

## Section Lifecycle-1 – EHR Lifecycle Model – Events

### Section x: Events in the Act Record Lifecycle

To fulfill its purpose as documentation and persistent evidence of the Act, the Act Record must be retained without alteration. The seminal event in the lifecycle comes at the point where the Act Record is originated and retained (by the source System). Immediately or over the course of time, additional lifecycle events may occur. The following identifies key points/events in the Act Record lifecycle:

| ID  | Act Record Lifecycle Event                                     |
|-----|--|
| 1   | Originate Record   |
| 2.1 | Amend Record Content   |
| 2.2 | Translate Record Content                                       |
| 3.1 | Verify Record Content  |
| 3.2 | Ensure/Attest Record as Complete                               |
| 3.3 | Ensure/Attest Record as Accurate                               |
| 4   | Access/View Record Content                                     |
| 5.1 | Transmit and/or Disclose Record(s) – Original and Amendment(s) |
| 5.2 | Transmit and/or Disclose Record(s) – Most Recent Amendment     |
| 6.1 | Receive and Retain/Persist Record(s) – from external source    |
| 6.2 | Receive Record(s) – from external source – no persistence      |
| 7.1 | De-identify or Alias Record(s)                                 |
| 7.2 | Re-identify Record(s)  |
| 8   | Converge Record(s)   |
| 9   | Archive Record(s)  |
| 10  | Destroy or Identify Record(s) as Missing                       |
| 11  | Deprecate Record(s)  |

For any given Act Record instance, the first event (Originate and Retain/Persist Record) is the only one required. Other events are invoked when appropriate.

## Section y: EHR Lifecycle Event Initiators

Act Record lifecycle events may be initiated by an actor: user or medical device; or automatically by rules-based algorithm. The following offers examples of both initiators:

| Initiator (Actor) | By                   | Act example(s)  |
|-------------------|----------------------|---|
| User              | Command              | Patient registration, admit/check-in, assessment, order, observation, diagnostic test, therapy, care, procedure, authorization etc. |
| Medical Device    | Rule-based algorithm | Monitored parameters, test results, etc.  |
| System            | Rule-based algorithm | Notification, alert, reminder, report, etc.   |

## Section z: Description of EHR Lifecycle Events

EHR lifecycle events include the following. In each case below the “System” is the EHR or other healthcare system in which the event defined by the “When: clause is performed. The specific business rules and authorizations governing these lifecycle events are often prescribed by jurisdictional or local policies, and are beyond the scope of this Model.

- z.1 Event: Originate and Retain/Persist Record
  - When: Act Record is originated – typically during the course of the Act itself, to document the Act.
  - Act Record content is the responsibility of authorized Author(s).
  - The originating System is responsible for Act Record retention and persistence.
  - The System is responsible for initiating an audit/trace event showing Act Record origination.
- z.2.1 Event: Amend Record Content
  - When: Act Record content is modified (from its original or previous retained state) – typically after conclusion of the Act, to correct, update or complete content.
  - Amended Act Record content is the responsibility of authorized amending Author(s).
  - The amendment becomes part of the Act Record revision history, where the original content and any previous amendments are retained without alteration.
  - After amendment, the System is responsible for retention of the Act Record and its revision history.

- The System is responsible for initiating an audit/trace event showing Act Record amendment.
- z.2.2 Event: Translate Record Content
- When: Act Record content is amended to include translation of content – typically to transform coded data from one coding/classification scheme to another, also from one human language to another.
  - Translated (amended) Act Record content is the responsibility of the System – which invokes mapping/translation rules for each relevant record attribute.
  - The translation amendment becomes part of the Act Record revision history, where original content and any previous amendments are retained without alteration.
  - After translation amendment, the System is responsible for retention of the Act Record and its revision history (including the translation event).
  - The System is responsible for initiating an audit/trace event showing Act Record translation amendment.
- z.3.1 Event: Verify Record Content
- When: Act Record content is verified – typically after conclusion of the Act, to ensure content is sufficient and appropriate.
  - Verified Act Record content is the responsibility of authorized Reviewer(s). The Reviewer may be a supervisor, proctor, preceptor or other designated individual.
  - The System is responsible for initiating an audit/trace event showing Act Record verification.
- z.3.2 Event: Ensure/Attest Record as Complete
- When: Act Record content is attested complete – typically during/after conclusion of the Act.
  - Attested Act Record content is the responsibility of authorized Author(s).
  - The System is responsible for initiating an audit/trace event showing Act Record attested complete.
- z.3.3 Event: Ensure/Attest Record as Accurate
- When: Act Record content is attested accurate – typically during/after conclusion of the Act.
  - Attested Act Record content is the responsibility of authorized Author(s).
  - The System is responsible for initiating an audit/trace event showing Act Record attested accurate.
- z.4 Event: View/Access Record Content
- When: Act Record content is viewed or accessed.
  - Viewed Act Record content is the responsibility of authorized User(s).

