

S&I Data Provenance Initiative  
**Use Case Assumptions and Post Conditions**

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# Recommendations

- Following are a series of recommended additions to the current DRAFT set of DPROV Use Case Assumptions and Post Conditions.
  - Assumptions establish the baseline.
  - Post Conditions (in part) ensure Assumptions have been met (fulfilled) – at conclusion of each Scenario.

## S&I Data Provenance

# Use Case Assumptions (added)

Data provenance captures (embodies) the source of truth – the point of data/record origination.

Data provenance, if properly captured, retained, secured, managed and conveyed from the point of origination forward establishes a verifiable chain of trust to all downstream users and for all purposes to which health information may be applied.

Data and its corresponding provenance are captured PAIR-wise at the point of data/record origination.

Data/provenance PAIRs are indivisible and immutable from their point of origination and thereafter throughout their lifespan.

Data/provenance PAIRs are captured, retained and conveyed securely throughout their lifespan.

Data/provenance PAIRs may be bound to the digital signature(s) of author, attester and/or software/system/device of origin.

# Use Case Assumptions (added)

Data/provenance PAIRs encapsulate evidence of source, truth and context, including who, what, when, where and why.

When health data/record content is originated, vital facts are known and captured in the data/provenance PAIR, including:

- Who: data/record subject (e.g., patient), Action performer (e.g., practitioner), organization, software, system and device IDs
- What: Action taken
- When: Action date/time, entry date/time
- Where: Action physical location, network address of entry author/software
- Why: rationale for Action and/or entry rationale, as applicable

Source data/records may contain structured and/or unstructured content.

All patient-related health data/records are originated, retained, attested, accessed and conveyed for legitimate purposes, including treatment, payment and healthcare operations.

# Use Case Assumptions (added)

Data/records transformed from source to alternate (derivative) representation may no longer be fit for primary use (clinical care, interventions and decision making). This includes data/records transformed to/from standards-based exchange artifacts (e.g., CCDA).

## S&I Data Provenance

# Use Case Post Conditions (added)

At the conclusion of each DPROV Use Case Scenario:

Data/provenance PAIRs have been securely retained and conveyed throughout their lifespan and remain verifiably indivisible and immutable.

Data/provenance PAIRs have been successfully conveyed in standards-based exchange artifacts (e.g., HL7 CCDA).

Data/provenance PAIRs remain bound to the digital signature(s) of author, attester and/or software/system/device of origin, as applicable.

Data/provenance PAIRS remain fit for use and the purpose intended, i.e., fit for primary (clinical care, interventions and decision making) or secondary use.

All patient-related health data/records have been originated, retained, attested, accessed and conveyed for legitimate purposes, including treatment, payment and healthcare operations.