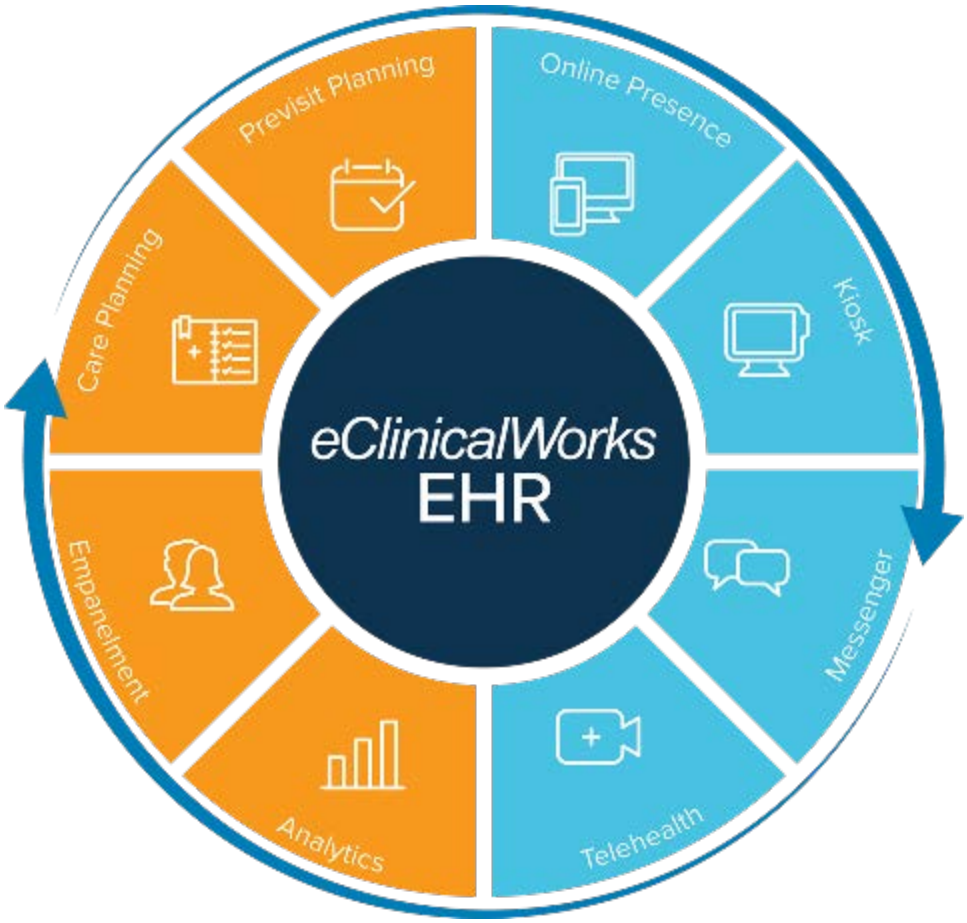
REAL WORLD TESTING - 2022 TEST PLAN

Version 1.0—December 2021



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REAL WORLD TESTING – 2022 TEST PLAN

This document describes the eClinicalWorks® (eCW) Real World Testing – 2022 Test Plan.

1. Introduction

The 21st Century Cures Act Final Rule mandates that health IT developers of certified health IT test the real-world use of health IT for interoperability, as defined by the 2015 Edition Certification Criteria. The functionality and use cases included in this testing effort include all certification criteria under 45 C.F.R. § 170.315(b), (c)(1)-(3), (e)(1), (f)(1)-(2), (f)(7), (g)(7)-(9), and (h)(1) to which eClinicalWorks V11 is certified, specifically:

(b)(1) Transitions of Care

(b)(2) Clinical Information Reconciliation and Incorporation

(b)(3) Electronic Prescribing

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This test plan evaluates the real world usage of these criteria, while creating the least amount of disruption to providers. For information about how each certification criteria will be tested and measured, refer to section 4. Test Plan.

