2024

# Sevocity, Real World Testing Plan

SEV-RWTP-24.01

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## General Information

**Plan Report ID Number:** SEV-RWTP-24.01

**Developer Name:** Conceptual MindWorks, Inc.

| Product Name | Certified Health IT Product List (CHPL) ID | Real World Testing Page URL |
|---|---|---|
| **Sevocity** | 15.04.04.2324.Sevo.13.01.1.221230 | https://www.sevocity.com/resources/onc-certifications-rwt/ |

**Version Number(s):** All Products listed above are version 13.0

## Overview

As a condition and maintenance of certification under the Cures Act, Office of the National Coordinator (ONC) is requiring that Health IT vendors plan for and conduct real world testing with a focus on interoperability and data exchange. This test plan defines what will be tested, how it will be tested, and provides justification for the test approach and reasoning behind the selection of care settings, measures, and metrics. The purpose of Real World Testing (RWT) is to demonstrate continued compliance to the certification criteria, to demonstrate that it is being used to exchange electronic health information (EHI) in the intended care and practice settings, and that EHI is being received and used in the product.

## Justification for Real World Testing Approach

To implement real world testing as a condition and maintenance of certification under the Cures Act, testing will focus on the use of Sevocity for interoperability and data exchange in a real-world clinical setting.

### Applicable Real World Testing Certification Criteria and Relied Upon Software, if applicable

Sevocity's 2024 Real World Testing plan will be limited to the following applicable criteria. Relied Upon Software is noted, if applicable to the Critera

| Certification Criteria | Relied Upon Software, if applicable |
|---|---|
| **170.315(b)(1) Transitions of care (Cures Update)** | **DrFirst – Rcopia, SES Direct** |
| **170.315(b)(2) Clinical Information Reconciliation and Incorporation (Cures Update)** | **DrFirst - Rcopia** |
| **170.315(b)(6) Data export** | |
| **170.315(b)(10) Electronic health information export** | |
| **170.315(c)(1) Clinical quality measures (CQMs) – record and export** | |
| **170.315(c)(2) Clinical quality measures (CQMs) – import and calculate** | |
| **170.315(c)(3) Clinical quality measures (CQMs) – Report (Cures Update)** | |
| **170.315(e)(1) View, download, and transmit to 3rd party (Cures Update)** | **SES Direct, SMTP2GO, DrFirst - Rcopia** |
| **170.315(f)(1) Transmission to immunization registries** | |
| **170.315(f)(2) Transmission to public health agencies – syndromic surveillance** | |
| **170.315(g)(7) Application access – patient selection** | **Google Authenticator** |

| | |
|---|---|
| **170.315(g)(9) Application access – all data request (Cures Update)** | **Google Authenticator** |
| **170.315(g)(10) Standardized API for patient and population services (Cures Update)** | |

170.315(b)(6) “Data export” is included in the criteria above as it is a certified and available service at the time of this writing, however it will be discontinued prior to 2024.

170.315(b)(10) “Electronic health information export” is included in the criteria, though it is not yet available at the time of this writing, it will be a certified offering by Sevocity prior to 2024.

To accomplish real world testing, we chose to focus on our four main clinical settings of care, which include Family Practice, Specialist/Surgical, Geriatrics, and Obstetrics & Gynecology. The test plan will be based on analysis of user activity from representative subset of Sevocity EHR users. The Traceability Matrix section at the end of this document provides an overview of the use cases applicable to each of the clinical settings of care.

## Standards Updates

The standard updates below are reflected in this 2024 Real World Testing plan.

| Standard | Certification Criteria Affected |
|---|---|
| | |
| **CMS Implementation Guide for Quality Reporting Document Architecture: Category III; Eligible Clinicians and Eligible Professionals Programs; Implementation Guide for 2020** | **170.315(c)(3)(Cures Update)** |
| **Applicability Statement for Secure Health Transport, Version 1.2, August 2015 (Direct)** | **170.315(b)(1)(Cures Update)** |
| **FHIR® US Core Implementation Guide STU V3.1.1, August , 2020** | **170.315(g)(10)(Cures Update)** |
| **HL7® Implementation Guide for CDA® Release 2: IHE Health Story Consolidation, DSTU Release 1.1 (US Realm) Draft Standard for Trial Use July 2012** | **170.315(b)(1)(Cures Update), 170.315(b)(2)(Cures Update)** |
| **HL7® Implementation Guide (IG) for CDA Release 2 Consolidation CDA Templates for Clinical Notes (US Realm), Draft Standard for Trial Use Release 2.1 C-CDA 2.1, August 2015, June 2019 (with Errata)** | **170.315(b)(1)(Cures Update), 170.315(b)(2)(Cures Update), 170.315(e)(1)(Cures Update), 170.315(g)(9)(Cures Update)** |
| **HL7® CDA R2 IG: C-CDA Templates for Clinical Notes R2.1 Companion Guide, Release 2, October 2019, IBR approved for §170.205(a)(5)** | **170.315(b)(1)(Cures Update), 170.315(b)(2)(Cures Update), 170.315(e)(1)(Cures Update), 170.315(g)(9)(Cures Update)** |
| **HL7® Version 4.0.1 FHIR® Release 4, October 30, 2019** | **170.315(g)(10)(Cures Update)** |
| **HL7® SMART Application Launch Framework Implementation Guide Release 1.0.0, November 13, 2018** | **170.315(g)(10)(Cures Update)** |
| **HL7® FHIR® Bulk Data Access (Flat FHIR®) (V1.0.1:STU 1)** | **170.315(g)(10)(Cures Update)** |
| **IHE IT Infrastructure Technical Framework Volume 2b (ITI TF-2b), Transactions Part B - Sections 3.29 - 2.43, Revision 7.0, August 10, 2010** | **170.315(b)(1)(Cures Update)** |
| **ONC Implementation Guide for Direct Edge Protocols, Version 1.1, June 25, 2014** | **170.315 (b)(1)(Cures Update)** |
| **OpenID Connect Core 1.0 incorporating errata set , November 8, 2014, IBR approved for § 170.215(b)** | **170.315(g)(10)(Cures Update)** |

