DrChrono v11 2023 Real World Test Results

Table of Contents

General Information

Plan Report ID Number: **DrChrono.RWTR.2023**

Developer Name: **DrChrono Inc.**

Product Name(s): **DrChrono EHR**

Version Number(s): **11.0**

Certified Health IT: **2015 Edition Cures Update**

Product List (CHPL) ID(s): **15.02.04.2897.DRCH.11.03.1.220531**

Developer Real World Testing Page URL: https://support.drchrono.com/hc/en-us/sections/20829764052891-Real-World-Testing

Attestation

This Real-World Testing Report is complete with all required elements, including measures that address all certification criteria and care settings. All information in this plan is up to date and fully addresses the health IT developer's Real World Testing requirements.

DocuSigned by:
Tara Cox
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Authorized Representative Name: Tara Cox, SVP Product Management
Authorized Representative Email: tcox@everhealthsoftware.com
Date: 2/1/2024

Changes to Original Plan

Three changes were made to our original test plan to accommodate updates to our CEHRT to support the ONC Cures Certification criterion. Two changes modified the scope of our API real world testing by removing testing for the archived §170.315(g)(8) Data Category criterion and adding testing for the §170.315(g)(10) Standardized API for patient and population services criterion. Scope was also increased to cover the §170.315(f)(5) Transmission to public health agencies – electronic case reporting criterion. This was a new criterion added to DrChrono in late 2022. Specific test plan modifications are as follows:

- For Use Case 7, the archived §170.315(g)(8) – Application Access – Data Category Request ONC test criterion was removed from the testing scope.
- We added a new Use Case 8 to support testing the new §170.315(g)(10) – Standardized API for patient and population services criterion.
- We added a new Use Case 9 to support testing the new §170.315(f)(5) – Transmission to Public Health Agencies – Electronic Case Reports criterion.

The updated/added use cases are documented below.

Use Case 7 - Independent vendors and DrChrono customers use certified APIs for both patient and provider-oriented use cases.

Certification Criteria	**Requirement**
§170.315(g)(7) – Application Access – Patient Selection	(i) Receive a request with sufficient info to uniquely identify a patient and return an ID to execute requests for the patient's data…
§170.315(g)(9) – Application Access – All Data Request	(i) Respond to requests for patient data and return a CCDA formatted document with the patient's data…

Measure 1: The request success rate for certified APIs – This measure will evaluate the successful use of all certified APIs (https://www.drchrono.com/api/) through the lens of individual transaction requests by request, API information Source, and API users.

Justification: The evaluation of a statistically significant sample size of API requests spanning a broad spectrum of API Information Sources will demonstrate the real-world utility of the APIs.

Test Methodology: System logs will be reviewed to determine the success rates for the following:

1. Requests Served:
    - Denominator: Total requests of certified API(s)
    - Numerator: Total number of successful responses

2. API Information Sources with at least one successful response -- validates successful API use spanning current API Information Sources:
    - Denominator: Total API Information Sources with at least one request
    - Numerator: Total API Information Sources with at least one successful response

3. API Users with at least one successful response - validates successful API use spanning current API Users:
    - Denominator: Total API Users with at least one request
    - Numerator: Total API Users with at least one successful response

Expected Outcomes: DrChrono expects to see a high success rate in the above sub-measures, with the expected errors included (e.g., failure in authorization/authentication, incorrectly formatted request, etc.)

Use Case 8 - Independent vendors and DrChrono customers use certified FHIR APIs for both single and multi-patient use cases.

Certification Criteria	**Requirement**
§170.315(g)(10) – Standardized API for patient and population services	i. Respond to requests for a single patient's data … ii. Respond to requests for multiple patients' data as a group

Measure 1: The request success rate for certified APIs – This measure will evaluate the successful use of all certified FHIR API Resources (https://drchrono-fhirpresentation.everhealthsoftware.com/drchrono/basepractice/r4/Home/ApiDocumentation) for single and multiple patient requests.

Justification: The evaluation of a statistically significant sample size of API requests spanning a broad spectrum of API Information Sources will demonstrate the real-world utility of the APIs.

Test Methodology: System logs will be reviewed to determine the success rates for the following:

4. Single Patient FHIR Resource Requests Served:
    - Denominator: Total requests of certified API(s)
    - Numerator: Total number of successful responses

5. Multiple Patient FHIR Resource Requests Served:
    - Denominator: Total requests of certified API(s)
    - Numerator: Total number of successful responses

6. Invalid Token Returns 1 or more Errors:
    - Denominator: Total API Users with at least one request
    - Numerator: Total API Users with invalid token returns at least one error response

Relied Upon Software: ConnectEHR

Expected Outcomes: DrChrono expects to see a high success rate in the above sub-measures, with the expected errors included (e.g., failure in authorization/authentication, incorrectly formatted request, etc.)

