Other Undefined Attributes in QDM December 2013

The following attributes may have implementations suggested in the QDM-based Implementation Guide but still do *not* have definitions in the QDM December 2013 spec:

1. Care Goal (related to)

The QDM-based HQMF IG implements "Care Goal" as an "ObservationCriteria", and "related to" as an optional "outboundRelationship" to an "ObservationCriteria" with code="REL".

The actual meaning and use of this attribute is unclear (in fact, some have noted that the use of Care Goal in general is unclear). This attribute does not appear to be used in any MU2 measures.

Recommendation
* Remove

2. Device, Applied (removal datetime)

The QDM-based HQMF IG implements "Device Applied" as a "ProcedureCriteria", and "removal datetime" as the optional "high" value of the optional "effectiveTime".

Recommendation
Define as: The date and time that the device was removed. The removal datetime is equivalent to Device, Applied's effective end time and may be removed in future versions of QDM. To indicate a timing relationship with removal datetime, always use a relationship that references the end time of Device, Applied (e.g. `"Device, Applied: Cardiac Pacer"` `ends before or during "Measurement Period"`).

3. Medication, Active/Administered/Adverse Effects/Allergy/Discharge/Dispensed/Order (refills)

The QDM-based HQMF IG implements "refills" in all these cases as an optional "repeatNumber".

Does "refills" really make sense in the context of *every* one of these datatypes? Epic suggests that it only makes sense on "Medication, Order".

Recommendation
* Short term: remove from Active, Administered, Adverse Effects, and Allergy
* Long term: if we restrict to Order only, then provide a better mechanism to relate

different datatypes to one another (for example, to allow one to reference the Order that is associated with a Dispensed).

4. Medication, Allergy (frequency)

Since we've already proposed the removal of "frequency" from "Medication, Intolerance", we should consider removing it from "Medication, Allergy" for the same reasons.

<u>Recommendation</u>
Remove

5. Patient Characteristic Expired (reason)

The QDM-based HQMF IG implements "reason" as an "outboundRelationship" with typeCode="RSON".

In other parts of the QDM, "reason" indicates a justification for doing (or not doing) something. That definition obviously does not apply here. If "reason" is intended to represent the cause of death, we may want to consider using a different attribute name to reduce ambiguity.

<u>Recommendation</u>
Remove "reason" and add new "cause" attribute, changing typeCode to "CAUS" in the QDM-based HQMF Implementation Guide.

6. Patient Characteristic Sex (reason)

The QDM-based HQMF IG implements "reason" as an "outboundRelationship" with typeCode="RSON".

In other parts of the QDM, "reason" indicates a justification for doing (or not doing) something. This does not seem to apply to "Patient Characteristic Sex".

<u>Recommendation</u>
Remove

7. Substance, Administered/Adverse Event/Allergy/Intolerance/Order/Recommended (refills)

The QDM-based HQMF IG implements "refills" in all these cases as an optional "repeatNumber".

Does "refills" really make sense in the context of *every* one of these datatypes? Epic suggests that it only makes sense on "Substance, Order".

<u>Recommendation</u>
- Short term: remove from Administered, Adverse Event, Allergy, and Intolerance
- Long term: if we restrict to Order only, then provide a better mechanism to relate different datatypes to one another (for example, to allow one to reference the Order that is associated with an Administered).

8. Substance, Intolerance (frequency, route)

Since we proposed the removal of "frequency" and "route" from "Substance, Allergy", we should consider removing it from "Substance, Intolerance" for the same reasons.

<u>Recommendation</u>
Remove

9. Negation Rationale

Negation rationale is associated to nearly every datatype, yet many datatypes define it as TBD. The following list represents all datatypes which define "negation rationale" as "TBD":
- Care Goal
- Device: Adverse Event, Allergy, Intolerance
- Diagnosis: Active, Family History, Inactive, Resolved
- Diagnostic Study: Adverse Event, Intolerance
- Encounter: Active
- Intervention: Adverse Event, Intolerance
- Laboratory Test: Adverse Event, Intolerance
- Medication: Adverse Effects, Allergy, Intolerance
- Patient Care Experience
- Procedure: Adverse Event, Intolerance, Order, Performed
- Provider Care Experience
- Provider Characteristic
- Substance: Adverse Event, Allergy, Intolerance
- Symptom: Active, Inactive, Resolved
- Transfer To
- Transfer From

Negation rationale usually indicates that something did not happen and the reason it did not happen. Using that as a guide, we could probably come up with definitions for "Procedure, Order" and "Procedure, Performed", and possibly "Transfer To" and "Transfer From. Definitions for the others, however, are pretty unclear.

This topic needs more discussion. For now, leave as-is with a general definition of negation rationale.

10. Patient Preference / Provider Preference

"Patient preference" and "provider preference" are on nearly every datatype, but almost *always* undefined. Their meaning is unclear and are not currently used in any MU2 measures.

Recommendation
Remove

11. Start datetime / stop datetime

The "start datetime" and "stop datetime" are undefined on most of the datatypes. Should we just use the IG's mappings to determine the meaning (i.e., effectiveTime vs authorTime, etc)?

There are also some datatypes for which "start datetime" and "stop datetime" might not make sense (e.g., Patient Characteristic Sex). Should we consider removing these?

Recommendation
This topic needs further discussion. For now, leave as-is with a general definition of start datetime and stop datetime.

12. Undefined Datatypes

There are also several undefined datatypes:
• Patient Characteristic
• Patient Characteristic Birth Date
• Patient Characteristic Expired
• Patient Characteristic Race
• Provider Characteristic

Recommendation
Provide definitions.