REAL WORLD TEST RESULT 2024

1/21/2025

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Revision History

Version	Date	Description
1	01/21/2025	Initial draft of Real World Test Result 2024

GENERAL INFORMATION

Developer Name	ZH Healthcare, Inc.
Product Name(s)	blueEHR
Version Number(s)	3
Certified Health IT Product List (CHPL) ID(s)	15.02.05.3076.ZHHC.01.02.1.220119
Developer Real World Testing Plan and Results Report Page URL	https://blueehr.com/certifications-and-costs/
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Introduction

blueEHR is a cloud-based application. The clients are using the application in a SaaS model. Each client will have their own database. All the certified modules are available for all the clients, the application is the same, but databases are different. Based on the specialty of the client, the usage might vary from client to client. Real World Testing (RWT) Result is taken from the production data based on the usage of the clients. For the certified modules that is not used by any clients, ZH tested the functionality in production using ZH's account. ZH's account is in production environment but does not have production data. For any measurement/metric, that requires actual patient data, we used ZH's account, as per our contracts with clients, nobody in the organization is authorized to access actual production data. For example, we can get the count of CCDA's transmitted in a period, but we are not authorized to access the actual file to check the formatting.

There are changes made in couple of measurement/metric, the same is described in the respective scenarios.

Certification Criteria Tested

- 170.315 (b)(1): Transitions of Care
- 170.315 (b)(2): Clinical Information Reconciliation and Incorporation
- 170.315 (b)(10): Electronic Health Information Export
- 170.315 (c)(1) Clinical Quality Measures - Record and Export
- 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 (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

Standard Updates

Standard (and version)	USCDI V1
Updated certification criteria and associated Product	(b)(1), (b)(2), (e)(1), (g)(9)
CHPL Product Number	15.02.05.3076.ZHHC.01.02.1.220119
Method used for standard update	Cures Update
Date of ONC ACB notification	10/26/2022
Date of customer notification (SVAP only)	N/A
Conformance measure	Scenario 1 - (b)(1) Scenario 2 - (b)(1), (b)(2) Scenario 5 - (g)(9) Scenario 6 - (e)(1)
USCDI updated certification criteria (and USCDI version)	(b)(1), (b)(2), (e)(1), (g)(9) USCDI V1

Care setting addressed

blueEHR markets its modules for use in integrated care settings, catering to both physical health (general practitioners) and behavioral health. Real World Testing was conducted specifically in integrated care environments supporting general practitioners.

Relied upon software

- EMR Direct is applicable for measure (b)(1) and (h)(1) in Scenario 1 and Scenario 2.
- EMR Direct Interoperability Engine is applicable for measure (g)(10) in Scenario 5.

Scenario 1 – External Facility Referral

Description

The highlighted scenario focuses on the process of referring a patient to an external facility, demonstrating the application's ability to transmit medical records to an external system. It is important to note that this feature is not currently utilized by all clients of the application.

Changes made in the measurement/metric

No changes were made to the result metrics, and no challenges were identified in this scenario.

Result of Measurement/Metric

- Successful transition of data – We observed multiple clients and reviewed the email log, finding that the blueEHR application sent a total of 101 emails between January 1, 2024, and December 31, 2024. All these emails originated from a Direct address, and we confirmed from the logs that each email was successfully sent, achieving a 100% success rate.
- Security of the data transferred – As reflected in the preceding metrics, all emails sent by BlueEHR from the selected clients during the specified timeframe were processed using the Direct method, which is considered secure. According to the log records, there were no failed email deliveries during this period, achieving a 100% success rate.
- Data format used for transfer – All 101 emails sent to external parties included a CCDA file attachment, resulting in a 100% success rate.

Associated Certification Criteria

- 170.315 (b)(1): Transitions of Care
- 170.315 (b)(10): Electronic Health Information Export
- 170.315 (h)(1): Direct Project

Scenario 2 – Incoming Patient Data from External Facility

Description

The scenario mentioned here is primarily focusing on receiving a patient from an external facility. The outcome of this approach will be to demonstrate the ability of the application to receive the medical records from an external application and incorporate the data into blueEHR system.

