime/low -->
    <time value="201307061145-0800" />
    <assignedAuthor>
      <id extension="555555555" root="2.16.840.1.113883.4.6" />
      <code code="207QA0505X" displayName="Adult Medicine"
codeSystem="2.16.840.1.113883.6.101"
      codeSystemName="Healthcare Provider Taxonomy (HIPAA)" />
    </assignedAuthor>
  </author>
  <entryRelationship typeCode="SUBJ">
    <observation classCode="OBS" moodCode="EVN">
      <!-- ** Problem Observation (V3) ** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2015-08-01" />
      <id root="abl791b0-5c71-11db-b0de-0800200c9a66" />
      <code code="75323-6" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Condition" />
      <!-- The statusCode reflects the status of the observation itself -->
      <statusCode code="completed" />
      <effectiveTime>
        <!-- The low value reflects the date of onset -->
        <!-- Based on patient symptoms, presumed onset is July 3, 2013 -->
        <low value="20130703" />
        <!-- The high value reflects when the problem was known to be resolved -->
        <!-- Based on signs and symptoms, appears to be resolved on Aug 14, 2013 --
>
        <high value="20080814" />
      </effectiveTime>
      <value xsi:type="CD"
code="233604007"
codeSystem="2.16.840.1.113883.6.96"
      displayName="Pneumonia" />
      <author typeCode="AUT">
        <templateId root="2.16.840.1.113883.10.20.22.4.119" />
        <time value="200808141030-0800" />
        <assignedAuthor>
          <id extension="555555555" root="2.16.840.1.113883.4.6" />
          <code code="207QA0505X"
displayName="Adult Medicine"
>
```

```

        codeSystem="2.16.840.1.113883.6.101"
        codeSystemName="Healthcare Provider Taxonomy (HIPAA)" />
        </assignedAuthor>
    </author>
</observation>
</entryRelationship>
</act>

```

3.58.1 Diagnosis Concern Act (V4)

```

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.137:2019-12-01
(open)]

```

Table 195: Diagnosis Concern Act (V4) Contexts

| Contained By: | Contains: |
|--|---|
| Patient Data Section QDM (V7) (optional) | Diagnosis (V3) (required) |

This template, along with its contained template Diagnosis (V3), represents the QDM datatype: Diagnosis.

The effectiveTime/low of the Diagnosis Concern Act (V4) asserts when the concern became active. This equates to the time the concern was authored in the patient's chart. The effectiveTime/high asserts when the diagnosis was completed (e.g., when the clinician deemed there is no longer any need to track the underlying condition).

The QDM category Condition/Diagnosis/Problem represents a practitioner's identification of a patient's disease, illness, injury, or condition. This QDM category contains a single datatype to represent all of these concepts: Diagnosis. A practitioner determines the diagnosis by means of examination, diagnostic test results, patient history, and/or family history. Diagnoses are usually considered unfavorable, but may also represent neutral or favorable conditions that affect a patient's plan of care (e.g., pregnancy).

Diagnosis Concern Act (V4) is derived from the Problem Concern Act template with diagnosis being subject of concern. C-CDA has defined health concerns and problem concerns. Problem concerns are a subset of health concerns. Depending on what QDM data type is used to specify a health concern in a measure, appropriate QRDA template would be used.

Table 196: Diagnosis Concern Act (V4) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-----------|-----------|----------------------------|--|
| act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.137:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-28148 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT |
| @moodCode | 1..1 | SHALL | | 4444-28149 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 0..0 | SHALL NOT | | 4444-29632 | |
| templateId | 1..1 | SHALL | | 4444-28143 | |
| @root | 1..1 | SHALL | | 4444-28146 | 2.16.840.1.113883.10.20.24.3.137 |
| @extension | 1..1 | SHALL | | 4444-28692 | 2019-12-01 |
| statusCode | 1..1 | SHALL | | 4444-28144 | |
| @code | 1..1 | SHALL | | 4444-28150 | urn:oid:2.16.840.1.113762.1.4.1021.35 (QDM Diagnosis Status) |
| entryRelationship | 1..1 | SHALL | | 4444-28142 | |
| @typeCode | 1..1 | SHALL | | 4444-28151 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ |
| observation | 1..1 | SHALL | | 4444-28145 | Diagnosis (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.135:2019-12-01) |

1. Conforms to [Problem Concern Act \(V3\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.3:2015-08-01).
2. **SHALL** contain exactly one [1..1] **@classCode**="ACT" Act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-28148).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-28149).
4. **SHALL NOT** contain [0..0] **@negationInd** (CONF:4444-29632).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-28143) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.137" (CONF:4444-28146).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-28692).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:4444-28144).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [QDM Diagnosis Status](#) urn:oid:2.16.840.1.113762.1.4.1021.35 **DYNAMIC** (CONF:4444-28150).
7. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:4444-28142) such that it

- a. **SHALL** contain exactly one [1..1] @typeCode="SUBJ" Has subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-28151).
- b. **SHALL** contain exactly one [1..1] [Diagnosis \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.135:2019-12-01) (CONF:4444-28145).

Figure 109: Diagnosis Concern Act (V4) Example

```
<act classCode="ACT" moodCode="EVN">
  <!-- Conforms to C-CDA 2.1 Problem Concern Act (V3) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.3" extension="2015-08-01"/>
  <!-- Diagnosis Concern Act (V4) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.137" extension="2019-12-01"/>
  <id root="ec8a6ff8-ed4b-4f7e-82c3-e98e58b45de7"/>
  <code code="CONC" codeSystem="2.16.840.1.113883.5.6" displayName="Concern"/>
  <!-- The statusCode represents whether this is an active (active) or resolved
(completed) diagnosis -->
  <statusCode code="active"/>
  <!-- This is the time that the diagnosis is authored in the patient's chart -->
  <effectiveTime>
    <!-- (equivalent to author/time in the contained observation) -->
    <low value="201904081130"/>
  </effectiveTime>
  <entryRelationship typeCode="SUBJ">
    <observation classCode="OBS" moodCode="EVN">
      <!-- Conforms to C-CDA R2.1 Problem Observation (V3) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2015-08-01"/>
      <!-- Diagnosis (V3) -->
      <templateId root="2.16.840.1.113883.10.20.24.3.135" extension="2019-12-01"/>
      <id root="e5d9e01e-d778-40ba-9bd0-351d0222b26c"/>
      <code code="29308-4" displayName="diagnosis" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC">
        <translation code="282291009" displayName="diagnosis"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT"/>
      </code>
      <statusCode code="completed"/>
      <effectiveTime>
        <!-- Onset Datetime -->
        <low value="20190101090000"/>
        <!-- Abatement Datetime -->
        <high value="20190401090000"/>
      </effectiveTime>
      <value xsi:type="CD" code="25907005" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED-CT" displayName="Diabetic gangrene (disorder)"/>
      <!-- QDM Attribute Anatomical Location Site -->
      <targetSiteCode code="56459004" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT" displayName="foot"/>
      <!-- QDM Attribute: Severity -->
      <entryRelationship typeCode="REFR">
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.22.4.8" extension="2014-06-
09"/>
          <code code="SEV" displayName="Severity Observation"
codeSystem="2.16.840.1.113883.5.4" codeSystemName="ActCode"/>
          <value xsi:type="CD" code="24484000" displayName="Severe"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT"/>
        </observation>
      </entryRelationship>
    </observation>
  </entryRelationship>
</act>
```

3.58.2 Symptom Concern Act (V4)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.138:2019-12-01
(open)]

Table 197: Symptom Concern Act (V4) Contexts

| Contained By: | Contains: |
|--|---|
| Patient Data Section QDM (V7) (optional) | Symptom (V3) (required) |

This template, along with its contained template Symptom (V3), represents the QDM datatype: Symptom.

The effectiveTime/low of the Symptom Concern Act (V4) asserts when the problem concern became active. This equates to the time the problem concern was authored in the patient's chart.

Table 198: Symptom Concern Act (V4) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-------|-----------|----------------------------|--|
| act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.138:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-28547 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT |
| @moodCode | 1..1 | SHALL | | 4444-28548 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 4444-28539 | |
| @root | 1..1 | SHALL | | 4444-28544 | 2.16.840.1.113883.10.20.24.3.138 |
| @extension | 1..1 | SHALL | | 4444-28694 | 2019-12-01 |
| statusCode | 1..1 | SHALL | | 4444-28540 | |
| @code | 1..1 | SHALL | | 4444-28545 | urn:oid:2.16.840.1.113762.1.4.1021.35 (QDM Diagnosis Status) |
| entryRelationship | 1..1 | SHALL | | 4444-28538 | |
| @typeCode | 1..1 | SHALL | | 4444-28543 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ |
| observation | 1..1 | SHALL | | 4444-28542 | Symptom (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.136:2019-12-01) |

1. Conforms to [Problem Concern Act \(V3\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.3:2015-08-01).

2. **SHALL** contain exactly one [1..1] **@classCode**="ACT" Act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-28547).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-28548).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-28539) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.138" (CONF:4444-28544).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-28694).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:4444-28540).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [QDM Diagnosis Status](#) urn:oid:2.16.840.1.113762.1.4.1021.35 **DYNAMIC** (CONF:4444-28545).
6. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:4444-28538) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="SUBJ" Has subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-28543).
 - b. **SHALL** contain exactly one [1..1] [Symptom \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.136:2019-12-01) (CONF:4444-28542).

Figure 110: Symptom Concern Act (V4) Example

```
<act classCode="ACT" moodCode="EVN">
  <!-- Conforms to C-CDA 2.1 Problem Concern Act (V3) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.3" extension="2015-08-01"/>
  <!-- Symptom Concern Act (V4) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.138" extension="2019-12-01"/>
  <id root="ec8a6ff8-ed4b-4f7e-82c3-e98e58b45de7"/>
  <code code="CONC" codeSystem="2.16.840.1.113883.5.6" displayName="Concern"/>
  <!-- The statusCode represents whether this is an active (active) or resolved
(completed) symptom -->
  <statusCode code="completed"/>
  <!-- This is the time that the symptom is authored in the patient's chart -->
  <effectiveTime>
    <!-- equivalent to author/time in the contained observation -->
    <low value="201904081130"/>
  </effectiveTime>
  <entryRelationship typeCode="SUBJ">
    <observation classCode="OBS" moodCode="EVN">
      <!-- Conforms to C-CDA R2.1 Problem Observation (V3) template -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2015-08-01"/>
      <!-- Symptom (V3) -->
      <templateId root="2.16.840.1.113883.10.20.24.3.136" extension="2019-12-01"/>
      <id root="e5d9e01e-d778-40ba-9bd0-351d0222b299"/>
      <code code="75325-1" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Symptom">
        <translation code="418799008" displayName="Symptom"
codeSystemName="SNOMED" codeSystem="2.16.840.1.113883.6.96"/>
      </code>
      <statusCode code="completed"/>
      <effectiveTime>
        <!-- QDM Attribute: Prevalence Period Onset Datetime -->
        <low value="201904041129"/>
        <!-- QDM Attribute: Prevalence Period Abatement Datetime -->
        <high value="201904081129"/>
      </effectiveTime>
      <value xsi:type="CD" code="233604007" codeSystem="2.16.840.1.113883.6.96"
displayName="Shortness of breath"/>
    </observation>
  </entryRelationship>
</act>
```

3.59 Problem Observation (V3)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01
(open)]

Table 199: Problem Observation (V3) Contexts

| Contained By: | Contains: |
|--|--|
| Deceased Observation (V3) (optional) Encounter Diagnosis (V3) (required) Problem Concern Act (V3) (required) | Age Observation (optional) Prognosis Observation (optional) Priority Preference (optional) Author Participation (optional) Problem Status (optional) |

This template reflects a discrete observation about a patient's problem. Because it is a discrete observation, it will have a statusCode of "completed". The effectiveTime, also referred to as the "biologically relevant time" is the time at which the observation holds for the patient. For a provider seeing a patient in the clinic today, observing a history of heart attack that occurred five years ago, the effectiveTime is five years ago.

The effectiveTime of the Problem Observation is the definitive indication of whether or not the underlying condition is resolved. If the problem is known to be resolved, then an effectiveTime/high would be present. If the date of resolution is not known, then effectiveTime/high will be present with a nullFlavor of "UNK".

Table 200: Problem Observation (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|--------------|-------------|------------------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01) | | | | | |
| @classCode | 1..1 | SHALL | | 1198-9041 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 1198-9042 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 0..1 | MAY | | 1198-10139 | |
| templateId | 1..1 | SHALL | | 1198-14926 | |
| @root | 1..1 | SHALL | | 1198-14927 | 2.16.840.1.113883.10.20.22.4.4 |
| @extension | 1..1 | SHALL | | 1198-32508 | 2015-08-01 |
| id | 1..* | SHALL | | 1198-9043 | |
| code | 1..1 | SHALL | | 1198-9045 | urn:oid:2.16.840.1.113883.3.88.12.3221.7.2 (Problem Type (SNOMEDCT)) |
| statusCode | 1..1 | SHALL | | 1198-9049 | |
| @code | 1..1 | SHALL | | 1198-19112 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL | | 1198-9050 | |
| low | 1..1 | SHALL | | 1198-15603 | |
| high | 0..1 | MAY | | 1198-15604 | |
| value | 1..1 | SHALL | CD | 1198-9058 | urn:oid:2.16.840.1.113883.3.88.12.3221.7.4 (Problem) |
| @code | 0..1 | MAY | | 1198-31871 | |
| qualifier | 0..* | MAY | | 1198-31870 | |
| translation | 0..* | MAY | | 1198-16749 | |
| @code | 0..1 | MAY | | 1198-16750 | urn:oid:2.16.840.1.113883.6.90 (ICD-10-CM) |
| author | 0..* | SHOULD | | 1198-31147 | Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) |
| entryRelationship | 0..1 | MAY | | 1198-9059 | |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|--|
| @typeCode | 1..1 | SHALL | | 1198-9060 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ |
| @inversionInd | 1..1 | SHALL | | 1198-9069 | true |
| observation | 1..1 | SHALL | | 1198-15590 | Age Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.31) |
| entryRelationship | 0..1 | MAY | | 1198-29951 | |
| @typeCode | 1..1 | SHALL | | 1198-31531 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| observation | 1..1 | SHALL | | 1198-29952 | Prognosis Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.113) |
| entryRelationship | 0..* | MAY | | 1198-31063 | |
| @typeCode | 1..1 | SHALL | | 1198-31532 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| observation | 1..1 | SHALL | | 1198-31064 | Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) |
| entryRelationship | 0..1 | MAY | | 1198-9063 | |
| @typeCode | 1..1 | SHALL | | 1198-9068 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| observation | 1..1 | SHALL | | 1198-15591 | Problem Status (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.6:2019-06-20) |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-9041).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-9042).

The negationInd is used to indicate the absence of the condition in observation/value. A negationInd of "true" coupled with an observation/value of SNOMED code 64572001 "Disease (disorder)" indicates that the patient has no known conditions.

3. **MAY** contain zero or one [0..1] **@negationInd** (CONF:1198-10139).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-14926) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.4" (CONF:1198-14927).

- b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32508).
- 5. **SHALL** contain at least one [1..*] **id** (CONF:1198-9043).
- 6. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet [Problem Type \(SNOMEDCT\)](#) urn:oid:2.16.840.1.113883.3.88.12.3221.7.2 **DYNAMIC** (CONF:1198-9045).
 - a. If code is selected from ValueSet Problem Type (SNOMEDCT) urn:oid:2.16.840.1.113883.3.88.12.3221.7.2 **DYNAMIC**, then it **SHALL** have at least one [1..*] translation, which **SHOULD** be selected from ValueSet Problem Type (LOINC) urn:oid:2.16.840.1.113762.1.4.1099.28 **DYNAMIC** (CONF:1198-32950) (CONF:1198-32950).
- 7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-9049).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1198-19112).

If the problem is known to be resolved, but the date of resolution is not known, then the high element **SHALL** be present, and the nullFlavor attribute **SHALL** be set to 'UNK'. Therefore, the existence of a high element within a problem does indicate that the problem has been resolved.

- 8. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1198-9050).

The effectiveTime/low (a.k.a. "onset date") asserts when the condition became biologically active.

- a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1198-15603).

The effectiveTime/high (a.k.a. "resolution date") asserts when the condition became biologically resolved.

- b. This effectiveTime **MAY** contain zero or one [0..1] **high** (CONF:1198-15604).
- 9. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD", where the code **SHOULD** be selected from ValueSet [Problem](#) urn:oid:2.16.840.1.113883.3.88.12.3221.7.4 **DYNAMIC** (CONF:1198-9058).

A negationInd of "true" coupled with an observation/value/**@code** of SNOMED code 64572001 "Disease (disorder)" indicates that the patient has no known conditions.

- a. This value **MAY** contain zero or one [0..1] **@code** (CONF:1198-31871).

The observation/value and all the qualifiers together (often referred to as a post-coordinated expression) make up one concept. Qualifiers constrain the meaning of the primary code, and cannot negate it or change its meaning. Qualifiers can only be used according to well-defined rules of post-coordination and only if the underlying code system defines the use of such qualifiers or if there is a third code system that specifies how other code systems may be combined.

For example, SNOMED CT allows constructing concepts as a combination of multiple codes. SNOMED CT defines a concept "pneumonia (disorder)" (233604007) an attribute "finding site" (363698007) and another concept "left lower lobe of lung (body structure)" (41224006). SNOMED CT allows one to combine these codes in a code phrase, as shown in the sample XML.

- b. This value **MAY** contain zero or more [0..*] **qualifier** (CONF:1198-31870).

- c. This value **MAY** contain zero or more [0..*] **translation** (CONF:1198-16749) such that it
 - i. **MAY** contain zero or one [0..1] **@code** (CodeSystem: ICD-10-CM urn:oid:2.16.840.1.113883.6.90 **STATIC**) (CONF:1198-16750).
- 10. **SHOULD** contain zero or more [0..*] **Author Participation** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1198-31147).
- 11. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-9059) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** Has subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1198-9060).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** True (CONF:1198-9069).
 - c. **SHALL** contain exactly one [1..1] **Age Observation** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.31) (CONF:1198-15590).
- 12. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-29951) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1198-31531).
 - b. **SHALL** contain exactly one [1..1] **Prognosis Observation** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.113) (CONF:1198-29952).
- 13. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31063) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1198-31532).
 - b. **SHALL** contain exactly one [1..1] **Priority Preference** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) (CONF:1198-31064).
- 14. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-9063) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1198-9068).
 - b. **SHALL** contain exactly one [1..1] **Problem Status** (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.6:2019-06-20) (CONF:1198-15591).

Figure 111: Problem Observation (V3) Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- ** Problem Observation (V3) ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2015-08-01" />
  <id root="abl791b0-5c71-11db-b0de-0800200c9a66" />
  <code code="64572001" displayName="Condition"
        codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT">
    <translation code="75323-6"
      codeSystem="2.16.840.1.113883.6.1"
      codeSystemName="LOINC"
      displayName="Condition"/>
  </code>
  <!-- The statusCode reflects the status of the observation itself -->
  <statusCode code="completed" />
  <effectiveTime>
    <!-- The low value reflects the date of onset -->
    <!-- Based on patient symptoms, presumed onset is July 3, 2013 -->
    <low value="20130703" />
    <!-- The high value reflects when the problem was known to be resolved -->
    <!-- Based on signs and symptoms, appears to be resolved on Aug 14, 2013 -->
    <high value="20080814" />
  </effectiveTime>
  <value xsi:type="CD"
code="233604007"
codeSystem="2.16.840.1.113883.6.96"
displayName="Pneumonia" />
  <author typeCode="AUT">
    <templateId root="2.16.840.1.113883.10.20.22.4.119" />
    <time value="200808141030-0800" />
    <assignedAuthor>
      <id extension="555555555" root="2.16.840.1.113883.4.6" />
      <code code="207QA0505X"
displayName="Adult Medicine"
codeSystem="2.16.840.1.113883.6.101"
codeSystemName="Healthcare Provider Taxonomy (HIPAA)" />
    </assignedAuthor>
  </author>
</observation>
```

3.59.1 Diagnosis (V3)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.135:2019-12-01 (open)]

Table 201: Diagnosis (V3) Contexts

| Contained By: | Contains: |
|---|--|
| Diagnosis Concern Act (V4) (required) | Severity Observation (V2) (optional) Author Participation (required) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Author (V2) (optional) |

This template represents the QDM datatype: Diagnosis. This template must be contained by a Diagnosis Concern Act (V5) template.

Condition/Diagnosis/Problem represents a practitioner’s identification of a patient’s disease, illness, injury, or condition. This category contains a single datatype to represent all of these concepts: Diagnosis. A practitioner determines the diagnosis by means of examination, diagnostic test results, patient history, and/or family history. Diagnoses are usually considered unfavorable, but may also represent neutral or favorable conditions that affect a patient’s plan of care (e.g., pregnancy).

The onset dateTtime corresponds to the implicit start dateTime of the diagnosis and the abatement dateTime corresponds to the implicit stop dateTime of the diagnosis. If the abatement dateTime is not present, then the diagnosis is considered to still be active. When this is used with timing relationships, the criterion is looking for an active diagnosis for the time frame indicated by the timing relationships.

QDM Attribute: Prevalence Period references the time from the onset date (observation/effectiveTime/low) to the abatement date (observation/effectiveTime/high). If effectiveTime/high is null, then the diagnosis is considered to still be active.

Table 202: Diagnosis (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-----------|-----------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.135:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-28510 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 4444-28511 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 0..0 | SHALL NOT | | 4444-28512 | |
| templateId | 1..1 | SHALL | | 4444-28498 | |
| @root | 1..1 | SHALL | | 4444-28503 | 2.16.840.1.113883.10.20.24.3.135 |
| @extension | 1..1 | SHALL | | 4444-28887 | 2019-12-01 |
| code | 1..1 | SHALL | | 4444-28499 | |
| @code | 1..1 | SHALL | | 4444-28505 | 29308-4 |
| @codeSystem | 1..1 | SHALL | | 4444-28506 | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| translation | 1..1 | SHALL | | 4444-28886 | |
| @code | 1..1 | SHALL | | 4444-28888 | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 282291009 |
| targetSiteCode | 0..1 | MAY | | 4444-28501 | |
| author | 0..1 | MAY | | 4444-28889 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| author | 0..0 | SHALL NOT | | 4444-30033 | Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) |
| participant | 0..* | MAY | | 4444-29306 | |
| @typeCode | 1..1 | SHALL | | 4444-29313 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29307 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29310 | |
| @typeCode | 1..1 | SHALL | | 4444-29315 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|--|
| | | | | | PRF |
| participantRole | 1..1 | SHALL | | 4444-29311 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.1.0.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29304 | |
| @typeCode | 1..1 | SHALL | | 4444-29312 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29305 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.1.0.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29308 | |
| @typeCode | 1..1 | SHALL | | 4444-29314 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29309 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.1.0.20.24.3.160:2019-12-01) |
| entryRelationship | 0..1 | MAY | | 4444-28497 | |
| @typeCode | 1..1 | SHALL | | 4444-28507 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| observation | 1..1 | SHALL | | 4444-28502 | Severity Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.1.0.20.22.4.8:2014-06-09) |

1. Conforms to [Problem Observation \(V3\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-28510).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-28511).
4. **SHALL NOT** contain [0..0] **@negationInd** (CONF:4444-28512).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-28498) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.135" (CONF:4444-28503).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-28887).
6. **SHALL** contain exactly one [1..1] **code** (CONF:4444-28499).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="29308-4" diagnosis (CONF:4444-28505).

- b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:4444-28506).
- c. This code **SHALL** contain exactly one [1..1] **translation** (CONF:4444-28886).
 - i. This translation **SHALL** contain exactly one [1..1] **@code**="282291009" 2.16.840.1.113883.6.96 (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:4444-28888).
- 7. **MAY** contain zero or one [0..1] **targetSiteCode** (CONF:4444-28501).
Note: QDM Attribute: Anatomical Location Site - the location where the diagnosis/problem manifests itself
- 8. **MAY** contain zero or one [0..1] **Author (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-28889).
Note: QDM Attribute: Author dateTime - time the diagnosis is entered into the clinical software
- 9. **SHALL NOT** contain [0..0] **Author Participation** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:4444-30033).
- 10. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29306) such that it
Note: QDM Attribute: Recorder
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29313).
 - b. **SHALL** contain exactly one [1..1] **Entity Practitioner** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29307).
- 11. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29310) such that it
Note: QDM Attribute: Recorder
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29315).
 - b. **SHALL** contain exactly one [1..1] **Entity Organization** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29311).
- 12. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29304) such that it
Note: QDM Attribute: Recorder
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29312).
 - b. **SHALL** contain exactly one [1..1] **Entity Patient** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29305).
- 13. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29308) such that it
Note: QDM Attribute: Recorder
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29314).
 - b. **SHALL** contain exactly one [1..1] **Entity Care Partner** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29309).

14. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-28497) such that it
Note: QDM Attribute: Severity

- a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** (CodeSystem:
HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-28507).
- b. **SHALL** contain exactly one [1..1] **Severity Observation (V2)** (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09) (CONF:4444-28502).

15. This template **SHALL** be contained by a **Diagnosis Concern Act (V4)** (CONF:4444-28885).

Figure 112: Diagnosis (V3) Example

```
<!-- Must be contained in the Diagnosis Concern Act (V4) template to represent the
Diagnosis QDM data type -->
<observation classCode="OBS" moodCode="EVN">
  <!-- Conforms to C-CDA R2.1 Problem Observation (V3) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2015-08-01"/>
  <!-- Diagnosis (V3) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.135" extension="2019-12-01"/>
  <id root="e5d9e01e-d778-40ba-9bd0-351d0222b26c"/>
  <code code="29308-4" displayName="diagnosis" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC">
    <translation code="282291009" displayName="diagnosis"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT"/>
  </code>
  <statusCode code="completed"/>
  <effectiveTime>
    <!-- Onset Datetime -->
    <low value="20190101090000"/>
    <!-- Abatement Datetime -->
    <high value="20190801090000"/>
  </effectiveTime>
  <value xsi:type="CD" code="25907005" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED-CT" displayName="Diabetic gangrene (disorder)"/>
  <!-- QDM Attribute Anatomical Location Site -->
  <targetSiteCode code="56459004" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT" displayName="foot"/>
  ...
</observation>
```

3.59.2 Symptom (V3)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.136:2019-12-01 (open)]

Table 203: Symptom (V3) Contexts

| Contained By: | Contains: |
|---|---|
| Symptom Concern Act (V4) (required) | Severity Observation (V2) (optional) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) |

This template represents the QDM datatype: Symptom. This template must be contained by a Symptom Concern Act template.

Symptom represents an indication that a person has a condition or disease. Some examples are headache, fever, fatigue, nausea, vomiting, and pain. Also, symptoms are subjective manifestations of the disease perceived by the patient. As an example to differentiate symptom from finding, the patient's subjective symptom of fever is distinguished from the temperature (a finding). For a finding, there is either a source of either a temperature-measuring device together with a recorder of the device (electronically) or an individual (healthcare provider, patient, etc.).

An active symptom is a patient's reported perception of departure from normal functioning that is present at the time indicated. A resolved symptom is a symptom that has been present in the past and is currently not expected to recur. The Observation/Code is constrained to "Symptom" and an effectiveTime/low is required.

QDM Attribute: Prevalence Period references the time from the onset date (effectiveTime/low) to the abatement date (effectiveTime/high). If effectiveTime/high is null, then the symptom is considered to still be active.

Table 204: Symptom (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|--------------|-------------|------------------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.136:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-28524 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 4444-28525 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 0..0 | SHALL NOT | | 4444-28526 | |
| templateId | 1..1 | SHALL | | 4444-28514 | |
| @root | 1..1 | SHALL | | 4444-28518 | 2.16.840.1.113883.10.20.24.3.136 |
| @extension | 1..1 | SHALL | | 4444-28855 | 2019-12-01 |
| code | 1..1 | SHALL | | 4444-28515 | |
| @code | 1..1 | SHALL | | 4444-28520 | 75325-1 |
| @codeSystem | 1..1 | SHALL | | 4444-28521 | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| effectiveTime | 1..1 | SHALL | | 4444-28854 | |
| low | 1..1 | SHALL | | 4444-28856 | |
| high | 0..1 | MAY | | 4444-28857 | |
| value | 1..1 | SHALL | CD | 4444-28516 | |
| participant | 0..* | MAY | | 4444-29499 | |
| @typeCode | 1..1 | SHALL | | 4444-29506 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29500 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29503 | |
| @typeCode | 1..1 | SHALL | | 4444-29508 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29504 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|---|
| participant | 0..1 | MAY | | 4444-29497 | |
| @typeCode | 1..1 | SHALL | | 4444-29505 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29498 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29501 | |
| @typeCode | 1..1 | SHALL | | 4444-29507 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29502 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |
| entryRelationship | 0..1 | MAY | | 4444-28513 | |
| @typeCode | 1..1 | SHALL | | 4444-28522 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| observation | 1..1 | SHALL | | 4444-28517 | Severity Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09) |

1. Conforms to [Problem Observation \(V3\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-28524).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-28525).
4. **SHALL NOT** contain [0..0] **@negationInd** (CONF:4444-28526).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-28514) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.136" (CONF:4444-28518).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-28855).
6. **SHALL** contain exactly one [1..1] **code** (CONF:4444-28515).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="75325-1" Symptom (CONF:4444-28520).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:4444-28521).
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4444-28854).
Note: QDM Attribute: Prevalence Period

- a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:4444-28856).
Note: Onset dateTime
 - b. This effectiveTime **MAY** contain zero or one [0..1] **high** (CONF:4444-28857).
Note: Abatement dateTime
8. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (CONF:4444-28516).
Note: QDM Attribute: Code
9. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29499) such that it
Note: QDM Attribute: Recorder
 - a. **SHALL** contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29506).
 - b. **SHALL** contain exactly one [1..1] Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29500).
10. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29503) such that it
Note: QDM Attribute: Recorder
 - a. **SHALL** contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29508).
 - b. **SHALL** contain exactly one [1..1] Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29504).
11. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29497) such that it
Note: QDM Attribute: Recorder
 - a. **SHALL** contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29505).
 - b. **SHALL** contain exactly one [1..1] Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29498).
12. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29501) such that it
Note: QDM Attribute: Recorder
 - a. **SHALL** contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29507).
 - b. **SHALL** contain exactly one [1..1] Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29502).
13. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-28513) such that it
Note: QDM Attribute: Severity
 - a. **SHALL** contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-28522).
 - b. **SHALL** contain exactly one [1..1] Severity Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09) (CONF:4444-28517).
14. This template **SHALL** be contained by a **Symptom Concern Act (V4)** (CONF:4444-28667).

Figure 113: Symptom (V3) Example

```

<!-- Must be contained in the Symptom Concern Act (V4) to represent Symptom QDM data type
-->
<observation classCode="OBS" moodCode="EVN">
  <!-- Conforms to C-CDA R2.1 Problem Observation (V3) template -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2015-08-01"/>
  <!-- Symptom (V3) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.136" extension="2019-12-01"/>
  <id root="e5d9e01e-d778-40ba-9bd0-351d0222b299"/>
  <code code="75325-1" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
  displayName="Symptom">
    <translation code="418799008" displayName="Symptom" codeSystemName="SNOMED"
  codeSystem="2.16.840.1.113883.6.96"/>
  </code>
  <statusCode code="completed"/>
  <effectiveTime>
    <!-- Onset Datetime -->
    <low value="201904041129"/>
    <!-- Abatement Datetime -->
    <high value="201904081129"/>
  </effectiveTime>
  <value xsi:type="CD" code="233604007" codeSystem="2.16.840.1.113883.6.96"
  displayName="Shortness of breath"/>
  <!-- QDM Attribute: Severity -->
  <entryRelationship typeCode="REFR">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.8" extension="2014-06-09"/>
      <code code="SEV" displayName="Severity Observation"
      codeSystem="2.16.840.1.113883.5.4" codeSystemName="ActCode"/>
      <statusCode code="completed"/>
      <value xsi:type="CD" code="371924009" displayName="Moderate to severe"
      codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT"/>
    </observation>
  </entryRelationship>
</observation>

```

3.60 Problem Status

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.6:2019-06-20 (open)]

Table 205: Problem Status Contexts

| Contained By: | Contains: |
|---|-----------|
| Problem Observation (V3) (optional) | |

The Problem Status records the clinical status attributed to the problem.

Table 206: Problem Status Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-------|-----------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.6:2019-06-20) | | | | | |
| @classCode | 1..1 | SHALL | | 1198-7357 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 1198-7358 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 1198-7359 | |
| @root | 1..1 | SHALL | | 1198-10518 | 2.16.840.1.113883.10.20.22.4.6 |
| @extension | 1..1 | SHALL | | 1198-32961 | 2019-06-20 |
| code | 1..1 | SHALL | | 1198-19162 | |
| @code | 1..1 | SHALL | | 1198-19163 | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 33999-4 |
| statusCode | 1..1 | SHALL | | 1198-7364 | |
| @code | 1..1 | SHALL | | 1198-19113 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | 1198-7365 | urn:oid:2.16.840.1.113883.3.88.12.80.68 (Problem Status) |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-7357).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-7358).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-7359) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.6" (CONF:1198-10518).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-06-20" (CONF:1198-32961).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1198-19162).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="33999-4" Status (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1 **STATIC**) (CONF:1198-19163).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-7364).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1198-19113).
6. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD", where the code **SHALL** be selected from ValueSet [Problem Status](#) urn:oid:2.16.840.1.113883.3.88.12.80.68 **DYNAMIC** (CONF:1198-7365).

3.61 Procedure Activity Act (V2)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.12:2014-06-09 (open)]

Table 207: Procedure Activity Act (V2) Contexts

| Contained By: | Contains: |
|----------------------|---|
| | Service Delivery Location (optional) Medication Activity (V2) (optional) Indication (V2) (optional) Instruction (V2) (optional) Author Participation (optional) |

This template represents any act that cannot be classified as an observation or procedure according to the HL7 RIM. Examples of these acts are a dressing change, teaching or feeding a patient, or providing comfort measures.

The common notion of "procedure" is broader than that specified by the HL7 Version 3 Reference Information Model (RIM). Procedure templates can be represented with various RIM classes: act (e.g., dressing change), observation (e.g., EEG), procedure (e.g., splenectomy).

Table 208: Procedure Activity Act (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|--|
| act (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.12:2014-06-09) | | | | | |
| @classCode | 1..1 | SHALL | | 1098-8289 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT |
| @moodCode | 1..1 | SHALL | | 1098-8290 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 1098-8291 | |
| @root | 1..1 | SHALL | | 1098-10519 | 2.16.840.1.113883.10.20.22.4.12 |
| @extension | 1..1 | SHALL | | 1098-32505 | 2014-06-09 |
| id | 1..* | SHALL | | 1098-8292 | |
| code | 1..1 | SHALL | | 1098-8293 | |
| originalText | 0..1 | SHOULD | | 1098-19186 | |
| reference | 0..1 | MAY | | 1098-19187 | |
| @value | 0..1 | MAY | | 1098-19188 | |
| statusCode | 1..1 | SHALL | | 1098-8298 | |
| @code | 1..1 | SHALL | | 1098-32364 | urn:oid:2.16.840.1.113883.11.20.9.22 (ProcedureAct statusCode) |
| effectiveTime | 1..1 | SHALL | | 1098-8299 | |
| priorityCode | 0..1 | MAY | | 1098-8300 | urn:oid:2.16.840.1.113883.1.11.16866 (ActPriority) |
| performer | 0..* | SHOULD | | 1098-8301 | |
| assignedEntity | 1..1 | SHALL | | 1098-8302 | |
| id | 1..* | SHALL | | 1098-8303 | |
| addr | 1..* | SHALL | | 1098-8304 | |
| telecom | 1..* | SHALL | | 1098-8305 | |
| representedOrganization | 0..1 | SHOULD | | 1098-8306 | |
| id | 0..* | SHOULD | | 1098-8307 | |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|--------|-----------|----------------------------|---|
| name | 0..* | MAY | | 1098-8308 | |
| telecom | 1..* | SHALL | | 1098-8310 | |
| addr | 1..* | SHALL | | 1098-8309 | |
| author | 0..* | SHOULD | | 1098-32477 | Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) |
| participant | 0..* | MAY | | 1098-8311 | |
| @typeCode | 1..1 | SHALL | | 1098-8312 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC |
| participantRole | 1..1 | SHALL | | 1098-15599 | Service Delivery Location (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32) |
| entryRelationship | 0..* | MAY | | 1098-8314 | |
| @typeCode | 1..1 | SHALL | | 1098-8315 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| @inversionInd | 1..1 | SHALL | | 1098-8316 | true |
| encounter | 1..1 | SHALL | | 1098-8317 | |
| @classCode | 1..1 | SHALL | | 1098-8318 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC |
| @moodCode | 1..1 | SHALL | | 1098-8319 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| id | 1..1 | SHALL | | 1098-8320 | |
| entryRelationship | 0..1 | MAY | | 1098-8322 | |
| @typeCode | 1..1 | SHALL | | 1098-8323 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ |
| @inversionInd | 1..1 | SHALL | | 1098-8324 | true |
| act | 1..1 | SHALL | | 1098-31396 | Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) |
| entryRelationship | 0..* | MAY | | 1098-8326 | |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------------|-------|-------|-----------|----------------------------|---|
| @typeCode | 1..1 | SHALL | | 1098-8327 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 1098-15601 | Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) |
| entryRelationship | 0..* | MAY | | 1098-8329 | |
| @typeCode | 1..1 | SHALL | | 1098-8330 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| substanceAdministration | 1..1 | SHALL | | 1098-15602 | Medication Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09) |

1. **SHALL** contain exactly one [1..1] **@classCode**="ACT" Act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8289).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-8290).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-8291) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.12" (CONF:1098-10519).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32505).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-8292).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-8293).
 - a. This code **SHOULD** contain zero or one [0..1] **originalText** (CONF:1098-19186).
 - i. The originalText, if present, **MAY** contain zero or one [0..1] **reference** (CONF:1098-19187).
 1. The reference, if present, **MAY** contain zero or one [0..1] **@value** (CONF:1098-19188).
 - a. This reference/**@value** **SHALL** begin with a '#' and **SHALL** point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1098-19189).
 - b. This **@code** **SHOULD** be selected from LOINC (CodeSystem: 2.16.840.1.113883.6.1) or SNOMED CT (CodeSystem: 2.16.840.1.113883.6.96), and **MAY** be selected from CPT-4 (CodeSystem: 2.16.840.1.113883.6.12) or ICD10 PCS (CodeSystem: 2.16.840.1.113883.6.4) or CDT-2 (Code System: 2.16.840.1.113883.6.13) (CONF:1098-19190).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-8298).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [ProcedureAct statusCode](#) urn:oid:2.16.840.1.113883.11.20.9.22 **STATIC** 2014-04-23 (CONF:1098-32364).

7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-8299).
8. **MAY** contain zero or one [0..1] **priorityCode**, which **SHALL** be selected from ValueSet **ActPriority** urn:oid:2.16.840.1.113883.1.11.16866 **DYNAMIC** (CONF:1098-8300).
9. **SHOULD** contain zero or more [0..*] **performer** (CONF:1098-8301).
 - a. The performer, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1098-8302).
 - i. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1098-8303).
 - ii. This assignedEntity **SHALL** contain at least one [1..*] **addr** (CONF:1098-8304).
 - iii. This assignedEntity **SHALL** contain at least one [1..*] **telecom** (CONF:1098-8305).
 - iv. This assignedEntity **SHOULD** contain zero or one [0..1] **representedOrganization** (CONF:1098-8306).
 1. The representedOrganization, if present, **SHOULD** contain zero or more [0..*] **id** (CONF:1098-8307).
 2. The representedOrganization, if present, **MAY** contain zero or more [0..*] **name** (CONF:1098-8308).
 3. The representedOrganization, if present, **SHALL** contain at least one [1..*] **telecom** (CONF:1098-8310).
 4. The representedOrganization, if present, **SHALL** contain at least one [1..*] **addr** (CONF:1098-8309).
10. **SHOULD** contain zero or more [0..*] **Author Participation** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-32477).
11. **MAY** contain zero or more [0..*] **participant** (CONF:1098-8311) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="LOC"** Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1098-8312).
 - b. **SHALL** contain exactly one [1..1] **Service Delivery Location** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32) (CONF:1098-15599).
12. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-8314) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** Has Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8315).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** true (CONF:1098-8316).
 - c. **SHALL** contain exactly one [1..1] **encounter** (CONF:1098-8317).
 - i. This encounter **SHALL** contain exactly one [1..1] **@classCode="ENC"** Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8318).
 - ii. This encounter **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-8319).
 - iii. This encounter **SHALL** contain exactly one [1..1] **id** (CONF:1098-8320).
 1. Set the encounter ID to the ID of an encounter in another section to signify they are the same encounter (CONF:1098-16849).
13. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-8322) such that it

- a. **SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** Has Subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8323).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** true (CONF:1098-8324).
 - c. **SHALL** contain exactly one [1..1] [Instruction \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) (CONF:1098-31396).
14. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-8326) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8327).
 - b. **SHALL** contain exactly one [1..1] [Indication \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) (CONF:1098-15601).
15. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-8329) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** Has Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8330).
 - b. **SHALL** contain exactly one [1..1] [Medication Activity \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09) (CONF:1098-15602).

Figure 114: Procedure Activity Act Example

```
<act classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.12" extension="2014-06-09" />
  <id root="1.2.3.4.5.6.7.8" extension="1234567" />
  <code code="274025005" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT"
  displayName="Colonic polypectomy">
    <originalText>
      <reference value="#Procl" />
    </originalText>
  </code>
  <statusCode code="completed" />
  <effectiveTime value="20110203" />
  <priorityCode code="CR" codeSystem="2.16.840.1.113883.5.7" codeSystemName="ActPriority"
  displayName="Callback results" />
  <performer>
    <assignedEntity>
      <id root="2.16.840.1.113883.19" extension="1234" />
      <addr>
        <streetAddressLine>1001 Village Avenue</streetAddressLine>
        <city>Portland</city>
        <state>OR</state>
        <postalCode>99123</postalCode>
        <country>US</country>
      </addr>
      <telecom use="WP" value="tel: +1(555)-555-5000" />
      <representedOrganization>
        <id root="2.16.840.1.113883.19.5" />
        <name>Community Health and Hospitals</name>
        <telecom use="WP" value="tel:+1(555)-555-5000" />
        <addr>
          <streetAddressLine>1001 Village Avenue</streetAddressLine>
          <city>Portland</city>
          <state>OR</state>
          <postalCode>99123</postalCode>
          <country>US</country>
        </addr>
      </representedOrganization>
    </assignedEntity>
  </performer>
  <participant typeCode="LOC">
    <participantRole classCode="SDLOC">
      <templateId root="2.16.840.1.113883.10.20.22.4.32" />
      . . .
    </participantRole>
  </participant>
  <entryRelationship typeCode="RSON">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.19" extension="2014-06-09" />
      . . .
    </observation>
  </entryRelationship>
  <entryRelationship typeCode="SUBJ" inversionInd="true">
    <act classCode="ACT" moodCode="INT">
      <templateId root="2.16.840.1.113883.10.20.22.4.20" extension="2014-06-09" />
      . . .
    </act>
  </entryRelationship>
</act>
```

```
</entryRelationship>  
</act>
```

3.61.1 Intervention Performed (V5)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.32:2019-12-01 (open)]

Table 209: Intervention Performed (V5) Contexts

| Contained By: | Contains: |
|--|--|
| Patient Data Section QDM (V7) (optional) | Author Participation (required) Reason (V3) (optional) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Status (V2) (optional) Author (V2) (optional) Result (V4) (optional) |

This template represents the QDM datatype: Intervention, Performed.

This template indicates that an intervention has been completed. An intervention is an influencing force or act to modify a given state of affairs. An intervention is any action carried out (by a healthcare provider or a consumer) to improve or maintain the health of a subject of care with the expectation of producing an outcome. MoodCode is constrained to "EVN".

QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template.

Table 210: Intervention Performed (V5) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|---|
| act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.32:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-27354 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT |
| @moodCode | 1..1 | SHALL | | 4444-13590 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 0..1 | MAY | | 4444-28072 | |
| templateId | 1..1 | SHALL | | 4444-13591 | |
| @root | 1..1 | SHALL | | 4444-13592 | 2.16.840.1.113883.10.20.24.3.32 |
| @extension | 1..1 | SHALL | | 4444-27144 | 2017-08-01 |
| code | 1..1 | SHALL | | 4444-27633 | |
| statusCode | 1..1 | SHALL | | 4444-27362 | |
| @code | 1..1 | SHALL | | 4444-27363 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL | | 4444-13611 | |
| @value | 0..1 | SHOULD | | 4444-29742 | |
| low | 0..1 | SHOULD | | 4444-13612 | |
| high | 0..1 | MAY | | 4444-13613 | |
| author | 0..1 | MAY | | 4444-29740 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| author | 0..0 | SHALL NOT | | 4444-30020 | Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) |
| participant | 0..* | MAY | | 4444-29750 | |
| @typeCode | 1..1 | SHALL | | 4444-30030 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29927 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29744 | |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|---|
| @typeCode | 1..1 | SHALL | | 4444-29751 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29745 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29748 | |
| @typeCode | 1..1 | SHALL | | 4444-29753 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29749 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29746 | |
| @typeCode | 1..1 | SHALL | | 4444-29752 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29747 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |
| entryRelationship | 0..* | MAY | | 4444-13604 | |
| @typeCode | 1..1 | SHALL | | 4444-13605 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 4444-27143 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) |
| entryRelationship | 0..1 | MAY | | 4444-27356 | |
| @typeCode | 1..1 | SHALL | | 4444-27357 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| observation | 1..1 | SHALL | | 4444-30021 | Result (V4) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.87:2019-12-01) |
| entryRelationship | 0..1 | MAY | | 4444-27359 | |
| @typeCode | 1..1 | SHALL | | 4444-27360 | REFR |
| observation | 1..1 | SHALL | | 4444-27361 | Status (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.93:2019-12-01) |

1. Conforms to [Procedure Activity Act \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.12:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="ACT" Act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-27354).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-13590).
4. **MAY** contain zero or one [0..1] **@negationInd** (CONF:4444-28072).
Note: QDM Attribute: Negation Rationale - negationInd="true" indicates Intervention Not Performed
 - a. If **@negationInd**="true" is present, **SHALL** contain one [1..1] entryRelationship such that it contains exactly one [1..1] **Reason (V3)** to state the reason for **Intervention Not Performed** (CONF:4444-29741).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-13591) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.32" (CONF:4444-13592).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2017-08-01" (CONF:4444-27144).
6. **SHALL** contain exactly one [1..1] **code** (CONF:4444-27633).
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:4444-27362).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:4444-27363).
8. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4444-13611).
Note: QDM Attribute: Relevant Period, Relevant dateTime
 - a. This effectiveTime **SHOULD** contain zero or one [0..1] **@value** (CONF:4444-29742).
Note: QDM Attribute: Relevant Period - the time the intervention is performed when the intervention occurs at a single point in time
 - b. This effectiveTime **SHOULD** contain zero or one [0..1] **low** (CONF:4444-13612).
Note: QDM Attribute: Relevant Period - startTime - the time the intervention begins when it occurs over a time interval
 - c. This effectiveTime **MAY** contain zero or one [0..1] **high** (CONF:4444-13613).
Note: QDM Attribute: Relevant Period - stopTime - the time the intervention ends when it occurs over a time interval
 - d. This effectiveTime **SHALL** contain either a **low** or a **@value** but not both (CONF:4444-29743).
Note: QDM Attributes Relevant dateTime and Relevant Period are mutually exclusive.
9. **MAY** contain zero or one [0..1] [Author \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-29740).
Note: QDM Attribute: Author dateTime
10. **SHALL NOT** contain [0..0] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:4444-30020).
11. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29750) such that it
Note: QDM Attribute: Performer
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-30030).

- b. **SHALL** contain exactly one [1..1] [Entity Practitioner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29927).
- 12. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29744) such that it
 - Note: QDM Attribute: Performer
 - a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29751).
 - b. **SHALL** contain exactly one [1..1] [Entity Organization](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29745).
- 13. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29748) such that it
 - Note: QDM Attribute: Performer
 - a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29753).
 - b. **SHALL** contain exactly one [1..1] [Entity Patient](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29749).
- 14. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29746) such that it
 - Note: QDM Attribute: Performer
 - a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29752).
 - b. **SHALL** contain exactly one [1..1] [Entity Care Partner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29747).
- 15. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:4444-13604) such that it
 - Note: QDM Attribute: Reason
 - a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-13605).
 - b. **SHALL** contain exactly one [1..1] [Reason \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-27143).
- 16. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-27356) such that it
 - Note: QDM Attribute: Result
 - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-27357).
 - b. **SHALL** contain exactly one [1..1] [Result \(V4\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.87:2019-12-01) (CONF:4444-30021).
- 17. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-27359) such that it
 - Note: QDM Attribute: Status
 - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CONF:4444-27360).

- b. **SHALL** contain exactly one [1..1] [Status \(V2\)](#) (identifier: urn:hl7iii:2.16.840.1.113883.10.20.24.3.93:2019-12-01) (CONF:4444-27361).

Figure 115: Intervention Performed (V5) Example

```

<act classCode="ACT" moodCode="EVN">
  <!-- Conforms to C-CDA R2 Procedure Activity Act (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.12" extension="2014-06-09"/>
  <!-- Intervention Performed (V5) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.32" extension="2019-12-01"/>
  <id root="db734647-fc99-424c-a864-7e3cda82e703"/>
  <code code="225323000" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CD"
  displayName="Smoking cessation education (procedure)"/>
  <statusCode code="completed"/>
  <effectiveTime>
    <!-- QDM Attribute: Relevant Period - Start dateTime -->
    <low value="201903011130"/>
    <!-- QDM Attribute: Relevant Period - Stop dateTime -->
    <high value="201903011330"/>
  </effectiveTime>
  <!-- QDM Attribute: Reason -->
  <entryRelationship typeCode="RSON">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.24.3.88" extension="2017-08-01"/>
      <code code="77301-0" codeSystem="2.16.840.1.113883.6.1" displayName="Reason
      care action performed or not" codeSystemName="LOINC"/>
      <value xsi:type="CD" code="160605003" codeSystem="2.16.840.1.113883.6.96"
      codeSystemName="SNOMED CT" displayName="Heavy cigarette smoker (20-39 cigs/day)
      (finding)"/>
    </observation>
  </entryRelationship>
  <!-- QDM Attribute: Result -->
  <entryRelationship typeCode="REFR">
    <observation classCode="OBS" moodCode="EVN">
      <!-- Conforms to C-CDA R2 Result Observation (V3) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.2" extension="2015-08-01"/>
      <!-- Result (V4) -->
      <templateId root="2.16.840.1.113883.10.20.24.3.87" extension="2019-12-01"/>
      <id root="ed971e73-c060-4258-8838-69c830254b5a"/>
      <code code="225323000" displayName="Smoking cessation education (procedure)"
      codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
      <statusCode code="completed"/>
      <effectiveTime value="201903011130"/>
      <value xsi:type="CD" code="394872000" codeSystem="2.16.840.1.113883.6.96"
      displayName="Ready to stop smoking (finding)" codeSystemName="SNOMED CT"/>
    </observation>
  </entryRelationship>
</act>

```

3.62 Procedure Activity Observation (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.13:2014-06-09
(open)]

Table 211: Procedure Activity Observation (V2) Contexts

| Contained By: | Contains: |
|---------------|---|
| | Service Delivery Location (optional) Medication Activity (V2) (optional) Reaction Observation (V2) (optional) Indication (V2) (optional) Instruction (V2) (optional) Author Participation (optional) |

The common notion of procedure is broader than that specified by the HL7 Version 3 Reference Information Model (RIM). Therefore procedure templates can be represented with various RIM classes: act (e.g., dressing change), observation (e.g., EEG), procedure (e.g., splenectomy).

This template represents procedures that result in new information about the patient that cannot be classified as a procedure according to the HL7 RIM. Examples of these procedures are diagnostic imaging procedures, EEGs, and EKGs.

Table 212: Procedure Activity Observation (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|--|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.13:2014-06-09) | | | | | |
| @classCode | 1..1 | SHALL | | 1098-8282 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 1098-8237 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 1098-8238 | |
| @root | 1..1 | SHALL | | 1098-10520 | 2.16.840.1.113883.10.20.22.4.13 |
| @extension | 1..1 | SHALL | | 1098-32507 | 2014-06-09 |
| id | 1..* | SHALL | | 1098-8239 | |
| code | 1..1 | SHALL | | 1098-19197 | |
| originalText | 0..1 | SHOULD | | 1098-19198 | |
| reference | 0..1 | SHOULD | | 1098-19199 | |
| @value | 0..1 | SHOULD | | 1098-19200 | |
| statusCode | 1..1 | SHALL | | 1098-8245 | |
| @code | 1..1 | SHALL | | 1098-32365 | urn:oid:2.16.840.1.113883.11.20.9.22 (ProcedureAct statusCode) |
| effectiveTime | 0..1 | SHOULD | | 1098-8246 | |
| priorityCode | 0..1 | MAY | | 1098-8247 | urn:oid:2.16.840.1.113883.1.11.16866 (ActPriority) |
| value | 1..1 | SHALL | | 1098-16846 | |
| @nullFlavor | 0..1 | MAY | | 1098-32778 | |
| methodCode | 0..1 | MAY | | 1098-8248 | |
| targetSiteCode | 0..* | SHOULD | | 1098-8250 | urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 (Body Site Value Set) |
| performer | 0..* | SHOULD | | 1098-8251 | |
| assignedEntity | 1..1 | SHALL | | 1098-8252 | |
| id | 1..* | SHALL | | 1098- | |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------------|-------|--------|-----------|----------------------------|---|
| | | | | 8253 | |
| addr | 1..* | SHALL | | 1098-8254 | |
| telecom | 1..* | SHALL | | 1098-8255 | |
| representedOrganization | 0..1 | SHOULD | | 1098-8256 | |
| id | 0..* | SHOULD | | 1098-8257 | |
| name | 0..* | MAY | | 1098-8258 | |
| telecom | 1..1 | SHALL | | 1098-8260 | |
| addr | 1..1 | SHALL | | 1098-8259 | |
| author | 0..* | SHOULD | | 1098-32478 | Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) |
| participant | 0..* | MAY | | 1098-8261 | |
| @typeCode | 1..1 | SHALL | | 1098-8262 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC |
| participantRole | 1..1 | SHALL | | 1098-15904 | Service Delivery Location (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32) |
| entryRelationship | 0..* | MAY | | 1098-8264 | |
| @typeCode | 1..1 | SHALL | | 1098-8265 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| @inversionInd | 1..1 | SHALL | | 1098-8266 | true |
| encounter | 1..1 | SHALL | | 1098-8267 | |
| @classCode | 1..1 | SHALL | | 1098-8268 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC |
| @moodCode | 1..1 | SHALL | | 1098-8269 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| id | 1..1 | SHALL | | 1098-8270 | |
| entryRelationship | 0..1 | MAY | | 1098-8272 | |
| @typeCode | 1..1 | SHALL | | 1098- | urn:oid:2.16.840.1.113883.5.1 |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------------|-------|-------|-----------|----------------------------|--|
| | | | | 8273 | 002 (HL7ActRelationshipType) = SUBJ |
| @inversionInd | 1..1 | SHALL | | 1098-8274 | true |
| act | 1..1 | SHALL | | 1098-31394 | Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.1.0.20.22.4.20:2014-06-09) |
| entryRelationship | 0..* | MAY | | 1098-8276 | |
| @typeCode | 1..1 | SHALL | | 1098-8277 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 1098-15906 | Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.1.0.20.22.4.19:2014-06-09) |
| entryRelationship | 0..* | MAY | | 1098-8279 | |
| @typeCode | 1..1 | SHALL | | 1098-8280 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| substanceAdministration | 1..1 | SHALL | | 1098-15907 | Medication Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.1.0.20.22.4.16:2014-06-09) |
| entryRelationship | 0..* | MAY | | 1098-32470 | |
| @typeCode | 1..1 | SHALL | | 1098-32471 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| observation | 1..1 | SHALL | | 1098-32472 | Reaction Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.1.0.20.22.4.9:2014-06-09) |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8282).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-8237).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-8238) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.13" (CONF:1098-10520).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32507).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-8239).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-19197).
 - a. This code **SHOULD** contain zero or one [0..1] **originalText** (CONF:1098-19198).

- i. The originalText, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:1098-19199).
 - 1. The reference, if present, **SHOULD** contain zero or one [0..1] **@value** (CONF:1098-19200).
 - a. This reference/@value **SHALL** begin with a '#' and **SHALL** point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1098-19201).
 - b. This @code **SHOULD** be selected from LOINC (CodeSystem: 2.16.840.1.113883.6.1) or SNOMED CT (CodeSystem: 2.16.840.1.113883.6.96), and **MAY** be selected from CPT-4 (CodeSystem: 2.16.840.1.113883.6.12) or ICD10 PCS (CodeSystem: 2.16.840.1.113883.6.4) or CDT-2 (Code System: 2.16.840.1.113883.6.13) (CONF:1098-19202).
- 6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-8245).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [ProcedureAct statusCode](#) urn:oid:2.16.840.1.113883.11.20.9.22 **STATIC** 2014-04-23 (CONF:1098-32365).
- 7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-8246).
- 8. **MAY** contain zero or one [0..1] **priorityCode**, which **SHALL** be selected from ValueSet [ActPriority](#) urn:oid:2.16.840.1.113883.1.11.16866 **DYNAMIC** (CONF:1098-8247).
- 9. **SHALL** contain exactly one [1..1] **value** (CONF:1098-16846).

Note: QDM Attribute: Value

If nothing is appropriate for value, use an appropriate nullFlavor.

- a. This value **MAY** contain zero or one [0..1] **@nullFlavor** (CONF:1098-32778).
- 10. **MAY** contain zero or one [0..1] **methodCode** (CONF:1098-8248).
 - a. MethodCode **SHALL NOT** conflict with the method inherent in Observation / code (CONF:1098-8249).
- 11. **SHOULD** contain zero or more [0..*] **targetSiteCode**, which **SHALL** be selected from ValueSet [Body Site Value Set](#) urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 **DYNAMIC** (CONF:1098-8250).
- 12. **SHOULD** contain zero or more [0..*] **performer** (CONF:1098-8251).
 - a. The performer, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1098-8252).
 - i. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1098-8253).
 - ii. This assignedEntity **SHALL** contain at least one [1..*] **addr** (CONF:1098-8254).
 - iii. This assignedEntity **SHALL** contain at least one [1..*] **telecom** (CONF:1098-8255).
 - iv. This assignedEntity **SHOULD** contain zero or one [0..1] **representedOrganization** (CONF:1098-8256).
 - 1. The representedOrganization, if present, **SHOULD** contain zero or more [0..*] **id** (CONF:1098-8257).
 - 2. The representedOrganization, if present, **MAY** contain zero or more [0..*] **name** (CONF:1098-8258).

3. The representedOrganization, if present, **SHALL** contain exactly one [1..1] **telecom** (CONF:1098-8260).
 4. The representedOrganization, if present, **SHALL** contain exactly one [1..1] **addr** (CONF:1098-8259).
13. **SHOULD** contain zero or more [0..*] Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-32478).
 14. **MAY** contain zero or more [0..*] **participant** (CONF:1098-8261) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="LOC"** Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1098-8262).
 - b. **SHALL** contain exactly one [1..1] Service Delivery Location (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32) (CONF:1098-15904).
 15. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-8264) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8265).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** true (CONF:1098-8266).
 - c. **SHALL** contain exactly one [1..1] **encounter** (CONF:1098-8267).
 - i. This encounter **SHALL** contain exactly one [1..1] **@classCode="ENC"** Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8268).
 - ii. This encounter **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-8269).
 - iii. This encounter **SHALL** contain exactly one [1..1] **id** (CONF:1098-8270).
 1. Set encounter/id to the id of an encounter in another section to signify they are the same encounter (CONF:1098-16847).
 16. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-8272) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** Has Subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8273).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** true (CONF:1098-8274).
 - c. **SHALL** contain exactly one [1..1] Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) (CONF:1098-31394).
 17. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-8276) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8277).
 - b. **SHALL** contain exactly one [1..1] Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) (CONF:1098-15906).
 18. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-8279) such that it

- a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** Has Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8280).
 - b. **SHALL** contain exactly one [1..1] [Medication Activity \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09) (CONF:1098-15907).
19. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32470) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** Has Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32471).
 - b. **SHALL** contain exactly one [1..1] [Reaction Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09) (CONF:1098-32472).

