Summary

This Real World Test (RWT) plan is intended to verify the adoption of Online Medical Record, Version 2013 certified functionality

The RWT plan will focus on certification criteria, represented as individual user stories for Ambulatory only care settings, Inpatient only care settings as well as user stories that are the same regardless of the care setting

User Story:	Care Coordination
§ 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)(6) Data export	
§ 170.315(h)(1) Direct Project	
§ 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)(3) Transmission to public health agencies — reportable laboratory tests and value/results	
§ 170.315(f)(5) Transmission to public health agencies — electronic case reporting	
§ 170.315(f)(6) Transmission to public health agencies — antimicrobial use and resistance reporting	
§ 170.315(g)(7) Application access— patient selection	
§ 170.315(g)(8) Application access— data category request	
§ 170.315(g)(9) Application access— all data request	

General Information

Developer Name:	*Beth Israel Deaconess Medical Center*
Product Name:	*Online Medical Record*
Version Number	*Online Medical Record v2013*
Certified Health IT Edition:	*2015 Edition*
Product List (CHPL) ID:	*15.07.07.1147.0N03.01.00.1.200319*
Real World Testing Public URL:	*https://www.bidmc.org/omr_rwtest*

Background

The following elements are addressed for each User Story (listed above). Ambulatory and Inpatient are the care settings where

- Testing methodology:
  - demonstrate real world interoperability and conformance to the the criterion requirements
  - include scenario and use case-focused testing
- Description:
  - of how the test is performed
  - of how conformance is demonstrated
- Schedule :
  - of key Real World Testing milestones;
- Expected Outcomes:
  - based on feature adoption in current year
- Measurement/ metric:
  - all measures used to validate criteria
- Justification for the Health IT Developer’s Real World Testing approach
  - description of how the measurements/metrics selected reflect the adoption rate of each required Real World Testing element

Introduction

The EHR analyzed in this Real World Test is Online Medical Record, an EHR designed to present medical information to healthcare providers in Ambulatory and Inpatient healthcare settings. The workflows in Online Medical Record help users with Transitions of Care, Electronic prescribing, public health initiatives and patient engagement.

The purpose of this testing is to validate the adoption of the current user interface and EHR capabilities and to provide evidence of usability within Online Medical Record v2013. To this end, measures of real world utilization of interoperability features and functionality are captured during the testing.

Care Coordination

Passed	
☐	§ 170.315(b)(1) Transitions of care
☐	§ 170.315(b)(2) Clinical information reconciliation and incorporation
☐	§ 170.315(b)(3) Electronic prescribing

Electronic Exchange

Passed	
☐	§ 170.315(h)(1) Direct Project

Patient Engagement

Passed	
☐	§ 170.315(e)(1) View, download, and transmit to 3rd party

Application Programming Interfaces

Passed	
☐	§ 170.315(g)(7) Application access— patient selection
☐	§ 170.315(g)(8) Application access— data category request
☐	§ 170.315(g)(9) Application access— all data request

Public Health

Passed	
☐	§ 170.315(f)(1) Transmission to immunization registries
☐	§ 170.315(f)(2) Transmission to public health agencies — syndromic surveillance
☐	§ 170.315(f)(3) Transmission to public health agencies — reportable laboratory tests and value/results
☐	§ 170.315(f)(5) Transmission to public health agencies — electronic case reporting
☐	§ 170.315(f)(6) Transmission to public health agencies — antimicrobial use and resistance reporting

