DrChrono v11 2025 Real World Test Plan

General Information

Plan Report ID Number: **DrChrono.RWTP.2025**

Developer Name: **DrChrono Inc.**

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

Version Number(s): **11.0**

Product List (CHPL) ID(s): **15.99.04.2897.DRCH.11.03.1.220531**

Developer Real World Testing Page URL: https://www.drchrono.com/meaningful-use-ehr/

Justification for Real World Testing Approach

DrChrono EHR v11.0 is a certified electronic health record (EHR) sold to primary care, specialty, and multi-specialty ambulatory groups. Functionality within the EHR overlaps regardless of the care setting. Still, the Real-World Testing plan aims to incorporate data from as diverse a set of these settings as possible.

Real World Testing Measurements

- Associated ONC criteria
- Testing Methodology used
- Description of the measurement/metric
- Justification for the measurement/metric
- Expected outcomes in testing for the measurement/metric
- Care settings that are targeted with the measurement/metric

We elaborate specifically on our justification for choosing this measure and the expected outcomes in each measurement evaluation. All measurements were determined to evaluate the best compliance with the certification criteria and interoperability of exchanging electronic health information (EHI) within the certified EHR.

As all the certification criteria apply broadly to the care settings noted above, the Real-World Testing plan will incorporate several certification criteria into one plan:

- **§170.315(b)(1) – Transitions of Care**
- **§170.315(b)(2) – Clinical Information Reconciliation and Incorporation**
- **§170.315(b)(3) – Electronic Prescribing**
- **§170.315(b)(10) – Electronic Health Information Export**
- **§170.315(c)(1) – CQMs – Record and Export**
- **§170.315(c)(2) – CQMs – Import and Calculate**
- **§170.315(c)(3) – CQMs – Report**
- **§170.315(e)(1) – View, Download, and Transmit to 3rd Party**
- **§170.315(f)(1) – Transmission to Immunization Registries**
- **§170.315(f)(2) – Transmission to Public Health Agencies – Syndromic Surveillance**
- **§170.315(f)(5) – Transmission to Public Health Agencies – Electronic Case Reporting**
- **§170.315(g)(7) – Application Access – Patient Selection**
- **§170.315(g)(9) – Application Access – All Data Request**
- **§170.315(g)(10) – Standardized API for patient and population services**
- **§170.315(h)(1) – Direct Project**

Standards Updates (SVAP and USCDI)

Standard (and version)	N/A
Updated certification criteria and associated product	N/A
Health IT Module CHPL ID	N/A
Data of ONC-ACB Notification	N/A
Data of Customer Notification	N/A
USCDI-Updated Criteria	N/A

Care Settings(s)

DrChrono is an ONC-certified product designed to be used in various ambulatory care settings. For real-world testing, the care settings that will be used to test the certification criteria are as follows:

- Primary Care / Family Medicine
- Behavioral Health (Psychiatry)
- Podiatry
- Dermatology
- Pain Medicine
- Chiropractic
- Multi-Specialty

Medical Practice Types

A. Solo Practice

A practice without partners or employment affiliations with other practice organizations. Solo practices are usually characterized by a small staff and typically have a limited patient base. This smaller size and the autonomy of being the only physician gives the advantage of designing, growing, and developing the practice as they like relative to other practice settings.

B. Group Practices

Group practices are typically divided into single-specialty and multispecialty practices. The defining characteristic of single-specialty practice is the presence of two or more physicians providing patients with one specific type of care (i.e., primary care or a specific subspecialty practice).

C. Direct Primary Care

Direct primary care is an alternative practice model based on a non-traditional payment system. In this model, patients are charged a flat membership fee monthly, quarterly, or annual basis for a defined set of primary care services instead of submitting claims for primary care services to insurance companies.

Overall Expected Outcomes

- Real World Testing will demonstrate that the EHR conforms to the criteria listed in the "Justification for Real World Testing" section.
- See below for measures and outcomes associated with the use cases related to the listed certification criteria.

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.

Certification Criteria	**Requirement**
§170.315(b)(1) – Transitions of Care	(i) Send and receive via edge protocol … (ii) Validate and Display … (iii) Create …
§170.315(b)(2) – Clinical Information Reconciliation and Incorporation	(i) General requirements … (ii) Reconciliation …
§170.315(h)(1) – Direct Project	(i) Applicability Statement for Secure Health Transport … (ii) Delivery Notification in Direct …

Measure 1: Create a valid CCDA – This measure will demonstrate EHR's ability to create and send a CCDA conforming to the standards outlined in § 170.315 (b)(1) Transition of Care.

Justification: Other EHRs will expect to successfully receive a CCDA formatted to Release 2.1 with all required data elements from DrChrono.

Test Methodology: A CCDA of each type (Referral Note, CCD) will be created in DrChrono and sent to another EHR via each certified workflow (if applicable). DrChrono and the other EHR will use a production-grade environment that is typical of the marketed care settings. System logs will be reviewed to identify possible errors in transport. A user in the receiving EHR will demonstrate a triumphant display of all required elements.

Expected Outcomes: Success is when a different EHR receives and recognizes each type of CCDA as conformant.