Figure 116: Procedure Activity Observation (V2) Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.13" extension="2014-06-09" />
  <id extension="123456789" root="2.16.840.1.113883.19" />
  <code code="274025005"
    codeSystem="2.16.840.1.113883.6.96"
    displayName="Colonic polypectomy"
    codeSystemName="SNOMED-CT">
    <originalText>
      <reference value="#Proc1" />
    </originalText>
  </code>
  <statusCode code="aborted" />
  <effectiveTime value="20110203" />
  <priorityCode code="CR" codeSystem="2.16.840.1.113883.5.7" codeSystemName="ActPriority"
  displayName="Callback results" />
  <value nullFlavor="NA" />
  <methodCode nullFlavor="UNK" />
  <targetSiteCode code="416949008" codeSystem="2.16.840.1.113883.6.96"
  codeSystemName="SNOMED CT" displayName="Abdomen and pelvis" />
  <performer>
    <assignedEntity>
      <id root="2.16.840.1.113883.19" extension="1234" />
      <addr>
        <streetAddressLine>1001 Village Avenue</streetAddressLine>
        <city>Portland</city>
        <state>OR</state>
        <postalCode>99123</postalCode>
        <country>US</country>
      </addr>
      <telecom use="WP" value="tel: +1(555)-555-5000" />
      <representedOrganization>
        <id root="2.16.840.1.113883.19.5" />
        <name>Community Health and Hospitals</name>
        <telecom use="WP" value="tel:+1(555)-555-5000" />
        <addr>
          <streetAddressLine>1001 Village Avenue</streetAddressLine>
          <city>Portland</city>
          <state>OR</state>
          <postalCode>99123</postalCode>
          <country>US</country>
        </addr>
      </representedOrganization>
    </assignedEntity>
  </performer>
  <participant typeCode="LOC">
    <participantRole classCode="SDLOC">
      <templateId root="2.16.840.1.113883.10.20.22.4.32" />
      .
      .
      .
    </participantRole>
  </participant>
  <entryRelationship typeCode="RSON">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.19" extension="2014-06-09" />
      .
      .
      .
    </observation>
  </entryRelationship>
</observation>
```

```

    </observation>
  </entryRelationship>
  <entryRelationship typeCode="SUBJ" inversionInd="true">
    <act classCode="ACT" moodCode="INT">
      <templateId root="2.16.840.1.113883.10.20.22.4.20" extension="2014-06-09" />
      . . .
    </act>
  </entryRelationship>
</observation>

```

3.62.1 Diagnostic Study Performed (V5)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.18:2019-12-01 (open)]

Table 213: Diagnostic Study Performed (V5) Contexts

| Contained By: | Contains: |
|--|---|
| Patient Data Section QDM (V7) (optional) | Author Participation (required) Facility Location (V2) (optional) Reason (V3) (optional) Component (optional) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Status (V2) (optional) Author (V2) (optional) Result (V4) (optional) |

This template represents the QDM datatype: Diagnostic Study, Performed.

This template indicates that a diagnostic study has been completed. Diagnostic Study represents any kind of medical test performed as a specific test or series of steps to aid in diagnosing or detecting disease (e.g., to establish a diagnosis, measure the progress or recovery from disease, confirm that a person is free from disease). The QDM defines diagnostic studies as those that are not performed in organizations that perform testing on samples of human blood, tissue, or other substance from the body. Such studies include but are not limited to imaging studies, cardiology studies (electrocardiogram, treadmill stress testing), pulmonary function testing, vascular laboratory testing, and others.

Timing:

Relevant dateTime references the time the diagnostic study is performed if it occurs at a single point in time.

Relevant Period references a start and stop time for an assessment that occurs over a time interval. startTime – when the diagnostic study is initiated. stopTime – when the diagnostic study is completed.

Author dateTime references the time the diagnostic study was recorded and applies only when the record has no reference to the time the diagnostic study was performed and only the recorded time is available.

For Diagnostic Study Not Performed, use Author dateTime to reference timing. It must not use Relevant Period or Relevant dateTime.

QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template.

Table 214: Diagnostic Study Performed (V5) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|--|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.18:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-27369 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 4444-12950 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 0..1 | MAY | | 4444-28063 | |
| templateId | 1..1 | SHALL | | 4444-12951 | |
| @root | 1..1 | SHALL | | 4444-12952 | 2.16.840.1.113883.10.20.24.3.18 |
| @extension | 1..1 | SHALL | | 4444-27141 | 2019-12-01 |
| code | 1..1 | SHALL | | 4444-27617 | |
| statusCode | 1..1 | SHALL | | 4444-12956 | |
| @code | 1..1 | SHALL | | 4444-12957 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL | | 4444-12958 | |
| @value | 0..1 | SHOULD | | 4444-30024 | |
| low | 0..1 | SHOULD | | 4444-12959 | |
| high | 0..1 | MAY | | 4444-12960 | |
| value | 1..1 | SHALL | | 4444-29332 | |
| @nullFlavor | 1..1 | SHALL | | 4444-29333 | NA |
| author | 0..1 | MAY | | 4444-28873 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| author | 0..0 | SHALL NOT | | 4444-30022 | Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) |
| participant | 0..1 | MAY | | 4444-13031 | Facility Location (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.100:2017-08-01) |
| participant | 0..* | MAY | | 4444-29340 | |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|---|
| @typeCode | 1..1 | SHALL | | 4444-29345 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29341 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29338 | |
| @typeCode | 1..1 | SHALL | | 4444-29344 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29339 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29334 | |
| @typeCode | 1..1 | SHALL | | 4444-29342 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29335 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29336 | |
| @typeCode | 1..1 | SHALL | | 4444-29343 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29337 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |
| entryRelationship | 0..* | MAY | | 4444-12963 | |
| @typeCode | 1..1 | SHALL | | 4444-12964 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 4444-27140 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) |
| entryRelationship | 0..1 | MAY | | 4444-27368 | |
| @typeCode | 1..1 | SHALL | | 4444-27370 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| observation | 1..1 | SHALL | | 4444-27371 | Status (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.93:2019-12-01) |
| entryRelationship | 0..1 | MAY | | 4444- | |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|--|
| | | | | 27746 | |
| @typeCode | 1..1 | SHALL | | 4444-28139 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| observation | 1..1 | SHALL | | 4444-30023 | Result (V4) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.87:2019-12-01) |
| entryRelationship | 0..* | MAY | | 4444-28874 | |
| @typeCode | 1..1 | SHALL | | 4444-28875 | REFR |
| observation | 1..1 | SHALL | | 4444-28876 | Component (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.149:2017-08-01) |

1. Conforms to [Procedure Activity Observation \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.13:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-27369).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-12950).
4. **MAY** contain zero or one [0..1] **@negationInd** (CONF:4444-28063).
Note: QDM Attribute: Negation Rationale – when @negationInd="true", this indicates Diagnostic Study Not Performed.
 - a. If **@negationInd**="true" is present, **SHALL** contain one [1..1] entryRelationship such that it contains exactly one [1..1] **Reason (V3)** to state the reason for **Diagnostic Study Not Performed** (CONF:4444-29634).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-12951) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.18" (CONF:4444-12952).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-27141).
6. **SHALL** contain exactly one [1..1] **code** (CONF:4444-27617).
Note: QDM Attribute: Code
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:4444-12956).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:4444-12957).
8. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4444-12958).
Note: QDM Attribute: Relevant Period
 - a. This effectiveTime **SHOULD** contain zero or one [0..1] **@value** (CONF:4444-30024).
Note: QDM Attribute: Relevant dateTime – the time the diagnostic study is performed if it occurs at a single point in time.

- b. This effectiveTime **SHOULD** contain zero or one [0..1] **low** (CONF:4444-12959).
Note: QDM Attribute: Relevant Period - startTime - when the diagnostic study is initiated when it occurs over a time interval.
 - c. This effectiveTime **MAY** contain zero or one [0..1] **high** (CONF:4444-12960).
Note: QDM Attribute: Relevant Period - stopTime - when the diagnostic study is completed when it occurs over a time interval.
 - d. This effectiveTime **SHALL** contain either a **low** or a **@value** but not both (CONF:4444-30025).
Note: QDM Attributes Relevant dateTime and Relevant Period are mutually exclusive.
9. **SHALL** contain exactly one [1..1] **value** (CONF:4444-29332).
Note: Use Result Observation (V3) to represent Result and/or Result dateTime
- a. This value **SHALL** contain exactly one [1..1] **@nullFlavor="NA"** (CONF:4444-29333).
10. **MAY** contain zero or one [0..1] **Author (V2)** (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-28873).
Note: QDM Attribute: Author dateTime
11. **SHALL NOT** contain [0..0] **Author Participation** (identifier:
urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:4444-30022).
12. **MAY** contain zero or one [0..1] **Facility Location (V2)** (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.24.3.100:2017-08-01) (CONF:4444-13031).
Note: QDM Attribute: Facility Location
13. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29340) such that it
Note: QDM Attribute: Performer
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem:
HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29345).
 - b. **SHALL** contain exactly one [1..1] **Entity Practitioner** (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29341).
14. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29338) such that it
Note: QDM Attribute: Performer
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem:
HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29344).
 - b. **SHALL** contain exactly one [1..1] **Entity Organization** (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29339).
15. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29334) such that it
Note: QDM Attribute: Performer
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem:
HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29342).
 - b. **SHALL** contain exactly one [1..1] **Entity Patient** (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29335).
16. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29336) such that it
Note: QDM Attribute: Performer

- a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29343).
 - b. **SHALL** contain exactly one [1..1] **Entity Care Partner** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29337).
17. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:4444-12963) such that it
Note: QDM Attribute: Reason
- a. **SHALL** contain exactly one [1..1] **@typeCode**="RSON" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-12964).
 - b. **SHALL** contain exactly one [1..1] **Reason (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-27140).
18. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-27368) such that it
Note: QDM Attribute: Status
- a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-27370).
 - b. **SHALL** contain exactly one [1..1] **Status (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.93:2019-12-01) (CONF:4444-27371).
19. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-27746) such that it
Note: QDM Attribute: Result, QDM Attribute: Result dateTime
- a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-28139).
 - b. **SHALL** contain exactly one [1..1] **Result (V4)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.87:2019-12-01) (CONF:4444-30023).
20. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:4444-28874) such that it
Note: QDM Attribute: Components
- a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" refers to (CONF:4444-28875).
 - b. **SHALL** contain exactly one [1..1] **Component** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.149:2017-08-01) (CONF:4444-28876).

Figure 117: Diagnostic Study Performed (V5) Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- Conforms to C-CDA R2.1 Procedure Activity Observation (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.13" extension="2014-06-09"/>
  <!-- Diagnostic Study Performed (V5) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.18" extension="2019-12-01"/>
  <id root="1fad091f-7b4e-4661-b61c-53f9a82515b6"/>
  <code code="24605-8" codeSystem="2.16.840.1.113883.6.1"
displayName="Breast Mammogram diagnostic" codeSystemName="LOINC"/>
  <text>Diagnostic Study, Performed: Breast Mammogram Diagnostic</text>
  <statusCode code="completed"/>
  <effectiveTime>
    <!-- QDM Attribute: Relevant Period - Start dateTime -->
    <low value="20190329090000"/>
    <!-- QDM Attribute: Relevant Period - Stop dateTime -->
    <high value="20190329103000"/>
  </effectiveTime>
  <value xsi:type="CD" nullFlavor="NA"/>
  <!-- QDM Attribute: Method -->
  <methodCode code="24623002" codeSystem="2.16.840.1.113883.6.96"
displayName="Screening mammography" codeSystemName="SNOMED CT"/>
  <!-- QDM Attribute: Facility Location -->
  <participant typeCode="LOC">
    <!-- Facility Location (V2) -->
    <templateId root="2.16.840.1.113883.10.20.24.3.100" extension="2018-07-01"/>
    <time>
      <low value="20190329"/>
    </time>
    <participantRole classCode="SDLOC">
      <code code="309905000" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT" displayName="Adult Intensive Care Unit"/>
      <addr>
        <streetAddressLine>17 Daws Rd.</streetAddressLine>
        <city>Blue Bell</city>
        <state>MA</state>
        <postalCode>02368</postalCode>
        <country>US</country>
      </addr>
      <telecom use="WP" value="tel:(555)555-1003"/>
      <playingEntity classCode="PLC">
        <name>Good Health Clinic</name>
      </playingEntity>
    </participantRole>
  </participant>
</observation>
```

3.62.2 Physical Exam Performed (V5)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.59:2019-12-01 (open)]

Table 215: Physical Exam Performed (V5) Contexts

| Contained By: | Contains: |
|--|--|
| Patient Data Section QDM (V7) (optional) | Author Participation (required) Reason (V3) (optional) Component (optional) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Author (V2) (optional) |

This template represents the QDM datatype: Physical Exam, Performed.

A physical exam has been completed. A time/date stamp is required, moodCode has been constrained to "EVN" and statusCode has been constrained to "completed". If there is a result, it is recorded in value.

QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template.

Table 216: Physical Exam Performed (V5) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.59:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-27559 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 4444-12643 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 0..1 | MAY | | 4444-28093 | |
| templateId | 1..1 | SHALL | | 4444-12644 | |
| @root | 1..1 | SHALL | | 4444-12645 | 2.16.840.1.113883.10.20.24.3.59 |
| @extension | 1..1 | SHALL | | 4444-27135 | 2019-12-01 |
| id | 1..* | SHALL | | 4444-29817 | |
| code | 1..1 | SHALL | | 4444-27651 | |
| statusCode | 1..1 | SHALL | | 4444-12649 | |
| @code | 1..1 | SHALL | | 4444-12650 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL | | 4444-12651 | |
| @value | 0..1 | SHOULD | | 4444-29818 | |
| low | 0..1 | SHOULD | | 4444-12652 | |
| high | 0..1 | MAY | | 4444-12653 | |
| author | 0..1 | MAY | | 4444-29807 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| author | 0..0 | SHALL NOT | | 4444-29824 | Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) |
| participant | 0..* | MAY | | 4444-29808 | |
| @typeCode | 1..1 | SHALL | | 4444-29820 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29809 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|---|
| participant | 0..* | MAY | | 4444-29810 | |
| @typeCode | 1..1 | SHALL | | 4444-29821 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29811 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29814 | |
| @typeCode | 1..1 | SHALL | | 4444-29823 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29815 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29812 | |
| @typeCode | 1..1 | SHALL | | 4444-29822 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29813 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |
| entryRelationship | 0..* | MAY | | 4444-12656 | |
| @typeCode | 1..1 | SHALL | | 4444-12657 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 4444-27134 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) |
| entryRelationship | 0..* | MAY | | 4444-28933 | |
| @typeCode | 1..1 | SHALL | | 4444-28934 | REFR |
| observation | 1..1 | SHALL | | 4444-28935 | Component (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.149:2017-08-01) |

1. Conforms to [Procedure Activity Observation \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.13:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-27559).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-12643).

4. **MAY** contain zero or one [0..1] **@negationInd** (CONF:4444-28093).
Note: QDM Attribute: Negation Rationale - negationInd="true" indicates Physical Exam Not Performed
 - a. If **@negationInd="true"** is present, **SHALL** contain one [1..1] entryRelationship such that it contains exactly one [1..1] **Reason (V3)** to state the reason for **Physical Exam Not Performed** (CONF:4444-29816).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-12644) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.24.3.59"** (CONF:4444-12645).
 - b. **SHALL** contain exactly one [1..1] **@extension="2019-12-01"** (CONF:4444-27135).
6. **SHALL** contain at least one [1..*] **id** (CONF:4444-29817).
7. **SHALL** contain exactly one [1..1] **code** (CONF:4444-27651).
Note: QDM Attribute: Code
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:4444-12649).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:4444-12650).
9. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4444-12651).
Note: QDM Attribute: Relevant Period, Relevant dateTime
 - a. This effectiveTime **SHOULD** contain zero or one [0..1] **@value** (CONF:4444-29818).
Note: QDM Attribute: Relevant dateTime – the time the physical exam is performed when the physical exam occurs at a single point in time.
 - b. This effectiveTime **SHOULD** contain zero or one [0..1] **low** (CONF:4444-12652).
Note: QDM Attribute: Relevant Period - startTime - the time the physical examination activity begins when it occurs over a time interval.
 - c. This effectiveTime **MAY** contain zero or one [0..1] **high** (CONF:4444-12653).
Note: QDM Attribute: Relevant Period - stopTime – the time the physical examination activity ends when it occurs over a time interval.
 - d. This effectiveTime **SHALL** contain either a **low** or a **@value** but not both (CONF:4444-29819).
Note: QDM Attributes Relevant dateTime and Relevant Period are mutually exclusive.
10. **MAY** contain zero or one [0..1] **Author (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-29807).
Note: QDM attribute: Author dateTime
11. **SHALL NOT** contain [0..0] **Author Participation** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:4444-29824).
12. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29808) such that it
Note: QDM Attribute: Performer
 - a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29820).
 - b. **SHALL** contain exactly one [1..1] **Entity Practitioner** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29809).
13. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29810) such that it
Note: QDM Attribute: Performer

- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29821).
 - b. **SHALL** contain exactly one [1..1] **Entity Organization** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29811).
14. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29814) such that it
Note: QDM Attribute: Performer
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29823).
 - b. **SHALL** contain exactly one [1..1] **Entity Patient** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29815).
15. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29812) such that it
Note: QDM Attribute: Performer
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29822).
 - b. **SHALL** contain exactly one [1..1] **Entity Care Partner** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29813).
16. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:4444-12656) such that it
Note: QDM Attribute: Reason
- a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-12657).
 - b. **SHALL** contain exactly one [1..1] **Reason (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-27134).
17. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:4444-28933) such that it
Note: QDM Attribute: Components
- a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** refers to (CONF:4444-28934).
 - b. **SHALL** contain exactly one [1..1] **Component** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.149:2017-08-01) (CONF:4444-28935).

Figure 118: Physical Exam Performed (V5) Example

```

<observation classCode="OBS" moodCode="EVN">
  <!-- Conforms to C-CDA R2 Procedure Activity Observation (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.13" extension="2014-06-09"/>
  <!-- Physical Exam Performed (V5) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.59" extension="2019-12-01"/>
  <id root="09982a50-a3f7-422b-9eb2-d9e26ad6448b"/>
  <!-- Physical Exam -->
  <code xsi:type="CD" code="29463-7" codeSystem="2.16.840.1.113883.6.1"
displayName="Body weight" codeSystemName="LOINC"/>
  <statusCode code="completed"/>
  <effectiveTime>
    <!-- QDM Attribute: Relevant Period - start Datetime -->
    <low value="20190329090000"/>
    <!-- QDM Attribute: Relevant Period - start Datetime -->
    <high value="20190329103000"/>
  </effectiveTime>
  <!-- QDM Attribute: Result -->
  <value xsi:type="PQ" value="79" unit="kg"/>
  <!-- QDM Attribute: Method -->
  <methodCode code="8350-1" codeSystem="2.16.840.1.113883.6.1"
displayName="Body weight Measured --with clothes" codeSystemName="LOINC"/>
  <!-- QDM Attribute: Reason -->
  <entryRelationship typeCode="RSON">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.24.3.88" extension="2017-08-01"/>
      <code code="77301-0" codeSystem="2.16.840.1.113883.6.1"
displayName="Reason care action performed or not" codeSystemName="LOINC"/>
      <value xsi:type="CD" code="238131007" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT" displayName="Overweight (finding)"/>
    </observation>
  </entryRelationship>
</observation>

```

3.63 Procedure Activity Procedure (V2)

[procedure: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09
(open)]

Table 217: Procedure Activity Procedure (V2) Contexts

| Contained By: | Contains: |
|--|--|
| Reaction Observation (V2) (optional) | Service Delivery Location (optional) Product Instance (optional) Medication Activity (V2) (optional) Reaction Observation (V2) (optional) Indication (V2) (optional) Instruction (V2) (optional) Author Participation (optional) |

The common notion of "procedure" is broader than that specified by the HL7 Version 3 Reference Information Model (RIM). Therefore procedure templates can be represented with various RIM classes: act (e.g., dressing change), observation (e.g., EEG), procedure (e.g., splenectomy).

This template represents procedures whose immediate and primary outcome (post-condition) is the alteration of the physical condition of the patient. Examples of these procedures are an appendectomy, hip replacement, and a creation of a gastrostomy.

This template can be used with a contained Product Instance template to represent a device in or on a patient. In this case, targetSiteCode is used to record the location of the device in or on the patient's body. Equipment supplied to the patient (e.g., pumps, inhalers, wheelchairs) is represented by the Non-Medicinal Supply Activity (V2) template.

Table 218: Procedure Activity Procedure (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|--|
| procedure (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09) | | | | | |
| @classCode | 1..1 | SHALL | | 1098-7652 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC |
| @moodCode | 1..1 | SHALL | | 1098-7653 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 1098-7654 | |
| @root | 1..1 | SHALL | | 1098-10521 | 2.16.840.1.113883.10.20.22.4.14 |
| @extension | 1..1 | SHALL | | 1098-32506 | 2014-06-09 |
| id | 1..* | SHALL | | 1098-7655 | |
| code | 1..1 | SHALL | | 1098-7656 | |
| originalText | 0..1 | SHOULD | | 1098-19203 | |
| reference | 0..1 | SHOULD | | 1098-19204 | |
| @value | 0..1 | SHOULD | | 1098-19205 | |
| statusCode | 1..1 | SHALL | | 1098-7661 | |
| @code | 1..1 | SHALL | | 1098-32366 | urn:oid:2.16.840.1.113883.11.20.9.22 (ProcedureAct statusCode) |
| effectiveTime | 0..1 | SHOULD | | 1098-7662 | |
| priorityCode | 0..1 | MAY | | 1098-7668 | urn:oid:2.16.840.1.113883.1.11.16866 (ActPriority) |
| methodCode | 0..1 | MAY | | 1098-7670 | |
| targetSiteCode | 0..* | SHOULD | | 1098-7683 | urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 (Body Site Value Set) |
| specimen | 0..* | MAY | | 1098-7697 | |
| specimenRole | 1..1 | SHALL | | 1098-7704 | |
| id | 0..* | SHOULD | | 1098-7716 | |
| performer | 0..* | SHOULD | | 1098-7718 | |
| assignedEntity | 1..1 | SHALL | | 1098- | |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------------|-------|--------|-----------|----------------------------|---|
| | | | | 7720 | |
| id | 1..* | SHALL | | 1098-7722 | |
| addr | 1..* | SHALL | | 1098-7731 | |
| telecom | 1..* | SHALL | | 1098-7732 | |
| representedOrganization | 0..1 | SHOULD | | 1098-7733 | |
| id | 0..* | SHOULD | | 1098-7734 | |
| name | 0..* | MAY | | 1098-7735 | |
| telecom | 1..1 | SHALL | | 1098-7737 | |
| addr | 1..1 | SHALL | | 1098-7736 | |
| author | 0..* | SHOULD | | 1098-32479 | Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) |
| participant | 0..* | MAY | | 1098-7751 | |
| @typeCode | 1..1 | SHALL | | 1098-7752 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = DEV |
| participantRole | 1..1 | SHALL | | 1098-15911 | Product Instance (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.37) |
| participant | 0..* | MAY | | 1098-7765 | |
| @typeCode | 1..1 | SHALL | | 1098-7766 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC |
| participantRole | 1..1 | SHALL | | 1098-15912 | Service Delivery Location (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32) |
| entryRelationship | 0..* | MAY | | 1098-7768 | |
| @typeCode | 1..1 | SHALL | | 1098-7769 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| @inversionInd | 1..1 | SHALL | | 1098-8009 | true |
| encounter | 1..1 | SHALL | | 1098- | |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------------|-------|-------|-----------|----------------------------|---|
| | | | | 7770 | |
| @classCode | 1..1 | SHALL | | 1098-7771 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC |
| @moodCode | 1..1 | SHALL | | 1098-7772 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| id | 1..1 | SHALL | | 1098-7773 | |
| entryRelationship | 0..1 | MAY | | 1098-7775 | |
| @typeCode | 1..1 | SHALL | | 1098-7776 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ |
| @inversionInd | 1..1 | SHALL | | 1098-7777 | true |
| act | 1..1 | SHALL | | 1098-31395 | Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) |
| entryRelationship | 0..* | MAY | | 1098-7779 | |
| @typeCode | 1..1 | SHALL | | 1098-7780 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 1098-15914 | Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) |
| entryRelationship | 0..* | MAY | | 1098-7886 | |
| @typeCode | 1..1 | SHALL | | 1098-7887 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| substanceAdministration | 1..1 | SHALL | | 1098-15915 | Medication Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09) |
| entryRelationship | 0..* | MAY | | 1098-32473 | |
| @typeCode | 1..1 | SHALL | | 1098-32474 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| observation | 1..1 | SHALL | | 1098-32475 | Reaction Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09) |

1. **SHALL** contain exactly one [1..1] @classCode="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7652).

2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-7653).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7654) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.14" (CONF:1098-10521).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32506).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-7655).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-7656).
 - a. This code **SHOULD** contain zero or one [0..1] **originalText** (CONF:1098-19203).
 - i. The originalText, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:1098-19204).
 1. The reference, if present, **SHOULD** contain zero or one [0..1] **@value** (CONF:1098-19205).
 - a. This reference/**@value** **SHALL** begin with a '#' and **SHALL** point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1098-19206).
 - b. This **@code** **SHOULD** be selected from LOINC (CodeSystem: 2.16.840.1.113883.6.1) or SNOMED CT (CodeSystem: 2.16.840.1.113883.6.96), and **MAY** be selected from CPT-4 (CodeSystem: 2.16.840.1.113883.6.12) or ICD10 PCS (CodeSystem: 2.16.840.1.113883.6.4) or CDT-2 (Code System: 2.16.840.1.113883.6.13) (CONF:1098-19207).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-7661).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [ProcedureAct statusCode](#) urn:oid:2.16.840.1.113883.11.20.9.22 **STATIC** 2014-04-23 (CONF:1098-32366).
7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-7662).
8. **MAY** contain zero or one [0..1] **priorityCode**, which **SHALL** be selected from ValueSet [ActPriority](#) urn:oid:2.16.840.1.113883.1.11.16866 **DYNAMIC** (CONF:1098-7668).
9. **MAY** contain zero or one [0..1] **methodCode** (CONF:1098-7670).
 - a. MethodCode **SHALL NOT** conflict with the method inherent in Procedure / code (CONF:1098-7890).

In the case of an implanted medical device, targetSiteCode is used to record the location of the device, in or on the patient's body.

10. **SHOULD** contain zero or more [0..*] **targetSiteCode**, which **SHALL** be selected from ValueSet [Body Site Value Set](#) urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 **DYNAMIC** (CONF:1098-7683).
11. **MAY** contain zero or more [0..*] **specimen** (CONF:1098-7697).
 - a. The specimen, if present, **SHALL** contain exactly one [1..1] **specimenRole** (CONF:1098-7704).
 - i. This specimenRole **SHOULD** contain zero or more [0..*] **id** (CONF:1098-7716).
 1. If you want to indicate that the Procedure and the Results are referring to the same specimen, the

Procedure/specimen/specimenRole/id **SHOULD** be set to equal an Organizer/specimen/ specimenRole/id (CONF:1098-29744).

- b. This specimen is for representing specimens obtained from a procedure (CONF:1098-16842).
12. **SHOULD** contain zero or more [0..*] **performer** (CONF:1098-7718) such that it
- a. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1098-7720).
 - i. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1098-7722).
 - ii. This assignedEntity **SHALL** contain at least one [1..*] **addr** (CONF:1098-7731).
 - iii. This assignedEntity **SHALL** contain at least one [1..*] **telecom** (CONF:1098-7732).
 - iv. This assignedEntity **SHOULD** contain zero or one [0..1] **representedOrganization** (CONF:1098-7733).
 - 1. The representedOrganization, if present, **SHOULD** contain zero or more [0..*] **id** (CONF:1098-7734).
 - 2. The representedOrganization, if present, **MAY** contain zero or more [0..*] **name** (CONF:1098-7735).
 - 3. The representedOrganization, if present, **SHALL** contain exactly one [1..1] **telecom** (CONF:1098-7737).
 - 4. The representedOrganization, if present, **SHALL** contain exactly one [1..1] **addr** (CONF:1098-7736).
13. **SHOULD** contain zero or more [0..*] **Author Participation** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-32479).
14. **MAY** contain zero or more [0..*] **participant** (CONF:1098-7751) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="DEV"** Device (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7752).
 - b. **SHALL** contain exactly one [1..1] **Product Instance** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.37) (CONF:1098-15911).
15. **MAY** contain zero or more [0..*] **participant** (CONF:1098-7765) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="LOC"** Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1098-7766).
 - b. **SHALL** contain exactly one [1..1] **Service Delivery Location** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32) (CONF:1098-15912).
16. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-7768) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** Has Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7769).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** true (CONF:1098-8009).
 - c. **SHALL** contain exactly one [1..1] **encounter** (CONF:1098-7770).
 - i. This encounter **SHALL** contain exactly one [1..1] **@classCode="ENC"** Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7771).

- ii. This encounter **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-7772).
 - iii. This encounter **SHALL** contain exactly one [1..1] **id** (CONF:1098-7773).
 - 1. Set the encounter ID to the ID of an encounter in another section to signify they are the same encounter (CONF:1098-16843).
- 17. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-7775) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** Has Subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7776).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** true (CONF:1098-7777).
 - c. **SHALL** contain exactly one [1..1] [Instruction \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) (CONF:1098-31395).
- 18. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-7779) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7780).
 - b. **SHALL** contain exactly one [1..1] [Indication \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) (CONF:1098-15914).
- 19. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-7886) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** Has Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7887).
 - b. **SHALL** contain exactly one [1..1] [Medication Activity \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09) (CONF:1098-15915).
- 20. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32473) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** Has Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32474).
 - b. **SHALL** contain exactly one [1..1] [Reaction Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09) (CONF:1098-32475).

Figure 119: Procedure Activity Procedure (V2) Example

```

<procedure classCode="PROC" moodCode="EVN">
  <!-- Procedure Activity Procedure V2-->
  <templateId root="2.16.840.1.113883.10.20.22.4.14" extension="2014-06-09" />
  <id root="d5b614bd-01ce-410d-8726-e1fd01dcc72a" />
  <code code="103716009" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT"
  displayName="Stent Placement">
    <originalText>
      <reference value="#Proc1" />
    </originalText>
  </code>
  <statusCode code="completed" />
  <effectiveTime value="20130512" />
  <targetSiteCode code="28273000" displayName="bile duct"
  codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT" />
  <specimen typeCode="SPC">
    <specimenRole classCode="SPEC">
      <id root="a6d7b927-2b70-43c7-bdf3-0e7c4133062c" />
      <specimenPlayingEntity>
        <code code="57259009" codeSystem="2.16.840.1.113883.6.96"
        displayName="gallbladder bile" />
      </specimenPlayingEntity>
    </specimenRole>
  </specimen>
  <performer>
    ...
  </performer>
</procedure>

```

3.63.1 Device Applied (V6)

[procedure: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.7:2019-12-01
(open)]

Table 219: Device Applied (V6) Contexts

| Contained By: | Contains: |
|--|--|
| Patient Data Section QDM (V7) (optional) | Author Participation (required) Reason (V3) (optional) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Author (V2) (optional) |

This template represents the QDM datatype: Device, Applied.

This datatype indicates that equipment designed to treat, monitor, or diagnose a patient's status is in use (e.g., an antithrombotic device has been placed on the patient's legs to prevent thromboembolism, or a cardiac pacemaker is in place). The statusCode has been constrained to “completed” and there is a participant to represent the device.

QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template.

Timing:

The Relevant Period startTime is when the device is inserted or first used, stopTime is when the device is removed or last used.

Relevant dateTime addresses the time the device is applied if it was used at a single point in time;

Relevant Period references a start and stop time for a device if the application occurred over a time interval..

Author dateTime references the time the device application was recorded and applies only when the record has no reference to the actual time the device was applied and only the recorded time is available.

For Device Not Applied, use the author dateTime attribute to reference timing and must not use Relevant Period.

Table 220: Device Applied (V6) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|--------------|-------------|------------------|----------------------------|---|
| procedure (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.7:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-28050 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC |
| @moodCode | 1..1 | SHALL | | 4444-28051 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 0..1 | MAY | | 4444-28052 | |
| templateId | 1..1 | SHALL | | 4444-12391 | |
| @root | 1..1 | SHALL | | 4444-12392 | 2.16.840.1.113883.10.20.24.3.7 |
| @extension | 1..1 | SHALL | | 4444-27132 | 2019-12-01 |
| code | 1..1 | SHALL | | 4444-12414 | |
| @code | 1..1 | SHALL | | 4444-12415 | 360030002 |
| @codeSystem | 1..1 | SHALL | | 4444-27536 | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96 |
| statusCode | 1..1 | SHALL | | 4444-12394 | |
| @code | 1..1 | SHALL | | 4444-29261 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL | | 4444-12395 | |
| @value | 0..1 | SHOULD | | 4444-29617 | |
| low | 0..1 | SHOULD | | 4444-27537 | |
| high | 0..1 | MAY | | 4444-27538 | |
| targetSiteCode | 0..1 | MAY | | 4444-12416 | |
| author | 0..1 | MAY | | 4444-28917 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| author | 0..0 | SHALL NOT | | 4444-30026 | Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) |
| participant | 1..1 | SHALL | | 4444-12396 | |
| @typeCode | 1..1 | SHALL | | 4444- | urn:oid:2.16.840.1.113883.5.9 |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|---|
| | | | | 12397 | 0 (HL7ParticipationType) = DEV |
| participantRole | 1..1 | SHALL | | 4444-12398 | |
| @classCode | 1..1 | SHALL | | 4444-12399 | urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU |
| playingDevice | 1..1 | SHALL | | 4444-12400 | |
| @classCode | 1..1 | SHALL | | 4444-12401 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = DEV |
| code | 1..1 | SHALL | | 4444-12402 | |
| participant | 0..* | MAY | | 4444-29264 | |
| @typeCode | 1..1 | SHALL | | 4444-29269 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29265 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29271 | |
| @typeCode | 1..1 | SHALL | | 4444-29273 | urn:oid:2.16.840.1.113883.18.439 (HL7ObservationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29272 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29266 | |
| @typeCode | 1..1 | SHALL | | 4444-29270 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29267 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29262 | |
| @typeCode | 1..1 | SHALL | | 4444-29268 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29263 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |
| entryRelationship | 0..* | MAY | | 4444-12403 | |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------|-------|-------|-----------|----------------------------|--|
| @typeCode | 1..1 | SHALL | | 4444-12404 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 4444-27131 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) |

1. Conforms to [Procedure Activity Procedure \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-28050).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-28051).
4. **MAY** contain zero or one [0..1] **@negationInd** (CONF:4444-28052).
Note: QDM Attribute: Negation Rationale
 - a. If **@negationInd**="true" is present, **SHALL** contain one [1..1] entryRelationship such that it contains exactly one [1..1] **Reason (V3)** to state the reason for **Device Not Applied** (CONF:4444-29616).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-12391) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.7" (CONF:4444-12392).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-27132).
6. **SHALL** contain exactly one [1..1] **code** (CONF:4444-12414).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="360030002" application of device (CONF:4444-12415).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:4444-27536).
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:4444-12394).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:4444-29261).
8. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4444-12395).
Note: QDM Attribute: Relevant Period, Relevant dateTime
 - a. This effectiveTime **SHOULD** contain zero or one [0..1] **@value** (CONF:4444-29617).
Note: QDM Attribute: Relevant dateTime - the time the device is applied if it was used at a single point in time
 - b. This effectiveTime **SHOULD** contain zero or one [0..1] **low** (CONF:4444-27537).
Note: QDM Attribute: Relevant Period startTime - the device is inserted or first used
 - c. This effectiveTime **MAY** contain zero or one [0..1] **high** (CONF:4444-27538).
Note: QDM Attribute: Relevant Period stopTime - the device is removed or last used
 - d. This effectiveTime **SHALL** contain either a **low** or a **@value** but not both (CONF:4444-29618).

Note: QDM Attributes Relevant dateTime and Relevant Period are mutually exclusive.

9. **MAY** contain zero or one [0..1] **targetSiteCode** (CONF:4444-12416).
Note: QDM Attribute: Anatomical Location Site
10. **MAY** contain zero or one [0..1] **Author (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-28917).
Note: QDM Attribute: Author dateTime - he time the action was recorded.
11. **SHALL NOT** contain [0..0] **Author Participation** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:4444-30026).
12. **SHALL** contain exactly one [1..1] **participant** (CONF:4444-12396) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="DEV"** device, which **SHALL** be selected from CodeSystem HL7ParticipationType (urn:oid:2.16.840.1.113883.5.90) (CONF:4444-12397).
 - b. **SHALL** contain exactly one [1..1] **participantRole** (CONF:4444-12398).
 - i. This participantRole **SHALL** contain exactly one [1..1] **@classCode="MANU"** manufactured product, which **SHALL** be selected from CodeSystem HL7RoleClass (urn:oid:2.16.840.1.113883.5.110) (CONF:4444-12399).
 - ii. This participantRole **SHALL** contain exactly one [1..1] **playingDevice** (CONF:4444-12400).
 1. This playingDevice **SHALL** contain exactly one [1..1] **@classCode="DEV"** device, which **SHALL** be selected from CodeSystem HL7ParticipationType (urn:oid:2.16.840.1.113883.5.90) (CONF:4444-12401).
 2. This playingDevice **SHALL** contain exactly one [1..1] **code** (CONF:4444-12402).
Note: QDM Attribute: Code
13. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29264) such that it
Note: QDM Attribute: Performer
 - a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29269).
 - b. **SHALL** contain exactly one [1..1] **Entity Practitioner** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29265).
14. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29271) such that it
Note: QDM Attribute: Performer
 - a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ObservationType urn:oid:2.16.840.1.113883.18.439) (CONF:4444-29273).
 - b. **SHALL** contain exactly one [1..1] **Entity Organization** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29272).
15. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29266) such that it
Note: QDM Attribute: Performer
 - a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29270).

- b. **SHALL** contain exactly one [1..1] [Entity Patient](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29267).
16. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29262) such that it
Note: QDM Attribute: Performer
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29268).
 - b. **SHALL** contain exactly one [1..1] [Entity Care Partner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29263).
17. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:4444-12403) such that it
Note: QDM Attribute: Reason
- a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** has reason, which **SHALL** be selected from CodeSystem HL7ActRelationshipType (urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-12404).
 - b. **SHALL** contain exactly one [1..1] [Reason \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-27131).

Figure 120: Device Applied (V6) Example

```

<procedure classCode="PROC" moodCode="EVN">
  <!-- Conforms to C-CDA R2.1 Procedure Activity Procedure (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.14" extension="2014-06-09"/>
  <!-- Device Applied (V6) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.7" extension="2019-12-01"/>
  <id root="20ebe7a7-a493-447d-922b-5d98fa8b96da"/>
  <code code="360030002" displayName="application of device"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED-CT"/>
  <statusCode code="completed"/>
  <effectiveTime>
    <!-- QDM Attribute: Relevant Period - Start dateTime -->
    <low value="20190101"/>
    <!-- QDM Attribute: Relevant Period - Stop dateTime -->
    <high value="20190601"/>
  </effectiveTime>
  <participant typeCode="DEV">
    <participantRole classCode="MANU">
      <playingDevice classCode="DEV">
        <!-- Device -->
        <code code="401608003" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED-CT" displayName="Suprapubic catheter (physical object)"/>
      </playingDevice>
    </participantRole>
  </participant>
  ...
</procedure>

```

3.63.2 Procedure Performed (V6)

[procedure: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.64:2019-12-01 (open)]

Table 221: Procedure Performed (V6) Contexts

| Contained By: | Contains: |
|--|---|
| Patient Data Section QDM (V7) (optional) | Incision Datetime (optional) Author Participation (required) Reason (V3) (optional) Component (optional) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Rank (optional) Status (V2) (optional) Author (V2) (optional) Result (V4) (optional) |

This template represents the QDM datatype: Procedure, Performed.

A procedure is a course of action intended to achieve a result in the care of persons with health problems. It is generally invasive and involves physical contact. A procedure may be a surgery or other type of physical manipulation of a person's body in whole or in part for purposes of making observations and diagnoses and/or providing treatment. Some of these procedures are not reimbursed. Note that procedure is distinct from intervention. MoodCode has been constrained to "EVN".

QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template.

Table 222: Procedure Performed (V6) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|---|
| procedure (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.64:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-27308 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC |
| @moodCode | 1..1 | SHALL | | 4444-11261 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 0..1 | MAY | | 4444-28098 | |
| templateId | 1..1 | SHALL | | 4444-11262 | |
| @root | 1..1 | SHALL | | 4444-11263 | 2.16.840.1.113883.10.20.24.3.64 |
| @extension | 1..1 | SHALL | | 4444-27129 | 2019-12-01 |
| code | 1..1 | SHALL | | 4444-27309 | |
| statusCode | 1..1 | SHALL | | 4444-27305 | |
| @code | 1..1 | SHALL | | 4444-27367 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL | | 4444-11669 | |
| @value | 0..1 | SHOULD | | 4444-29831 | |
| low | 0..1 | SHOULD | | 4444-11670 | |
| high | 0..1 | MAY | | 4444-11671 | |
| targetSiteCode | 0..1 | MAY | | 4444-27312 | |
| author | 0..1 | MAY | | 4444-28937 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| author | 0..0 | SHALL NOT | | 4444-30027 | Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) |
| participant | 0..* | MAY | | 4444-29428 | |
| @typeCode | 1..1 | SHALL | | 4444-29439 | PRF |
| participantRole | 1..1 | SHALL | | 4444-29429 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444- | |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|--|
| | | | | 29430 | |
| @typeCode | 1..1 | SHALL | | 4444-29440 | PRF |
| participantRole | 1..1 | SHALL | | 4444-29431 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.1 0.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29434 | |
| @typeCode | 1..1 | SHALL | | 4444-29442 | PRF |
| participantRole | 1..1 | SHALL | | 4444-29435 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.1 0.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29432 | |
| @typeCode | 1..1 | SHALL | | 4444-29441 | PRF |
| participantRole | 1..1 | SHALL | | 4444-29433 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.1 0.20.24.3.160:2019-12-01) |
| entryRelationship | 0..* | MAY | | 4444-11371 | |
| @typeCode | 1..1 | SHALL | | 4444-11372 | urn:oid:2.16.840.1.113883.5.1 002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL | | 4444-11498 | Reason (V3) (identifier: urn:hl7ii:2.16.840.1.113883.1 0.20.24.3.88:2017-08-01) |
| entryRelationship | 0..1 | MAY | | 4444-11410 | |
| @typeCode | 1..1 | SHALL | | 4444-11500 | urn:oid:2.16.840.1.113883.5.1 002 (HL7ActRelationshipType) = REFR |
| procedure | 1..1 | SHALL | | 4444-14564 | Incision Datetime (identifier: urn:oid:2.16.840.1.113883.10.20.24.3.89) |
| entryRelationship | 0..1 | MAY | | 4444-27315 | |
| @typeCode | 1..1 | SHALL | | 4444-27316 | urn:oid:2.16.840.1.113883.5.1 002 (HL7ActRelationshipType) = REFR |
| observation | 1..1 | SHALL | | 4444-30028 | Result (V4) (identifier: urn:hl7ii:2.16.840.1.113883.1 0.20.24.3.87:2019-12-01) |
| entryRelationship | 0..1 | MAY | | 4444-27364 | |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|-------|-----------|----------------------------|--|
| @typeCode | 1..1 | SHALL | | 4444-27365 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| observation | 1..1 | SHALL | | 4444-27366 | Status (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.93:2019-12-01) |
| value | 1..1 | SHALL | CD | 4444-28608 | |
| entryRelationship | 0..* | MAY | | 4444-28936 | |
| @typeCode | 1..1 | SHALL | | 4444-28938 | REFR |
| observation | 1..1 | SHALL | | 4444-28939 | Component (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.149:2017-08-01) |
| entryRelationship | 0..1 | MAY | | 4444-29461 | |
| @typeCode | 1..1 | SHALL | | 4444-29463 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = REFR |
| observation | 1..1 | SHALL | | 4444-29462 | Rank (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.166:2019-12-01) |

1. Conforms to [Procedure Activity Procedure \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-27308).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-11261).
4. **MAY** contain zero or one [0..1] **@negationInd** (CONF:4444-28098).
Note: QDM Attribute: Negation Rationale
 - a. If **@negationInd**="true" is present, **SHALL** contain one [1..1] entryRelationship such that it contains exactly one [1..1] **Reason (V3)** to state the reason for **Procedure Not Performed** (CONF:4444-29928).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-11262) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.64" (CONF:4444-11263).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-27129).
6. **SHALL** contain exactly one [1..1] **code** (CONF:4444-27309).
Note: QDM Attribute: Code
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:4444-27305).

- a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:4444-27367).
8. **SHALL** contain exactly one [1..1] effectiveTime (CONF:4444-11669).
Note: QDM Attribute: Relevant Period, Relevant dateTime
 - a. This effectiveTime **SHOULD** contain zero or one [0..1] @value (CONF:4444-29831).
Note: QDM Attribute: Relevant dateTime – the time the procedure is performed when the procedure occurs at a single point in time.
 - b. This effectiveTime **SHOULD** contain zero or one [0..1] low (CONF:4444-11670).
Note: QDM Attribute: Relevant Period: startTime – the time the procedure begins when it occurs over a time interval.
 - c. This effectiveTime **MAY** contain zero or one [0..1] high (CONF:4444-11671).
Note: QDM Attribute: Relevant Period: stopTime – the time the procedure is completed when it occurs over a time interval
 - d. This effectiveTime **SHALL** contain either a **low** or a @value but not both (CONF:4444-29438).
Note: QDM Attributes Relevant dateTime and Relevant Period are mutually exclusive.
9. **MAY** contain zero or one [0..1] targetSiteCode (CONF:4444-27312).
Note: QDM Attribute: Anatomical Location Site
10. **MAY** contain zero or one [0..1] [Author \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-28937).
Note: QDM Attribute: Author dateTime
11. **SHALL NOT** contain [0..0] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:4444-30027).
12. **MAY** contain zero or more [0..*] participant (CONF:4444-29428) such that it
Note: QDM Attribute: Performer
 - a. **SHALL** contain exactly one [1..1] @typeCode="PRF" (CONF:4444-29439).
 - b. **SHALL** contain exactly one [1..1] [Entity Practitioner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29429).
13. **MAY** contain zero or more [0..*] participant (CONF:4444-29430) such that it
Note: QDM Attribute: Performer
 - a. **SHALL** contain exactly one [1..1] @typeCode="PRF" (CONF:4444-29440).
 - b. **SHALL** contain exactly one [1..1] [Entity Organization](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29431).
14. **MAY** contain zero or one [0..1] participant (CONF:4444-29434) such that it
Note: QDM Attribute: Performer
 - a. **SHALL** contain exactly one [1..1] @typeCode="PRF" (CONF:4444-29442).
 - b. **SHALL** contain exactly one [1..1] [Entity Patient](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29435).
15. **MAY** contain zero or more [0..*] participant (CONF:4444-29432) such that it
Note: QDM Attribute: Performer

- a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" (CONF:4444-29441).
 - b. **SHALL** contain exactly one [1..1] **Entity Care Partner** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29433).
16. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:4444-11371) such that it
Note: QDM Attribute: Reason
- a. **SHALL** contain exactly one [1..1] **@typeCode**="RSON" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-11372).
 - b. **SHALL** contain exactly one [1..1] **Reason (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) (CONF:4444-11498).
17. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-11410) such that it
Note: QDM Attribute: Incision Datetime
- a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-11500).
 - b. **SHALL** contain exactly one [1..1] **Incision Datetime** (identifier: urn:oid:2.16.840.1.113883.10.20.24.3.89) (CONF:4444-14564).
18. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-27315) such that it
Note: QDM Attribute: Result
- a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-27316).
 - b. **SHALL** contain exactly one [1..1] **Result (V4)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.87:2019-12-01) (CONF:4444-30028).
19. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-27364) such that it
Note: QDM Attribute: Status
- a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-27365).
 - b. **SHALL** contain exactly one [1..1] **Status (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.93:2019-12-01) (CONF:4444-27366).
 - i. This observation **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:4444-28608).
20. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:4444-28936) such that it
Note: QDM Attribute: Components
- a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" refers tp (CONF:4444-28938).
 - b. **SHALL** contain exactly one [1..1] **Component** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.149:2017-08-01) (CONF:4444-28939).
21. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:4444-29461) such that it
Note: QDM Attribute: Rank

- a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29463).
- b. **SHALL** contain exactly one [1..1] **Rank** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.166:2019-12-01) (CONF:4444-29462).

Figure 121: Procedure Performed (V6) Example

```

<procedure classCode="PROC" moodCode="EVN">
  <!-- Conforms to C-CDA R2.1 Procedure Activity Procedure (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.14" extension="2014-06-09"/>
  <!-- Procedure Performed (V6) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.64" extension="2019-12-01"/>
  <id root="d68b7e32-7810-4f5b-9cc2-acd54b0fd85d"/>
  <code code="235326000" displayName="Right hemicolectomy"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT"/>
  <text>Procedure, Performed: Right hemicolectomy </text>
  <statusCode code="completed"/>
  <effectiveTime>
    <!-- QDM Attribute: Relevant Period - start dateTime -->
    <low value="20190329090000"/>
    <!-- QDM Attribute: Relevant Period - stop dateTime -->
    <high value="20190329103000"/>
  </effectiveTime>
  <!-- QDM Attribute Anatomical Location Site -->
  <targetSiteCode code="71854001" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT" displayName="colon"/>
  <!-- QDM Attribute: Incision Datetime -->
  <entryRelationship typeCode="REFR">
    <procedure classCode="PROC" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.24.3.89"/>
      <code code="34896006" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT" displayName="incision"/>
      <effectiveTime value="20190329103000"/>
    </procedure>
  </entryRelationship>
</procedure>

```

3.64 Product Instance

[participantRole: identifier urn:oid:2.16.840.1.113883.10.20.22.4.37 (open)]

Table 223: Product Instance Contexts

| Contained By: | Contains: |
|--|-----------|
| Procedure Activity Procedure (V2) (optional) Planned Supply (V2) (optional) | |

This clinical statement represents a particular device that was placed in a patient or used as part of a procedure or other act. This provides a record of the identifier and other details about the given product that was used. For example, it is important to have a record that indicates not just that a hip

prostheses was placed in a patient but that it was a particular hip prostheses number with a unique identifier.

The FDA Amendments Act specifies the creation of a Unique Device Identification (UDI) System that requires the label of devices to bear a unique identifier that will standardize device identification and identify the device through distribution and use.

The FDA permits an issuing agency to designate that their Device Identifier (DI) + Production Identifier (PI) format qualifies as a UDI through a process of accreditation. Currently, there are three FDA-accredited issuing agencies that are allowed to call their format a UDI. These organizations are GS1, HIBCC, and ICCBBA. For additional information on technical formats that qualify as UDI from each of the issuing agencies see the UDI Appendix.

When communicating only the issuing agency device identifier (i.e., subcomponent of the UDI), the use of the issuing agency OID is appropriate. However, when communicating the unique device identifier (DI + PI), the FDA OID (2.16.840.1.113883.3.3719) must be used.

When sending a UDI, populate the participantRole/id/@root with the FDA OID (2.16.840.1.113883.3.3719) and participantRole/id/@extension with the UDI.

When sending a DI, populate the participantRole/id/@root with the appropriate assigning agency OID and participantRole/id/@extension with the DI.

The scopingEntity/id should correspond to FDA or the appropriate issuing agency.

Table 224: Product Instance Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|--------|-----------|--------------------------|---|
| participantRole (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.37) | | | | | |
| @classCode | 1..1 | SHALL | | 81-7900 | urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU |
| templateId | 1..1 | SHALL | | 81-7901 | |
| @root | 1..1 | SHALL | | 81-10522 | 2.16.840.1.113883.10.20.22.4.37 |
| id | 1..* | SHALL | | 81-7902 | |
| playingDevice | 1..1 | SHALL | | 81-7903 | |
| code | 0..1 | SHOULD | | 81-16837 | |
| scopingEntity | 1..1 | SHALL | | 81-7905 | |
| id | 1..* | SHALL | | 81-7908 | |

1. **SHALL** contain exactly one [1..1] **@classCode**="MANU" Manufactured Product (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110 **STATIC**) (CONF:81-7900).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-7901) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.37" (CONF:81-10522).
3. **SHALL** contain at least one [1..*] **id** (CONF:81-7902).
4. **SHALL** contain exactly one [1..1] **playingDevice** (CONF:81-7903).
 - a. This playingDevice **SHOULD** contain zero or one [0..1] **code** (CONF:81-16837).
5. **SHALL** contain exactly one [1..1] **scopingEntity** (CONF:81-7905).
 - a. This scopingEntity **SHALL** contain at least one [1..*] **id** (CONF:81-7908).

Figure 122: Product Instance Example

```

<participantRole classCode="MANU">
  <templateId root="2.16.840.1.113883.10.20.22.4.37"/>
  <id root="2.16.840.1.113883.3.3719"
    extension="(01)5102222233336(11)141231(17)150707(10)A213B1(21)1234"
    assigningAuthorityName="FDA"/>
  <playingDevice>
    <code code="90412006" codeSystem="2.16.840.1.113883.6.96"
      displayName="Colonoscope"/>
  </playingDevice>
  <scopingEntity>
    <id root="2.16.840.1.113883.3.3719"/>
  </scopingEntity>
</participantRole>

```

3.65 Prognosis Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.22.4.113 (open)]

Table 225: Prognosis Observation Contexts

| Contained By: | Contains: |
|---|-----------|
| Problem Observation (V3) (optional) | |

This template represents the patient’s prognosis, which must be associated with a problem observation. It may serve as an alert to scope intervention plans. The effectiveTime represents the clinically relevant time of the observation. The observation/value is not constrained and can represent the expected life duration in PQ, an anticipated course of the disease in text, or coded term.

Table 226: Prognosis Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|-------|-----------|----------------------------|---|
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.113) | | | | | |
| @classCode | 1..1 | SHALL | | 1098-29035 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 1098-29036 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 1098-29037 | |
| @root | 1..1 | SHALL | | 1098-29038 | 2.16.840.1.113883.10.20.22.4.113 |
| code | 1..1 | SHALL | | 1098-29039 | |
| @code | 1..1 | SHALL | | 1098-29468 | 75328-5 |
| @codeSystem | 1..1 | SHALL | | 1098-31349 | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| statusCode | 1..1 | SHALL | | 1098-31350 | |
| @code | 1..1 | SHALL | | 1098-31351 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL | | 1098-31123 | |
| value | 1..1 | SHALL | | 1098-29469 | |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-29035).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-29036).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-29037) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.113" (CONF:1098-29038).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1098-29039).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="75328-5" Prognosis (CONF:1098-29468).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1098-31349).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-31350).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1098-31351).
6. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-31123).

7. **SHALL** contain exactly one [1..1] value (CONF:1098-29469).

Figure 123: Prognosis, Free Text Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- Prognosis -->
  <templateId root="2.16.840.1.113883.10.20.22.4.113" />
  <id root="2097c709-291b-4a0f-bef9-ad9b23b3bb43" />
  <code code="75328-5"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="Prognosis" />
  <text>
    Presence of a life limiting condition(>50% possibility of death within 2 year)
  </text>
  <statusCode code="completed" />
  <effectiveTime value="20130606" />
  <value xsi:type="ST">Presence of a life limiting condition(>50% possibility of death
within 2 year</value>
</observation>
```

Figure 124: Prognosis, Coded Example

```
<entryRelationship typeCode="REFR">
  <observation classCode="OBS" moodCode="EVN">
    <!-- Prognosis -->
    <templateId root="2.16.840.1.113883.10.20.22.4.113" />
    <id root="2097c709-291b-4a0f-bef9-ad9b23b3bb43" />
    <code code="75328-5"
      codeSystem="2.16.840.1.113883.6.1"
      codeSystemName="LOINC"
      displayName="Prognosis" />
    <statusCode code="completed" />
    <effectiveTime>
      <low value="20130301" />
    </effectiveTime>
    <value xsi:type="CD" code="67334001" codeSystem="2.16.840.1.113883.6.96"
      displayName="guarded prognosis" codeSystemName="SNOMED CT" />
  </observation>
</entryRelationship>
```

3.66 Program Participation (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.154:2019-12-01 (open)]

Table 227: Program Participation (V2) Contexts

| Contained By: | Contains: |
|--|---|
| Patient Data Section QDM (V7) (optional) | Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) |

This template represents the QDM Datatype: Participation.

Participation represents the type of plan or program in which the patient is expected to be enrolled. The program is identified as the Issuer (e.g., Aetna, BCBSA, Cigna, etc.). The code attribute indicates the coverage type indicating the program in which the subject of record participates (e.g., health insurance plan policy, disease specific policy, health maintenance organization policy, etc.)

Table 228: Program Participation (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-----------|-----------|----------------------------|--|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.154:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-28974 | OBS |
| @moodCode | 1..1 | SHALL | | 4444-28975 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = EVN |
| @negationInd | 0..0 | SHALL NOT | | 4444-28978 | |
| templateId | 1..1 | SHALL | | 4444-28965 | |
| @root | 1..1 | SHALL | | 4444-28969 | 2.16.840.1.113883.10.20.24.3.154 |
| @extension | 1..1 | SHALL | | 4444-28970 | 2019-12-01 |
| id | 1..* | SHALL | | 4444-28976 | |
| code | 1..1 | SHALL | | 4444-28964 | |
| @code | 1..1 | SHALL | | 4444-28967 | ASSERTION |
| @codeSystem | 1..1 | SHALL | | 4444-28968 | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL | | 4444-28977 | completed |
| effectiveTime | 1..1 | SHALL | | 4444-28966 | |
| low | 1..1 | SHALL | | 4444-28971 | |
| high | 0..1 | MAY | | 4444-28972 | |
| value | 1..1 | SHALL | CD | 4444-28973 | urn:oid:2.16.840.1.113883.1.1.1.19832 (HL7ActCoverageType) |
| participant | 0..* | MAY | | 4444-29915 | |
| @typeCode | 1..1 | SHALL | | 4444-29923 | urn:oid:2.16.840.1.113883.5.9.0 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29916 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.1.0.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29917 | |
| @typeCode | 1..1 | SHALL | | 4444- | urn:oid:2.16.840.1.113883.5.9 |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-----------------|-------|-------|-----------|----------------------------|--|
| | | | | 29924 | 0 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29918 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.1.0.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29921 | |
| @typeCode | 1..1 | SHALL | | 4444-29926 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29922 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.1.0.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29919 | |
| @typeCode | 1..1 | SHALL | | 4444-29925 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29920 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.1.0.20.24.3.160:2019-12-01) |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CONF:4444-28974).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-28975).
3. **SHALL NOT** contain [0..0] **@negationInd** (CONF:4444-28978).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-28965) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.154" (CONF:4444-28969).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-28970).
5. **SHALL** contain at least one [1..*] **id** (CONF:4444-28976).
6. **SHALL** contain exactly one [1..1] **code** (CONF:4444-28964).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" (CONF:4444-28967).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:4444-28968).
7. **SHALL** contain exactly one [1..1] **statusCode**="completed" Completed (CONF:4444-28977).
8. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4444-28966).

Note: QDM Attribute: Participation Period

 - a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:4444-28971).
Note: enrollmentStartdate – the time the patient enrolled in the program
 - b. This effectiveTime **MAY** contain zero or one [0..1] **high** (CONF:4444-28972).
Note: enrollmentEnddate – the time the patient enrollment in the program ends

9. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (ValueSet: [HL7ActCoverageType](#) urn:oid:2.16.840.1.113883.1.11.19832 **DYNAMIC**) (CONF:4444-28973).
10. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29915) such that it
Note: QDM Attribute: Recorder
 - a. **SHALL** contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29923).
 - b. **SHALL** contain exactly one [1..1] [Entity Practitioner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29916).
11. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29917) such that it
Note: QDM Attribute: Recorder
 - a. **SHALL** contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29924).
 - b. **SHALL** contain exactly one [1..1] [Entity Organization](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29918).
12. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29921) such that it
Note: QDM Attribute: Recorder
 - a. **SHALL** contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29926).
 - b. **SHALL** contain exactly one [1..1] [Entity Patient](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29922).
13. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29919) such that it
Note: QDM Attribute: Recorder
 - a. **SHALL** contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29925).
 - b. **SHALL** contain exactly one [1..1] [Entity Care Partner](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29920).

Figure 125: Program Participation (V2) Example

```

<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.24.3.154" extension="2019-12-01"/>
  <id root="94de1700-9629-40b4-b56d-a4eac5f48726"/>
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"/>
  <statusCode code="completed"/>
  <effectiveTime>
    <low value="201906151030"/>
  </effectiveTime>
  <value xsi:type="CD" code="MENTPRG" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" displayName="Mental Health Program"/>
</observation>

```

3.67 Provider Care Experience (V5)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.67:2019-12-01
(open)]

Table 229: Provider Care Experience (V5) Contexts

| Contained By: | Contains: |
|--|---|
| Patient Data Section QDM (V7) (optional) | Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Author (V2) (required) |

This template represents the QDM datatype Provider Care Experience.

Provider Care Experience describes information collected from providers about their perception of the care provided.

Table 230: Provider Care Experience (V5) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|-----------|-----------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.67:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-12479 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 4444-12480 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 0..0 | SHALL NOT | | 4444-28100 | |
| templateId | 1..1 | SHALL | | 4444-12481 | |
| @root | 1..1 | SHALL | | 4444-12482 | 2.16.840.1.113883.10.20.24.3.67 |
| @extension | 1..1 | SHALL | | 4444-27293 | 2019-12-01 |
| id | 1..* | SHALL | | 4444-12484 | |
| code | 1..1 | SHALL | | 4444-12485 | |
| @code | 1..1 | SHALL | | 4444-27562 | 77219-4 |
| @codeSystem | 1..1 | SHALL | | 4444-27563 | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| statusCode | 1..1 | SHALL | | 4444-12486 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | 4444-12572 | |
| author | 1..1 | SHALL | | 4444-28941 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| participant | 0..* | MAY | | 4444-29974 | |
| @typeCode | 1..1 | SHALL | | 4444-29982 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29975 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29976 | |
| @typeCode | 1..1 | SHALL | | 4444-29983 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29977 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-----------------|-------|-------|-----------|----------------------------|---|
| participant | 0..1 | MAY | | 4444-29980 | |
| @typeCode | 1..1 | SHALL | | 4444-29985 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29981 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29978 | |
| @typeCode | 1..1 | SHALL | | 4444-29984 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29979 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" observation, which **SHALL** be selected from CodeSystem HL7ActClass (urn:oid:2.16.840.1.113883.5.6) (CONF:4444-12479).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" event, which **SHALL** be selected from CodeSystem HL7ActMood (urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-12480).
3. **SHALL NOT** contain [0..0] **@negationInd** (CONF:4444-28100).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-12481) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.67" (CONF:4444-12482).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-27293).
5. **SHALL** contain at least one [1..*] **id** (CONF:4444-12484).
6. **SHALL** contain exactly one [1..1] **code** (CONF:4444-12485).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="77219-4" Provider satisfaction with healthcare delivery (CONF:4444-27562).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:4444-27563).
7. **SHALL** contain exactly one [1..1] **statusCode**="completed", which **SHALL** be selected from CodeSystem HL7ActStatus (urn:oid:2.16.840.1.113883.5.14) (CONF:4444-12486).
8. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:4444-12572).
Note: QDM Attribute: Code
9. **SHALL** contain exactly one [1..1] [Author \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-28941).
Note: QDM Attribute: Author dateTime - the time the care experience is recorded
10. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29974) such that it
Note: QDM Attribute: Recorder

- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29982).
 - b. **SHALL** contain exactly one [1..1] **Entity Practitioner** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-29975).
11. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29976) such that it
Note: QDM Attribute: Recorder
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29983).
 - b. **SHALL** contain exactly one [1..1] **Entity Organization** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-29977).
12. **MAY** contain zero or one [0..1] **participant** (CONF:4444-29980) such that it
Note: QDM Attribute: Recorder
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29985).
 - b. **SHALL** contain exactly one [1..1] **Entity Patient** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-29981).
13. **MAY** contain zero or more [0..*] **participant** (CONF:4444-29978) such that it
Note: QDM Attribute: Recorder
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29984).
 - b. **SHALL** contain exactly one [1..1] **Entity Care Partner** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-29979).

Figure 126: Provider Care Experience (V5) Example

```

<observation classCode="OBS" moodCode="EVN">
  <!-- Provider Care Experience (V5) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.67" extension="2019-12-01"/>
  <id root="ffa71406-ab33-4325-822e-0f0b1a4ebb6f"/>
  <code code="77219-4" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Provider satisfaction with healthcare delivery"/>
  <statusCode code="completed"/>
  <value xsi:type="CD" code="445060000"
displayName="Left against medical advice (finding)"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT"/>
  <author>
    <templateId root="2.16.840.1.113883.10.20.24.3.155" extension="2019-12-01"/>
    <time value="2019050101030"/>
    <assignedAuthor>
      <id nullFlavor="NA"/>
    </assignedAuthor>
  </author>
</observation>

```

3.68 Rank

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.166:2019-12-01 (open)]

Table 231: Rank Contexts

| Contained By: | Contains: |
|---|-----------|
| Procedure Performed (V6) (optional) Procedure Order (V6) (optional) Procedure Recommended (V6) (optional) Encounter Diagnosis QDM (optional) | |

This template represents the QDM attribute: Rank.

A position in a hierarchy. Rank is defined by an integer to indicate the relative importance of an item. Rank is expressed as a positive integer, i.e., 1, 2, 3 etc.

The attribute applies to:

- Encounter, Performed diagnosis as a component to identify a principal diagnosis for a given encounter. A rank of 1 defines a principal diagnosis
- Procedure, Performed; Procedure, Order; and Procedure, Recommended. A rank of 1 defines a principal procedure
Rank is an optional attribute, but any individual procedure or encounter can have only one rank.

Table 232: Rank Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-----------|-----------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.166:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-29455 | OBS |
| @moodCode | 1..1 | SHALL | | 4444-29456 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = EVN |
| @negationInd | 0..0 | SHALL NOT | | 4444-29459 | |
| templateId | 1..1 | SHALL | | 4444-29446 | |
| @root | 1..1 | SHALL | | 4444-29450 | 2.16.840.1.113883.10.20.24.3.166 |
| @extension | 1..1 | SHALL | | 4444-29451 | 2019-12-01 |
| code | 1..1 | SHALL | | 4444-29445 | |
| @code | 1..1 | SHALL | | 4444-29448 | 263486008 |
| @codeSystem | 1..1 | SHALL | | 4444-29449 | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96 |
| value | 1..1 | SHALL | INT | 4444-29460 | |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CONF:4444-29455).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-29456).
3. **SHALL NOT** contain [0..0] **@negationInd** (CONF:4444-29459).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-29446) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.166" (CONF:4444-29450).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-29451).
5. **SHALL** contain exactly one [1..1] **code** (CONF:4444-29445).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="263486008" Rank (CONF:4444-29448).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:4444-29449).
6. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="INT" (CONF:4444-29460).

Figure 127: Rank Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.24.3.166" extension="2019-12-01"/>
  <code code="263486008" displayName="Rank" codeSystem="2.16.840.1.113883.6.96"/>
  <value xsi:type="INT" value="1"/>
</observation>
```

3.69 Reaction Observation (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09 (open)]

Table 233: Reaction Observation (V2) Contexts

| Contained By: | Contains: |
|--|---|
| Medication Activity (V2) (optional) Procedure Activity Procedure (V2) (optional) Procedure Activity Observation (V2) (optional) Substance or Device Allergy - Intolerance Observation (V2) (optional) Immunization Activity (V3) (optional) Adverse Event (V2) (optional) | Medication Activity (V2) (optional) Procedure Activity Procedure (V2) (optional) Severity Observation (V2) (optional) |

This clinical statement represents the response to an undesired symptom, finding, etc. due to administered or exposed substance. A reaction can be defined described with respect to its severity, and can have been treated by one or more interventions.