Criteria	Care Setting	Measurement Period			Date		Key Milestones
Care Coordination							
§ 170.315(b)(1) Transitions of care § 170.315(b)(2) Clinical information reconciliation and incorporation § 170.315(h)(1) Direct Project: from the Electronic Exchange Category	Ambulatory & Inpatient	5/1/2023	-	8/31/2023	May, 2023	☐	• Confirm Trading Partner • Confirm ability to send and receive clinical documents • Confirm with TP that production data will be used, whether in an actual live environment or a copy of a live environment
					June, 2023	☐	• Care provider selects recipient from directory of Direct addresses and initiates sending of Clinical Document. The user is able to create a C-CDA Release 2.1 that also includes the reason for referral, and the referring or transitioning provider's name and office contact information. • C-CDA Care Referral or Referral Note is triggered to send via Direct Protocol
					June, 2023	☐	• System creates a C-CDA Release 2.1 Discharge Summary Document that also includes the discharge instructions. • System sends Clinical Document to direct address(es) of patient's provider(s)
					June, 2023	☐	• Use scorecard to grade C-CDA
					July, 2023	☐	• Care provider in system under test locates clinical document in provider's Tasks Queue or on patient record. • Provider confirms that the document is filed on the correct patient or refers it to an HIM queue for review if it is on the wrong patient
					July, 2023	☐	• The care provider reviews the record, and the patient's problems, medications, and medication allergies are merged into the system under test with no duplicates.
					August, 2023	☐	• Calculate and compile metrics
§ 170.315(b)(3) Electronic prescribing	Ambulatory & Inpatient	5/1/2023	-	8/31/2023	May, 2023	☐	• Confirm Trading Partner • Confirm ability to send and receive electronic prescriptions • Confirm with TP that production data will be used, whether in an actual live environment or a copy of a live environment
					June, 2023	☐	Prescription for non-controlled substance is shown in patient's record.
					August, 2023	☐	• Calculate and compile metrics
§ 170.315(b)(6) Data export	Ambulatory & Inpatient	6/1/2023	-	8/31/2023	June, 2023	☐	• Date and time ranges can be configurable via the UI • Targeted Practices can be configurable via the UI • Patients exported can be configurable via the UI
					June, 2023	☐	Confirm that file passes scorecard
					July, 2023	☐	Spot-checked C-CDAs pass scorecard
					August, 2023	☐	• Calculate and compile metrics
Patient Engagement							
§ 170.315(e)(1) View, download, and transmit to 3rd party	Ambulatory & Inpatient	5/1/2023	-	8/31/2023	May, 2023	☐	• Confirm Trading Partner • Confirm ability to provide patients timely access to their ePHI • Confirm with TP that production data will be used, whether in an actual live environment or a copy of a live environment
					June, 2023	☐	• Patient visits the BIDMC website and requests access to their patient portal. • Patient is provided information and an initial password for accessing the patient portal website, and successfully activates their portal account.
					June, 2023	☐	Record validation in the audit log that patient has transmitted the C-CDA via DIRECT or email
					August, 2023	☐	• Run Timely Access report in OMR and compare to patient visit report from EHR to determine percentage of patients who had access within 24 hours. • Calculate average of survey responses.
Public Health							
§ 170.315(f)(1) Transmission to immunization registries	Ambulatory & Inpatient	5/1/2023	-	8/31/2023	May, 2023	☐	• Has a Massachusetts immunization registry that is enabled for bi-directional send/receive of immunization data. • Already has a functional bi-directional immunization interface or would like to implement one to their registry.
					June, 2023	☐	Validate that immunization interface is functioning as expected
					July, 2023	☐	Verify immunization data was received in registry for patient A
					July, 2023	☐	Verify immunization data was received in EHR for patient B
					August, 2023	☐	• Calculate and compile metrics
§ 170.315(f)(2) Transmission to public health agencies — syndromic surveillance	Ambulatory & Inpatient	5/1/2023	-	8/31/2023	May, 2023	☐	Syndromic surveillance messages are successfully received and processed by public health agency.
					June, 2023	☐	Functioning HL7 2.5.1 interface to public health agency
					August, 2023	☐	• Calculate and compile metrics
§ 170.315(f)(3) Transmission to public health agencies —	Inpatient	5/1/2023	-	8/31/2023	May, 2023	☐	Client test partner selected

reportable laboratory tests and value/results					June, 2023	☐	Lab interface is functioning as expected
					July, 2023	☐	ACK confirmed
					August, 2023	☐	• Calculate and compile metrics
§ 170.315(f)(5) Transmission to public health agencies — electronic case reporting	Inpatient	5/1/2023	-	8/31/2023	May, 2023	☐	• Confirm Trading Partner • Confirm with TP that production data will be used, whether in an actual live environment or a copy of a live environment
					June, 2023	☐	Patient registered and queued for interface
					August, 2023	☐	
§ 170.315(f)(6) Transmission to public health agencies — antimicrobial use and resistance reporting	Ambulatory & Inpatient	5/1/2023	-	8/31/2023	May, 2023	☐	• Confirm Trading Partner • Confirm with TP that production data will be used, whether in an actual live environment or a copy of a live environment
					June 2023	☐	Reports are created
					August, 2023	☐	Using HAI Validator to validate report files
					August, 2023	☐	• Calculate and compile metrics
Application Programming Interfaces							
§ 170.315(g)(7) Application access— patient selection § 170.315(g)(8) Application access— data category request § 170.315(g)(9) Application access— all data request	Ambulatory & Inpatient	5/1/2023	-	8/31/2023	May, 2023	☐	• Identify partner who will test API using Postman • Ensure Postman is configured to access the patient data API, as described here.
					June, 2023	☐	Encounter is created and visually confirmed
					July, 2023	☐	All data resources are shown in Postman results
					July, 2023	☐	Visually validate Demographics, Problems, Medications and Allergies
					August, 2023	☐	• Calculate and compile metrics
Electronic Exchange							
§ 170.315(h)(1) Direct Project (Included with (b)(1) in the CareCoordination Category)	Ambulatory & Inpatient	5/1/2023	-	8/31/2023	SEE CARE COORDINATION		SEE CARE COORDINATION