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The following list describes each component of the test plan for the respective certification criteria:

- **Testing Methodology/Method** describes the approach (e.g., steps, conditions, etc.) a tester will use to evaluate the functionality of the certification criteria.
- **Metric Definition** describes the measurement used to determine whether the test case can be marked as *Passed* or *Failed*. Any failures found during testing will have documentation describing the failure, steps taken to correct the failure, and mitigation efforts to help reduce or prevent the failure from occurring in the future.
- **Care/Practice Settings** describes the type of settings in which the certification criteria are tested. eClinicalWorks V11 is an ONC-certified product designed to be used in a variety of ambulatory care settings. For the purposes of real world testing, the care settings that will be used to test the certification criteria are listed in the following table. The care settings are sorted into two groups: Group A (Primary Care) and Group B (Specialty Care). Group A care settings use the e-prescription functionality, whereas Group B care settings typically do not. eClinicalWorks chose this grouping because not all customers use the full set of certification criteria:

Group A: Primary Care	Group B: Specialty Care
Family Practice	Vision
Pediatrics	Dermatology
OBGYN	Physical Therapy

- **Milestones** describes the milestones that will enable eClinicalWorks to evaluate the progress of the real world testing in achieving the expected outcome of each certification criterion.
- **Expected Outcome** describes the result of successfully completing the test case for a test to be marked as *Passed*.
- **Justification** provides the reasoning for the specified real world testing approach used by eClinicalWorks.

2. General Information

Developer Name	eClinicalWorks, LLC
Product Name and Version Number	eClinicalWorks V11
Product List (CHPL) IDs	15.04.04.2883.eCli.11.00.1.171228
Real World Testing Plans and Results	https://www.eclinicalworks.com/resources/certified-ehr-technology

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3. Acronyms and Terms

The following table lists the acronyms and terms used in this document:

Acronym/Term	Definition
ACK	HL7 message type used in message acknowledgement between health IT systems
ADT	Admit-Discharge-Transfer; HL7 message type used to communicate patient demographics, visit information, and events (e.g., patient admit, patient discharge, patient transfer, etc.)
API	Application Programming Interface
APU	Auto-Practice Upgrade
C-CDA	Consolidated Clinical Document Architecture
CCDS	Common Clinical Data Set
CQM	Clinical Quality Measures
eClinicalWorks P2P®	eClinicalWorks Provider-to-Provider network
eCW	eClinicalWorks
EHR	Electronic Health Record
ePHI	Electronic Protected Health Information
HIPAA	Health Insurance Portability and Accountability Act
NHCS	National Hospital Care Survey
ONC	Office of the National Coordinator for Health Information Technology
QBP	HL7 message type used for immunization queries between health IT systems and immunization information systems used by state registries
RSP	HL7 message type used for immunization responses between health IT systems and immunization information systems used by state registries
SQL	Structured Query Language
SVAP	Standards Version Advancement Process
USCDI	United States Core Data for Interoperability
VXU	HL7 message type used to transmit patient immunization information from health IT systems
XDR	Cross-Enterprise Document Reliable Interchange

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4. Milestones

The following table describes the eClinicalWorks 2022 Real World Testing Milestones:

Date/Timeline	Milestone
November 2021	**2022 Plan Submission:** Submit the 2022 Real World Testing Plan.
First week of January 2022	**Participant Identification:** Identify EHR users/practices to participate in Real World Testing, including: ▪ Explaining the scope of Real World Testing to eCW users/practices ▪ Confirming the criteria on which practices will agree to be tested
Last week of January 2022	**Participant Confirmation:** Finalize the list of participants.
February 2022	**Scheduling:** Determine the schedule for testing. eClinicalWorks will identify available dates/times to conduct testing/surveillance activities with the practice.
March - June 2022	**Testing Phase 1:** Conduct testing with the practices in accordance with the Testing Methodology/Method described for each certification criteria.
July 1, 2022 - July 15, 2022	**Initial Report Creation:** Compile all of the testing results into a report. The EHR Regulatory Compliance Team will review the results to identify any issues that were not resolved during the first testing phase and determine if a retest is required.
End of July - October 2022	**Testing Phase 2:** Conduct a second round of testing, if necessary. A retest may be required if there was a scheduling conflict, or if there is a gap in the data gathered during the first testing phase.
October - November 2022	**Lessons Learned Session:** Conduct a lessons-learned session to determine improvements for the next testing cycle. eClinicalWorks will make any changes or updates to the 2023 Real World Testing Plan, as needed.

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Date/Timeline	Milestone
November - December 2022	**Final Report Creation:** Finalize the report and submit it to the Technical Documentation Team.
December 2022	**2023 Plan Submission:** Submit the 2023 Real World Testing Plan with updates to the milestones timeline, certification criteria, or standards for calendar year 2023.