Table 234: Reaction Observation (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|--------|-----------|----------------------------|--|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09) | | | | | |
| @classCode | 1..1 | SHALL | | 1098-7325 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 1098-7326 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 1098-7323 | |
| @root | 1..1 | SHALL | | 1098-10523 | 2.16.840.1.113883.10.20.22.4.9 |
| @extension | 1..1 | SHALL | | 1098-32504 | 2014-06-09 |
| id | 1..* | SHALL | | 1098-7329 | |
| code | 1..1 | SHALL | | 1098-16851 | |
| @code | 1..1 | SHALL | | 1098-31124 | ASSERTION |
| @codeSystem | 1..1 | SHALL | | 1098-32169 | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL | | 1098-7328 | |
| @code | 1..1 | SHALL | | 1098-19114 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 0..1 | SHOULD | | 1098-7332 | |
| low | 0..1 | SHOULD | | 1098-7333 | |
| high | 0..1 | SHOULD | | 1098-7334 | |
| value | 1..1 | SHALL | CD | 1098-7335 | urn:oid:2.16.840.1.113883.3.88.12.3221.7.4 (Problem) |
| entryRelationship | 0..* | MAY | | 1098-7337 | |
| @typeCode | 1..1 | SHALL | | 1098-7338 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| @inversionInd | 1..1 | SHALL | | 1098-7343 | true |
| procedure | 1..1 | SHALL | | 1098-15920 | Procedure Activity Procedure (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09) |
| entryRelationship | 0..* | MAY | | 1098- | |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------------|-------|-------|-----------|----------------------------|---|
| | | | | 7340 | |
| @typeCode | 1..1 | SHALL | | 1098-7341 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| @inversionInd | 1..1 | SHALL | | 1098-7344 | true |
| substanceAdministration | 1..1 | SHALL | | 1098-15921 | Medication Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09) |
| entryRelationship | 0..1 | MAY | | 1098-7580 | |
| @typeCode | 1..1 | SHALL | | 1098-7581 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ |
| @inversionInd | 1..1 | SHALL | | 1098-10375 | true |
| observation | 1..1 | SHALL | | 1098-15922 | Severity Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09) |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7325).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-7326).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7323) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.9" (CONF:1098-10523).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32504).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-7329).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-16851).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" (CONF:1098-31124).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:1098-32169).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-7328).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-19114).
7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-7332).
 - a. The effectiveTime, if present, **SHOULD** contain zero or one [0..1] **low** (CONF:1098-7333).

- b. The effectiveTime, if present, **SHOULD** contain zero or one [0..1] **high** (CONF:1098-7334).
- 8. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD", where the code **SHALL** be selected from ValueSet [Problem](#) urn:oid:2.16.840.1.113883.3.88.12.3221.7.4 **DYNAMIC** (CONF:1098-7335).
- 9. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-7337) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="RSON" Has reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7338).
 - b. **SHALL** contain exactly one [1..1] @inversionInd="true" True (CONF:1098-7343).

This procedure activity is intended to contain information about procedures that were performed in response to an allergy reaction.

- c. **SHALL** contain exactly one [1..1] [Procedure Activity Procedure \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09) (CONF:1098-15920).
- 10. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-7340) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="RSON" Has reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7341).
 - b. **SHALL** contain exactly one [1..1] @inversionInd="true" True (CONF:1098-7344).

This medication activity is intended to contain information about medications that were administered in response to an allergy reaction.

- c. **SHALL** contain exactly one [1..1] [Medication Activity \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09) (CONF:1098-15921).
- 11. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-7580) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="SUBJ" Has subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7581).
 - b. **SHALL** contain exactly one [1..1] @inversionInd="true" TRUE (CONF:1098-10375).
 - c. **SHALL** contain exactly one [1..1] [Severity Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09) (CONF:1098-15922).

Figure 128: Reaction Observation (V2) Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.9" extension="2014-06-09" />
  <id root="4adc1020-7b14-11db-9fe1-0800200c9a64" />
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" />
  <text>
    <reference value="#reaction1" />
  </text>
  <statusCode code="completed" />
  <effectiveTime>
    <low value="200802260805-0800" />
    <high value="200802281205-0800" />
  </effectiveTime>
  <value xsi:type="CD" code="422587007" codeSystem="2.16.840.1.113883.6.96"
  displayName="Nausea" />
  <entryRelationship typeCode="SUBJ" inversionInd="true">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.8" extension="2014-06-09" />
      . . .
    </observation>
  </entryRelationship>
</observation>
```


3.70 Reason (V3)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01
(open)]

Table 235: Reason (V3) Contexts

| Contained By: | Contains: |
|---|-----------|
| <p>Patient Characteristic Clinical Trial Participant (V4) (optional)</p> <p>Assessment Performed (V3) (optional)</p> <p>Communication Performed (V2) (optional)</p> <p>Communication Performed (V2) (required)</p> <p>Assessment Recommended (V3) (optional)</p> <p>Assessment Order (V2) (optional)</p> <p>Device Applied (V6) (optional)</p> <p>Device Order (V5) (optional)</p> <p>Device Order Act (V3) (optional)</p> <p>Device Recommended (V5) (optional)</p> <p>Device Recommended Act (V3) (optional)</p> <p>Diagnostic Study Order (V5) (optional)</p> <p>Diagnostic Study Performed (V5) (optional)</p> <p>Diagnostic Study Recommended (V5) (optional)</p> <p>Discharge Medication (V5) (optional)</p> <p>Encounter Order (V5) (optional)</p> <p>Encounter Order Act (V3) (optional)</p> <p>Encounter Performed Act (V3) (optional)</p> <p>Procedure Performed (V6) (optional)</p> <p>Procedure Order (V6) (optional)</p> <p>Procedure Recommended (V6) (optional)</p> <p>Encounter Recommended (V5) (optional)</p> <p>Substance Recommended (V5) (optional)</p> <p>Laboratory Test Performed (V5) (optional)</p> <p>Laboratory Test Order (V5) (optional)</p> <p>Laboratory Test Recommended (V5) (optional)</p> <p>Encounter Recommended Act (V3) (optional)</p> <p>Immunization Administered (V3) (optional)</p> <p>Immunization Order (V3) (optional)</p> <p>Intervention Order (V5) (optional)</p> <p>Intervention Performed (V5) (optional)</p> <p>Intervention Recommended (V5) (optional)</p> <p>Physical Exam Order (V5) (optional)</p> <p>Physical Exam Recommended (V5) (optional)</p> <p>Physical Exam Performed (V5) (optional)</p> <p>Medication Administered (V5) (optional)</p> <p>Medication Dispensed Act (V4) (optional)</p> <p>Medication Order (V6) (optional)</p> | |

This template represents the QDM attribute: Reason.

This template describes the thought process or justification for an action or for not performing an action. Examples include patient, system, or medical-related reasons for declining to perform specific actions. Note that the parent template that calls this template can be asserted to have occurred or to not have occurred. Therefore, this template simply adds a reason to some other (possibly negated) act. As such, there is nothing in this template that says whether the parent act did or did not occur.

Table 236: Reason (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|-------|-----------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01) | | | | | |
| @classCode | 1..1 | SHALL | | 3343-11357 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 3343-11358 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 3343-11359 | |
| @root | 1..1 | SHALL | | 3343-11360 | 2.16.840.1.113883.10.20.24.3.88 |
| @extension | 1..1 | SHALL | | 3343-27027 | 2017-08-01 |
| code | 1..1 | SHALL | | 3343-11361 | |
| @code | 1..1 | SHALL | | 3343-11362 | 77301-0 |
| @codeSystem | 1..1 | SHALL | | 3343-27028 | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| effectiveTime | 0..1 | MAY | | 3343-11366 | |
| low | 1..1 | SHALL | | 3343-27551 | |
| high | 0..1 | MAY | | 3343-27552 | |
| value | 1..1 | SHALL | CD | 3343-11367 | |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:3343-11357).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3343-11358).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:3343-11359) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.88" (CONF:3343-11360).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2017-08-01" (CONF:3343-27027).
4. **SHALL** contain exactly one [1..1] **code** (CONF:3343-11361).

- a. This code **SHALL** contain exactly one [1..1] **@code**="77301-0" Reason care action performed or not (CONF:3343-11362).
- b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3343-27028).
- 5. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3343-11366).
 - a. The effectiveTime, if present, **SHALL** contain exactly one [1..1] **low** (CONF:3343-27551).
 - b. The effectiveTime, if present, **MAY** contain zero or one [0..1] **high** (CONF:3343-27552).
- 6. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:3343-11367).

Figure 129: Reason (V3) Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- Reason (V3) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.88" extension="2017-08-01" />
  <id root="5750a5bb-6a01-4b99-9b1c-cda56bldce0c" />
  <code code="77301-0"
    codeSystem="2.16.840.1.113883.6.1"
    displayName="Reason care action performed or not"
    codeSystemName="LOINC" />
  <statusCode code="completed" />
  <effectiveTime>
    <low value="20170105"/>
  </effectiveTime>
  <value xsi:type="CD" code="57054005" codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT" displayName="Acute myocardial infarction" />
</observation>
```

3.71 Related Person QDM

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.170:2019-12-01 (open)]

Table 237: Related Person QDM Contexts

| Contained By: | Contains: |
|--|-----------|
| Patient Data Section QDM (V7) (optional) | |

This template represents the Related Person.

A person who has a personal or non-healthcare-specific professional relationship to the patient.

The “code” attribute references the relationship to the index patient.

Timing: A Related Person has no associated timing. The Related Person QDM datatype references only an identifier and a relationship. The relationship references the nature of the relationship (e.g., a direct reference code or a value set for “Mother” using the example provided).

Table 238: Related Person QDM Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-------|-----------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.170:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-29994 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 4444-29995 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 4444-29986 | |
| @root | 1..1 | SHALL | | 4444-29989 | 2.16.840.1.113883.10.20.24.3.170 |
| @extension | 1..1 | SHALL | | 4444-29990 | 2019-12-01 |
| id | 1..* | MAY | | 4444-29998 | |
| code | 1..1 | SHALL | | 4444-29987 | |
| @code | 1..1 | SHALL | | 4444-29991 | 444018008 |
| @codeSystem | 1..1 | SHALL | | 4444-29992 | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96 |
| value | 0..1 | MAY | CD | 4444-29988 | urn:oid:2.16.840.1.113883.1.11.19563 (PersonalRelationshipRoleType) |
| participant | 1..1 | SHALL | | 4444-29996 | |
| @typeCode | 1..1 | SHALL | | 4444-29999 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PART |
| participantRole | 1..1 | SHALL | | 4444-29997 | |
| @classCode | 1..1 | SHALL | | 4444-30000 | PAT |
| id | 1..* | SHALL | | 4444-30001 | |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-29994).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4444-29995).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-29986) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.170" (CONF:4444-29989).

- b. **SHALL** contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-29990).
- 4. **MAY** contain at least one [1..*] id (CONF:4444-29998).
- 5. **SHALL** contain exactly one [1..1] code (CONF:4444-29987).
 - a. This code **SHALL** contain exactly one [1..1] @code="444018008" Person with characteristic related to subject of record (CONF:4444-29991).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:4444-29992).
- 6. **MAY** contain zero or one [0..1] value with @xsi:type="CD", where the code **MAY** be selected from ValueSet [PersonalRelationshipRoleType](#) urn:oid:2.16.840.1.113883.1.11.19563 **DYNAMIC** (CONF:4444-29988).
Note: QDM Attribute: Code - relationship of related person to the patient
- 7. **SHALL** contain exactly one [1..1] participant (CONF:4444-29996) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="PART" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29999).
 - b. **SHALL** contain exactly one [1..1] participantRole (CONF:4444-29997).
 - i. This participantRole **SHALL** contain exactly one [1..1] @classCode="PAT" Patient (CONF:4444-30000).
 - ii. This participantRole **SHALL** contain at least one [1..*] id (CONF:4444-30001).
Note: QDM Attribute: LinkedPatientId

Figure 130: Related Person QDM Example

```

<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.24.3.170" extension="2019-12-01" />
  <id root="f67ec9c7-6a6d-4e4b-a292-b8aba8d0de3e" />
  <code code="444018008" codeSystem="2.16.840.1.113883.6.96" />
  <value code="MTH" displayName="Mother" codeSystem="2.16.840.1.113883.5.111"
codeSystemName="HL7 Role Code"/>
  <participant typeCode="PART">
    <participantRole classCode="PAT">
      <id root="2.16.840.1.113883.4.927" extension="ABC12345678" />
    </participantRole>
  </participant>
</observation>

```

3.72 Reporting Parameters Act

[act: identifier urn:oid:2.16.840.1.113883.10.20.17.3.8 (open)]

Table 239: Reporting Parameters Act Contexts

| Contained By: | Contains: |
|---|-----------|
| Reporting Parameters Section (required) | |

This template provides information about the reporting time interval and context for the patient data being reported to the receiving organization. The receiving organization may tell the reporting hospitals what information to include, such as dates representing the quarters of the year for which data are

desired. The reporting parameter time interval refers to the data being sent in the document and may differ from the quality measure's measurement period or valid dates for the data set.

Table 240: Reporting Parameters Act Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|-------|-----------|--------------------------|---|
| act (identifier: urn:oid:2.16.840.1.113883.10.20.17.3.8) | | | | | |
| @classCode | 1..1 | SHALL | | 23-3269 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT |
| @moodCode | 1..1 | SHALL | | 23-3270 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 23-18098 | |
| @root | 1..1 | SHALL | | 23-18099 | 2.16.840.1.113883.10.20.17.3.8 |
| id | 1..* | SHALL | | 23-26549 | |
| code | 1..1 | SHALL | | 23-3272 | |
| @code | 1..1 | SHALL | | 23-26550 | 252116004 |
| @codeSystem | 1..1 | SHALL | | 23-26551 | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96 |
| effectiveTime | 1..1 | SHALL | | 23-3273 | |
| low | 1..1 | SHALL | | 23-3274 | |
| high | 1..1 | SHALL | | 23-3275 | |

1. **SHALL** contain exactly one [1..1] **@classCode**="ACT" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:23-3269).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:23-3270).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:23-18098) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.17.3.8" (CONF:23-18099).
4. **SHALL** contain at least one [1..*] **id** (CONF:23-26549).
5. **SHALL** contain exactly one [1..1] **code** (CONF:23-3272).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="252116004" Observation Parameters (CONF:23-26550).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:23-26551).
6. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:23-3273).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:23-3274).
 - b. This effectiveTime **SHALL** contain exactly one [1..1] **high** (CONF:23-3275).

Figure 131: Reporting Parameters Act Example

```

<act classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.17.3.8"/>
  <id root="55a43e20-6463-46eb-81c3-9a3a1ad41225"/>
  <code code="252116004"
    codeSystem="2.16.840.1.113883.6.96"
    displayName="Observation Parameters"/>
  <!-- This reporting period/performance period shows that Good Health Clinic is
    sending data for the first quarter of the year. The referenced measure definition
    may be valid for the entire year or more-->
  <effectiveTime>
    <low value="20190101"/>
    <!-- The first day of the period reported. -->
    <high value="20191231"/>
    <!-- The last day of the period reported. -->
  </effectiveTime>
</act>

```

3.73 Result Observation (V3)

```

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2015-08-01
(open)]

```

Table 241: Result Observation (V3) Contexts

| Contained By: | Contains: |
|---------------|---|
| | Author Participation (optional) |

This template represents the results of a laboratory, radiology, or other study performed on a patient. The result observation includes a statusCode to allow recording the status of an observation. “Pending” results (e.g., a test has been run but results have not been reported yet) should be represented as “active” ActStatus.

Table 242: Result Observation (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|--------------|-------------|------------------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2015-08-01) | | | | | |
| @classCode | 1..1 | SHALL | | 1198-7130 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 1198-7131 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 1198-7136 | |
| @root | 1..1 | SHALL | | 1198-9138 | 2.16.840.1.113883.10.20.22.4.2 |
| @extension | 1..1 | SHALL | | 1198-32575 | 2015-08-01 |
| id | 1..* | SHALL | | 1198-7137 | |
| code | 1..1 | SHALL | | 1198-7133 | urn:oid:2.16.840.1.113883.6.1 (LOINC) |
| statusCode | 1..1 | SHALL | | 1198-7134 | |
| @code | 1..1 | SHALL | | 1198-14849 | urn:oid:2.16.840.1.113883.11.20.9.39 (Result Status) |
| effectiveTime | 1..1 | SHALL | | 1198-7140 | |
| value | 1..1 | SHALL | | 1198-7143 | |
| interpretationCode | 0..* | SHOULD | | 1198-7147 | |
| @code | 1..1 | SHALL | | 1198-32476 | urn:oid:2.16.840.1.113883.1.11.78 (Observation Interpretation (HL7)) |
| methodCode | 0..1 | MAY | SET<C E> | 1198-7148 | |
| targetSiteCode | 0..1 | MAY | SET<C D> | 1198-7153 | |
| author | 0..* | SHOULD | | 1198-7149 | Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) |
| referenceRange | 0..* | SHOULD | | 1198-7150 | |
| observationRange | 1..1 | SHALL | | 1198-7151 | |
| code | 0..0 | SHALL NOT | | 1198-7152 | |
| value | 1..1 | SHALL | | 1198-32175 | |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-7130).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-7131).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-7136) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.2" (CONF:1198-9138).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32575).
4. **SHALL** contain at least one [1..*] **id** (CONF:1198-7137).
5. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from CodeSystem LOINC (urn:oid:2.16.840.1.113883.6.1) (CONF:1198-7133).
 - a. This code **SHOULD** be a code from the LOINC that identifies the result observation. If an appropriate LOINC code does not exist, then the local code for this result **SHALL** be sent (CONF:1198-19212).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-7134).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [Result Status](#) urn:oid:2.16.840.1.113883.11.20.9.39 **STATIC** (CONF:1198-14849).
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1198-7140).
Note: Represents the biologically relevant time of the measurement (e.g., the time a blood pressure reading is obtained, the time the blood sample was obtained for a chemistry test).
8. **SHALL** contain exactly one [1..1] **value** (CONF:1198-7143).
 - a. If Observation/value is a physical quantity (**xsi:type**="PQ"), the unit of measure **SHALL** be selected from ValueSet UnitsOfMeasureCaseSensitive 2.16.840.1.113883.1.11.12839 **DYNAMIC** (CONF:1198-31484).
 - b. A coded or physical quantity value **MAY** contain zero or more [0..*] translations, which can be used to represent the original results as output by the lab (CONF:1198-31866).
 - c. If Observation/value is a CD (**xsi:type**="CD") the value **SHOULD** be SNOMED-CT (CONF:1198-32610).
9. **SHOULD** contain zero or more [0..*] **interpretationCode** (CONF:1198-7147).
 - a. The interpretationCode, if present, **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [Observation Interpretation \(HL7\)](#) urn:oid:2.16.840.1.113883.1.11.78 **DYNAMIC** (CONF:1198-32476).
10. **MAY** contain zero or one [0..1] **methodCode** (CONF:1198-7148).
11. **MAY** contain zero or one [0..1] **targetSiteCode** (CONF:1198-7153).
12. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1198-7149).
13. **SHOULD** contain zero or more [0..*] **referenceRange** (CONF:1198-7150).
 - a. The referenceRange, if present, **SHALL** contain exactly one [1..1] **observationRange** (CONF:1198-7151).
 - i. This observationRange **SHALL NOT** contain [0..0] **code** (CONF:1198-7152).

- ii. This observationRange **SHALL** contain exactly one [1..1] value (CONF:1198-32175).

Figure 132: Result Observation (V3) Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.2" extension="2015-08-01" />
  <id root="7c0704bb-9c40-41b5-9c7d-26b2d59e234f" />
  <code code="20570-8" displayName="Hematocrit" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" />
  <statusCode code="completed" />
  <effectiveTime value="200803190830-0800" />
  <value xsi:type="PQ" value="35.3" unit="%" />
  <interpretationCode code="L" codeSystem="2.16.840.1.113883.5.83" />
  <author>
    <time value="200803190830-0800" />
    <assignedAuthor>
      <id extension="333444444" root="1.1.1.1.1.1.1.4" />
      <addr>
        <streetAddressLine>1017 Health Drive</streetAddressLine>
        <city>Portland</city>
        <state>OR</state>
        <postalCode>99123</postalCode>
        <country>US</country>
      </addr>
      <telecom use="WP" value="tel:+1(555)555-1017" />
      <assignedPerson>
        <name>
          <given>William</given>
          <given qualifier="CL">Bill</given>
          <family>Beaker</family>
        </name>
      </assignedPerson>
      <representedOrganization>
        <name>Good Health Laboratory</name>
      </representedOrganization>
    </assignedAuthor>
  </author>
  <referenceRange>
    <observationRange>
      <text>Low</text>
      <value xsi:type="IVL_PQ">
        <low value="34.9" unit="%" />
        <high value="44.5" unit="%" />
      </value>
      <interpretationCode code="L" codeSystem="2.16.840.1.113883.5.83" />
    </observationRange>
  </referenceRange>
</observation>
```

3.73.1 Result (V4)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.87:2019-12-01 (open)]

Table 243: Result (V4) Contexts

| Contained By: | Contains: |
|--|---|
| Diagnostic Study Performed (V5) (optional) Procedure Performed (V6) (optional) Laboratory Test Performed (V5) (optional) Intervention Performed (V5) (optional) | Author Participation (required) |

This template represents the QDM attribute: Result.

This template describes the final consequences or data collected from a sequence of actions or events, or observable entities, including but not limited to procedures, laboratory tests, physical examinations, or diagnostic tests.

Table 244: Result (V4) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|-----------|-----------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.87:2019-12-01) | | | | | |
| templateId | 1..1 | SHALL | | 4444-11672 | |
| @root | 1..1 | SHALL | | 4444-11673 | 2.16.840.1.113883.10.20.24.3.87 |
| @extension | 1..1 | SHALL | | 4444-27035 | 2019-12-01 |
| effectiveTime | 1..1 | SHALL | | 4444-30011 | |
| @value | 1..1 | SHALL | | 4444-30014 | |
| author | 0..0 | SHALL NOT | | 4444-30013 | Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) |

1. Conforms to [Result Observation \(V3\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2015-08-01).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-11672) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.87" (CONF:4444-11673).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-27035).
3. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4444-30011).
 Note: QDM Attribute: Result dateTime
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **@value** (CONF:4444-30014).

4. **SHALL NOT** contain [0..0] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:4444-30013).

Figure 133: Result (V4) Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- Conforms to C-CDA R2.1 Result Observation (V3) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.2" extension="2015-08-01" />
  <!-- Result (V4) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.87" extension="2019-12-01" />
  <id root="ed971e73-c060-4258-8838-69c830254b5a" />
  <code code="36625-2" displayName="Breast Mammogram"
  codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
  <statusCode code="completed" />
  <effectiveTime value="201903231430" />
  <value xsi:type="CD" code="369895002" codeSystem="2.16.840.1.113883.6.96"
  displayName="T1: Breast tumor &lt; 2 cm in greatest dimension"
  codeSystemName="SNOMED CT" />
</observation>
```

3.74 Service Delivery Location

[participantRole: identifier urn:oid:2.16.840.1.113883.10.20.22.4.32 (open)]

Table 245: Service Delivery Location Contexts

| Contained By: | Contains: |
|---|-----------|
| Procedure Activity Act (V2) (optional) Procedure Activity Procedure (V2) (optional) Procedure Activity Observation (V2) (optional) Planned Encounter (V2) (optional) Encounter Activity (V3) (optional) | |

This clinical statement represents the location of a service event where an act, observation or procedure took place.

Table 246: Service Delivery Location Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|--------|-----------|--------------------------|--|
| participantRole (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32) | | | | | |
| @classCode | 1..1 | SHALL | | 81-7758 | urn:oid:2.16.840.1.113883.5.111 (HL7RoleCode) = SDLOC |
| templateId | 1..1 | SHALL | | 81-7635 | |
| @root | 1..1 | SHALL | | 81-10524 | 2.16.840.1.113883.10.20.22.4.32 |
| code | 1..1 | SHALL | | 81-16850 | urn:oid:2.16.840.1.113883.1.11.20275 (HealthcareServiceLocation) |
| addr | 0..* | SHOULD | | 81-7760 | |
| telecom | 0..* | SHOULD | | 81-7761 | |
| playingEntity | 0..1 | MAY | | 81-7762 | |
| @classCode | 1..1 | SHALL | | 81-7763 | urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = PLC |
| name | 0..1 | MAY | | 81-16037 | |

1. **SHALL** contain exactly one [1..1] **@classCode**="SDLOC" (CodeSystem: HL7RoleCode urn:oid:2.16.840.1.113883.5.111 **STATIC**) (CONF:81-7758).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-7635) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.32" (CONF:81-10524).
3. **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [HealthcareServiceLocation](#) urn:oid:2.16.840.1.113883.1.11.20275 **DYNAMIC** (CONF:81-16850).
4. **SHOULD** contain zero or more [0..*] **addr** (CONF:81-7760).
5. **SHOULD** contain zero or more [0..*] **telecom** (CONF:81-7761).
6. **MAY** contain zero or one [0..1] **playingEntity** (CONF:81-7762).
 - a. The playingEntity, if present, **SHALL** contain exactly one [1..1] **@classCode**="PLC" (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41 **STATIC**) (CONF:81-7763).
 - b. The playingEntity, if present, **MAY** contain zero or one [0..1] **name** (CONF:81-16037).

Figure 134: Service Delivery Location Example

```

<participantRole classCode="SDLOC">
  <templateId root="2.16.840.1.113883.10.20.22.4.32"/>
  <code code="1160-1" codeSystem="2.16.840.1.113883.6.259"
    codeSystemName="HealthcareServiceLocation" displayName="Urgent Care Center"/>
  <addr>
    <streetAddressLine>17 Daws Rd.</streetAddressLine>
    <city>Blue Bell</city>
    <state>MA</state>
    <postalCode>02368</postalCode>
    <country>US</country>
  </addr>
  <telecom use="WP" value="tel:+1(555)555-5000"/>
  <playingEntity classCode="PLC">
    <name>Community Health and Hospitals</name>
  </playingEntity>
</participantRole>

```

3.75 Severity Observation (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09
(open)]

Table 247: Severity Observation (V2) Contexts

| Contained By: | Contains: |
|--|-----------|
| Reaction Observation (V2) (optional) Substance or Device Allergy - Intolerance Observation (V2) (optional) Adverse Event (V2) (optional) Diagnosis (V3) (optional) Symptom (V3) (optional) | |

This clinical statement represents the gravity of the reaction. The Severity Observation characterizes the Reaction Observation. A person may manifest many symptoms in a reaction to a single substance, and each reaction to the substance can be represented. However, each reaction observation can have only one severity observation associated with it. For example, someone may have a rash reaction observation as well as an itching reaction observation, but each can have only one level of severity. Note the severity observation is no longer recommended for use with the Allergy and Intolerance Observation. The Criticality Observation is preferred for characterizing the Allergy and Intolerance.

Table 248: Severity Observation (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-------|-----------|----------------------------|--|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09) | | | | | |
| @classCode | 1..1 | SHALL | | 1098-7345 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 1098-7346 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 1098-7347 | |
| @root | 1..1 | SHALL | | 1098-10525 | 2.16.840.1.113883.10.20.22.4.8 |
| @extension | 1..1 | SHALL | | 1098-32577 | 2014-06-09 |
| code | 1..1 | SHALL | | 1098-19168 | |
| @code | 1..1 | SHALL | | 1098-19169 | SEV |
| @codeSystem | 1..1 | SHALL | | 1098-32170 | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL | | 1098-7352 | |
| @code | 1..1 | SHALL | | 1098-19115 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | 1098-7356 | urn:oid:2.16.840.1.113883.3.88.12.3221.6.8 (Reaction Severity) |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7345).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-7346).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7347) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.8" (CONF:1098-10525).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32577).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1098-19168).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="SEV" Severity (CONF:1098-19169).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:1098-32170).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-7352).

- a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-19115).
- 6. **SHALL** contain exactly one [1..1] value with @xsi:type="CD", where the code **SHALL** be selected from ValueSet [Reaction Severity](#) urn:oid:2.16.840.1.113883.3.88.12.3221.6.8 **DYNAMIC** (CONF:1098-7356).

Figure 135: Severity Observation (V2) Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.8" extension="2014-06-09" />
  <code code="SEV" displayName="Severity Observation" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="ActCode" />
  <text>
    <reference value="#allergyseverity1" />
  </text>
  <statusCode code="completed" />
  <value xsi:type="CD" code="371924009" displayName="Moderate to severe"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT" />
</observation>
```

3.76 Status (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.93:2019-12-01 (open)]

Table 249: Status (V2) Contexts

| Contained By: | Contains: |
|---|-----------|
| Care Goal (V5) (optional) Diagnostic Study Performed (V5) (optional) Procedure Performed (V6) (optional) Laboratory Test Performed (V5) (optional) Intervention Performed (V5) (optional) | |

This template is to represent the QDM attribute Status for the QDM data types Diagnostic Study Performed, Intervention Performed, Laboratory Test Performed, and Procedure Performed. QDM Attribute: status - Indicates the particular stage of the action represented by the datatype. This template is also to represent the QDM attribute Status Date for the QDM data type Care Goal. QDM Attribute: status date - The date a care goal was updated and/or changed status.

Table 250: Status (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|-------|-----------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.93:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-11879 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 4444-11880 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 4444-11881 | |
| @root | 1..1 | SHALL | | 4444-11882 | 2.16.840.1.113883.10.20.24.3.93 |
| @extension | 1..1 | SHALL | | 4444-29586 | 2019-12-01 |
| code | 1..1 | SHALL | | 4444-11885 | |
| @code | 1..1 | SHALL | | 4444-11886 | 33999-4 |
| @codeSystem | 1..1 | SHALL | | 4444-27011 | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| effectiveTime | 0..1 | MAY | | 4444-29585 | |
| @value | 1..1 | SHALL | | 4444-29587 | |
| value | 1..1 | SHALL | CD | 4444-11887 | |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:4444-11879).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:4444-11880).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-11881) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.93" (CONF:4444-11882).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-29586).
4. **SHALL** contain exactly one [1..1] **code** (CONF:4444-11885).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="33999-4" status (CONF:4444-11886).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:4444-27011).
5. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:4444-29585).
 Note: QDM Attribute: Status Date

- a. The effectiveTime, if present, **SHALL** contain exactly one [1..1] @value (CONF:4444-29587).
- 6. **SHALL** contain exactly one [1..1] value with @xsi:type="CD" (CONF:4444-11887).
Note: QDM Attribute: Status

Figure 136: Status (V2) Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.24.3.93" extension="2019-12-01"/>
  <id root="cd0bf417-d0a9-4971-aa47-59514626a226"/>
  <code code="33999-4"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="Status" />
  <value xsi:type="CD"
    code="445665009"
    displayName="Final Report" />
</observation>
```

3.77 Substance Administered Act

[act: identifier urn:oid:2.16.840.1.113883.10.20.22.4.118 (open)]

Table 251: Substance Administered Act Contexts

| Contained By: | Contains: |
|--|-----------|
| Medication Activity (V2) (optional) Immunization Activity (V3) (optional) | |

This template represents the administration course in a series. The entryRelationship/sequenceNumber in the containing template shows the order of this particular administration in that medication series.

Table 252: Substance Administered Act Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|-------|-----------|----------------------------|---|
| act (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.118) | | | | | |
| @classCode | 1..1 | SHALL | | 1098-31500 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT |
| @moodCode | 1..1 | SHALL | | 1098-31501 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 1098-31502 | |
| @root | 1..1 | SHALL | | 1098-31503 | 2.16.840.1.113883.10.20.22.4.118 |
| id | 1..* | SHALL | | 1098-31504 | |
| code | 1..1 | SHALL | | 1098-31506 | |
| @code | 1..1 | SHALL | | 1098-31507 | 416118004 |
| @codeSystem | 1..1 | SHALL | | 1098-31508 | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96 |
| statusCode | 1..1 | SHALL | | 1098-31505 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 0..1 | MAY | | 1098-31509 | |

1. **SHALL** contain exactly one [1..1] **@classCode**="ACT" Act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1098-31500).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1098-31501).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-31502) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.118" (CONF:1098-31503).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-31504).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-31506).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="416118004" Administration (CONF:1098-31507).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:1098-31508).
6. **SHALL** contain exactly one [1..1] **statusCode**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1098-31505).
7. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:1098-31509).

Figure 137: Substance Administered Act Example

```

<substanceAdministration classCode="SBADM" moodCode="EVN">
  ...
  <consumable>
    ...
    <code code="43" codeSystem="2.16.840.1.113883.6.59" displayName="Hepatitis B
Vaccine" codeSystemName="CVX" />
  </consumable>
  <entryRelationship typeCode="COMP">
    <!-- This entryRelationship sequenceNumber indicates this is #2 in the series -->
    <sequenceNumber value="2" />
    <act classCode="ACT" moodCode="EVN">
      <!-- Substance Administered Act Template -->
      <templateId root="2.16.840.1.113883.10.20.22.4.118" />
      <id root="df8908d0-40f2-11e3-aa6e-0800200c9a66" />
      <code code="416118004" displayName="administration"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED-CT" />
      <statusCode code="completed" />
      <effectiveTime value="19991101" />
    </act>
  </entryRelationship>
  ...
</substanceAdministration>

```

3.78 Substance or Device Allergy - Intolerance Observation (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.90:2014-06-09 (open)]

Table 253: Substance or Device Allergy - Intolerance Observation (V2) Contexts

| Contained By: | Contains: |
|---------------|--|
| | Reaction Observation (V2) (optional) Severity Observation (V2) (optional) Author Participation (optional) Criticality Observation (optional) Allergy Status Observation (optional) |

This template reflects a discrete observation about a patient's allergy or intolerance to a substance or device. Because it is a discrete observation, it will have a statusCode of "completed". The effectiveTime, also referred to as the 'biologically relevant time' is the time at which the observation holds for the patient. For a provider seeing a patient in the clinic today, observing a history of penicillin allergy that developed five years ago, the effectiveTime is five years ago.

The effectiveTime of the Substance or Device Allergy - Intolerance Observation is the definitive indication of whether or not the underlying allergy/intolerance is resolved. If known to be resolved, then an effectiveTime/high would be present. If the date of resolution is not known, then effectiveTime/high will be present with a nullFlavor of "UNK".

Table 254: Substance or Device Allergy - Intolerance Observation (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|--------------|-------------|------------------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.90:2014-06-09) | | | | | |
| @classCode | 1..1 | SHALL | | 1098-16303 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 1098-16304 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 1098-16305 | |
| @root | 1..1 | SHALL | | 1098-16306 | 2.16.840.1.113883.10.20.24.3.90 |
| @extension | 1..1 | SHALL | | 1098-32527 | 2014-06-09 |
| id | 1..* | SHALL | | 1098-16307 | |
| code | 1..1 | SHALL | | 1098-16345 | |
| @code | 1..1 | SHALL | | 1098-16346 | ASSERTION |
| @codeSystem | 1..1 | SHALL | | 1098-32171 | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL | | 1098-16308 | |
| @code | 1..1 | SHALL | | 1098-26354 | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL | | 1098-16309 | |
| low | 1..1 | SHALL | | 1098-31536 | |
| high | 0..1 | MAY | | 1098-31537 | |
| value | 1..1 | SHALL | CD | 1098-16312 | |
| @code | 1..1 | SHALL | CS | 1098-16317 | urn:oid:2.16.840.1.113883.3.88.12.3221.6.2 (Allergy and Intolerance Type) |
| author | 0..* | SHOULD | | 1098-31144 | Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) |
| participant | 0..* | SHOULD | | 1098-16318 | |
| @typeCode | 1..1 | SHALL | | 1098-16319 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = CSM |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-------------------|-------|------------|-----------|----------------------------|---|
| participantRole | 1..1 | SHALL | | 1098-16320 | |
| @classCode | 1..1 | SHALL | | 1098-16321 | urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU |
| playingEntity | 1..1 | SHALL | | 1098-16322 | |
| @classCode | 1..1 | SHALL | | 1098-16323 | urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = MMAT |
| code | 1..1 | SHALL | | 1098-16324 | urn:oid:2.16.840.1.113762.1.4.1010.1 (Substance Reactant for Intolerance) |
| entryRelationship | 0..1 | MAY | | 1098-16333 | |
| @typeCode | 1..1 | SHALL | | 1098-16335 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ |
| @inversionInd | 1..1 | SHALL | | 1098-16334 | true |
| observation | 1..1 | SHALL | | 1098-16336 | Allergy Status Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.28:2019-06-20) |
| entryRelationship | 0..* | SHOULD | | 1098-16337 | |
| @typeCode | 1..1 | SHALL | | 1098-16339 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = MFST |
| @inversionInd | 1..1 | SHALL | | 1098-16338 | true |
| observation | 1..1 | SHALL | | 1098-16340 | Reaction Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09) |
| entryRelationship | 0..1 | SHOULD NOT | | 1098-16341 | |
| @typeCode | 1..1 | SHALL | | 1098-16342 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ |
| @inversionInd | 1..1 | SHALL | | 1098-16343 | true |
| observation | 1..1 | SHALL | | 1098-16344 | Severity Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09) |
| entryRelationship | 0..1 | SHOULD | | 1098-32935 | |
| @typeCode | 1..1 | SHALL | | 1098- | urn:oid:2.16.840.1.113883.5.1 |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---------------|-------|-------|-----------|----------------------------|--|
| | | | | 32936 | 002 (HL7ActRelationshipType) = SUBJ |
| @inversionInd | 1..1 | SHALL | | 1098-32937 | true |
| observation | 1..1 | SHALL | | 1098-32938 | Criticality Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.145) |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-16303).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-16304).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-16305) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.90" (CONF:1098-16306).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32527).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-16307).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-16345).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:1098-16346).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:1098-32171).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-16308).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1098-26354).
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-16309).
 Note: The effectiveTime/low (a.k.a. "onset date") asserts when the allergy/intolerance became biologically active. The effectiveTime/high (a.k.a. "resolution date") asserts when the allergy/intolerance became biologically resolved.

If the allergy/intolerance is known to be resolved, but the date of resolution is not known, then the high element SHALL be present, and the nullFlavor attribute SHALL be set to 'UNK'.

- a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1098-31536).
 - b. This effectiveTime **MAY** contain zero or one [0..1] **high** (CONF:1098-31537).
8. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:1098-16312).
 - a. This value **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [Allergy and Intolerance Type](#) urn:oid:2.16.840.1.113883.3.88.12.3221.6.2 **DYNAMIC** (CONF:1098-16317).
 Note: Many systems will simply assign a fixed value here (e.g., "allergy to substance").

9. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-31144).
10. **SHOULD** contain zero or more [0..*] **participant** (CONF:1098-16318) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="CSM"** Consumable (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1098-16319).
 - b. **SHALL** contain exactly one [1..1] **participantRole** (CONF:1098-16320).
 - i. This participantRole **SHALL** contain exactly one [1..1] **@classCode="MANU"** Manufactured Product (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110 **STATIC**) (CONF:1098-16321).
 - ii. This participantRole **SHALL** contain exactly one [1..1] **playingEntity** (CONF:1098-16322).
 1. This playingEntity **SHALL** contain exactly one [1..1] **@classCode="MMAT"** Manufactured Material (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41 **STATIC**) (CONF:1098-16323).
 2. This playingEntity **SHALL** contain exactly one [1..1] **code**, which **MAY** be selected from ValueSet [Substance Reactant for Intolerance](#) urn:oid:2.16.840.1.113762.1.4.1010.1 **DYNAMIC** (CONF:1098-16324).
11. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-16333) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** Has subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-16335).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** True (CONF:1098-16334).
 - c. **SHALL** contain exactly one [1..1] [Allergy Status Observation](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.28:2019-06-20) (CONF:1098-16336).
12. **SHOULD** contain zero or more [0..*] **entryRelationship** (CONF:1098-16337) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="MFST"** Is Manifestation of (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-16339).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** True (CONF:1098-16338).
 - c. **SHALL** contain exactly one [1..1] [Reaction Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09) (CONF:1098-16340).
13. **SHOULD NOT** contain zero or one [0..1] **entryRelationship** (CONF:1098-16341) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** Has Subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-16342).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** True (CONF:1098-16343).
 - c. **SHALL** contain exactly one [1..1] [Severity Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09) (CONF:1098-16344).
14. **SHOULD** contain zero or one [0..1] **entryRelationship** (CONF:1098-32935) such that it

- a. **SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** Has Subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32936).
- b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** True (CONF:1098-32937).
- c. **SHALL** contain exactly one [1..1] Criticality Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.145) (CONF:1098-32938).

3.78.1 Allergy Intolerance (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.147:2019-12-01 (open)]

Table 255: Allergy Intolerance (V2) Contexts

| Contained By: | Contains: |
|--|--|
| Patient Data Section QDM (V7) (optional) | Author Participation (required) Entity Care Partner (optional) Entity Patient (optional) Entity Organization (optional) Entity Practitioner (optional) Author (V2) (optional) |

This template is to represent QDM data type: Allergy/Intolerance

Allergy is used to address immune-mediated reactions to a substance such as type 1 hypersensitivity reactions, other allergy-like reactions, including pseudo-allergy.

Intolerance is a record of a clinical assessment of a propensity, or a potential risk to an individual, to have a non-immune mediated adverse reaction on future exposure to the specified substance, or class of substance.

Table 256: Allergy Intolerance (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|--------------|-------------|------------------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.147:2019-12-01) | | | | | |
| @classCode | 1..1 | SHALL | | 4444-28826 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 4444-28827 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 0..0 | SHALL NOT | | 4444-28848 | |
| templateId | 1..1 | SHALL | | 4444-29592 | |
| @root | 1..1 | SHALL | | 4444-28828 | 2.16.840.1.113883.10.20.24.3.147 |
| @extension | 1..1 | SHALL | | 4444-28829 | 2019-12-01 |
| code | 1..1 | SHALL | | 4444-29593 | |
| @code | 1..1 | SHALL | | 4444-28831 | ASSERTION |
| @codeSystem | 1..1 | SHALL | | 4444-28832 | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| effectiveTime | 1..1 | SHALL | | 4444-29594 | |
| low | 1..1 | SHALL | | 4444-28834 | |
| high | 0..1 | MAY | | 4444-28835 | |
| value | 1..1 | SHALL | CD | 4444-28836 | |
| @code | 1..1 | SHALL | | 4444-28849 | 419199007 |
| @codeSystem | 1..1 | SHALL | | 4444-28850 | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96 |
| author | 0..1 | MAY | | 4444-29596 | Author (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) |
| author | 0..0 | SHALL NOT | | 4444-30034 | Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) |
| participant | 1..1 | SHALL | | 4444-29595 | |
| @typeCode | 1..1 | SHALL | | 4444-28837 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = CSM |

| XPath | Card. | Verb | Data Type | CONF# | Value |
|-----------------|-------|-------|-----------|----------------------------|---|
| participantRole | 1..1 | SHALL | | 4444-28821 | |
| @classCode | 1..1 | SHALL | | 4444-28838 | urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU |
| playingEntity | 1..1 | SHALL | | 4444-28822 | |
| @classCode | 1..1 | SHALL | | 4444-28839 | urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = MMAT |
| code | 1..1 | SHALL | | 4444-28840 | |
| participant | 0..* | MAY | | 4444-29597 | |
| @typeCode | 1..1 | SHALL | | 4444-29606 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29598 | Entity Practitioner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) |
| participant | 0..* | MAY | | 4444-29603 | |
| @typeCode | 1..1 | SHALL | | 4444-29609 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29604 | Entity Organization (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) |
| participant | 0..1 | MAY | | 4444-29601 | |
| @typeCode | 1..1 | SHALL | | 4444-29608 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29602 | Entity Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) |
| participant | 0..* | MAY | | 4444-29599 | |
| @typeCode | 1..1 | SHALL | | 4444-29607 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF |
| participantRole | 1..1 | SHALL | | 4444-29600 | Entity Care Partner (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) |

1. Conforms to [Substance or Device Allergy - Intolerance Observation \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.90:2014-06-09).

2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:4444-28826).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:4444-28827).
4. **SHALL NOT** contain [0..0] **@negationInd** (CONF:4444-28848).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-29592) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.147" (CONF:4444-28828).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-28829).
6. **SHALL** contain exactly one [1..1] **code** (CONF:4444-29593).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:4444-28831).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:4444-28832).
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4444-29594).
Note: QDM Attribute: PrevalencePeriod
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:4444-28834).
Note: onset date: when the allergy/intolerance became biologically active.
 - b. This effectiveTime **MAY** contain zero or one [0..1] **high** (CONF:4444-28835).
Note: abatement date: when the allergy/intolerance became biologically resolved.
8. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:4444-28836).
 - a. This value **SHALL** contain exactly one [1..1] **@code**="419199007" Allergy to substance (CONF:4444-28849).
 - b. This value **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:4444-28850).
9. **MAY** contain zero or one [0..1] **Author (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) (CONF:4444-29596).
Note: QDM Attribute: Author dateTime
10. **SHALL NOT** contain [0..0] **Author Participation** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:4444-30034).
11. **SHALL** contain exactly one [1..1] **participant** (CONF:4444-29595) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="CSM" Consumable (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:4444-28837).
 - b. **SHALL** contain exactly one [1..1] **participantRole** (CONF:4444-28821).
 - i. This participantRole **SHALL** contain exactly one [1..1] **@classCode**="MANU" Manufactured Product (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110 **STATIC**) (CONF:4444-28838).
 - ii. This participantRole **SHALL** contain exactly one [1..1] **playingEntity** (CONF:4444-28822).
 1. This playingEntity **SHALL** contain exactly one [1..1] **@classCode**="MMAT" Manufactured Material (CodeSystem:

HL7EntityClass urn:oid:2.16.840.1.113883.5.41 **STATIC**
(CONF:4444-28839).

2. This playingEntity **SHALL** contain exactly one [1..1] code
(CONF:4444-28840).

Note: QDM Attribute: Code

12. **MAY** contain zero or more [0..*] participant (CONF:4444-29597) such that it
Note: QDM Attribute: Recorder
 - a. **SHALL** contain exactly one [1..1] @typeCode="PRF" (CodeSystem:
HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29606).
 - b. **SHALL** contain exactly one [1..1] [Entity Practitioner](#) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) (CONF:4444-
29598).
13. **MAY** contain zero or more [0..*] participant (CONF:4444-29603) such that it
Note: QDM Attribute: Recorder
 - a. **SHALL** contain exactly one [1..1] @typeCode="PRF" (CodeSystem:
HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29609).
 - b. **SHALL** contain exactly one [1..1] [Entity Organization](#) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) (CONF:4444-
29604).
14. **MAY** contain zero or one [0..1] participant (CONF:4444-29601) such that it
Note: QDM Attribute: Recorder
 - a. **SHALL** contain exactly one [1..1] @typeCode="PRF" (CodeSystem:
HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29608).
 - b. **SHALL** contain exactly one [1..1] [Entity Patient](#) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) (CONF:4444-
29602).
15. **MAY** contain zero or more [0..*] participant (CONF:4444-29599) such that it
Note: QDM Attribute: Recorder
 - a. **SHALL** contain exactly one [1..1] @typeCode="PRF" (CodeSystem:
HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29607).
 - b. **SHALL** contain exactly one [1..1] [Entity Care Partner](#) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) (CONF:4444-
29600).

Figure 138: Allergy Intolerance (V2) Example

```

<observation classCode="OBS" moodCode="EVN">
  <!-- Conforms to C-CDA R2.1 Substance or Device Allergy - Intolerance Observation (V2)
-->
  <templateId root="2.16.840.1.113883.10.20.24.3.90" extension="2014-06-09"/>
  <!-- Allergy Intolerance (V2) -->
  <templateId root="2.16.840.1.113883.10.20.24.3.147" extension="2019-12-01"/>
  <id root="901db0f8-9355-4794-81cd-fd951efe7817"/>
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"/>
  <statusCode code="completed"/>
  <effectiveTime>
    <!-- QDM Attribute: Relevant Period - onset date -->
    <low value="20191101"/>
    <!-- QDM Attribute: Relevant Period - abatement date -->
    <high nullFlavor="UNK"/>
  </effectiveTime>
  <value xsi:type="CD" code="419199007" displayName="Allergy to substance"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT"/>
  <participant typeCode="CSM">
    <participantRole classCode="MANU">
      <playingEntity classCode="MMAT">
        <!-- Medication -->
        <code code="105152" codeSystem="2.16.840.1.113883.6.88"
codeSystemName="RxNorm" displayName="Amoxicillin 60 MG/ML Oral Suspension"/>
      </playingEntity>
    </participantRole>
  </participant>
</observation>

```

3.79 Target Outcome (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.119:2017-08-01 (open)]

Table 257: Target Outcome (V2) Contexts

| Contained By: | Contains: |
|---|-----------|
| Care Goal (V5) (optional) | |

This template represents the QDM attribute: Target Outcome.
The expected outcome that will indicate the care goal is achieved, or met.

Table 258: Target Outcome (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-------|-----------|----------------------------|---|
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.119:2017-08-01) | | | | | |
| @classCode | 1..1 | SHALL | | 3343-28033 | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL | | 3343-28034 | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL | | 3343-28025 | |
| @root | 1..1 | SHALL | | 3343-28028 | 2.16.840.1.113883.10.20.24.3.119 |
| @extension | 1..1 | SHALL | | 3343-28029 | 2017-08-01 |
| code | 1..1 | SHALL | | 3343-28026 | urn:oid:2.16.840.1.113883.6.1 (LOINC) |
| value | 1..1 | SHALL | | 3343-28027 | |

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:3343-28033).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3343-28034).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:3343-28025) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.119" (CONF:3343-28028).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2017-08-01" (CONF:3343-28029).
4. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from CodeSystem LOINC (urn:oid:2.16.840.1.113883.6.1) (CONF:3343-28026).
5. **SHALL** contain exactly one [1..1] **value** (CONF:3343-28027).

Figure 139: Target Outcome (V2) Example

```

<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.24.3.119" extension="2017-08-01"/>
  <id root="3a4aa411-78b9-484b-a0f1-33f1cf49b4ad"/>
  <code code="29463-7" displayName="Body weight" codeSystemName="LOINC"/>
  <value xsi:type="PQ" unit="kg" value="65"/>
</observation>

```

4 SUBENTRY TEMPLATES

4.1 Entity Care Partner

[participantRole: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 (open)]

Table 259: Entity Care Partner Contexts

| Contained By: | Contains: |
|---|-----------|
| <p>Adverse Event (V2) (optional)</p> <p>Assessment Performed (V3) (optional)</p> <p>Communication Performed (V2) (optional)</p> <p>Assessment Recommended (V3) (optional)</p> <p>Assessment Order (V2) (optional)</p> <p>Care Goal (V5) (optional)</p> <p>Device Applied (V6) (optional)</p> <p>Device Order (V5) (optional)</p> <p>Device Recommended (V5) (optional)</p> <p>Diagnosis (V3) (optional)</p> <p>Diagnostic Study Order (V5) (optional)</p> <p>Diagnostic Study Performed (V5) (optional)</p> <p>Diagnostic Study Recommended (V5) (optional)</p> <p>Discharge Medication (V5) (optional)</p> <p>Encounter Order (V5) (optional)</p> <p>Encounter Performed (V5) (optional)</p> <p>Procedure Performed (V6) (optional)</p> <p>Procedure Order (V6) (optional)</p> <p>Procedure Recommended (V6) (optional)</p> <p>Encounter Recommended (V5) (optional)</p> <p>Symptom (V3) (optional)</p> <p>Substance Recommended (V5) (optional)</p> <p>Laboratory Test Performed (V5) (optional)</p> <p>Laboratory Test Order (V5) (optional)</p> <p>Laboratory Test Recommended (V5) (optional)</p> <p>Allergy Intolerance (V2) (optional)</p> <p>Family History Observation QDM (V4) (optional)</p> <p>Immunization Administered (V3) (optional)</p> <p>Immunization Order (V3) (optional)</p> <p>Intervention Order (V5) (optional)</p> <p>Intervention Performed (V5) (optional)</p> <p>Intervention Recommended (V5) (optional)</p> <p>Physical Exam Order (V5) (optional)</p> <p>Physical Exam Recommended (V5) (optional)</p> <p>Physical Exam Performed (V5) (optional)</p> <p>Medication Active (V5) (optional)</p> <p>Medication Administered (V5) (optional)</p> <p>Medication Dispensed (V6) (optional)</p> | |

| Contained By: | Contains: |
|--|-----------|
| Medication Order (V6) (optional) Program Participation (V2) (optional) Patient Care Experience (V5) (optional) Provider Care Experience (V5) (optional) | |

Care partner is a person that is related to a patient, but who is not the direct target of care.

Id - The identifier of a specific instance of any QDM data element.

Identifier - External identifiers for the individual (care partner). Unless specified in program or measure-specific guidance, eCQMs generally allow implementers to use local identifiers for such individuals or organizations. Program or measure-specific guidance may specify a required identification system (e.g., National Provider Identifier (NPI) for practitioners, or CMS Certification Number (CCN) for hospitals).

Table 260: Entity Care Partner Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-------|-----------|----------------------------|----------------------------------|
| participantRole (identifier: urn:h17ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01) | | | | | |
| templateId | 0..1 | MAY | | 4444-28791 | |
| @root | 1..1 | SHALL | | 4444-28794 | 2.16.840.1.113883.10.20.24.3.160 |
| @extension | 1..1 | SHALL | | 4444-28795 | 2019-12-01 |
| id | 0..1 | MAY | | 4444-29363 | |
| @root | 1..1 | SHALL | | 4444-29580 | |
| id | 0..1 | MAY | | 4444-28792 | |
| @root | 1..1 | SHALL | | 4444-28796 | |
| @extension | 1..1 | SHALL | | 4444-28797 | |
| playingEntity | 0..1 | MAY | | 4444-28793 | |
| code | 1..1 | SHALL | | 4444-28798 | |

1. **MAY** contain zero or one [0..1] **templateId** (CONF:4444-28791) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.160" (CONF:4444-28794).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-28795).
2. **MAY** contain zero or one [0..1] **id** (CONF:4444-29363) such that it

Note: Id

- a. **SHALL** contain exactly one [1..1] **@root** (CONF:4444-29580).
- 3. **MAY** contain zero or one [0..1] **id** (CONF:4444-28792) such that it
Note: Identifier
 - a. **SHALL** contain exactly one [1..1] **@root** (CONF:4444-28796).
 - b. **SHALL** contain exactly one [1..1] **@extension** (CONF:4444-28797).
- 4. **MAY** contain zero or one [0..1] **playingEntity** (CONF:4444-28793).
 - a. The playingEntity, if present, **SHALL** contain exactly one [1..1] **code** (CONF:4444-28798).
Note: Relationship

Figure 140: Entity Care Partner

```

<participantRole>
  <templateId root="2.16.840.1.113883.10.20.24.3.160" extension="2019-12-01" />
  <playingEntity>
    <code code="DAUC" displayName="daughter" codeSystem="2.16.840.1.113883.5.111"
codeSystemName="Role Code" />
  </playingEntity>
</participantRole>

```

4.2 Entity Organization

[participantRole: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 (open)]

Table 261: Entity Organization Contexts

| Contained By: | Contains: |
|---|-----------|
| <p>Adverse Event (V2) (optional)</p> <p>Assessment Performed (V3) (optional)</p> <p>Communication Performed (V2) (optional)</p> <p>Assessment Recommended (V3) (optional)</p> <p>Assessment Order (V2) (optional)</p> <p>Care Goal (V5) (optional)</p> <p>Device Applied (V6) (optional)</p> <p>Device Order (V5) (optional)</p> <p>Device Recommended (V5) (optional)</p> <p>Diagnosis (V3) (optional)</p> <p>Diagnostic Study Order (V5) (optional)</p> <p>Diagnostic Study Performed (V5) (optional)</p> <p>Diagnostic Study Recommended (V5) (optional)</p> <p>Discharge Medication (V5) (optional)</p> <p>Encounter Order (V5) (optional)</p> <p>Encounter Performed (V5) (optional)</p> <p>Procedure Performed (V6) (optional)</p> <p>Procedure Order (V6) (optional)</p> <p>Procedure Recommended (V6) (optional)</p> <p>Encounter Recommended (V5) (optional)</p> <p>Symptom (V3) (optional)</p> <p>Substance Recommended (V5) (optional)</p> <p>Laboratory Test Performed (V5) (optional)</p> <p>Laboratory Test Order (V5) (optional)</p> <p>Laboratory Test Recommended (V5) (optional)</p> <p>Allergy Intolerance (V2) (optional)</p> <p>Family History Observation QDM (V4) (optional)</p> <p>Immunization Administered (V3) (optional)</p> <p>Immunization Order (V3) (optional)</p> <p>Intervention Order (V5) (optional)</p> <p>Intervention Performed (V5) (optional)</p> <p>Intervention Recommended (V5) (optional)</p> <p>Physical Exam Order (V5) (optional)</p> <p>Physical Exam Recommended (V5) (optional)</p> <p>Physical Exam Performed (V5) (optional)</p> <p>Medication Active (V5) (optional)</p> <p>Medication Administered (V5) (optional)</p> <p>Medication Dispensed (V6) (optional)</p> <p>Medication Order (V6) (optional)</p> <p>Program Participation (V2) (optional)</p> <p>Patient Care Experience (V5) (optional)</p> | |

| | |
|--|------------------|
| Contained By: | Contains: |
| Provider Care Experience (V5) (optional) | |

This template represents Entity that is organization - a grouping of people or organizations with a common purpose.

Table 262: Entity Organization Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-------|-----------|----------------------------|----------------------------------|
| participantRole (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01) | | | | | |
| templateId | 0..1 | MAY | | 4444-28799 | |
| @root | 1..1 | SHALL | | 4444-28802 | 2.16.840.1.113883.10.20.24.3.163 |
| @extension | 1..1 | SHALL | | 4444-28803 | 2019-12-01 |
| id | 0..1 | MAY | | 4444-29583 | |
| @root | 1..1 | SHALL | | 4444-29584 | |
| id | 0..1 | MAY | | 4444-28800 | |
| @root | 1..1 | SHALL | | 4444-28804 | |
| @extension | 1..1 | SHALL | | 4444-28805 | |
| playingEntity | 0..1 | MAY | | 4444-28801 | |
| code | 1..1 | SHALL | | 4444-28806 | |

1. **MAY** contain zero or one [0..1] **templateId** (CONF:4444-28799) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.163" (CONF:4444-28802).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-28803).
2. **MAY** contain zero or one [0..1] **id** (CONF:4444-29583) such that it

Note: Id

 - a. **SHALL** contain exactly one [1..1] **@root** (CONF:4444-29584).
3. **MAY** contain zero or one [0..1] **id** (CONF:4444-28800) such that it

Note: Identifier

 - a. **SHALL** contain exactly one [1..1] **@root** (CONF:4444-28804).
 - b. **SHALL** contain exactly one [1..1] **@extension** (CONF:4444-28805).
4. **MAY** contain zero or one [0..1] **playingEntity** (CONF:4444-28801).

- a. The playingEntity, if present, **SHALL** contain exactly one [1..1] code (CONF:4444-28806).

Note: Type (kind of organization (e.g., hospital))

Figure 141: Entity Organization Example

```
<participantRole>
  <templateId root="2.16.840.1.113883.10.20.24.3.163" extension="2019-12-01" />
  <!-- Identifier -->
  <id root="2.16.840.1.113883.4.2" extension="123456789" />
</participantRole>
```

4.3 Entity Patient

[participantRole: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 (open)]

Table 263: Entity Patient Contexts

| Contained By: | Contains: |
|---|-----------|
| <p>Adverse Event (V2) (optional)</p> <p>Assessment Performed (V3) (optional)</p> <p>Communication Performed (V2) (optional)</p> <p>Assessment Recommended (V3) (optional)</p> <p>Assessment Order (V2) (optional)</p> <p>Care Goal (V5) (optional)</p> <p>Device Applied (V6) (optional)</p> <p>Device Order (V5) (optional)</p> <p>Device Recommended (V5) (optional)</p> <p>Diagnosis (V3) (optional)</p> <p>Diagnostic Study Order (V5) (optional)</p> <p>Diagnostic Study Performed (V5) (optional)</p> <p>Diagnostic Study Recommended (V5) (optional)</p> <p>Discharge Medication (V5) (optional)</p> <p>Encounter Order (V5) (optional)</p> <p>Encounter Performed (V5) (optional)</p> <p>Procedure Performed (V6) (optional)</p> <p>Procedure Order (V6) (optional)</p> <p>Procedure Recommended (V6) (optional)</p> <p>Encounter Recommended (V5) (optional)</p> <p>Symptom (V3) (optional)</p> <p>Substance Recommended (V5) (optional)</p> <p>Laboratory Test Performed (V5) (optional)</p> <p>Laboratory Test Order (V5) (optional)</p> <p>Laboratory Test Recommended (V5) (optional)</p> <p>Allergy Intolerance (V2) (optional)</p> <p>Family History Observation QDM (V4) (optional)</p> <p>Immunization Administered (V3) (optional)</p> <p>Immunization Order (V3) (optional)</p> <p>Intervention Order (V5) (optional)</p> <p>Intervention Performed (V5) (optional)</p> <p>Intervention Recommended (V5) (optional)</p> <p>Physical Exam Order (V5) (optional)</p> <p>Physical Exam Recommended (V5) (optional)</p> <p>Physical Exam Performed (V5) (optional)</p> <p>Medication Active (V5) (optional)</p> <p>Medication Administered (V5) (optional)</p> <p>Medication Dispensed (V6) (optional)</p> <p>Medication Order (V6) (optional)</p> <p>Program Participation (V2) (optional)</p> <p>Patient Care Experience (V5) (optional)</p> | |

| | |
|--|------------------|
| Contained By: | Contains: |
| Provider Care Experience (V5) (optional) | |

This template represents Entity that is patient – information about an individual receiving health care services

Table 264: Entity Patient Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-------|-----------|----------------------------|----------------------------------|
| participantRole (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01) | | | | | |
| templateId | 0..1 | MAY | | 4444-28784 | |
| @root | 1..1 | SHALL | | 4444-28787 | 2.16.840.1.113883.10.20.24.3.161 |
| @extension | 1..1 | SHALL | | 4444-28788 | 2019-12-01 |
| id | 0..1 | MAY | | 4444-29579 | |
| id | 1..1 | SHALL | | 4444-28785 | |
| @root | 1..1 | SHALL | | 4444-28789 | |
| @extension | 1..1 | SHALL | | 4444-28790 | |

1. **MAY** contain zero or one [0..1] **templateId** (CONF:4444-28784) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.161" (CONF:4444-28787).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-28788).
2. **MAY** contain zero or one [0..1] **id** (CONF:4444-29579).
Note: Instance id
3. **SHALL** contain exactly one [1..1] **id** (CONF:4444-28785) such that it
Note: Identifier
 - a. **SHALL** contain exactly one [1..1] **@root** (CONF:4444-28789).
 - b. **SHALL** contain exactly one [1..1] **@extension** (CONF:4444-28790).