| Standard | Certification Criteria Affected |
|---|---|
| United States Core Data for Interoperability (USCDI), Version 1 | 170.315(b)(1)(Cures Update), 170.315(b)(2)(Cures Update), 170.315(e)(1)(Cures Update), 170.315(g)(9)(Cures Update), 170.315(g)(10)(Cures Update) |
| Web Content Accessibility Guidelines (WCAG) 2.0, Level A Conformance, December 11, 2008 | 170.315(e)(1)(Cures Update) |
| HL7® CDA® Release 2 Implementation Guide for: Quality Reporting Document Architecture – Category I (QRDA I); Release 1, DSTU Release 3 (US Realm) June 2015 | 170.315(c)(1), 170.315(c)(2) |
| HL7 2.5.1 Implementation Guide for Immunization Messaging, Release 1.5, October 1, 2014 | 170.315(f)(1) |
| HL7® Version 2.5.1 Implementation Guide for Immunization Messaging (Release 1.5)—Addendum, July 2015 | 170.315(f)(1) |
| PHIN Messaging Guide for Syndromic Surveillance: Emergency Department, Urgent, Care, Inpatient and Ambulatory Care, and Inpatient Settings, Release 2.0, April 21, 2015 | 170.315(f)(2) |
| Erratum to the CDC PHIN 2.0 Implementation Guide, August 2015; Erratum to the CDC PHIN 2.0 Messaging Guide, April 2015 Release for Syndromic Surveillance: Emergency Department, Urgent Care, Inpatient and Ambulatory Care Settings | 170.315(f)(2) |

## Care Settings

The four clinical settings of care that will be represented in real world testing are: Family Practice, Specialist/Surgical, Geriatrics, and Obstetrics & Gynecology. An analysis of all current customers was conducted to determine the clinical settings of care to be tested. The largest clinical setting categories represented by our customers are Family Practice, followed by Specialist/Surgical and Obstetrics & Gynecology. Geriatrics, while representing less than 2% of the customer base, is a focus of current and future marketing efforts and represents a predicted growth in market share.

| Category | % of Customers |
|---|---|
| Family Practice | 59.42% |
| Geriatrics | 1.75% |
| Obstetrics & Gynecology | 7.96% |
| Specialist/Surgical | 14.17% |

## Overall Expected Outcomes

Real World Testing will demonstrate that the Certified Electronic Health Record Technology (CEHRT) remains compliant with the applicable 2015 edition certification and Cures Act updates (for details, refer to the Applicable Real World Testing Criteria section earlier in this document). It will also demonstrate that the available interoperability services are successfully being used in real world scenarios to exchange data between providers. The metrics and measures detailed in this plan will be collected and analyzed after an evaluation period of a predetermined duration; the evaluation period of each measure may differ. It is expected that the gathered metrics will provide evidence that users of our product are consistently and meaningfully engaging in the interoperability services provided within our product. The gathered metrics will also indicate overall success rates; failures will include errors that emit from the

production environment, as opposed to those originating from the user's environment unrelated to the production environment. It is expected that the success rate will indicate high reliability and consistency of the tested measures, and that any failure rate is statistically low and not indicative of a quality or systemic issue.

## Schedule of Key Milestones

| Key Milestone | Timeframe |
|---|---|
| **Submit 2024 RWT Plan to ONC-ACB for completeness review** | NLT November 1, 2024 |
| **ONC-ACB publishes 2024 RWT Plan to CHPL** | NLT December 15, 2024 |
| **Revision of scripts/tools to gather 2024 metrics** | 2024, Q1 |
| **Identification of the RWT environment (production when practical, or production-like settings otherwise) for 2024 RWT evaluation** | 2024, Q1 |
| **2024 RWT production usage period** | 2024, Q2<br><br>Except for 170.315(c)(1)(2), 170.315(c)(Cures Update): 2024, Q1 |
| **Gather and analyze 2024 RWT production usage data** | 2024, Q3 – Q4 |
| **Submit 2024 RWT Results Report to ONC-ACB for review** | 2025, Q1 |
| **ONC-ACB publishes 2024 RWT Results in CHPL** | NLT March 15, 2025 |

## 170.315(b)(1)(Cures Update) Transitions of care

### Measures Used in Approach

The following sections outline the measures that will be used to demonstrate conformance to 170.315(b)(1)(Cures Update) Transitions of care certification criterion. RWT observations will focus on a representative user subset sending referrals and clinical summaries via direct messaging (Relied Upon Software – SES Direct) and verifying the successfulness of the message. Third party software is utilized for sending direct messages (Relied Upon Software – SES Direct). Relied Upon Software – DrFirst – Rcopia is used in the data creation for clinical summaries and referrals for medications and allergies in the CCDs used in (b)(1).