Use Case 9 - Data is appropriately triggered and submitted to relevant public health agencies for electronic case reporting.

Certification Criteria	Requirement
§170.315(f)(5) – Transmission to Public Health Agencies – Electronic Case Reports	i. Match a patient visit to a trigger code based on parameters of trigger code table… ii. Case report creation for electronic transmission…

Measure 1: electronic case report message success – This measure will evaluate the ability of DrChrono to submit conformant electronic case report messages in the primary care setting.

Justification: Evaluating a statistically significant number of electronic case reporting messages spanning multiple organizations using DrChrono will demonstrate the real-world utility of capability. DrChrono will be focused on testing this criterion in the primary and urgent care settings.

Test Methodology: System logs will be evaluated for all applicable messages sent to registries.

Expected Outcomes: Success is defined as the successful message submission to and receipt by all actively engaged registries, with standard errors (e.g., no response from the registry, formatting error beyond the scope of CEHR specification requirements, etc.)

Withdrawn Products

DrChrono did not have any withdrawn product during the 2023 calendar year.

Summary of Testing Methods and Key Findings

During DrChrono's real world testing in 2023, all testing resulted in 100% conformance except for the following ONC criterion:

- §170.315(b)(3) – Electronic Prescribing - RxCancel messages

Any issues found are described in the Metrics and Outcomes section. DrChrono is working with Surescripts to research and remediate the errors we saw for the RxCancel messages.

A usability challenge was found when testing the § 170.315 (b)(2) Reconciliation measure for patients with large data sets (problems, allergies and/or problem lists with more than 10 items in them). DrChrono is currently using pagination when there are more than 10 items in the patient's chart and/or incoming CCDA file. This is making it challenging for the providers to perform reconciliation. Our product team is working on some solutions to help better accommodate patient reconciliation for patients with large data sets. We hope to have this completed in early Q2 2024.

We used the following methodologies for our testing:

- **Audit Trail/ Reporting:** This methodology uses the audit logging or various reporting capabilities of the application to examine tasks performed in the system. This methodology often provides historical measurement reports which can be accessed at different times of the year to evaluate interoperability. It can serve as a benchmark for evaluating real-world testing over multiple time intervals.
- **Third-Party Software Confirmation or Attestation:** This methodology leverages industry-standard or industry-required technology and services to evaluate data sharing. By way of example, when submitting an electronic prescription in the 20170701 SCRIPT standard to Surescripts, it may be necessary to review logs stored in the Surescripts Admin Console to verify receipt and accuracy of data provided. Other third-party software may be used as well to simulate or confirm activities when another option is not available. It may also be necessary to receive attestation reports from third-party applications to verify the receipt and accuracy of data when access to the third-party system is unavailable or prohibited.
- **Manual Chart Review:** This methodology leverages human intervention to visually review and confirm changes to data as expected. When data is shared to the application that may cause a change to a patient's medical chart, it may be necessary for a human to review the expected change and sign-off that the update occurred as expected.

Standards Updates (SVAP and USCDI)

For CY 2023, DrChrono did not make any version updates on approved standards through the SVAP process. This applies to all test scenarios described within.

Care Settings

DrChrono performed real world testing in 2023 for the following care settings:

- Acupuncture
- Family Practice / Primary Care
- Gynecologic Oncologist
- Internal Medicine
- Orthopedic Surgery
- Pain Management
- Podiatry
- Psychiatry

Metrics and Outcomes

Use Case 1 - During ambulatory care, providers share patient records (CCDAs) with each other and, where appropriate, reconcile critical clinical data elements into the chart. § 170.315 (b)(1) Transition of Care; §170.315(b)(2) – Clinical Information Reconciliation and Incorporation; and §170.315(h)(1) – Direct Project

Measure 1: Create a valid CCDA

Expected Outcome	Relied Upon Software	Results	Challenges Encountered
A different EHR receives and recognizes each type of CCDA as conformant.	Updox	100% Conformance	None

Measure 2: Create and Send a CCDA

Expected Outcome	Relied Upon Software	Results	Challenges Encountered
CCDAs of each required type of successfully created and sent via Direct with common errors (e.g., invalid direct address, no response from the receiver, etc.).	Updox	100% Conformance	None

Measure 3: Receive and display a CCDA § 170.315 (b)(1) Transition of Care and §170.315(h)(1) – Direct Project