Figure 142: Entity Patient Example

```
<participantRole>
  <templateId root="2.16.840.1.113883.10.20.24.3.161" extension="2019-12-01" />
  <!-- identifier -->
  <id root="1.3.52.100" extension="MRN1000001" />
</participantRole>
```

4.4 Entity Practitioner

[participantRole: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 (open)]

Table 265: Entity Practitioner Contexts

| Contained By: | Contains: |
|---|-----------|
| <p>Adverse Event (V2) (optional)</p> <p>Assessment Performed (V3) (optional)</p> <p>Communication Performed (V2) (optional)</p> <p>Assessment Recommended (V3) (optional)</p> <p>Assessment Order (V2) (optional)</p> <p>Care Goal (V5) (optional)</p> <p>Device Applied (V6) (optional)</p> <p>Device Order (V5) (optional)</p> <p>Device Recommended (V5) (optional)</p> <p>Diagnosis (V3) (optional)</p> <p>Diagnostic Study Order (V5) (optional)</p> <p>Diagnostic Study Performed (V5) (optional)</p> <p>Diagnostic Study Recommended (V5) (optional)</p> <p>Discharge Medication (V5) (optional)</p> <p>Encounter Order (V5) (optional)</p> <p>Encounter Performed (V5) (optional)</p> <p>Procedure Performed (V6) (optional)</p> <p>Procedure Order (V6) (optional)</p> <p>Procedure Recommended (V6) (optional)</p> <p>Encounter Recommended (V5) (optional)</p> <p>Symptom (V3) (optional)</p> <p>Substance Recommended (V5) (optional)</p> <p>Laboratory Test Performed (V5) (optional)</p> <p>Laboratory Test Order (V5) (optional)</p> <p>Laboratory Test Recommended (V5) (optional)</p> <p>Allergy Intolerance (V2) (optional)</p> <p>Family History Observation QDM (V4) (optional)</p> <p>Immunization Administered (V3) (optional)</p> <p>Immunization Order (V3) (optional)</p> <p>Intervention Order (V5) (optional)</p> <p>Intervention Performed (V5) (optional)</p> <p>Intervention Recommended (V5) (optional)</p> <p>Physical Exam Order (V5) (optional)</p> <p>Physical Exam Recommended (V5) (optional)</p> <p>Physical Exam Performed (V5) (optional)</p> <p>Medication Active (V5) (optional)</p> <p>Medication Administered (V5) (optional)</p> <p>Medication Dispensed (V6) (optional)</p> <p>Medication Order (V6) (optional)</p> <p>Program Participation (V2) (optional)</p> <p>Patient Care Experience (V5) (optional)</p> | |

| | |
|--|------------------|
| Contained By: | Contains: |
| Provider Care Experience (V5) (optional) | |

This template represents Entity that is practitioner - a person with a formal responsibility in the provisioning of healthcare or related services.

Table 266: Entity Practitioner Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-------|-----------|----------------------------|----------------------------------|
| participantRole (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01) | | | | | |
| templateId | 0..1 | MAY | | 4444-28807 | |
| @root | 1..1 | SHALL | | 4444-28810 | 2.16.840.1.113883.10.20.24.3.162 |
| @extension | 1..1 | SHALL | | 4444-28811 | 2019-12-01 |
| id | 0..1 | MAY | | 4444-29581 | |
| @root | 1..1 | SHALL | | 4444-29582 | |
| id | 0..1 | MAY | | 4444-28808 | |
| @root | 1..1 | SHALL | | 4444-28812 | |
| @extension | 1..1 | SHALL | | 4444-28813 | |
| code | 0..1 | MAY | | 4444-28816 | |
| playingEntity | 0..1 | MAY | | 4444-28809 | |
| code | 1..1 | SHALL | | 4444-28814 | |
| scopingEntity | 0..1 | MAY | | 4444-28815 | |
| code | 0..1 | MAY | | 4444-28817 | |

1. **MAY** contain zero or one [0..1] **templateId** (CONF:4444-28807) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.162" (CONF:4444-28810).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-28811).
2. **MAY** contain zero or one [0..1] **id** (CONF:4444-29581) such that it

Note: Id

 - a. **SHALL** contain exactly one [1..1] **@root** (CONF:4444-29582).

3. **MAY** contain zero or one [0..1] **id** (CONF:4444-28808) such that it
Note: Identifier
 - a. **SHALL** contain exactly one [1..1] **@root** (CONF:4444-28812).
 - b. **SHALL** contain exactly one [1..1] **@extension** (CONF:4444-28813).
4. **MAY** contain zero or one [0..1] **code** (CONF:4444-28816).
Note: Attribute: role - role this practitioner may perform (e.g., doctor, nurse)
5. **MAY** contain zero or one [0..1] **playingEntity** (CONF:4444-28809).
 - a. The playingEntity, if present, **SHALL** contain exactly one [1..1] **code** (CONF:4444-28814).
Note: Attribute: specialty - specific specialty of the practitioner (e.g., anesthesia, cardiology, gastroenterology, etc.)
6. **MAY** contain zero or one [0..1] **scopingEntity** (CONF:4444-28815).
 - a. The scopingEntity, if present, **MAY** contain zero or one [0..1] **code** (CONF:4444-28817).
Note: Attribute: qualification - coded representation of the certification, licenses, or training pertaining to the provision of care (e.g., MD, DO, CRN, CNP, etc.)

Figure 143: Entity Practitioner (Example)

```

<participantRole>
  <templateId root="2.16.840.1.113883.10.20.24.3.162" extension="2019-12-01" />
  <id root="2.16.840.1.113883.4.6" extension="1234567890"/>
  <playingEntity>
    <code code="163WG0100X" displayName="Gastroenterology"
    codeSystem="2.16.840.1.113883.4.642.3.51" codeSystemName="Healthcare Provider Taxonomy"/>
  </playingEntity>
</participantRole>

```

4.5 Facility Location (V2)

[participant: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.100:2017-08-01 (open)]

Table 267: Facility Location (V2) Contexts

| Contained By: | Contains: |
|--|-----------|
| Adverse Event (V2) (optional) Diagnostic Study Performed (V5) (optional) Encounter Order (V5) (optional) Encounter Performed (V5) (optional) Encounter Recommended (V5) (optional) | |

This clinical statement represents the location where an act, observation or procedure took place. The particular location of a facility in which the adverse event, diagnostic study, or encounter occurs or occurred. Examples include, but are not limited to, intensive care units (ICUs), non-ICUs, burn critical-care unit, neonatal ICU, and respiratory-care unit.

Each Encounter, Performed may have 1 or more locations. For example, a patient treated in multiple locations during an individual encounter might be expressed as:

Encounter, Performed: Inpatient Admission
 ICU (location period)
 Non-ICU Admission (location period)
 Rehab (location period)

Table 268: Facility Location (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|--------|-----------|----------------------------|---|
| participant (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.100:2017-08-01) | | | | | |
| @typeCode | 1..1 | SHALL | | 3343-13374 | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC |
| templateId | 1..1 | SHALL | | 3343-13375 | |
| @root | 1..1 | SHALL | | 3343-13376 | 2.16.840.1.113883.10.20.24.3.100 |
| @extension | 1..1 | SHALL | | 3343-28729 | 2017-08-01 |
| time | 1..1 | SHALL | | 3343-13371 | |
| low | 1..1 | SHALL | | 3343-13384 | |
| high | 0..1 | MAY | | 3343-13385 | |
| participantRole | 1..1 | SHALL | | 3343-13372 | |
| @classCode | 1..1 | SHALL | | 3343-13373 | urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = SDLOC |
| code | 1..1 | SHALL | | 3343-13378 | |
| addr | 0..* | SHOULD | | 3343-13379 | |
| telecom | 0..* | SHOULD | | 3343-13380 | |
| playingEntity | 0..1 | MAY | | 3343-13381 | |
| @classCode | 1..1 | SHALL | | 3343-13382 | urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = PLC |
| name | 0..1 | MAY | | 3343-13383 | |

1. **SHALL** contain exactly one [1..1] @typeCode="LOC" location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:3343-13374).
2. **SHALL** contain exactly one [1..1] templateId (CONF:3343-13375) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.24.3.100" (CONF:3343-13376).

- b. **SHALL** contain exactly one [1..1] **@extension**="2017-08-01" (CONF:3343-28729).
- 3. **SHALL** contain exactly one [1..1] **time** (CONF:3343-13371).
 - Note: QDM Attribute: Location Period
 - a. This time **SHALL** contain exactly one [1..1] **low** (CONF:3343-13384).
 - b. This time **MAY** contain zero or one [0..1] **high** (CONF:3343-13385).
- 4. **SHALL** contain exactly one [1..1] **participantRole** (CONF:3343-13372).
 - a. This participantRole **SHALL** contain exactly one [1..1] **@classCode**="SDLOC" service delivery location (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110 **STATIC**) (CONF:3343-13373).
 - b. This participantRole **SHALL** contain exactly one [1..1] **code** (CONF:3343-13378).
 - Note: QDM Attribute: Code
 - c. This participantRole **SHOULD** contain zero or more [0..*] **addr** (CONF:3343-13379).
 - d. This participantRole **SHOULD** contain zero or more [0..*] **telecom** (CONF:3343-13380).
 - e. This participantRole **MAY** contain zero or one [0..1] **playingEntity** (CONF:3343-13381).
 - i. The playingEntity, if present, **SHALL** contain exactly one [1..1] **@classCode**="PLC" place (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41 **STATIC**) (CONF:3343-13382).
 - ii. The playingEntity, if present, **MAY** contain zero or one [0..1] **name** (CONF:3343-13383).

Figure 144: Facility Location (V2) Example

```

<participant typeCode="LOC">
  <!-- Facility Location template -->
  <templateId root="2.16.840.1.113883.10.20.24.3.100" extension="2017-08-01"/>
  <time>
    <!-- QDM Attribute: Location Period -->
    <low value="20170203"/>
    <high value="20170206"/>
  </time>
  <participantRole classCode="SDLOC">
    <code code="GACH"
      codeSystem="2.16.840.1.113883.5.111"
      codeSystemName="HL7RoleCode"
      displayName="General Acute Care Hospital"
    />
    <addr>
      <streetAddressLine>17 Daws Rd.</streetAddressLine>
      <city>Blue Bell</city>
      <state>MA</state>
      <postalCode>02368</postalCode>
      <country>US</country>
    </addr>
    <telecom nullFlavor="UNK"/>
    <playingEntity classCode="PLC">
      <name>Good Health Clinic</name>
    </playingEntity>
  </participantRole>
</participant>

```

4.6 Related To

[sdtc:inFulfillmentOf1: identifier
urn:hl7ii:2.16.840.1.113883.10.20.24.3.150:2017-08-01 (open)]

Table 269: Related To Contexts

| Contained By: | Contains: |
|--|-----------|
| Assessment Performed (V3) (optional) Communication Performed (V2) (optional) Care Goal (V5) (optional) | |

This template represents the QDM Attribute: Related To Something to which the QDM element instance is related to.

This template uses the CDA extension sdtc:inFulfillmentOf1 which is available to be used inside an observation, substanceAdministration, supply, procedure, encounter, procedure or an act. This template will reference (using sdtc:actReference) an already existing QDM element instance in the QRDA document. The id of the existing QDM element will be used to reference the already existing data without repeating it in this template. The sdtc:actReference/id is required and must be the same id as the entry/id it is referencing. The sdtc:actReference/id cannot be a null value. The

sdtc:actReference/classCode and sdtc:actReference/moodCode must be the same as the entry/classCode and entry/moodCode of the entry being referenced.

Table 270: Related To Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-------|-----------|----------------------------|--|
| sdtc:inFulfillmentOf1 (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.150:2017-08-01) | | | | | |
| @typeCode | 1..1 | SHALL | | 3343-29113 | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = FLFS |
| sdtc:templateId | 1..1 | SHALL | | 3343-29104 | |
| @root | 1..1 | SHALL | | 3343-29107 | 2.16.840.1.113883.10.20.24.3.150 |
| @extension | 1..1 | SHALL | | 3343-29108 | 2017-08-01 |
| sdtc:actReference | 1..1 | SHALL | | 3343-29105 | |
| @classCode | 1..1 | SHALL | | 3343-29114 | |
| @moodCode | 1..1 | SHALL | | 3343-29110 | |
| sdtc:id | 1..* | SHALL | | 3343-29106 | |
| @root | 1..1 | SHALL | | 3343-29111 | |
| @extension | 0..1 | MAY | | 3343-29112 | |

1. **SHALL** contain exactly one [1..1] **@typeCode**="FLFS" Fulfills (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3343-29113).
2. **SHALL** contain exactly one [1..1] **sdtc:templateId** (CONF:3343-29104) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.150" (CONF:3343-29107).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2017-08-01" (CONF:3343-29108).
3. **SHALL** contain exactly one [1..1] **sdtc:actReference** (CONF:3343-29105).
 - a. This sdtc:actReference **SHALL** contain exactly one [1..1] **@classCode** (CONF:3343-29114).
Note: **@classCode** must be the same as the entry/classCode of the entry being referenced.
 - b. This sdtc:actReference **SHALL** contain exactly one [1..1] **@moodCode** (CONF:3343-29110).
Note: **@moodCode** must be the same as the entry/moodCode of the entry being referenced.

- c. This `sdtc:actReference` **SHALL** contain at least one `[1..*]` `sdtc:id` (CONF:3343-29106).

Note: The ID must equal another entry/id in the same document instance.

- i. Such `sdtc:ids` **SHALL** contain exactly one `[1..1]` `@root` (CONF:3343-29111).
- ii. Such `sdtc:ids` **MAY** contain zero or one `[0..1]` `@extension` (CONF:3343-29112).

Figure 145: Related To Example

```
<procedure classCode="PROC" moodCode="EVN">
  <!-- Conforms to C-CDA R2 Procedure Activity Procedure (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.14"
    extension="2014-06-09" />
  <!-- QRDA R3: Device Applied Template -->
  <templateId root="2.16.840.1.113883.10.20.24.3.7"
    extension="2014-12-01" />
  ...
  <!-- This Device, Applied procedure is related to a Device, Order
    defined elsewhere in the QRDA XML -->
  <sdtc:inFulfillmentOf1 typeCode="FLFS">
    <sdtc:templateId root="2.16.840.1.113883.10.20.24.3.150"
      extension="2017-08-01"/>
    <!-- The classCode and moodCode are the same as the classCode and moodCode of the
      Device, Order being referenced -->
    <sdtc:actReference classCode="SPLY" moodCode="RQO">
      <!-- The id is the same as the id of the Device, Order being referenced -->
      <sdtc:id root="6a8d037d-f144-4071-9d1f-8a92a11dedc6" />
    </sdtc:actReference>
  </sdtc:inFulfillmentOf1>
</procedure>
```

5 PARTICIPATION AND OTHER TEMPLATES

5.1 Author (V2)

[author: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01
(open)]

Table 271: Author (V2) Contexts

| Contained By: | Contains: |
|---|-----------|
| <p>Adverse Event (V2) (optional) Assessment Performed (V3) (required) Communication Performed (V2) (required) Assessment Recommended (V3) (required) Assessment Order (V2) (required) Device Applied (V6) (optional) Device Order (V5) (required) Device Recommended (V5) (required) Diagnosis (V3) (optional) Diagnostic Study Order (V5) (required) Diagnostic Study Performed (V5) (optional) Diagnostic Study Recommended (V5) (required) Encounter Order (V5) (required) Encounter Performed (V5) (optional) Procedure Performed (V6) (optional) Procedure Order (V6) (required) Procedure Recommended (V6) (required) Encounter Recommended (V5) (required) Substance Recommended (V5) (required) Laboratory Test Performed (V5) (optional) Laboratory Test Order (V5) (required) Laboratory Test Recommended (V5) (required) Allergy Intolerance (V2) (optional) Family History Observation QDM (V4) (required) Immunization Administered (V3) (optional) Immunization Order (V3) (required) Patient Characteristic Observation Assertion (V5) (optional) Intervention Order (V5) (required) Intervention Performed (V5) (optional) Intervention Recommended (V5) (required) Physical Exam Order (V5) (required) Physical Exam Recommended (V5) (required) Physical Exam Performed (V5) (optional) Medication Administered (V5) (optional) Medication Dispensed (V6) (required) Medication Order (V6) (required) Patient Care Experience (V5) (required)</p> | |

| | |
|--|------------------|
| Contained By: | Contains: |
| Provider Care Experience (V5) (required) | |

This template is intended to represent Author Datetime QDM attribute.

Table 272: Author (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|--|-------|-------|-----------|----------------------------|----------------------------------|
| author (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01) | | | | | |
| templateId | 1..1 | SHALL | | 4444-30005 | |
| @root | 1..1 | SHALL | | 4444-30007 | 2.16.840.1.113883.10.20.24.3.155 |
| @extension | 1..1 | SHALL | | 4444-30008 | 2019-12-01 |
| time | 1..1 | SHALL | | 4444-30009 | |
| @value | 1..1 | SHALL | | 4444-30010 | |
| assignedAuthor | 1..1 | SHALL | | 4444-29146 | |
| id | 1..* | SHALL | | 4444-30006 | |

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:4444-30005) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.155" (CONF:4444-30007).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-12-01" (CONF:4444-30008).
2. **SHALL** contain exactly one [1..1] **time** (CONF:4444-30009).
Note: QDM Attribute: Author dateTime
 - a. This time **SHALL** contain exactly one [1..1] **@value** (CONF:4444-30010).
3. **SHALL** contain exactly one [1..1] **assignedAuthor** (CONF:4444-29146).
 - a. This assignedAuthor **SHALL** contain at least one [1..*] **id** (CONF:4444-30006).
Note: nullFlavor is allowed for assignedAuthor/id

Figure 146: Author (V2) Example

```

<author>
  <templateId root="2.16.840.1.113883.10.20.24.3.155" extension="2019-12-01"/>
  <time value="201908111235"/>
  <assignedAuthor>
    <id nullFlavor="NA" />
  </assignedAuthor>
</author>

```

5.2 Author Participation

[author: identifier urn:oid:2.16.840.1.113883.10.20.22.4.119 (open)]

Table 273: Author Participation Contexts

| Contained By: | Contains: |
|---|-----------|
| <p>Medication Activity (V2) (optional) Procedure Activity Act (V2) (optional) Procedure Activity Procedure (V2) (optional) Procedure Activity Observation (V2) (optional) Goal Observation (optional) Substance or Device Allergy - Intolerance Observation (V2) (optional) Planned Act (V2) (optional) Planned Encounter (V2) (optional) Planned Procedure (V2) (optional) Planned Observation (V2) (optional) Planned Supply (V2) (optional) Planned Medication Activity (V2) (optional) Priority Preference (optional) Planned Coverage (optional) Planned Immunization Activity (optional) Immunization Activity (V3) (optional) Result Observation (V3) (optional) Problem Observation (V3) (optional) Problem Concern Act (V3) (optional) Device Applied (V6) (required) Diagnosis (V3) (required) Diagnostic Study Performed (V5) (required) Procedure Performed (V6) (required) Allergy Intolerance (V2) (required) Immunization Administered (V3) (required) Intervention Performed (V5) (required) Physical Exam Performed (V5) (required) Medication Administered (V5) (required) Result (V4) (required)</p> | |

This template represents the Author Participation (including the author timestamp). CDA R2 requires that Author and Author timestamp be asserted in the document header. From there, authorship propagates to contained sections and contained entries, unless explicitly overridden.

The Author Participation template was added to those templates in scope for analysis in R2. Although it is not explicitly stated in all templates the Author Participation template can be used in any template.

Table 274: Author Participation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|--------|-----------|----------------------------|--|
| author (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) | | | | | |
| templateId | 1..1 | SHALL | | 1098-32017 | |
| @root | 1..1 | SHALL | | 1098-32018 | 2.16.840.1.113883.10.20.22.4.119 |
| time | 1..1 | SHALL | | 1098-31471 | |
| assignedAuthor | 1..1 | SHALL | | 1098-31472 | |
| id | 1..* | SHALL | | 1098-31473 | |
| code | 0..1 | SHOULD | | 1098-31671 | urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy) |
| assignedPerson | 0..1 | MAY | | 1098-31474 | |
| name | 0..* | MAY | | 1098-31475 | |
| representedOrganization | 0..1 | MAY | | 1098-31476 | |
| id | 0..* | MAY | | 1098-31478 | |
| name | 0..* | MAY | | 1098-31479 | |
| telecom | 0..* | MAY | | 1098-31480 | |
| addr | 0..* | MAY | | 1098-31481 | |

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-32017) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.119" (CONF:1098-32018).
2. **SHALL** contain exactly one [1..1] **time** (CONF:1098-31471).
3. **SHALL** contain exactly one [1..1] **assignedAuthor** (CONF:1098-31472).
 - a. This assignedAuthor **SHALL** contain at least one [1..*] **id** (CONF:1098-31473).
 Note: This id may be set equal to (a pointer to) an id on a participant elsewhere in the document (header or entries) or a new author participant can be described here. If the id is pointing to a participant already described elsewhere in the document, assignedAuthor/id is sufficient to identify this participant and none of the remaining details of assignedAuthor are required to be set. Application Software must be responsible for resolving the identifier back to its original object and then rendering the information in the correct place in the containing section's narrative text. This id must be a pointer to another author participant.

- i. If the ID isn't referencing an author described elsewhere in the document, then the author components required in US Realm Header are required here as well (CONF:1098-32628).
- b. This assignedAuthor **SHOULD** contain zero or one [0..1] **code**, which **SHOULD** be selected from ValueSet [Healthcare Provider Taxonomy](#) urn:oid:2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1098-31671).
 - i. If the content is patient authored the code **SHOULD** be selected from Personal And Legal Relationship Role Type (2.16.840.1.113883.11.20.12.1) (CONF:1098-32315).
- c. This assignedAuthor **MAY** contain zero or one [0..1] **assignedPerson** (CONF:1098-31474).
 - i. The assignedPerson, if present, **MAY** contain zero or more [0..*] **name** (CONF:1098-31475).
- d. This assignedAuthor **MAY** contain zero or one [0..1] **representedOrganization** (CONF:1098-31476).
 - i. The representedOrganization, if present, **MAY** contain zero or more [0..*] **id** (CONF:1098-31478).
 - ii. The representedOrganization, if present, **MAY** contain zero or more [0..*] **name** (CONF:1098-31479).
 - iii. The representedOrganization, if present, **MAY** contain zero or more [0..*] **telecom** (CONF:1098-31480).
 - iv. The representedOrganization, if present, **MAY** contain zero or more [0..*] **addr** (CONF:1098-31481).

Figure 147: New Author Participant Example

```

<author>
  <templateId root="2.16.840.1.113883.10.20.22.4.119" />
  <time value="201308011235-0800" />
  <assignedAuthor>
    <id root="20cf14fb-b65c-4c8c-a54d-b0cca834c18c" />
    <code code="163W00000X" codeSystem="2.16.840.1.113883.5.53" codeSystemName="Health
Care Provider Taxonomy" displayName="Registered nurse" />
    <assignedPerson>
      <name>
        <given>Nurse</given>
        <family>Nightingale</family>
        <suffix>RN</suffix>
      </name>
    </assignedPerson>
    <representedOrganization>
      <id root="2.16.840.1.113883.19.5" />
      <name>Good Health Hospital</name>
    </representedOrganization>
  </assignedAuthor>
</author>

```

Figure 148: Existing Author Reference Example

```

<author>
  <time value="201308011235-0800" />
  <assignedAuthor>
    <!--
      This id points to a participant already described
      elsewhere in the document
    -->
    <id root="20cf14fb-b65c-4c8c-a54d-b0cca834c18c" />
  </assignedAuthor>
</author>

```

5.3 US Realm Address (AD.US.FIELDED)

[addr: identifier urn:oid:2.16.840.1.113883.10.20.22.5.2 (open)]

Table 275: US Realm Address (AD.US.FIELDED) Contexts

| Contained By: | Contains: |
|---|-----------|
| Medication Dispense (V2) (optional) US Realm Header (V3) (optional) US Realm Header (V3) (required) | |

Reusable address template, for use in US Realm CDA Header.

Table 276: US Realm Address (AD.US.FIELDED) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|--------|-----------|-------------------------|---|
| addr (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) | | | | | |
| @use | 0..1 | SHOULD | | 81-7290 | urn:oid:2.16.840.1.113883.1.11.10637 (PostalAddressUse) |
| country | 0..1 | SHOULD | | 81-7295 | urn:oid:2.16.840.1.113883.3.88.12.80.63 (Country) |
| state | 0..1 | SHOULD | | 81-7293 | urn:oid:2.16.840.1.113883.3.88.12.80.1 (StateValueSet) |
| city | 1..1 | SHALL | | 81-7292 | |
| postalCode | 0..1 | SHOULD | | 81-7294 | urn:oid:2.16.840.1.113883.3.88.12.80.2 (PostalCode) |
| streetAddressLine | 1..4 | SHALL | | 81-7291 | |

If addr/@nullFlavor is present, the remaining conformance statements *SHALL NOT* be enforced

- SHOULD** contain zero or one [0..1] @use, which **SHALL** be selected from ValueSet [PostalAddressUse](#) urn:oid:2.16.840.1.113883.1.11.10637 **STATIC** 2005-05-01 (CONF:81-7290).
- SHOULD** contain zero or one [0..1] country, which **SHALL** be selected from ValueSet [Country](#) urn:oid:2.16.840.1.113883.3.88.12.80.63 **DYNAMIC** (CONF:81-7295).

3. **SHOULD** contain zero or one [0..1] **state** (ValueSet: [StateValueSet](#) urn:oid:2.16.840.1.113883.3.88.12.80.1 **DYNAMIC**) (CONF:81-7293).
 - a. If the country is US, the state element is required but **SHOULD** have @nullFlavor if the state is unknown. If country is not specified, it's assumed to be US. If country is something other than US, the state **MAY** be present but **MAY** be bound to different vocabularies (CONF:81-10024).
4. **SHALL** contain exactly one [1..1] **city** (CONF:81-7292).
5. **SHOULD** contain zero or one [0..1] **postalCode**, which **SHOULD** be selected from ValueSet [PostalCode](#) urn:oid:2.16.840.1.113883.3.88.12.80.2 **DYNAMIC** (CONF:81-7294).
 - a. If the country is US, the postalCode element is required but **SHOULD** have @nullFlavor if the postalCode is unknown. If country is not specified, it's assumed to be US. If country is something other than US, the postalCode **MAY** be present but **MAY** be bound to different vocabularies (CONF:81-10025).
6. **SHALL** contain at least one and not more than 4 **streetAddressLine** (CONF:81-7291).
7. **SHALL NOT** have mixed content except for white space (CONF:81-7296).

Figure 149: US Realm Address Example

```

<addr use="HP">
  <streetAddressLine>22 Sample Street</streetAddressLine>
  <city>Beaverton</city>
  <state>OR</state>
  <postalCode>97867</postalCode>
  <country>US</country>
</addr>

```

5.4 US Realm Date and Time (DTM.US.FIELED)

[effectiveTime: identifier urn:oid:2.16.840.1.113883.10.20.22.5.4 (open)]

Table 277: US Realm Date and Time (DTM.US.FIELED) Contexts

| Contained By: | Contains: |
|---|-----------|
| US Realm Header (V3) (optional) | |
| US Realm Header (V3) (required) | |

The US Realm Clinical Document Date and Time datatype flavor records date and time information. If no time zone offset is provided, you can make no assumption about time, unless you have made a local exchange agreement.

This data type uses the same rules as US Realm Date and Time (DT.US.FIELED), but is used with elements having a datatype of TS.

Table 278: US Realm Date and Time (DTM.US.FIELED) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---------------|--|------|-----------|-------|-------|
| effectiveTime | (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4) | | | | |

1. **SHALL** be precise to the day (CONF:81-10127).
2. **SHOULD** be precise to the minute (CONF:81-10128).
3. **MAY** be precise to the second (CONF:81-10129).
4. If more precise than day, **SHOULD** include time-zone offset (CONF:81-10130).

Note: Use of datetime without a UTC offset may be used in a QRDA Category I document (even if the datetime value is more precise than day) unless one or more of the datetime fields are coming from different time zone. In such case, a UTC offset must be specified everywhere a time component in a datetime field is provided, with the following two exceptions: the effectiveTime element of the [Reporting Parameter Act](#) template and birthTime/value.

Figure 150: US Realm Date and Time Example

```

<!-- Common values for date/time elements would range in precision to the day YYYYMMDD to
precision to the second with a time zone offset YYYYMMDDHHMMSS - ZZzz -->
<!-- time element with TS data type precise to the day for a birthdate -->
<time value="19800531"/>
<!-- effectiveTime element with IVL<TS> data type precise to the second for an observation
-->
<effectiveTime>
  <low value='20110706122735-0800' />
  <high value='20110706122815-0800' />
</effectiveTime>

```

5.5 US Realm Patient Name (PTN.US.FIELDDED)

[name: identifier urn:oid:2.16.840.1.113883.10.20.22.5.1 (open)]

Table 279: US Realm Patient Name (PTN.US.FIELDDED) Contexts

| Contained By: | Contains: |
|---|-----------|
| US Realm Header (V3) (required) | |

The US Realm Patient Name datatype flavor is a set of reusable constraints that can be used for the patient or any other person. It requires a first (given) and last (family) name. If a patient or person has only one name part (e.g., patient with first name only) place the name part in the field required by the organization. Use the appropriate nullFlavor, "Not Applicable" (NA), in the other field.

For information on mixed content see the Extensible Markup Language reference (<http://www.w3c.org/TR/2008/REC-xml-20081126/>).

Table 280: US Realm Patient Name (PTN.US.FIELDED) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-------|-----------|-------------------------|--|
| name (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1) | | | | | |
| @use | 0..1 | MAY | | 81-7154 | urn:oid:2.16.840.1.113883.1.11.15913 (EntityNameUse) |
| family | 1..1 | SHALL | | 81-7159 | |
| @qualifier | 0..1 | MAY | | 81-7160 | urn:oid:2.16.840.1.113883.11.20.9.26 (EntityPersonNamePartQualifier) |
| given | 1..* | SHALL | | 81-7157 | |
| @qualifier | 0..1 | MAY | | 81-7158 | urn:oid:2.16.840.1.113883.11.20.9.26 (EntityPersonNamePartQualifier) |
| prefix | 0..* | MAY | | 81-7155 | |
| @qualifier | 0..1 | MAY | | 81-7156 | urn:oid:2.16.840.1.113883.11.20.9.26 (EntityPersonNamePartQualifier) |
| suffix | 0..1 | MAY | | 81-7161 | |
| @qualifier | 0..1 | MAY | | 81-7162 | urn:oid:2.16.840.1.113883.11.20.9.26 (EntityPersonNamePartQualifier) |

If name/@nullFlavor is present, the remaining conformance statements *SHALL NOT* be enforced

1. **MAY** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet [EntityNameUse](#) urn:oid:2.16.840.1.113883.1.11.15913 **STATIC** 2005-05-01 (CONF:81-7154).
2. **SHALL** contain exactly one [1..1] **family** (CONF:81-7159).
 - a. This family **MAY** contain zero or one [0..1] **@qualifier**, which **SHALL** be selected from ValueSet [EntityPersonNamePartQualifier](#) urn:oid:2.16.840.1.113883.11.20.9.26 **STATIC** 2011-09-30 (CONF:81-7160).
3. **SHALL** contain at least one [1..*] **given** (CONF:81-7157).
 - a. Such givens **MAY** contain zero or one [0..1] **@qualifier**, which **SHALL** be selected from ValueSet [EntityPersonNamePartQualifier](#) urn:oid:2.16.840.1.113883.11.20.9.26 **STATIC** 2011-09-30 (CONF:81-7158).
 - b. The second occurrence of given (given[2]) if provided, **SHALL** include middle name or middle initial (CONF:81-7163).
4. **MAY** contain zero or more [0..*] **prefix** (CONF:81-7155).
 - a. The prefix, if present, **MAY** contain zero or one [0..1] **@qualifier**, which **SHALL** be selected from ValueSet [EntityPersonNamePartQualifier](#) urn:oid:2.16.840.1.113883.11.20.9.26 **STATIC** 2011-09-30 (CONF:81-7156).

5. **MAY** contain zero or one [0..1] **suffix** (CONF:81-7161).
 - a. The suffix, if present, **MAY** contain zero or one [0..1] **@qualifier**, which **SHALL** be selected from ValueSet [EntityPersonNamePartQualifier](#) urn:oid:2.16.840.1.113883.11.20.9.26 **STATIC** 2011-09-30 (CONF:81-7162).
6. **SHALL NOT** have mixed content except for white space (CONF:81-7278).

Figure 151: US Realm Patient Name Example

```

<name use="L">
  <prefix qualifier="TITLE">Rep</suffix>
  <given>Evelyn</given>
  <given qualifier="CL">Eve</given>
  <family qualifier="BR">Everywoman</family>
  <suffix qualifier="AC">J.D.</suffix>
</name>

```

5.6 US Realm Person Name (PN.US.FIELDED)

[name: identifier urn:oid:2.16.840.1.113883.10.20.22.5.1.1 (open)]

Table 281: US Realm Person Name (PN.US.FIELDED) Contexts

| Contained By: | Contains: |
|---|-----------|
| Drug Monitoring Act (required) US Realm Header (V3) (optional) | |

The US Realm Clinical Document Person Name datatype flavor is a set of reusable constraints that can be used for Persons.

Table 282: US Realm Person Name (PN.US.FIELDED) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
|---|-------|-------|-----------|-------------------------|-------|
| name (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) | | | | | |
| name | 1..1 | SHALL | | 81-9368 | |

1. **SHALL** contain exactly one [1..1] **name** (CONF:81-9368).
 - a. The content of name **SHALL** be either a conformant Patient Name (PTN.US.FIELDED), or a string (CONF:81-9371).
 - b. The string **SHALL NOT** contain name parts (CONF:81-9372).

6 TEMPLATE IDS IN THIS GUIDE

Table 283: Template List

| Template Title | Template Type | templateId |
|---|---------------|---|
| QDM-Based QRDA (V7) | document | urn:hl7ii:2.16.840.1.113883.10.20.24.1.2:2019-12-01 |
| QRDA Category I Framework (V4) | document | urn:hl7ii:2.16.840.1.113883.10.20.24.1.1:2017-08-01 |
| US Realm Header (V3) | document | urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2015-08-01 |
| Measure Section | section | urn:oid:2.16.840.1.113883.10.20.24.2.2 |
| Measure Section QDM | section | urn:oid:2.16.840.1.113883.10.20.24.2.3 |
| Patient Data Section | section | urn:oid:2.16.840.1.113883.10.20.17.2.4 |
| Patient Data Section QDM (V7) | section | urn:hl7ii:2.16.840.1.113883.10.20.24.2.1:2019-12-01 |
| Reporting Parameters Section | section | urn:oid:2.16.840.1.113883.10.20.17.2.1 |
| Admission Source | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.151:2017-08-01 |
| Adverse Event (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.146:2019-12-01 |
| Adverse Event Cause Observation Assertion | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.148:2017-08-01 |
| Age Observation | entry | urn:oid:2.16.840.1.113883.10.20.22.4.31 |
| Allergy Intolerance (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.147:2019-12-01 |
| Allergy Status Observation | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.28:2019-06-20 |
| Assessment Order (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.158:2019-12-01 |
| Assessment Performed (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.144:2019-12-01 |
| Assessment Recommended (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.145:2019-12-01 |
| Care Goal (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.1:2019-12-01 |
| Communication Performed (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.156:2019-12-01 |
| Component | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.149:2017-08-01 |
| Criticality Observation | entry | urn:oid:2.16.840.1.113883.10.20.2 |

| Template Title | Template Type | templateId |
|---|---------------|---|
| | | 2.4.145 |
| Days Supplied | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.157:2018-10-01 |
| Deceased Observation (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.79:2015-08-01 |
| Device Applied (V6) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.7:2019-12-01 |
| Device Order (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.9:2019-12-01 |
| Device Order Act (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.130:2019-12-01 |
| Device Recommended (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.10:2019-12-01 |
| Device Recommended Act (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.131:2019-12-01 |
| Diagnosis (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.135:2019-12-01 |
| Diagnosis Concern Act (V4) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.137:2019-12-01 |
| Diagnostic Study Order (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.17:2019-12-01 |
| Diagnostic Study Performed (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.18:2019-12-01 |
| Diagnostic Study Recommended (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.19:2019-12-01 |
| Discharge Medication (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.105:2019-12-01 |
| Drug Monitoring Act | entry | urn:oid:2.16.840.1.113883.10.20.2.4.123 |
| Drug Vehicle | entry | urn:oid:2.16.840.1.113883.10.20.2.4.24 |
| eMeasure Reference QDM | entry | urn:oid:2.16.840.1.113883.10.20.2.4.3.97 |
| Encounter Activity (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.49:2015-08-01 |
| Encounter Diagnosis (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.80:2015-08-01 |
| Encounter Diagnosis QDM | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.168:2019-12-01 |
| Encounter Order (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.22:2019-12-01 |
| Encounter Order Act (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.132:2019-12-01 |
| Encounter Performed (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.23:2019-12-01 |
| Encounter Performed Act (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20. |

| Template Title | Template Type | templateId |
|--|---------------|---|
| | | 24.3.133:2019-12-01 |
| Encounter Recommended (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.24:2019-12-01 |
| Encounter Recommended Act (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.134:2019-12-01 |
| Entry Reference | entry | urn:oid:2.16.840.1.113883.10.20.2.4.122 |
| External Document Reference | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.115:2014-06-09 |
| Family History Death Observation | entry | urn:oid:2.16.840.1.113883.10.20.2.4.47 |
| Family History Observation (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.46:2015-08-01 |
| Family History Observation QDM (V4) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.112:2019-12-01 |
| Family History Organizer (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.45:2015-08-01 |
| Family History Organizer QDM (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.12:2019-12-01 |
| Goal Observation | entry | urn:oid:2.16.840.1.113883.10.20.2.4.121 |
| Immunization Activity (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.52:2015-08-01 |
| Immunization Administered (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.140:2019-12-01 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Immunization Order (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.143:2019-12-01 |
| Immunization Refusal Reason | entry | urn:oid:2.16.840.1.113883.10.20.2.4.53 |
| Immunization Supply Request | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.167:2019-12-01 |
| Incision Datetime | entry | urn:oid:2.16.840.1.113883.10.20.2.4.3.89 |
| Indication (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Intervention Order (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.31:2019-12-01 |
| Intervention Performed (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.32:2019-12-01 |
| Intervention Recommended (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.33:2019-12-01 |
| Laboratory Test Order (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20. |

| Template Title | Template Type | templateId |
|--|---------------|---|
| | | 24.3.37:2019-12-01 |
| Laboratory Test Performed (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.38:2019-12-01 |
| Laboratory Test Recommended (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.39:2019-12-01 |
| Measure Reference | entry | urn:oid:2.16.840.1.113883.10.20.24.3.98 |
| Medication Active (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.41:2019-12-01 |
| Medication Activity (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09 |
| Medication Administered (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.42:2019-12-01 |
| Medication Dispense (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09 |
| Medication Dispensed (V6) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.45:2019-12-01 |
| Medication Dispensed Act (V4) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.139:2019-12-01 |
| Medication Free Text Sig | entry | urn:oid:2.16.840.1.113883.10.20.24.4.147 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Medication Order (V6) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.47:2019-12-01 |
| Medication Supply Order (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09 |
| Medication Supply Request (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.99:2019-12-01 |
| Patient Care Experience (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.48:2019-12-01 |
| Patient Characteristic Clinical Trial Participant (V4) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.51:2017-08-01 |
| Patient Characteristic Expired (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.54:2016-02-01 |
| Patient Characteristic Observation Assertion (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.103:2019-12-01 |
| Patient Characteristic Payer | entry | urn:oid:2.16.840.1.113883.10.20.24.3.55 |
| Physical Exam Order (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.58:2019-12-01 |
| Physical Exam Performed (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.59:2019-12-01 |
| Physical Exam Recommended (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.60:2019-12-01 |
| Planned Act (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20. |

| Template Title | Template Type | templateId |
|--|---------------|---|
| | | 22.4.39:2014-06-09 |
| Planned Coverage | entry | urn:oid:2.16.840.1.113883.10.20.2.4.129 |
| Planned Encounter (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.40:2014-06-09 |
| Planned Immunization Activity | entry | urn:oid:2.16.840.1.113883.10.20.2.4.120 |
| Planned Medication Activity (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.42:2014-06-09 |
| Planned Observation (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.44:2014-06-09 |
| Planned Procedure (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.41:2014-06-09 |
| Planned Supply (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.43:2014-06-09 |
| Precondition for Substance Administration (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09 |
| Present On Admission Indicator | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.169:2019-12-01 |
| Principal Diagnosis (RETIRED) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.152:2019-12-01 |
| Priority Preference | entry | urn:oid:2.16.840.1.113883.10.20.2.4.143 |
| Problem Concern Act (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.3:2015-08-01 |
| Problem Observation (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01 |
| Problem Status | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.6:2019-06-20 |
| Procedure Activity Act (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.12:2014-06-09 |
| Procedure Activity Observation (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.13:2014-06-09 |
| Procedure Activity Procedure (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09 |
| Procedure Order (V6) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.63:2019-12-01 |
| Procedure Performed (V6) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.64:2019-12-01 |
| Procedure Recommended (V6) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.65:2019-12-01 |
| Product Instance | entry | urn:oid:2.16.840.1.113883.10.20.2.4.37 |
| Prognosis Observation | entry | urn:oid:2.16.840.1.113883.10.20.2.4.113 |
| Program Participation (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20. |

| Template Title | Template Type | templateId |
|--|---------------|---|
| | | 24.3.154:2019-12-01 |
| Provider Care Experience (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.67:2019-12-01 |
| Provider Characteristic Observation Assertion (RETIRED) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.114:2019-12-01 |
| Rank | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.166:2019-12-01 |
| Reaction Observation (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Related Person QDM | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.170:2019-12-01 |
| Reporting Parameters Act | entry | urn:oid:2.16.840.1.113883.10.20.17.3.8 |
| Result (V4) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.87:2019-12-01 |
| Result Observation (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2015-08-01 |
| Service Delivery Location | entry | urn:oid:2.16.840.1.113883.10.20.22.4.32 |
| Severity Observation (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09 |
| Status (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.93:2019-12-01 |
| Substance Administered Act | entry | urn:oid:2.16.840.1.113883.10.20.22.4.118 |
| Substance or Device Allergy - Intolerance Observation (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.90:2014-06-09 |
| Substance Recommended (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.75:2019-12-01 |
| Symptom (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.136:2019-12-01 |
| Symptom Concern Act (V4) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.138:2019-12-01 |
| Target Outcome (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.119:2017-08-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Facility Location (V2) | subentry | urn:hl7ii:2.16.840.1.113883.10.20. |

| Template Title | Template Type | templateId |
|--|----------------------|---|
| | | 24.3.100:2017-08-01 |
| Related To | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.150:2017-08-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |
| US Realm Address (AD.US.FIELDDED) | unspecified | urn:oid:2.16.840.1.113883.10.20.2.5.2 |
| US Realm Date and Time (DTM.US.FIELDDED) | unspecified | urn:oid:2.16.840.1.113883.10.20.2.5.4 |
| US Realm Patient Name (PTN.US.FIELDDED) | unspecified | urn:oid:2.16.840.1.113883.10.20.2.5.1 |
| US Realm Person Name (PN.US.FIELDDED) | unspecified | urn:oid:2.16.840.1.113883.10.20.2.5.1.1 |

Table 284: Template Containments

| Template Title | Template Type | templateId |
|--|----------------------|---|
| QDM-Based QRDA (V7) | document | urn:hl7ii:2.16.840.1.113883.10.20.24.1.2:2019-12-01 |
| Reporting Parameters Section | section | urn:oid:2.16.840.1.113883.10.20.17.2.1 |
| Reporting Parameters Act | entry | urn:oid:2.16.840.1.113883.10.20.17.3.8 |
| Measure Section QDM | section | urn:oid:2.16.840.1.113883.10.20.24.2.3 |
| eMeasure Reference QDM | entry | urn:oid:2.16.840.1.113883.10.20.24.3.97 |
| Patient Data Section QDM (V7) | section | urn:hl7ii:2.16.840.1.113883.10.20.24.2.1:2019-12-01 |
| Patient Characteristic Payer | entry | urn:oid:2.16.840.1.113883.10.20.24.3.55 |
| Patient Characteristic Expired (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.54:2016-02-01 |
| Patient Characteristic Clinical Trial Participant (V4) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.51:2017-08-01 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Adverse Event (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.146:2019-12-01 |
| Reaction Observation (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09 |
| Medication Activity (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09 |
| Drug Vehicle | entry | urn:oid:2.16.840.1.113883.10.20.22.4.24 |
| Drug Monitoring Act | entry | urn:oid:2.16.840.1.113883.10.20.22.4.123 |
| US Realm Person Name (PN.US.FIELDDED) | unspecified | urn:oid:2.16.840.1.113883.10.20.22.5.1.1 |
| Indication (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09 |
| Medication Supply Order (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |

| Template Title | Template Type | templateId |
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| Medication Dispense (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09 |
| US Realm Address (AD.US.FIELDDED) | unspecified | urn:oid:2.16.840.1.113883.10.20.22.5.2 |
| Medication Supply Order (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.22.4.119 |
| Substance Administered Act | entry | urn:oid:2.16.840.1.113883.10.20.22.4.118 |
| Precondition for Substance Administration (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09 |
| Medication Free Text Sig | entry | urn:oid:2.16.840.1.113883.10.20.22.4.147 |
| Procedure Activity Procedure (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09 |
| Service Delivery Location | entry | urn:oid:2.16.840.1.113883.10.20.22.4.32 |
| Product Instance | entry | urn:oid:2.16.840.1.113883.10.20.22.4.37 |
| Medication Activity (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09 |
| Drug Vehicle | entry | urn:oid:2.16.840.1.113883.10.20.22.4.24 |
| Drug Monitoring Act | entry | urn:oid:2.16.840.1.113883.10.20.22.4.123 |
| US Realm Person Name (PN.US.FIELDDED) | unspecified | urn:oid:2.16.840.1.113883.10.20.22.5.1.1 |
| Indication (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09 |
| Medication Supply Order (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09 |
| Medication Information | entry | urn:hl7ii:2.16.840.1.113883.10.20. |

| Template Title | Template Type | templateId |
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| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Medication Dispense (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09 |
| US Realm Address (AD.US.FIELDDED) | unspecified | urn:oid:2.16.840.1.113883.10.20.2.5.2 |
| Medication Supply Order (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |
| Substance Administered Act | entry | urn:oid:2.16.840.1.113883.10.20.2.4.118 |
| Precondition for Substance Administration (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09 |
| Medication Free Text Sig | entry | urn:oid:2.16.840.1.113883.10.20.2.4.147 |
| Indication (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |
| Severity Observation (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09 |
| Severity Observation (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09 |

| Template Title | Template Type | templateId |
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| Facility Location (V2) | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.100:2017-08-01 |
| Adverse Event Cause Observation Assertion | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.148:2017-08-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Assessment Performed (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.144:2019-12-01 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Component | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.149:2017-08-01 |
| Related To | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.150:2017-08-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Communication Performed (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.156:2019-12-01 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Related To | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.150:2017-08-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |

| Template Title | Template Type | templateId |
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| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Assessment Recommended (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.145:2019-12-01 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Assessment Order (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.158:2019-12-01 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Care Goal (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.1:2019-12-01 |
| Target Outcome (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.119:2017-08-01 |
| Related To | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.150:2017-08-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |

| Template Title | Template Type | templateId |
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| Status (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.93:2019-12-01 |
| Device Applied (V6) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.7:2019-12-01 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Device Order Act (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.130:2019-12-01 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Device Order (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.9:2019-12-01 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Device Recommended Act (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.131:2019-12-01 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Device Recommended (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.10:2019-12-01 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |

| Template Title | Template Type | templateId |
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| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Diagnosis Concern Act (V4) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.137:2019-12-01 |
| Diagnosis (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.135:2019-12-01 |
| Severity Observation (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Diagnostic Study Order (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.17:2019-12-01 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Diagnostic Study Performed (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.18:2019-12-01 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |
| Facility Location (V2) | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.100:2017-08-01 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |

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| Component | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.149:2017-08-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Status (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.93:2019-12-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Result (V4) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.87:2019-12-01 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |
| Diagnostic Study Recommended (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.19:2019-12-01 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Discharge Medication (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.105:2019-12-01 |
| Medication Activity (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09 |
| Drug Vehicle | entry | urn:oid:2.16.840.1.113883.10.20.2.4.24 |
| Drug Monitoring Act | entry | urn:oid:2.16.840.1.113883.10.20.2.4.123 |
| US Realm Person Name (PN.US.FIELDDED) | unspecified | urn:oid:2.16.840.1.113883.10.20.2.5.1.1 |
| Reaction Observation (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09 |
| Procedure Activity Procedure (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09 |

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| Service Delivery Location | entry | urn:oid:2.16.840.1.113883.10.20.2.4.32 |
| Product Instance | entry | urn:oid:2.16.840.1.113883.10.20.2.4.37 |
| Indication (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |
| Severity Observation (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09 |
| Indication (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09 |
| Medication Supply Order (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Medication Dispense (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09 |
| US Realm Address (AD.US.FIELDDED) | unspecified | urn:oid:2.16.840.1.113883.10.20.2.5.2 |
| Medication Supply Order (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |
| Substance Administered Act | entry | urn:oid:2.16.840.1.113883.10.20.2.4.118 |

| Template Title | Template Type | templateId |
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| Precondition for Substance Administration (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09 |
| Medication Free Text Sig | entry | urn:oid:2.16.840.1.113883.10.20.2.4.147 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Days Supplied | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.157:2018-10-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Encounter Order Act (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.132:2019-12-01 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Encounter Order (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.22:2019-12-01 |
| Facility Location (V2) | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.100:2017-08-01 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Encounter Performed Act (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.133:2019-12-01 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Encounter Performed (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.23:2019-12-01 |
| Facility Location (V2) | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.100:2017-08-01 |
| Admission Source | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.151:2017-08-01 |

| Template Title | Template Type | templateId |
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| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Encounter Diagnosis QDM | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.168:2019-12-01 |
| Rank | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.166:2019-12-01 |
| Present On Admission Indicator | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.169:2019-12-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Procedure Performed (V6) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.64:2019-12-01 |
| Incision Datetime | entry | urn:oid:2.16.840.1.113883.10.20.24.3.89 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.24.119 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Component | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.149:2017-08-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Rank | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.166:2019-12-01 |
| Status (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.93:2019-12-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Result (V4) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.87:2019-12-01 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.24.119 |
| Procedure Order (V6) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.63:2019-12-01 |

| Template Title | Template Type | templateId |
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| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Rank | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.166:2019-12-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Procedure Recommended (V6) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.65:2019-12-01 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Rank | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.166:2019-12-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Symptom Concern Act (V4) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.138:2019-12-01 |
| Symptom (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.136:2019-12-01 |
| Severity Observation (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Substance Recommended (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.75:2019-12-01 |

| Template Title | Template Type | templateId |
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| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Laboratory Test Performed (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.38:2019-12-01 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Component | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.149:2017-08-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Status (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.93:2019-12-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Result (V4) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.87:2019-12-01 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |
| Laboratory Test Order (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.37:2019-12-01 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |

| Template Title | Template Type | templateId |
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| Laboratory Test Recommended (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.39:2019-12-01 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Allergy Intolerance (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.147:2019-12-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Encounter Recommended Act (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.134:2019-12-01 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Encounter Recommended (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.24:2019-12-01 |
| Facility Location (V2) | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.100:2017-08-01 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |

| Template Title | Template Type | templateId |
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| Family History Organizer QDM (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.12:2019-12-01 |
| Family History Observation QDM (V4) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.112:2019-12-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Immunization Administered (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.140:2019-12-01 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Immunization Order (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.143:2019-12-01 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Immunization Supply Request | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.167:2019-12-01 |

| Template Title | Template Type | templateId |
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| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Patient Characteristic Observation Assertion (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.103:2019-12-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Intervention Order (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.31:2019-12-01 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Intervention Performed (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.32:2019-12-01 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Status (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.93:2019-12-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Result (V4) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.87:2019-12-01 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |
| Intervention Recommended (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.33:2019-12-01 |

| Template Title | Template Type | templateId |
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| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Physical Exam Order (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.58:2019-12-01 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Physical Exam Recommended (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.60:2019-12-01 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Physical Exam Performed (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.59:2019-12-01 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |

| Template Title | Template Type | templateId |
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| Component | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.149:2017-08-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Medication Active (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.41:2019-12-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Medication Administered (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.42:2019-12-01 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Medication Dispensed Act (V4) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.139:2019-12-01 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Medication Dispensed (V6) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.45:2019-12-01 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Days Supplied | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.157:2018-10-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |

| Template Title | Template Type | templateId |
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| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Medication Order (V6) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.47:2019-12-01 |
| Reason (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.88:2017-08-01 |
| Days Supplied | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.157:2018-10-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Medication Supply Request (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.99:2019-12-01 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Program Participation (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.154:2019-12-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Patient Care Experience (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.48:2019-12-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |

| Template Title | Template Type | templateId |
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| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Provider Care Experience (V5) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.67:2019-12-01 |
| Entity Care Partner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.160:2019-12-01 |
| Entity Patient | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.161:2019-12-01 |
| Entity Organization | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.163:2019-12-01 |
| Entity Practitioner | subentry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.162:2019-12-01 |
| Author (V2) | unspecified | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| Related Person QDM | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.170:2019-12-01 |
| QRDA Category I Framework (V4) | document | urn:hl7ii:2.16.840.1.113883.10.20.24.1.1:2017-08-01 |
| Reporting Parameters Section | section | urn:oid:2.16.840.1.113883.10.20.17.2.1 |
| Reporting Parameters Act | entry | urn:oid:2.16.840.1.113883.10.20.17.3.8 |
| Patient Data Section | section | urn:oid:2.16.840.1.113883.10.20.17.2.4 |
| Measure Section | section | urn:oid:2.16.840.1.113883.10.20.24.2.2 |
| Measure Reference | entry | urn:oid:2.16.840.1.113883.10.20.24.3.98 |
| US Realm Header (V3) | document | urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2015-08-01 |
| US Realm Patient Name (PTN.US.FIELDDED) | unspecified | urn:oid:2.16.840.1.113883.10.20.22.5.1 |
| US Realm Address (AD.US.FIELDDED) | unspecified | urn:oid:2.16.840.1.113883.10.20.22.5.2 |
| US Realm Address (AD.US.FIELDDED) | unspecified | urn:oid:2.16.840.1.113883.10.20.22.5.2 |
| US Realm Person Name (PN.US.FIELDDED) | unspecified | urn:oid:2.16.840.1.113883.10.20.22.5.1.1 |
| US Realm Date and Time (DTM.US.FIELDDED) | unspecified | urn:oid:2.16.840.1.113883.10.20.22.5.4 |
| US Realm Date and Time (DTM.US.FIELDDED) | unspecified | urn:oid:2.16.840.1.113883.10.20.22.5.4 |
| Deceased Observation (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.79:2015-08-01 |

| Template Title | Template Type | templateId |
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| Problem Observation (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01 |
| Age Observation | entry | urn:oid:2.16.840.1.113883.10.20.22.4.31 |
| Prognosis Observation | entry | urn:oid:2.16.840.1.113883.10.20.22.4.113 |
| Priority Preference | entry | urn:oid:2.16.840.1.113883.10.20.22.4.143 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.22.4.119 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.22.4.119 |
| Problem Status | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.6:2019-06-20 |
| Encounter Activity (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.49:2015-08-01 |
| Service Delivery Location | entry | urn:oid:2.16.840.1.113883.10.20.22.4.32 |
| Indication (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09 |
| Encounter Diagnosis (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.80:2015-08-01 |
| Problem Observation (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01 |
| Age Observation | entry | urn:oid:2.16.840.1.113883.10.20.22.4.31 |
| Prognosis Observation | entry | urn:oid:2.16.840.1.113883.10.20.22.4.113 |
| Priority Preference | entry | urn:oid:2.16.840.1.113883.10.20.22.4.143 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.22.4.119 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.22.4.119 |
| Problem Status | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.6:2019-06-20 |
| Family History Organizer (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.45:2015-08-01 |
| Family History Observation (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.46:2015-08-01 |
| Age Observation | entry | urn:oid:2.16.840.1.113883.10.20.22.4.31 |
| Family History Death Observation | entry | urn:oid:2.16.840.1.113883.10.20.22.4.47 |
| Immunization Activity (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.52:2015-08-01 |

| Template Title | Template Type | templateId |
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| Drug Vehicle | entry | urn:oid:2.16.840.1.113883.10.20.2.4.24 |
| Immunization Refusal Reason | entry | urn:oid:2.16.840.1.113883.10.20.2.4.53 |
| Reaction Observation (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09 |
| Medication Activity (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09 |
| Drug Vehicle | entry | urn:oid:2.16.840.1.113883.10.20.2.4.24 |
| Drug Monitoring Act | entry | urn:oid:2.16.840.1.113883.10.20.2.4.123 |
| US Realm Person Name (PN.US.FIELDDED) | unspecified | urn:oid:2.16.840.1.113883.10.20.2.5.1.1 |
| Indication (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09 |
| Medication Supply Order (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Medication Dispense (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09 |
| US Realm Address (AD.US.FIELDDED) | unspecified | urn:oid:2.16.840.1.113883.10.20.2.5.2 |
| Medication Supply Order (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |

| Template Title | Template Type | templateId |
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| Substance Administered Act | entry | urn:oid:2.16.840.1.113883.10.20.2.4.118 |
| Precondition for Substance Administration (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09 |
| Medication Free Text Sig | entry | urn:oid:2.16.840.1.113883.10.20.2.4.147 |
| Procedure Activity Procedure (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09 |
| Service Delivery Location | entry | urn:oid:2.16.840.1.113883.10.20.2.4.32 |
| Product Instance | entry | urn:oid:2.16.840.1.113883.10.20.2.4.37 |
| Medication Activity (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09 |
| Drug Vehicle | entry | urn:oid:2.16.840.1.113883.10.20.2.4.24 |
| Drug Monitoring Act | entry | urn:oid:2.16.840.1.113883.10.20.2.4.123 |
| US Realm Person Name (PN.US.FIELDDED) | unspecified | urn:oid:2.16.840.1.113883.10.20.2.5.1.1 |
| Indication (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09 |
| Medication Supply Order (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Medication Dispense (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09 |
| US Realm Address (AD.US.FIELDDED) | unspecified | urn:oid:2.16.840.1.113883.10.20.2.5.2 |
| Medication Supply Order (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |

| Template Title | Template Type | templateId |
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| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |
| Substance Administered Act | entry | urn:oid:2.16.840.1.113883.10.20.2.4.118 |
| Precondition for Substance Administration (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09 |
| Medication Free Text Sig | entry | urn:oid:2.16.840.1.113883.10.20.2.4.147 |
| Indication (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |
| Severity Observation (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09 |
| Indication (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09 |
| Medication Supply Order (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Medication Dispense (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09 |
| US Realm Address (AD.US.FIELDDED) | unspecified | urn:oid:2.16.840.1.113883.10.20.2.5.2 |
| Medication Supply Order (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |

| Template Title | Template Type | templateId |
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| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.22.4.119 |
| Substance Administered Act | entry | urn:oid:2.16.840.1.113883.10.20.22.4.118 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Precondition for Substance Administration (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09 |
| Planned Act (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.39:2014-06-09 |
| Indication (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09 |
| Priority Preference | entry | urn:oid:2.16.840.1.113883.10.20.22.4.143 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.22.4.119 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.22.4.119 |
| Planned Encounter (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.40:2014-06-09 |
| Service Delivery Location | entry | urn:oid:2.16.840.1.113883.10.20.22.4.32 |
| Indication (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09 |
| Priority Preference | entry | urn:oid:2.16.840.1.113883.10.20.22.4.143 |
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| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.22.4.119 |
| Planned Immunization Activity | entry | urn:oid:2.16.840.1.113883.10.20.22.4.120 |
| Indication (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09 |
| Priority Preference | entry | urn:oid:2.16.840.1.113883.10.20.22.4.143 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.22.4.119 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.22.4.119 |

| Template Title | Template Type | templateId |
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| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Precondition for Substance Administration (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09 |
| Planned Medication Activity (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.42:2014-06-09 |
| Indication (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Priority Preference | entry | urn:oid:2.16.840.1.113883.10.20.2.4.143 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |
| Precondition for Substance Administration (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09 |
| Planned Observation (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.44:2014-06-09 |
| Indication (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09 |
| Priority Preference | entry | urn:oid:2.16.840.1.113883.10.20.2.4.143 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |
| Planned Coverage | entry | urn:oid:2.16.840.1.113883.10.20.2.4.129 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |
| Planned Procedure (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.41:2014-06-09 |
| Indication (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09 |
| Priority Preference | entry | urn:oid:2.16.840.1.113883.10.20.2.4.143 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |

| Template Title | Template Type | templateId |
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| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |
| Planned Supply (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.43:2014-06-09 |
| Product Instance | entry | urn:oid:2.16.840.1.113883.10.20.2.4.37 |
| Indication (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Priority Preference | entry | urn:oid:2.16.840.1.113883.10.20.2.4.143 |
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| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Planned Coverage | entry | urn:oid:2.16.840.1.113883.10.20.2.4.129 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |
| Principal Diagnosis (RETIRED) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.152:2019-12-01 |
| Problem Concern Act (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.3:2015-08-01 |
| Priority Preference | entry | urn:oid:2.16.840.1.113883.10.20.2.4.143 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |
| Problem Observation (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01 |
| Age Observation | entry | urn:oid:2.16.840.1.113883.10.20.2.4.31 |
| Prognosis Observation | entry | urn:oid:2.16.840.1.113883.10.20.2.4.113 |
| Priority Preference | entry | urn:oid:2.16.840.1.113883.10.20.2.4.143 |

| Template Title | Template Type | templateId |
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| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |
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| Problem Status | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.6:2019-06-20 |
| Procedure Activity Act (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.12:2014-06-09 |
| Service Delivery Location | entry | urn:oid:2.16.840.1.113883.10.20.2.4.32 |
| Medication Activity (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09 |
| Drug Vehicle | entry | urn:oid:2.16.840.1.113883.10.20.2.4.24 |
| Drug Monitoring Act | entry | urn:oid:2.16.840.1.113883.10.20.2.4.123 |
| US Realm Person Name (PN.US.FIELDDED) | unspecified | urn:oid:2.16.840.1.113883.10.20.2.5.1.1 |
| Reaction Observation (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09 |
| Procedure Activity Procedure (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09 |
| Service Delivery Location | entry | urn:oid:2.16.840.1.113883.10.20.2.4.32 |
| Product Instance | entry | urn:oid:2.16.840.1.113883.10.20.2.4.37 |
| Indication (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |
| Severity Observation (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09 |
| Indication (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09 |
| Medication Supply Order (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |

| Template Title | Template Type | templateId |
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| Medication Dispense (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09 |
| US Realm Address (AD.US.FIELDDED) | unspecified | urn:oid:2.16.840.1.113883.10.20.22.5.2 |
| Medication Supply Order (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.22.4.119 |
| Substance Administered Act | entry | urn:oid:2.16.840.1.113883.10.20.22.4.118 |
| Precondition for Substance Administration (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09 |
| Medication Free Text Sig | entry | urn:oid:2.16.840.1.113883.10.20.22.4.147 |
| Indication (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.22.4.119 |
| Procedure Activity Observation (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.13:2014-06-09 |
| Service Delivery Location | entry | urn:oid:2.16.840.1.113883.10.20.22.4.32 |
| Medication Activity (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09 |
| Drug Vehicle | entry | urn:oid:2.16.840.1.113883.10.20.22.4.24 |
| Drug Monitoring Act | entry | urn:oid:2.16.840.1.113883.10.20.22.4.123 |
| US Realm Person Name (PN.US.FIELDDED) | unspecified | urn:oid:2.16.840.1.113883.10.20.22.5.1.1 |
| Reaction Observation (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09 |