5. Standards Updates

For the pilot year of Real World Testing (calendar year 2022), eClinicalWorks will not be updating any standards (e.g., USCDI) through the Standards Version Advancement Process (SVAP). With the exception of the (c)(3) criterion, all certification criteria included in this test plan will be evaluated against the standards described in this section, as required by the 2015 Edition Health IT Certification Criteria. (c)(3) will be tested against the 2015 Edition Cures Update, because eClinicalWorks certified to this version in 2021.

eClinicalWorks expects to update its certified health IT to the USCDI and other standards as required by the 2015 Edition Cures Update in 2022. These changes will be reflected in an updated real world testing test plan in calendar year 2023.

(b)(1) Transitions of Care:

- §170.202(d) ONC Implementation Guide for Direct Edge Protocols, Version 1.1, June 25, 2014
- §170.202(a)(2) Direct Project: ONC Applicability Statement for Secure Health Transport, Version 1.2 August 2015
- §170.205(p)(1) IHE IT Infrastructure Technical Framework Volume 2b (ITI TF- 2b)
- §170.205(a)(3) HL7 Implementation Guide for CDA Release 2: IHE Health Story Consolidation, DSTU Release 1.1 (US Realm) Draft Standard for Trial Use July 2012
- §170.205(a)(4) HL7 Implementation Guide for CDA Release 2: Consolidated CDA Templates for Clinical Notes (US Realm), Draft Standard for Trial Use Release 2.1, August 2015
- §170.207(a)(4) International Health Terminology Standards Development Organisation (IHTSDO) Systematized Nomenclature of Medicine Clinical Terms (SNOMED CT®) U.S. Edition, September 2015 Release
- §170.207(a)(3) International Health Terminology Standards Development Organisation (IHTSDO) Systematized Nomenclature of Medicine Clinical Terms (SNOMED CT) International Release July 31, 2012 ,and US Extension to SNOMED CT March 2012
- §170.207(n)(1) Birth sex must be coded in accordance with HL7 Version 3 Standard, Value Sets for AdministrativeGender and NullFlavor

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- §170.207(q)(1) International Telecommunication Union E.123: Notation for national and international telephone numbers, e-mail addresses and web addresses and International Telecommunication Union E.164: The international public telecommunication numbering plan

(b)(2) Clinical Information Reconciliation and Incorporation:

- §170.205(a)(3) HL7 Implementation Guide for CDA Release 2: IHE Health Story Consolidation, DSTU Release 1.1 (US Realm) Draft Standard for Trial Use July 2012
- §170.205(a)(4) HL7 Implementation Guide for CDA Release 2: Consolidated CDA Templates for Clinical Notes (US Realm), Draft Standard for Trial Use Release 2.1, August 2015
- §170.207(a)(4) International Health Terminology Standards Development Organisation (IHTSDO) Systematized Nomenclature of Medicine Clinical Terms (SNOMED CT), U.S. Edition, September 2015 Release
- §170.207(d)(3) RxNorm, September 8, 2015 Full Release Update

(b)(3) Electronic Prescribing:

- §170.205(b)(1) NCPDP SCRIPT Standard, Implementation Guide, Version 2017071
- §170.207(d)(3) RxNorm, September 8, 2015 Full Release Update

(b)(6) Data Export:

- §170.205(a)(4) HL7 Implementation Guide for CDA Release 2: Consolidated CDA Templates for Clinical Notes (US Realm), Draft Standard for Trial Use Release 2.1, August 2015
- §170.207(a)(4) International Health Terminology Standards Development Organisation (IHTSDO) Systematized Nomenclature of Medicine Clinical Terms (SNOMED CT), U.S. Edition, September 2015 Release
- §170.207(i) ICD-10-CM

(c)(1) Clinical Quality Measures (CQMs) – Record and Export:

- §170.205(h)(2) HL7 CDA Release 2 Implementation Guide for: Quality Reporting Document Architecture – Category I (QRDA I); Release 1, DSTU Release 3 (US Realm), Volume 1

(c)(2) Clinical Quality Measures (CQMs) – Import and Calculate:

- §170.205(h)(2) HL7 CDA Release 2 Implementation Guide for: Quality Reporting Document Architecture – Category I (QRDA I); Release 1, DSTU Release 3 (US Realm), Volume 1

(c)(3) Clinical Quality Measures (CQMs) – Report:

- §170.205(h)(2) HL7 CDA Release 2 Implementation Guide for: Quality Reporting Document Architecture – Category I (QRDA I); Release 1, DSTU Release 3 (US Realm)), Volume 1
- §170.205(k)(1) Quality Reporting Document Architecture Category III, Implementation Guide for CDA Release 2
- § 170.205(k)(2) Errata to the HL7 Implementation Guide for CDA Release 2: Quality Reporting Document Architecture – Category III, DSTU Release 1 (US Realm), September 2014

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(e)(1) View, Download, and Transmit to 3rd Party:

- § 170.204(a)(1) Web Content Accessibility Guidelines (WCAG) 2.0, Level A Conformance
- § 170.204(a)(2) Web Content Accessibility Guidelines (WCAG) 2.0, Level AA Conformance
- 42 CFR 493.1291(c)(1) through (7)
  - For positive patient identification, either the patient's name and identification number, or a unique patient identifier and identification number; the name and address of the laboratory location where the test was performed; the test report date; the test performed; the specimen source, when appropriate; the test result and, if applicable, the units of measurement or interpretation, or both; and any information regarding the condition and disposition of specimens that do not meet the laboratory's criteria for acceptability.
- 42 CFR 493.1291(d) – Pertinent "reference intervals" or "normal" values, as determined by the laboratory performing the tests
- 42 CFR 493.1291(k)(2) – information for corrected reports whenever errors in the reported patient test results are detected by the performing laboratory
- § 170.205(a)(4) HL7 Implementation Guide for CDA Release 2: Consolidated CDA Templates for Clinical Notes (US Realm), Draft Standard for Trial Use Release 2.1, August 2015

(f)(1) Transmission to Immunization Registries:

- §170.205(e)(4) HL7 2.5.1 Implementation Specifications. HL7 2.5.1 Implementation Guide for Immunization Messaging, Release 1.5, October 2014 and HL7 Version 2.5.1 Implementation Guide for Immunization Messaging (Release 1.5) – Addendum, July 2015
- §170.207(e)(3) HL7 Standard Code Set CVX – Vaccines Administered, updates through August 17, 2015
- §170.207(e)(4) National Drug Code (NDC) Directory – Vaccine NDC Linker, updates through August 17, 2015

(f)(2) Transmission to Public Health Agencies – Syndromic Surveillance:

- §170.205(d)(4) HL7 2.5.1. Implementation specifications. PHIN Messaging Guide for Syndromic Surveillance: Emergency Department, Urgent, Care, Inpatient and Ambulatory Care, and Inpatient Settings, Release 2.0, April 21, 2015, and Erratum to the CDC PHIN 2.0 Implementation Guide, August 2015

(f)(7) Transmission to Public Health Agencies – Health Care Surveys:

- §170.205(s)(1) HL7 Implementation Guide for CDA Release 2: National Health Care Surveys (NHCS), Release 1 – US Realm, Draft Standard for Trial Use, December 2014

(g)(7) Application Access – Patient Selection:

- No mandatory standard specified in 2015 Edition Certification Criteria

(g)(8) Application Access – Data Category Request:

- Common Clinical Data Set (CCDS)

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(g)(9) Application Access – All Data Request:

- Common Clinical Data Set (CCDS)
- §170.205(a)(4) HL7 Implementation Guide for CDA Release 2: Consolidated CDA Templates for Clinical Notes (US Realm), Draft Standard for Trial Use Release 2.1, August 2015

(h)(1) Direct Project:

- §170.202(a)(2) Direct Project: ONC Applicability Statement for Secure Health Transport, Version 1.2, August 2015
- §170.202(e)(1) Delivery Notification - Implementation Guide for Delivery Notification in Direct v1.0

6. Test Plan

The following sections outline the test plans for the certification criteria identified in section 5. Standards Updates.

(b)(1) Transitions of Care

The following table outlines the test plan for the (b)(1) Transitions of Care criterion:

Testing Methodology/Method	The tester will identify a user who has sent a transition of care/referral summary to a different provider through the eClinicalWorks P2P network. The tester will observe the user performing the (b)(1) workflow (transition of care/referral summary using P2P) and visually confirm the following on the receiving side: ▪ The data is displayed in human readable format ▪ The data for each document section is individually displayed
Metric Definition	The user is able to create and send a transition of care/referral summary document through the eCW P2P workflow for three patients: ▪ Number of transition of care documents sent ▪ Number of transition of care documents received
Care/Practice Settings	eClinicalWorks V11 is a comprehensive electronic health record (EHR) software used in a variety of ambulatory care settings. The care settings used for testing this criterion will be Group A and Group B, as listed in section 1. Introduction depending on which practices have agreed to participate in Real World Testing. The (b)(1) criterion is applicable to any of the care settings described in this document.
Milestones	For a detailed milestone timeline, refer to section 4. Milestones.
Expected Outcome	Evidence of a transition of care/referral summary sent using XDR with all document sections visible to the user in a human readable format.
Justification	eClinicalWorks will report the number of transactions, along with the success rate, for sending and receiving transition of care documents using the eClinicalWorks P2P network. This approach is intended to demonstrate the real-world volume of P2P transactions.