### Conformance to Transitions of care (170.315(b)(1)(Cures Update)) (create)

### Use Case 1 (Create patient data)

This measure will test conformance to 170.315(b)(1)(Cures Update) Transitions of care by tracking the number of times a CCD was created and tracking any errors logged in the process.

#### Description of Measurement/Metric(s)

The following measures will be taken during this test: Number of CCD files exported, and number of errors logged. These measures will then be used to calculate the successful completion rate of CCD creation.

| | Metric | Key User Action |
|---|---|---|
| **1** | Number of times a CCD was exported | chart tools > export > c-cda export |

| | | |
|---|---|---|
| **2** | Number of errors logged during a CCD export | |

| | Metric | Key User Action |
|---|---|---|
| **3** | Error-free Rate of CCD Exports | |

### Associated Certification Criteria

| Certification Criteria | Requirement |
|---|---|
| **170.315(b)(1) (Cures Update) Transitions of care** | (iii)(A) – Create |

### Justification

Tracking the number of Continuity of Care Document (CCD) file exports attempted and their successful creations will document the real-world practicality for our customers to create CCD files that can be shared between providers. These statistics will help us evaluate our customers' awareness and engagement of this service. This measure is applicable to all care settings.

### Expected Outcomes

It is expected that customers are actively participating in interoperability within their real-world clinical workflow. It is also expected that the observed metrics will confirm that attempts to perform this measure are error-free, and errors – if any – are indicative of only non-systemic issues.

## Conformance to Transitions of care (170.315(b)(1)(Cures Update)) (send)

## Use Case 2 (Send patient data via direct)

This measure will test conformance to 170.315(b)(1)(Cures Update) Transitions of care by tracking the number of Direct messages (Relied Upon Software – SES Direct) sent in the form of referrals and clinical summaries. The error-free rate of those messages will also be evaluated. Relied Upon Software – DrFirst – Rcopia is used in the data creation for clinical summaries and referrals for medications and allergies in the CCDs used in (b)(1).

### Description of Measurement/Metric(s)

The following measures will be taken during this test: Number of referrals and clinical summaries sent through Direct Messaging (known as Provider-Patient Data Exchange (PPDX) in the EHR), number of direct messages that were successfully transmitted, and number of direct messages that were returned as undeliverable due to the fault of the sending system or undeterminable causes. Messages returned as undeliverable due to an invalid recipient address, fault of the receiving system, or user induced error, will not be included in the metrics for the purpose of RWT evaluation, as the ability to alert the sender of these external failures are an important part of a usable Direct Messaging system. These measures will then be used to calculate the error-free rate of data transmission.

| | Metric | Key User Action |
|---|---|---|
| **1** | Number of Clinical Summaries Transmitted | chart tools > send clinical summary |
| **2** | Number of Returned Undeliverable Clinical Summary Transmissions | |
| **3** | Number of Referrals Transmitted | Either of the actions below is applicable. It is not required that the sender perform each. |
| | | (a) Chart > referrals |
| | | (b) Enc > procedures/orders > referrals |

| | Metric | Key User Action |
|---|---|---|
| **4** | Number of Returned Undeliverable Referral Transmissions | |
| **5** | Calculated Percentage of Deliverable Transmissions | |

### Associated Certification Criteria

| Certification Criteria | Requirement |
|---|---|
| **170.315(b)(1) (Cures Update) Transitions of care** | (i)(A) – Send Using Edge Protocol for IHE XDR profile for Limited Metadata Document Sources |

### Justification

Tracking the number of direct messages sent with Continuity of Care Document (CCD) files attached and the rate of error-free transmissions will demonstrate that Electronic Health Information (EHI) is being shared between providers and is being sent securely. These statistics will help us evaluate our customers' awareness and engagement of this service. This measure is applicable to all care settings. Relied Upon Software for sending direct messages used is SES Direct and for the medication and allergy information for the data in the CCDs is DrFirst – Rcopia.

### Expected Outcomes

It is expected that customers are actively participating in interoperability within their real-world clinical workflow. It is also expected that the observed metrics will confirm that attempts to perform this measure are error-free, and errors – if any – are indicative of only non-systemic issues.

## 170.315(b)(2)(Cures Update) Clinical Information Reconciliation and Incorporation

### Measures Used in Approach

The following sections outline the measures that will be used to demonstrate conformance to 170.315(b)(2)(Cures Update) Clinical Information Reconciliation and Incorporation certification criterion. RWT observations of a representative user subset will focus on their use of reconciling and importing patient data. RWT observations will also document the error-free rate of attempted imports. Relied Upon Software for the Medication and Allergy information in the CCDs and reconciliation within a patient's chart is DrFirst – Rcopia.

### Conformance to Clinical Information Reconciliation and Incorporation (170.315(b)(2)(Cures Update))

### Use Case 1 (Reconcile and incorporate patient data)

This measure will test conformance to 170.315(b)(2)(Cures Update) Clinical Information Reconciliation and Incorporation by tracking the number of reconciliations performed and their error-free completion rate.