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| Procedure Activity Procedure (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09 |
| Service Delivery Location | entry | urn:oid:2.16.840.1.113883.10.20.22.4.32 |
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| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.22.4.119 |
| Severity Observation (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09 |
| Indication (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09 |
| Medication Supply Order (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Medication Dispense (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09 |
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| Medication Supply Order (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
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| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
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| Template Title | Template Type | templateId |
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| Substance Administered Act | entry | urn:oid:2.16.840.1.113883.10.20.2.4.118 |
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| Medication Free Text Sig | entry | urn:oid:2.16.840.1.113883.10.20.2.4.147 |
| Reaction Observation (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09 |
| Medication Activity (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09 |
| Drug Vehicle | entry | urn:oid:2.16.840.1.113883.10.20.2.4.24 |
| Drug Monitoring Act | entry | urn:oid:2.16.840.1.113883.10.20.2.4.123 |
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| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Medication Dispense (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09 |
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| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
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| Medication Free Text Sig | entry | urn:oid:2.16.840.1.113883.10.20.2.4.147 |
| Procedure Activity Procedure (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09 |
| Service Delivery Location | entry | urn:oid:2.16.840.1.113883.10.20.2.4.32 |
| Product Instance | entry | urn:oid:2.16.840.1.113883.10.20.2.4.37 |
| Medication Activity (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09 |
| Drug Vehicle | entry | urn:oid:2.16.840.1.113883.10.20.2.4.24 |
| Drug Monitoring Act | entry | urn:oid:2.16.840.1.113883.10.20.2.4.123 |
| US Realm Person Name (PN.US.FIELDDED) | unspecified | urn:oid:2.16.840.1.113883.10.20.2.5.1.1 |
| Indication (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09 |
| Medication Supply Order (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Medication Dispense (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09 |
| US Realm Address (AD.US.FIELDDED) | unspecified | urn:oid:2.16.840.1.113883.10.20.2.5.2 |
| Medication Supply Order (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |

| Template Title | Template Type | templateId |
|--|----------------------|---|
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |
| Substance Administered Act | entry | urn:oid:2.16.840.1.113883.10.20.2.4.118 |
| Precondition for Substance Administration (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09 |
| Medication Free Text Sig | entry | urn:oid:2.16.840.1.113883.10.20.2.4.147 |
| Indication (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |
| Severity Observation (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09 |
| Indication (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |
| Provider Characteristic Observation Assertion (RETIRED) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.114:2019-12-01 |
| Result Observation (V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2015-08-01 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |
| Substance or Device Allergy - Intolerance Observation (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.24.3.90:2014-06-09 |
| Reaction Observation (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09 |
| Medication Activity (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09 |
| Drug Vehicle | entry | urn:oid:2.16.840.1.113883.10.20.2.4.24 |
| Drug Monitoring Act | entry | urn:oid:2.16.840.1.113883.10.20.2.4.123 |
| US Realm Person Name (PN.US.FIELDDED) | unspecified | urn:oid:2.16.840.1.113883.10.20.2.5.1.1 |

| Template Title | Template Type | templateId |
|--|---------------|--|
| Indication (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09 |
| Medication Supply Order (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Medication Dispense (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09 |
| US Realm Address (AD.US.FIELDDED) | unspecified | urn:oid:2.16.840.1.113883.10.20.22.5.2 |
| Medication Supply Order (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.22.4.119 |
| Substance Administered Act | entry | urn:oid:2.16.840.1.113883.10.20.22.4.118 |
| Precondition for Substance Administration (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09 |
| Medication Free Text Sig | entry | urn:oid:2.16.840.1.113883.10.20.22.4.147 |
| Procedure Activity Procedure (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09 |
| Service Delivery Location | entry | urn:oid:2.16.840.1.113883.10.20.22.4.32 |
| Product Instance | entry | urn:oid:2.16.840.1.113883.10.20.22.4.37 |
| Medication Activity (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09 |

| Template Title | Template Type | templateId |
|--|---------------|--|
| Drug Vehicle | entry | urn:oid:2.16.840.1.113883.10.20.22.4.24 |
| Drug Monitoring Act | entry | urn:oid:2.16.840.1.113883.10.20.22.4.123 |
| US Realm Person Name (PN.US.FIELDDED) | unspecified | urn:oid:2.16.840.1.113883.10.20.22.5.1.1 |
| Indication (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09 |
| Medication Supply Order (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Medication Dispense (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09 |
| US Realm Address (AD.US.FIELDDED) | unspecified | urn:oid:2.16.840.1.113883.10.20.22.5.2 |
| Medication Supply Order (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 |
| Immunization Medication Information (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 |
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.22.4.119 |
| Substance Administered Act | entry | urn:oid:2.16.840.1.113883.10.20.22.4.118 |
| Precondition for Substance Administration (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09 |
| Medication Free Text Sig | entry | urn:oid:2.16.840.1.113883.10.20.22.4.147 |
| Indication (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09 |

| Template Title | Template Type | templateId |
|--|----------------------|--|
| Instruction (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |
| Severity Observation (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09 |
| Severity Observation (V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09 |
| Author Participation | unspecified | urn:oid:2.16.840.1.113883.10.20.2.4.119 |
| Criticality Observation | entry | urn:oid:2.16.840.1.113883.10.20.2.4.145 |
| Allergy Status Observation | entry | urn:hl7ii:2.16.840.1.113883.10.20.22.4.28:2019-06-20 |

7 VALUE SETS IN THIS GUIDE

Table 285: Race Value Set

| <p>Value Set: Race Value Set urn:oid:2.16.840.1.113883.1.11.14914 (Clinical Focus: All concepts that can describe a person's "race" as defined by the United States Bureau of Census),(Data Element Scope: Personal Demographic information, can be multiple.),(Inclusion Criteria: All descendant concepts from the concept "1000-9 Race", excluding that root concept, as derived from the Race and Ethnicity - CDC code system.),(Exclusion Criteria: Concepts that are not a descendant of "Race", therefore, no concepts descendant from "2133-7 Ethnicity". Also the root concept "Race".)</p> <p>This value set was imported on 6/29/2019 with a version of 20190522. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.1.11.14914/expansion</p> | | | |
|---|------------------------|---------------------------------|----------------------------------|
| Code | Code System | Code System OID | Print Name |
| 1002-5 | Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 | American Indian or Alaska Native |
| 1004-1 | Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 | American Indian |
| 1006-6 | Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 | Abenaki |
| 1008-2 | Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 | Algonquian |
| 1010-8 | Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 | Apache |
| 1011-6 | Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 | Chiricahua |
| 1012-4 | Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 | Fort Sill Apache |
| 1013-2 | Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 | Jicarilla Apache |
| 1014-0 | Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 | Lipan Apache |
| 1015-7 | Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 | Mescalero Apache |
| ... | | | |

Table 286: HL7 BasicConfidentialityKind

Value Set: HL7 BasicConfidentialityKind urn:oid:2.16.840.1.113883.1.11.16926
 (Clinical Focus: Commonly used confidentiality constraints placed upon clinical documents),(Data Element Scope:),(Inclusion Criteria:),(Exclusion Criteria:)

This value set was imported on 6/25/2019 with a version of 20190425.
 Value Set Source:
<https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.1.11.16926/expansion>

| Code | Code System | Code System OID | Print Name |
|------|--------------------|--------------------------------|-----------------|
| N | HL7Confidentiality | urn:oid:2.16.840.1.113883.5.25 | normal |
| R | HL7Confidentiality | urn:oid:2.16.840.1.113883.5.25 | restricted |
| V | HL7Confidentiality | urn:oid:2.16.840.1.113883.5.25 | very restricted |

Table 287: Language

Value Set: Language urn:oid:2.16.840.1.113883.1.11.11526
 A value set of codes defined by Internet RFC 5646.

Use 2 character code if one exists.
 Use 3 character code if a 2 character code does not exist.
 Including type = region is allowed

See <http://www.iana.org/assignments/language-subtag-registry/language-subtag-registry>
 Value Set Source: http://www.loc.gov/standards/iso639-2/php/code_list.php

| Code | Code System | Code System OID | Print Name |
|------|-------------|-------------------------------------|----------------------|
| aa | Language | urn:oid:2.16.840.1.113883.6.12 1 | Afar |
| ab | Language | urn:oid:2.16.840.1.113883.6.12 1 | Abkhazian |
| ace | Language | urn:oid:2.16.840.1.113883.6.12 1 | Achinese |
| ach | Language | urn:oid:2.16.840.1.113883.6.12 1 | Acoli |
| ada | Language | urn:oid:2.16.840.1.113883.6.12 1 | Adangme |
| ady | Language | urn:oid:2.16.840.1.113883.6.12 1 | Adyghe; Adygei |
| ae | Language | urn:oid:2.16.840.1.113883.6.12 1 | Avestan |
| af | Language | urn:oid:2.16.840.1.113883.6.12 1 | Afrikaans |
| afa | Language | urn:oid:2.16.840.1.113883.6.12 1 | Afro-Asiatic (Other) |
| afh | Language | urn:oid:2.16.840.1.113883.6.12 1 | Afrihili |
| ... | | | |

Table 288: Telecom Use (US Realm Header)

| Value Set: Telecom Use (US Realm Header) urn:oid:2.16.840.1.113883.11.20.9.20 | | | |
|---|---------------|----------------------------------|----------------|
| Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.11.20.9.20/expansion | | | |
| Code | Code System | Code System OID | Print Name |
| HP | HL7AddressUse | urn:oid:2.16.840.1.113883.5.1119 | Primary home |
| HV | HL7AddressUse | urn:oid:2.16.840.1.113883.5.1119 | Vacation home |
| WP | HL7AddressUse | urn:oid:2.16.840.1.113883.5.1119 | Work place |
| MC | HL7AddressUse | urn:oid:2.16.840.1.113883.5.1119 | Mobile contact |

Table 289: Administrative Gender (HL7 V3)

| Value Set: Administrative Gender (HL7 V3) urn:oid:2.16.840.1.113883.1.11.1 (Clinical Focus: The gender of a person used for administrative purposes (as opposed to clinical gender)),(Data Element Scope:),(Inclusion Criteria: All codes in the HL7 V3 AdministrativeGender code system),(Exclusion Criteria:) | | | |
|--|-----------------------|-------------------------------|------------------|
| This value set was imported on 6/24/2019 with a version of 20190425. | | | |
| Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.1.11.1/expansion | | | |
| Code | Code System | Code System OID | Print Name |
| F | Administrative Gender | urn:oid:2.16.840.1.113883.5.1 | Female |
| M | Administrative Gender | urn:oid:2.16.840.1.113883.5.1 | Male |
| UN | Administrative Gender | urn:oid:2.16.840.1.113883.5.1 | Undifferentiated |

Table 290: Marital Status

| <p>Value Set: Marital Status urn:oid:2.16.840.1.113883.1.11.12212 (Clinical Focus: The domestic partnership status of a person.),(Data Element Scope: Marital Status),(Inclusion Criteria: All codes in the HL7 MaritalStatus code system),(Exclusion Criteria: Any non-selectable codes)</p> <p>This value set was imported on 6/25/2019 with a version of 20190517. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.1.11.12212/expansion</p> | | | |
|--|------------------|-------------------------------|-------------------|
| Code | Code System | Code System OID | Print Name |
| A | HL7MaritalStatus | urn:oid:2.16.840.1.113883.5.2 | Annulled |
| C | HL7MaritalStatus | urn:oid:2.16.840.1.113883.5.2 | Common Law |
| D | HL7MaritalStatus | urn:oid:2.16.840.1.113883.5.2 | Divorced |
| I | HL7MaritalStatus | urn:oid:2.16.840.1.113883.5.2 | Interlocutory |
| L | HL7MaritalStatus | urn:oid:2.16.840.1.113883.5.2 | Legally Separated |
| M | HL7MaritalStatus | urn:oid:2.16.840.1.113883.5.2 | Married |
| P | HL7MaritalStatus | urn:oid:2.16.840.1.113883.5.2 | Polygamous |
| S | HL7MaritalStatus | urn:oid:2.16.840.1.113883.5.2 | Never Married |
| T | HL7MaritalStatus | urn:oid:2.16.840.1.113883.5.2 | Domestic partner |
| U | HL7MaritalStatus | urn:oid:2.16.840.1.113883.5.2 | unmarried |
| ... | | | |

Table 291: Religious Affiliation

| <p>Value Set: Religious Affiliation urn:oid:2.16.840.1.113883.1.11.19185 (Clinical Focus: A person's faith affiliation),(Data Element Scope:),(Inclusion Criteria: All codes in the HL7 ReligiousAffiliation code system),(Exclusion Criteria:)</p> <p>This value set was imported on 6/29/2019 with a version of 20190425. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.1.11.19185/expansion</p> | | | |
|--|-------------------------|----------------------------------|--------------------------|
| Code | Code System | Code System OID | Print Name |
| 1001 | HL7ReligiousAffiliation | urn:oid:2.16.840.1.113883.5.1076 | Adventist |
| 1002 | HL7ReligiousAffiliation | urn:oid:2.16.840.1.113883.5.1076 | African Religions |
| 1003 | HL7ReligiousAffiliation | urn:oid:2.16.840.1.113883.5.1076 | Afro-Caribbean Religions |
| 1004 | HL7ReligiousAffiliation | urn:oid:2.16.840.1.113883.5.1076 | Agnosticism |
| 1005 | HL7ReligiousAffiliation | urn:oid:2.16.840.1.113883.5.1076 | Anglican |
| 1006 | HL7ReligiousAffiliation | urn:oid:2.16.840.1.113883.5.1076 | Animism |
| 1007 | HL7ReligiousAffiliation | urn:oid:2.16.840.1.113883.5.1076 | Atheism |
| 1008 | HL7ReligiousAffiliation | urn:oid:2.16.840.1.113883.5.1076 | Babi & Baha'I faiths |
| 1009 | HL7ReligiousAffiliation | urn:oid:2.16.840.1.113883.5.1076 | Baptist |
| 1010 | HL7ReligiousAffiliation | urn:oid:2.16.840.1.113883.5.1076 | Bon |
| ... | | | |

Table 292: Race Category Excluding Nulls

Value Set: Race Category Excluding Nulls urn:oid:2.16.840.1.113883.3.2074.1.1.3
 (Clinical Focus: The top-level "Race" concepts as defined by US Office of Management and Budget (OMB), excluding "Other race". All "Race" concepts in the Race and Ethnicity - CDC code system roll-up to one of these codes.),(Data Element Scope: Demographic categorization of a person's race (can be multiple).),(Inclusion Criteria: Direct children of the "1000-9 Race" concept in the Race and Ethnicity Code system.),(Exclusion Criteria: Specifically exclude "2131-1 Other Race" and any descendant of the concepts defined in the inclusion criteria.)

This value set was imported on 6/29/2019 with a version of 20180618.

Value Set Source:
<https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.3.2074.1.1.3/expansion>

| Code | Code System | Code System OID | Print Name |
|--------|------------------------|---------------------------------|---|
| 1002-5 | Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 | American Indian or Alaska Native |
| 2028-9 | Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 | Asian |
| 2054-5 | Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 | Black or African American |
| 2076-8 | Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 | Native Hawaiian or Other Pacific Islander |
| 2106-3 | Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 | White |

Table 293: Ethnicity

Value Set: Ethnicity urn:oid:2.16.840.1.114222.4.11.837
 (Clinical Focus:),(Data Element Scope:),(Inclusion Criteria:),(Exclusion Criteria:)

This value set was imported on 6/24/2019 with a version of 20180618.

Value Set Source:
<https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.837/expansion>

| Code | Code System | Code System OID | Print Name |
|--------|------------------------|---------------------------------|------------------------|
| 2135-2 | Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 | Hispanic or Latino |
| 2186-5 | Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 | Not Hispanic or Latino |

Table 294: Personal And Legal Relationship Role Type

Value Set: Personal And Legal Relationship Role Type urn:oid:2.16.840.1.113883.11.20.12.1
 (Clinical Focus: A personal or legal relationship records the role of a person in relation to another person, or a person to himself or herself. This value set is to be used when recording relationships based on personal or family ties or through legal assignment of responsibility.),(Data Element Scope: C-CDA v2.1 Any person role such as Guardian and associatedEntity. Many @code references.),(Inclusion Criteria: Union of: (Descendants of _PersonalRelationshipRoleType OR Descendants of RESPRSN)),(Exclusion Criteria: not in the inclusion criteria)

This value set was imported on 6/26/2019 with a version of 20190425.

Value Set Source:

<https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.11.20.12.1/expansion>

| Code | Code System | Code System OID | Print Name |
|-----------|-------------|---------------------------------|-----------------|
| ADOPTF | HL7RoleCode | urn:oid:2.16.840.1.113883.5.111 | adoptive father |
| ADOPTM | HL7RoleCode | urn:oid:2.16.840.1.113883.5.111 | adoptive mother |
| ADOPTP | HL7RoleCode | urn:oid:2.16.840.1.113883.5.111 | adoptive parent |
| AUNT | HL7RoleCode | urn:oid:2.16.840.1.113883.5.111 | aunt |
| BRO | HL7RoleCode | urn:oid:2.16.840.1.113883.5.111 | brother |
| BROINLAW | HL7RoleCode | urn:oid:2.16.840.1.113883.5.111 | brother-in-law |
| CHILD | HL7RoleCode | urn:oid:2.16.840.1.113883.5.111 | child |
| CHLDADOPT | HL7RoleCode | urn:oid:2.16.840.1.113883.5.111 | adopted child |
| CHLDFOST | HL7RoleCode | urn:oid:2.16.840.1.113883.5.111 | foster child |
| CHLDINLAW | HL7RoleCode | urn:oid:2.16.840.1.113883.5.111 | child-in-law |
| ... | | | |

Table 295: Country

| Value Set: Country urn:oid:2.16.840.1.113883.3.88.12.80.63 This identifies the codes for the representation of names of countries, territories and areas of geographical interest. Value Set Source: https://www.iso.org/obp/ui/#iso:pub:PUB500001:en | | | |
|--|---|------------------------|------------|
| Code | Code System | Code System OID | Print Name |
| AW | ISO 3166 Part 1 Country Codes, 2nd Edition, Alpha-2 | urn:oid:1.0.3166.1.2.2 | Aruba |
| IL | ISO 3166 Part 1 Country Codes, 2nd Edition, Alpha-2 | urn:oid:1.0.3166.1.2.2 | Israel |
| ... | | | |

Table 296: LanguageAbilityMode

| Value Set: LanguageAbilityMode urn:oid:2.16.840.1.113883.1.11.12249 (Clinical Focus: Channels for expressing and receiving human language),(Data Element Scope:),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 6/25/2019 with a version of 20190425. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.1.11.12249/expansion | | | |
|---|------------------------|--------------------------------|-------------------|
| Code | Code System | Code System OID | Print Name |
| ESGN | HL7LanguageAbilityMode | urn:oid:2.16.840.1.113883.5.60 | Expressed signed |
| ESP | HL7LanguageAbilityMode | urn:oid:2.16.840.1.113883.5.60 | Expressed spoken |
| EWR | HL7LanguageAbilityMode | urn:oid:2.16.840.1.113883.5.60 | Expressed written |
| RSGN | HL7LanguageAbilityMode | urn:oid:2.16.840.1.113883.5.60 | Received signed |
| RSP | HL7LanguageAbilityMode | urn:oid:2.16.840.1.113883.5.60 | Received spoken |
| RWR | HL7LanguageAbilityMode | urn:oid:2.16.840.1.113883.5.60 | Received written |

Table 297: LanguageAbilityProficiency

| Value Set: LanguageAbilityProficiency urn:oid:2.16.840.1.113883.1.11.12199 (Clinical Focus: A person's level of proficiency in a language),(Data Element Scope:),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 6/25/2019 with a version of 20190425. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.1.11.12199/expansion | | | |
|---|-------------------------------|--------------------------------|------------|
| Code | Code System | Code System OID | Print Name |
| E | HL7LanguageAbilityProficiency | urn:oid:2.16.840.1.113883.5.61 | Excellent |
| F | HL7LanguageAbilityProficiency | urn:oid:2.16.840.1.113883.5.61 | Fair |
| G | HL7LanguageAbilityProficiency | urn:oid:2.16.840.1.113883.5.61 | Good |
| P | HL7LanguageAbilityProficiency | urn:oid:2.16.840.1.113883.5.61 | Poor |

Table 298: Detailed Ethnicity

Value Set: Detailed Ethnicity urn:oid:2.16.840.1.114222.4.11.877
 (Clinical Focus: All concepts that can describe a person's "ethnicity" as defined by the United States Bureau of Census. This includes the US Office of Management and Budget (OMB) two top-level ethnicity categories, plus all the more detailed descendant ethnicity concepts used by the US Bureau of Census.),(Data Element Scope: Personal Demographic information, can be multiple.),(Inclusion Criteria: All descendant concepts from the concept "2133-7 Ethnicity", excluding that root concept, as derived from the Race and Ethnicity - CDC code system.),(Exclusion Criteria: Concepts that are not a descendant of "2133-7 Ethnicity", therefore, no concepts descendant from "1000-9 Race". Also the root concept "Ethnicity".)

This value set was imported on 6/24/2019 with a version of 20190518.

Value Set Source:

<https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.877/expansion>

| Code | Code System | Code System OID | Print Name |
|--------|------------------------|---------------------------------|-------------------|
| 2137-8 | Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 | Spaniard |
| 2138-6 | Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 | Andalusian |
| 2139-4 | Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 | Asturian |
| 2140-2 | Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 | Castillian |
| 2141-0 | Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 | Catalonian |
| 2142-8 | Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 | Belearic Islander |
| 2143-6 | Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 | Gallego |
| 2144-4 | Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 | Valencian |
| 2145-1 | Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 | Canarian |
| 2146-9 | Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 | Spanish Basque |
| ... | | | |

Table 299: Healthcare Provider Taxonomy

| <p>Value Set: Healthcare Provider Taxonomy urn:oid:2.16.840.1.114222.4.11.1066 (Clinical Focus: Represent the "type" of health care provider individual or organization using the National Uniform Claims Committee (NUCC) code system),(Data Element Scope: The assignedEntity attribute),(Inclusion Criteria: All codes in the NUCC Provider Taxonomy code system),(Exclusion Criteria: None)</p> <p>This value set was imported on 6/24/2019 with a version of 20190521. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.1066/expansion</p> | | | |
|--|--------------------------------------|---------------------------------|---|
| Code | Code System | Code System OID | Print Name |
| 10 | Healthcare Provider Taxonomy (HIPAA) | urn:oid:2.16.840.1.113883.6.101 | Provider has a medical condition that impairs or limits him/her to practice |
| 101Y00000X | Healthcare Provider Taxonomy (HIPAA) | urn:oid:2.16.840.1.113883.6.101 | Behavioral Health & Social Service Providers; Counselor |
| 101YA0400X | Healthcare Provider Taxonomy (HIPAA) | urn:oid:2.16.840.1.113883.6.101 | Behavioral Health & Social Service Providers; Counselor, Addiction (Substance Use Disorder) |
| 101YM0800X | Healthcare Provider Taxonomy (HIPAA) | urn:oid:2.16.840.1.113883.6.101 | Behavioral Health & Social Service Providers; Counselor, Mental Health |
| 101YP1600X | Healthcare Provider Taxonomy (HIPAA) | urn:oid:2.16.840.1.113883.6.101 | Behavioral Health & Social Service Providers; Counselor, Pastoral |
| 101YP2500X | Healthcare Provider Taxonomy (HIPAA) | urn:oid:2.16.840.1.113883.6.101 | Behavioral Health & Social Service Providers; Counselor, Professional |
| 101YS0200X | Healthcare Provider Taxonomy (HIPAA) | urn:oid:2.16.840.1.113883.6.101 | Behavioral Health & Social Service Providers; Counselor, School |
| 102L00000X | Healthcare Provider Taxonomy (HIPAA) | urn:oid:2.16.840.1.113883.6.101 | Behavioral Health & Social Service Providers; Psychoanalyst |
| 102X00000X | Healthcare Provider Taxonomy (HIPAA) | urn:oid:2.16.840.1.113883.6.101 | Behavioral Health & Social Service Providers; Poetry Therapist |
| 103G00000X | Healthcare Provider Taxonomy (HIPAA) | urn:oid:2.16.840.1.113883.6.101 | Behavioral Health & Social Service Providers; Clinical Neuropsychologist |
| ... | | | |

Table 300: INDRoleclassCodes

| Value Set: INDRoleclassCodes urn:oid:2.16.840.1.113883.11.20.9.33 | | | |
|--|--------------|---------------------------------|-----------------------|
| Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.11.20.9.33/expansion | | | |
| Code | Code System | Code System OID | Print Name |
| PRS | HL7RoleClass | urn:oid:2.16.840.1.113883.5.110 | personal relationship |
| NOK | HL7RoleClass | urn:oid:2.16.840.1.113883.5.110 | next of kin |
| CAREGIVER | HL7RoleClass | urn:oid:2.16.840.1.113883.5.110 | caregiver |
| AGNT | HL7RoleClass | urn:oid:2.16.840.1.113883.5.110 | agent |
| GUAR | HL7RoleClass | urn:oid:2.16.840.1.113883.5.110 | guarantor |
| ECON | HL7RoleClass | urn:oid:2.16.840.1.113883.5.110 | emergency contact |

Table 301: x_ServiceEventPerformer

| Value Set: x_ServiceEventPerformer urn:oid:2.16.840.1.113883.1.11.19601 | | | |
|--|----------------------|--------------------------------|---------------------|
| Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/inrastructure/vocabulary/vocabulary.html | | | |
| Code | Code System | Code System OID | Print Name |
| PRF | HL7ParticipationType | urn:oid:2.16.840.1.113883.5.90 | performer |
| SPRF | HL7ParticipationType | urn:oid:2.16.840.1.113883.5.90 | secondary performer |
| PPRF | HL7ParticipationType | urn:oid:2.16.840.1.113883.5.90 | primary performer |

Table 302: Care Team Member Function

Value Set: Care Team Member Function urn:oid:2.16.840.1.113762.1.4.1099.30
 (Clinical Focus: This set of concepts describes the function performed on a patient-centered care team. This value set contains concepts that describe a functional role played by a member of a care team on a particular care team.),(Data Element Scope: A functional role on a patient's care team.),(Inclusion Criteria: The set of commonly played roles on a patient-centered care team.),(Exclusion Criteria: Functional roles on care teams that are not patient-centered. For example, hospital's may define teams of practitioners who fill roles that are relevant to the function of the hospital's operation. These roles would not be included when they are not roles that would be played on a patient-centered care team.)

This value set was imported on 10/17/2019 with a version of 20191016.
 Value Set Source:
<https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1099.30/expansion>

| Code | Code System | Code System OID | Print Name |
|-----------|-------------|--------------------------------|-----------------------------------|
| 106289002 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Dentist (occupation) |
| 106292003 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Professional nurse (occupation) |
| 106328005 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Social worker (occupation) |
| 116154003 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Patient (person) |
| 11911009 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Nephrologist (occupation) |
| 11935004 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Obstetrician (occupation) |
| 133932002 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Caregiver (person) |
| 158965000 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Medical practitioner (occupation) |
| 158967008 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Consultant physician (occupation) |
| 159003003 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | School nurse (occupation) |
| ... | | | |

Table 303: AgePQ_UCUM

| Value Set: AgePQ_UCUM urn:oid:2.16.840.1.113883.11.20.9.21 (Clinical Focus: Units of time needed for humans and animals),(Data Element Scope: time),(Inclusion Criteria: time units from year to minute),(Exclusion Criteria: only units within inclusion criteria) | | | |
|--|-------------|----------------------------------|------------|
| This value set was imported on 6/24/2019 with a version of 20180508. | | | |
| Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.11.20.9.21/expansion | | | |
| Code | Code System | Code System OID | Print Name |
| a | UCUM | urn:oid:1.3.6.1.4.1.12009.10.3.1 | year |
| d | UCUM | urn:oid:1.3.6.1.4.1.12009.10.3.1 | day |
| h | UCUM | urn:oid:1.3.6.1.4.1.12009.10.3.1 | hour |
| min | UCUM | urn:oid:1.3.6.1.4.1.12009.10.3.1 | minute |
| mo | UCUM | urn:oid:1.3.6.1.4.1.12009.10.3.1 | month |
| wk | UCUM | urn:oid:1.3.6.1.4.1.12009.10.3.1 | week |

Table 304: Allergy Clinical Status

| Value Set: Allergy Clinical Status urn:oid:2.16.840.1.113762.1.4.1099.29 (Clinical Focus: The clinical status of an allergic condition),(Data Element Scope: Status value),(Inclusion Criteria: limited high level status of a clinical condition),(Exclusion Criteria: none specific) | | | |
|---|-------------|--------------------------------|----------------------------|
| This value set was imported on 6/26/2019 with a version of 20190418. | | | |
| Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1099.29/expansion | | | |
| Code | Code System | Code System OID | Print Name |
| 413322009 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Problem resolved (finding) |
| 55561003 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Active (qualifier value) |
| 73425007 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Inactive (qualifier value) |

Table 305: Criticality Observation

| <p>Value Set: Criticality Observation urn:oid:2.16.840.1.113883.1.11.20549 (Clinical Focus: A clinical judgment as to the worst case result of a future exposure (including substance administration).),(Data Element Scope: observation),(Inclusion Criteria: All descendant codes from _CriticalityObservationValue in code system ObservationValue),(Exclusion Criteria: none)</p> <p>This value set was imported on 6/24/2019 with a version of 20190425. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.1.11.20549/expansion</p> | | | |
|--|---------------------|----------------------------------|------------------------------|
| Code | Code System | Code System OID | Print Name |
| CRITH | HL7ObservationValue | urn:oid:2.16.840.1.113883.5.1063 | high criticality |
| CRITL | HL7ObservationValue | urn:oid:2.16.840.1.113883.5.1063 | low criticality |
| CRITU | HL7ObservationValue | urn:oid:2.16.840.1.113883.5.1063 | unable to assess criticality |

Table 306: ActStatus

| <p>Value Set: ActStatus urn:oid:2.16.840.1.113883.1.11.15933 Contains the names (codes) for each of the states in the state-machine of the RIM Act class. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.1.11.15933/expansion</p> | | | |
|--|--------------|--------------------------------|------------|
| Code | Code System | Code System OID | Print Name |
| normal | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | normal |
| aborted | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | aborted |
| active | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | active |
| cancelled | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | cancelled |
| completed | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | completed |
| held | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | held |
| new | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | new |
| suspended | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | suspended |
| nullified | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | nullified |
| obsolete | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | obsolete |

Table 307: EncounterTypeCode

Value Set: EncounterTypeCode urn:oid:2.16.840.1.113883.3.88.12.80.32
 (Clinical Focus: Concepts that represent an interaction between a patient and clinician. Interactions may include in-person encounters, telephone conversations, and email exchanges.),(Data Element Scope: Indicator of an encounter),(Inclusion Criteria: CPT codes found in the following CPT sections:
 99201-99499 E/M
 99500-99600 home health (mainly nonphysician, such as newborn care in home)
 99605-99607 medication management
 98966-98968 non physician telephone services),(Exclusion Criteria: Only codes as defined in the inclusion criteria)

This value set was imported on 6/24/2019 with a version of 20190517.

Value Set Source:

<https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.3.88.12.80.32/expansion>

| Code | Code System | Code System OID | Print Name |
|-------|-------------|--------------------------------|--|
| 98966 | CPT4 | urn:oid:2.16.840.1.113883.6.12 | Telephone assessment and management service provided by a qualified nonphysician health care professional to an established patient, parent, or guardian not originating from a related assessment and management service provided within the previous 7 days nor leading to an assessment and management service or procedure within the next 24 hours or soonest available appointment; 5-10 minutes of medical discussion |
| 98967 | CPT4 | urn:oid:2.16.840.1.113883.6.12 | Telephone assessment and management service provided by a qualified nonphysician health care professional to an established patient, parent, or guardian not originating from a related assessment and management service provided within the previous 7 days nor leading to an assessment and management service or procedure within the next 24 hours or soonest available appointment; 11-20 minutes of |

| | | | |
|-------|------|--------------------------------|---|
| | | | medical discussion |
| 98968 | CPT4 | urn:oid:2.16.840.1.113883.6.12 | Telephone assessment and management service provided by a qualified nonphysician health care professional to an established patient, parent, or guardian not originating from a related assessment and management service provided within the previous 7 days nor leading to an assessment and management service or procedure within the next 24 hours or soonest available appointment; 21-30 minutes of medical discussion |
| 99091 | CPT4 | urn:oid:2.16.840.1.113883.6.12 | Collection and interpretation of physiologic data (eg, ECG, blood pressure, glucose monitoring) digitally stored and/or transmitted by the patient and/or caregiver to the physician or other qualified health care professional, qualified by education, training, licensure/regulation (when applicable) requiring a minimum of 30 minutes of time, each 30 days |
| 99201 | CPT4 | urn:oid:2.16.840.1.113883.6.12 | Office or other outpatient visit for the evaluation and management of a new patient, which requires these 3 key components: A problem focused history; A problem focused examination; Straightforward medical decision making. Counseling and/or coordination of care with other physicians, other qualified health care professionals, or agencies are provided consistent with the |

| | | | |
|-------|------|--------------------------------|---|
| | | | nature of the problem(s) and the patient's and/or family's needs. Usually, the presenting problem(s) are self limited or minor. Typically, 10 minutes are spent face-to-face with the patient and/or family. |
| 99202 | CPT4 | urn:oid:2.16.840.1.113883.6.12 | Office or other outpatient visit for the evaluation and management of a new patient, which requires these 3 key components: An expanded problem focused history; An expanded problem focused examination; Straightforward medical decision making. Counseling and/or coordination of care with other physicians, other qualified health care professionals, or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the presenting problem(s) are of low to moderate severity. Typically, 20 minutes are spent face-to-face with the patient and/or family. |
| 99203 | CPT4 | urn:oid:2.16.840.1.113883.6.12 | Office or other outpatient visit for the evaluation and management of a new patient, which requires these 3 key components: A detailed history; A detailed examination; Medical decision making of low complexity. Counseling and/or coordination of care with other physicians, other qualified health care professionals, or agencies are provided consistent with the |

| | | | |
|-------|------|--------------------------------|---|
| | | | nature of the problem(s) and the patient's and/or family's needs. Usually, the presenting problem(s) are of moderate severity. Typically, 30 minutes are spent face-to-face with the patient and/or family. |
| 99204 | CPT4 | urn:oid:2.16.840.1.113883.6.12 | Office or other outpatient visit for the evaluation and management of a new patient, which requires these 3 key components: A comprehensive history; A comprehensive examination; Medical decision making of moderate complexity. Counseling and/or coordination of care with other physicians, other qualified health care professionals, or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the presenting problem(s) are of moderate to high severity. Typically, 45 minutes are spent face-to-face with the patient and/or family. |
| 99205 | CPT4 | urn:oid:2.16.840.1.113883.6.12 | Office or other outpatient visit for the evaluation and management of a new patient, which requires these 3 key components: A comprehensive history; A comprehensive examination; Medical decision making of high complexity. Counseling and/or coordination of care with other physicians, other qualified health care professionals, or |

| | | | |
|-------|------|--------------------------------|--|
| | | | agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the presenting problem(s) are of moderate to high severity. Typically, 60 minutes are spent face-to-face with the patient and/or family. |
| 99211 | CPT4 | urn:oid:2.16.840.1.113883.6.12 | Office or other outpatient visit for the evaluation and management of an established patient, that may not require the presence of a physician or other qualified health care professional. Usually, the presenting problem(s) are minimal. Typically, 5 minutes are spent performing or supervising these services. |
| ... | | | |

Table 308: Problem Type (SNOMEDCT)

| <p>Value Set: Problem Type (SNOMEDCT) urn:oid:2.16.840.1.113883.3.88.12.3221.7.2 (Clinical Focus: A problem observation categorization of the condition as represented in the SNOMED CT code system.),(Data Element Scope: Problem Observation),(Inclusion Criteria: High level condition types as selected for use.),(Exclusion Criteria: Only the codes selected.)</p> <p>This value set was imported on 6/20/2019 with a version of 20190319. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.3.88.12.3221.7.2/expansion</p> | | | |
|---|-------------|--------------------------------|---|
| Code | Code System | Code System OID | Print Name |
| 248536006 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Finding of functional performance and activity (finding) |
| 282291009 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Diagnosis interpretation (observable entity) |
| 373930000 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Cognitive function finding (finding) |
| 404684003 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Clinical finding (finding) |
| 409586006 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Complaint (finding) |
| 418799008 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Finding reported by subject or history provider (finding) |
| 55607006 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Problem (finding) |
| 64572001 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Disease (disorder) |

Table 309: Problem

| <p>Value Set: Problem urn:oid:2.16.840.1.113883.3.88.12.3221.7.4 (Clinical Focus: A pathology or disorder identified in a patient),(Data Element Scope: Observations),(Inclusion Criteria: Limited to terms descending from the Clinical Findings (404684003) or Situation with Explicit Context (243796009) hierarchies.),(Exclusion Criteria: any concept not in the hierarchies specified)</p> <p>This value set was imported on 6/26/2019 with a version of 20190426. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.3.88.12.3221.7.4/expansion</p> | | | |
|--|-------------|--------------------------------|--|
| Code | Code System | Code System OID | Print Name |
| 10000006 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Radiating chest pain (finding) |
| 10001005 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Bacterial sepsis (disorder) |
| 10007009 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Coffin-Siris syndrome (disorder) |
| 1001000119102 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Pulmonary embolism with pulmonary infarction (disorder) |
| 1001000124104 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Normal left ventricular systolic function (finding) |
| 10017004 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Occlusal wear of teeth (disorder) |
| 100191000119105 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Asymmetry of prostate (finding) |
| 100211000119106 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Muscle spasm of thoracic back (disorder) |
| 100231000119101 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Acquired pericardial cyst (disorder) |
| 10028000 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Uncomplicated sedative, hypnotic AND/OR anxiolytic withdrawal (disorder) |
| ... | | | |

Table 310: Problem Type (LOINC)

| <p>Value Set: Problem Type (LOINC) urn:oid:2.16.840.1.113762.1.4.1099.28 (Clinical Focus: A problem observation categorization of the condition as represented in the LOINC code system.),(Data Element Scope: Problem observation),(Inclusion Criteria: High level condition types as selected for use.),(Exclusion Criteria: Only those selected)</p> <p>This value set was imported on 6/20/2019 with a version of 20190416. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1099.28/expansion</p> | | | |
|--|-------------|-------------------------------|---|
| Code | Code System | Code System OID | Print Name |
| 29308-4 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Diagnosis |
| 75275-8 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Cognitive function [Interpretation] |
| 75312-9 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Clinical finding Family member |
| 75313-7 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Complaint Family member |
| 75314-5 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Diagnosis Family member |
| 75315-2 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Condition Family member |
| 75316-0 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Functional performance Family member |
| 75317-8 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Symptom Family member |
| 75318-6 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Problem Family member |
| 75319-4 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Mental function Family member |
| ... | | | |

Table 311: Family Member Value

| Value Set: Family Member Value urn:oid:2.16.840.1.113883.1.11.19579 (Clinical Focus: A characterization of the familial relationship between two people),(Data Element Scope:),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 6/24/2019 with a version of 20190425. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.1.11.19579/expansion | | | |
|--|-------------|---------------------------------|------------------|
| Code | Code System | Code System OID | Print Name |
| AUNT | HL7RoleCode | urn:oid:2.16.840.1.113883.5.111 | aunt |
| BRO | HL7RoleCode | urn:oid:2.16.840.1.113883.5.111 | brother |
| BROINLAW | HL7RoleCode | urn:oid:2.16.840.1.113883.5.111 | brother-in-law |
| CHILD | HL7RoleCode | urn:oid:2.16.840.1.113883.5.111 | child |
| CHLDADOPT | HL7RoleCode | urn:oid:2.16.840.1.113883.5.111 | adopted child |
| CHLDFOST | HL7RoleCode | urn:oid:2.16.840.1.113883.5.111 | foster child |
| CHLDINLAW | HL7RoleCode | urn:oid:2.16.840.1.113883.5.111 | child-in-law |
| COUSN | HL7RoleCode | urn:oid:2.16.840.1.113883.5.111 | cousin |
| DAU | HL7RoleCode | urn:oid:2.16.840.1.113883.5.111 | natural daughter |
| DAUADOPT | HL7RoleCode | urn:oid:2.16.840.1.113883.5.111 | adopted daughter |
| ... | | | |

Table 312: MoodCodeEvnInt

| Value Set: MoodCodeEvnInt urn:oid:2.16.840.1.113883.11.20.9.18 (Clinical Focus: Subset of HL7 ActMood codes, constrained to represent event (EVN) and intent (INT) moods.),(Data Element Scope:),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 4/24/2019 with a version of 20190104. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.11.20.9.18/expansion | | | |
|--|-------------|----------------------------------|--------------------|
| Code | Code System | Code System OID | Print Name |
| EVN | HL7ActMood | urn:oid:2.16.840.1.113883.5.1001 | event (occurrence) |
| INT | HL7ActMood | urn:oid:2.16.840.1.113883.5.1001 | intent |

Table 313: SPL Drug Route of Administration Terminology

Value Set: SPL Drug Route of Administration Terminology urn:oid:2.16.840.1.113883.3.88.12.3221.8.7
 (Clinical Focus: The set of route of administration concepts that may be used in structured product labeling.),(Data Element Scope: Ordered, administered, medication route),(Inclusion Criteria: Selected concepts that are descendent of C38114 as determined by the FDA. These concepts are linked to "SPL Drug Route of Administration Terminology (Code C54455)" by Concept_In_Subset.),(Exclusion Criteria: As determined by the FDA those routes not to be used in SPL (navigational concepts, etc.))

This value set was imported on 6/29/2019 with a version of 20190604.
 Value Set Source:
<https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.3.88.12.3221.8.7/expansion>

| Code | Code System | Code System OID | Print Name |
|---------|----------------------|------------------------------------|--|
| C132737 | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Intracanalicular Route of Administration |
| C28161 | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Intramuscular Route of Administration |
| C38192 | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Auricular Route of Administration |
| C38193 | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Buccal Route of Administration |
| C38194 | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Conjunctival Route of Administration |
| C38197 | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Dental Route of Administration |
| C38198 | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Soft Tissue Route of Administration |
| C38200 | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Administration via Hemodialysis |
| C38203 | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Iontophoresis Route of Administration |
| C38205 | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Endocervical Route of Administration |
| ... | | | |

Table 314: Body Site Value Set

Value Set: Body Site Value Set urn:oid:2.16.840.1.113883.3.88.12.3221.8.9
 (Clinical Focus: All SNOMED CT anatomic structures, locations, abnormal structures that can be considered to describe an anatomical site.),(Data Element Scope: data element describing body location),(Inclusion Criteria: SNOMED CT concepts descending from the Anatomical Structure (91723000) or Acquired body structure (body structure) (280115004) or Anatomical site notations for tumor staging (body structure) (258331007) or Body structure, altered from its original anatomical structure (morphologic abnormality) (118956008) or Physical anatomical entity (body structure) (91722005)),(Exclusion Criteria: none)

This value set was imported on 6/24/2019 with a version of 20190420.

Value Set Source:
<https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.3.88.12.3221.8.9/expansion>

| Code | Code System | Code System OID | Print Name |
|----------|-------------|--------------------------------|---|
| 10013000 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Lateral meniscus structure (body structure) |
| 10024003 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Structure of base of lung (body structure) |
| 10025002 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Structure of base of phalanx of index finger (body structure) |
| 10026001 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Structure of ventral spinocerebellar tract of pons (body structure) |
| 10036009 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Structure of nucleus pulposus of intervertebral disc of eighth thoracic vertebra (body structure) |
| 10042008 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Structure of intervertebral foramen of fifth thoracic vertebra (body structure) |
| 10047002 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Structure of transplanted lung (body structure) |
| 1005009 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Entire diaphragmatic lymph node (body structure) |
| 10052007 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Male structure (body structure) |
| 10056005 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Structure of ophthalmic nerve (body structure) |
| ... | | | |

Table 315: UnitsOfMeasureCaseSensitive

| <p>Value Set: UnitsOfMeasureCaseSensitive urn:oid:2.16.840.1.113883.1.11.12839 (Clinical Focus: Common UCUM units. This value set is based on the Common UCUM set.),(Data Element Scope: unit of measure),(Inclusion Criteria: all valid UCUM units case sensitive),(Exclusion Criteria:)</p> <p>This value set was imported on 6/29/2019 with a version of 20180509. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.1.11.12839/expansion</p> | | | |
|---|-------------|----------------------------------|------------------------------|
| Code | Code System | Code System OID | Print Name |
| % | UCUM | urn:oid:1.3.6.1.4.1.12009.10.3.1 | percent |
| %{Hb} | UCUM | urn:oid:1.3.6.1.4.1.12009.10.3.1 | percent hemoglobin |
| %{RBCs} | UCUM | urn:oid:1.3.6.1.4.1.12009.10.3.1 | percent of red blood cells |
| %{WBCs} | UCUM | urn:oid:1.3.6.1.4.1.12009.10.3.1 | percent of white blood cells |
| %{abnormal} | UCUM | urn:oid:1.3.6.1.4.1.12009.10.3.1 | percent abnormal |
| %{activity} | UCUM | urn:oid:1.3.6.1.4.1.12009.10.3.1 | percent activity |
| %{aggregation} | UCUM | urn:oid:1.3.6.1.4.1.12009.10.3.1 | percent aggregation |
| %{at_60_min} | UCUM | urn:oid:1.3.6.1.4.1.12009.10.3.1 | percent at 60 minute |
| %{bacteria} | UCUM | urn:oid:1.3.6.1.4.1.12009.10.3.1 | percent of bacteria |
| %{basal_activity} | UCUM | urn:oid:1.3.6.1.4.1.12009.10.3.1 | percent basal activity |
| ... | | | |

Table 316: AdministrationUnitDoseForm

| <p>Value Set: AdministrationUnitDoseForm urn:oid:2.16.840.1.113762.1.4.1021.30 (Clinical Focus: Codes that are similar to a drug "form" but limited to those used as units when describing drug administration when the drug item is a physical form that is continuous and therefore not administered as an "each" of the physical form, or is not using standard measurement units (inch, ounce, gram, etc.) This set does not include unit concepts that mimic "physical form" concepts that can be counted using "each", such as tablet, bar, lozenge, packet, etc.),(Data Element Scope: C-CDA substanceAdministration/administrationUnitCode),(Inclusion Criteria: Unit concepts describing drug administration when the drug item is not administered as an "each" of the physical form, or is not using standard measurement units (inch, ounce, gram, etc.) Concepts have a "Concept_In_Subset" relationship to "SPL Unit of Presentation Terminology" (Code C87300)),(Exclusion Criteria: This set does not include unit concepts that mimic "physical form" concepts that can be counted using "each", such as tablet, bar, lozenge, packet, etc. Does not include standard measurement units (inch, ounce, gram, etc.))</p> <p>This value set was imported on 6/24/2019 with a version of 20190604. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1021.30/expansion</p> | | | |
|--|----------------------|------------------------------------|------------------------|
| Code | Code System | Code System OID | Print Name |
| C102405 | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Capful Dosing Unit |
| C122629 | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Actuation Dosing Unit |
| C122631 | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Dropperful Dosing Unit |
| C25397 | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Application Unit |
| C44278 | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Unit |
| C48491 | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Metric Drop |
| C48501 | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Inhalation Dosing Unit |
| C48536 | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Scoopful Dosing Unit |
| C48537 | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Spray Dosing Unit |
| C65060 | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Puff Dosing Unit |
| ... | | | |

Table 317: Medication Route

| <p>Value Set: Medication Route urn:oid:2.16.840.1.113762.1.4.1099.12 (Clinical Focus: Terms used to describe the path by which a substance is taken into the body.),(Data Element Scope:),(Inclusion Criteria: All SNOMED_CT values descending from 284009009 route of administration value),(Exclusion Criteria:)</p> <p>This value set was imported on 6/25/2019 with a version of 20190521. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1099.12/expansion</p> | | | |
|---|-------------|--------------------------------|---|
| Code | Code System | Code System OID | Print Name |
| 10547007 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Otic route (qualifier value) |
| 12130007 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Intra-articular route (qualifier value) |
| 127490009 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Gastrostomy route (qualifier value) |
| 127491008 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Jejunostomy route (qualifier value) |
| 127492001 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Nasogastric route (qualifier value) |
| 1611000175109 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Sublesional route (qualifier value) |
| 16857009 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Vaginal route (qualifier value) |
| 26643006 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Oral route (qualifier value) |
| 34206005 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Subcutaneous route (qualifier value) |
| 37161004 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Rectal route (qualifier value) |
| ... | | | |

Table 318: CVX Vaccines Administered Vaccine Set

Value Set: CVX Vaccines Administered Vaccine Set urn:oid:2.16.840.1.113762.1.4.1010.6
 (Clinical Focus: CVX vaccine concepts that represent actual vaccines types, including those that are historical record of a vaccine administered where the exact formulation is unknown. This does not include the identifiers for CVX codes that are administrative codes or never active codes. Available at <http://www2a.cdc.gov/vaccines/iis/iisstandards/vaccines.asp?rpt=cvx>),(Data Element Scope: Vaccine representation),(Inclusion Criteria: Any CVX code with "CVX status" (VSAC Property) = Active, Inactive, Non-US except those noted in exclusions),(Exclusion Criteria: CVX codes that have a CVX "status" of either "Pending" or "Never Active" AND CVX codes with CVX "Nonvaccine" property = True.)

This value set was imported on 6/24/2019 with a version of 20190415.

Value Set Source:

<https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1010.6/expansion>

| Code | Code System | Code System OID | Print Name |
|------|------------------------|----------------------------------|---|
| 01 | CDC Vaccine Code (CVX) | urn:oid:2.16.840.1.113883.12.292 | diphtheria, tetanus toxoids and pertussis vaccine |
| 02 | CDC Vaccine Code (CVX) | urn:oid:2.16.840.1.113883.12.292 | trivalent poliovirus vaccine, live, oral |
| 03 | CDC Vaccine Code (CVX) | urn:oid:2.16.840.1.113883.12.292 | measles, mumps and rubella virus vaccine |
| 04 | CDC Vaccine Code (CVX) | urn:oid:2.16.840.1.113883.12.292 | measles and rubella virus vaccine |
| 05 | CDC Vaccine Code (CVX) | urn:oid:2.16.840.1.113883.12.292 | measles virus vaccine |
| 06 | CDC Vaccine Code (CVX) | urn:oid:2.16.840.1.113883.12.292 | rubella virus vaccine |
| 07 | CDC Vaccine Code (CVX) | urn:oid:2.16.840.1.113883.12.292 | mumps virus vaccine |
| 08 | CDC Vaccine Code (CVX) | urn:oid:2.16.840.1.113883.12.292 | hepatitis B vaccine, pediatric or pediatric/adolescent dosage |
| 09 | CDC Vaccine Code (CVX) | urn:oid:2.16.840.1.113883.12.292 | tetanus and diphtheria toxoids, adsorbed, preservative free, for adult use (2 Lf of tetanus toxoid and 2 Lf of diphtheria toxoid) |
| 10 | CDC Vaccine Code (CVX) | urn:oid:2.16.840.1.113883.12.292 | poliovirus vaccine, inactivated |
| ... | | | |

Table 319: Vaccine Clinical Drug

Value Set: Vaccine Clinical Drug urn:oid:2.16.840.1.113762.1.4.1010.8
 (Clinical Focus: Administrable vaccine medication formulations represented using either a "generic" or "brand-specific" concept.),(Data Element Scope: vaccine medication),(Inclusion Criteria: Currently Active RxNorm clinical drug concepts that have the a mapped CVX code. Limit to SBD or SCD TTY.),(Exclusion Criteria: Any drug not meeting the inclusion criteria)

This value set was imported on 6/29/2019 with a version of 20190620.
 Value Set Source:
<https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1010.8/expansion>

| Code | Code System | Code System OID | Print Name |
|---------|-------------|--------------------------------|--|
| 1099936 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | Adenovirus Type 4 Vaccine Live 32000 UNT Delayed Release Oral Tablet |
| 1099940 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | Adenovirus Type 7 Vaccine Live 32000 UNT Delayed Release Oral Tablet |
| 1190916 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | 0.5 ML diphtheria toxoid vaccine, inactivated 4 UNT/ML / tetanus toxoid vaccine, inactivated 10 UNT/ML Injection [Tenixac] |
| 1190919 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | 0.5 ML diphtheria toxoid vaccine, inactivated 4 UNT/ML / tetanus toxoid vaccine, inactivated 10 UNT/ML Prefilled Syringe [Tenixac] |
| 1244205 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | 0.5 ML diphtheria toxoid vaccine, inactivated 50 UNT/ML / tetanus toxoid vaccine, inactivated 10 UNT/ML Injection |
| 1292435 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | 0.65 ML Varicella-Zoster Virus Vaccine Live (Oka-Merck) strain 29800 UNT/ML Injection [Zostavax] |
| 1292443 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | 0.5 ML Measles Virus Vaccine Live, Enders' attenuated Edmonston strain 2000 UNT/ML / Mumps Virus Vaccine Live, Jeryl Lynn Strain 40000 UNT/ML / Rubella Virus Vaccine Live (Wistar RA 27-3 |

| | | | |
|---------|--------|--------------------------------|---|
| | | | Strain) 2000 UNT/ML / Varicella-Zoster Virus Vaccine Live (Oka- Merck) strain 20000 UNT/ML Injection [ProQuad] |
| 1292459 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | 0.5 ML Varicella-Zoster Virus Vaccine Live (Oka- Merck) strain 2700 UNT/ML Injection [Varivax] |
| 1292828 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | Yellow-Fever Virus Vaccine, 17D-204 strain 4000 UNT/ML Injectable Suspension [YF-Vax] |
| 1298819 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | influenza A-California-7- 2009-(H1N1)v-like virus vaccine 158000000 UNT/ML Nasal Spray |
| ... | | | |

Table 320: No Immunization Reason

| <p>Value Set: No Immunization Reason urn:oid:2.16.840.1.113883.1.11.19717 (Clinical Focus: Rationale for not administering indicated immunization),(Data Element Scope:),(Inclusion Criteria: All descendant codes from ActNoImmunizationReason in code system ActReason),(Exclusion Criteria:)</p> <p>This value set was imported on 6/25/2019 with a version of 20190425. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.1.11.19717/expansion</p> | | | |
|---|--------------|-------------------------------|------------------------------|
| Code | Code System | Code System OID | Print Name |
| IMMUNE | HL7ActReason | urn:oid:2.16.840.1.113883.5.8 | immunity |
| MEDPREC | HL7ActReason | urn:oid:2.16.840.1.113883.5.8 | medical precaution |
| OSTOCK | HL7ActReason | urn:oid:2.16.840.1.113883.5.8 | product out of stock |
| PATOBJ | HL7ActReason | urn:oid:2.16.840.1.113883.5.8 | patient objection |
| PHILISOP | HL7ActReason | urn:oid:2.16.840.1.113883.5.8 | philosophical objection |
| RELIG | HL7ActReason | urn:oid:2.16.840.1.113883.5.8 | religious objection |
| VACEFF | HL7ActReason | urn:oid:2.16.840.1.113883.5.8 | vaccine efficacy concerns |
| VACSAF | HL7ActReason | urn:oid:2.16.840.1.113883.5.8 | vaccine safety concerns |

Table 321: Patient Education

Value Set: Patient Education urn:oid:2.16.840.1.113883.11.20.9.34
 (Clinical Focus: Interventions intended to inform the patient about a condition, its treatment, and the patient's role in the treatment),(Data Element Scope: procedure or communication),(Inclusion Criteria: All concepts descending from the Education (409073007) or the Education with explicit context (460615006) hierarchies in SNOMED CT.),(Exclusion Criteria: any concept not in the hierarchies described)

This value set was imported on 6/25/2019 with a version of 20190413.
 Value Set Source:
<https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.11.20.9.34/expansion>

| Code | Code System | Code System OID | Print Name |
|-----------------------|-------------|--------------------------------|--|
| 10189761000 046105 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Hypertension exercise education (procedure) |
| 10756541000 119104 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Childbirth education done (situation) |
| 108247002 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Visual correction training AND/OR re-education procedure (procedure) |
| 113145005 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Biofeedback training in conduction disorder, arrhythmia (regime/therapy) |
| 113155009 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Myocardial infarction education (procedure) |
| 11464100011 9104 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Natural contraception education done (situation) |
| 11581009 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Swinging transfer training (regime/therapy) |
| 11816003 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Diet education (procedure) |
| 118629009 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Functional training (procedure) |
| 11924009 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Orthotics training of upper extremities (procedure) |
| ... | | | |

Table 322: Medication Status

| Value Set: Medication Status urn:oid:2.16.840.1.113762.1.4.1099.11 (Clinical Focus: A coded concept indicating the current status of a Medication administration or fulfillment.),(Data Element Scope:),(Inclusion Criteria:),(Exclusion Criteria: All concepts are subsumed by the selected concepts.) This value set was imported on 9/21/2017 with a version of 20170914. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1099.11/expansion | | | |
|--|--------------|--------------------------------|------------|
| Code | Code System | Code System OID | Print Name |
| aborted | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | aborted |
| active | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | active |
| completed | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | completed |
| nullified | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | nullified |
| suspended | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | suspended |

Table 323: Medication Fill Status

| Value Set: Medication Fill Status urn:oid:2.16.840.1.113883.3.88.12.80.64 Value Set Source: https://vsac.nlm.nih.gov/ | | | |
|--|--------------|--------------------------------|------------|
| Code | Code System | Code System OID | Print Name |
| aborted | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | Aborted |
| completed | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | Completed |

Table 324: Medication Clinical Drug

| <p>Value Set: Medication Clinical Drug urn:oid:2.16.840.1.113762.1.4.1010.4 (Clinical Focus: All prescribable medication formulations represented using either a "generic" or "brand-specific" concept developed to support HL7 C-CDA R2 October 2013 ballot.),(Data Element Scope: Medication orderable),(Inclusion Criteria: GROUPING value set made up of: UNION(Value set: Medication Clinical General Drug OID: 2.16.840.1.113883.3.88.12.80.17 Value set: Medication Clinical Brand-specific Drug OID: 2.16.840.1.113762.1.4.1010.5).),(Exclusion Criteria: none)</p> <p>This value set was imported on 6/25/2019 with a version of 20190620. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1010.4/expansion</p> | | | |
|--|-------------|--------------------------------|--|
| Code | Code System | Code System OID | Print Name |
| 1000000 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | Amlodipine 5 MG / Hydrochlorothiazide 12.5 MG / Olmesartan medoxomil 40 MG Oral Tablet [Tribenzor] |
| 1000001 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | Amlodipine 5 MG / Hydrochlorothiazide 25 MG / Olmesartan medoxomil 40 MG Oral Tablet |
| 1000003 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | Amlodipine 5 MG / Hydrochlorothiazide 25 MG / Olmesartan medoxomil 40 MG [Tribenzor] |
| 1000005 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | Amlodipine 5 MG / Hydrochlorothiazide 25 MG / Olmesartan medoxomil 40 MG Oral Tablet [Tribenzor] |
| 1000009 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | dimethicone 100 MG/ML / Miconazole Nitrate 20 MG/ML / Zinc Oxide 100 MG/ML Topical Spray |
| 1000012 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | whole wheat allergenic extract 50 MG/ML |
| 1000013 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | whole wheat allergenic extract 50 MG/ML Injectable Solution |
| 1000014 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | western wheatgrass pollen extract 10000 UNT/ML |
| 1000015 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | western wheatgrass pollen extract 10000 |

| | | | |
|---------|--------|--------------------------------|------------------------------------|
| | | | UNT/ML Injectable Solution |
| 1000023 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | methenamine mandelate 100 MG/ML |
| ... | | | |

Table 325: Clinical Substance

| <p>Value Set: Clinical Substance urn:oid:2.16.840.1.113762.1.4.1010.2 (Clinical Focus: Any substance that can be ordered or is included in a clinical record. This is not restricted to medications.),(Data Element Scope: Clinical Substance ManufacturedProduct/manufacturedMaterial/code/translation/),(Inclusion Criteria: As defined in grouped value sets),(Exclusion Criteria: No drug classes)</p> <p>This value set was imported on 6/24/2019 with a version of 20190620. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1010.2/expansion</p> | | | |
|---|-------------|--------------------------------|--|
| Code | Code System | Code System OID | Print Name |
| 1000000 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | Amlodipine 5 MG / Hydrochlorothiazide 12.5 MG / Olmesartan medoxomil 40 MG Oral Tablet [Tribenzor] |
| 1000001 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | Amlodipine 5 MG / Hydrochlorothiazide 25 MG / Olmesartan medoxomil 40 MG Oral Tablet |
| 1000003 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | Amlodipine 5 MG / Hydrochlorothiazide 25 MG / Olmesartan medoxomil 40 MG [Tribenzor] |
| 1000005 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | Amlodipine 5 MG / Hydrochlorothiazide 25 MG / Olmesartan medoxomil 40 MG Oral Tablet [Tribenzor] |
| 1000009 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | dimethicone 100 MG/ML / Miconazole Nitrate 20 MG/ML / Zinc Oxide 100 MG/ML Topical Spray |
| 1000012 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | whole wheat allergenic extract 50 MG/ML |
| 1000013 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | whole wheat allergenic extract 50 MG/ML Injectable Solution |
| 1000014 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | western wheatgrass pollen extract 10000 UNT/ML |
| 1000015 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | western wheatgrass pollen extract 10000 UNT/ML Injectable Solution |
| 1000023 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | methenamine mandelate 100 MG/ML |

...