Changes made in the measurement/metric

No changes were made to the result metrics, and no challenges were identified in this scenario.

Result of Measurement/Metric

- Successfully receive the data from external entity – The same clients from Scenario 1 were used for this scenario. Emails were sent to the EMR Direct application, and BlueEHR utilized APIs to retrieve them from EMR Direct into the BlueEHR application. Only one client utilized the import functionality to receive referral data. Upon confirming with the client, no failure notifications were reported for direct emails during the period from 01/01/2024 to 12/31/2024. This is considered a 100% success rate.
- Importing of data received – The CCDAs received via email are stored in the application as raw data, with imported CCDAs being flagged. During the period from 01/01/2024 to 12/31/2024, the client received two CCDA files, which were successfully integrated into the patient data within the system. This is considered a 100% success rate.

Associated Certification Criteria

- 170.315 (b)(1): Transitions of Care
- 170.315 (b)(2): Clinical Information Reconciliation and Incorporation
- 170.315 (h)(1): Direct Project

Scenario 3 – CQM Reporting

Description

The scenario mentioned here will be focusing on submission of Clinical Quality Measure data to registry. The outcome of this approach will be to demonstrate blueEHR will be able to generate the data required to submit to the registry as mentioned in the standard

§170.205(h)(2) – HL7 CDA® Release 2 Implementation Guide for: Quality Reporting Document Architecture – Category I (QRDA I), DTSU Release 3 (US Realm).

Changes made in the measurement/metric

No changes were made to the result metrics. The challenge encountered was the limited usage of the export functionality. While available, it is not widely used by all clients. However, this does not affect our ability to measure the application's capability to generate QRDA files.

Result of Measurement/Metric

- Export Report – The export functionality is not widely used by our clients, so we selected a few clients to test it. These clients successfully exported both QRDA Cat I and Cat II files. Additionally, we tested the export process using the QRDA file from our sample database in production, and it was successfully exported. A total of 18 exports were completed during the period from 01/01/2024 to 12/31/2024, which is considered a 100% success rate.

Associated Certification Criteria

- 170.315(c)(1) Clinical Quality Measures - Record and Export

Scenario 4 – Transmitting Immunization Information

Description Use Case 1

The scenario primarily demonstrates the application's capability to export immunization data as HL7 files and transmit it to immunization registries.

Result of Measurement/Metric

- Generate Immunization information of a patient – All files generated from the Immunization module are stored within the application. The log tables confirm that these files are generated in the standard format. A total of 35 files were generated in HL7 format during the period from 01/01/2024 to 12/31/2024, which is considered a 100% success rate.

Description Use Case 2

The scenario primarily highlights the application's ability to connect with immunization registries and retrieve the patient's immunization records.

Result of Measurement/Metric

- Generate message to pull Immunization history – All requests from blueEHR to registries are stored in the log tables. Using the NIST Testing Tool, we tested this functionality in production. The HL7 message generated for retrieving immunization history was stored in the log and successfully verified. This is considered a 100% success rate.

Changes made in the measurement/metric

No changes were made to the result metrics. The main challenge we faced was that clients were not using this functionality to transmit data to the immunization registry or retrieve immunization history from the registry into the application. As a result, we had to use our sample database in production to test the functionality.

Associated Certification Criteria

- 170.315 (f)(1): Transmission to Immunization Registries

Scenario 5 – Using APIs to Access Data

Description

blueEHR is integrated with a client's Care Management (CM) solution. The CM solution is an external application which is used by one of our clients to pull data from blueEHR. blueEHR uses all the capabilities mentioned in the standards to provide data to the CM solution.

Changes made in the measurement/metric

No changes were made to the result metrics.