Table of Contents	Associated Certification Criteria: § 170.315(b)(1) Transition of Care § 170.315(b)(2) Clinical information reconciliation and incorporation § 170.315(h)(1) Direct Project					
	Measure Description: **Send and receive Transition of Care (TOC) messages with other providers to close the referral loop. The patient's ePHI will be exchanged using a C-CDA 2.1 Care Referral or Referral Note and DIRECT secure messaging for data transport. Patient data from incoming TOCs will be reconciled with existing data in the EHR including, at minimum, the patient's problems, medications, and medication allergies.**	Justification: **We chose to concentrate on the aspects of this criterion that would: 1) Demonstrate a streamlined provider-to-provider patient referrals and transitions of care with the ultimate goal being higher quality patient care 2) eliminate as much risk of data entry errors as possible by transmitting patient data securely and electronically rather than relying on manual data entry for referrals 3) reduce the overall time burden of manual data entry 4) ensure private and secure transmission of patients' PHI 5) result in increased interoperability between disparate HIT systems.**				
	Metric Description: **1) 90 percent of outbound TOC's successfully received by HISP 2) 75 percent of trading partner's TOC C-CDAs successfully received by system under test. 3) Average score between 1 and 3 (1=Easy to use, 5=Unable to access) for reconciliation of patients' problems, medications, and medication allergies from incoming TOCs**		Standards Implemented: **N/A**			
	Developer Info: **Beth Israel Deaconess Medical Center 300 Brookline Avenue Boston, MA 02215 617.754.8031** Care Setting: **Ambulatory and Inpatient**	Product Info: **Product Name: Online Medical Record Product Version: 2013** CHPL ID: **15.07.07.1147.0N03.01.00.1.200319**	Methods Use to Demonstrate Interoperability: **1) HISP via Direct Protocol (SMTP) 2) HTTPS via secure provider portal**			

Test Step:	Testing Procedure:	Expected Outcomes:	Key Milestone Date:	Key Milestone:	Outcomes:	Comments:
1	Identify Trading Partner (TP) and coordinate with TP for sending/receiving clinical documents using production data as described in this RWT plan.	• Confirm Trading Partner • Confirm ability to send and receive clinical documents • Confirm with TP that production data will be used, whether in an actual live environment or a copy of a live environment	May, 2023	☐		
*	Next 2 steps are for Ambulatory setting only					
2a	Patient A has encounter with care provider and data is captured in EHR	• CCDS data elements captured in EHR (system under test)				
3a	Care provider initiates TOC to TP EHR in EHR	• Care provider selects recipient from directory of Direct addresses and initiates sending of Clinical Document. The user is able to create a C-CDA Release 2.1 that also includes the reason for referral, and the referring or transitioning provider's name and office contact information. • C-CDA Care Referral or Referral Note is triggered to send via Direct Protocol	June, 2023	☐		
	* Next 2 steps are for Inpatient setting only	Provider had an encounter that required a patient was referred or transition to another care setting				
2i	Patient A has inpatient admission and discharge and data is captured in EHR	• CCDS data elements captured in EHR (system under test) • Care provider completes discharge documentation • Patient's provider(s) (PCP, referring MD, etc) captured in EHR • Patient is discharged				
3i	System initiates TOC in EHR at discharge	• System creates a C-CDA Release 2.1 Discharge Summary Document that also includes the discharge instructions. • System sends Clinical Document to direct address(es) of patient's provider(s)	June, 2023	☐		
*	Next steps take place in trading partner's EHR.					

4	Spot check that C-CDA for Patient A contains CCDS data elements.	• Use scorecard to grade C-CDA	June, 2023	☐		
5	Trading partner refers Patient B from TP EHR to system under test by generating C-CDA Clinical Document or Referral Note.	• Care provider selects recipient from directory of Direct addresses and initiates sending of Clinical Document. • Clinical document is sent to system under test.				
6	In system under test, tester acknowledges receipt of valid Clinical Document.	• Care provider in system under test locates clinical document in provider's Tasks Queue or on patient record. • Provider confirms that the document is filed on the correct patient or refers it to an HIM queue for review if it is on the	July, 2023	☐		
7	In system under test, the incoming data is incorporated via reconciliation into Patient B's existing medical record.	• The care provider reviews the record, and the patient's problems, medications, and medication allergies are merged into the system under test with no duplicates.	July, 2023	☐		
8	Calculate and compile metrics		August, 2023	☐		

	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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	Real World Testing Public URL: https://www.bidmc.org/omrrwt