Table 326: Payer

Value Set: Payer urn:oid:2.16.840.1.114222.4.11.3591
(Clinical Focus: Categories of types of health care payor entities as defined by the US Public Health Data Consortium SOP code system),(Data Element Scope: @code in CCDA r2.1 template Planned Coverage [act: identifier urn:oid:2.16.840.1.113883.10.20.22.4.129 (open)] DYNAMIC),(Inclusion Criteria: All codes in the code system),(Exclusion Criteria: none)

This value set was imported on 7/25/2019 with a version of 20180718.

Value Set Source:

<https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3591/expansion>

| Code | Code System | Code System OID | Print Name |
|------|------------------------------------|------------------------------------|--|
| 1 | Source of Payment Typology (PHDSC) | urn:oid:2.16.840.1.113883.3.22 1.5 | MEDICARE |
| 11 | Source of Payment Typology (PHDSC) | urn:oid:2.16.840.1.113883.3.22 1.5 | Medicare (Managed Care) |
| 111 | Source of Payment Typology (PHDSC) | urn:oid:2.16.840.1.113883.3.22 1.5 | Medicare HMO |
| 112 | Source of Payment Typology (PHDSC) | urn:oid:2.16.840.1.113883.3.22 1.5 | Medicare PPO |
| 113 | Source of Payment Typology (PHDSC) | urn:oid:2.16.840.1.113883.3.22 1.5 | Medicare POS |
| 119 | Source of Payment Typology (PHDSC) | urn:oid:2.16.840.1.113883.3.22 1.5 | Medicare Managed Care Other |
| 12 | Source of Payment Typology (PHDSC) | urn:oid:2.16.840.1.113883.3.22 1.5 | Medicare (Non-managed Care) |
| 121 | Source of Payment Typology (PHDSC) | urn:oid:2.16.840.1.113883.3.22 1.5 | Medicare FFS |
| 122 | Source of Payment Typology (PHDSC) | urn:oid:2.16.840.1.113883.3.22 1.5 | Medicare Drug Benefit |
| 123 | Source of Payment Typology (PHDSC) | urn:oid:2.16.840.1.113883.3.22 1.5 | Medicare Medical Savings Account (MSA) |
| ... | | | |

Table 327: Planned moodCode (Act/Encounter/Procedure)

| Value Set: Planned moodCode (Act/Encounter/Procedure) urn:oid:2.16.840.1.113883.11.20.9.23 This value set is used to restrict the moodCode on an act, an encounter or a procedure to future moods Value Set Source: https://vsac.nlm.nih.gov/ | | | |
|---|-------------|----------------------------------|---------------------|
| Code | Code System | Code System OID | Print Name |
| INT | HL7ActMood | urn:oid:2.16.840.1.113883.5.1001 | Intent |
| ARQ | HL7ActMood | urn:oid:2.16.840.1.113883.5.1001 | Appointment Request |
| PRMS | HL7ActMood | urn:oid:2.16.840.1.113883.5.1001 | Promise |
| PRP | HL7ActMood | urn:oid:2.16.840.1.113883.5.1001 | Proposal |
| RQO | HL7ActMood | urn:oid:2.16.840.1.113883.5.1001 | Request |
| APT | HL7ActMood | urn:oid:2.16.840.1.113883.5.1001 | Appointment |

Table 328: Encounter Planned

Value Set: Encounter Planned urn:oid:2.16.840.1.113883.11.20.9.52
 (Clinical Focus: Activities that represent planned patient encounters with clinicians),(Data Element Scope: encounter),(Inclusion Criteria: SNOMED-CT codes descending from "308335008" patient encounter procedure (procedure).),(Exclusion Criteria: unknown)

This value set was imported on 10/25/2017 with a version of 20171016.
 Value Set Source:
<https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.11.20.9.52/expansion>

| Code | Code System | Code System OID | Print Name |
|-----------|-------------|--------------------------------|--|
| 108219001 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Physician visit with evaluation AND/OR management service (procedure) |
| 108220007 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Evaluation AND/OR management - new patient (procedure) |
| 108221006 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Evaluation AND/OR management - established patient (procedure) |
| 11429006 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Consultation (procedure) |
| 11797002 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Telephone call by physician to patient or for consultation (procedure) |
| 12566000 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Consultation in computer dosimetry and isodose chart, teletherapy (procedure) |
| 12586001 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Physician direction of emergency medical systems (procedure) |
| 12843005 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Subsequent hospital visit by physician (procedure) |
| 14736009 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | History and physical examination with evaluation and management of patient (procedure) |
| 15301000 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Consultation in chemotherapy (procedure) |
| ... | | | |

Table 329: Planned moodCode (SubstanceAdministration/Supply)

| Value Set: Planned moodCode (SubstanceAdministration/Supply) urn:oid:2.16.840.1.113883.11.20.9.24 This value set is used to restrict the moodCode on a substance administration or a supply to future moods. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.11.20.9.24/expansion | | | |
|---|-------------|--------------------------------------|------------|
| Code | Code System | Code System OID | Print Name |
| INT | HL7ActMood | urn:oid:2.16.840.1.113883.5.10 01 | Intent |
| PRMS | HL7ActMood | urn:oid:2.16.840.1.113883.5.10 01 | Promise |
| PRP | HL7ActMood | urn:oid:2.16.840.1.113883.5.10 01 | Proposal |
| RQO | HL7ActMood | urn:oid:2.16.840.1.113883.5.10 01 | Request |

Table 330: Planned moodCode (Observation)

| Value Set: Planned moodCode (Observation) urn:oid:2.16.840.1.113883.11.20.9.25 This value set is used to restrict the moodCode on an Observation to future moods. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.11.20.9.25/expansion | | | |
|--|-------------|--------------------------------------|------------|
| Code | Code System | Code System OID | Print Name |
| INT | HL7ActMood | urn:oid:2.16.840.1.113883.5.10 01 | Intent |
| PRMS | HL7ActMood | urn:oid:2.16.840.1.113883.5.10 01 | Promise |
| PRP | HL7ActMood | urn:oid:2.16.840.1.113883.5.10 01 | Proposal |
| RQO | HL7ActMood | urn:oid:2.16.840.1.113883.5.10 01 | Request |

Table 331: Priority Level

Value Set: Priority Level urn:oid:2.16.840.1.113883.11.20.9.60
 (Clinical Focus: Qualifier representing the priority of an action),(Data Element Scope: qualifier for an action),(Inclusion Criteria: selected concepts for priority),(Exclusion Criteria: only concepts identified; excludes scheduled - priority)

This value set was imported on 6/26/2019 with a version of 20190319.
 Value Set Source:
<https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.11.20.9.60/expansion>

| Code | Code System | Code System OID | Print Name |
|-----------|-------------|--------------------------------|------------------------------------|
| 394848005 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Normal priority (qualifier value) |
| 394849002 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | High priority (qualifier value) |
| 441808003 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Delayed priority (qualifier value) |

Table 332: ProblemAct statusCode

Value Set: ProblemAct statusCode urn:oid:2.16.840.1.113883.11.20.9.19
 A ValueSet of HL7 actStatus codes for use on the concern act
 Value Set Source:
http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/in_frastructure/vocabulary/vocabulary.html

| Code | Code System | Code System OID | Print Name |
|-----------|--------------|--------------------------------|------------|
| completed | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | Completed |
| aborted | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | Aborted |
| active | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | Active |
| suspended | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | Suspended |

Table 333: QDM Diagnosis Status

Value Set: QDM Diagnosis Status urn:oid:2.16.840.1.113762.1.4.1021.35
 The Quality Data Model (QDM) v4.2 Condition/Diagnosis/Problem data type implicitly supports active and resolved status through the use of timing relationships. The statusCode for Active diagnosis is "active"; the statusCode for Resolved diagnosis is "completed".
 Value Set Source: <https://vsac.nlm.nih.gov/>

| Code | Code System | Code System OID | Print Name |
|----------|--------------|--------------------------------|------------|
| Active | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | Active |
| Complete | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | Complete |

Table 334: Problem Type (LOINC)

| Value Set: Problem Type (LOINC) urn:hl7ii:2.16.840.1.113883.3.88.12.3221.7.2:2014-09-02 | | | |
|---|-------------|-------------------------------|---|
| This value set indicates the level of medical judgment used to determine the existence of a problem using selected concepts from LOINC. | | | |
| Value Set Source: | | | |
| https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.3.88.12.3221.7.2/expansion | | | |
| Code | Code System | Code System OID | Print Name |
| 75326-9 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Problem HL7.CCDAR2 |
| 75325-1 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Symptom HL7.CCDAR2 |
| 75324-4 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Functional performance HL7.CCDAR2 |
| 75323-6 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Condition HL7.CCDAR2 |
| 29308-4 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Diagnosis |
| 75322-8 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Complaint HL7.CCDAR2 |
| 75321-0 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Clinical finding HL7.CCDAR2 |
| 75319-4 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Cognitive function family member HL7.CCDAR2 |
| 75318-6 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Problem family member HL7.CCDAR2 |
| 75317-8 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Symptom family member HL7.CCDAR2 |
| ... | | | |

Table 335: Problem Status

| Value Set: Problem Status urn:oid:2.16.840.1.113883.3.88.12.80.68 | | | |
|---|-------------|--------------------------------|-----------------------------------|
| (Clinical Focus: The clinical status of a problem),(Data Element Scope: Status value),(Inclusion Criteria: Selected qualifier values that represent the clinical status of a problem),(Exclusion Criteria: none specific) | | | |
| This value set was imported on 6/26/2019 with a version of 20190418. | | | |
| Value Set Source: | | | |
| https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.3.88.12.80.68/expansion | | | |
| Code | Code System | Code System OID | Print Name |
| 246455001 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Recurrence (qualifier value) |
| 263855007 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Relapse phase (qualifier value) |
| 277022003 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Remission phase (qualifier value) |
| 413322009 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Problem resolved (finding) |
| 55561003 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Active (qualifier value) |
| 73425007 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Inactive (qualifier value) |

Table 336: ActPriority

| Value Set: ActPriority urn:oid:2.16.840.1.113883.1.11.16866 (Clinical Focus: The urgency under which the Act happened, can happen, is happening, is intended to happen, or is requested/demanded to happen.),(Data Element Scope:),(Inclusion Criteria: All members of system 2.16.840.1.113883.5.7),(Exclusion Criteria:) | | | |
|---|----------------|-------------------------------|----------------------------------|
| This value set was imported on 6/24/2019 with a version of 20190425. | | | |
| Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.1.11.16866/expansion | | | |
| Code | Code System | Code System OID | Print Name |
| A | HL7ActPriority | urn:oid:2.16.840.1.113883.5.7 | ASAP |
| CR | HL7ActPriority | urn:oid:2.16.840.1.113883.5.7 | callback results |
| CS | HL7ActPriority | urn:oid:2.16.840.1.113883.5.7 | callback for scheduling |
| CSP | HL7ActPriority | urn:oid:2.16.840.1.113883.5.7 | callback placer for scheduling |
| CSR | HL7ActPriority | urn:oid:2.16.840.1.113883.5.7 | contact recipient for scheduling |
| EL | HL7ActPriority | urn:oid:2.16.840.1.113883.5.7 | elective |
| EM | HL7ActPriority | urn:oid:2.16.840.1.113883.5.7 | emergency |
| P | HL7ActPriority | urn:oid:2.16.840.1.113883.5.7 | preop |
| PRN | HL7ActPriority | urn:oid:2.16.840.1.113883.5.7 | as needed |
| R | HL7ActPriority | urn:oid:2.16.840.1.113883.5.7 | routine |
| ... | | | |

Table 337: ProcedureAct statusCode

| Value Set: ProcedureAct statusCode urn:oid:2.16.840.1.113883.11.20.9.22 (Clinical Focus: Status of a procedure activity),(Data Element Scope:),(Inclusion Criteria:),(Exclusion Criteria:) | | | |
|--|--------------|--------------------------------|------------|
| This value set was imported on 4/24/2019 with a version of 20190103. | | | |
| Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.11.20.9.22/expansion | | | |
| Code | Code System | Code System OID | Print Name |
| aborted | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | aborted |
| active | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | active |
| cancelled | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | cancelled |
| completed | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | completed |

Table 338: HL7ActCoverageType

| Value Set: HL7ActCoverageType urn:oid:2.16.840.1.113883.1.11.19832 | | | |
|---|-------------|-------------------------------|------------------------------------|
| Set of codes indicating the type of insurance policy or program that pays for the cost of benefits provided to covered parties | | | |
| Value Set Source: https://www.hl7.org/fhir/v3/ActCoverageTypeCode/vs.html | | | |
| Code | Code System | Code System OID | Print Name |
| DISEASEPRG | HL7ActCode | urn:oid:2.16.840.1.113883.5.4 | public health program |
| SUBPRG | HL7ActCode | urn:oid:2.16.840.1.113883.5.4 | substance use program |
| HIVAIDS | HL7ActCode | urn:oid:2.16.840.1.113883.5.4 | HIV-AIDS program |
| LIFE | HL7ActCode | urn:oid:2.16.840.1.113883.5.4 | life insurance policy |
| GOVEMP | HL7ActCode | urn:oid:2.16.840.1.113883.5.4 | government employee health program |
| ... | | | |

Table 339: PersonalRelationshipRoleType

| Value Set: PersonalRelationshipRoleType urn:oid:2.16.840.1.113883.1.11.19563 | | | |
|--|-------------|---------------------------------|------------------|
| Code | Code System | Code System OID | Print Name |
| FAMMEMB | HL7RoleCode | urn:oid:2.16.840.1.113883.5.111 | Family Member |
| CHILD | HL7RoleCode | urn:oid:2.16.840.1.113883.5.111 | Child |
| CHLDADOPT | HL7RoleCode | urn:oid:2.16.840.1.113883.5.111 | adopted child |
| DAUADOPT | HL7RoleCode | urn:oid:2.16.840.1.113883.5.111 | adopted daughter |
| SONADOPT | HL7RoleCode | urn:oid:2.16.840.1.113883.5.111 | adopted son |
| CHLDFOST | HL7RoleCode | urn:oid:2.16.840.1.113883.5.111 | foster child |
| DAUFOST | HL7RoleCode | urn:oid:2.16.840.1.113883.5.111 | foster daughter |
| SONFOST | HL7RoleCode | urn:oid:2.16.840.1.113883.5.111 | foster son |
| CHLDINLAW | HL7RoleCode | urn:oid:2.16.840.1.113883.5.111 | child in-law |
| DAUINLAW | HL7RoleCode | urn:oid:2.16.840.1.113883.5.111 | daughter in-law |
| ... | | | |

Table 340: Result Status

Value Set: Result Status urn:oid:2.16.840.1.113883.11.20.9.39
 (Clinical Focus: The processing status of a laboratory test or panel),(Data Element Scope:),(Inclusion Criteria:),(Exclusion Criteria:)

This value set was imported on 4/24/2019 with a version of 20190103.
 Value Set Source:
<https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.11.20.9.39/expansion>

| Code | Code System | Code System OID | Print Name |
|-----------|--------------|--------------------------------|------------|
| aborted | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | aborted |
| active | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | active |
| cancelled | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | cancelled |
| completed | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | completed |
| held | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | held |
| suspended | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | suspended |

Table 341: Observation Interpretation (HL7)

Value Set: Observation Interpretation (HL7) urn:oid:2.16.840.1.113883.1.11.78
 (Clinical Focus: Codes specifying a rough qualitative interpretation of the observation, such as "normal", "abnormal", "below normal", "change up", "resistant", "susceptible", etc.),(Data Element Scope:),(Inclusion Criteria: all reportable codes in the code system ObservationInterpretation),(Exclusion Criteria: Collector codes in the code system)

This value set was imported on 4/24/2019 with a version of 20190104.
 Value Set Source:
<https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.1.11.78/expansion>

| Code | Code System | Code System OID | Print Name |
|---------|---------------------------|--------------------------------|---------------------------------------|
| < | ObservationInterpretation | urn:oid:2.16.840.1.113883.5.83 | Off scale low |
| > | ObservationInterpretation | urn:oid:2.16.840.1.113883.5.83 | Off scale high |
| A | ObservationInterpretation | urn:oid:2.16.840.1.113883.5.83 | Abnormal |
| AA | ObservationInterpretation | urn:oid:2.16.840.1.113883.5.83 | Critical abnormal |
| AC | ObservationInterpretation | urn:oid:2.16.840.1.113883.5.83 | Anti-complementary substances present |
| B | ObservationInterpretation | urn:oid:2.16.840.1.113883.5.83 | Better |
| CAR | ObservationInterpretation | urn:oid:2.16.840.1.113883.5.83 | Carrier |
| Carrier | ObservationInterpretation | urn:oid:2.16.840.1.113883.5.83 | Carrier |
| D | ObservationInterpretation | urn:oid:2.16.840.1.113883.5.83 | Significant change down |
| DET | ObservationInterpretation | urn:oid:2.16.840.1.113883.5.83 | Detected |
| ... | | | |

Table 342: HealthcareServiceLocation

| <p>Value Set: HealthcareServiceLocation urn:oid:2.16.840.1.113883.1.11.20275 (Clinical Focus: Concepts representing locations and settings where healthcare services are provided. This includes non- (or atypical) patient care locations where emergency services may be provided. The values are derived from the NHSN Healthcare Facility Patient Care Location code system.),(Data Element Scope: Location),(Inclusion Criteria: All codes in code system),(Exclusion Criteria: Codes that do not represent an actual location where health care services can be delivered, IE: Float, or a location aggregation.)</p> <p>This value set was imported on 6/24/2019 with a version of 20190424. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.1.11.20275/expansion</p> | | | |
|--|-------------|---------------------------------|---|
| Code | Code System | Code System OID | Print Name |
| 1005-8 | HSLOC | urn:oid:2.16.840.1.113883.6.259 | Cardiac Catheterization Room/Suite |
| 1007-4 | HSLOC | urn:oid:2.16.840.1.113883.6.259 | Endoscopy Suite |
| 1008-2 | HSLOC | urn:oid:2.16.840.1.113883.6.259 | Radiology |
| 1009-0 | HSLOC | urn:oid:2.16.840.1.113883.6.259 | Pulmonary Function Testing |
| 1010-8 | HSLOC | urn:oid:2.16.840.1.113883.6.259 | General Laboratory |
| 1011-6 | HSLOC | urn:oid:2.16.840.1.113883.6.259 | Clinical Chemistry Laboratory |
| 1012-4 | HSLOC | urn:oid:2.16.840.1.113883.6.259 | Hematology Laboratory |
| 1013-2 | HSLOC | urn:oid:2.16.840.1.113883.6.259 | Histology-Surgical Pathology Laboratory |
| 1014-0 | HSLOC | urn:oid:2.16.840.1.113883.6.259 | Microbiology Laboratory |
| 1015-7 | HSLOC | urn:oid:2.16.840.1.113883.6.259 | Serology Laboratory |
| ... | | | |

Table 343: Reaction Severity

Value Set: Reaction Severity urn:oid:2.16.840.1.113883.3.88.12.3221.6.8
(Clinical Focus: This is a description of the level of severity of the REACTION),(Data Element Scope:),(Inclusion Criteria: Three severities (map fatal to severe, moderate to severe to severe, mild to moderate to moderate)),(Exclusion Criteria:)

This value set was imported on 6/29/2019 with a version of 20190319.
Value Set Source:
<https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.3.88.12.3221.6.8/expansion>

| Code | Code System | Code System OID | Print Name |
|-----------|-------------|--------------------------------|--|
| 24484000 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Severe (severity modifier) (qualifier value) |
| 255604002 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Mild (qualifier value) |
| 6736007 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Moderate (severity modifier) (qualifier value) |

Table 344: Allergy and Intolerance Type

Value Set: Allergy and Intolerance Type urn:oid:2.16.840.1.113883.3.88.12.3221.6.2
(Clinical Focus: The class of substance and intolerance suffered by the patient),(Data Element Scope: Describes any medication allergies, adverse reactions, idiosyncratic reactions, anaphylaxis/anaphylactoid reactions to food items, and metabolic variations or adverse reactions/allergies to other substances (such as latex, iodine, tape adhesives)),(Inclusion Criteria:),(Exclusion Criteria:)

This value set was imported on 6/24/2019 with a version of 20190319.
Value Set Source:
<https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.3.88.12.3221.6.2/expansion>

| Code | Code System | Code System OID | Print Name |
|-----------|-------------|--------------------------------|--|
| 235719002 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Intolerance to food (finding) |
| 414285001 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Allergy to food (finding) |
| 416098002 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Allergy to drug (finding) |
| 418038007 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Propensity to adverse reactions to substance (finding) |
| 418471000 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Propensity to adverse reactions to food (disorder) |
| 419199007 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Allergy to substance (finding) |
| 419511003 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Propensity to adverse reactions to drug (finding) |
| 420134006 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Propensity to adverse reaction (finding) |
| 59037007 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Intolerance to drug (finding) |

Table 345: Substance Reactant for Intolerance

Value Set: Substance Reactant for Intolerance urn:oid:2.16.840.1.113762.1.4.1010.1
 (Clinical Focus: A substance or other type of agent (eg. Sunshine) that may be associated with an intolerance reaction event or a propensity to such an event. These concepts are expected to be at a more general level of abstraction (ingredients versus more specific formulations). This value set is quite general and includes concepts that may never cause an adverse event, particularly the included SNOMED CT concepts. This code system-specific value sets in this grouping value set are intended to provide broad coverage of all kinds of agents, but the expectation for use is that the chosen concept identifier for a substance should be appropriately specific and drawn from the available code systems in the following priority order: NDFRT, then RXNORM, then UNII, then SNOMEDCT. UNII is not included in the initial version. This overarching grouping value set is intended to support identification of drug classes, individual medication ingredients, foods, general substances and environmental entities.),(Data Element Scope: substance elements),(Inclusion Criteria: Any concept that could at some point cause an allergy or intolerance. Intended to include following value sets: Medication Clinical Drug (RxNorm), Clinical Drug Class (NDF-RT), Substance Other Than Clinical Drug (SNOMED CT). It was originally to also include all UNII codes but this will not be included initially.),(Exclusion Criteria: non-substance)

This value set was imported on 6/29/2019 with a version of 20190620.

Value Set Source:

<https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1010.1/expansion>

| Code | Code System | Code System OID | Print Name |
|---------|-------------|--------------------------------|-----------------------------|
| 1000082 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | alcaftadine |
| 1000086 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | Lastacaft |
| 1000104 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | incobotulinumtoxinA |
| 1000108 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | Xeomin |
| 1000112 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | medroxyprogesterone acetate |
| 1000146 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | estradiol cypionate |
| 1000492 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | resveratrol |
| 1000577 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | microcrystalline cellulose |
| 1000581 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | Trichlorfon |
| 1000705 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | Benzalkonium / Tolnaftate |
| ... | | | |

Table 346: PostalAddressUse

| Value Set: PostalAddressUse urn:oid:2.16.840.1.113883.1.11.10637 | | | |
|---|---------------|----------------------------------|------------------------|
| A value set of HL7 Codes for address use. | | | |
| Value Set Source: | | | |
| https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.1.11.10637/expansion | | | |
| Code | Code System | Code System OID | Print Name |
| BAD | HL7AddressUse | urn:oid:2.16.840.1.113883.5.1119 | bad address |
| CONF | HL7AddressUse | urn:oid:2.16.840.1.113883.5.1119 | confidential |
| DIR | HL7AddressUse | urn:oid:2.16.840.1.113883.5.1119 | direct |
| H | HL7AddressUse | urn:oid:2.16.840.1.113883.5.1119 | home address |
| HP | HL7AddressUse | urn:oid:2.16.840.1.113883.5.1119 | primary home |
| HV | HL7AddressUse | urn:oid:2.16.840.1.113883.5.1119 | vacation home |
| PHYS | HL7AddressUse | urn:oid:2.16.840.1.113883.5.1119 | physical visit address |
| PST | HL7AddressUse | urn:oid:2.16.840.1.113883.5.1119 | postal address |
| PUB | HL7AddressUse | urn:oid:2.16.840.1.113883.5.1119 | public |
| TMP | HL7AddressUse | urn:oid:2.16.840.1.113883.5.1119 | temporary |
| ... | | | |

Table 347: StateValueSet

| Value Set: StateValueSet urn:oid:2.16.840.1.113883.3.88.12.80.1 | | | |
|--|------------------|--------------------------------|----------------------|
| Identifies addresses within the United States are recorded using the FIPS 5-2 two-letter alphabetic codes for the State, District of Columbia, or an outlying area of the United States or associated area | | | |
| Value Set Source: http://www.census.gov/geo/reference/ansi_statetables.html | | | |
| Code | Code System | Code System OID | Print Name |
| AL | FIPS 5-2 (State) | urn:oid:2.16.840.1.113883.6.92 | Alabama |
| AK | FIPS 5-2 (State) | urn:oid:2.16.840.1.113883.6.92 | Alaska |
| AZ | FIPS 5-2 (State) | urn:oid:2.16.840.1.113883.6.92 | Arizona |
| AR | FIPS 5-2 (State) | urn:oid:2.16.840.1.113883.6.92 | Arkansas |
| CA | FIPS 5-2 (State) | urn:oid:2.16.840.1.113883.6.92 | California |
| CO | FIPS 5-2 (State) | urn:oid:2.16.840.1.113883.6.92 | Colorado |
| CT | FIPS 5-2 (State) | urn:oid:2.16.840.1.113883.6.92 | Connecticut |
| DE | FIPS 5-2 (State) | urn:oid:2.16.840.1.113883.6.92 | Delaware |
| DC | FIPS 5-2 (State) | urn:oid:2.16.840.1.113883.6.92 | District of Columbia |
| FL | FIPS 5-2 (State) | urn:oid:2.16.840.1.113883.6.92 | Florida |
| ... | | | |

Table 348: PostalCode

| Value Set: PostalCode urn:oid:2.16.840.1.113883.3.88.12.80.2 | | | |
|---|---------------|-------------------------------------|----------------------|
| A value set of postal (ZIP) Code of an address in the United States | | | |
| Value Set Source: http://ushik.ahrq.gov/ViewItemDetails?system=mdr&itemKey=86671000 | | | |
| Code | Code System | Code System OID | Print Name |
| 19009 | USPostalCodes | urn:oid:2.16.840.1.113883.6.23 1 | Bryn Athyn |
| 92869-1736 | USPostalCodes | urn:oid:2.16.840.1.113883.6.23 1 | Orange, CA |
| 32830-8413 | USPostalCodes | urn:oid:2.16.840.1.113883.6.23 1 | Lake Buena Vista, FL |
| ... | | | |

Table 349: EntityNameUse

| Value Set: EntityNameUse urn:oid:2.16.840.1.113883.1.11.15913 | | | |
|--|------------------|--------------------------------|-------------------|
| Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.1.11.15913/expansion | | | |
| Code | Code System | Code System OID | Print Name |
| A | HL7EntityNameUse | urn:oid:2.16.840.1.113883.5.45 | Artist/Stage |
| ABC | HL7EntityNameUse | urn:oid:2.16.840.1.113883.5.45 | Alphabetic |
| ASGN | HL7EntityNameUse | urn:oid:2.16.840.1.113883.5.45 | Assigned |
| C | HL7EntityNameUse | urn:oid:2.16.840.1.113883.5.45 | License |
| I | HL7EntityNameUse | urn:oid:2.16.840.1.113883.5.45 | Indigenous/Tribal |
| IDE | HL7EntityNameUse | urn:oid:2.16.840.1.113883.5.45 | Ideographic |
| L | HL7EntityNameUse | urn:oid:2.16.840.1.113883.5.45 | Legal |
| P | HL7EntityNameUse | urn:oid:2.16.840.1.113883.5.45 | Pseudonym |
| PHON | HL7EntityNameUse | urn:oid:2.16.840.1.113883.5.45 | Phonetic |
| R | HL7EntityNameUse | urn:oid:2.16.840.1.113883.5.45 | Religious |
| ... | | | |

Table 350: EntityPersonNamePartQualifier

| Value Set: EntityPersonNamePartQualifier urn:oid:2.16.840.1.113883.11.20.9.26 | | | |
|--|----------------------------|--------------------------------|--------------|
| Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.11.20.9.26/expansion | | | |
| Code | Code System | Code System OID | Print Name |
| AC | HL7EntityNamePartQualifier | urn:oid:2.16.840.1.113883.5.43 | academic |
| AD | HL7EntityNamePartQualifier | urn:oid:2.16.840.1.113883.5.43 | adopted |
| BR | HL7EntityNamePartQualifier | urn:oid:2.16.840.1.113883.5.43 | birth |
| CL | HL7EntityNamePartQualifier | urn:oid:2.16.840.1.113883.5.43 | callme |
| IN | HL7EntityNamePartQualifier | urn:oid:2.16.840.1.113883.5.43 | initial |
| NB | HL7EntityNamePartQualifier | urn:oid:2.16.840.1.113883.5.43 | nobility |
| PR | HL7EntityNamePartQualifier | urn:oid:2.16.840.1.113883.5.43 | professional |
| SP | HL7EntityNamePartQualifier | urn:oid:2.16.840.1.113883.5.43 | spouse |
| TITLE | HL7EntityNamePartQualifier | urn:oid:2.16.840.1.113883.5.43 | title |
| VV | HL7EntityNamePartQualifier | urn:oid:2.16.840.1.113883.5.43 | voorvoegsel |

8 CODE SYSTEMS IN THIS GUIDE

Table 351: Code Systems

| Name | OID |
|--------------------------------------|--|
| Administrative Gender | urn:oid:2.16.840.1.113883.5.1 |
| CDC Vaccine Code (CVX) | urn:oid:2.16.840.1.113883.12.292 |
| CPT4 | urn:oid:2.16.840.1.113883.6.12 |
| DCM | urn:oid:1.2.840.10008.2.16.4 |
| FIPS 5-2 (State) | urn:oid:2.16.840.1.113883.6.92 |
| Healthcare Provider Taxonomy (HIPAA) | urn:oid:2.16.840.1.113883.6.101 |
| HL7ActClass | urn:oid:2.16.840.1.113883.5.6 |
| HL7ActCode | urn:oid:2.16.840.1.113883.5.4 |
| HL7ActMood | urn:oid:2.16.840.1.113883.5.1001 |
| HL7ActPriority | urn:oid:2.16.840.1.113883.5.7 |
| HL7ActReason | urn:oid:2.16.840.1.113883.5.8 |
| HL7ActRelationshipType | urn:oid:2.16.840.1.113883.5.1002 |
| HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 |
| HL7AddressUse | urn:oid:2.16.840.1.113883.5.1119 |
| HL7Confidentiality | urn:oid:2.16.840.1.113883.5.25 |
| HL7EntityClass | urn:oid:2.16.840.1.113883.5.41 |
| HL7EntityNamePartQualifier | urn:oid:2.16.840.1.113883.5.43 |
| HL7EntityNameUse | urn:oid:2.16.840.1.113883.5.45 |
| HL7LanguageAbilityMode | urn:oid:2.16.840.1.113883.5.60 |
| HL7LanguageAbilityProficiency | urn:oid:2.16.840.1.113883.5.61 |
| HL7MaritalStatus | urn:oid:2.16.840.1.113883.5.2 |
| HL7NullFlavor | urn:oid:2.16.840.1.113883.5.1008 |
| HL7ObservationType | urn:oid:2.16.840.1.113883.18.439 |
| HL7ObservationValue | urn:oid:2.16.840.1.113883.5.1063 |
| HL7ParticipationFunction | urn:oid:2.16.840.1.113883.5.88 |
| HL7ParticipationSignature | urn:oid:2.16.840.1.113883.5.89 |
| HL7ParticipationType | urn:oid:2.16.840.1.113883.5.90 |
| HL7Race | urn:oid:2.16.840.1.113883.5.104 |
| HL7ReligiousAffiliation | urn:oid:2.16.840.1.113883.5.1076 |
| HL7RoleClass | urn:oid:2.16.840.1.113883.5.110 |
| HL7RoleCode | urn:oid:2.16.840.1.113883.5.111 |
| HL7VocabularyDomainQualifier | urn:oid:2.16.840.1.113883.5.147 |
| HSLOC | urn:oid:2.16.840.1.113883.6.259 |
| ICD-10-CM | urn:oid:2.16.840.1.113883.6.90 |
| Insurance Type Code | urn:oid:2.16.840.1.113883.3.88.12.3221.5.2 |

| Name | OID |
|---|--|
| ISO 3166 Part 1 Country Codes, 2nd Edition, Alpha-2 | urn:oid:1.0.3166.1.2.2 |
| Language | urn:oid:2.16.840.1.113883.6.121 |
| LOINC | urn:oid:2.16.840.1.113883.6.1 |
| Media Type | urn:oid:2.16.840.1.113883.5.79 |
| NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 |
| NDFRT | urn:oid:2.16.840.1.113883.3.26.1.5 |
| NUBC UB-04 Patient Discharge Status code set | urn:oid:2.16.840.1.113883.6.301.5 |
| ObservationInterpretation | urn:oid:2.16.840.1.113883.5.83 |
| Provider Role (HL7) | urn:oid:2.16.840.1.113883.3.88.12.3221.4 |
| Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 |
| RxNorm | urn:oid:2.16.840.1.113883.6.88 |
| SNOMED CT | urn:oid:2.16.840.1.113883.6.96 |
| Source of Payment Typology (PHDSC) | urn:oid:2.16.840.1.113883.3.221.5 |
| UCUM | urn:oid:2.16.840.1.113883.6.8 |
| UCUM | urn:oid:1.3.6.1.4.1.12009.10.3.1 |
| USPostalCodes | urn:oid:2.16.840.1.113883.6.231 |

9 RETIRED TEMPLATES

Table 352: Retired Templates

| Name | OID | Description |
|---|---|--|
| Principal Diagnosis (RETIRED) | urn:hl7ii:2.16.840.1.113883.10.20.24.3.152:2019-12-01 | <p>This template represents the Principal Diagnosis QDM Attribute.</p> <p>The coded diagnosis/problem established after study to be chiefly responsible for occasioning the admission of the patient to the hospital for care.</p> <p>This template is retired in QRDA I STU 5.2 due to QDM 5.5 update.</p> |
| Provider Characteristic Observation Assertion (RETIRED) | urn:hl7ii:2.16.840.1.113883.10.20.24.3.114:2019-12-01 | <p>This template represents the QDM datatype: Provider Characteristic.</p> <p>Provider characteristics refer to specific factors about a provider. Included are demographics, behavioral factors, social, or cultural factors, available resources and preferences.</p> <p>This is a pattern that can be used for any simple assertion observation of a provider characteristic.</p> |

10 CHANGES FROM PREVIOUS VERSION

10.1 QDM-Based QRDA (V7)

[QDM-Based QRDA \(V7\) \(urn:hl7ii:2.16.840.1.113883.10.20.24.1.2:2019-12-01\)](#)

| Change | Old | New |
|-----------------------------|---|---|
| Status | Published | Published |
| Name | QDM-Based QRDA (V6) | QDM-Based QRDA (V7) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.1.2:2018-10-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.1.2:2019-12-01 |
| CONF #: 4444-28696 Modified | SHALL contain exactly one [1..1] @extension="2018-10-01" (CONF:4388-28696). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-28696). |

10.2 Adverse Event (V2)

[Adverse Event \(V2\) \(urn:hl7ii:2.16.840.1.113883.10.20.24.3.146:2019-12-01\)](#)

| Change | Old | New |
|--------------------------|---|---|
| Status | Published | Published |
| Name | Adverse Event | Adverse Event (V2) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.146:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.146:2019-12-01 |
| CONF #: 4444-28781 Added | | MAY contain zero or more [0..*] participant (CONF:4444-28781) such that it Note: QDM Attribute: Recorder |
| CONF #: 4444-28782 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-28782). |
| CONF #: 4444-28783 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-28783). |
| CONF #: 4444-29203 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29203) such that it |
| CONF #: 4444-29204 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29204). Note: QDM Attribute: Recorder |
| CONF #: 4444-29205 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29205) such that it |
| CONF #: 4444-29206 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29206). Note: QDM Attribute: Recorder |
| CONF #: 4444-29207 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29207) such that it |
| CONF #: 4444-29208 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29208). Note: QDM Attribute: Recorder |
| CONF #: 4444-29211 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29211). |
| CONF #: 4444-29212 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" performer (CodeSystem: HL7ParticipationType |

| Change | Old | New |
|-----------------------------|---|---|
| | | urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29212). |
| CONF #: 4444-29213 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" performer (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29213). |
| CONF #: 4444-30015 Added | | This effectiveTime SHALL contain exactly one [1..1] @value (CONF:4444-30015). Note: QDM Attribute: Relevant dateTime – datetime adverse event occurred |
| CONF #: 3343-28766 Removed | This effectiveTime SHALL contain exactly one [1..1] low (CONF:3343-28766). Note: startTime - the time the adverse event began | |
| CONF #: 3343-28767 Removed | This effectiveTime SHOULD contain zero or one [0..1] high (CONF:3343-28767). Note: stopTime - the time the adverse event completed | |
| CONF #: 4444-28750 Modified | SHOULD contain zero or one [0..1] entryRelationship (CONF:3343-28750) such that it Note: QDM Attribute: Type | MAY contain zero or one [0..1] entryRelationship (CONF:4444-28750) such that it Note: QDM Attribute: Type |
| CONF #: 4444-28762 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-28762). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-28762). |

10.3 Allergy Intolerance (V2)

[Allergy Intolerance \(V2\) \(urn:hl7ii:2.16.840.1.113883.10.20.24.3.147:2019-12-01\)](#)

| Change | Old | New |
|--------------------------|---|---|
| Status | Published | Published |
| Name | Allergy Intolerance | Allergy Intolerance (V2) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.147:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.147:2019-12-01 |
| CONF #: 4444-29592 Added | | SHALL contain exactly one [1..1] templateId (CONF:4444-29592) such that it |
| CONF #: 4444-29593 Added | | SHALL contain exactly one [1..1] code (CONF:4444-29593). |
| CONF #: 4444-29594 Added | | SHALL contain exactly one [1..1] effectiveTime (CONF:4444-29594). Note: QDM Attribute: PrevalencePeriod |
| CONF #: 4444-29595 Added | | SHALL contain exactly one [1..1] participant (CONF:4444-29595) such that it |
| CONF #: 4444-29596 Added | | MAY contain zero or one [0..1] author (CONF:4444-29596). Note: QDM Attribute: Author dateTime |
| CONF #: 4444-29597 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29597) such that it Note: QDM Attribute: Recorder |
| CONF #: 4444-29598 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29598). |
| CONF #: 4444-29599 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29599) such that it Note: QDM Attribute: Recorder |
| CONF #: 4444-29600 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29600). |
| CONF #: 4444-29601 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29601) such that it Note: QDM Attribute: Recorder |
| CONF #: 4444-29602 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29602). |
| CONF #: 4444-29603 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29603) such that it Note: QDM Attribute: Recorder |

| Change | Old | New |
|-----------------------------|--|---|
| CONF #: 4444-29604 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29604). |
| CONF #: 4444-29606 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29606). |
| CONF #: 4444-29607 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29607). |
| CONF #: 4444-29608 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29608). |
| CONF #: 4444-29609 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29609). |
| CONF #: 4444-30034 Added | | SHALL NOT contain [0..0] author (CONF:4444-30034). |
| CONF #: 3343-28816 Removed | SHALL contain exactly one [1..1] templateId (CONF:3343-28816) such that it | |
| CONF #: 3343-28817 Removed | SHALL contain exactly one [1..1] code (CONF:3343-28817). | |
| CONF #: 3343-28819 Removed | SHALL contain exactly one [1..1] effectiveTime (CONF:3343-28819). Note: QDM Attribute: PrevalencePeriod | |
| CONF #: 3343-28820 Removed | SHALL contain exactly one [1..1] participant (CONF:3343-28820) such that it | |
| CONF #: 3343-29163 Removed | MAY contain zero or one [0..1] author (CONF:3343-29163). Note: QDM Attribute: Author dateTime | |
| CONF #: 4444-28829 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-28829). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-28829). |

10.4 Assessment Order (V2)

[Assessment Order \(V2\) \(urn:hl7ii:2.16.840.1.113883.10.20.24.3.158:2019-12-01\)](#)

| Change | Old | New |
|-------------|--|--|
| Status | Published | Published |
| Name | Assessment Order | Assessment Order (V2) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.158:2018-10-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.158:2019-12-01 |
| Description | <p>This template represents the QDM datatype: Assessment, Order. Assessment is a resource used to define specific observations that clinicians use to guide treatment of the patient. An assessment can be a single question, or observable entity with an expected response, an organized collection of questions intended to solicit information from patients, providers or other individuals, or a single observable entity that is part of such a collection of questions.</p> <p>Data elements that meet these criteria using the Assessment, Order data type should document an order by a clinician or appropriately licensed care provider to a patient or an appropriate provider or organization to perform an assessment indicated by the Assessment category and its corresponding value set.</p> <p>Timing: The time the recommendation is authored (i.e., provided to the patient).</p> <p>QDM attribute: Author dateTime is represented by author/time and correspond to when the order was authored (i.e., provided to the patient). Orders address the time that the order is authored, a single point in time. Some assessment orders will be addressed as components of a care plan which incorporates the period (or timing) when the order is to be carried out.</p> <p>QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template.</p> | <p>This template represents the QDM datatype: Assessment, Order. Assessment is a resource used to define specific observations that clinicians use to guide treatment of the patient. An assessment can be a single question, or observable entity with an expected response, an organized collection of questions intended to solicit information from patients, providers or other individuals, or a single observable entity that is part of such a collection of questions.</p> <p>Data elements that meet these criteria using the Assessment, Order data type should document an order by a clinician or appropriately licensed care provider to a patient or an appropriate provider or organization to perform an assessment indicated by the Assessment category and its corresponding value set.</p> <p>Timing: The time the recommendation is authored (i.e., provided to the patient).</p> <p>QDM attribute: Author dateTime is represented by author/time and correspond to when the order was authored (i.e., provided to the patient). Orders address the time that the order is authored, a single point in time. Some assessment orders will be addressed as components of a care plan which incorporates the period (or timing) when the order is to be carried out.</p> <p>For Assessment Not Order, use Author dateTime to reference the timing.</p> <p>QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained</p> |

| Change | Old | New |
|--------------------------|-----|--|
| | | Reason (V3) template. |
| CONF #: 4444-29251 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29251) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29252 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29252). |
| CONF #: 4444-29253 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29253) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29254 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29254). |
| CONF #: 4444-29255 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29255) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29256 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29256). |
| CONF #: 4444-29257 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29257). |
| CONF #: 4444-29258 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29258). |
| CONF #: 4444-29259 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29259). |
| CONF #: 4444-29565 Added | | If @negationInd="true" is present, SHALL contain one [1..1] entryRelationship such that it contains exactly one [1..1] Reason (V3) to state the reason for Assessment Not Order (CONF:4444-29565). |
| CONF #: 4444-29610 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29610) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29611 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444- |

| Change | Old | New |
|-----------------------------|--|---|
| | | 29611). |
| CONF #: 4444-29612 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29612). |
| CONF #: 4444-29239 Modified | MAY contain zero or one [0..1] entryRelationship (CONF:4388-29239) such that it Note: QDM Attribute: Reason | MAY contain zero or more [0..*] entryRelationship (CONF:4444-29239) such that it Note: QDM Attribute: Reason |
| CONF #: 4444-29245 Modified | SHALL contain exactly one [1..1] @extension="2018-10-01" (CONF:4388-29245). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-29245). |

10.5 Assessment Performed (V3)

[Assessment Performed \(V3\) \(urn:hl7ii:2.16.840.1.113883.10.20.24.3.144:2019-12-01\)](#)

| Change | Old | New |
|-------------|--|--|
| Status | Published | Published |
| Name | Assessment Performed (V2) | Assessment Performed (V3) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.144:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.144:2019-12-01 |
| Description | <p>This template represents the QDM datatype: Assessment, Performed. Assessment is a resource used to define specific observations that clinicians use to guide treatment of the patient. An assessment can be a single question, or observable entity with an expected response, an organized collection of questions intended to solicit information from patients, providers or other individuals, or a single observable entity that is part of such a collection of questions. The Assessment Performed template represents the completion of an assessment.</p> <p>QDM attribute: Author dateTime is the time the assessment is completed.</p> <p>QDM attribute: Component. Elements included or documented as part of assessment. Examples include: specific questions included in assessments. Each assessment may have one or more components.</p> <p>QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template.</p> <p>This template could also be used to represent occupational data for health such as current industry, occupation, and employment status.</p> | <p>This template represents the QDM datatype: Assessment, Performed. Assessment is a resource used to define specific observations that clinicians use to guide treatment of the patient. An assessment can be a single question, or observable entity with an expected response, an organized collection of questions intended to solicit information from patients, providers or other individuals, or a single observable entity that is part of such a collection of questions. The Assessment Performed template represents the completion of an assessment.</p> <p>This template could also be used to represent occupational data for health such as current industry, occupation, and employment status.</p> <p>QDM attribute: Component. Elements included or documented as part of assessment. Examples include: specific questions included in assessments. Each assessment may have one or more components.</p> <p>QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template.</p> <p>Timing:</p> <p>QDM attribute: Relevant dateTime references timing for an assessment that occurs at a single point in time.</p> <p>QDM Attribute: Relevant Period references a start and stop time for an assessment that occurs over a time interval.</p> <p>QDM attribute: Author dateTime references the time the assessment was recorded and applies only when the record has no reference</p> |

| Change | Old | New |
|--------------------------|-----|---|
| | | to the time the assessment was performed and only the recorded time is available. For Assessment Not Performed for a reason always use the Author dateTime attribute to reference timing and must not use Relevant Period or Relevant dateTime. |
| CONF #: 4444-28818 Added | | SHALL contain exactly one [1..1] author (CONF:4444-28818). Note: QDM Attribute: Author dateTime - the time the assessment was recorded, applies only when the record has no reference to the time the assessment was performed and only the recorded time is available |
| CONF #: 4444-28819 Added | | MAY contain zero or more [0..*] entryRelationship (CONF:4444-28819) such that it Note: QDM Attribute: Components |
| CONF #: 4444-28820 Added | | SHALL contain exactly one [1..1] observation (CONF:4444-28820). |
| CONF #: 4444-29120 Added | | MAY contain zero or one [0..1] methodCode (CONF:4444-29120). Note: QDM Attribute: Method |
| CONF #: 4444-29121 Added | | MAY contain zero or one [0..1] value (CONF:4444-29121). Note: QDM Attribute: Result |
| CONF #: 4444-29122 Added | | MAY contain zero or one [0..1] effectiveTime (CONF:4444-29122) such that it Note: QDM Attribute: Relevant Period, Relevant dateTime |
| CONF #: 4444-29123 Added | | SHOULD contain zero or one [0..1] low (CONF:4444-29123). Note: QDM Attribute: Relevant Period startTime – the time the assessment starts if the assessment occurred over a time interval. |
| CONF #: 4444-29124 Added | | MAY contain zero or one [0..1] high (CONF:4444-29124). Note: QDM Attribute: Relevant Period stopTime - the time the assessment stops if the assessment occurred over a time interval |
| CONF #: 4444-29125 Added | | This effectiveTime SHALL contain either a low or a @value but not both (CONF:4444-29125). Note: QDM Attributes Relevant |

| Change | Old | New |
|--------------------------|-----|---|
| | | dateTime and Relevant Period are mutually exclusive. |
| CONF #: 4444-29128 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29128) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29129 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29129). |
| CONF #: 4444-29130 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29130) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29131 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29131). |
| CONF #: 4444-29132 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29132) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29133 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29133). |
| CONF #: 4444-29134 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29134) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29135 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29135). |
| CONF #: 4444-29136 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29136). |
| CONF #: 4444-29137 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29137). |
| CONF #: 4444-29138 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29138). |
| CONF #: 4444-29139 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29139). |

| Change | Old | New |
|-----------------------------|---|--|
| CONF #: 4444-29563 Added | | If @negationInd="true" is present, SHALL contain one [1..1] entryRelationship such that it contains exactly one [1..1] Reason (V3) to state the reason for Assessment Not Performed (CONF:4444-29563). |
| CONF #: 4444-29613 Added | | SHALL contain at least one [1..*] id (CONF:4444-29613). |
| CONF #: 4444-30016 Added | | SHOULD contain zero or one [0..1] @value (CONF:4444-30016). Note: QDM Attribute: Relevant dateTime - the time the assessment occurred at a single point in time |
| CONF #: 3343-28781 Removed | MAY contain zero or one [0..1] methodCode (CONF:3343-28781). Note: QDM Attribute: Method | |
| CONF #: 3343-28782 Removed | MAY contain zero or one [0..1] value (CONF:3343-28782). Note: QDM Attribute: Result | |
| CONF #: 3343-28783 Removed | SHALL contain exactly one [1..1] author (CONF:3343-28783). Note: QDM Attribute: Author dateTime - the time the assessment is completed | |
| CONF #: 3343-28800 Removed | MAY contain zero or more [0..*] entryRelationship (CONF:3343-28800) such that it Note: QDM Attribute: Components | |
| CONF #: 3343-28801 Removed | SHALL contain exactly one [1..1] observation (CONF:3343-28801). | |
| CONF #: 4444-28651 Modified | MAY contain zero or one [0..1] entryRelationship (CONF:3343-28651) such that it Note: QDM Attribute: Reason | MAY contain zero or more [0..*] entryRelationship (CONF:4444-28651) such that it Note: QDM Attribute: Reason |
| CONF #: 4444-28701 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-28701). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-28701). |

10.6 Assessment Recommended (V3)

[Assessment Recommended \(V3\) \(urn:hl7ii:2.16.840.1.113883.10.20.24.3.145:2019-12-01\)](urn:hl7ii:2.16.840.1.113883.10.20.24.3.145:2019-12-01)

| Change | Old | New |
|--------|-----------------------------|-----------------------------|
| Status | Published | Published |
| Name | Assessment Recommended (V2) | Assessment Recommended (V3) |

| Change | Old | New |
|--------------------------|---|---|
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.145:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.145:2019-12-01 |
| CONF #: 4444-29215 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29215) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29216 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29216). |
| CONF #: 4444-29217 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29217) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29218 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29218). |
| CONF #: 4444-29219 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29219) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29220 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29220). |
| CONF #: 4444-29221 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29221) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29222 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29222). |
| CONF #: 4444-29223 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29223). |
| CONF #: 4444-29224 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29224). |
| CONF #: 4444-29225 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29225). |
| CONF #: 4444-29226 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29226). |

| Change | Old | New |
|-----------------------------|--|--|
| CONF #: 4444-29566 Added | | If @negationInd="true" is present, SHALL contain one [1..1] entryRelationship such that it contains exactly one [1..1] Reason (V3) to state the reason for Assessment Not Recommended (CONF:4444-29566). |
| CONF #: 3343-28699 Removed | MAY contain zero or one [0..1] methodCode (CONF:3343-28699). Note: QDM Attribute: Method | |
| CONF #: 4444-28672 Modified | MAY contain zero or one [0..1] entryRelationship (CONF:3343-28672) such that it Note: QDM Attribute: Reason | MAY contain zero or more [0..*] entryRelationship (CONF:4444-28672) such that it Note: QDM Attribute: Reason |
| CONF #: 4444-28702 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-28702). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-28702). |

10.7 Care Goal (V5)

Care Goal (V5) (urn:hl7ii:2.16.840.1.113883.10.20.24.3.1:2019-12-01)

| Change | Old | New |
|--------------------------|---|---|
| Status | Published | Published |
| Name | Care Goal (V4) | Care Goal (V5) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.1:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.1:2019-12-01 |
| CONF #: 4444-29567 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29567) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29568 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29568). |
| CONF #: 4444-29569 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29569) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29570 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29570). |
| CONF #: 4444-29571 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29571) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29572 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29572). |
| CONF #: 4444-29573 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29573) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29574 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29574). |
| CONF #: 4444-29575 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29575). |
| CONF #: 4444-29576 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29576). |
| CONF #: 4444-29577 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) |

| Change | Old | New |
|-----------------------------|---|---|
| | | (CONF:4444-29577). |
| CONF #: 4444-29578 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29578). |
| CONF #: 4444-29588 Added | | MAY contain zero or one [0..1] entryRelationship (CONF:4444-29588) such that it Note: QDM Attribute: Status Date |
| CONF #: 4444-29589 Added | | SHALL contain exactly one [1..1] observation (CONF:4444-29589). Note: When uses Status (V2) template to represent the Care Goal Status Date attribute, observation/effectiveTime SHALL be present. NullFlavor could be provided for the observation/value. |
| CONF #: 4444-27067 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-27067). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-27067). |

10.8 Communication Performed (V2)

Communication Performed (V2) (urn:hl7ii:2.16.840.1.113883.10.20.24.3.156:2019-12-01)

| Change | Old | New |
|--------------------------|--|---|
| Status | Published | Published |
| Name | Communication Performed | Communication Performed (V2) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.156:2018-10-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.156:2019-12-01 |
| Description | <p>This template represents the QDM datatype: Communication, Performed.</p> <p>To meet criteria using this datatype, the communication indicated by the Communication QDM category is a conveyance of information from one entity (e.g., person, organization, or device) to another.</p> <p>QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template. Although Reason (V3) is not explicitly contained in every template, it is available for use in any template.</p> | <p>This template represents the QDM datatype: Communication, Performed.</p> <p>To meet criteria using this datatype, the communication indicated by the Communication QDM category is a conveyance of information from one entity (e.g., person, organization, or device) to another.</p> <p>QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template.</p> <p>Timing: sent dateTime – when the communication was sent received dateTime – when the communication was received author dateTime – Communication Not Performed with a reason always use the author dateTime attribute to reference timing and must not use Relevant Period.</p> |
| CONF #: 4444-29176 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29176) such that it |
| CONF #: 4444-29177 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29177). Note: QDM Attribute: Recipient - The entity (e.g., person, organization, clinical information system, or device) which is the target of a communication |
| CONF #: 4444-29178 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29178) such that it |
| CONF #: 4444-29179 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29179). Note: QDM Attribute: Recipient - |

| Change | Old | New |
|--------------------------|-----|---|
| | | The entity (e.g., person, organization, clinical information system, or device) which is the target of a communication |
| CONF #: 4444-29180 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29180) such that it |
| CONF #: 4444-29181 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29181). Note: QDM Attribute: Recipient - The entity (e.g., person, organization, clinical information system, or device) which is the target of a communication |
| CONF #: 4444-29182 Added | | SHALL contain exactly one [1..1] @typeCode="IRCP" information recipient (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29182). |
| CONF #: 4444-29183 Added | | SHALL contain exactly one [1..1] @typeCode="IRCP" information recipient (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29183). |
| CONF #: 4444-29184 Added | | QDM Attribute: Recipient - The entity (e.g., person, organization, clinical information system, or device) which is the target of a communication SHALL contain exactly one [1..1] @typeCode="IRCP" information recipient (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29184). |
| CONF #: 4444-29185 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29185). Note: QDM Attribute: Sender - The entity (e.g., person, organization, clinical information system, or device) that is the source of a communication |
| CONF #: 4444-29186 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29186) such that it |
| CONF #: 4444-29187 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29187). |

| Change | Old | New |
|--------------------------|-----|--|
| | | Note: QDM Attribute: Sender - The entity (e.g., person, organization, clinical information system, or device) that is the source of a communication |
| CONF #: 4444-29188 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29188) such that it |
| CONF #: 4444-29189 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29189). Note: QDM Attribute: Sender - The entity (e.g., person, organization, clinical information system, or device) that is the source of a communication |
| CONF #: 4444-29190 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29190) such that it |
| CONF #: 4444-29191 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29191). Note: QDM Attribute: Sender - The entity (e.g., person, organization, clinical information system, or device) that is the source of a communication |
| CONF #: 4444-29192 Added | | MAY contain zero or one [0..1] entryRelationship (CONF:4444-29192) such that it Note: Reason for negation |
| CONF #: 4444-29193 Added | | SHALL contain exactly one [1..1] observation (CONF:4444-29193). |
| CONF #: 4444-29194 Added | | SHALL contain exactly one [1..1] @typeCode="AUT" author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29194). |
| CONF #: 4444-29195 Added | | SHALL contain exactly one [1..1] @typeCode="AUT" author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29195). |
| CONF #: 4444-29196 Added | | SHALL contain exactly one [1..1] @typeCode="AUT" author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29196). |

| Change | Old | New |
|-----------------------------|--|---|
| CONF #: 4444-29197 Added | | SHALL contain exactly one [1..1] @typeCode="RSON" has reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-29197). |
| CONF #: 4444-29201 Added | | The effectiveTime, if present, MAY contain zero or one [0..1] high (CONF:4444-29201). Note: QDM Attribute: Received dateTime – the time the communication is received |
| CONF #: 4444-29591 Added | | If @negationInd="true" is present, SHALL contain one [1..1] entryRelationship (with @typeCode="RSON") such that it contains exactly one [1..1] Reason (V3) to state the reason for Communication Not Performed (CONF:4444-29591). |
| CONF #: 4388-29146 Removed | This participantRole SHALL contain exactly one [1..1] code (CONF:4388-29146). Note: QDM Attribute: Recipient - The entity (e.g., person, organization, clinical information system, or device) which is the target of a communication | |
| CONF #: 4388-29148 Removed | SHALL contain exactly one [1..1] participantRole (CONF:4388-29148). | |
| CONF #: 4388-29171 Removed | The effectiveTime, if present, MAY contain zero or one [0..1] high (CONF:4388-29171). Note: Stop dateTime – the time the communication is received | |
| CONF #: 4388-29172 Removed | This participantRole SHALL contain exactly one [1..1] code (CONF:4388-29172). Note: QDM Attribute: Sender - The entity (e.g., person, organization, clinical information system, or device) that is the source of a communication | |
| CONF #: 4444-29144 Modified | MAY contain zero or one [0..1] participant (CONF:4388-29144) such that it | MAY contain zero or more [0..*] participant (CONF:4444-29144) such that it |
| CONF #: 4444-29147 Modified | MAY contain zero or one [0..1] participant (CONF:4388-29147) such that it | MAY contain zero or more [0..*] participant (CONF:4444-29147) such that it |

| Change | Old | New |
|-----------------------------|---|---|
| CONF #: 4444-29152 Modified | SHALL contain exactly one [1..1] @extension="2018-10-01" (CONF:4388-29152). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-29152). |
| CONF #: 4444-29170 Modified | The effectiveTime, if present, SHALL contain exactly one [1..1] low (CONF:4388-29170). Note: Start dateTime - the time the communication is sent | The effectiveTime, if present, MAY contain zero or one [0..1] low (CONF:4444-29170). Note: QDM Attribute: Sent dateTime - the time the communication is sent |

10.9 Device Applied (V6)

[Device Applied \(V6\) \(urn:hl7ii:2.16.840.1.113883.10.20.24.3.7:2019-12-01\)](#)

| Change | Old | New |
|--------------------------|---|---|
| Status | Published | Published |
| Name | Device Applied (V5) | Device Applied (V6) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.7:2018-10-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.7:2019-12-01 |
| Description | <p>This template represents the QDM datatype: Device, Applied. This datatype indicates that equipment designed to treat, monitor, or diagnose a patient's status is in use (e.g., an antithrombotic device has been placed on the patient's legs to prevent thromboembolism, or a cardiac pacemaker is in place). The statusCode has been constrained to "completed" and there is a participant to represent the device. QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template.</p> | <p>This template represents the QDM datatype: Device, Applied. This datatype indicates that equipment designed to treat, monitor, or diagnose a patient's status is in use (e.g., an antithrombotic device has been placed on the patient's legs to prevent thromboembolism, or a cardiac pacemaker is in place). The statusCode has been constrained to "completed" and there is a participant to represent the device.</p> <p>QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template.</p> <p>Timing: The Relevant Period startTime is when the device is inserted or first used, stopTime is when the device is removed or last used. Relevant dateTime addresses the time the device is applied if it was used at a single point in time; Relevant Period references a start and stop time for a device if the application occurred over a time interval.. Author dateTime references the time the device application was recorded and applies only when the record has no reference to the actual time the device was applied and only the recorded time is available. For Device Not Applied, use the author dateTime attribute to reference timing and must not use Relevant Period.</p> |
| CONF #: 4444-29261 Added | | This statusCode SHALL contain exactly one [1..1] @code="completed" Completed |

| Change | Old | New |
|--------------------------|-----|---|
| | | (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:4444-29261). |
| CONF #: 4444-29262 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29262) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29263 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444- 29263). |
| CONF #: 4444-29264 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29264) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29265 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444- 29265). |
| CONF #: 4444-29266 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29266) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29267 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444- 29267). |
| CONF #: 4444-29268 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29268). |
| CONF #: 4444-29269 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29269). |
| CONF #: 4444-29270 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29270). |
| CONF #: 4444-29271 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29271) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29272 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444- 29272). |
| CONF #: 4444-29273 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ObservationType urn:oid:2.16.840.1.113883.18.439) |

| Change | Old | New |
|-----------------------------|---|--|
| | | (CONF:4444-29273). |
| CONF #: 4444-29616 Added | | If @negationInd="true" is present, SHALL contain one [1..1] entryRelationship such that it contains exactly one [1..1] Reason (V3) to state the reason for Device Not Applied (CONF:4444-29616). |
| CONF #: 4444-29617 Added | | This effectiveTime SHOULD contain zero or one [0..1] @value (CONF:4444-29617). Note: QDM Attribute: Relevant dateTime - the time the device is applied if it was used at a single point in time |
| CONF #: 4444-29618 Added | | This effectiveTime SHALL contain either a low or a @value but not both (CONF:4444-29618). Note: QDM Attributes Relevant dateTime and Relevant Period are mutually exclusive. |
| CONF #: 4444-30026 Added | | SHALL NOT contain [0..0] author (CONF:4444-30026). |
| CONF #: 4388-29254 Removed | This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:4388-29254). | |
| CONF #: 4444-12403 Modified | MAY contain zero or one [0..1] entryRelationship (CONF:4388-12403) such that it Note: QDM Attribute: Reason | MAY contain zero or more [0..*] entryRelationship (CONF:4444-12403) such that it Note: QDM Attribute: Reason |
| CONF #: 4444-27132 Modified | SHALL contain exactly one [1..1] @extension="2018-10-01" (CONF:4388-27132). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-27132). |
| CONF #: 4444-27537 Modified | This effectiveTime SHALL contain exactly one [1..1] low (CONF:4388-27537). Note: startTime - the device is inserted or first used | This effectiveTime SHOULD contain zero or one [0..1] low (CONF:4444-27537). Note: QDM Attribute: Relevant Period startTime - the device is inserted or first used |
| CONF #: 4444-12416 Modified | SHOULD contain zero or one [0..1] targetSiteCode (CONF:4388-12416). Note: QDM Attribute: Anatomical Location Site | MAY contain zero or one [0..1] targetSiteCode (CONF:4444-12416). Note: QDM Attribute: Anatomical Location Site |