Measure 2: Create and send a CCDA. This measure will evaluate the creation and sending of required CCDAs (Referral Note, CCD) at scale across many providers using DrChrono in a live production environment.

Justification: A statistically significant sample size of CCDAs generated and sent by DrChrono spanning multiple organizations with standard errors will validate successful use in the real world.

Test Methodology: System logs will be evaluated for each required type of CCDA created and sent.

Relied Upon Software: Updox

Expected Outcomes: Success is defined as 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.).

Measure 3: Receive and display a CCDA. This measure will demonstrate EHR's ability to receive and communicate a CCDA of each required type (Referral Note, CCD, Care Plan) in a live production environment.

Justification:

1. A manual evaluation of several production examples of each required type of CCDA (Referral Note, CCD, and Care Plan) will show that DrChrono can successfully receive and display CCDAs.
2. Evaluating a statistically significant number of CCDAs received and displayed by providers using DrChrono spanning multiple organizations will validate successful use in the real world.

Test Methodology:

1. Examples of CCDAs of each type will be randomly selected for manual review spanning various care settings in the DrChrono product.
2. System logs will be evaluated to identify the proportion of each type of CCDA successfully received.

Relied Upon Software: Updox

Expected Outcomes:

1. Chosen examples are successfully received and displayed.
2. CCDAs successfully received via Direct with standard errors (e.g., incorrect CCDA format)

Measure 4: Receive and reconcile a CCDA – This measure will demonstrate EHR's ability to receive and reconcile a CCDA of each required type (Referral Note, CCD) in a live production environment.

Justification: An evaluation of reconciliation use spanning a statistically significant number of active users spanning multiple organizations will validate successful use in the real world.

Test Methodology: System logs will be evaluated to determine the number of users that successfully reconcile at least one CDDA using CEHRT.

Relied Upon Software: Updox

Expected Outcomes: A high number of users successfully use CEHRT to receive and reconcile data into patients' charts.

Use Case 2 - During ambulatory care, patients access a copy of their records (CCDs) for viewing, downloading, and/or transmitting.

Certification Criteria	**Requirement**
§170.315(e)(1) – View, Download, and Transmit to 3rd Party	(i) (a) View … (ii) (b) Download … (iii) (c) Transmit to the third party …

Measure 1: Validate user behavior around view actions. This measure will demonstrate the ability of a patient to preview a CCD document template in the live production environment of their patient portal.

Justification: The CCD document template contains all required data elements in §170.315(e)(1)(i)(a)

Test Methodology: System logs will be evaluated to identify patients with a successful CCD document view in the patient portal.

Expected Outcomes: Success is defined by the number of patients with successful CCD document previews.

Measure 2: Validate user behavior around download actions. This measure will demonstrate the ability of a patient to download a CCD document template in a live production environment of their patient portal.

Justification: An evaluation of a statistically significant number of CCD document downloads spanning multiple organizations will demonstrate the successful real-world use of the downloading feature.

Test Methodology: System logs will be evaluated to identify patients with a successful CCD document download in the patient portal.

Expected Outcomes: Success is defined by the number of patients that can successfully download CCD documents.

Measure 3: Validate user behavior around transmit actions – This measure will demonstrate the ability of a patient to transmit a CCD document template to a third party in a live production environment of their patient portal.

Justification: An evaluation of a statistically significant number of CCD document transmissions spanning multiple organizations will demonstrate the successful real-world use of the transmit feature.

Test Methodology: System logs will be evaluated to identify the volume of successful CCD document transmits in the portal. The analysis will break out transmission via either encrypted, password protected attachment Email or Email.

Expected Outcomes:

1. 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.)
2. CCD documents were successfully sent via email with standard errors (e.g., invalid email address, etc.).

Use Case 3 - EHR users export single patient and entire practice electronic health information exports to share with providers, patients, or third parties under the purview of HIPAA.

Certification Criteria	**Requirement**
§170.315(b)(10) – Electronic Health Information Export	(i) Single patient electronic health information export … (ii) Patient population electronic health information export …

Measure 1: Single patient export – This measure will assess functionality used to export EHI for a single patient and patient population in a production environment.

Justification: The evaluation of a statistically significant number of exports by users spanning multiple organizations using DrChrono will demonstrate the real-world utility of the data export.

Test Methodology: System logs will be reviewed to determine the volume of exports generated in various configurations (e.g., single-patient, patient population, etc.) and only by authorized users.

Expected Outcomes: Only authorized users can create export summaries successfully, and there will be evidence of successful exports using various configurations (e.g., single-patient, patient population, etc.).

Use Case 4 - Clinicians electronically prescribe medications.

Certification Criteria	**Requirement**
§170.315(b)(3) – Electronic Prescribing	(i) (a) Enable a user to perform the following prescription-related electronic transactions … (i) (c) For the following transactions, the platform/technology must receive and transmit the reason for the prescription …

Measure 1: Transaction success rates – This measure will evaluate the successful use of required eRx transaction types in a production environment.

Justification: A statistically significant sample size of electronic prescriptions spanning multiple organizations using DrChrono will demonstrate the real-world utility of the feature.