Table of Contents	Associated Certification Criteria: § 170.315(b)(6) - Data export					
	Measure Description: **Export all available data elements from the Common Clinical Dataset (CCDS) for a population of patients for use in a different health information technology product or a third party system. This export can be used for many purposes, including data portability when a physician practice switches to a new EHR platform.**	Justification: **We chose to concentrate on the aspects of this criterion that would: 1) demonstrate Online Medical Record's ability to export batches of patient data in a straightforward fashion 2) facilitate interoperability by providing the exported data in the form of valid CCD files that conform to the HL7 standards as described in the HL7 Implementation Guide for CDA® Release 2: Consolidated CDA Templates for Clinical Notes (US Realm).**				
	Metric Description: **1) 100 Percent of exports ran at the correct time. 2) C-CDA count matches actual patient count for requested date range. 3) Spot-checked C-CDAs pass scorecard with average overall grade of "C" or better.**		Standards Implemented: **N/A**			
	Developer Info: **Beth Israel Deaconess Medical Center 300 Brookline Avenue Boston, MA 02215 617.754.8031** Care Setting: **Inpatient and Ambulatory**	Product Info: **Product Name: Online Medical Record Product Version: 2013** CHPL ID: **15.07.07.1147.0N03.01.00.1.200319**	Methods Use to Demonstrate Interoperability: **1) Visual validation/counting 2) Test output file with C-CDA scorecard to ensure correct format/contents.**			

Test Step:	Testing Procedure:	Expected Outcomes:	Key Milestone Date:	Key Milestone:	Outcomes:	Comment(s):
1	Identify client and coordinate with client for testing export.	• Confirm client • Confirm with client that production data will be used, whether in an actual live environment or a copy of a live environment	May, 2023	☐		
				☐		
2	Using production data in an actual live environment or copy of live environment, demonstrate the ability to configure data export configurations for Timeframe and Location	• Date and time ranges can be configurable via the UI • Targeted Practices can be configurable via the UI • Patients exported can be configurable via the UI	June, 2023	☐		
3	Demonstrate the ability to limit the set of users who can create export summaries	Logging in as an Admin will allow access to the export functionality				
4	Confirm users roles that have been denied export summary access cannot create export summaries	Logging in as a non-Admin will not allow access to the export functionality				
5	Create and validate an export for a single patient	Confirm that file passes scorecard	June, 2023	☐		
6	Create an export summary for data within a entered date and time range	• Data was available for the entered date and time range • The export summary contained data only within that date and time range				
7	Create an export summary in real time	Spot-checked C-CDAs pass scorecard	July, 2023	☐		
8	Create an export summary based on a relative date and time (Ex. Every first of every month @ 7 AM)	The scheduled export summary would be display and be visually validated				
9	Create an export summary for a specific date/time (Ex. 07/16/2021 @ 3:30 PM)	• The scheduled export summary was created successfully • The specific date/time would be in the near future so the export could be confirmed				
10	Save the export summary to a preferred location at the time of export.	• Saving to a preferred location is allowed • Visually confirming the export after save is performed and successful				
11	Calculate and compile metrics		August, 2023	☐		

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Real World Testing Public URL: https://www.bidmc.org/omrrwt

Table of Contents	Associated Certification Criteria: 170.315(e)(1) View, Download, and Transmit to 3rd Party					
	Measure Description: **Provide patient (and their authorized representatives) user friendly, secure Portal access to their PHI in C-CDA 2.1 HL7 Standard format. Allowing patient to download a summary in both a human readable format and using the CCD document template of the Consolidated CDA Release 2.1 containing:** **• The provider's name and hospital contact information** **• Laboratory test report(s)** **• Diagnostic image report(s)**	Justification: **We chose to concentrate on the aspects of this criterion that would empower patients with timely electronic access to comprehensive, useful ePHI.**				
	Metric Description: **1) 80 percent of unique patient with encounters in the review period are provided timely access (within 24 hours of their encounter) to health information to view online, download, and transmit to a third party.** **2) Average score between 1 and 3 (1=Easy to use, 5=Unable to access) for patients or Authorized Representatives who tried to access the patient portal and responded to survey questions.** **3) Average score between 1 and 3 (1=Easy to download/transmit, 5=Unable to download/transmit) for patients or Authorized Representatives who accessed the patient portal and tried to download or transmit a C-CDA.**		Standards Implemented: **N/A**			
	Developer Info: **Beth Israel Deaconess Medical Center** **300 Brookline Avenue** **Boston, MA 02215** **617.754.8031** Care Setting: **Ambulatory/Inpatient** **The functionality for the criteria is the same regardless of the care setting.**	Product Info: **Product Name: Online Medical Record** **Product Version: 2013** CHPL ID: **15.07.07.1147.0N03.01.00.1.200319**	Methods Use to Demonstrate Interoperability: **1) Direct Protocol Send Functionality** **2) SMTP Email Send Functionality** **3) HTTPS via secure portal Access for patient from any browser**			

Test Step:	Testing Procedure:	Expected Outcomes:	Key Milestone Date:	Key Milestone:	Outcomes:	Comment(s)
1	Identify Trading Partner (TP) and coordinate with TP for providing patients timely access to their ePHI using production data as described in this RWT plan.	• Confirm Trading Partner • Confirm ability to provide patients timely access to their ePHI • Confirm with TP that production data will be used, whether in an actual live environment or a copy of a live environment	May, 2023	☐		
2	For a period of time (1 month), monitor the system as the below steps (3-12) take place continuously.	Many patient visits will occur during the period of time, generating a sufficient amount of data for calculating the metrics at the end of testing.				
3	Patient arrives for a visit	Patient demographics are captured in the EHR				
4	Provider Charts on the Patients health status	CCDS data elements are recorded in EHR				
5	Provider Signs note or patient checks out or is discharged	C-CDA is created and stored in EHR database. A link is made available to the patient via the patient portal.				

