



# Timeboxing Office Hours

RCKMS Educational Session

June 8, 2023

# Agenda

- Review timeboxing definitions
- In-tool Demonstration of timeboxing feature
- Timeline for the initial rollout of timeboxing
- Questions

# What is Timeboxing?

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# What RCKMS Timeboxing is...

- Timeboxing is an effort to reduce the number of eICR messages that are determined to be reportable to PHAs based on Encounter Diagnoses or Problem list entries that may not be related to the current instance of disease.
- This is accomplished by including date-based logic in RCKMS rules to assess the interval between two key dates from the eICR message.

# Timeboxing Definitions

Timeboxing = Evaluation of the duration between Date A and Date B\*\*

- Date A = eICR Document Date
- Date B = EffectiveDateTime/Low of the current encounter (for Encounter Diagnosis) or of the Problem Concern Act Observation (for Active Problems)\*\*

Timebox Duration = the maximum acceptable interval between the two dates, as defined by the PHA

Timebox Calculation:  $\text{Date B} \geq (\text{Date A} - \text{Timebox Duration})$

*\*\*If the value for Date B (the EffectiveDateTime/Low) is NULL, the timebox calculation will not be performed. The criteria will be processed as though no timebox is set.*

# What RCKMS Timeboxing is not...

- *Timeboxing will not change the content of eICRs; historical data in problem lists will remain in the eICRs if they are “unresolved.”*
- Timeboxing will not eliminate “resolved” problems being present in the eICR. EHR vendors are being asked not to trigger off of, or load, “resolved” problems; however, the vendor must exclude the “resolved” problems for them to be removed entirely from the eICR.
- For the initial rollout, timeboxing will not be applied to any other types of criteria (laboratory results, medication, pregnancy, hospitalization) aside from the “Condition (as a diagnosis or active problem).”

How do you implement  
Timeboxing in RCKMS?

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# The timebox duration is considered in the reportability determination, when the following is true:

- The condition is eligible for timeboxing
- ✓ Timeboxing is enabled and a duration is set
- ✓ The timeboxed criterion is active and has an S, N, O designation
- ✓ The logic set that includes the timeboxed criterion is implementable (i.e., none of the criteria included in the logic set are marked as “Not Yet Implementable”)



The timebox duration is NOT considered in the reportability determination, when the following is true:

The latest version (which includes timeboxing) of the 5 conditions is NOT published to production

- ✓ Timeboxing is NOT enabled
- ✓ No timebox duration is set
- ✓ The EffectiveDateTime/Low of the current encounter (for Encounter Diagnosis) or of the Problem Concern Act Observation (for Active Problems) is NULL

# RCKMS Timeboxing – Initial Rollout

## ***Initial conditions that will support timeboxing\*:***

- COVID-19
- Gonorrhea
- Hepatitis C Virus Infection
- Mpox
- Syphilis

***\*Timeboxing rules are ONLY available on the latest versions of each condition***

Jurisdiction Administrators may enable/disable timeboxing in the tool for each condition that supports timeboxing

# Demonstration

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# eICR Test Cases for Timeboxing

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# Test Case Manager Limitations (Initial Release)

1. Only eICR test cases are supported for timeboxing at this time  
(Document Date is not yet available as a criteria test case input)
2. In the label for the 'Actual Criteria Met' in the Test Case Manager, the timebox duration is not reflected like it is elsewhere in the tool:

COVID-19 (as a diagnosis or active problem) [~~Timeboxed to 30 Days~~]

Expected Criteria Met

Actual Criteria Met COVID-19 (as a diagnosis or active problem)

# eICR Test Cases for Initial Timeboxing Release

## COVID-19 Default eICR Timebox Test Cases

1. Diagnosis Date 1 year before eICR Document Date
2. Diagnosis Date 3 weeks before eICR Document Date
3. Diagnosis Date 7 days before eICR Document Date
4. Diagnosis Date 7 days before eICR Document Date plus Active Problem 1 year before Document Date

# eICR Test Cases for Initial Timeboxing Release

## Gonorrhea Default eICR Timebox Test Cases

1. Active Problem Date 1 year before eICR Document Date
2. Diagnosis Date 7 days before eICR Document Date

## Hepatitis C Default eICR Timebox Test Cases

1. Active Problem Date 3 years before eICR Document Date
2. Diagnosis Date 6 months before eICR Document Date

# eICR Test Cases for Initial Timeboxing Release

## Mpox Default eICR Timebox Test Cases

1. Active Problem Date 1 year before eICR Document Date
2. Diagnosis Date 7 days before eICR Document Date
3. Suspected Diagnosis Date 7 days before eICR Document Date

## Syphilis Default eICR Timebox Test Cases

1. Diagnosis Date 1 year before eICR Document Date
2. Diagnosis Date 3 weeks before eICR Document Date



# Timebox Test Case Configuration

## Edit Test Case

Details

Test Subject

Test Inputs

### Reporting Specification

COVID-19 Timebox Test - 13.0 Release 20230203

#### Name

COVID-19 eICR Timebox Test Case - Diagnosis Date 1 year before eICR Document Date