Test Methodology: System logs will be reviewed to determine the frequency of errors for each transaction type.

Relied Upon Software: Surescripts, ID.me and Bamboo Health

Expected Outcomes: 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.

- NewRx
- RxChange
- CancelRx
- RxRenewal
- RxFill
- Medication History

Use Case 5 - EHR users generate QRDA files that comply with the latest specifications for submission to CMS and other quality reporting requirements.

Certification Criteria	Requirement
§170.315(c)(1) – CQMs – Record and Export	(i) Record … (ii) Export …
§170.315(c)(2) – CQMs – Import and Calculate	(i) Import … (ii) Calculate every CQM (clinical quality measure)
§170.315(c)(3) – CQMs – Report	(i) Enable a user to create a data file for transmission electronically…

Measure 1: eCQM calculation success rates – This measure will validate the correct calculation of implemented eCQMs relative to the measure specifications.

Justification: Using live customer data to validate the accurate calculation of eCQMs is difficult due to the variability of data inputs. A justifiable approach would be having a controlled production-grade environment with known eCQM data inputs that can be regularly run to evaluate the accurate calculator of the eCQMs over a certain period.

Test Methodology: A comprehensive test tool previously developed by the EHR vendor for the same purpose will be leveraged to ensure the accurate calculator of eCQMs. DrChrono leverages the end-to-end testing framework for eCQMs using production test cases for each scenario (e.g., Denominator, Numerator, Exclusions, Exceptions, etc.) along with the various workflows that satisfy the EHR workflow.

Expected Outcomes: Test cases pass expected errors (e.g., due to known specification gap, etc.)

Measure 2: QRDA file export conformance – This measure will validate that a different EHR can successfully import a QRDA I file generated by DrChrono and that a QRDA III file generated by DrChrono visually conforms to the standard.

Justification: The ability for different EHRs to recognize and successfully import a QRDA I file generated by DrChrono will demonstrate file conformance. A visual inspection of a file generated in production will validate conformance to what is implemented in the real world.

Test Methodology: A QRDA I file using synthetic test data will be generated by DrChrono and imported into a different EHR. A manual review of the system logs and eCQM reports in the other EHR will validate

conformance to specifications. Visual inspection of a sample QRDA III file generated in production using currently implemented QRDA III standards.
Expected Outcomes: 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.

Measure 3: QRDA file import conformance – This measure will assess the use of the DrChrono QRDA I import feature using a QRDA I file created in another EHR.

Justification: The ability for DrChrono to successfully import a QRDA I file generated by a different EHR that is also certified to the CQM criteria will demonstrate the real-world utility of the QRDA I import feature.

Test Methodology: A QRDA I file will be generated in a different EHR using synthetic test data and then imported into DrChrono. A manual review of system logs and eCQM reports will validate the successful import and calculation of eCQMs based on imported data.

Expected Outcomes: 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.

Use Case 6 - Data is appropriately triggered and submitted to relevant public health agencies.

Certification Criteria	**Requirement**
§170.315(f)(1) – Transmission to Immunization Registries	(i) Create immunization information for transmission… (ii) Request and display patient's evaluated immunization history and forecast…
§170.315(f)(2) – Transmission to Public Health Agencies – Syndromic Surveillance	(i) Create syndrome-based public health surveillance information …
§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: Immunization information message success – This measure will evaluate the ability of DrChrono to submit conformant immunization messages in the primary care and family medicine setting.

Justification: Evaluating a statistically significant number of immunization messages spanning multiple organizations using DrChrono will demonstrate the real-world utility of capability.

Test Methodology: Manual verification and system logs will be evaluated for all applicable messages sent to registries.

Relied Upon Software: Iron Bridge Pub Hub 2.0

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 CEHRT specification requirements, etc.)

Measure 2: Immunization history and forecast message success – This measure will evaluate the ability of DrChrono to request, receive and display conformant immunization history and forecast messages in the primary care and family medicine setting.

Justification: Evaluating a statistically significant number of immunization history and forecast messages spanning multiple organizations using DrChrono will demonstrate the real-world utility of capability.

Test Methodology: Manual verification and 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 CEHRT specification requirements, etc.).

Measure 3: Syndromic surveillance message success – This measure will evaluate the ability of DrChrono to submit conformant syndromic surveillance messages in the urgent care setting.

Justification: Evaluating a statistically significant number of syndromic surveillance messages spanning multiple organizations using DrChrono will demonstrate the real-world utility of capability. Although these messages apply to urgent care, emergency department, and inpatient settings, DrChrono only serves 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.)

Measure 4: 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.)

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:

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

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

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

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.)

Schedule of Key Milestones

Key Milestones	Data/Timeframe
Recruitment of organizations participating in de-identified data collection	January 2025
State of collection of necessary data as laid out by plan (will vary by measure)	February - December 2025
End of collection of required data as laid out by plan (will vary by measure)	December 2026
Analysis of Data (will vary by measure)	December 2025
Submit Real World Testing Report to ACB	February 2026

Attestation

This Real-World Testing plan 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 comprehensively addresses the Health IT Developer's Real World Testing requirements.

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Date: 11/22/2024