6	EHR system generates CCD including all provided CCDS data	• Validate that a C-CDA has been triggered. • Ensure patient is mapped to the right provider and practice. • Visually verify CCDS data sections exist with accurate information • Validate code systems and format with ScoreCard or ETT tool for schema validation.				
7	Patient activates Portal	• Patient visits the BIDMC website and requests access to their patient portal. • Patient is provided information and an initial password for accessing the patient portal website, and successfully activates their portal account.	June, 2023	☐		
8	Patient or authorized representative logs into Portal	• URL is provided to patient in an email or • the Patient is provided the URL while in the physician's office. • Record validation in the audit log that URL is functional				
9	Patient or authorized representative views C-CDA or chooses a date range of CCDs to view	• Record validation in the audit log that patient has viewed C-CDA				
10	Patient or authorized representative downloads C-CDA their choice of xml or pdf	Record validation in the audit log that patient has downloaded C-CDA				
11	Patient or authorized representative transmits:	Record validation in the audit log that patient has transmitted the C-CDA via DIRECT or email	June, 2023	☐		
a	C-CDA via Direct Protocol to a provider					
b	C-CDA via email to others					
12	Request survey response on ease of use and accessibility.	Patient or authorized representative provides a score from 1 (easy) to 5 (unable) on the following criteria: • accessing the portal • downloading and/or transmitting ePHI				
13	Calculate and compile metrics	• Run Timely Access report in OMR and compare to patient visit report from EHR to determine percentage of patients who had access within 24 hours. • Calculate average of survey responses.	August, 2023	☐		

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Table of Contents	Associated Certification Criteria: § 170.315(b)(3) Electronic prescribing					
	Measure Description: **Prescription-related electronic transaction:** **Create, Change, Cancel, Renew, Fill Status, Medication History including Status, Errors and Verification.**	Justification: **We chose to concentrate on the aspects of this criterion that would demonstrate the importance of the electronic prescription process in terms of patient care. Managing prescriptions electronically, as opposed to handwriting them, helps to ensure medications are accurate and not in conflict with each other by reducing the possibility of human error. Electronic prescribing with two factor authentication allows providers to securely transmit prescriptions for controlled substances.**				
	Metric Description: **1. At least 90 percent of all prescriptions are ePrescribed (as opposed to written)** **2. Average score between 1 and 3 (1=Easy to use, 5=Unable to access) for each activity (send new script, change request from pharmacy, acknowledgement of controlled substance)**		Standards Implemented: **• § 170.205(b)(1) NCPDP SCRIPT Standard, Implementation Guide, Version 2017071** **• § 170.207(d)(3) RxNorm, September 8, 2015 Full Release Update**			
	Developer Info: **Beth Israel Deaconess Medical Center** **300 Brookline Avenue** **Boston, MA 02215** **617.754.8031** Care Setting: **Ambulatory Only**	Product Info: **Product Name: Online Medical Record** **Product Version: 2013** CHPL ID: **15.07.07.1147.0N03.01.00.1.200319**	Methods Use to Demonstrate Interoperability:			
Test Step:	Testing Procedure:	Expected Outcomes:	Key Milestone Date:	Key Milestone:	Outcomes:	Comments:
1	Identify Trading Partner (TP) and coordinate with TP for sending/receiving electronic prescriptions using production data as described in this RWT plan.	• Confirm Trading Partner • Confirm ability to send and receive electronic prescriptions • Confirm with TP that production data will be used, whether in an actual live environment or	May, 2023	☐		
2	Open a patient record and add a prescription order for a non-controlled substance, including primary and secondary diagnoses.	Prescription for non-controlled substance is shown in patient's record.	June, 2023	☐		
3	Select a pharmacy to receive the prescription. Sign the prescription so that the order is sent	Pharmacy confirms receipt of prescription electronically. Primary and Secondary diagnoses are shown with prescription.				
4	Open a patient record and add a prescription order for a controlled substance, including primary and secondary diagnoses.	Prescription for controlled substance is shown in patient's record.				
5	Select a pharmacy.	Pharmacy is selected.				
6	Sign the prescription and initiate two factor authentication.	Care provider confirms two factor authentication is successful. Pharmacy confirms receipt of prescription electronically.				
7	Modify the dosage of the existing non-controlled substance prescription.	Pharmacy shows modified prescription record.				
8	Query the status of the prescription order from within the EHR.	EHR successfully receives fill status.				
9	Pharmacy requests a refill.	Care provider receives and approves refill request.				
10	Calculate and compile metrics		August, 2023	☐		