### Description of Measurement/Metric

The following measures will be taken during this test: Number of C-CDA reconciliations performed, number of errors logged. These measures will then be used to calculate the error-free rate of patient

data reconciliation and incorporation.

| | Metric | Key User Action |
|---|---|---|
| **1** | Number of times a C-CDA reconciliation was performed | Each of the actions below is independently applicable. It is not required that the user perform each. |
| | | (a) Tools > C-CDA Reconciliation |
| | | (b) Chart > Chart Tools > C-CDA Reconciliation |
| | | (c) Clinical Reconciliation from the Provider PDX Inbox<br><br>(Must select "Reconcile" … not "Attach") |
| **2** | Number of errors logged during a C-CDA reconciliation | |
| **3** | Calculated percentage of error-free C-CDA reconciliations | |

### Associated Certification Criteria

| Certification Criteria | Requirement |
|---|---|
| **170.315(b)(2) (Cures Update) Clinical Information Reconciliation and Incorporation** | (b)(2)(i) Support for CCDA Release 1.1. and 2.1 |
| | (b)(2)(ii) Patient match |
| | (b)(2)(iii)(A) Simultaneous display |
| | (b)(2)(iii)(B)-(D) Review, validate and incorporate patient medications, allergies, and problems |
| | (b)(2)(iv) CCDA creation of incorporated data |

### Justification

Tracking the number of reconciliations performed will demonstrate that EHI is being shared between providers and is being reviewed and incorporated into the patient's record. This measure is applicable to all clinical settings being tested.

### Expected Outcomes

It is expected that customers are actively receiving EHI within their real-world clinical workflow. It is also expected that the observed metrics will confirm that attempts to perform this measure are error-free, and errors – if any – are indicative of only non-systemic issues.

## 170.315(b)(6) Data export

### Measures Used in Approach

Note that this (b)(6) criterion will be replaced by (b)(10) criterion prior to 2024. This (b)(6) section of the 2024 RWT Plan is primarily included for accuracy at the time of this writing and historical completeness.

The following sections outline the measures that will be used to demonstrate conformance to 170.315(b)(6) Data export certification criterion. Testing will focus on data exports created and downloaded. The successful completion of the exports will also be measured.

## Conformance to Data export (170.315(b)(6))

### Use Case 1 (Export patient data)

This measure will test conformance to 170.315(b)(6) Data export by tracking the number of exports attempted and successfully completed.

#### Description of Measurement/Metric

The following measures will be taken during this test: Number of export requests created; number of unsuccessful completions logged. These measures will then be used to calculate the successful completion rate of requested CCD exports.

| | Metric | Key User Action |
|---|---|---|
| **1** | Number of Batch CCD Export Jobs created | Tools > Administration > Export CCD(s) |
| **2** | Number of unsuccessful completions logged | |
| **3** | Successful Completion Rate of Batch CCD Export Jobs | |

#### Associated Certification Criteria

| Certification Criteria | Requirement |
|---|---|
| **170.315(b)(6) Data export** | (b)(6)(i)(A) Export parameters |
| | (b)(6)(i)(B) Limited access |
| | (b)(6)(ii) CCD-A creation based on parameters |
| | (b)(6)(iii)(A) Specific date and time |
| | (b)(6)(iii)(B) Real time, relative time and specific date/time exports |
| | (b)(6)(iv) Export location |

#### Justification

Tracking the number of exports performed will demonstrate that EHI is being exported and may be transmitted or shared with other entities such as Health Information Exchange (HIE)s and other registries. Tracking the successful completion metrics will demonstrate the consistent reliability of this service provided within the product. This measure is applicable to all clinical settings.

#### Expected Outcomes

It is expected that customers are actively exporting EHI within their real-world clinical workflow. It is also expected that the observed metrics will confirm that attempts to perform this measure are error-free, and errors – if any – are indicative of only non-systemic issues.

## 170.315(b)(10) Electronic Health Information export

### Measures Used in Approach

The following sections outline the measures that will be used to demonstrate conformance to 170.315(b)(10) EHI export certification criterion. Testing will focus on data exports created and downloaded. The successful completion of the exports will also be measured.

## Conformance to EHI export (170.315(b)(10))

### Use Case 1 (Export single patient EHI)

This measure will test conformance to 170.315(b)(10) EHI export by tracking the number of single patient exports attempted and successfully completed.

#### Description of Measurement/Metric

The following measures will be taken during this test: Number of single patient exports attempted; number of unsuccessful attempts logged. These measures will then be used to calculate the successful completion rate of requested single patient exports.

| | Metric | Key User Action |
|---|---|---|
| **1** | Number of single patient EHI exports attempted | Chart Tools > Export > Standard Export |
| **2** | Number of unsuccessful attempts logged | |
| **3** | Successful Completion Rate of Single Patient EHI Exports | |

#### Associated Certification Criteria

| Certification Criteria | Requirement |
|---|---|
| **170.315(b)(10) EHI export** | (b)(10)(i) Single Patient EHI Export |

#### Justification

Tracking the number of single patient EHI exports performed will demonstrate that EHI is being exported and may be transmitted or shared with other patient care providers. Tracking the successful completion metrics will demonstrate the consistent reliability of this service provided within the product. This measure is applicable to all clinical settings.

#### Expected Outcomes

It is expected that customers are actively exporting patient EHI within their real-world clinical workflow. It is also expected that the observed metrics will confirm that attempts to perform this measure are error-free, and errors – if any – are indicative of only non-systemic issues.

### Use Case 2 (Export patient population EHI)

This measure will test conformance to 170.315(b)(10) EHI export by tracking the number of patient population EHI exports requested and the number of any reattempts due to a technical error.