#### Description

COVID-19 eICR Test Case for Testing Timeboxing  
Document Date: 20230501  
COVID Dx Date: 20220501

#### Condition Expected to be Reportable

Yes  May be reportable  No

#### Reporter Type

Provider/Facility Reporting

# Timebox Test Case Configuration

Set 'Condition Expected to be Reportable' to Yes or No based on how the difference between Diagnosis/Active Problem Date and Document Date in the test eICR compares to your configured rules:

## Reporting Specification:

COVID-19 (as a diagnosis or active problem) [Timeboxed to 2 months] **Clinical** Sufficient

## Test Case (Dx Date 1 year before eICR Document Date):

Condition Expected to be Reportable  Yes  May be reportable  No

# Test Case Results - Passed - Timebox Not Met

Test Results for [COVID-19 eICR Timebox Test Case - Diagnosis Date 1 year before eICR Document Date](#)

Summary	
<b>Reporter Type</b>	Provider/Facility Reporting
<b>Test Result</b>	Passed
<b>Expected Reportable</b>	No
<b>Actual Reportable</b>	No
<b>Expected Reportable Condition</b>	COVID-19 Timebox Test
<b>Actual Reportable Condition</b>	None
<b>Expected Criteria Met</b>	
<b>Actual Criteria Met</b>	

# Timebox Test Case Configuration

Set 'Condition Expected to be Reportable' to Yes or No based on how the difference between Diagnosis/Active Problem Date and Document Date in the test eICR compares to your configured rules:

Reporting Specification:

**Clinical**  
COVID-19 (as a diagnosis or active problem) [Timeboxed to 2 months] Sufficient

Test Case (Dx Date 7 days before eICR Document Date):

Condition Expected to be Reportable  Yes  May be reportable  No

# Test Case Results - Passed - Timebox Met

Test Results for [COVID-19 eICR Timebox Test Case - Diagnosis Date 7 days before eICR Document Date](#)

Summary	
<b>Reporter Type</b>	Provider/Facility Reporting
<b>Test Result</b>	Passed
<b>Expected Reportable</b>	Yes
<b>Actual Reportable</b>	Yes
<b>Expected Reportable Condition</b>	COVID-19 Timebox Test
<b>Actual Reportable Condition</b>	COVID-19 Timebox Test
<b>Expected Criteria Met</b>	
<b>Actual Criteria Met</b>	COVID-19 (as a diagnosis or active problem)

# Test Case Results - Test Case Failed

Test Results for [COVID-19 eICR Timebox Test Case - Diagnosis Date 1 year before eICR Document Date](#)

Summary	
<b>Reporter Type</b>	Provider/Facility Reporting
<b>Test Result</b>	Failed
<b>Expected Reportable</b>	Yes
<b>Actual Reportable</b>	No
<b>Expected Reportable Condition</b>	COVID-19 Timebox Test
<b>Actual Reportable Condition</b>	None
<b>Expected Criteria Met</b>	
<b>Actual Criteria Met</b>	

# Editing Test Case eICRs

Follow instructions in the Description section of the Test Case Details tab:

To change the Document Date and Diagnosis Date from the defaults:

1. Download the eICR file from the Test Inputs tab
2. Open the eICR file in an XML editor
3. Search for the text 'TIMEBOX DATE' (there are multiple instances)
4. Follow the instructions in the comments to change the date values
5. Save the updated eICR file
6. On the Test Inputs tab, click 'Choose File'
7. Select the updated eICR file
8. Click 'Apply' to save the changes
9. On the Details tab, set 'Condition Expected to be Reportable'
10. Click 'Apply' to save changes
11. Run the updated Test Case

# Editing Test Case eICRs

## Change Document Date:

```
<!--
*****
TIMEBOX DATE 1 - Document effectiveTime

The date the Dx/Active Problem Date will be compared to

Edit effectiveTime value below to desired "YYYYMMDD" value
*****
-->
<effectiveTime value="20230501"/>
```

## Change Diagnosis Date:

```
<!--
*****
TIMEBOX DATE 2 - COVID-19 Encounter Diagnosis Date

Edit <effectiveTime> low value below to desired "YYYYMMDD" value
*****
-->
<effectiveTime>
  <low value="20220501"/>
</effectiveTime>
```



# Timeboxing and Test Cases are complicated!

- If you need assistance modifying or running eICR Test Cases for timeboxing, reach out to your ASA or submit a ticket via [www.rckms.org](http://www.rckms.org).