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Table of Contents	Associated Certification Criteria: §170.315(f)(1) Transmission to immunization registries					
	Measure Description: **Create and transmit immunization information. Enable a user to request, access, and display a patient's evaluated immunization history and the immunization forecast from an immunization registry**	Justification: **We chose to concentrate on the aspects of this criterion that would provide the most patient care value in an actual setting. Immunization registries can be very helpful in directing and informing patient care and in cost control through identification of needed immunizations and elimination of redundant immunizations.**				
	Metric Description: **1) 90 percent correct immunization records successfully posted to registry confirmed by visual validation.** **2) 90 percent correct correct immunization history records successfully received in EHR confirmed by visual validation.** **3) Successful Transmission to Public Health Registry will be reviewed for ACK & NAK to ensure 100% successful transmission.**		Standards Implemented: **N/A**			
	Developer Info: **Beth Israel Deaconess Medical Center** **300 Brookline Avenue** **Boston, MA 02215** **617.754.8031** Care Setting: **Inpatient and Ambulatory**	Product Info: **Product Name: Online Medical Record** **Product Version: 2013** CHPL ID: **15.07.07.1147.0N03.01.00.1.200319**	Methods Use to Demonstrate Interoperability: **1) SFTP** **2) TCP/IP** **3) Webservice** **4) HL7 Standard Code Set CVX – Vaccine AdministeredOID: 2.16.840.1.113883.12.292** **5) National Drug Code Directory OID: 2.16.840.1.113883.6.69** **6) SOAP-based standard for transport of immunization data**			

Test Step:	Testing Procedure:	Expected Outcomes:	Key Milestone Date:	Key Milestone:	Outcomes:	Comment(s)
1	Identify client who: • Already has a functional bi-directional Immunization interface to Massachusetts state registry	• Has a Massachusetts immunization registry that is enabled for bi-directional send/receive of immunization data. • Already has a functional bi-directional immunization interface or would like to implement one to their registry.	May, 2023	☐		
2	Implement bi-directional immunization interface (if interface not already in place)	Validate that immunization interface is functioning as expected	June, 2023	☐		
3	Determine whether test or production interface will be used.	If production, determine whether an actual patient or a test patient will be used.				
4	Create a new immunization record	• Register a patient or create a new patient “A” in Client EHR and create a current patient encounter. • Record an immunization in Client EHR.				
5	Create a new query	• Select a patient or create a new patient “B” in Client EHR and create a current patient encounter. • Request immunization record in Client EHR.				
6	Run immunization process to send/receive from registry (assuming process is batch, rather than real-time).	Confirm send/received functionality				
7	Access registry to verify that immunization data was received for patient A.	Verify immunization data was received in registry for patient A	July, 2023	☐		
8	Access EHR to verify that immunization data was received for patient B.	Verify immunization data was received in EHR for patient B	July, 2023	☐		
9	Calculate and compile metrics	See above	August, 2023	☐		

	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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	Date: 11/22/22
	Real World Testing Public URL: https://www.bidmc.org/omrrwt

Table of Contents	Associated Certification Criteria: §170.315(f)(2) Transmission to public health agencies — syndromic surveillance					
	Measure Description: **Create syndromic surveillance messages and transmit to public health agencies.**	Justification: **We chose to concentrate on the aspects of this criterion that would:** **1) Ensure all patients flagged will have health data sent for surveillance** **2) Allow for health threats to be reported faster.** **3) Provide information to the CDC or other registries to identify illness clusters early, before diagnoses are confirmed and reported to public health agencies, and to mobilize a rapid response, thereby reducing morbidity and mortality.**				
	Metric Description: **1) 95 percent of HL7 Syndromic Surveillance messages successfully sent and acknowledged (via HL7 ACK) by public health agency**		Standards Implemented: **N/A**			
	Developer Info: **Beth Israel Deaconess Medical Center** **300 Brookline Avenue** **Boston, MA 02215** **617.754.8031** Care Setting: **Ambulatory/Inpatient** **The functionality for the criteria is the same regardless of the care setting.**	Product Info: **Product Name: Online Medical Record** **Product Version: 2013** CHPL ID: **15.07.07.1147.0N03.01.00.1.200319**	Methods Use to Demonstrate Interoperability: **1) ICD-10-CM** **2) SNOMED CT®** **3) SFTP** **4) TCP/IP** **5) Webservice**			

