



Public Health eCR Data Quality Subgroup

Tuesday, January 10, 2023

Data Quality Subgroup Agenda

2:00 PM ET, January 10, 2023

Updates

- **eICR Routing, Soft Go-Lives, and EHR Production Data**
- **Testing and Data Quality Schematron**
- **Feed Monitoring and Platform Dashboarding**

- **RCKMS Timeboxing – Initial Rollout Proposal**

eICR Routing, Soft Go-Lives, and EHR Production Data

- **Capability to route HCO soft-go-live data to PHA test environments**
 - For HCOs not yet, but soon going into, production
 - Based on AIMS platform infrastructure update
 - Delivery option at desire of PHA
 - Can still route test scenario data to PHA test environments
 - Can share soft-go-live analytics done by onboarding team centrally too
 - Close to availability – working on ensuring that HCOs can not “surprise” and start reporting without notice to PHAs
- **HCO already in production with PHA adding conditions**
 - Not suitable for soft-go-lives
 - Developing “feed splitters” for PHA implementation
 - Rhapsody route filter and Mirth channel to direct additional conditions by HCO and/or by condition to PHA test environment
 - Will make available to PHAs and also have a Direct Support focused “offering”

Testing and Data Quality Schematron

- Rachelle Boulton (UT), 31 PHA representatives (QA work group), and support from Tim Morris and Chuck Hagen (eCR team)
- Developing initial version of eCR validation and completeness metrics
- Will be implemented in “Data Quality Schematron”
 - Schematron will implement rules
 - Including eCR implementation guide
 - With a supporting database can accumulate completeness data
 - Data Quality Schematron will:
 - Be used for onboarding
 - Be available to PHAs
 - Be available with focused Direct Support implementation option

Feed Monitoring and Platform Dashboarding

- Recent volunteer “ask” to DQ Subgroup
- Ann Kayser (MN), Joel Hartsell (eCR team), AIMS and ~9 PHA representative volunteers
- Short duration work group
- AIMS Platform-based dashboarding and feed monitoring “requirements”
- Capabilities to be made available to all PHAs
- Will not do everything that PHA-based dashboarding will be able to do

RCKMS Timeboxing – Initial Rollout Proposal

What RCKMS Timeboxing is...

Timeboxing is an effort to reduce the number of eICR messages that are determined to be reportable to the PHAs based on Problem list entries that are not related to the current instance of disease.

This is accomplished by evaluating the duration interval between two key dates from the eICR message.

Timeboxing Definitions

Timeboxing = evaluation of the duration between Date A & Date B

- A = Start Date of Encompassing Encounter
- B = Effective Date/Time of the Problem Observation

Timebox Duration = the maximum acceptable interval between the two dates.

2022 RCKMS Timebox Pilot

- Four jurisdictions participated in the pilot: CA, MN, TN, WI
- A new COVID-19 RCKMS reporting specification (RS) was created that included the standard, un-timeboxed Diagnosis/Problem criterion, and a new timeboxed Dx/Problem criterion (timebox duration = 30 days).
 - Both criteria were set as “Sufficient” for reportability
- A new Rhapsody data collection script was installed on AIMS; all COVID-19 reportable eICRs for the participating jurisdictions were routed through this script.
 - From 8/7 - 9/5/22, a total of 55,651 eICRs were processed for analysis
- All timebox “filtering” was based on Problem List entries. Timeboxing would not be effective for Encounter Diagnoses as those with dates were within the duration constraint.
 - NULL values for the Encompassing Encounter, Encounter Diagnosis or the Problem Effective Dates matched the “standard” criterion but could not be evaluated against the date-based logic
- Summary finding is that the timebox constraint would have reduced the number of COVID-19 eICRs PHAs received by 7,198 documents **(12.93%)**

What RCKMS Timeboxing is not...

1. Timeboxing will not change the content of eICRs; historical data in problem lists will remain in the eICRs if they are “unresolved.”
2. Timeboxing will not eliminate “resolved” problems from eICRs (EHRs need to exclude them for them to be eliminated).
3. Timeboxing will only be applied to the criteria labeled “Condition Name (as a diagnosis or active problem),” for the primary condition. Timeboxing will not be applied to other problems, such as fever or cough.
4. Initially, timeboxing will not be available for all conditions in RCKMS.

RCKMS Timeboxing – Initial Rollout

Default Behavior

When timeboxing support is added to a specific condition in RCKMS:

1. Timeboxing will be ***disabled*** by default.
2. With timeboxing disabled, RCKMS reportability determinations will be consistent with those determinations generated by the previous version of the condition.

RCKMS Timeboxing – Initial Rollout

Enabling Timeboxing

1. Jurisdiction Administrators will have the ability to enable/disable timeboxing in the tool for each condition that supports it.
2. ***Initial conditions that will support timeboxing may include:***
 - COVID-19
 - Hepatitis B Virus Infection
 - Hepatitis C Virus Infection
 - HIV Infection or AIDS
 - Tuberculosis

RCKMS Timeboxing – Initial Rollout

Application of Timeboxing

Timeboxing will apply to the criteria labeled “Condition Name (as a diagnosis or active problem),” for the primary condition. Timeboxing will not be applied to other problems, such as fever or cough.