# Timebox Information in the Reportability Response

```
<structuredBody>
  <component>
    <section>
      <entry typeCode="DRIV">
        <organizer classCode="CLUSTER" moodCode="EVN">
          <code code="RR11" codeSystem="2.16.840.1.114222.4.5.232" codeSystemName="PHIN Questions" displayName="Reportability Response Coded Information"/>
          <component>
            <observation classCode="OBS" moodCode="EVN">
              <templateId extension="2017-04-01" root="2.16.840.1.113883.10.20.15.2.3.12"/>
              <id root="2244a8e6-c959-4d0b-925f-f77c8487290b"/>
              <value code="840539006" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT" displayName="Disease caused by severe acute respiratory syndrome coronavirus 2"/>
              <entryRelationship typeCode="COMP">
                <organizer classCode="CLUSTER" moodCode="EVN">
                  <code code="RRVS5" codeSystem="2.16.840.1.114222.4.5.274" codeSystemName="Location Relevance" displayName="Patient home address"/>
                  <component typeCode="COMP">
                    <observation classCode="OBS" moodCode="EVN">
                      <templateId extension="2017-04-01" root="2.16.840.1.113883.10.20.15.2.3.19"/>
                      <id root="bdedeale-e750-4557-918e-21420185eab3"/>
                      <code code="RR1" codeSystem="2.16.840.1.114222.4.5.232" codeSystemName="PHIN Questions" displayName="Determination of reportability"/>
                      <value code="RRVS1" codeSystem="2.16.840.1.114222.4.5.274" codeSystemName="PHIN VS (CDC Local Coding System)" displayName="Reportable" xsi:type="CD"/>
                      <entryRelationship typeCode="RSON">
                        <observation classCode="OBS" moodCode="EVN">
                          <templateId extension="2017-04-01" root="2.16.840.1.113883.10.20.15.2.3.27"/>
                          <id root="e25387c2-7a9e-484f-8baf-2cb279e3ff9b"/>
                          <code code="RR3" codeSystem="2.16.840.1.114222.4.5.232" codeSystemName="PHIN Questions" displayName="Determination of reportability rule"/>
                          <value xsi:type="ST">COVID-19 (as a diagnosis or active problem)</value>
                        </observation>
                      </entryRelationship>
                    </observation>
                  </component>
                </organizer>
              </entryRelationship>
            </observation>
          </component>
        </organizer>
      </entry>
    </section>
  </component>
</structuredBody>
```



COVID-19 (as a diagnosis or active problem) [Timeboxed to 30 Days]

# Initial Rollout of Timeboxing

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# RCKMS Timeboxing – Initial Rollout

## ***Initial conditions that will support timeboxing\*:***

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- Gonorrhea
- Hepatitis C Virus Infection
- Mpox
- Syphilis

***\*Timeboxing rules are ONLY available on the latest versions of each condition***

Jurisdiction Administrators may enable/disable timeboxing in the tool for each condition that supports timeboxing

# RCKMS Timeboxing – Initial Rollout

## Deployment Plans

1. Timeboxing software modifications were released as part of the May 17, 2023 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 on **June 19, 2023**.
3. RCKMS Administrators will import the initial set of updated Reporting Specifications on behalf of PHAs and ongoing authoring support will be available.
4. PHAs will decide whether/when to publish new timebox-enabled Reporting Specifications for their jurisdictions.

# RCKMS Timeboxing – Re-authoring

RCKMS Administrators will complete the following re-authoring on behalf of the PHAs:

- Import the new timeboxed version of the RS
- Re-author any updates to the details tab to match the prior version
- Re-create any user added logic sets to match the prior version
- Update the reporting timeframes to match the prior version
- Update the S, N, O designations to match the prior version
- Re-author internal and external references to match the prior version

The RCKMS Admins will NOT publish the new versions.

# RCKMS Timeboxing – Re-authoring

RCKMS Administrators will import & re-author on behalf of the jurisdictions *if the jurisdiction has the following version of the condition or later published to production*

- COVID-19 – version 12.0
- Gonorrhoea – version 4.0
- Hepatitis C Virus Infection – version 4.0
- Mpox (Monkey pox) – version 4.0
- Syphilis – version 2.1

***\*Timeboxing rules are ONLY available on the latest versions of each condition***

If you need assistance adopting the latest version of any of these conditions, please reach out to your ASA or submit a ticket via [www.rckms.org](http://www.rckms.org).

# RCKMS Timeboxing- Initial Rollout Timeline

- **June 15<sup>th</sup> – 19<sup>th</sup>:** RCKMS Administrators will complete the import & re-authoring on behalf of the PHAs with the minimum required versions from 8am ET on 6/15 to 8am ET on 6/19. *Jurisdiction users are asked to refrain from making any changes to their rules in the authoring interface during this time.*
- **June 19<sup>th</sup> :** New versions of Reporting Specifications for the initial timebox-supported conditions become available in the RCKMS Authoring Interface
  - eICR test cases will be included to test timeboxed criteria (criteria test cases for testing the timebox function is not supported with the initial release)
  - Supporting materials available at [www.rckms.org](http://www.rckms.org)
- **Summer 2023:** Ongoing analysis of utility and functionality of initial rollout
- **Fall/ Winter 2023:**
  - Planning the extension of timeboxing for new and existing conditions going forward
  - Analysis of application of timeboxing to other types of RCKMS criteria (e.g., hospitalization, labs, etc.)





Questions?

# Next Steps...

- If you need assistance adopting the latest version of any of the conditions that will be part of the Timebox release, please reach out to your ASA or submit a ticket via [www.rckms.org](http://www.rckms.org).