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(b)(2) Clinical Information Reconciliation and Incorporation

The following table outlines the test plan for the (b)(2) Clinical Information Reconciliation and Incorporation criterion:

Testing Methodology/Method	The tester will identify a user that has received and incorporated a transition of care/referral summary document into the EHR. Once identified, the tester will visually confirm the following: ▪ The document was matched with the correct patient ▪ The user was able to reconcile data from the document and merge that data into the patient's Medication List, Medication Allergy List, and Problem List eClinicalWorks recognizes that not all customers use the full functionality of the certification criteria. If eClinicalWorks is unable to identify customers that use the (b)(2) criterion as defined in the regulation, then that will be reflected in the results report.
Metric Definition	Upon receipt of a transition of care/referral summary, the user can reconcile and incorporate at least one summary document through the eCW P2P workflow, and validate the following: ▪ The document is matched to the correct patient ▪ The data that represent the patient's active medication list, allergies and intolerance list, and problem list is reconciled into the patient's medical record In addition, the tester will identify the following: ▪ Number of medications incorporated into the patient's record ▪ Number of allergies and intolerances incorporated into the patient's record ▪ Number of problems incorporated into the patient's record
Care/Practice Settings	eClinicalWorks V11 is a comprehensive EHR software used in a variety of ambulatory care settings. The care settings used for testing this criterion will be Group A and Group B, as listed in section 1. Introduction depending on which practices have agreed to participate in Real World Testing. The (b)(2) criterion is applicable to any of the care settings described in this document.
Milestones	For a detailed milestone timeline, refer to section 4. Milestones.
Expected Outcome	A transition of care/referral summary document can be received and incorporated into the customer's EHR and the reconciliation of data into the correct patient's record was verified.

Justification	This approach is intended to ensure that users are matching C-CDAs received from external systems to the correct patient and that the data from the received document is incorporated into the patient's electronic record so that users have the full set of data when delivering patient care.

(b)(3) Electronic Prescribing

The following table outlines the test plan for the (b)(3) Electronic Prescribing criterion:

Testing Methodology/Method	eClinicalWorks partners with Surescripts® to validate and transmit electronic prescription orders to pharmacies. For the (b)(3) criterion, the tester will identify the number of transactions for the following transaction types: ▪ NewRx - new prescriptions ▪ RxChangeRequest and RxChangeResponse - requests and responses to change prescriptions ▪ CancelRx and CancelRxResponse - requests and responses to cancel prescriptions ▪ RxRenewalRequest and RxRenewalResponse - requests and responses to renew prescriptions ▪ RxFill - responses with fill status notifications ▪ RxHistoryRequest and RxHistoryResponse - requests and responses to medication histories ▪ Status - responses with acceptance of a transaction ▪ Error - responses that there was a problem with the transaction ▪ Verify - responses that a transaction requesting a return receipt has been received
Metric Definition	For each customer tested, the number of transactions sent for each transaction type, along with the success rate for each transaction type, will be recorded for a 90-day period.
Care/Practice Settings	eClinicalWorks V11 is a comprehensive EHR software used in a variety of ambulatory care settings. The care settings used for testing this criterion will be Group A, as listed in section 1. Introduction depending on which practices have agreed to participate in Real World Testing.
Milestones	For a detailed milestone timeline, refer to section 4. Milestones.
Expected Outcome	All transactions performed by the customer's EHR are accepted and validated by the Surescripts network.

Justification	eClinicalWorks will report the number of transactions, along with the success rate, for each transaction type listed in (b)(3). This approach is intended to demonstrate the real-world volume of e-prescription transactions that are processed between eClinicalWorks and Surescripts.