10.10 Device Order (V5)

[Device Order \(V5\) \(urn:hl7ii:2.16.840.1.113883.10.20.24.3.9:2019-12-01\)](#)

| Change | Old | New |
|--------------------------|--|---|
| Status | Published | Published |
| Name | Device Order (V4) | Device Order (V5) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.9:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.9:2019-12-01 |
| Description | <p>This template, along with the Device Order Act (V2) template, represents the QDM datatype: Device, Order. This template must be contained by a Device Order Act (V2) template.</p> <p>This datatype represents an order for equipment designed to treat, monitor, or diagnose a patient's condition.</p> <p>The moodCode is constrained to "RQO", an author is required to represent the ordering clinician and an author time/date stamp is required.</p> <p>QDM Attribute: Author dateTime corresponds to when the order was signed. The time the activity is intended to take place is represented by effectiveTime.</p> | <p>This template, along with the Device Order Act (V3) template, represents the QDM datatype: Device, Order. This template must be contained by a Device Order Act (V3) template.</p> <p>This datatype represents an order for equipment designed to treat, monitor, or diagnose a patient's condition.</p> <p>The moodCode is constrained to "RQO", an author is required to represent the ordering clinician and an author time/date stamp is required.</p> <p>QDM Attribute: Author dateTime corresponds to when the order was signed.</p> <p>For Device Not Ordered, use author dateTime to reference the timing.</p> |
| CONF #: 4444-29276 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29276) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29277 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29277). |
| CONF #: 4444-29278 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29278) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29279 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29279). |
| CONF #: 4444-29280 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29280) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29281 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29281). |
| CONF #: 4444-29282 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29282) |

| Change | Old | New |
|-----------------------------|--|---|
| | | such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29283 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29283). |
| CONF #: 4444-29284 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29284). |
| CONF #: 4444-29285 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29285). |
| CONF #: 4444-29286 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29286). |
| CONF #: 4444-29287 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29287). |
| CONF #: 4444-27091 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-27091). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-27091). |
| CONF #: 4444-28665 Modified | This template *SHALL* be contained by a Device Order Act (V2) (CONF:3343-28665). | This template SHALL be contained by a Device Order Act (V3) (CONF:4444-28665). |

10.11 Device Order Act (V3)

[Device Order Act \(V3\) \(urn:hl7ii:2.16.840.1.113883.10.20.24.3.130:2019-12-01\)](#)

| Change | Old | New |
|-----------------------------|--|--|
| Status | Published | Published |
| Name | Device Order Act (V2) | Device Order Act (V3) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.130:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.130:2019-12-01 |
| Description | This template along with the Device Order (V3) template represents the QDM Datatype: Device, Order. Adding this act wrapper to the Device Order (V3) template allows device order to be negated. | This template along with the Device Order (V5) template represents the QDM Datatype: Device, Order. The Device Order Act is added as a wrapper to the Device Order (V5) template to allow device order to be negated. |
| CONF #: 4444-29619 Added | | MAY contain zero or one [0..1] entryRelationship (CONF:4444-29619) such that it Note: Reason for Negation |
| CONF #: 4444-29620 Added | | SHALL contain exactly one [1..1] observation (CONF:4444-29620). |
| CONF #: 4444-29621 Added | | If @negationInd="true" is present, SHALL contain one [1..1] entryRelationship such that it contains exactly one [1..1] Reason (V3) to state the reason for Device Not Order (CONF:4444-29621). |
| CONF #: 4444-29622 Added | | SHALL contain exactly one [1..1] @typeCode="RSON" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-29622). |
| CONF #: 4444-28918 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-28918). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-28918). |

10.12 Device Recommended (V5)

[Device Recommended \(V5\) \(urn:hl7ii:2.16.840.1.113883.10.20.24.3.10:2019-12-01\)](#)

| Change | Old | New |
|--------------------------|---|---|
| Status | Published | Published |
| Name | Device Recommended (V4) | Device Recommended (V5) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.10:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.10:2019-12-01 |
| Description | <p>This template along with the Device Recommended Act (V2) represents the QDM datatype: Device, Recommended. This template must be contained by a Device Recommended Act (V2) template. This datatype represents a recommendation for equipment designed to treat, monitor, or diagnose a patient's condition. The moodCode is constrained to "INT", an author is required to represent the recommending clinician and an author time/date stamp is required.</p> <p>QDM Attribute: Author dateTime corresponds to when the recommendation was signed. The time the activity is recommended to take place is represented by effectiveTime.</p> | <p>This template along with the Device Recommended Act (V3) represents the QDM datatype: Device, Recommended. This template must be contained by a Device Recommended Act (V3) template. This datatype represents a recommendation for equipment designed to treat, monitor, or diagnose a patient's condition. The moodCode is constrained to "INT", an author is required to represent the recommending clinician and an author time/date stamp is required.</p> <p>QDM Attribute: Author dateTime corresponds to when the recommendation was signed. For Device Not Recommended use Author dateTime to reference timing.</p> |
| CONF #: 4444-29288 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29288) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29289 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29289). |
| CONF #: 4444-29290 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29290) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29291 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29291). |
| CONF #: 4444-29292 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29292) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29293 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29293). |
| CONF #: 4444-29294 Added | | MAY contain zero or more [0..*] |

| Change | Old | New |
|-----------------------------|--|---|
| | | participant (CONF:4444-29294) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29295 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29295). |
| CONF #: 4444-29296 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29296). |
| CONF #: 4444-29297 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29297). |
| CONF #: 4444-29298 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29298). |
| CONF #: 4444-29299 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29299). |
| CONF #: 4444-27094 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-27094). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-27094). |
| CONF #: 4444-28666 Modified | This template *SHALL* be contained by a Device Recommended Act (V2) (CONF:3343-28666). | This template SHALL be contained by a Device Recommended Act (V3) (CONF:4444-28666). |

10.13 Device Recommended Act (V3)

Device Recommended Act (V3) (urn:hl7ii:2.16.840.1.113883.10.20.24.3.131:2019-12-01)

| Change | Old | New |
|-----------------------------|---|---|
| Status | Published | Published |
| Name | Device Recommended Act (V2) | Device Recommended Act (V3) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.131:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.131:2019-12-01 |
| Description | This template along with the Device Recommended (V4) template represent the QDM Datatype: Device, Recommended. Adding an act wrapper to the Device Recommended (V4) template allows the device recommended to be negated. | This template along with the Device Recommended (V5) template represent the QDM Datatype: Device, Recommended. This template is to add a wrapper to the Device Recommended (V5) template to allow the Device Recommended to be negated. |
| CONF #: 4444-29300 Added | | MAY contain zero or one [0..1] entryRelationship (CONF:4444-29300) such that it Note: Reason for Negation |
| CONF #: 4444-29301 Added | | SHALL contain exactly one [1..1] observation (CONF:4444-29301). |
| CONF #: 4444-29302 Added | | SHALL contain exactly one [1..1] @typeCode="RSON" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29302). |
| CONF #: 4444-29630 Added | | If @negationInd="true" is present, SHALL contain one [1..1] entryRelationship such that it contains exactly one [1..1] Reason (V3) to state the reason for Device Not Recommended (CONF:4444-29630). |
| CONF #: 4444-29631 Added | | MAY contain zero or more [0..*] id (CONF:4444-29631). Note: QDM Attribute: id |
| CONF #: 4444-28922 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-28922). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-28922). |

10.14 Diagnosis (V3)

[Diagnosis \(V3\) \(urn:hl7ii:2.16.840.1.113883.10.20.24.3.135:2019-12-01\)](#)

| Change | Old | New |
|--------------------------|---|---|
| Status | Published | Published |
| Name | Diagnosis (V2) | Diagnosis (V3) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.135:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.135:2019-12-01 |
| Description | <p>This template represents the QDM datatype: Diagnosis. This template must be contained by a Diagnosis Concern Act (V3) template. Condition/Diagnosis/Problem represents a practitioner's identification of a patient's disease, illness, injury, or condition. This category contains a single datatype to represent all of these concepts: Diagnosis. A practitioner determines the diagnosis by means of examination, diagnostic test results, patient history, and/or family history. Diagnoses are usually considered unfavorable, but may also represent neutral or favorable conditions that affect a patient's plan of care (e.g., pregnancy). The onset dateTime corresponds to the implicit start date of the diagnosis and the abatement dateTime corresponds to the implicit stop date of the diagnosis. If the abatement dateTime is not present, then the diagnosis is considered to still be active. When this is used with timing relationships, the criterion is looking for an active diagnosis for the time frame indicated by the timing relationships. QDM Attribute: Prevalence Period references the time from the onset date (observation/effectiveTime/low) to the abatement date (observation/effectiveTime/high). If effectiveTime/high is null, then the diagnosis is considered to still be active.</p> | <p>This template represents the QDM datatype: Diagnosis. This template must be contained by a Diagnosis Concern Act (V5) template. Condition/Diagnosis/Problem represents a practitioner's identification of a patient's disease, illness, injury, or condition. This category contains a single datatype to represent all of these concepts: Diagnosis. A practitioner determines the diagnosis by means of examination, diagnostic test results, patient history, and/or family history. Diagnoses are usually considered unfavorable, but may also represent neutral or favorable conditions that affect a patient's plan of care (e.g., pregnancy). The onset dateTime corresponds to the implicit start date of the diagnosis and the abatement dateTime corresponds to the implicit stop date of the diagnosis. If the abatement dateTime is not present, then the diagnosis is considered to still be active. When this is used with timing relationships, the criterion is looking for an active diagnosis for the time frame indicated by the timing relationships. QDM Attribute: Prevalence Period references the time from the onset date (observation/effectiveTime/low) to the abatement date (observation/effectiveTime/high). If effectiveTime/high is null, then the diagnosis is considered to still be active.</p> |
| CONF #: 4444-29304 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29304) such that it Note: QDM Attribute: Recorder |

| Change | Old | New |
|-----------------------------|---|---|
| CONF #: 4444-29305 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29305). |
| CONF #: 4444-29306 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29306) such that it Note: QDM Attribute: Recorder |
| CONF #: 4444-29307 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29307). |
| CONF #: 4444-29308 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29308) such that it Note: QDM Attribute: Recorder |
| CONF #: 4444-29309 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29309). |
| CONF #: 4444-29310 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29310) such that it Note: QDM Attribute: Recorder |
| CONF #: 4444-29311 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29311). |
| CONF #: 4444-29312 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29312). |
| CONF #: 4444-29313 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29313). |
| CONF #: 4444-29314 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29314). |
| CONF #: 4444-29315 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29315). |
| CONF #: 4444-30033 Added | | SHALL NOT contain [0..0] author (CONF:4444-30033). |
| CONF #: 4444-28885 Modified | This template *SHALL* be contained by a Diagnosis Concern Act (V3) (CONF:3343-28885). | This template SHALL be contained by a Diagnosis Concern Act (V4) (CONF:4444-28885). |

| Change | Old | New |
|-----------------------------|---|---|
| CONF #: 4444-28887 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-28887). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-28887). |

10.15 Diagnosis Concern Act (V4)

[Diagnosis Concern Act \(V4\) \(urn:hl7ii:2.16.840.1.113883.10.20.24.3.137:2019-12-01\)](#)

| Change | Old | New |
|--------------------------|---|---|
| Status | Published | Published |
| Name | Diagnosis Concern Act (V3) | Diagnosis Concern Act (V4) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.137:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.137:2019-12-01 |
| Description | <p>This template, along with its contained template Diagnosis (V2), represents the QDM datatype: Diagnosis.</p> <p>The effectiveTime/low of the Diagnosis Concern Act (V2) asserts when the concern became active. This equates to the time the concern was authored in the patient's chart. The effectiveTime/high asserts when the diagnosis was completed (e.g., when the clinician deemed there is no longer any need to track the underlying condition).</p> <p>The QDM category Condition/Diagnosis/Problem represents a practitioner's identification of a patient's disease, illness, injury, or condition. This QDM category contains a single datatype to represent all of these concepts: Diagnosis. A practitioner determines the diagnosis by means of examination, diagnostic test results, patient history, and/or family history. Diagnoses are usually considered unfavorable, but may also represent neutral or favorable conditions that affect a patient's plan of care (e.g., pregnancy).</p> <p>Diagnosis Concern Act (V2) is derived from the Problem Concern Act template with diagnosis being subject of concern. C-CDA has defined health concerns and problem concerns. Problem concerns are a subset of health concerns. Depending on what QDM data type is used to specify a health concern in a measure, appropriate QRDA template would be used.</p> | <p>This template, along with its contained template Diagnosis (V3), represents the QDM datatype: Diagnosis.</p> <p>The effectiveTime/low of the Diagnosis Concern Act (V4) asserts when the concern became active. This equates to the time the concern was authored in the patient's chart. The effectiveTime/high asserts when the diagnosis was completed (e.g., when the clinician deemed there is no longer any need to track the underlying condition).</p> <p>The QDM category Condition/Diagnosis/Problem represents a practitioner's identification of a patient's disease, illness, injury, or condition. This QDM category contains a single datatype to represent all of these concepts: Diagnosis. A practitioner determines the diagnosis by means of examination, diagnostic test results, patient history, and/or family history. Diagnoses are usually considered unfavorable, but may also represent neutral or favorable conditions that affect a patient's plan of care (e.g., pregnancy).</p> <p>Diagnosis Concern Act (V4) is derived from the Problem Concern Act template with diagnosis being subject of concern. C-CDA has defined health concerns and problem concerns. Problem concerns are a subset of health concerns. Depending on what QDM data type is used to specify a health concern in a measure, appropriate QRDA template would be used.</p> |
| CONF #: 4444-29632 Added | | SHALL NOT contain [0..0] @negationInd (CONF:4444-29632). |

| Change | Old | New |
|-----------------------------|---|---|
| CONF #: 4444-28692 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-28692). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-28692). |

10.16 Diagnostic Study Order (V5)

[Diagnostic Study Order \(V5\) \(urn:hl7ii:2.16.840.1.113883.10.20.24.3.17:2019-12-01\)](#)

| Change | Old | New |
|--------------------------|--|---|
| Status | Published | Published |
| Name | Diagnostic Study Order (V4) | Diagnostic Study Order (V5) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.17:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.17:2019-12-01 |
| Description | <p>This template represents the QDM datatype: Diagnostic Study, Order. This datatype represents that a diagnostic study has been ordered. Diagnostic studies are those that are not performed in the clinical laboratory. Such studies include but are not limited to imaging studies, cardiology studies (electrocardiogram, treadmill stress testing), pulmonary function testing, vascular laboratory testing, and others.</p> <p>The moodCode is constrained to "RQO", an author is required to represent the ordering clinician and an author time/date stamp is required.</p> <p>QDM attribute: Author dateTime corresponds to when the order was signed. The time the activity is intended to take place is represented by effectiveTime.</p> <p>QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template.</p> | <p>This template represents the QDM datatype: Diagnostic Study, Order. This datatype represents that a diagnostic study has been ordered. Diagnostic studies are those that are not performed in the clinical laboratory. Such studies include but are not limited to imaging studies, cardiology studies (electrocardiogram, treadmill stress testing), pulmonary function testing, vascular laboratory testing, and others.</p> <p>The moodCode is constrained to "RQO", an author is required to represent the ordering clinician and an author time/date stamp is required.</p> <p>QDM attribute: Author dateTime corresponds to when the order was signed.</p> <p>For Diagnostic Study Not Order, use Author dateTime to reference timing.</p> <p>QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template.</p> |
| CONF #: 4444-29316 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29316) such that it |
| CONF #: 4444-29317 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29317). Note: QDM Attribute: Requester |
| CONF #: 4444-29318 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29318) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29319 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29319). |
| CONF #: 4444-29320 Added | | MAY contain zero or more [0..*] |

| Change | Old | New |
|-----------------------------|--|--|
| | | participant (CONF:4444-29320) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29321 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29321). |
| CONF #: 4444-29324 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29324) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29325 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29325). |
| CONF #: 4444-29326 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29326). |
| CONF #: 4444-29327 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29327). |
| CONF #: 4444-29328 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29328). |
| CONF #: 4444-29330 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29330). |
| CONF #: 4444-29637 Added | | If @negationInd="true" is present, SHALL contain one [1..1] entryRelationship such that it contains exactly one [1..1] Reason (V3) to state the reason for Diagnostic Not Order (CONF:4444-29637). |
| CONF #: 4444-13430 Modified | MAY contain zero or one [0..1] entryRelationship (CONF:3343-13430) such that it Note: QDM Attribute: Reason | MAY contain zero or more [0..*] entryRelationship (CONF:4444-13430) such that it Note: QDM Attribute: Reason |
| CONF #: 4444-27069 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-27069). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-27069). |

10.17 Diagnostic Study Performed (V5)

[Diagnostic Study Performed \(V5\) \(urn:hl7ii:2.16.840.1.113883.10.20.24.3.18:2019-12-01\)](#)

| Change | Old | New |
|-------------|---|--|
| Status | Published | Published |
| Name | Diagnostic Study Performed (V4) | Diagnostic Study Performed (V5) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.18:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.18:2019-12-01 |
| Description | <p>This template represents the QDM datatype: Diagnostic Study, Performed.</p> <p>This template indicates that a diagnostic study has been completed. Diagnostic Study represents any kind of medical test performed as a specific test or series of steps to aid in diagnosing or detecting disease (e.g., to establish a diagnosis, measure the progress or recovery from disease, confirm that a person is free from disease). The QDM defines diagnostic studies as those that are not performed in organizations that perform testing on samples of human blood, tissue, or other substance from the body. Such studies include but are not limited to imaging studies, cardiology studies (electrocardiogram, treadmill stress testing), pulmonary function testing, vascular laboratory testing, and others.</p> <p>QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template.</p> | <p>This template represents the QDM datatype: Diagnostic Study, Performed.</p> <p>This template indicates that a diagnostic study has been completed. Diagnostic Study represents any kind of medical test performed as a specific test or series of steps to aid in diagnosing or detecting disease (e.g., to establish a diagnosis, measure the progress or recovery from disease, confirm that a person is free from disease). The QDM defines diagnostic studies as those that are not performed in organizations that perform testing on samples of human blood, tissue, or other substance from the body. Such studies include but are not limited to imaging studies, cardiology studies (electrocardiogram, treadmill stress testing), pulmonary function testing, vascular laboratory testing, and others.</p> <p>Timing: Relevant dateTime references the time the diagnostic study is performed if it occurs at a single point in time. Relevant Period references a start and stop time for an assessment that occurs over a time interval. startTime – when the diagnostic study is initiated. stopTime – when the diagnostic study is completed. Author dateTime references the time the diagnostic study was recorded and applies only when the record has no reference to the time the diagnostic study was performed and only the recorded time is available.</p> <p>For Diagnostic Study Not</p> |

| Change | Old | New |
|--------------------------|-----|---|
| | | Performed, use Author dateTime to reference timing. It must not use Relevant Period or Relevant dateTime. QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template. |
| CONF #: 4444-29332 Added | | SHALL contain exactly one [1..1] value (CONF:4444-29332). Note: Use Result Observation (V3) to represent Result and/or Result dateTime |
| CONF #: 4444-29333 Added | | This value SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:4444-29333). |
| CONF #: 4444-29334 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29334) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29335 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29335). |
| CONF #: 4444-29336 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29336) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29337 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29337). |
| CONF #: 4444-29338 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29338) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29339 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29339). |
| CONF #: 4444-29340 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29340) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29341 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29341). |
| CONF #: 4444-29342 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29342). |

| Change | Old | New |
|----------------------------|---|--|
| CONF #: 4444-29343 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29343). |
| CONF #: 4444-29344 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29344). |
| CONF #: 4444-29345 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29345). |
| CONF #: 4444-29634 Added | | If @negationInd="true" is present, SHALL contain one [1..1] entryRelationship such that it contains exactly one [1..1] Reason (V3) to state the reason for Diagnostic Study Not Performed (CONF:4444-29634). |
| CONF #: 4444-30022 Added | | SHALL NOT contain [0..0] author (CONF:4444-30022). |
| CONF #: 4444-30023 Added | | SHALL contain exactly one [1..1] observation (CONF:4444-30023). |
| CONF #: 4444-30024 Added | | This effectiveTime SHOULD contain zero or one [0..1] @value (CONF:4444-30024). Note: QDM Attribute: Relevant dateTime – the time the diagnostic study is performed if it occurs at a single point in time. |
| CONF #: 4444-30025 Added | | This effectiveTime SHALL contain either a low or a @value but not both (CONF:4444-30025). Note: QDM Attributes Relevant dateTime and Relevant Period are mutually exclusive. |
| CONF #: 3343-27747 Removed | SHALL contain exactly one [1..1] observation (CONF:3343-27747). | |
| CONF #: 3343-29135 Removed | SHALL contain exactly one [1..1] value (CONF:3343-29135). Note: Use Result Observation (V3) to represent Result and/or Result dateTime | |
| CONF #: 3343-29139 Removed | This value SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:3343-29139). | |

| Change | Old | New |
|-----------------------------|--|---|
| CONF #: 4444-12963 Modified | MAY contain zero or one [0..1] entryRelationship (CONF:3343-12963) such that it Note: QDM Attribute: Reason | MAY contain zero or more [0..*] entryRelationship (CONF:4444-12963) such that it Note: QDM Attribute: Reason |
| CONF #: 4444-27141 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-27141). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-27141). |
| CONF #: 4444-12959 Modified | This effectiveTime SHALL contain exactly one [1..1] low (CONF:3343-12959). Note: startTime - when the diagnostic study is initiated | This effectiveTime SHOULD contain zero or one [0..1] low (CONF:4444-12959). Note: QDM Attribute: Relevant Period - startTime - when the diagnostic study is initiated when it occurs over a time interval. |
| CONF #: 4444-12960 Modified | This effectiveTime SHALL contain exactly one [1..1] high (CONF:3343-12960). Note: stopTime - when the diagnostic study is completed | This effectiveTime MAY contain zero or one [0..1] high (CONF:4444-12960). Note: QDM Attribute: Relevant Period - stopTime - when the diagnostic study is completed when it occurs over a time interval. |

10.18 Diagnostic Study Recommended (V5)

[Diagnostic Study Recommended \(V5\) \(urn:hl7ii:2.16.840.1.113883.10.20.24.3.19:2019-12-01\)](#)

| Change | Old | New |
|--------------------------|--|--|
| Status | Published | Published |
| Name | Diagnostic Study Recommended (V4) | Diagnostic Study Recommended (V5) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.19:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.19:2019-12-01 |
| Description | <p>This template represents the QDM datatype: Diagnostic Study, Recommended.</p> <p>Diagnostic studies are those that are not performed in the clinical laboratory. Such studies include but are not limited to imaging studies, cardiology studies (electrocardiogram, treadmill stress testing), pulmonary function testing, vascular laboratory testing, and others.</p> <p>The moodCode is constrained to "INT", an author is required to represent the recommending clinician and an author time/date stamp is required.</p> <p>QDM attribute: Author dateTime is represented by author/time and correspond to when the recommendation was authored (i.e., provided to the patient). The time the activity is recommended to take place is represented by effectiveTime.</p> <p>QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template. Although Reason (V3) is not explicitly contained in every template, it is available for use in any template.</p> | <p>This template represents the QDM datatype: Diagnostic Study, Recommended.</p> <p>Diagnostic studies are those that are not performed in the clinical laboratory. Such studies include but are not limited to imaging studies, cardiology studies (electrocardiogram, treadmill stress testing), pulmonary function testing, vascular laboratory testing, and others.</p> <p>The moodCode is constrained to "INT", an author is required to represent the recommending clinician and an author time/date stamp is required.</p> <p>QDM attribute: Author dateTime is represented by author/time and correspond to when the recommendation was authored (i.e., provided to the patient). The time the activity is recommended to take place is represented by effectiveTime.</p> <p>For Diagnostic Study Not Recommended, use Author dateTime to reference timing.</p> <p>QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template. Although Reason (V3) is not explicitly contained in every template, it is available for use in any template.</p> |
| CONF #: 4444-29347 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29347) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29348 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29348). |

| Change | Old | New |
|--------------------------|------------|--|
| CONF #: 4444-29349 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29349) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29350 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29350). |
| CONF #: 4444-29351 Added | | MAY contain zero or more [0..*] entryRelationship (CONF:4444-29351) such that it |
| CONF #: 4444-29352 Added | | SHALL contain exactly one [1..1] observation (CONF:4444-29352). |
| CONF #: 4444-29353 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29353) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29354 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29354). |
| CONF #: 4444-29355 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29355) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29356 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29356). |
| CONF #: 4444-29357 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29357). |
| CONF #: 4444-29358 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29358). |
| CONF #: 4444-29359 Added | | SHALL contain exactly one [1..1] @typeCode="RSON" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29359). |
| CONF #: 4444-29361 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29361). |
| CONF #: 4444-29362 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) |

| Change | Old | New |
|-----------------------------|--|--|
| | | (CONF:4444-29362). |
| CONF #: 4444-29639 Added | | If @negationInd="true" is present, SHALL contain one [1..1] entryRelationship such that it contains exactly one [1..1] Reason (V3) to state the reason for Diagnostic Not Recommended (CONF:4444-29639). |
| CONF #: 4444-27070 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-27070). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-27070). |

10.19 Discharge Medication (V5)

[Discharge Medication \(V5\) \(urn:hl7ii:2.16.840.1.113883.10.20.24.3.105:2019-12-01\)](#)

| Change | Old | New |
|--------------------------|---|--|
| Status | Published | Published |
| Name | Discharge Medication (V4) | Discharge Medication (V5) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.105:2018-10-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.105:2019-12-01 |
| CONF #: 4444-29364 Added | | MAY contain zero or one [0..1] entryRelationship (CONF:4444-29364) such that it |
| CONF #: 4444-29365 Added | | SHALL contain exactly one [1..1] supply (CONF:4444-29365). Note: QDM Attribute: Days Supplied |
| CONF #: 4444-29366 Added | | SHALL contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-29366). |
| CONF #: 4444-29367 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29367) such that it |
| CONF #: 4444-29368 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29368). Note: QDM Attribute: Prescriber |
| CONF #: 4444-29369 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29369) such that it |
| CONF #: 4444-29370 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29370). Note: QDM Attribute: Prescriber |
| CONF #: 4444-29371 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29371) such that it |
| CONF #: 4444-29372 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29372). Note: QDM Attribute: Recorder |
| CONF #: 4444-29373 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29373) such that it |
| CONF #: 4444-29374 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29374). Note: QDM Attribute: Recorder |
| CONF #: 4444-29375 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29375) |

| Change | Old | New |
|--------------------------|-----|---|
| | | such that it |
| CONF #: 4444-29376 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29376). Note: QDM Attribute: Recorder |
| CONF #: 4444-29377 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29377) such that it |
| CONF #: 4444-29378 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29378). Note: QDM Attribute: Recorder |
| CONF #: 4444-29379 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29379) such that it |
| CONF #: 4444-29380 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29380). Note: QDM Attribute: Prescriber |
| CONF #: 4444-29381 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29381) such that it |
| CONF #: 4444-29382 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29382). Note: QDM Attribute: Prescriber |
| CONF #: 4444-29383 Added | | MAY contain zero or more [0..*] entryRelationship (CONF:4444-29383) such that it |
| CONF #: 4444-29384 Added | | SHALL contain exactly one [1..1] observation (CONF:4444-29384). |
| CONF #: 4444-29385 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29385). |
| CONF #: 4444-29386 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29386). |
| CONF #: 4444-29387 Added | | SHALL contain exactly one [1..1] @typeCode="AUT" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29387). |
| CONF #: 4444-29388 Added | | SHALL contain exactly one [1..1] @typeCode="AUT" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) |

| Change | Old | New |
|-----------------------------|--|--|
| | | (CONF:4444-29388). |
| CONF #: 4444-29389 Added | | SHALL contain exactly one [1..1] @typeCode="AUT" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29389). |
| CONF #: 4444-29390 Added | | SHALL contain exactly one [1..1] @typeCode="AUT" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29390). |
| CONF #: 4444-29391 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29391). |
| CONF #: 4444-29392 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29392). |
| CONF #: 4444-29393 Added | | SHALL contain exactly one [1..1] @typeCode="RSON" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-29393). |
| CONF #: 4444-29845 Added | | If @negationInd="true" is present, SHALL contain one [1..1] entryRelationship such that it contains exactly one [1..1] Reason (V3) to state the reason for Medication Not Discharge (CONF:4444-29845). |
| CONF #: 4388-29212 Removed | MAY contain zero or one [0..1] entryRelationship (CONF:4388-29212) such that it | |
| CONF #: 4388-29213 Removed | SHALL contain exactly one [1..1] supply (CONF:4388-29213). Note: QDM Attribute: Days Supplied | |
| CONF #: 4388-29214 Removed | SHALL contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4388-29214). | |
| CONF #: 4444-27037 Modified | SHALL contain exactly one [1..1] @extension="2018-10-01" (CONF:4388-27037). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-27037). |

10.20Encounter Order (V5)

[Encounter Order \(V5\) \(urn:hl7ii:2.16.840.1.113883.10.20.24.3.22:2019-12-01\)](#)

| Change | Old | New |
|--------------------------|---|---|
| Status | Published | Published |
| Name | Encounter Order (V4) | Encounter Order (V5) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.22:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.22:2019-12-01 |
| Description | <p>This template, along with Encounter Order Act (V2) template, represents the QDM datatype: Encounter, Order. This template must be contained in an Encounter Order Act (V2) template.</p> <p>This datatype describes an order for an encounter. This clinical statement describes the ordered interactions between the patient and clinicians. Interactions include in-person encounters, telephone conversations, and email exchanges.</p> <p>The moodCode is constrained to “RQO”, an author is required to represent the ordering clinician and an author time/date stamp is required.</p> <p>QDM attribute: Author dateTime corresponds to when the order was signed. The time the activity is intended to take place is represented by effectiveTime.</p> <p>QDM attribute: Facility Location is represented through the Service Delivery Location template specified in the Planned Encounter (V2) parent template.</p> | <p>This template, along with Encounter Order Act (V3) template, represents the QDM datatype: Encounter, Order. This template must be contained in an Encounter Order Act (V3) template.</p> <p>This datatype describes an order for an encounter. This clinical statement describes the ordered interactions between the patient and clinicians. Interactions include in-person encounters, telephone conversations, and email exchanges.</p> <p>The moodCode is constrained to “RQO”, an author is required to represent the ordering clinician and an author time/date stamp is required.</p> <p>QDM attribute: Author dateTime corresponds to when the order was signed. The time the activity is intended to take place is represented by effectiveTime.</p> <p>QDM attribute: Facility Location is represented through the Service Delivery Location template specified in the Planned Encounter (V2) parent template.</p> |
| CONF #: 4444-29395 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29395). Note: QDM Attribute: Facility Locations |
| CONF #: 4444-29396 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29396) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29397 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29397). |
| CONF #: 4444-29398 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29398) such that it Note: QDM Attribute: Requester |

| Change | Old | New |
|-----------------------------|--|--|
| CONF #: 4444-29399 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29399). |
| CONF #: 4444-29400 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29400) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29401 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29401). |
| CONF #: 4444-29402 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29402) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29403 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29403). |
| CONF #: 4444-29404 Added | | MAY contain zero or one [0..1] priorityCode (CONF:4444-29404). Note: QDM Attribute: Priority - urgency of the encounter referenced. |
| CONF #: 4444-29405 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29405). |
| CONF #: 4444-29406 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29406). |
| CONF #: 4444-29407 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29407). |
| CONF #: 4444-29408 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29408). |
| CONF #: 3343-29136 Removed | MAY contain zero or one [0..1] participant (CONF:3343-29136). Note: QDM Attribute: Facility Locations | |
| CONF #: 4444-27064 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-27064). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-27064). |
| CONF #: 4444-28668 Modified | This template *SHALL* be | This template SHALL be |

| Change | Old | New |
|--------|---|--|
| | contained by an Encounter Order Act (V2) (CONF:3343-28668). | contained by an Encounter Order Act (V3) (CONF:4444-28668). |

10.21 Encounter Order Act (V3)

[Encounter Order Act \(V3\) \(urn:hl7ii:2.16.840.1.113883.10.20.24.3.132:2019-12-01\)](#)

| Change | Old | New |
|----------------------------|---|---|
| Status | Published | Published |
| Name | Encounter Order Act (V2) | Encounter Order Act (V3) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.132:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.132:2019-12-01 |
| Description | | This template, along with its contained Encounter Order (V5) template, represents the QDM datatype: Encounter, Order. The Encounter Order (V5) template itself does not support the negationInd attribute. Adding an act wrapper to the Encounter Order (V5) template allows Encounter Order to be negated. |
| CONF #: 4444-29409 Added | | SHALL contain exactly one [1..1] code (CONF:4444-29409). |
| CONF #: 4444-29410 Added | | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-29410). |
| CONF #: 4444-29411 Added | | This code SHALL contain exactly one [1..1] @code="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-29411). |
| CONF #: 4444-29412 Added | | MAY contain zero or one [0..1] entryRelationship (CONF:4444-29412) such that it Note: Reason for Negation |
| CONF #: 4444-29413 Added | | SHALL contain exactly one [1..1] observation (CONF:4444-29413). |
| CONF #: 4444-29414 Added | | SHALL contain exactly one [1..1] @typeCode="RSON" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-29414). |
| CONF #: 4444-29640 Added | | If @negationInd="true" is present, SHALL contain one [1..1] entryRelationship such that it contains exactly one [1..1] Reason (V3) to state the reason for Encounter Not Order (CONF:4444-29640). |
| CONF #: 4444-29641 Added | | MAY contain zero or more [0..*] id (CONF:4444-29641). |
| CONF #: 3343-28810 Removed | SHALL contain exactly one [1..1] | |

| Change | Old | New |
|----------------------------|---|-----|
| | code (CONF:3343-28810). | |
| CONF #: 3343-28811 Removed | This code SHALL contain exactly one [1..1] @code="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:3343-28811). | |
| CONF #: 3343-28812 Removed | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-28812). | |

10.22 Encounter Performed (V5)

[Encounter Performed \(V5\) \(urn:hl7ii:2.16.840.1.113883.10.20.24.3.23:2019-12-01\)](#)

| Change | Old | New |
|-------------|--|--|
| Status | Published | Published |
| Name | Encounter Performed (V4) | Encounter Performed (V5) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.23:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.23:2019-12-01 |
| Description | <p>This template, along with the Encounter Performed Act (V2) template, represents the QDM datatype: Encounter, Performed. This template must be contained in an Encounter Performed Act (V2) template.</p> <p>The Encounter, Performed describes the interactions between the patient and clinicians that have been completed. Interactions include in-person encounters, telephone conversations, and email exchanges. The actStatus is constrained to “completed” and both a low and high effectiveTime are required.</p> <p>Encounter id is represented using the encounter/id element, the encounter/id/@root (or combined with @extension, if @extension is present) uniquely identifies an encounter.</p> <p>Each episode of care shall have one unique inpatient encounter id and if there are other types of encounters present (ICU, ED) during the same episode of care, they shall have their own unique encounter ids. If there are data for multiple episode of cares within the same QRDA category I file, then each episode of care shall have their own unique inpatient encounter id. Should there be another reference to the unique encounter id of an encounter instance in a QRDA category I file, then users should reference the previously noted encounter id of that encounter instance.</p> <p>QDM Attribute: Diagnosis is a coded diagnosis/problem addressed during the encounter. Diagnosis attribute is intended to</p> | <p>This template, along with the Encounter Performed Act (V2) template, represents the QDM datatype: Encounter, Performed. This template must be contained in an Encounter Performed Act (V2) template.</p> <p>The Encounter, Performed describes the interactions between the patient and clinicians that have been completed. Interactions include in-person encounters, telephone conversations, and email exchanges. The actStatus is constrained to “completed” and both a low and high effectiveTime are required.</p> <p>Encounter id is represented using the encounter/id element, the encounter/id/@root (or combined with @extension, if @extension is present) uniquely identifies an encounter.</p> <p>Each episode of care shall have one unique inpatient encounter id and if there are other types of encounters present (ICU, ED) during the same episode of care, they shall have their own unique encounter ids. If there are data for multiple episode of cares within the same QRDA category I file, then each episode of care shall have their own unique inpatient encounter id. Should there be another reference to the unique encounter id of an encounter instance in a QRDA category I file, then users should reference the previously noted encounter id of that encounter instance.</p> <p>QDM Attribute: Diagnosis is a coded diagnosis/problem addressed during the encounter. Diagnosis attribute is intended to</p> |

| Change | Old | New |
|--------------------------|--|--|
| | capture ALL diagnoses, including principal diagnosis. This is represented through entryRelationship to Encounter Diagnosis template as specified in the Encounter Activity (V3) parent template. QDM Attribute: Principal Diagnosis is the coded diagnosis/problem established after study to be chiefly responsible for occasioning the admission of the patient to the hospital for care. | capture ALL diagnoses, including principal diagnosis. This is represented through entryRelationship to Encounter Diagnosis template as specified in the Encounter Activity (V3) parent template. |
| CONF #: 4444-29416 Added | | SHALL contain at least one [1..*] id (CONF:4444-29416). |
| CONF #: 4444-29417 Added | | MAY contain zero or one [0..1] author (CONF:4444-29417). Note: QDM Attribute: Author dateTime |
| CONF #: 4444-29418 Added | | Such ids SHALL contain exactly one [1..1] @root (CONF:4444-29418). |
| CONF #: 4444-29419 Added | | Such ids MAY contain zero or one [0..1] @extension (CONF:4444-29419). |
| CONF #: 4444-29420 Added | | This template SHALL be contained by an Encounter Performed Act (V3) (CONF:4444-29420). |
| CONF #: 4444-29661 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29661) such that it Note: QDM Attribute: Participant |
| CONF #: 4444-29662 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29662). |
| CONF #: 4444-29663 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29663) such that it Note: QDM Attribute: Participant |
| CONF #: 4444-29664 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29664). |
| CONF #: 4444-29665 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29665) such that it Note: QDM Attribute: Participant |
| CONF #: 4444-29666 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29666). |

| Change | Old | New |
|----------------------------|---|---|
| CONF #: 4444-29667 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29667) such that it Note: QDM Attribute: Participant |
| CONF #: 4444-29668 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" performer (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29668). |
| CONF #: 4444-29669 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29669). |
| CONF #: 4444-29670 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29670). |
| CONF #: 4444-29671 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29671). |
| CONF #: 4444-29958 Added | | MAY contain zero or more [0..*] entryRelationship (CONF:4444-29958) such that it Note: QDM Attribute: Diagnoses |
| CONF #: 4444-29959 Added | | SHALL contain exactly one [1..1] observation (CONF:4444-29959). |
| CONF #: 4444-29960 Added | | SHALL contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-29960). |
| CONF #: 4444-30029 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-30029). |
| CONF #: 3343-28597 Removed | MAY contain zero or one [0..1] entryRelationship (CONF:3343-28597) such that it Note: QDM Attribute: Principal Diagnosis | |
| CONF #: 3343-28598 Removed | SHALL contain exactly one [1..1] observation (CONF:3343-28598). | |
| CONF #: 3343-28802 Removed | SHALL contain at least one [1..*] id (CONF:3343-28802). | |
| CONF #: 3343-28600 Removed | SHALL contain exactly one [1..1] @typeCode="REFR" refers to | |

| Change | Old | New |
|-----------------------------|--|---|
| | (CONF:3343-28600). | |
| CONF #: 3343-28803 Removed | This template *SHALL* be contained by an Encounter Performed Act (V2) (CONF:3343-28803). | |
| CONF #: 3343-28804 Removed | Such ids SHALL contain exactly one [1..1] @root (CONF:3343-28804). | |
| CONF #: 3343-28805 Removed | Such ids MAY contain zero or one [0..1] @extension (CONF:3343-28805). | |
| CONF #: 3343-28806 Removed | MAY contain zero or one [0..1] author (CONF:3343-28806). Note: QDM Attribute: Author dateTime | |
| CONF #: 4444-26552 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-26552). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-26552). |

10.23 Encounter Performed Act (V3)

Encounter Performed Act (V3) (urn:hl7ii:2.16.840.1.113883.10.20.24.3.133:2019-12-01)

| Change | Old | New |
|----------------------------|---|---|
| Status | Published | Published |
| Name | Encounter Performed Act (V2) | Encounter Performed Act (V3) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.133:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.133:2019-12-01 |
| Description | <p>This template, along with its contained Encounter Performed (V4) template, represents the QDM datatype: Encounter, Performed.</p> <p>The Encounter Performed (V4) template itself does not support the negationInd attribute. Adding an act wrapper to the Encounter Performed (V4) template allows Encounter Performed to be negated.</p> | <p>This template, along with its contained Encounter Performed (V5) template, represents the QDM datatype: Encounter, Performed.</p> <p>The Encounter Performed (V5) template itself does not support the negationInd attribute. Adding an act wrapper to the Encounter Performed (V5) template allows Encounter Performed to be negated.</p> |
| CONF #: 4444-29421 Added | | SHALL contain exactly one [1..1] code (CONF:4444-29421). |
| CONF #: 4444-29422 Added | | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-29422). |
| CONF #: 4444-29423 Added | | This code SHALL contain exactly one [1..1] @code="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-29423). |
| CONF #: 4444-29424 Added | | MAY contain zero or one [0..1] entryRelationship (CONF:4444-29424) such that it Note: Reason for negation |
| CONF #: 4444-29425 Added | | SHALL contain exactly one [1..1] observation (CONF:4444-29425). |
| CONF #: 4444-29426 Added | | SHALL contain exactly one [1..1] @typeCode="RSON" (CONF:4444-29426). |
| CONF #: 4444-29929 Added | | If @negationInd="true" is present, SHALL contain one [1..1] entryRelationship such that it contains exactly one [1..1] Reason (V3) to state the reason for Encounter Not Performed (CONF:4444-29929). |
| CONF #: 3343-28807 Removed | SHALL contain exactly one [1..1] code (CONF:3343-28807). | |

| Change | Old | New |
|----------------------------|---|-----|
| CONF #: 3343-28808 Removed | This code SHALL contain exactly one [1..1] @code="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:3343-28808). | |
| CONF #: 3343-28809 Removed | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-28809). | |

10.24 Encounter Recommended (V5)

[Encounter Recommended \(V5\) \(urn:hl7ii:2.16.840.1.113883.10.20.24.3.24:2019-12-01\)](#)

| Change | Old | New |
|-------------|--|--|
| Status | Published | Published |
| Name | Encounter Recommended (V4) | Encounter Recommended (V5) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.24:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.24:2019-12-01 |
| Description | <p>This template, along with the Encounter Recommended Act (V2) template, represents the QDM datatype: Encounter, Recommended. This template must be contained in an Encounter Recommended Act (V2) template. The Encounter Recommended template itself does not support the negationInd attribute. Adding an act wrapper to the Encounter Recommended template allows Encounter Recommended to be negated.</p> <p>This datatype describes a recommendation for an encounter. This clinical statement describes the recommended interaction between the patient and clinicians. Interactions include in-person encounters, telephone conversations, and email exchanges.</p> <p>The moodCode is constrained to "INT", an author is required to represent the recommending clinician and an author time/date stamp is required.</p> <p>QDM Attribute: attributes: Start Datetime and Stop Datetime are represented by author/time (a single point in time) and Author dateTime corresponds to when the recommendation was signed/authored (i.e., provided to the patient). The time the activity is recommended to take place is represented by effectiveTime.</p> <p>QDM Attribute: Facility Location is represented through the Service Delivery Location template specified in the Planned Encounter (V2) parent template.</p> <p>QDM Attribute: Author dateTime corresponds to when the recommendation was authored</p> | <p>This template, along with the Encounter Recommended Act (V3) template, represents the QDM datatype: Encounter, Recommended. This template must be contained in an Encounter Recommended Act (V3) template. The Encounter Recommended template itself does not support the negationInd attribute. Adding an act wrapper to the Encounter Recommended template allows Encounter Recommended to be negated.</p> <p>This datatype describes a recommendation for an encounter. This clinical statement describes the recommended interaction between the patient and clinicians. Interactions include in-person encounters, telephone conversations, and email exchanges.</p> <p>The moodCode is constrained to "INT", an author is required to represent the recommending clinician and an author time/date stamp is required.</p> <p>QDM Attribute: attributes: Start Datetime and Stop Datetime are represented by author/time (a single point in time) and Author dateTime corresponds to when the recommendation was signed/authored (i.e., provided to the patient). The time the activity is recommended to take place is represented by effectiveTime.</p> <p>QDM Attribute: Facility Location is represented through the Service Delivery Location template specified in the Planned Encounter (V2) parent template.</p> <p>QDM Attribute: Author dateTime corresponds to when the recommendation was authored</p> |

| Change | Old | New |
|--------------------------|---|---|
| | (i.e., provided to the patient). The time the activity is recommended to take place is represented by effectiveTime. QDM Attribute: Facility Location is represented through the Service Delivery Location template specified in the Planned Encounter (V2) parent template. | (i.e., provided to the patient). The time the activity is recommended to take place is represented by effectiveTime. QDM Attribute: Facility Location is represented through the Service Delivery Location template specified in the Planned Encounter (V2) parent template. |
| CONF #: 4444-29495 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29495). Note: QDM Attribute: Facility Locations |
| CONF #: 4444-29496 Added | | This template SHALL be contained by an Encounter Recommended Act (V3) (CONF:4444-29496). |
| CONF #: 4444-29642 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29642) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29643 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29643). |
| CONF #: 4444-29644 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29644) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29645 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29645). |
| CONF #: 4444-29646 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29646) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29647 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29647). |
| CONF #: 4444-29648 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29648) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29649 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29649). |
| CONF #: 4444-29650 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29650). |

| Change | Old | New |
|-----------------------------|---|---|
| CONF #: 4444-29651 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29651). |
| CONF #: 4444-29652 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29652). |
| CONF #: 4444-29653 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29653). |
| CONF #: 3343-28813 Removed | This template *SHALL* be contained by an Encounter Recommended Act (V2) (CONF:3343-28813). | |
| CONF #: 3343-29137 Removed | MAY contain zero or one [0..1] participant (CONF:3343-29137). Note: QDM Attribute: Facility Locations | |
| CONF #: 4444-27066 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-27066). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-27066). |

10.25 Encounter Recommended Act (V3)

Encounter Recommended Act (V3) (urn:hl7ii:2.16.840.1.113883.10.20.24.3.134:2019-12-01)

| Change | Old | New |
|----------------------------|---|---|
| Status | Published | Published |
| Name | Encounter Recommended Act (V2) | Encounter Recommended Act (V3) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.134:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.134:2019-12-01 |
| Description | This template, along with its contained Encounter Recommended (V4) template, represents the QDM datatype: Encounter, Recommended. The Encounter Recommended (V4) template itself does not support the negationInd attribute. Adding an act wrapper to the Encounter Recommended (V4) template allows Encounter Recommended to be negated. | This template, along with its contained Encounter Recommended (V5) template, represents the QDM datatype: Encounter, Recommended. The Encounter Recommended (V5) template itself does not support the negationInd attribute. Adding an act wrapper to the Encounter Recommended (V5) template allows Encounter Recommended to be negated. |
| CONF #: 4444-29654 Added | | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-29654). |
| CONF #: 4444-29655 Added | | This code SHALL contain exactly one [1..1] @code="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4444-29655). |
| CONF #: 4444-29656 Added | | MAY contain zero or one [0..1] entryRelationship (CONF:4444-29656) such that it Note: Reason for Negation |
| CONF #: 4444-29657 Added | | SHALL contain exactly one [1..1] observation (CONF:4444-29657). |
| CONF #: 4444-29658 Added | | If @negationInd="true" is present, SHALL contain one [1..1] entryRelationship such that it contains exactly one [1..1] Reason (V3) to state the reason for Encounter Not Recommended (CONF:4444-29658). |
| CONF #: 4444-29659 Added | | MAY contain zero or more [0..*] id (CONF:4444-29659). |
| CONF #: 4444-29660 Added | | SHALL contain exactly one [1..1] @typeCode="RSON" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-29660). |
| CONF #: 3343-28814 Removed | This code SHALL contain exactly | |

| Change | Old | New |
|----------------------------|--|-----|
| | one [1..1] @code="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:3343-28814). | |
| CONF #: 3343-28815 Removed | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-28815). | |

10.26 Family History Observation QDM (V4)

Family History Observation QDM (V4)

(<urn:hl7ii:2.16.840.1.113883.10.20.24.3.112:2019-12-01>)

| Change | Old | New |
|--------------------------|---|---|
| Status | Published | Published |
| Name | Family History Observation QDM (V3) | Family History Observation QDM (V4) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.112:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.112:2019-12-01 |
| Description | This template (along with its containing organizer template Family History Organizer QDM (V4) represents the QDM datatype: Family History. This datatype represents a problem, condition, or diagnosis experienced by a patient's family member whether existing currently or in the past. | This template (along with its containing organizer template Family History Organizer QDM (V5) represents the QDM datatype: Family History. This datatype represents a problem, condition, or diagnosis experienced by a patient's family member whether existing currently or in the past. |
| CONF #: 4444-29672 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29672) such that it Note: QDM Attribute: Recorder |
| CONF #: 4444-29673 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29673). |
| CONF #: 4444-29674 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29674) such that it Note: QDM Attribute: Recorder |
| CONF #: 4444-29675 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29675). |
| CONF #: 4444-29676 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29676) such that it Note: QDM Attribute: Recorder |
| CONF #: 4444-29677 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29677). |
| CONF #: 4444-29678 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29678) such that it Note: QDM Attribute: Recorder |
| CONF #: 4444-29679 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29679). |
| CONF #: 4444-29680 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: |

| Change | Old | New |
|-----------------------------|---|---|
| | | HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29680). |
| CONF #: 4444-29681 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29681). |
| CONF #: 4444-29682 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29682). |
| CONF #: 4444-29683 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29683). |
| CONF #: 4444-27682 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-27682). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-27682). |
| CONF #: 4444-28571 Modified | MAY contain zero or one [0..1] author (CONF:3343-28571). Note: QDM Attribute: Author dateTime - the time the family history item is authored (i.e., entered into the record) | SHALL contain exactly one [1..1] author (CONF:4444-28571). Note: QDM Attribute: Author dateTime - the time the family history item is authored (i.e., entered into the record) |
| CONF #: 4444-28661 Modified | This template *SHALL* be contained by a Family History Organizer QDM (V4) (CONF:3343- 28661). | This template SHALL be contained by a Family History Organizer QDM (V5) (CONF:4444-28661). |

10.27 Family History Organizer QDM (V5)

Family History Organizer QDM (V5) (urn:hl7ii:2.16.840.1.113883.10.20.24.3.12:2019-12-01)

| Change | Old | New |
|-----------------------------|--|--|
| Status | Published | Published |
| Name | Family History Organizer QDM (V4) | Family History Organizer QDM (V5) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.12:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.12:2019-12-01 |
| Description | This template (along with its contained template Family History Observation QDM (V3) represents the QDM datatype: Family History. This template is an organizer that contains the Family History Observation (V3) template and represents problems, conditions, and diagnoses experienced by a patient's family members, whether existing currently or in the past. This organizer groups the Family History Observation by family member as expressed in the subject. | This template (along with its contained template Family History Observation QDM (V4) represents the QDM datatype: Family History. This template is an organizer that contains the Family History Observation (V4) template and represents problems, conditions, and diagnoses experienced by a patient's family members, whether existing currently or in the past. This organizer groups the Family History Observation by family member as expressed in the subject. |
| CONF #: 4444-26553 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-26553). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-26553). |

10.28 Immunization Administered (V3)

Immunization Administered (V3) (urn:hl7ii:2.16.840.1.113883.10.20.24.3.140:2019-12-01)

| Change | Old | New |
|--------------------------|---|---|
| Status | Published | Published |
| Name | Immunization Administered (V2) | Immunization Administered (V3) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.140:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.140:2019-12-01 |
| CONF #: 4444-29684 Added | | MAY contain zero or one [0..1] @negationInd (CONF:4444-29684). Note: QDM Attribute: Negation Rationale - negationInd="true" indicates Immunization Not Administered |
| CONF #: 4444-29685 Added | | MAY contain zero or one [0..1] author (CONF:4444-29685). Note: QDM Attribute: Author dateTime |
| CONF #: 4444-29686 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29686) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29687 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29687). |
| CONF #: 4444-29688 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29688) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29689 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29689). |
| CONF #: 4444-29690 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29690) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29691 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29691). |
| CONF #: 4444-29692 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29692) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29693 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29693). |
| CONF #: 4444-29694 Added | | If @negationInd="true" is present, SHALL contain one [1..1] entryRelationship such |

| Change | Old | New |
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| | | that it contains exactly one [1..1] Reason (V3) to state the reason for Immunization Not Administered (CONF:4444-29694). |
| CONF #: 4444-29695 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29695). |
| CONF #: 4444-29696 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29696). |
| CONF #: 4444-29697 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29697). |
| CONF #: 4444-29698 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29698). |
| CONF #: 4444-29699 Added | | SHALL NOT contain [0..0] author (CONF:4444-29699). |
| CONF #: 4444-28577 Modified | MAY contain zero or one [0..1] entryRelationship (CONF:3343-28577) such that it Note: QDM Attribute: Reason | MAY contain zero or more [0..*] entryRelationship (CONF:4444-28577) such that it Note: QDM Attribute: Reason |
| CONF #: 4444-28958 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-28958). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-28958). |

10.29 Immunization Order (V3)

[Immunization Order \(V3\) \(urn:hl7ii:2.16.840.1.113883.10.20.24.3.143:2019-12-01\)](#)

| Change | Old | New |
|--------------------------|--|--|
| Status | Published | Published |
| Name | Immunization Order (V2) | Immunization Order (V3) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.143:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.143:2019-12-01 |
| Description | <p>This template represents the QDM datatypes: Immunization, Order. This datatype represents a request by a clinician or appropriately licensed care provider to a pharmacy to provide immunization to a patient.</p> <p>The moodCode is constrained to "RQO", an author is required to represent the ordering clinician and an author time/date stamp is required.</p> <p>QDM Attribute: Author dateTime corresponds to when the order was signed.</p> <p>QDM Attribute: Active dateTime is the date and time at which an order becomes active (intended to take place), this is represented by effectiveTime. In most cases, this is the same as the author (signed) dateTime, but with advance orders it may be after the signed dateTime. This is represented by effectiveTime.</p> <p>QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template. Although Reason (V2) is not explicitly contained in every template, it is available for use in any template.</p> | <p>This template represents the QDM datatypes: Immunization, Order. This datatype represents a request by a clinician or appropriately licensed care provider to a pharmacy to provide immunization to a patient.</p> <p>The moodCode is constrained to "RQO", an author is required to represent the ordering clinician and an author time/date stamp is required.</p> <p>QDM Attribute: Author dateTime corresponds to when the order was signed.</p> <p>QDM Attribute: Active dateTime is the date and time at which an order becomes active (intended to take place), this is represented by effectiveTime. In most cases, this is the same as the author (signed) dateTime, but with advance orders it may be after the signed dateTime. This is represented by effectiveTime.</p> <p>QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template. Although Reason (V3) is not explicitly contained in every template, it is available for use in any template.</p> |
| CONF #: 4444-29700 Added | | MAY contain zero or one [0..1] entryRelationship (CONF:4444-29700) such that it Note: QDM Attribute: Supply |
| CONF #: 4444-29701 Added | | If <@negationInd="true"> is present, <SHALL contain one [1..1] entryRelationship such that it contains exactly one [1..1] <Reason (V3) to state the reason for <Immunization Not Order (CONF:4444-29701). |
| CONF #: 4444-29702 Added | | This effectiveTime SHALL contain |

| Change | Old | New |
|--------------------------|-----|--|
| | | exactly one [1..1] @value (CONF:4444-29702). |
| CONF #: 4444-29703 Added | | SHALL contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29703). |
| CONF #: 4444-29704 Added | | SHALL contain exactly one [1..1] supply (CONF:4444-29704). |
| CONF #: 4444-29714 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29714). Note: QDM Attribute: Requester |
| CONF #: 4444-29715 Added | | The participant, if present, SHALL contain exactly one [1..1] participantRole (CONF:4444-29715). |
| CONF #: 4444-29716 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29716). Note: QDM Attribute: Requester |
| CONF #: 4444-29717 Added | | The participant, if present, SHALL contain exactly one [1..1] participantRole (CONF:4444-29717). |
| CONF #: 4444-29718 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29718). Note: QDM Attribute: Requester |
| CONF #: 4444-29719 Added | | The participant, if present, SHALL contain exactly one [1..1] participantRole (CONF:4444-29719). |
| CONF #: 4444-29720 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29720). Note: QDM Attribute: Requester |
| CONF #: 4444-29721 Added | | The participant, if present, SHALL contain exactly one [1..1] participantRole (CONF:4444-29721). |
| CONF #: 4444-29722 Added | | The participant, if present, SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29722). |
| CONF #: 4444-29723 Added | | The participant, if present, SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29723). |
| CONF #: 4444-29724 Added | | The participant, if present, SHALL |

| Change | Old | New |
|-----------------------------|--|--|
| | | contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29724). |
| CONF #: 4444-29725 Added | | The participant, if present, SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29725). |
| CONF #: 3343-28628 Removed | MAY contain zero or one [0..1] routeCode (CONF:3343-28628). Note: QDM Attribute: Route | |
| CONF #: 3343-28925 Removed | This effectiveTime SHALL contain exactly one [1..1] low (CONF:3343-28925). | |
| CONF #: 4444-28626 Modified | MAY contain zero or one [0..1] entryRelationship (CONF:3343-28626) such that it Note: QDM Attribute: Reason | MAY contain zero or more [0..*] entryRelationship (CONF:4444-28626) such that it Note: QDM Attribute: Reason |
| CONF #: 4444-28923 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-28923). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-28923). |

10.30 Intervention Order (V5)

[Intervention Order \(V5\) \(urn:hl7ii:2.16.840.1.113883.10.20.24.3.31:2019-12-01\)](#)

| Change | Old | New |
|--------------------------|--|---|
| Status | Published | Published |
| Name | Intervention Order (V4) | Intervention Order (V5) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.31:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.31:2019-12-01 |
| CONF #: 4444-29727 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29727) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29728 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29728). |
| CONF #: 4444-29729 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29729) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29730 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29730). |
| CONF #: 4444-29731 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29731) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29732 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29732). |
| CONF #: 4444-29733 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29733) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29734 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29734). |
| CONF #: 4444-29735 Added | | If <@negationInd="true"/> is present, <SHALL contain one [1..1] entryRelationship such that it contains exactly one [1..1] <Reason (V3) to state the reason for <Intervention Not Order (CONF:4444-29735). |
| CONF #: 4444-29736 Added | | SHALL contain exactly one [1..1] <@typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29736). |
| CONF #: 4444-29737 Added | | SHALL contain exactly one [1..1] <@typeCode="PRF" (CodeSystem: |

| Change | Old | New |
|-----------------------------|---|---|
| | | HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29737). |
| CONF #: 4444-29738 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29738). |
| CONF #: 4444-29739 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29739). |
| CONF #: 4444-13756 Modified | MAY contain zero or one [0..1] entryRelationship (CONF:3343- 13756) such that it Note: QDM Attribute: Reason | MAY contain zero or more [0..*] entryRelationship (CONF:4444- 13756) such that it Note: QDM Attribute: Reason |
| CONF #: 4444-26556 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-26556). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-26556). |

10.31 Intervention Performed (V5)

[Intervention Performed \(V5\) \(urn:hl7ii:2.16.840.1.113883.10.20.24.3.32:2019-12-01\)](#)

| Change | Old | New |
|--------------------------|--|---|
| Status | Published | Published |
| Name | Intervention Performed (V4) | Intervention Performed (V5) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.32:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.32:2019-12-01 |
| CONF #: 4444-29740 Added | | MAY contain zero or one [0..1] author (CONF:4444-29740). Note: QDM Attribute: Author dateTime |
| CONF #: 4444-29741 Added | | If <negationInd="true"> is present, <SHALL contain one [1..1] entryRelationship such that it contains exactly one [1..1] <Reason (V3) to state the reason for <Intervention Not Performed (CONF:4444-29741). |
| CONF #: 4444-29742 Added | | This effectiveTime SHOULD contain zero or one [0..1] @value (CONF:4444-29742). Note: QDM Attribute: Relevant Period - the time the intervention is performed when the intervention occurs at a single point in time |
| CONF #: 4444-29743 Added | | This effectiveTime <SHALL contain either a <low or a <@value but not both (CONF:4444-29743). Note: QDM Attributes Relevant dateTime and Relevant Period are mutually exclusive. |
| CONF #: 4444-29744 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29744) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29745 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29745). |
| CONF #: 4444-29746 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29746) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29747 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29747). |
| CONF #: 4444-29748 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29748) such that it |

| Change | Old | New |
|-----------------------------|---|--|
| | | Note: QDM Attribute: Performer |
| CONF #: 4444-29749 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29749). |
| CONF #: 4444-29750 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29750) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29751 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29751). |
| CONF #: 4444-29752 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29752). |
| CONF #: 4444-29753 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29753). |
| CONF #: 4444-29927 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29927). |
| CONF #: 4444-30020 Added | | SHALL NOT contain [0..0] author (CONF:4444-30020). |
| CONF #: 4444-30021 Added | | SHALL contain exactly one [1..1] observation (CONF:4444-30021). |
| CONF #: 4444-30030 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-30030). |
| CONF #: 3343-27358 Removed | SHALL contain exactly one [1..1] observation (CONF:3343-27358). | |
| CONF #: 3343-29162 Removed | MAY contain zero or one [0..1] author (CONF:3343-29162). Note: QDM Attribute: Author dateTime | |
| CONF #: 4444-13604 Modified | MAY contain zero or one [0..1] entryRelationship (CONF:3343-13604) such that it Note: QDM Attribute: Reason | MAY contain zero or more [0..*] entryRelationship (CONF:4444-13604) such that it Note: QDM Attribute: Reason |
| CONF #: 4444-13612 Modified | This effectiveTime SHALL contain exactly one [1..1] low (CONF:3343-13612). Note: Start dateTime - the time the intervention begins | This effectiveTime SHOULD contain zero or one [0..1] low (CONF:4444-13612). Note: QDM Attribute: Relevant Period - startTime - the time the |

| Change | Old | New |
|--------|-----|---|
| | | intervention begins when it occurs over a time interval |