#### Description of Measurement/Metric

The following measures will be taken during this test: Number of patient population EHI exports requested; number of reattempts required – if any – to successfully complete the export. These measures will then be used to calculate the successful completion rate of requested single patient exports.

| | Metric | Key User Action |
|---|---|---|
| **1** | Number of patient population EHI exports requested | N/A; this action is not initiated through the application. |
| **2** | Number of reattempts required | |
| **3** | Successful Completion Rate of Patient Population EHI Exports | |

### Associated Certification Criteria

| Certification Criteria | Requirement |
|---|---|
| **170.315(b)(10) EHI export** | (b)(10)(ii) Patient Population EHI Export |

### Justification

Tracking the number of patient population EHI exports performed will demonstrate that EHI is being exported and may be transmitted or shared with other entities such as other EHR solutions and/or Health Information Exchange (HIE)s and other registries. Tracking the successful completion metrics will demonstrate the consistent reliability of this service provided within the product. This measure is applicable to all clinical settings.

### Expected Outcomes

It is expected that customers are actively exporting patient EHI within their real-world clinical workflow. It is also expected that the observed metrics will confirm that attempts to perform this measure are error-free, and errors – if any – are indicative of only non-systemic issues.

## 170.315(c)(1)(2), 170.315(c)(3)(Cures Update) Clinical quality measures (CQMs)

### Measures Used in Approach

The following sections outline the measures that will be used to demonstrate conformance to 170.315(c)(1)(2), 170.315(c)(3)(Cures Update) Clinical quality measures (CQMs) certification criterion. Testing will focus on data entry, report creation and data files, and verifying the error-free completion of data suitable for CMS submission.

### Conformance to Transitions of care (170.315(c)(1)) (enter data and export)

### Use Case 1 (eCQM execution)

This measure will test conformance to 170.315(c)(1) Clinical quality measures (CQMs) by tracking the real-world usage of eCQM reports and the overall success rate.

### Description of Measurement/Metric

The following measures will be taken during this test: Number of report executions; number of errors reported. These measures will then be used to calculate the success rate of report execution.

| | Metric | Key User Action |
|---|---|---|
| **1** | Total number of eCQM report executions attempted.<br><br>If a report is run multiple times, each will count as an execution. | Reports > eCQMs |
| **2** | Number of unsuccessful attempted eCQM report executions logged | |
| **3** | Success rate of eCQM report executions | |

### Associated Certification Criteria

| Certification Criteria | Requirement |
|---|---|
| **170.315(c)(1) Clinical quality measures (CQMs) – record and export** | (c)(1)(i) Manual entry |
| | (c)(1)(ii) Export |

### Justification

Tracking the number of reports executed will demonstrate the manual entry and calculate features. The determination of clinical settings to be used will be based on usage of the reports.

### Expected Outcomes

It is expected that customers are actively utilizing clinical quality measures within their real-world clinical workflow. It is also expected that the observed metrics will confirm that attempts to perform this measure are error-free, and errors – if any – are indicative of only non-systemic issues.

## Conformance to CQMs – import and calculate (170.315(c)(1), 170.315(c)(3)(Cures Update)) (enter, export and create data files)

## Use Case 2 (QRDA file exports)

This measure will test conformance to 170.315(c)(1), 170.315(c)(3)(Cures Update) Clinical quality measures (CQMs) by tracking the use of Quality Reporting Document Architecture (QRDA) export files and their successful completion rate.

### Description of Measurement/Metric

The following measures will be taken during this test: Number of QRDA exports attempted, number of QRDA exports completed, and the calculated successful completion rate. The generated QRDAs adhere to standards suitable for successful CMS submission; however, the submission of the QRDAs to CMS is a process performed by participating practices entirely external to the product.

| | Metric | Key User Action |
|---|---|---|
| **1** | Number of QRDA exports attempted | Reports > eCQMs > Consolidated QRDA Report |
| **2** | Number of QRDA exports successfully completed | |
| **3** | Successful Completion Rate of QRDA Exports | |

### Associated Certification Criteria

| Certification Criteria | Requirement |
|---|---|
| **170.315(c)(1) Clinical quality measures (CQMs) – record and export** | (c)(1)(i) Manual entry |
| | (c)(1)(ii) Export |
| **170.315(c)(3)(Cures Update)Clinical quality measures (CQMs) – Report** | (c)(3)(i) Report data files (Cat I and Cat III) |

### Justification

Tracking the number of QRDA exports performed will demonstrate that report data and patient data is being created and suitable for submission to CMS and/or exchange with other entities. Tracking successful completions rates will prove the reliability of this service within the product, as well as indicate areas of engagement and growth amongst our user population. The determination of clinical settings to be used will be based on usage of the reports and exports.

### Expected Outcomes

It is expected that customers are actively utilizing QRDA's within their real-world clinical workflow. It is also expected that the observed metrics will confirm that attempts to perform this measure are error-free, and errors – if any – are indicative of only non-systemic issues.

## Conformance to CQMs – import and calculate (170.315(c)(2)) (import and calculate)

## Use Case 3 (Import and calculate)

This measure will test conformance to 170.315(c)(2) Clinical quality measures (CQMs). This specific Use Case does not have sufficient adoption by current customers. Therefore, product developers will simulate real world usage of the feature in a test clinic in a production-like environment. The production-like environment will be a true representation of the actual production environment as-is. Synthetic patient files will be imported, and selected report(s) will be created based on that information.