Description of Measurement/Metric

- Identify the requests to blueEHR to access data through API - External applications can connect to blueEHR using OAuth2.0 authentication mechanism. Any invalid requests will be rejected and recorded in the logs. We checked the logs for the period 01/01/2024 to 12/31/2024. We have identified 5 invalid login requests from the log. So, we can consider as 100% success.
- Completeness of the data exported – blueEHR offers multiple APIs, and upon reviewing the API logs for the period from 01/01/2024 to 12/31/2024, we found that the client primarily used the APIs to retrieve details such as prescriptions, problems, and other data. The client successfully retrieved complete patient data in CCDA format for 815 patients. This is considered a 100% success rate.
- Make sure external parties can connect to FHIR APIs and retrieve data – FHIR APIs in blueEHR are not currently used by any clients. To test this functionality, we used our sample database in production to connect and retrieve the FHIR document for one of the sample patients. We successfully retrieved the complete PHI of a single patient using our FHIR APIs. This is considered a 100% success rate.

Associated Certification Criteria

- 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

Scenario 6 – Patient Portal

Description

blueEHR has its own patient portal, MyDocsPortal. MyDocsPortal is connected to blueEHR through APIs. MyDocsPortal can sync the medical records with blueEHR. This is done real time. Patients can gain access to blueEHR using the credentials generated by any authorized user at the providers facility. The login credentials are generated in blueEHR and sent to the patient's email. The patient can use the same to login to MyDocsPortal and view their medical records.

Changes made in the measurement/metric

No changes were made to the result metrics.

Result of Measurement/Metric

- View and Share information – All patient activities are recorded, and the logs provide details on the number of patients who have viewed or shared information with external parties, as well as the format used. After reviewing the logs for the period from 01/01/2024 to 12/31/2024, we identified that 15,392 patients have viewed, downloaded, or shared their information with external parties. This is considered a 100% success rate.

Associated Certification Criteria

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

Scenario 7 – Syndromic Surveillance Registry

Description

In this scenario we are going to measure the ability of blueEHR to generate information required to be transmitted to Syndromic Surveillance registries. We will also make sure that the information is generated in accordance with the standards mentioned in §170.205(d)(4) HL7 2.5.1 (incorporated by reference in §170.299).

Changes made in the measurement/metric

No changes were made to the result metrics. The challenge we faced was that clients were not utilizing this feature. Consequently, we had to use our sample database in production to test the functionality.

Result of Measurement/Metric

- Generate Syndromic Surveillance information for a patient – All documents generated from the Syndromic Surveillance module are stored within the application. For the period from 01/01/2024 to 12/31/2024, we generated HL7 files for 23 sample patients, and these files were successfully created in the standard format. This is considered a 100% success rate.

Associated Certification Criteria

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

Scenario 8 – Export of patient's financial data for analysis

Description

The purpose of this scenario is to demonstrate blueEHR's ability to export a patient's financial data for a specific period and use an external tool to analyze the data and generate the necessary reports.

Changes made in the measurement/metric

No changes were made to the result metrics. The challenge we faced was that clients were not utilizing this feature. Consequently, we had to use our sample database in production to test the functionality.

Result of Measurement/Metric

- Export financial data for a batch of patients – We used our sample database in production to test this functionality. Using our analytics module, we generated reports for 52 patients for the period from 01/01/2024 to 12/31/2024. The reports were successfully exported in XLSX format, making them compatible for further analysis in tools like PowerBI. This is considered a 100% success rate.

Associated Certification Criteria

- 170.315 (b)(10): Electronic Health Information Export

Schedule of key milestones

We collected data at the end of each quarter in 2024, using information from the application database and verbal discussions with the client. blueEHR markets its modules in integrated care settings, supporting both physical (general practitioners) and behavioral health. Real World Testing was conducted within this care setting.

Key Milestones	Date/Time
Meet with organizations taking part in RWT 2024	January 2024
Data collection and analysis	End of every Quarter in 2024
Report creation	January 2025
Result submission to SLI Compliance	January 2025

Attestation

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

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