Acute onset of at least two or more of the following clinical findings: fever, chills, rigors, myalgia, headache, sore throat, nausea, vomiting, diarrhea, fatigue, congestion, or runny nose		Optional	Optional		
Acute respiratory distress syndrome (ARDS)		Optional	Optional		
Clinical or radiographic evidence of pneumonia (radiographic evidence not implemented: imaging findings and interpretations are text and not coded)		Optional	Optional		
COVID-19 (as a diagnosis or active problem)				Sufficient	
Post-acute or Chronic COVID-19 syndrome (as a diagnosis or active problem)					

RCKMS Timeboxing – Initial Rollout

Timebox Duration

Each condition that supports timeboxing will have a ***fixed Timebox Duration***.

- Different conditions may have different timebox durations (for example, Condition A = 3 weeks; Condition B = 3 months).
- Once enabled, the Timebox Duration will display on the Specifications tab in the authoring tool.
- Labels for timeboxed criteria in the RCKMS Authoring Interface will indicate which criteria are timeboxed and the timebox duration.
- Labels for timeboxed criteria in the Reportability Response will indicate which criteria are timeboxed and the timebox duration.

Timebox Criteria - Timeboxing NOT Enabled

Edit Reporting Specification

[Details](#) [Criteria / Logic Sets](#) [Specifications](#) [Internal References](#) [External References](#)

Reporting Specifications ☐ Show Inactive Criteria

☐ Enable Timebox of 3 weeks

	Lab Reporting (Lab Reporting)	Provider/Facility Reporting (DX)	Provider/Facility Reporting (LAB)
Reporting Time Frame	0 immediate	0 immediate	0 immediate
Clinical			
COVID-19 (as a diagnosis or active problem)		Sufficient	
Post-acute or Chronic COVID-19 syndrome (as a diagnosis or active problem)			
Laboratory			
Detection of SARS-CoV-2 antigen in a clinical or post-mortem by any method	Sufficient		Sufficient
Detection of SARS-CoV-2 genomic sequence by any method	Sufficient		Sufficient
Detection of SARS-CoV-2 nucleic acid in a clinical or post-mortem specimen by any method	Sufficient		Sufficient
Detection of SARS-CoV-2 organism or substance in a clinical specimen			
Encounter			
Hospitalized during encounter			

Timebox Criteria - Timeboxing Enabled

Edit Reporting Specification

[Details](#) [Criteria / Logic Sets](#) [Specifications](#) [Internal References](#) [External References](#)

Reporting Specifications ☐ Show Inactive Criteria

☒ Enable Timebox for 3 weeks

	Lab Reporting (Lab Reporting)	Provider/Facility Reporting (DX)
Reporting Time Frame	0 immediate ▾	0 immediate ▾
Clinical		
COVID-19 (as a diagnosis or active problem) - Timeboxed to 3 weeks	▾	▾
Post-acute or Chronic COVID-19 syndrome (as a diagnosis or active problem)	▾	▾
Laboratory		
Detection of SARS-CoV-2 antigen in a clinical or post-mortem by any method	Sufficient ▾	▾
Detection of SARS-CoV-2 genomic sequence by any method	Sufficient ▾	▾
Detection of SARS-CoV-2 nucleic acid in a clinical or post-mortem specimen by any method	Sufficient ▾	▾
Detection of SARS-CoV-2 organism or substance in a clinical specimen	▾	▾
Encounter		
Hospitalized during encounter	▾	▾

RCKMS Timeboxing – Initial Rollout

Timebox Calculation

- The timebox is the difference between *Encompassing Encounter Start Date* and *Problem Observation EffectiveDateTime* in the eICR message.
 - If this difference exceeds the condition's Timebox Duration value, RCKMS will return “No Rule Met” for the timeboxed criterion (Active Problem).
- If *Problem Observation EffectiveDateTime* is not present in the eICR, the timebox calculation will not be performed. The criteria will be processed as “Condition (as a diagnosis or active problem),” as though no timebox duration is set.

RCKMS Timeboxing – Initial Rollout

Deployment Plans

1. Timeboxing software modifications will be released as part of an RCKMS deployment.
2. Reporting Specifications for the initial timebox-supported conditions will be made available in the RCKMS Authoring Interface via an off-schedule Content Release.
3. RCKMS Admins will import the initial set of updated Reporting Specifications on behalf of PHAs and author to match existing published Reporting Specifications.
4. PHAs will decide whether/when to publish new timebox-enabled Reporting Specifications for their jurisdictions.

RCKMS Timeboxing - Next Steps

- Collect PHA feedback regarding timebox durations for proposed conditions
 - Confluence and eCR/RCKMS Basecamp
 - Comment period through Friday, January 27
- RCKMS Development Team will perform extensive testing of the timebox feature prior to release
 - If no Timebox Duration set or Problem EffectiveDateTime not present in eICR - results should be consistent with pre-timebox results
 - Timebox Duration set – reportability determination based on whether eICR's Problem EffectiveDateTime falls within the timebox
- Questions?