### Description of Measurement/Metric

The following measures will be taken during this test: Imports executed; number of errors encountered. These measures will then be used to calculate the success rate of the import feature.

| | Metric | Key User Action |
|---|---|---|
| **1** | Number of Imports executed | N/A |
| **2** | Number of Errors encountered | |
| **3** | Success Rate of Imports Executed | |

### Associated Certification Criteria

| Certification Criteria | Requirement |
|---|---|
| **170.315(c)(2) Clinical quality measures (CQMs) – import and calculate** | (c)(2)(i) Import data |
| | (c)(2)(ii) Calculate |

### Justification

The import and calculate feature provided by the EHR is not currently being utilized by our customers. Due to the nature of the import process, synthetic patient data and a test clinic will be used for this testing. This measure is applicable to all clinical settings but since the workflow for utilizing the import tool and create the reports is the same, it will not be separately measured for all.

### Expected Outcomes

It is expected that these metrics will prove the feature is readily available and reliable, should users choose to import data to include in their Clinical Quality Measures scenarios. It is also expected that the observed metrics will confirm that attempts to perform this measure are error-free, and errors – if any – are indicative of only non-systemic issues.

## 170.315(e)(1)(Cures Update) View, download, and transmit to 3rd party

### Measures Used in Approach

The following sections outline the measures that will be used to demonstrate conformance to 170.315(e)(1)(Cures Update) View, download, and transmit to 3rd party certification criterion. Testing will focus on the use of the portal by patients to obtain their health information. Patients can then view the data, download it for later use or transmit it directly from the portal via email or direct message (Relied upon software for Direct Messaging – SES Direct).

These measures will focus on the patient's access to their health data and ability to transmit their own data (Relied Upon Software for Patient Notifications – SMTP2GO). Relied Upon Software – DrFirst – Rcopia will be utilized for medications and allergy information in the CCDs available via the patient portal.

### Conformance to View, download, and transmit to 3rd party (170.315(e)(1)(Cures Update))

### Use Case 1 (Request, view, download, and transmit)

This measure will test conformance to 170.315(e)(1)(Cures Update) View, download, and transmit to 3rd party by verifying that specific health data can be requested by the user, requests for health data complete successfully, and the health data can be downloaded in human readable or machine-readable formats.

### Description of Measurement/Metric

The following measures will be taken during this test: Number of requests, views, and downloads initiated by patients for their health data via the portal; the number of transmits of health data initiated by patients via the portal; the number of errors logged for requests and transmits; the overall success rate of requests and transmits. (Errors are not tracked for view or download requests because those actions are simply a HTML link to the data generated by the request action; any pertinent errors in system functionality would occur during the request action.)

| Metric | Key User Action |
|---|---|

| | | |
|---|---|---|
| **1** | Number of times a patient has requested, viewed, downloaded, and transmitted their health data | Patient Portal > My Health Summary<br><br>There are distinct options for the patient to “Request”, “View”, “Download”, or “Transmit”. Any selection applies to this Use Case metric. |

| | Metric | Key User Action |
|---|---|---|
| | (a) Health data requested | |
| | (b) Health data viewed | |
| | (c) Health data downloaded | |
| | (d) Health data transmitted | |
| **2** | Number of errors logged | |
| | (a) Errors during request | |
| | (b) Errors during transmit | |
| **3** | Success rate of user-initiated health data activity | |
| | (a) Requests | |
| | (b) Transmit | |

### Associated Certification Criteria

| Certification Criteria | Requirement |
|---|---|
| **170.315(e)(1)(Cures Update) View, download, and transmit to 3rd party** | (i) WCAG |
| | (i)(A) View |
| | (i)(B) Download |
| | (i)(C) Transmit |
| | (i)(D) Timeframe selection |

### Justification

Tracking patient use of the online portal to request their health data, download their data, and/or transmit their data, will demonstrate the real-world practicality of these services to the patient population. This measure is applicable to all clinical settings.

### Expected Outcomes

It is expected that patients are utilizing and benefiting from these available services to access their health records at their convenience. It is also expected that the observed metrics will confirm that attempts to perform this measure are error-free, and errors – if any – are indicative of only non-systemic issues.

## 170.315(f)(1) Transmission to immunization registries

### Measures Used in Approach

The following sections outline the measures that will be used to demonstrate conformance to 170.315(f)(1) Transmission to immunization registries certification criterion. Assessments will focus on the data being sent from the EHR to the immunization registries. These measures will also indicate the number of any messages returned by the immunization registry as rejected.

### Conformance to Transmission to immunization registries (170.315(f)(1)) (create)

### Use Case 1 (Enter and send immunization data to registry)

This measure will test conformance to 170.315(f)(1) Transmission to immunization registries by verifying that immunization data can be entered and successfully sent to an immunization registry.

### Description of Measurement/Metric

The following measures will be taken during this test: number of messages sent by customers under assessment to the registry, number of messages rejected by the registry. These measures will then be used to calculate the rate of rejection.

| | Metric | Key User Action |
|---|---|---|
| **1** | Number of messages sent to the registries by RWT customers | Documentation of Immunization administration in patient chart |
| **2** | Number of messages rejected by registries | |
| **3** | Success rate of messages delivered to registries | |

### Associated Certification Criteria

| Certification Criteria | Requirement |
|---|---|
| **170.315(f)(1) Transmission to immunization Registries** | (i) Create messages |

### Justification

Tracking immunization data being submitted to registries will demonstrate the operation of this function and verify that data is being accepted. Clinical settings that administer immunizations regularly and have immunization registry interfaces will be utilized for this measure.

### Expected Outcomes

It is expected that customers are participating in interoperability opportunities, such as this available service. It is also expected that the observed metrics will confirm that attempts to transmit this data are accepted by the receiving registry, and rejections – if any – are indicative of only non-systemic issues.