(b)(6) Data Export

The following table outlines the test plan for the (b)(6) Data Export criterion:

Testing Methodology/Method	The real world testing method for (b)(6) is based on the eClinicalWorks Data Portability testing procedure. For this criterion, the objective is to verify if customers can create a data export file. The tester will analyze a user's EHR/database to determine when the customer used the Data Export functionality to generate a C-CDA document and under what circumstances (e.g., real-time, scheduling, date range). Once identified, the tester will report the number of transactions under each scenario. eClinicalWorks recognizes that not all customers use the full functionality of the certification criteria. If eClinicalWorks is unable to identify customers that use the (b)(6) criterion as defined in the regulation, then that will be reflected in the results report.
Metric Definition	For each customer tested, an EHR user can create at least one data export file for each of the following scenarios: ▪ Real-time/on-demand ▪ Specific date range defined by the user
Care/Practice Settings	eClinicalWorks V11 is a comprehensive EHR software used in a variety of ambulatory care settings. The care settings used for testing this criterion will be Group A and Group B, as listed in section 1. Introduction depending on which practices have agreed to participate in Real World Testing. The (b)(2) criterion is applicable to any of the care settings described in this document.
Milestones	For a detailed milestone timeline, refer to section 4. Milestones.
Expected Outcome	The data export file (C-CDA) was successfully generated for each of the scenarios listed in the testing method (real-time/on-demand and specific date range defined by the user).
Justification	eClinicalWorks will report the number of transactions, along with the success rate, for each scenario listed in the (b)(6) testing method. This approach is intended to demonstrate the real-world volume of Data Portability files that are processed by eClinicalWorks V11.

(c)(1) Clinical Quality Measures (CQMs) - Record and Export, (c)(2) Clinical Quality Measures (CQMs) - Import and Calculate, and (c)(3) Clinical Quality Measures (CQMs) - Report

The following table outlines the test plan for the (c)(1) Clinical Quality Measures (CQMs) – Record and Export, (c)(2) Clinical Quality Measures (CQMs) – Import and Calculate, and (c)(3) Clinical Quality Measures (CQMs) – Report criteria:

Testing Methodology/Method	For the CQM criteria, eClinicalWorks will evaluate the reports generated by real-world users. The tester will identify the measures used by the customer and report how many files were generated for each measure.
Metric Definition	For each customer tested, at least one export file is created for each measure used by the customer.
Care/Practice Settings	eClinicalWorks V11 is a comprehensive EHR software used in a variety of ambulatory care settings. The care settings used for testing this criterion will be Group A and Group B, as listed in section 1. Introduction depending on which practices have agreed to participate in Real World Testing.
Milestones	For a detailed milestone timeline, refer to section 4. Milestones.
Expected Outcome	Users are able to generate an export file for each clinical quality measure used by the customer.
Justification	eClinicalWorks will report the number of export files, along with the success rate for each measure used by the customer. This approach is intended to demonstrate the real-world volume of CQMs that are processed by eClinicalWorks V11.

(e)(1) View, Download, and Transmit to 3rd Party

The following table outlines the test plan for the (e)(1) View, Download, and Transmit to 3rd Party criterion:

Testing Methodology/Method	The tester will identify a customer who has given eClinicalWorks Patient Portal™ access to patients. The tester will determine (through a SQL script or other means as determined by the eClinicalWorks R&D Team) the number of patients (for a single customer) who accessed the Patient Portal and were able to successfully view, download, or transmit their health information. The tester will also verify that the appropriate logging for each action is recorded by the EHR.
Metric Definition	For each customer tested, at least five patients are able to view, download, or transmit their health information within a 90-day period.

Care/Practice Settings	eClinicalWorks V11 is a comprehensive EHR software used in a variety of ambulatory care settings. The care settings used for testing this criterion will be Group A and Group B, as listed in section 1. Introduction depending on which practices have agreed to participate in Real World Testing.
Milestones	For a detailed milestone timeline, refer to section 4. Milestones.
Expected Outcome	Patients are able to view, download, or transmit their health information using the Patient Portal.
Justification	By performing a database audit on the Patient Portal, this approach is intended to verify that patients are able to access their health information according to the (e)(1) criterion. Looking at the database level and logs will enable eCW to identify any errors when patients attempted to view, download, or transmit their health information.