- The System is responsible for initiating an audit/trace event showing Act Record viewed/accessed.
- z.5.1 Event: Transmit and/or Disclose Record(s) – Original and Amendment(s)
- When: Act Record(s) transmitted and/or disclosed – typically to an external entity or system.
  - Transmittal includes original Act Record(s) and corresponding amendment(s), if any.
  - Transmittal of Act Record(s) is the responsibility of the System – which invokes relevant rules.
  - The System is responsible for initiating an audit/trace event showing Act Record(s) transmitted/disclosed.
- z.5.2 Event: Transmit and/or Disclose Record – Most Recent Amendment
- When: Act Record(s) transmitted and/or disclosed – typically to an external entity or system.
  - Assumes original Act Record and any preceding amendments have already been transmitted.
  - Transmittal of Act Record(s) is the responsibility of the System – which invokes relevant rules.
  - The System is responsible for initiating an audit/trace event showing Act Record(s) transmitted/disclosed.
- z.6.1 Event: Receive and Retain/Persist Record(s)
- When: Act Record(s) received – typically from an external system.
  - Receipt of Act Record(s) is the responsibility of the System – which invokes relevant rules.
  - The System is responsible for initiating an audit/trace event showing Act Record(s) received and retained.
- z.6.2 Event: Receive Record(s) – from external source – no persistence
- When: Act Record(s) received – typically from an external system.
  - Receipt of Act Record(s) is the responsibility of the System – which invokes relevant rules.
  - The System may be responsible for initiating an audit/trace event showing Act Record(s) received.
- z.7.1 Event: De-identify or Alias Record(s)
- When: Act Record(s) de-identified or aliased.
  - Aliasing allows records to be later re-identified.
  - De-identification or aliasing of Act Record(s) may be initiated by User command.
  - De-identification or aliasing of Act Record(s) is the responsibility of the System – which invokes relevant rules.
  - The System is responsible for initiating an audit/trace event showing Act Record(s) de-identified or aliased.

- z.7.2 Event: Re-identify Record(s)
- When: Act Record(s) re-identified.
  - Re-identification of Act Record(s) is the responsibility of the System – which invokes relevant rules.
  - The System is responsible for initiating an audit/trace event showing Act Record(s) re-identified.
- z.8 Event: Converge Record(s)
- When: Act Record(s) converged through derivation, summarization or aggregation.
  - Convergence of Act Record(s) may be initiated by User command and/or rules-based algorithm.
  - Convergence of Act Record(s) is the responsibility of the System – which invokes relevant rules.
  - The System is responsible for initiating an audit/trace event showing Act Record(s) converged.
- z.9 Event: Archive Record(s)
- When: Act Record(s) archived – typically to off-line (less readily available) storage media.
  - Archival of Act Record(s) may be initiated by User command.
  - Archival of Act Record(s) is the responsibility of the System – which invokes relevant rules.
  - The System is responsible for initiating an audit/trace event showing Act Record(s) archived.
- z.10 Event: Destroy or Identify Record(s) as Missing
- When: Act Record(s) destroyed or identified as missing.
  - Destruction typically occurs after conclusion of the legal retention period.
  - Destruction of Act Record(s) may be initiated by User command.
  - Destruction of Act Record(s) is the responsibility of the System – which invokes relevant rules.
  - The System is responsible for initiating an audit/trace event showing Act Record(s) destroyed or identified as missing.
- z.11 Event: Deprecate Record(s)
- When: Act Record(s) are deprecated, if found to be improperly identified or otherwise invalid.
  - Deprecation of Act Record(s) may be initiated by User command.
  - Deprecation of Act Record(s) is the responsibility of the System – which invokes relevant rules.
  - The System is responsible for initiating an audit/trace event showing Act Record(s) deprecated.