## Conformance to Transmission to immunization registries (170.315(f)(1)) (history/forecast only)

## Use Case 2 (History/forecast)

This measure will test conformance to 170.315(f)(1) Transmission to immunization registries by verifying that the history and forecast feature is successfully returning results.

### Description of Measurement/Metric

The following measures will be assessed amongst clinics under evaluation during the RWT period: number of times the history and forecast feature has been used, the number of errors logged when using this feature, and the overall success rate.

| | Metric | Key User Action |
|---|---|---|
| **1** | Number of times a participating RWT clinic used the History/Forecast feature | Either of the actions listed below is applicable. It is not necessary for a RWT participant to perform both. |
| | | (a) Chart > Immunizations/Growth Chart > Hx/Forecast |

| | Metric | Key User Action |
|---|---|---|
| | | (b) Encounter > Immunizations > Hx/Forecast |
| **2** | Number of errors logged using History/Forecast during RWT | |
| **3** | Success rate of History/Forecast display | |

### Associated Certification Criteria

| Certification Criteria | Requirement |
|---|---|
| **170.315(f)(1) Transmission to immunization Registries** | (ii) Forecast and history |

### Justification

Tracking immunization forecast and history usage will demonstrate the operation of this function and verify that data is being returned and presented to the user. Clinical settings that administer immunizations regularly and have applicable immunization registry interfaces will be utilized for this measure. This feature does not yet have a wide adoption rate; only immunization registry interfaces that make this feature available will be considered for RWT participation.

### Expected Outcomes

It is expected that these metrics will provide insight into the adoption rate and usage of this feature in real world settings. It is also expected that the observed metrics will confirm that attempts to perform this measure are error-free, and errors – if any – are indicative of only non-systemic issues.

## 170.315(f)(2) Transmission to public health agencies – syndromic surveillance

### Measures Used in Approach

The following sections outline the measures that will be used to demonstrate conformance to 170.315(f)(2) Transmission to public health agencies – syndromic surveillance certification criterion. Testing will focus on the exchange of syndromic surveillance data.

### Conformance to Transmission to public health agencies – syndromic surveillance (170.315(f)(2)) (registration and discharge)

This criterion does not have sufficient adoption by our current customer base. Therefore, product developers will simulate real world usage of the feature in a test clinic, but on the actual production environment. Testing will not utilize real patient PHI; Synthetic data will be utilized.

### Use Case 1 (Syndromic surveillance registration and discharge data)

This measure will test conformance to 170.315(f)(2) Transmission to public health agencies – syndromic surveillance by tracking the creation of syndromic surveillance registration and discharge exports and tracking any errors logged in the process.

### Description of Measurement/Metric

The following measures will be taken during this test: Number of syndromic surveillance registration and discharge exports, number of errors observed. These measures will then be used to calculate the error-free rate of data exports.

| | Metric | Key User Action |
|---|---|---|
| **1** | Number of Syndromic Surveillance Registration exports | Urgent Care Encounter > Syndromic Surveillance Data<br><br>Message Type: Registration |
| **2** | Number of Syndromic Surveillance Discharge exports | Urgent Care Encounter > Syndromic Surveillance Data<br><br>Message Type: Discharge |
| **3** | Number of errors logged during the exports | |
| **4** | Error-free Rate of Syndromic Surveillance Exports | |

### Associated Certification Criteria

| Certification Criteria | Requirement |
|---|---|
| **170.315(f)(2) Transmission to public health agencies – syndromic surveillance** | Create syndromic surveillance data |

### Justification

The creation of syndromic surveillance data has not been utilized by any current users, therefore test data for a test patient will be used. Tracking the creation of syndromic surveillance exports will demonstrate that data is being exported and may be transmitted or shared with other entities to detect and monitor health events. This measure is applicable to all clinical settings but since the workflow for exporting syndromic surveillance data is the same and this feature is not sufficiently utilized by our current users, it will not need to be measured separately for each clinical setting.

### Expected Outcomes

It is expected that these metrics will prove the feature is readily available and reliable, should users choose to utilize it in their real-world scenarios. It is also expected that the observed metrics will confirm that attempts to perform this measure are error-free, and errors – if any – are indicative of only non-systemic issues.

## 170.315(g)(7), 170.315(g)(9)(Cures Update) Application access

### Measures Used in Approach

The following sections outline the measures that will be used to demonstrate conformance to 170.315(g)(7), 170.315(g)(9)(Cures Update) Application access certification criterion. Testing will focus on the application programming interface (API) service to deliver specific patient data in CCD format per request, as well as tracking the overall success rate of data delivery.

This feature, though available in the production environment, has yet to have any real world engagement. If adoption rate remains insufficient through the RWT period, the product developer will simulate real world usage as-is on the production environment.

## Conformance to Application access – patient selection (170.315(g)(7), 170.315(g)(9)(Cures Update))

### Use Case 1 (Query patient data)

This measure will test conformance to 170.315(g)(7), 170.315(g)(9)(Cures Update) Application access by tracking the number of data requests invoked, any observed errors, and the overall success rate.