(f)(1) Transmission to Immunization Registries

The following table outlines the test plan for the (f)(1) Transmission to Immunization Registries criterion:

Testing Methodology/Method	The tester will identify a customer who has an active immunization interface with a state registry. The tester will evaluate (through a SQL script or other means as determined by the eClinicalWorks R&D Team) the number of VXU messages sent to an immunization registry that received a response within the past 90 days. For immunization queries (QBP), the tester will execute a script that evaluates the number of QBP messages sent to an immunization registry that received a response (RSP) within the past 90 days.
Metric Definition	For each customer tested, the following measures will be recorded for the past 90 days: ▪ Percentage of immunizations documented that are sent to a registry through an immunizations interface ▪ Percentage of immunization queries sent to a registry that receive a RSP immunization history response
Care/Practice Settings	eClinicalWorks will test with pediatric practices (Group A) because the administration of immunizations is common in pediatric care settings. The volume of administered immunizations with this group is expected to be high, which will provide a good sample size in the number of messages that are transmitted to immunization registries.
Milestones	For a detailed milestone timeline, refer to section 4. Milestones.

Expected Outcome	Users are able to document immunizations and receive a response from the registry acknowledging that the VXU or QBP message was successfully received.
Justification	By performing an audit with the immunization registries, this approach is intended to verify that VXU and QBP messages generated by the EHR are receiving their corresponding acknowledgement messages (i.e., ACK for VXU, RSP for QBP). Looking at the database level and logs will enable eCW to identify any errors at the time of transmission.

(f)(2) Transmission to Public Health Agencies - Syndromic Surveillance

The following table outlines the test plan for the (f)(2) Transmission to Public Health Agencies – Syndromic Surveillance criterion:

Testing Methodology/Method	The tester will identify a customer who has an active syndromic surveillance interface with a public health department/syndromic surveillance registry. The tester will evaluate (through a SQL script or other means as determined by the eClinicalWorks R&D Team) the number of ADT syndromic surveillance messages sent to a state registry that received a response within the past 90 days.
Metric Definition	For a single customer, the percentage of syndromic surveillance ADT messages sent to a public health department/syndromic surveillance registry that receive an acknowledgment (ACK) response within the past 90 days.
Care/Practice Settings	eClinicalWorks V11 is a comprehensive EHR software used in a variety of ambulatory care settings. The care settings used for testing this criterion will be Group A and Group B, as listed in section 1. Introduction depending on which practices have agreed to participate in Real World Testing.
Milestones	For a detailed milestone timeline, refer to section 4. Milestones.
Expected Outcome	As defined by the Metric Definition, syndromic surveillance messages transmitted to a registry are successfully received and acknowledged by a state registry.
Justification	By performing an audit with the syndromic surveillance registries, this approach is intended to verify that HL7 messages generated by the EHR are receiving the corresponding acknowledgement messages. Looking at the database level and logs will enable eCW to identify any errors at the time of transmission.

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(f)(7) Transmission to Public Health Agencies - Health Care Surveys

The following table outlines the test plan for the (f)(7) Transmission to Public Health Agencies – Health Care Surveys criterion:

Testing Methodology/Method	eClinicalWorks does not support a live interface for the submission of healthcare surveys. eCW users generate the healthcare survey XML document from the EHR and manually submit it to the CDC's NHCS Secure Data Transfer portal. To test (f)(7), after the tester has identified a customer that uses the healthcare survey functionality, the tester will query the customer's database (using the means determined by the eClinicalWorks R&D Team) to verify the number of healthcare surveys generated. The tester will work with the customer to verify or show proof of successful submission to the CDC's NHCS Secure Data Transfer portal.
Metric Definition	For a single customer, the number of healthcare surveys generated by the customer.
Care/Practice Settings	eClinicalWorks V11 is a comprehensive EHR software used in a variety of ambulatory care settings. The care settings used for testing this criterion will be Group A and Group B, as listed in section 1. Introduction depending on which practices have agreed to participate in Real World Testing.
Milestones	For a detailed milestone timeline, refer to section 4. Milestones.
Expected Outcome	Users are able to generate healthcare surveys that can be successfully submitted to the CDC's NHCS Secure Data Transfer portal.
Justification	By submitting healthcare surveys to the NHCS Secure Data Transfer portal, this approach is intended to verify that the XML documents generated by the EHR are properly formatted according to the (f)(7) criterion and confirm that they are accepted.

(g)(7) Application Access - Patient Selection

The following table outlines the test plan for the (g)(7) Application Access – Patient Selection criterion:

Testing Methodology/Method	The tester will identify a customer who has activated third-party API access for their EHR. The tester will evaluate (through a SQL script or other means as determined by the eClinicalWorks R&D Team) the number of API calls that request a patient ID according to the (g)(7) criterion.
Metric Definition	For each customer tested, the number of API requests for a patient ID.