10.32 Intervention Recommended (V5)

Intervention Recommended (V5) (urn:hl7ii:2.16.840.1.113883.10.20.24.3.33:2019-12-01)

| Change | Old | New |
|--------------------------|--|--|
| Status | Published | Published |
| Name | Intervention Recommended (V4) | Intervention Recommended (V5) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.33:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.33:2019-12-01 |
| CONF #: 4444-29754 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29754) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29755 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29755). |
| CONF #: 4444-29756 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29756) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29757 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29757). |
| CONF #: 4444-29758 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29758) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29759 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29759). |
| CONF #: 4444-29760 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29760) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29761 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29761). |
| CONF #: 4444-29762 Added | | If @negationInd="true" is present, SHALL contain one [1..1] entryRelationship such that it contains exactly one [1..1] Reason (V3) to state the reason for Intervention Not Recommended (CONF:4444-29762). |
| CONF #: 4444-29763 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29763). |

| Change | Old | New |
|-----------------------------|--|---|
| CONF #: 4444-29764 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29764). |
| CONF #: 4444-29765 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29765). |
| CONF #: 4444-29766 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29766). |
| CONF #: 4444-29767 Added | | SHALL contain at least one [1..*] id (CONF:4444-29767). |
| CONF #: 4444-13777 Modified | MAY contain zero or one [0..1] entryRelationship (CONF:3343-13777) such that it Note: QDM Attribute: Reason | MAY contain zero or more [0..*] entryRelationship (CONF:4444-13777) such that it Note: QDM Attribute: Reason |
| CONF #: 4444-26557 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-26557). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-26557). |

10.33 Laboratory Test Order (V5)

Laboratory Test Order (V5) (urn:hl7ii:2.16.840.1.113883.10.20.24.3.37:2019-12-01)

| Change | Old | New |
|--------------------------|--|---|
| Status | Published | Published |
| Name | Laboratory Test Order (V4) | Laboratory Test Order (V5) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.37:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.37:2019-12-01 |
| CONF #: 4444-29550 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29550) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29551 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29551). |
| CONF #: 4444-29552 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29552) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29553 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29553). |
| CONF #: 4444-29554 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29554) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29555 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29555). |
| CONF #: 4444-29556 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29556) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29557 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29557). |
| CONF #: 4444-29558 Added | | If @negationInd="true" is present, SHALL contain one [1..1] entryRelationship such that it contains exactly one [1..1] Reason (V3) to state the reason for Laboratory Test Not Order (CONF:4444-29558). |
| CONF #: 4444-29559 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29559). |
| CONF #: 4444-29560 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: |

| Change | Old | New |
|-----------------------------|---|--|
| | | HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29560). |
| CONF #: 4444-29561 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29561). |
| CONF #: 4444-29562 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29562). |
| CONF #: 4444-11969 Modified | MAY contain zero or one [0..1] entryRelationship (CONF:3343- 11969) such that it Note: QDM Attribute: Reason | MAY contain zero or more [0..*] entryRelationship (CONF:4444- 11969) such that it Note: QDM Attribute: Reason; Reason for Laboratory Test Not Order |
| CONF #: 4444-27075 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-27075). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-27075). |

10.34 Laboratory Test Performed (V5)

Laboratory Test Performed (V5) (urn:hl7ii:2.16.840.1.113883.10.20.24.3.38:2019-12-01)

| Change | Old | New |
|--------------------------|---|--|
| Status | Published | Published |
| Name | Laboratory Test Performed (V4) | Laboratory Test Performed (V5) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.38:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.38:2019-12-01 |
| Description | <p>This template represents the QDM datatype: Laboratory Test, Performed.</p> <p>The Laboratory Test Performed template represents the medical procedure of obtaining a sample of blood, urine, or other substance from the body. This template can also describe the result of a study in the clinical laboratory (traditionally chemistry, hematology, microbiology, serology, urinalysis, blood bank). A time/date stamp is required.</p> <p>QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V2) template. Although Reason (V2) is not explicitly contained in every template, it is available for use in any template.</p> | <p>This template represents the QDM datatype: Laboratory Test, Performed.</p> <p>The Laboratory Test Performed template represents the medical procedure of obtaining a sample of blood, urine, or other substance from the body. This template can also describe the result of a study in the clinical laboratory (traditionally chemistry, hematology, microbiology, serology, urinalysis, blood bank). A time/date stamp is required.</p> <p>QDM attribute: Negation Rationale is represented by setting negationInd="true" and stating the reason (rationale) in a contained Reason (V3) template.</p> |
| CONF #: 4444-29523 Added | | MAY contain zero or one [0..1] author (CONF:4444-29523). Note: QDM Attribute: Author dateTime - the time the action was recorded |
| CONF #: 4444-29524 Added | | MAY contain zero or one [0..1] entryRelationship (CONF:4444-29524) such that it Note: QDM Attribute: Result, QDM Attribute: Result dateTime |
| CONF #: 4444-29526 Added | | MAY contain zero or one [0..1] referenceRange (CONF:4444-29526). Note: QDM Attribute: Reference Range Low, QDM Attribute: Reference Range High |
| CONF #: 4444-29527 Added | | The referenceRange, if present, SHALL contain exactly one [1..1] observationRange (CONF:4444- |

| Change | Old | New |
|--------------------------|-----|--|
| | | 29527). |
| CONF #: 4444-29528 Added | | MAY contain zero or more [0..*] entryRelationship (CONF:4444-29528) such that it Note: QDM Attribute: Components |
| CONF #: 4444-29529 Added | | SHALL contain exactly one [1..1] observation (CONF:4444-29529). |
| CONF #: 4444-29530 Added | | SHALL contain exactly one [1..1] @typeCode="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-29530). |
| CONF #: 4444-29531 Added | | This observationRange SHALL NOT contain [0..0] code (CONF:4444-29531). |
| CONF #: 4444-29532 Added | | This observationRange SHALL contain exactly one [1..1] value with @xsi:type="IVL_PQ" (CONF:4444-29532). |
| CONF #: 4444-29533 Added | | SHALL contain exactly one [1..1] @typeCode="REFR" Refers to (CONF:4444-29533). |
| CONF #: 4444-29534 Added | | SHALL NOT contain [0..0] value (CONF:4444-29534). Note: Use Result (V4) to represent Result and Result dateTime |
| CONF #: 4444-29535 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29535) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29536 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29536). |
| CONF #: 4444-29537 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29537) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29538 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29538). |
| CONF #: 4444-29539 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29539) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29540 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29540). |
| CONF #: 4444-29541 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29541) |

| Change | Old | New |
|----------------------------|--|---|
| | | such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29542 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29542). |
| CONF #: 4444-29543 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29543). |
| CONF #: 4444-29544 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29544). |
| CONF #: 4444-29545 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29545). |
| CONF #: 4444-29546 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29546). |
| CONF #: 4444-29548 Added | | This effectiveTime SHALL contain either a low or a @value but not both (CONF:4444-29548). Note: QDM Attributes Relevant dateTime and Relevant Period are mutually exclusive. |
| CONF #: 4444-29564 Added | | If @negationInd="true" is present, SHALL contain one [1..1] entryRelationship such that it contains exactly one [1..1] Reason (V3) to state the reason for Laboratory Test Not Performed (CONF:4444-29564). |
| CONF #: 4444-30017 Added | | SHOULD contain zero or one [0..1] @value (CONF:4444-30017). Note: QDM Attribute: Relevant dateTime – the time the laboratory test is performed when the laboratory test occurs at a single point in time |
| CONF #: 4444-30018 Added | | SHALL contain exactly one [1..1] observation (CONF:4444-30018). |
| CONF #: 3343-29120 Removed | MAY contain zero or one [0..1] author (CONF:3343-29120). | |

| Change | Old | New |
|-----------------------------|---|---|
| | Note: QDM Attribute: Author dateTime | |
| CONF #: 3343-29122 Removed | MAY contain zero or one [0..1] entryRelationship (CONF:3343- 29122) such that it Note: QDM Attribute: Result, QDM Attribute: Result dateTime | |
| CONF #: 3343-29123 Removed | MAY contain zero or one [0..1] referenceRange (CONF:3343- 29123). Note: QDM Attribute: Reference Range Low, QDM Attribute: Reference Range High | |
| CONF #: 3343-29124 Removed | The referenceRange, if present, SHALL contain exactly one [1..1] observationRange (CONF:3343- 29124). | |
| CONF #: 3343-29127 Removed | SHALL contain exactly one [1..1] @typeCode="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3343-29127). | |
| CONF #: 3343-29128 Removed | SHALL contain exactly one [1..1] observation (CONF:3343-29128). | |
| CONF #: 3343-29129 Removed | This observationRange SHALL NOT contain [0..0] code (CONF:3343- 29129). | |
| CONF #: 3343-29130 Removed | This observationRange SHALL contain exactly one [1..1] value with @xsi:type="IVL_PQ" (CONF:3343-29130). | |
| CONF #: 3343-29131 Removed | MAY contain zero or more [0..*] entryRelationship (CONF:3343- 29131) such that it Note: QDM Attribute: Components | |
| CONF #: 3343-29132 Removed | SHALL contain exactly one [1..1] @typeCode="REFR" Refers to (CONF:3343-29132). | |
| CONF #: 3343-29133 Removed | SHALL contain exactly one [1..1] observation (CONF:3343-29133). | |
| CONF #: 3343-29134 Removed | SHALL NOT contain [0..0] value (CONF:3343-29134). Note: Use Result Observation (V3) to represent Result and/or Result dateTime | |
| CONF #: 4444-11727 Modified | MAY contain zero or one [0..1] entryRelationship (CONF:3343- 11727) such that it Note: QDM Attribute: Reason | MAY contain zero or more [0..*] entryRelationship (CONF:4444- 11727) such that it Note: QDM Attribute: Reason; Reason for Laboratory Test Not |

| Change | Old | New |
|-----------------------------|--|---|
| | | Performed |
| CONF #: 4444-11712 Modified | SHALL contain exactly one [1..1] low (CONF:3343-11712). Note: startTime - the time the laboratory test is initiated (i.e., the time the specimen collection begins) | SHOULD contain zero or one [0..1] low (CONF:4444-11712). Note: QDM Attribute: Relevant Period startTime - the time the laboratory test is initiated if it occurs over a time interval (i.e., the time the specimen collection begins). |
| CONF #: 4444-11713 Modified | SHALL contain exactly one [1..1] high (CONF:3343-11713). Note: stopTime - the time the laboratory test is initiated (i.e., the time the specimen collection ends) | MAY contain zero or one [0..1] high (CONF:4444-11713). Note: QDM Attribute: Relevant Period stopTime - the time the laboratory test ends (i.e., the time the specimen collection ends) |
| CONF #: 4444-27021 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-27021). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-27021). |

10.35 Laboratory Test Recommended (V5)

Laboratory Test Recommended (V5) (urn:hl7ii:2.16.840.1.113883.10.20.24.3.39:2019-12-01)

| Change | Old | New |
|--------------------------|--|---|
| Status | Published | Published |
| Name | Laboratory Test Recommended (V4) | Laboratory Test Recommended (V5) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.39:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.39:2019-12-01 |
| CONF #: 4444-29768 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29768) such that it |
| CONF #: 4444-29769 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29769). Note: QDM Attribute: Requester |
| CONF #: 4444-29770 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29770) such that it |
| CONF #: 4444-29771 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29771). Note: QDM Attribute: Requester |
| CONF #: 4444-29772 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29772) such that it |
| CONF #: 4444-29773 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29773). Note: QDM Attribute: Requester |
| CONF #: 4444-29774 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29774) such that it |
| CONF #: 4444-29775 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29775). Note: QDM Attribute: Requester |
| CONF #: 4444-29776 Added | | If @negationInd="true" is present, SHALL contain one [1..1] entryRelationship such that it contains exactly one [1..1] Reason (V3) to state the reason for Laboratory Test Not Recommended (CONF:4444-29776). |
| CONF #: 4444-29777 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29777). |

| Change | Old | New |
|-----------------------------|--|---|
| CONF #: 4444-29778 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29778). |
| CONF #: 4444-29779 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29779). |
| CONF #: 4444-29780 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29780). |
| CONF #: 4444-11811 Modified | MAY contain zero or one [0..1] entryRelationship (CONF:3343-11811) such that it Note: QDM Attribute: Reason | MAY contain zero or more [0..*] entryRelationship (CONF:4444-11811) such that it Note: QDM Attribute: Reason |
| CONF #: 4444-27077 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-27077). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-27077). |

10.36 Medication Active (V5)

Medication Active (V5) (urn:hl7ii:2.16.840.1.113883.10.20.24.3.41:2019-12-01)

| Change | Old | New |
|--------------------------|--|---|
| Status | Published | Published |
| Name | Medication Active (V4) | Medication Active (V5) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.41:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.41:2019-12-01 |
| CONF #: 4444-29833 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29833) such that it Note: QDM Attribute: Recorder |
| CONF #: 4444-29834 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29834). |
| CONF #: 4444-29835 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29835) such that it Note: QDM Attribute: Recorder |
| CONF #: 4444-29836 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29836). |
| CONF #: 4444-29837 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29837) such that it Note: QDM Attribute: Recorder |
| CONF #: 4444-29838 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29838). |
| CONF #: 4444-29839 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29839) such that it Note: QDM Attribute: Recorder |
| CONF #: 4444-29840 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29840). |
| CONF #: 4444-29841 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29841). |
| CONF #: 4444-29842 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29842). |
| CONF #: 4444-29843 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) |

| Change | Old | New |
|-----------------------------|---|---|
| | | (CONF:4444-29843). |
| CONF #: 4444-29844 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29844). |
| CONF #: 4444-28654 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-28654). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-28654). |

10.37 Medication Administered (V5)

Medication Administered (V5) (urn:hl7ii:2.16.840.1.113883.10.20.24.3.42:2019-12-01)

| Change | Old | New |
|--------------------------|--|---|
| Status | Published | Published |
| Name | Medication Administered (V4) | Medication Administered (V5) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.42:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.42:2019-12-01 |
| CONF #: 4444-29846 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29846) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29847 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29847). |
| CONF #: 4444-29848 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29848) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29849 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29849). |
| CONF #: 4444-29850 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29850) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29851 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29851). |
| CONF #: 4444-29852 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29852) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29853 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29853). |
| CONF #: 4444-29854 Added | | If @negationInd="true" is present, SHALL contain one [1..1] entryRelationship such that it contains exactly one [1..1] Reason (V3) to state the reason for Medication Not Administered (CONF:4444-29854). |
| CONF #: 4444-29855 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29855). |
| CONF #: 4444-29856 Added | | SHALL contain exactly one [1..1] |

| Change | Old | New |
|-----------------------------|--|---|
| | | @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29856). |
| CONF #: 4444-29857 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29857). |
| CONF #: 4444-29858 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29858). |
| CONF #: 4444-30031 Added | | MAY contain zero or one [0..1] author (CONF:4444-30031). Note: QDM Attribute: Author dateTime |
| CONF #: 4444-30032 Added | | SHALL NOT contain [0..0] author (CONF:4444-30032). |
| CONF #: 4444-27022 Modified | MAY contain zero or one [0..1] entryRelationship (CONF:3343-27022) such that it Note: QDM Attribute: Reason | MAY contain zero or more [0..*] entryRelationship (CONF:4444-27022) such that it Note: QDM Attribute: Reason |
| CONF #: 4444-27023 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-27023). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-27023). |

10.38 Medication Dispensed (V6)

Medication Dispensed (V6) (urn:hl7ii:2.16.840.1.113883.10.20.24.3.45:2019-12-01)

| Change | Old | New |
|--------------------------|---|--|
| Status | Published | Published |
| Name | Medication Dispensed (V5) | Medication Dispensed (V6) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.45:2018-10-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.45:2019-12-01 |
| Description | <p>Together with the Medication Dispensed Act (V3) template, this template represents the QDM datatype: Medication, Dispensed. This template must be contained within the Medication Dispensed Act (V3) template.</p> <p>This datatype represents that a medication prescription has been filled by a pharmacy and the medication has been provided to the patient or patient proxy. In the ambulatory setting, medications are primarily taken directly by patients and not directly observed. Hence, dispensed is the closest health provider documentation of medication compliance. In settings where patients attest to taking medications in electronic format (perhaps a Personal Health Record), patient attestation of “medication taken” may be available.</p> <p>Timing: The time the medication dispensing event occurs; the Author dateTime.</p> <p>Timing: The Relevant Period addresses: startTime is when the first administration of the medication is expected. If not specified, the startTime defaults to the Author dateTime (the time the medication dispensing event occurs). stopTime is when the medication supply provided by the dispensing event is expected to be completed.</p> | <p>Together with the Medication Dispensed Act (V3) template, this template represents the QDM datatype: Medication, Dispensed. This template must be contained within the Medication Dispensed Act (V3) template.</p> <p>This datatype represents that a medication prescription has been filled by a pharmacy and the medication has been provided to the patient or patient proxy. In the ambulatory setting, medications are primarily taken directly by patients and not directly observed. Hence, dispensed is the closest health provider documentation of medication compliance. In settings where patients attest to taking medications in electronic format (perhaps a Personal Health Record), patient attestation of “medication taken” may be available.</p> <p>Relevant dateTime references the dateTime the prescription dispensing event occurred, i.e., the time the prescription was handed over to the patient or patient’s representative.</p> <p>Relevant Period references the validity period, i.e., the time period for which the ordered supply is authorized by the prescription authorizing the dispensing event. Author dateTime references the date and time the dispensing event is recorded.</p> |
| CONF #: 4444-29859 Added | | MAY contain zero or one [0..1] effectiveTime (CONF:4444-29859). Note: QDM Attribute: Relevant Period, Relevant dateTime |
| CONF #: 4444-29862 Added | | MAY contain zero or one [0..1] entryRelationship (CONF:4444-29862) such that it |

| Change | Old | New |
|--------------------------|-----|---|
| | | Note: QDM Attribute: Days Supplied |
| CONF #: 4444-29863 Added | | SHALL contain exactly one [1..1] supply (CONF:4444-29863). |
| CONF #: 4444-29864 Added | | The effectiveTime, if present, SHOULD contain zero or one [0..1] low (CONF:4444-29864). Note: QDM Attribute: Relevant Period - startTime - when the first administration of the medication is expected. If not specified, the startTime defaults to the Author dateTime (the time the medication dispensing event occurs). |
| CONF #: 4444-29865 Added | | The effectiveTime, if present, MAY contain zero or one [0..1] high (CONF:4444-29865). Note: QDM Attribute: Relevant Period - stopTime - when the medication supply provided by the dispensing event is expected to be completed. |
| CONF #: 4444-29868 Added | | SHALL contain exactly one [1..1] @typeCode="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-29868). |
| CONF #: 4444-29869 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29869) such that it Note: QDM Attribute: Dispenser |
| CONF #: 4444-29870 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29870). |
| CONF #: 4444-29871 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29871) such that it Note: QDM Attribute: Prescriber |
| CONF #: 4444-29872 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29872). |
| CONF #: 4444-29873 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29873) such that it Note: QDM Attribute: Prescriber |
| CONF #: 4444-29874 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29874). |
| CONF #: 4444-29875 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29875) |

| Change | Old | New |
|--------------------------|-----|--|
| | | such that it Note: QDM Attribute: Prescriber |
| CONF #: 4444-29876 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29876). |
| CONF #: 4444-29877 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29877) such that it Note: QDM Attribute: Prescriber |
| CONF #: 4444-29878 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29878). |
| CONF #: 4444-29879 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29879) such that it Note: QDM Attribute: Dispenser |
| CONF #: 4444-29880 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29880). |
| CONF #: 4444-29881 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29881) such that it Note: QDM Attribute: Dispenser |
| CONF #: 4444-29882 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29882). |
| CONF #: 4444-29883 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29883) such that it Note: QDM Attribute: Dispenser |
| CONF #: 4444-29884 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29884). |
| CONF #: 4444-29885 Added | | SHALL contain exactly one [1..1] @typeCode="DIST" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29885). |
| CONF #: 4444-29886 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29886). |
| CONF #: 4444-29887 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29887). |
| CONF #: 4444-29888 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: |

| Change | Old | New |
|----------------------------|---|---|
| | | HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29888). |
| CONF #: 4444-29889 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29889). |
| CONF #: 4444-29890 Added | | SHALL contain exactly one [1..1] @typeCode="DIST" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29890). |
| CONF #: 4444-29891 Added | | SHALL contain exactly one [1..1] @typeCode="DIST" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29891). |
| CONF #: 4444-29892 Added | | SHALL contain exactly one [1..1] @typeCode="DIST" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29892). |
| CONF #: 4444-29897 Added | | MAY contain [0..0] product (CONF:4444-29897) such that it |
| CONF #: 4444-29898 Added | | SHALL NOT contain [0..0] manufacturedProduct (CONF:4444-29898). |
| CONF #: 4444-29899 Added | | The effectiveTime, if present, SHOULD contain zero or one [0..1] @value (CONF:4444-29899). Note: QDM Attribute: Relevant dateTime - the dateTime the prescription dispensing event occurred, i.e., the time the prescription was handed over to the patient or patient's representative. |
| CONF #: 4444-30019 Added | | This effectiveTime SHALL contain either a low or a @value but not both (CONF:4444-30019). Note: QDM Attributes Relevant dateTime and Relevant Period are mutually exclusive. |
| CONF #: 4388-29215 Removed | MAY contain zero or one [0..1] effectiveTime (CONF:4388-29215). Note: QDM Attribute: Relevant Period | |
| CONF #: 4388-29216 Removed | The effectiveTime, if present, SHALL contain exactly one [1..1] | |

| Change | Old | New |
|-----------------------------|---|---|
| | low (CONF:4388-29216). Note: startTime = when the first administration of the medication is expected. If not specified, the startTime defaults to the Author dateTime (the time the medication dispensing event occurs). | |
| CONF #: 4388-29217 Removed | The effectiveTime, if present, SHALL contain exactly one [1..1] high (CONF:4388-29217). Note: stopTime = when the medication supply provided by the dispensing event is expected to be completed. | |
| CONF #: 4388-29218 Removed | MAY contain zero or one [0..1] participant (CONF:4388-29218) such that it | |
| CONF #: 4388-29219 Removed | SHALL contain exactly one [1..1] participantRole (CONF:4388-29219). | |
| CONF #: 4388-29220 Removed | MAY contain zero or one [0..1] entryRelationship (CONF:4388-29220) such that it Note: QDM Attribute: Days Supplied | |
| CONF #: 4388-29221 Removed | SHALL contain exactly one [1..1] supply (CONF:4388-29221). | |
| CONF #: 4388-29222 Removed | SHALL contain exactly one [1..1] @typeCode="PRF" Performer (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4388-29222). | |
| CONF #: 4388-29223 Removed | This participantRole SHALL contain at least one [1..*] id (CONF:4388-29223). Note: QDM Attribute: prescriberId | |
| CONF #: 4388-29224 Removed | SHALL contain exactly one [1..1] @typeCode="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4388-29224). | |
| CONF #: 4444-26555 Modified | SHALL contain exactly one [1..1] @extension="2018-10-01" (CONF:4388-26555). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-26555). |
| CONF #: 4444-28912 Modified | *SHALL* contain exactly one [1..1] @xsi:type="PIVL_TS" or "EIVL_TS" (CONF:1098-28499) (CONF:4388-28912). | SHALL contain exactly one [1..1] @xsi:type="PIVL_TS" or "EIVL_TS" (CONF:1098-28499) (CONF:4444-28912). |
| CONF #: 4444-28908 Modified | This template *SHALL* be | This template SHALL be |

| Change | Old | New |
|--------|---|--|
| | contained by a Medication Dispensed Act (V3) (CONF:4388-28908). | contained by a Medication Dispensed Act (V4) (CONF:4444-28908). |

10.39 Medication Dispensed Act (V4)

[Medication Dispensed Act \(V4\) \(urn:hl7ii:2.16.840.1.113883.10.20.24.3.139:2019-12-01\)](#)

| Change | Old | New |
|--------------------------|---|--|
| Status | Published | Published |
| Name | Medication Dispensed Act (V3) | Medication Dispensed Act (V4) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.139:2018-10-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.139:2019-12-01 |
| CONF #: 4444-29893 Added | | MAY contain zero or one [0..1] entryRelationship (CONF:4444-29893) such that it Note: Reason for Negation |
| CONF #: 4444-29894 Added | | SHALL contain exactly one [1..1] observation (CONF:4444-29894). |
| CONF #: 4444-29895 Added | | If @negationInd="true" is present, SHALL contain one [1..1] entryRelationship such that it contains exactly one [1..1] Reason (V3) to state the reason for Medication Not Dispensed (CONF:4444-29895). |
| CONF #: 4444-29896 Added | | SHALL contain exactly one [1..1] @typeCode="RSON" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29896). |

10.40 Medication Order (V6)

[Medication Order \(V6\) \(urn:hl7ii:2.16.840.1.113883.10.20.24.3.47:2019-12-01\)](#)

| Change | Old | New |
|--------------------------|--|--|
| Status | Published | Published |
| Name | Medication Order (V5) | Medication Order (V6) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.47:2018-10-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.47:2019-12-01 |
| CONF #: 4444-29900 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29900) such that it |
| CONF #: 4444-29901 Added | | SHALL contain exactly one [1..1] high (CONF:4444-29901). Note: stopTime = when the medication supply provided by the medication order is expected to be completed, including all fulfillments covered by the number of refills. |
| CONF #: 4444-29902 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29902) such that it Note: QDM Attribute: Prescriber |
| CONF #: 4444-29903 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29903). |
| CONF #: 4444-29904 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29904) such that it Note: QDM Attribute: Prescriber |
| CONF #: 4444-29905 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29905). |
| CONF #: 4444-29906 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29906) such that it Note: QDM Attribute: Prescriber |
| CONF #: 4444-29907 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29907). |
| CONF #: 4444-29908 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29908) such that it Note: QDM Attribute: Prescriber |
| CONF #: 4444-29909 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29909). |
| CONF #: 4444-29910 Added | | If <@negationInd="true"> is present, <SHALL contain one [1..1] entryRelationship such |

| Change | Old | New |
|-----------------------------|--|---|
| | | that it contains exactly one [1..1] Reason (V3) to state the reason for Medication Not Order (CONF:4444-29910). |
| CONF #: 4444-29911 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29911). |
| CONF #: 4444-29912 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29912). |
| CONF #: 4444-29913 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29913). |
| CONF #: 4444-29914 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29914). |
| CONF #: 4388-29225 Removed | SHALL contain exactly one [1..1] high (CONF:4388-29225). Note: stopTime = when the medication supply provided by the medication order is expected to be completed, including all fulfillments covered by the number of refills. | |
| CONF #: 4388-29226 Removed | MAY contain zero or one [0..1] participant (CONF:4388-29226) such that it | |
| CONF #: 4444-28008 Modified | MAY contain zero or one [0..1] entryRelationship (CONF:4388-28008) such that it Note: QDM Attribute: Reason | MAY contain zero or more [0..*] entryRelationship (CONF:4444-28008) such that it Note: QDM Attribute: Reason |
| CONF #: 4444-27089 Modified | SHALL contain exactly one [1..1] @extension="2018-10-01" (CONF:4388-27089). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-27089). |

10.41 Medication Supply Request (V3)

Medication Supply Request (V3) (urn:hl7ii:2.16.840.1.113883.10.20.24.3.99:2019-12-01)

| Change | Old | New |
|-----------------------------|--|---|
| Status | Published | Published |
| Name | Medication Supply Request (V2) | Medication Supply Request (V3) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.99:2015-04-05 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.99:2019-12-01 |
| Description | This template represents a request to a pharmacy to supply a medication. An effectiveTime is required. | This template represents a request to a pharmacy to supply a medication. |
| CONF #: 4444-29705 Added | | SHALL contain exactly one [1..1] product (CONF:4444-29705) such that it |
| CONF #: 4444-29706 Added | | SHALL contain exactly one [1..1] manufacturedProduct (CONF:4444-29706). |
| CONF #: 1140-13829 Removed | SHALL contain exactly one [1..1] effectiveTime (CONF:1140-13829). | |
| CONF #: 1140-13831 Removed | MAY contain zero or one [0..1] independentInd (CONF:1140-13831). | |
| CONF #: 4444-28374 Modified | SHALL contain exactly one [1..1] @extension="2014-04-05" (CONF:1140-28374). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-28374). |

10.42 Patient Care Experience (V5)

Patient Care Experience (V5) (urn:hl7ii:2.16.840.1.113883.10.20.24.3.48:2019-12-01)

| Change | Old | New |
|--------------------------|--|---|
| Status | Published | Published |
| Name | Patient Care Experience (V4) | Patient Care Experience (V5) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.48:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.48:2019-12-01 |
| CONF #: 4444-29962 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29962) such that it Note: QDM Attribute: Recorder |
| CONF #: 4444-29963 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29963). |
| CONF #: 4444-29964 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29964) such that it Note: QDM Attribute: Recorder |
| CONF #: 4444-29965 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29965). |
| CONF #: 4444-29966 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29966) such that it Note: QDM Attribute: Recorder |
| CONF #: 4444-29967 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29967). |
| CONF #: 4444-29968 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29968) such that it Note: QDM Attribute: Recorder |
| CONF #: 4444-29969 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29969). |
| CONF #: 4444-29970 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29970). |
| CONF #: 4444-29971 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29971). |
| CONF #: 4444-29972 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) |

| Change | Old | New |
|-----------------------------|---|---|
| | | (CONF:4444-29972). |
| CONF #: 4444-29973 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29973). |
| CONF #: 4444-27290 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-27290). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-27290). |

10.43 Patient Characteristic Observation Assertion (V5)

Patient Characteristic Observation Assertion (V5)

(urn:hl7ii:2.16.840.1.113883.10.20.24.3.103:2019-12-01)

| Change | Old | New |
|-----------------------------|--|---|
| Status | Published | Published |
| Name | Patient Characteristic Observation Assertion (V4) | Patient Characteristic Observation Assertion (V5) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.103:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.103:2019-12-01 |
| CONF #: 4444-29726 Added | | MAY contain zero or one [0..1] author (CONF:4444-29726). Note: QDM Attribute: Author dateTime |
| CONF #: 3343-16540 Removed | SHALL contain exactly one [1..1] effectiveTime (CONF:3343-16540). | |
| CONF #: 3343-27670 Removed | This effectiveTime SHALL contain exactly one [1..1] low (CONF:3343-27670). | |
| CONF #: 3343-27671 Removed | This effectiveTime MAY contain zero or one [0..1] high (CONF:3343-27671). | |
| CONF #: 3343-16539 Removed | SHALL contain exactly one [1..1] statusCode="completed" Completed (CONF:3343-16539). | |
| CONF #: 4444-27781 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-27781). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-27781). |

10.44 Physical Exam Order (V5)

[Physical Exam Order \(V5\) \(urn:hl7ii:2.16.840.1.113883.10.20.24.3.58:2019-12-01\)](#)

| Change | Old | New |
|--------------------------|--|---|
| Status | Published | Published |
| Name | Physical Exam Order (V4) | Physical Exam Order (V5) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.58:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.58:2019-12-01 |
| CONF #: 4444-29781 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29781) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29782 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29782). |
| CONF #: 4444-29783 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29783) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29784 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29784). |
| CONF #: 4444-29785 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29785) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29786 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29786). |
| CONF #: 4444-29787 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29787) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29788 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29788). |
| CONF #: 4444-29789 Added | | If <@negationInd="true"> is present, <SHALL> contain one [1..1] entryRelationship such that it contains exactly one [1..1] <Reason (V3)> to state the reason for <Physical Exam Not Order> (CONF:4444-29789). |
| CONF #: 4444-29790 Added | | SHALL contain exactly one [1..1] <@typeCode="PRF"> (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29790). |
| CONF #: 4444-29791 Added | | SHALL contain exactly one [1..1] <@typeCode="PRF"> (CodeSystem: |

| Change | Old | New |
|-----------------------------|---|---|
| | | HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 (CONF:4444-29791). |
| CONF #: 4444-29792 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29792). |
| CONF #: 4444-29793 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29793). |
| CONF #: 4444-12701 Modified | MAY contain zero or one [0..1] entryRelationship (CONF:3343- 12701) such that it Note: QDM Attribute: Reason | MAY contain zero or more [0..*] entryRelationship (CONF:4444- 12701) such that it Note: QDM Attribute: Reason |
| CONF #: 4444-27078 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-27078). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-27078). |

10.45 Physical Exam Performed (V5)

Physical Exam Performed (V5) (urn:hl7ii:2.16.840.1.113883.10.20.24.3.59:2019-12-01)

| Change | Old | New |
|--------------------------|--|---|
| Status | Published | Published |
| Name | Physical Exam Performed (V4) | Physical Exam Performed (V5) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.59:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.59:2019-12-01 |
| CONF #: 4444-29807 Added | | MAY contain zero or one [0..1] author (CONF:4444-29807). Note: QDM attribute: Author dateTime |
| CONF #: 4444-29808 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29808) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29809 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29809). |
| CONF #: 4444-29810 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29810) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29811 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29811). |
| CONF #: 4444-29812 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29812) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29813 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29813). |
| CONF #: 4444-29814 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29814) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29815 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29815). |
| CONF #: 4444-29816 Added | | If @negationInd="true" is present, SHALL contain one [1..1] entryRelationship such that it contains exactly one [1..1] Reason (V3) to state the reason for Physical Exam Not Performed (CONF:4444-29816). |
| CONF #: 4444-29817 Added | | SHALL contain at least one [1..*] id (CONF:4444-29817). |

| Change | Old | New |
|-----------------------------|--|---|
| CONF #: 4444-29818 Added | | This effectiveTime SHOULD contain zero or one [0..1] @value (CONF:4444-29818). Note: QDM Attribute: Relevant dateTime – the time the physical exam is performed when the physical exam occurs at a single point in time. |
| CONF #: 4444-29819 Added | | This effectiveTime SHALL contain either a low or a @value but not both (CONF:4444-29819). Note: QDM Attributes Relevant dateTime and Relevant Period are mutually exclusive. |
| CONF #: 4444-29820 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29820). |
| CONF #: 4444-29821 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29821). |
| CONF #: 4444-29822 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29822). |
| CONF #: 4444-29823 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29823). |
| CONF #: 4444-29824 Added | | SHALL NOT contain [0..0] author (CONF:4444-29824). |
| CONF #: 3343-29164 Removed | MAY contain zero or one [0..1] author (CONF:3343-29164). Note: QDM attribute: Author dateTime | |
| CONF #: 4444-12656 Modified | MAY contain zero or one [0..1] entryRelationship (CONF:3343-12656) such that it Note: QDM Attribute: Reason | MAY contain zero or more [0..*] entryRelationship (CONF:4444-12656) such that it Note: QDM Attribute: Reason |
| CONF #: 4444-27135 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-27135). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-27135). |
| CONF #: 4444-12652 Modified | This effectiveTime SHALL contain exactly one [1..1] low (CONF:3343-12652). | This effectiveTime SHOULD contain zero or one [0..1] low (CONF:4444-12652). |

| Change | Old | New |
|-----------------------------|---|---|
| | Note: startTime - the time the physical examination activity begins | Note: QDM Attribute: Relevant Period - startTime - the time the physical examination activity begins when it occurs over a time interval. |
| CONF #: 4444-12653 Modified | This effectiveTime SHALL contain exactly one [1..1] high (CONF:3343-12653). Note: stopTime – the time the physical examination activity ends | This effectiveTime MAY contain zero or one [0..1] high (CONF:4444-12653). Note: QDM Attribute: Relevant Period - stopTime – the time the physical examination activity ends when it occurs over a time interval. |

10.46Physical Exam Recommended (V5)

Physical Exam Recommended (V5) (urn:hl7ii:2.16.840.1.113883.10.20.24.3.60:2019-12-01)

| Change | Old | New |
|--------------------------|--|---|
| Status | Published | Published |
| Name | Physical Exam Recommended (V4) | Physical Exam Recommended (V5) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.60:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.60:2019-12-01 |
| CONF #: 4444-29794 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29794) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29795 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29795). |
| CONF #: 4444-29796 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29796) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29797 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29797). |
| CONF #: 4444-29798 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29798) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29799 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29799). |
| CONF #: 4444-29800 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29800) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29801 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29801). |
| CONF #: 4444-29802 Added | | If @negationInd="true" is present, SHALL contain one [1..1] entryRelationship such that it contains exactly one [1..1] Reason (V3) to state the reason for Physical Exam Not Recommended (CONF:4444-29802). |
| CONF #: 4444-29803 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29803). |

| Change | Old | New |
|-----------------------------|--|---|
| CONF #: 4444-29804 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29804). |
| CONF #: 4444-29805 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29805). |
| CONF #: 4444-29806 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29806). |
| CONF #: 4444-12679 Modified | MAY contain zero or one [0..1] entryRelationship (CONF:3343-12679) such that it Note: QDM Attribute: Reason | MAY contain zero or more [0..*] entryRelationship (CONF:4444-12679) such that it Note: QDM Attribute: Reason |
| CONF #: 4444-27082 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-27082). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-27082). |

10.47 Principal Diagnosis (RETIRED)

Principal Diagnosis (RETIRED) (urn:hl7ii:2.16.840.1.113883.10.20.24.3.152:2019-12-01)

| Change | Old | New |
|-------------|--|---|
| Status | Published | Retired |
| Name | Principal Diagnosis | Principal Diagnosis (RETIRED) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.152:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.152:2019-12-01 |
| Description | This template represents the Principal Diagnosis QDM Attribute. The coded diagnosis/problem established after study to be chiefly responsible for occasioning the admission of the patient to the hospital for care. | This template represents the Principal Diagnosis QDM Attribute. The coded diagnosis/problem established after study to be chiefly responsible for occasioning the admission of the patient to the hospital for care. This template is retired in QRDA I STU 5.2 due to QDM 5.5 update. |

10.48 Procedure Order (V6)

[Procedure Order \(V6\) \(urn:hl7ii:2.16.840.1.113883.10.20.24.3.63:2019-12-01\)](#)

| Change | Old | New |
|--------------------------|--|---|
| Status | Published | Published |
| Name | Procedure Order (V5) | Procedure Order (V6) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.63:2018-10-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.63:2019-12-01 |
| CONF #: 4444-29464 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29464) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29465 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29465). |
| CONF #: 4444-29466 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29466) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29467 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29467). |
| CONF #: 4444-29468 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29468) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29469 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29469). |
| CONF #: 4444-29470 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29470) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29471 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29471). |
| CONF #: 4444-29474 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29474). |
| CONF #: 4444-29475 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29475). |
| CONF #: 4444-29476 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) |

| Change | Old | New |
|-----------------------------|--|---|
| | | (CONF:4444-29476). |
| CONF #: 4444-29477 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29477). |
| CONF #: 4444-29825 Added | | MAY contain zero or one [0..1] entryRelationship (CONF:4444-29825) such that it Note: QDM Attribute: Rank |
| CONF #: 4444-29826 Added | | SHALL contain exactly one [1..1] observation (CONF:4444-29826). |
| CONF #: 4444-29827 Added | | If @negationInd="true" is present, SHALL contain one [1..1] entryRelationship such that it contains exactly one [1..1] Reason (V3) to state the reason for Procedure Not Order (CONF:4444-29827). |
| CONF #: 4444-29829 Added | | SHALL contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29829). |
| CONF #: 4444-11616 Modified | MAY contain zero or one [0..1] entryRelationship (CONF:4388-11616) such that it Note: QDM Attribute: Reason | MAY contain zero or more [0..*] entryRelationship (CONF:4444-11616) such that it Note: QDM Attribute: Reason |
| CONF #: 4444-27083 Modified | SHALL contain exactly one [1..1] @extension="2018-10-01" (CONF:4388-27083). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-27083). |

10.49 Procedure Performed (V6)

Procedure Performed (V6) (urn:hl7ii:2.16.840.1.113883.10.20.24.3.64:2019-12-01)

| Change | Old | New |
|--------------------------|--|--|
| Status | Published | Published |
| Name | Procedure Performed (V5) | Procedure Performed (V6) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.64:2018-10-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.64:2019-12-01 |
| CONF #: 4444-29428 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29428) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29429 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29429). |
| CONF #: 4444-29430 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29430) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29431 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29431). |
| CONF #: 4444-29432 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29432) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29433 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29433). |
| CONF #: 4444-29434 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29434) such that it Note: QDM Attribute: Performer |
| CONF #: 4444-29435 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29435). |
| CONF #: 4444-29438 Added | | This effectiveTime SHALL contain either a low or a @value but not both (CONF:4444-29438). Note: QDM Attributes Relevant dateTime and Relevant Period are mutually exclusive. |
| CONF #: 4444-29439 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CONF:4444-29439). |
| CONF #: 4444-29440 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CONF:4444-29440). |
| CONF #: 4444-29441 Added | | SHALL contain exactly one [1..1] |

| Change | Old | New |
|-----------------------------|---|---|
| | | @typeCode="PRF" (CONF:4444-29441). |
| CONF #: 4444-29442 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CONF:4444-29442). |
| CONF #: 4444-29461 Added | | MAY contain zero or one [0..1] entryRelationship (CONF:4444-29461) such that it Note: QDM Attribute: Rank |
| CONF #: 4444-29462 Added | | SHALL contain exactly one [1..1] observation (CONF:4444-29462). |
| CONF #: 4444-29463 Added | | SHALL contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29463). |
| CONF #: 4444-29831 Added | | This effectiveTime SHOULD contain zero or one [0..1] @value (CONF:4444-29831). Note: QDM Attribute: Relevant dateTime – the time the procedure is performed when the procedure occurs at a single point in time. |
| CONF #: 4444-29928 Added | | If @negationInd="true" is present, SHALL contain one [1..1] entryRelationship such that it contains exactly one [1..1] Reason (V3) to state the reason for Procedure Not Performed (CONF:4444-29928). |
| CONF #: 4444-30027 Added | | SHALL NOT contain [0..0] author (CONF:4444-30027). |
| CONF #: 4444-30028 Added | | SHALL contain exactly one [1..1] observation (CONF:4444-30028). |
| CONF #: 4388-27317 Removed | SHALL contain exactly one [1..1] observation (CONF:4388-27317). | |
| CONF #: 4388-27765 Removed | The targetSiteCode, if present, MAY contain zero or more [0..*] translation (CONF:4388-27765). | |
| CONF #: 4444-11371 Modified | MAY contain zero or one [0..1] entryRelationship (CONF:4388-11371) such that it Note: QDM Attribute: Reason | MAY contain zero or more [0..*] entryRelationship (CONF:4444-11371) such that it Note: QDM Attribute: Reason |
| CONF #: 4444-27312 Modified | SHOULD contain zero or more [0..*] targetSiteCode (CONF:4388-27312). Note: QDM Attribute: Anatomical Location Site | MAY contain zero or one [0..1] targetSiteCode (CONF:4444-27312). Note: QDM Attribute: Anatomical Location Site |
| CONF #: 4444-27129 Modified | SHALL contain exactly one [1..1] | SHALL contain exactly one [1..1] |

| Change | Old | New |
|-----------------------------|---|---|
| | @extension="2018-10-01" (CONF:4388-27129). | @extension="2019-12-01" (CONF:4444-27129). |
| CONF #: 4444-11670 Modified | This effectiveTime SHALL contain exactly one [1..1] low (CONF:4388-11670). Note: startTime – the time the procedure begins | This effectiveTime SHOULD contain zero or one [0..1] low (CONF:4444-11670). Note: QDM Attribute: Relevant Period: startTime – the time the procedure begins when it occurs over a time interval. |
| CONF #: 4444-11671 Modified | This effectiveTime SHALL contain exactly one [1..1] high (CONF:4388-11671). Note: stopTime – the time the procedure is completed | This effectiveTime MAY contain zero or one [0..1] high (CONF:4444-11671). Note: QDM Attribute: Relevant Period: stopTime – the time the procedure is completed when it occurs over a time interval |

10.50 Procedure Recommended (V6)

Procedure Recommended (V6) (urn:hl7ii:2.16.840.1.113883.10.20.24.3.65:2019-12-01)

| Change | Old | New |
|--------------------------|--|---|
| Status | Published | Published |
| Name | Procedure Recommended (V5) | Procedure Recommended (V6) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.65:2018-10-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.65:2019-12-01 |
| CONF #: 4444-29479 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29479) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29480 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29480). |
| CONF #: 4444-29481 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29481) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29482 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29482). |
| CONF #: 4444-29483 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29483) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29484 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29484). |
| CONF #: 4444-29485 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29485) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29486 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29486). |
| CONF #: 4444-29487 Added | | MAY contain zero or one [0..1] entryRelationship (CONF:4444-29487) such that it Note: QDM Attribute: Rank |
| CONF #: 4444-29488 Added | | SHALL contain exactly one [1..1] observation (CONF:4444-29488). |
| CONF #: 4444-29489 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29489). |
| CONF #: 4444-29490 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType |

| Change | Old | New |
|-----------------------------|---|---|
| | | urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29490). |
| CONF #: 4444-29491 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29491). |
| CONF #: 4444-29492 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29492). |
| CONF #: 4444-29494 Added | | SHALL contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-29494). |
| CONF #: 4444-29830 Added | | If @negationInd="true" is present, SHALL contain one [1..1] entryRelationship such that it contains exactly one [1..1] Reason (V3) to state the reason for Procedure Not Recommended (CONF:4444- 29830). |
| CONF #: 4388-28940 Removed | The targetSiteCode, if present, MAY contain zero or more [0..*] translation (CONF:4388-28940). Note: QDM Attribute: Author dateTime – the time the recommendation was authored | |
| CONF #: 4444-11592 Modified | MAY contain zero or one [0..1] entryRelationship (CONF:4388- 11592) such that it Note: QDM Attribute: Reason | MAY contain zero or more [0..*] entryRelationship (CONF:4444- 11592) such that it Note: QDM Attribute: Reason |
| CONF #: 4444-27086 Modified | SHALL contain exactly one [1..1] @extension="2018-10-01" (CONF:4388-27086). | SHALL contain exactly one [1..1] @extension="2018-09-01" (CONF:4444-27086). |

10.51 Program Participation (V2)

[Program Participation \(V2\) \(urn:hl7ii:2.16.840.1.113883.10.20.24.3.154:2019-12-01\)](#)

| Change | Old | New |
|--------------------------|---|---|
| Status | Published | Published |
| Name | Program Participation | Program Participation (V2) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.154:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.154:2019-12-01 |
| CONF #: 4444-29915 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29915) such that it Note: QDM Attribute: Recorder |
| CONF #: 4444-29916 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29916). |
| CONF #: 4444-29917 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29917) such that it Note: QDM Attribute: Recorder |
| CONF #: 4444-29918 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29918). |
| CONF #: 4444-29919 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29919) such that it Note: QDM Attribute: Recorder |
| CONF #: 4444-29920 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29920). |
| CONF #: 4444-29921 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29921) such that it Note: QDM Attribute: Recorder |
| CONF #: 4444-29922 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29922). |
| CONF #: 4444-29923 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29923). |
| CONF #: 4444-29924 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29924). |
| CONF #: 4444-29925 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) |

| Change | Old | New |
|-----------------------------|---|---|
| | | (CONF:4444-29925). |
| CONF #: 4444-29926 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29926). |
| CONF #: 4444-28970 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-28970). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-28970). |

10.52 Provider Care Experience (V5)

Provider Care Experience (V5) (urn:hl7ii:2.16.840.1.113883.10.20.24.3.67:2019-12-01)

| Change | Old | New |
|--------------------------|--|---|
| Status | Published | Published |
| Name | Provider Care Experience (V4) | Provider Care Experience (V5) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.67:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.67:2019-12-01 |
| CONF #: 4444-29974 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29974) such that it Note: QDM Attribute: Recorder |
| CONF #: 4444-29975 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29975). |
| CONF #: 4444-29976 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29976) such that it Note: QDM Attribute: Recorder |
| CONF #: 4444-29977 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29977). |
| CONF #: 4444-29978 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29978) such that it Note: QDM Attribute: Recorder |
| CONF #: 4444-29979 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29979). |
| CONF #: 4444-29980 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29980) such that it Note: QDM Attribute: Recorder |
| CONF #: 4444-29981 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29981). |
| CONF #: 4444-29982 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29982). |
| CONF #: 4444-29983 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29983). |
| CONF #: 4444-29984 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType |

| Change | Old | New |
|-----------------------------|---|---|
| | | urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29984). |
| CONF #: 4444-29985 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29985). |
| CONF #: 4444-27293 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-27293). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-27293). |

10.53 Provider Characteristic Observation Assertion (RETIRED)

Provider Characteristic Observation Assertion (RETIRED)
(urn:hl7ii:2.16.840.1.113883.10.20.24.3.114:2019-12-01)

| Change | Old | New |
|--------|---|--|
| Status | Published | Retired |
| Name | Provider Characteristic Observation Assertion (V3) | Provider Characteristic Observation Assertion (RETIRED) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20. 24.3.114:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20. 24.3.114:2019-12-01 |

10.54Result (V4)

[Result \(V4\) \(urn:hl7ii:2.16.840.1.113883.10.20.24.3.87:2019-12-01\)](#)

| Change | Old | New |
|-----------------------------|---|--|
| Status | Published | Published |
| Name | Result (V3) | Result (V4) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.87:2016-02-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.87:2019-12-01 |
| CONF #: 4444-30011 Added | | SHALL contain exactly one [1..1] effectiveTime (CONF:4444-30011). Note: QDM Attribute: Result dateTime |
| CONF #: 4444-30013 Added | | SHALL NOT contain [0..0] author (CONF:4444-30013). |
| CONF #: 4444-30014 Added | | This effectiveTime SHALL contain exactly one [1..1] @value (CONF:4444-30014). |
| CONF #: 2228-14171 Removed | MAY contain zero or one [0..1] entryRelationship (CONF:2228-14171) such that it | |
| CONF #: 2228-16701 Removed | SHALL contain exactly one [1..1] value (CONF:2228-16701). | |
| CONF #: 2228-27658 Removed | SHALL contain exactly one [1..1] code (CONF:2228-27658). | |
| CONF #: 2228-14174 Removed | SHALL contain exactly one [1..1] observation (CONF:2228-14174). | |
| CONF #: 2228-14172 Removed | SHALL contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:2228-14172). | |
| CONF #: 2228-16702 Removed | If xsi:type=PQ, then @units shall be drawn from Unified Code for Units of Measure (UCUM) 2.16.840.1.113883.6.8 code system. Additional constraint is dependent on criteria in the corresponding eMeasure (CONF:2228-16702). | |
| CONF #: 2228-27659 Removed | This code SHALL contain exactly one [1..1] @sdtc:valueSet (CONF:2228-27659). | |
| CONF #: 4444-27035 Modified | SHALL contain exactly one [1..1] @extension="2016-02-01" (CONF:2228-27035). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-27035). |

10.55Status (V2)

Status (V2) (urn:hl7ii:2.16.840.1.113883.10.20.24.3.93:2019-12-01)

| Change | Old | New |
|-----------------------------|--|--|
| Status | Published | Published |
| Name | Status | Status (V2) |
| Oid | urn:oid:2.16.840.1.113883.10.20.24.3.93 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.93:2019-12-01 |
| Description | <p>This simple “status” clinical statement should only be used if there is not already a described method for handling status. This template should be used if actStatus code does not convey enough meaning.</p> <p>This template represents the QDM Attribute: status. It indicates the particular stage of the action represented by the datatype</p> | <p>This template is to represent the QDM attribute Status for the QDM data types Diagnostic Study Performed, Intervention Performed, Laboratory Test Performed, and Procedure Performed. QDM Attribute: status - Indicates the particular stage of the action represented by the datatype.</p> <p>This template is also to represent the QDM attribute Status Date for the QDM data type Care Goal. QDM Attribute: status date - The date a care goal was updated and/or changed status.</p> |
| CONF #: 4444-29585 Added | | MAY contain zero or one [0..1] effectiveTime (CONF:4444-29585). Note: QDM Attribute: Status Date |
| CONF #: 4444-29586 Added | | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-29586). |
| CONF #: 4444-29587 Added | | The effectiveTime, if present, SHALL contain exactly one [1..1] @value (CONF:4444-29587). |
| CONF #: 4444-11887 Modified | SHALL contain exactly one [1..1] value (CONF:67-11887). | SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:4444-11887). Note: QDM Attribute: Status |

10.56 Substance Recommended (V5)

Substance Recommended (V5) (urn:hl7ii:2.16.840.1.113883.10.20.24.3.75:2019-12-01)

| Change | Old | New |
|--------------------------|--|---|
| Status | Published | Published |
| Name | Substance Recommended (V4) | Substance Recommended (V5) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.75:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.75:2019-12-01 |
| CONF #: 4444-29509 Added | | SHALL contain exactly one [1..1] @operator="A" (CONF:4444-29509). |
| CONF #: 4444-29510 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29510) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29511 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29511). |
| CONF #: 4444-29512 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29512) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29513 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29513). |
| CONF #: 4444-29514 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29514) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29515 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29515). |
| CONF #: 4444-29516 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29516) such that it Note: QDM Attribute: Requester |
| CONF #: 4444-29517 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29517). |
| CONF #: 4444-29518 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29518). |
| CONF #: 4444-29519 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29519). |
| CONF #: 4444-29520 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: |

| Change | Old | New |
|-----------------------------|---|---|
| | | HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29520). |
| CONF #: 4444-29521 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29521). |
| CONF #: 4444-29832 Added | | If @negationInd="true" is present, SHALL contain one [1..1] entryRelationship such that it contains exactly one [1..1] Reason (V3) to state the reason for Substance Not Recommended (CONF:4444- 29832). |
| CONF #: 3343-29145 Removed | SHALL contain exactly one [1..1] @operator="A" (CONF:3343-29145). | |
| CONF #: 4444-13867 Modified | MAY contain zero or one [0..1] entryRelationship (CONF:3343- 13867) such that it Note: QDM Attribute: Reason | MAY contain zero or more [0..*] entryRelationship (CONF:4444- 13867) such that it Note: QDM Attribute: Reason |
| CONF #: 4444-27152 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-27152). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-27152). |

10.57Symptom (V3)

[Symptom \(V3\) \(urn:hl7ii:2.16.840.1.113883.10.20.24.3.136:2019-12-01\)](#)

| Change | Old | New |
|--------------------------|---|---|
| Status | Published | Published |
| Name | Symptom (V2) | Symptom (V3) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.136:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.136:2019-12-01 |
| CONF #: 4444-29497 Added | | MAY contain zero or one [0..1] participant (CONF:4444-29497) such that it Note: QDM Attribute: Recorder |
| CONF #: 4444-29498 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29498). |
| CONF #: 4444-29499 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29499) such that it Note: QDM Attribute: Recorder |
| CONF #: 4444-29500 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29500). |
| CONF #: 4444-29501 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29501) such that it Note: QDM Attribute: Recorder |
| CONF #: 4444-29502 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29502). |
| CONF #: 4444-29503 Added | | MAY contain zero or more [0..*] participant (CONF:4444-29503) such that it Note: QDM Attribute: Recorder |
| CONF #: 4444-29504 Added | | SHALL contain exactly one [1..1] participantRole (CONF:4444-29504). |
| CONF #: 4444-29505 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29505). |
| CONF #: 4444-29506 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29506). |
| CONF #: 4444-29507 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) |

| Change | Old | New |
|-----------------------------|---|---|
| | | (CONF:4444-29507). |
| CONF #: 4444-29508 Added | | SHALL contain exactly one [1..1] @typeCode="PRF" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4444-29508). |
| CONF #: 4444-28667 Modified | This template *SHALL* be contained by a Symptom Concern Act (V3) (CONF:3343-28667). | This template SHALL be contained by a Symptom Concern Act (V4) (CONF:4444-28667). |
| CONF #: 4444-28855 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-28855). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-28855). |

10.58 Symptom Concern Act (V4)

[Symptom Concern Act \(V4\) \(urn:hl7ii:2.16.840.1.113883.10.20.24.3.138:2019-12-01\)](#)

| Change | Old | New |
|-----------------------------|---|---|
| Status | Published | Published |
| Name | Symptom Concern Act (V3) | Symptom Concern Act (V4) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.138:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.138:2019-12-01 |
| Description | This template, along with its contained template Symptom (V2), represents the QDM datatype: Symptom. The effectiveTime/low of the Symptom Concern Act (V3) asserts when the problem concern became active. This equates to the time the problem concern was authored in the patient's chart. | This template, along with its contained template Symptom (V3), represents the QDM datatype: Symptom. The effectiveTime/low of the Symptom Concern Act (V4) asserts when the problem concern became active. This equates to the time the problem concern was authored in the patient's chart. |
| CONF #: 4444-28694 Modified | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-28694). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-28694). |

10.59 Patient Data Section QDM (V7)

Patient Data Section QDM (V7) (urn:hl7ii:2.16.840.1.113883.10.20.24.2.1:2019-12-01)

| Change | Old | New |
|--------------------------|---|---|
| Status | Published | Published |
| Name | Patient Data Section QDM (V6) | Patient Data Section QDM (V7) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.2.1:2018-10-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.2.1:2019-12-01 |
| Description | <p>The Patient Data Section QDM (V6) contains entries that conform to the QDM approach to QRDA. In contrast to a QRDA Framework Patient Data Section that requires but does not specify the structured entries, the Patient Data Section QDM contained entry templates have specific requirements to align the quality measure data element type with its corresponding QDM HQMF pattern and QDM attributes. All entries must also have time element. See Quality Data Model-Based QRDA in Volume 1 of this IG.</p> <p>For time elements, a Coordinated Universal Time (UTC time) offset should not be used anywhere in a QRDA Category I file or, if a UTC time offset is needed anywhere, then it must be specified everywhere a time field is provided. Example time elements are:</p> <ul style="list-style-type: none"> • effectiveTime/@value • effectiveTime/low/@value • effectiveTime/high/@value • time/@value • time/low/@value • time/high/@value | <p>The Patient Data Section QDM (V7) contains entries that conform to the QDM approach to QRDA. In contrast to a QRDA Framework Patient Data Section that requires but does not specify the structured entries, the Patient Data Section QDM contained entry templates have specific requirements to align the quality measure data element type with its corresponding QDM HQMF pattern and QDM attributes. All entries must also have time element. See Quality Data Model-Based QRDA in Volume 1 of this IG.</p> <p>For time elements, a Coordinated Universal Time (UTC time) offset should not be used anywhere in a QRDA Category I file or, if a UTC time offset is needed anywhere, then it must be specified everywhere a time field is provided. Example time elements are:</p> <ul style="list-style-type: none"> • effectiveTime/@value • effectiveTime/low/@value • effectiveTime/high/@value • time/@value • time/low/@value • time/high/@value |
| CONF #: 4444-29623 Added | | SHALL contain exactly one [1..1] substanceAdministration (CONF:4444-29623). |
| CONF #: 4444-29624 Added | | MAY contain zero or more [0..*] entry (CONF:4444-29624) such that it |
| CONF #: 4444-29625 Added | | SHALL contain exactly one [1..1] act (CONF:4444-29625). |
| CONF #: 4444-29626 Added | | MAY contain zero or more [0..*] entry (CONF:4444-29626) such that it |
| CONF #: 4444-29627 Added | | SHALL contain exactly one [1..1] observation (CONF:4444-29627). |

| Change | Old | New |
|----------------------------|--|--|
| CONF #: 4444-29628 Added | | SHALL contain exactly one [1..1] @typeCode="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-29628). |
| CONF #: 4444-29629 Added | | SHALL contain exactly one [1..1] @typeCode="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-29629). |
| CONF #: 4444-30002 Added | | MAY contain zero or more [0..*] entry (CONF:4444-30002) such that it |
| CONF #: 4444-30003 Added | | SHALL contain exactly one [1..1] observation (CONF:4444-30003). |
| CONF #: 4444-30004 Added | | SHALL contain exactly one [1..1] @typeCode="DRIV" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-30004). |
| CONF #: 4388-29138 Removed | SHALL contain exactly one [1..1] substanceAdministration (CONF:4388-29138). | |
| CONF #: 4388-28953 Removed | MAY contain zero or more [0..*] entry (CONF:4388-28953) such that it | |
| CONF #: 4388-28955 Removed | SHALL contain exactly one [1..1] observation (CONF:4388-28955). | |
| CONF #: 4388-28954 Removed | SHALL contain exactly one [1..1] @typeCode="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4388-28954). | |
| CONF #: 4388-29176 Removed | MAY contain zero or more [0..*] entry (CONF:4388-29176) such that it | |
| CONF #: 4388-29177 Removed | SHALL contain exactly one [1..1] act (CONF:4388-29177). | |
| CONF #: 4388-29178 Removed | SHALL contain exactly one [1..1] @typeCode="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4388-29178). | |
| CONF #: 4388-29236 Removed | MAY contain zero or more [0..*] entry (CONF:4388-29236) such that it | |

| Change | Old | New |
|-----------------------------|--|--|
| CONF #: 4388-29237 Removed | SHALL contain exactly one [1..1] observation (CONF:4388-29237). | |
| CONF #: 4388-29238 Removed | MAY contain zero or one [0..1] @typeCode="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4388-29238). | |
| CONF #: 4388-29251 Removed | MAY contain zero or more [0..*] entry (CONF:4388-29251) such that it | |
| CONF #: 4388-29252 Removed | SHALL contain exactly one [1..1] @typeCode="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4388-29252). | |
| CONF #: 4388-29253 Removed | SHALL contain exactly one [1..1] observation (CONF:4388-29253). | |
| CONF #: 4444-28405 Modified | SHALL contain exactly one [1..1] @extension="2018-10-01" (CONF:4388-28405). | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-28405). |
| CONF #: 4444-28852 Modified | SHALL contain exactly one [1..1] @typeCode="DRIV" is derived from (CONF:4388-28852). | SHALL contain exactly one [1..1] @typeCode="DRIV" is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4444-28852). |

10.60Author (V2)

[Author \(V2\) \(urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01\)](#)

| Change | Old | New |
|----------------------------|--|--|
| Status | Published | Published |
| Name | Author | Author (V2) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2017-08-01 | urn:hl7ii:2.16.840.1.113883.10.20.24.3.155:2019-12-01 |
| CONF #: 4444-30005 Added | | SHALL contain exactly one [1..1] templateId (CONF:4444-30005) such that it |
| CONF #: 4444-30006 Added | | This assignedAuthor SHALL contain at least one [1..*] id (CONF:4444-30006). Note: nullFlavor is allowed for assignedAuthor/id |
| CONF #: 4444-30007 Added | | SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.24.3.155" (CONF:4444-30007). |
| CONF #: 4444-30008 Added | | SHALL contain exactly one [1..1] @extension="2019-12-01" (CONF:4444-30008). |
| CONF #: 4444-30009 Added | | SHALL contain exactly one [1..1] time (CONF:4444-30009). Note: QDM Attribute: Author dateTime |
| CONF #: 4444-30010 Added | | This time SHALL contain exactly one [1..1] @value (CONF:4444-30010). |
| CONF #: 3343-29147 Removed | This assignedAuthor SHALL contain at least one [1..*] id (CONF:3343-29147). Note: nullFlavor is allowed for assignedAuthor/id | |
| CONF #: 3343-29151 Removed | SHALL contain exactly one [1..1] templateId (CONF:3343-29151) such that it | |
| CONF #: 3343-29152 Removed | SHALL contain exactly one [1..1] time (CONF:3343-29152). Note: QDM Attribute: Author dateTime | |
| CONF #: 3343-29160 Removed | SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.24.3.155" (CONF:3343-29160). | |
| CONF #: 3343-29161 Removed | SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3343-29161). | |