#### Description of Measurement/Metric

The following measures will be taken during this test: Number of queries invoked, and the number of errors encountered. These measures will then be used to calculate the success rate of the data requests.

| | Metric | Key User Action |
|---|---|---|
| **1** | Number of Data Requests invoked | N/A. The API is not an application menu option. |
| **2** | Number of Errors encountered | |
| **3** | Success Rate of Data Request Executions | |

#### Associated Certification Criteria

| Certification | Criteria Requirement |
|---|---|
| **170.315(g)(7) Application access – patient Selection** | (i) access |
| **170.315(g)(9)(Cures Update) Application access – all data Request** | (i) all data request |
| | (ii) documentation |

#### Justification

Tracking the number of data requests performed will demonstrate that EHI is being exported and may be gathered and used for reporting information back to the patient to improve overall health. This measure is applicable to all clinical settings but since the workflow for utilizing an Application Programming Interface (API) to obtain data is the same and this feature is not currently utilized by any users, it will not be measured for all. If the real-world adoption remains insufficient, then the test harness created for certification testing will be utilized for this RWT evaluation period using real patient data in a production clinic.

#### Expected Outcomes

It is expected that these metrics will prove the feature is readily available and reliable, should users choose to utilize it in their real-world scenarios. It is also expected that the observed metrics will confirm that attempts to perform this measure are error-free, and errors – if any – are indicative of only non-systemic issues.

# 170.315(g)(10)(Cures Update) Standardized API for patient and population services

## Measures Used in Approach

The following sections outline the measures that will be used to demonstrate conformance to 170.315(g)(10)(Cures Update) Application access certification criterion. Testing will focus on the application programming interface (API) service to deliver specific patient data in FHIR format per request, as well as tracking the overall success rate of data delivery.

This feature, though available in the production environment, has yet to have any real world engagement. If adoption rate is insufficient through the RWT period, the product developer will simulate real world usage of the service as-is on a production-like environment.

## Conformance to Application access – patient selection (170.315(g)(10)(Cures Update))

## Use Case 1 (Query patient data)

This measure will test conformance to 170.315(g)(10) Application access by tracking the number of data requests invoked, any observed errors, and the overall success rate.

### Description of Measurement/Metric

The following measures will be taken during this test: Number of queries invoked, and the number of errors encountered. These measures will then be used to calculate the success rate of the data requests.

| | Metric | Key User Action |
|---|---|---|
| **1** | Number of Data Requests invoked | N/A. The API is not an application menu option. |
| **2** | Number of Errors encountered | |
| **3** | Success Rate of Data Request Executions | |

### Associated Certification Criteria

| Certification Criteria | Requirement |
|---|---|
| **170.315(g)(10)(Cures Update) Standardized API for patient and population services** | (i) Data response |
| | (ii) Supported search operations |
| | (iii) Application registration |
| | (iv) Secure connection |
| | (V)(A) Authentication and authorization for patient and user scopes |

### Justification

Tracking the number of data requests performed will demonstrate that EHI is being exported and may be gathered and used for reporting information back to the patient to improve overall health. This measure is applicable to all clinical settings but since the workflow for utilizing an Application Programming Interface (API) to obtain data is the same and this feature is not currently utilized by any users, it will not be measured for all. If real world adoption rate is insufficient through the evaluation

period, the product developer will demonstrate real world scenarios in a production-like environment via the ONC approved testing tool utilized for certification.

### Expected Outcomes

It is expected that these metrics will prove the feature is readily available and reliable, should users choose to utilize it in their real-world scenarios. It is also expected that the observed metrics will confirm that attempts to perform this measure are error-free, and errors – if any – are indicative of only non-systemic issues.

## Traceability Matrix

| Use Case | Family Practice | Specialist/ Surgical | Geriatrics | OB/Gyn |
|---|---|---|---|---|
| **170.315(b)(1)(Cures Update) Transitions of care** | | | | |
| **Create patient data** | X | X | X | X |
| **Send patient data via direct** | X | X | X | X |
| **170.315(b)(2)(Cures Update) Clinical information reconciliation and incorporation** | | | | |
| **Reconcile and incorporate patient data** | X | X | X | X |
| **170.315(b)(6) Data export** | | | | |
| **Export patient data** | X | X | X | X |
| **170.315(b)(10) EHI export** | | | | |
| **Export single patient EHI** | X | X | X | X |
| **Export patient population EHI** | X | X | X | X |
| **170.315(c)(1) Clinical quality measures (CQMs) — record and export<br>170.315(c)(2) Clinical quality measures (CQMs) — import and calculate<br>170.315(c)(3)(Cures Update) Clinical quality measures (CQMs) — report** | | | | |
| **eCQM execution** | X | X | X | X |
| **QRDA file export** | X | X | X | X |
| **170.315(e)(1)(Cures Update) View, download, and transmit to 3rd party<br>(View, download, transmit and view logs in the portal)** | | | | |
| **Request, view, download, and transmit** | X | X | X | X |
| **View** | X | X | X | X |
| **170.315(f)(1) Transmission to immunization registries** | | | | |
| **Enter and send immunization data to registry** | X | X | X | No RWT |
| **History and forecast** | X | X | X | No RWT |
| **170.315(f)(2) Transmission to public health agencies – syndromic surveillance** | | | | |
| **Syndromic surveillance registration and discharge data** | X | No RWT | No RWT | No RWT |
| **170.315(g)(7) Application access – patient selection (API)<br>170.315(g)(9)(Cures Update) Application access – all data request (API)** | | | | |
| **Query patient data** | X | No RWT | No RWT | No RWT |
| **170.315(g)(10)(Cures Update) Standardized API for patient and population services** | | | | |
| **Query patient data** | X | No RWT | No RWT | No RWT |

## Attestation

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