Care/Practice Settings	eClinicalWorks V11 is a comprehensive EHR software used in a variety of ambulatory care settings. The care settings used for testing this criterion will be Group A and Group B, as listed in section 1. Introduction depending on which practices have agreed to participate in Real World Testing.
Milestones	For a detailed milestone timeline, refer to section 4. Milestones.
Expected Outcome	Retrieval of patient IDs, which will be used in subsequent testing for (g)(8) and (g)(9).
Justification	This approach is intended to demonstrate the volume of requests a customer receives from a third-party application using the customer's public API.

(g)(8) Application Access - Data Category Request

The following table outlines the test plan for the (g)(8) Application Access – Data Category Request criterion:

Testing Methodology/Method	The tester identifies a customer who has activated third-party API access for their EMR. The tester will evaluate (through a SQL script or other means as determined by the eClinicalWorks R&D Team) the number of API calls that request a data category from the Clinical Common Data Set (CCDS).
Metric Definition	For every customer tested, using the patient ID retrieved from the (g)(7) test case, the tester will check the number of times a request was made for the following data categories in the CCDS: ▪ Demographics ▪ Smoking status ▪ Problems ▪ Medications ▪ Medication allergies ▪ Laboratory tests ▪ Laboratory values/results ▪ Vital signs ▪ Procedures ▪ Care team members ▪ Immunizations ▪ Unique device identifiers for a patient's implantable device ▪ Assessment and treatment plan ▪ Goals ▪ Health concerns

Care/Practice Settings	eClinicalWorks V11 is a comprehensive EHR software used in a variety of ambulatory care settings. The care settings used for testing this criterion will be Group A and Group B, as listed in section 1. Introduction depending on which practices have agreed to participate in Real World Testing.
Milestones	For a detailed milestone timeline, refer to section 4. Milestones.
Expected Outcome	Retrieval of patient data from each data category request for each customer queried.
Justification	This approach is intended to ensure that each of the CCDS categories are accessible through the public API for each customer tested.

(g)(9) Application Access - All Data Request

The following table outlines the test plan for the (g)(9) Application Access – All Data Request criterion:

Testing Methodology/Method	The tester will identify a customer who has activated third-party API access for their EMR. The tester will evaluate (through a SQL script or other means as determined by the eClinicalWorks R&D Team) the number of API calls that request all data categories from the CCDS.
Metric Definition	For every customer tested, using the patient ID retrieved from the (g)(7) test case, the number of times a request was made for all data categories of the CCDS.
Care/Practice Settings	eClinicalWorks V11 is a comprehensive EHR software used in a variety of ambulatory care settings. The care settings used for testing this criterion will be Group A and Group B, as listed in section 1. Introduction depending on which practices have agreed to participate in Real World Testing.
Milestones	For a detailed milestone timeline, refer to section 4. Milestones.
Expected Outcome	Retrieval of patient data from all data categories of the CCDS.
Justification	This approach is intended to represent how a third-party application uses a customer's public API to retrieve all CCDS categories in C-CDA format, as defined by the (g)(9) criterion.

(h)(1) Direct Project

The following table outlines the test plan for the (h)(1) Direct Project criterion:

Testing Methodology/Method	The tester will identify a customer who has activated Direct Messaging within the EHR. The tester will evaluate (through a SQL script or other means as determined by the eClinicalWorks R&D Team) the number of direct messages sent within a 90-day period.
Metric Definition	▪ Number of direct messages sent during a 90-day period ▪ Number of direct messages sent with an attachment during a 90-day period ▪ Number of direct messages received during a 90-day period ▪ Number of direct messages received with an attachment during a 90-day period
Care/Practice Settings	eClinicalWorks V11 is a comprehensive EHR software used in a variety of ambulatory care settings. The care settings used for testing this criterion will be Group A and Group B, as listed in section 1. Introduction depending on which practices have agreed to participate in Real World Testing.
Milestones	For a detailed milestone timeline, refer to section 4. Milestones.
Expected Outcome	Message successfully received with evidence of a successful round trip of a direct message.
Justification	This approach is intended to demonstrate the volume of direct messages sent and received through the eClinicalWorks EHR.

7. 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 fully addresses the health IT developer's Real World Testing requirements.

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