Expected Outcome	Relied Upon Software	Results	Challenges Encountered
Examples CCDA files are successfully received and displayed.	Updox	100% Conformance	None
CCDAs successfully received via Direct with standard errors (e.g., incorrect CCDA format)	Updox	100% Conformance	None

Measure 4: Receive and reconcile a CCDA § 170.315 (b)(2) Reconciliation and §170.315(h)(1) – Direct Project

Expected Outcome	Relied Upon Software	Results	Challenges Encountered
Users successfully use CEHRT to receive and reconcile data into patients' charts.	Updox	100% Conformance	Usability considerations were found during testing for patients with > 10 medications, problems and/or allergens either in their chart or contained within the CCDA that's being reconciled. Currently, DrChrono is using pagination to display > 10 meds, allergens or problems and it makes it very hard for the user to perform reconciliation. DrChrono is working with our design team to create a better end-user experience for patients with large data sets.

Use Case 2 - During ambulatory care, patients access a copy of their records (CCDs) for viewing, downloading, and/or transmitting. §170.315(e)(1) – View, Download, and Transmit to 3rd Party

Measure 1: Validate user behavior around view actions

Expected Outcome	Relied Upon Software	Results	Challenges Encountered
Number of patients with successful CCD document previews.	N/A	3/3 Patients for 100% Conformance	None

Measure 2: Validate user behavior around download actions.

Expected Outcome	Relied Upon Software	Results	Challenges Encountered
Number of patients that can successfully download CCD documents.	N/A	3 of 3 Patients for 100% Conformance	None

Measure 3: Validate user behavior around transmit actions

Expected Outcome	Relied Upon Software	Results	Challenges Encountered
CCD documents were successfully sent as encrypted, password protected files via email with the expected errors (e.g., invalid email address, lack of response, etc.)	N/A	100% Conformance	None
CCD documents were successfully sent via email with standard errors (e.g., invalid email address, etc.).	N/A	100% Conformance	None

Use Case 3 - EHR users export CCDAs for one or many patients to share with providers, patients, or third parties under the purview of HIPAA. §170.315(b)(6) – Data Export

Measure 1: Single/Multi patient export

Expected Outcome	Relied Upon Software	Results	Challenges Encountered
Only authorized users can create export summaries successfully, and there will be evidence of successful exports using various configurations (e.g., single-patient, multi-patient, etc.).	None	100% Conformance	None

Use Case 4 - Clinicians electronically prescribe medications. §170.315(b)(3) – Electronic Prescribing

Measure 1: Transaction success rates

Expected Outcome	Relied Upon Software	Results	Challenges Encountered
NewRx Transactions are successfully delivered with standard errors (e.g., pharmacy does not support electronic transactions). Data validation errors are prevented, or the end-user is notified of the errors when applicable.	Surescripts	99% Conformance	None. Users received common validation warnings/errors from the application as expected for missing data requirements/etc.
RxChange Transactions are successfully delivered with standard errors (e.g., pharmacy does not support electronic transactions). Data validation errors are prevented, or the end-user is notified of the eros when applicable.	Surescripts	100% Conformance	Limited adoption. Not all practices we tested with are utilizing this message type. Seeing errors back to the pharmacy when trying to send RxChange messages to providers not enabled for the message type.
CancelRx Transactions are successfully delivered with standard errors (e.g., pharmacy does not support electronic transactions). Data validation errors are prevented, or the end-user is notified of the errors when applicable.	Surescripts	20% Conformance	Limited adoption. Not all practices we tested with are utilizing this message type. Saw errors message failed Surescripts validation process. DrChrono is looking into these errors.

Expected Outcome	Relied Upon Software	Results	Challenges Encountered
RxRenewal Transactions are successfully delivered with standard errors (e.g., pharmacy does not support electronic transactions). Data validation errors are prevented, or the end-user is notified of the errors when applicable.	Surescripts	98% Conformance	None. Users received common validation warnings/errors from the application as expected for missing data requirements/etc.
RxFill Transactions are successfully delivered with standard errors (e.g., pharmacy does not support electronic transactions). Data validation errors are prevented, or the end-user is notified of the errors when applicable.	Surescripts	100% Conformance	Limited adoption. Not all practices we tested with are utilizing this message type. Seeing errors back to the pharmacy when trying to send RxFill messages to providers not enabled for the message type.
Medication History Transactions are successfully delivered with standard errors (e.g., pharmacy does not support electronic transactions). Data validation errors are prevented, or the end-user is notified of the errors when applicable.	Surescripts	96% Success Rate	Seeing standard errors, “the connection with receiver timed out before the response was returned. Status of message at receiver is unknown.”