Test Step:	Testing Procedure:	Expected Outcomes:	Key Milestone Date:	Key Milestone:	Outcomes:	Comment(s)
1	Identify Trading Partner (TP) and coordinate with TP for transmitting syndromic surveillance records to Massachusetts Department of Public Heallth using production data as described in this RWT plan.	Syndromic surveillance messages are successfully received and processed by public health agency.	May, 2023	☐		
2	Send-only public health interface with MA DPH is in place.	Functioning HL7 2.5.1 interface to public health agency	June, 2023	☐		
3	Identify a Live ED Patient A that has one or more ICD-10 diagnosis codes present in the Triggers event table that lists reportable Syndromic Surveillance Diagnoses	Patient registered and queued for interface				
4	Real Time syndromic surveillance process creates HL7 messages when triggered.	• Ensure messages are de-identified per CDC PHIN Messaging Guide requirements • Messages sent to public health agency				
5	Check logs for whether HL7 messages ACKed by agency	HL7 messages are successfully received and ACKed				
6	Check logs to verify that public health data was received for patient A.	Public health successfully processed by agency				
7	Calculate and compile metrics		August, 2023	☐		

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	Associated Certification Criteria: **§170.315(f)(3) Transmission to public health agencies — reportable laboratory tests and value/results**					
	Measure Description: **Create and transmit HL7 lab result messages to public health agency.**	**Justification:** **We wanted to focus on aspects of this criterion that would generally provide the most public health benefit. State agencies provide statistics that can be very helpful to patient care, epidemiologists and government for identifying disease outbreaks, epidemics and even pandemics.**				
	Metric Description: **1) 80 percent of HL7 Reportable lab messages successfully sent and acknowledged (via HL7 ACK) by public health agency**		**Standards Implemented:** **N/A**			
	Developer Info: **Beth Israel Deaconess Medical Center** **300 Brookline Avenue** **Boston, MA 02215** **617.754.8031** **Care Setting:** **Inpatient and Ambulatory**	**Product Info:** **Product Name: Online Medical Record** **Product Version: 2013** **CHPL ID:** **15.07.07.1147.0N03.01.00.1.200319**	**Methods Use to Demonstrate Interoperability:** **1) Table of reportable lab tests based on LOINC® Code**			
Test Step:	**Testing Procedure:**	**Expected Outcomes:**	**Key Milestone Date:**	**Key Milestone:**	**Outcomes:**	**Comment(s)**
1	Identify client who: • Already has a functional reportable lab (EHR) interface to Massachusetts state registry	Client test partner selected	May, 2023	☐		
2	Implement send-only reportable lab interface (if interface not already in place)	Lab interface is functioning as expected	June, 2023	☐		
3	Determine whether an actual patient or a test patient will be used	Environment and patient selected				
4	Create a new patient encounter and orders for lab tests	Confirm encounter and order				
5	Register a patient or create a new patient "A" in Client EHR and create a current patient encounter	Confirm patient and encounter				
6	Enter one or more orders for laboratory tests	Confirm order(s) are entered				
7	In Client Laboratory Information System (LIS), result these tests.	Confirm tests have been resulted				
8	Make note of the LOINC code(s) for each result to determine whether each code is present in the list of reportable codes.	Record LOINC code(s) and confirm in list of reportable codes				
9	Make sure LIS generates HL7 ORU (Result) messages for each patient who has a lab result	Confirm results messages for each patient and data sent				
10	Verify ACK message received	ACK confirmed	July, 2023	☐		
11	Calculate and compile metrics		August, 2023	☐		
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Table of Contents	Associated Certification Criteria: § 170.315(f)(5) Transmission to public health agencies — electronic case reporting					
	Measure Description: **Create Electronic Case Reports (eCR) for transmission to public health agency based on a specific LOINC, ICD-10 and SNOMED codes entered in a patient's encounter. eCR functionality looks up the patient's codes in the table and, if appropriate, sends an eCR message to the health agency.**	**Justification:** **We chose to focus on aspects of this criterion that would provide the most patient care value in an actual setting. Public health registries can be very helpful to patient care, epidemiologists and government for identifying disease outbreaks, epidemics and even pandemics.**				
	Metric Description: **1. 90% of case report spot checks match EHR data for report range**		**Standards Implemented:** **N/A**			
	Developer Info: **Beth Israel Deaconess Medical Center** **300 Brookline Avenue** **Boston, MA 02215** **617.754.8031** **Care Setting:** **Inpatient and Ambulatory**	**Product Info:** **Product Name: Online Medical Record** **Product Version: 2013** **CHPL ID:** **15.07.07.1147.0N03.01.00.1.200319**	**Methods Use to Demonstrate Interoperability:** **1) Table of Trigger Events based on LOINC, ICD-10 and SNOMED codes.** **2) Use of USCDI**			

Test Step:	Testing Procedure:	Expected Outcomes:	Key Milestone Date:	Key Milestone:	Outcomes:	Comment(s)
1	Identify Trading Partner (TP) and coordinate with TP for generating electronic case reports.	• Confirm Trading Partner • Confirm with TP that production data will be used, whether in an actual live environment or a copy of a live environment	May, 2023	☐		
2	Create patient encounters. • Register patients or create new patients in Client EHR and create a current patient encounter • Enter one or more SNOMED Codes or ICD-10 diagnosis codes present in the Trigger Events table that lists reportable eCR diagnoses	Patient registered and queued for interface	June, 2023	☐		
3	Enter Lab results through EHR or Lab interface. Make sure LOINC codes correspond to codes present in the Trigger Events table that lists reportable LOINC codes.	Patient queued for interface				
4	Run eCR process to send to public health agency (assuming process is batch, rather than real-time).	Messages are generated				
5	Validate messages	Messages are reviewed and compared with data in EHR				
6	Calculate and compile metrics		August, 2023	☐		

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Table of Contents	§ 170.315(f)(6) Transmission to public health agencies — antimicrobial use and resistance reporting					
	Measure Description: **Create antimicrobial use and resistance reports.**	Justification: **We chose to focus on aspects of this criterion that would demonstrate the value of using electronic health records to generate reports for submission to public health agencies.**				
	Metric Description: **1. 95% of report spot checks match EHR data for report range** **2. 95% of reports generated by system validate using HAI Validator**		Standards Implemented: **N/A**			
	Developer Info: **Beth Israel Deaconess Medical Center** **300 Brookline Avenue** **Boston, MA 02215** **617.754.8031** Care Setting: **Inpatient and Ambulatory**	Product Info: **Product Name: Online Medical Record** **Product Version: 2013** CHPL ID: **15.07.07.1147.0N03.01.00.1.200319**	Methods Use to Demonstrate Interoperability: **1) Table of Trigger Events based on LOINC, ICD-10 and SNOMED codes.**			
Test Step:	**Testing Procedure:**	**Expected Outcomes:**	**Key Milestone Date:**	**Key Milestone:**	**Outcomes:**	**Comments:**
1	Identify Trading Partner (TP) and coordinate with TP for generating electronic antimicrobial use and resistance reports.	• Confirm Trading Partner • Confirm with TP that production data will be used, whether in an actual live environment or a copy of a live environment	May, 2023	☐		
2	Generate antimicrobial use and resistance reports	Reports are created	June 2023	☐		
3	Spot check reports	Reports match EHR data for specified date range				
4	Validate reports	Using HAI Validator to validate report files	August, 2023	☐		
5	Calculate and compile metrics		August, 2023	☐		
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Table of Contents	Associated Certification Criteria: § 170.315(g)(7) Application access— patient selection § 170.315(g)(8) Application access— data category request § 170.315(g)(9) Application access— all data request					
	Measure Description: **Enable a patient to access their electronic health data. They have had a healthcare encounter with a provider using an EHR that is integrated with an API that is used for secure transmission of PHI. They would like to view the results from that encounter along with the rest of their electronic health record.**	Justification: **CMS has a focus on empowering patients by providing them with an electronic copy of their health record. We agree that this is very important for patient satisfaction and improving population health in general.**				
	Metric Description: **1) Testing partner is able to retrieve patient data from API via Postman for 90 percent of encounters.** **2) In 90 percent of encounters from Step #1, API data matches data from EHR. This will be confirmed by visual validation of the following resources:** **• Demographics** **• Problems** **• Medications** **• Allergies**		Standards Implemented: **N/A**			
	Developer Info: **Beth Israel Deaconess Medical Center** **300 Brookline Avenue** **Boston, MA 02215** **617.754.8031** Care Setting: **Inpatient and Ambulatory**	Product Info: **Product Name: Online Medical Record** **Product Version: 2013** CHPL ID: **15.07.07.1147.0N03.01.00.1.200319**	Methods Use to Demonstrate Interoperability: **1) API**			

Test Step:	Testing Procedure:	Expected Outcomes:	Key Milestone Date:	Key Milestone:	Outcomes:	Comment(s)
1	Identify Trading Partner (TP) and coordinate with TP for providing patients timely access to their ePHI using production data as described in this RWT plan.	• Identify partner who will test API using Postman • Ensure Postman is configured to access the patient data API, as described here.	May, 2023	☐		
2	Patient A has encounter with care provider who uses EHR described above.	Encounter is created and visually confirmed	June, 2023	☐		
3	Provider captures CCDS data elements in EHR	CCDS data elements are validated in the system				
4	Provider manually generates Care/Referral Summary C-CDA post-visit or ensures that the EHR generates one automatically.	C-CDA is confirmed for the specified patient				
5	Partner connects to API using Postman	Postman is able to successfully connect to API				
6	Partner sends request to API to pull all patient data for Patient A	All data resources are shown in Postman results	July, 2023	☐		
7	Partner sends request to API to pull full set of data for a given category for Patient A	Requested category's data resources are shown in Postman results				
8	Partner sends request to API to pull data for Patient A for a specific date and specific date range	• Filtering data by a specific date returns data accurately and as expected • Filtering data by a specific date range returns data accurately and as expected				
9	Confirm via visual inspection of Postman results that the data for Demographics, Problems, Medications and Allergies matches SUT	Visually validate Demographics, Problems, Medications and Allergies	July, 2023	☐		
10	Calculate and compile metrics		August, 2023	☐		

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