Use Case 5 - EHR users generate QRDA files that comply with the latest specifications for submission to CMS and other quality reporting requirements. §170.315(c)(1) – CQMs – Record and Export; §170.315(c)(2) – CQMs – Import and Calculate; and §170.315(c)(3) – CQMs – Report

Measure 1: eCQM calculation success rates

Expected Outcome	Relied Upon Software	Results	Challenges Encountered
Test cases pass expected errors (e.g., due to known specification gap, etc.)	None	100% Conformance	None

Measure 2: QRDA file export conformance

Expected Outcome	Relied Upon Software	Results	Challenges Encountered
Files conform to required specifications, and all data for the eCQMs in the file are present in the other EHR. File samples conform to currently implemented QRDA II standards.	None	100% Conformance	None

Measure 3: QRDA file import conformance

Expected Outcome	Relied Upon Software	Results	Challenges Encountered
File import, with any import errors (file or formatting related), flagged to the end-users, and imported data is used to calculate eCQMS results correctly.	None	100% Conformance	None

Use Case 6 - Data is appropriately triggered and submitted to relevant public health agencies. §170.315(f)(2) – Transmission to Public Health Agencies – Syndromic Surveillance

Measure 1: Syndromic surveillance message success

Expected Outcome	Relied Upon Software	Results	Challenges Encountered
The successful message submission to and receipt by all actively engaged registries, with standard errors (e.g., no response from the registry, formatting error beyond the scope of CEHR specification requirements, etc.)	None	100% Conformance	None.

Use Case 7 - Independent vendors and DrChrono customers use certified APIs for both patient and provider-oriented use cases. §170.315(g)(7) – Application Access – Patient Selection; and §170.315(g)(9) – Application Access – All Data Request

Measure 1: Successful API request for a Patient

Expected Outcome	Relied Upon Software	Results	Challenges Encountered
1. Successful Requests Served: - Denominator: Total requests of certified API(s) - Numerator: Total number of successful responses	None	100% Conformance 3/3 Success Rate	None
2. Successful API Information Sources with at least one successful response -- validates successful API use spanning current API Information Sources: - Denominator: Total API Information Sources with at least one request - Numerator: Total API Information Sources with at least one successful response	None	100% Conformance 3/3 Success Rate	None
3. Successful receipt of error response with the usage of incorrect API credentials: - Denominator: Total API Users with at least one request - Numerator: Total API Users with at least one successful response	None	100% Conformance 1/1 Success Rate	None

Use Case 8 - Independent vendors and DrChrono customers use certified FHIR APIs for both single and multi-patient use cases. §170.315(g)(10) – Standardized API for patient and population services

Measure 1: The Request Success Rate for Certified API's

Expected Outcome	Relied Upon Software	Results	Challenges Encountered
1. Single Patient FHIR Resource Requests Served: • Denominator: Total requests of certified API(s) • Numerator: Total number of successful responses	DHIT Connect EHR + BulkFHIR (version FHIR4-B)	100% Conformance 3/3 Success Rate	None
2. Multiple Patient FHIR Resource Requests Served: • Denominator: Total requests of certified API(s) • Numerator: Total number of successful responses	DHIT Connect EHR + BulkFHIR (version FHIR4-B)	100% Conformance 3/3 Success Rate	None
3. Invalid Token Returns 1 or more Errors: • Denominator: Total API Users with at least one request • Numerator: Total API Users with invalid token returns at least one error response	DHIT Connect EHR + BulkFHIR (version FHIR4-B)	100% Conformance 3/3 Success Rate	None

Use Case 9 - Data is appropriately triggered and submitted to relevant public health agencies for electronic case reporting. §170.315(f)(5) – Transmission to Public Health Agencies – Electronic Case Reports

Measure 1: Electronic case report message success

Expected Outcome	Relied Upon Software	Results	Challenges Encountered
Successful message submission to and receipt by all actively engaged registries, with standard errors (e.g., no response from the registry, formatting error beyond the scope of CEHR specification requirements, etc.).	None	100% Conformance	None.

Key Milestones

Key Milestones	Data/Timeframe
Recruitment of organizations participating in de-identified data collection	November 2023
Start of collection of necessary data as laid out by plan (will vary by measure)	November 2023
End of collection of required data as laid out by plan (will vary by measure)	December 2023
Analysis of Data (will vary by measure)	January 2023
Submit Real World Testing Report to ACB	February 2023