REAL WORLD TEST RESULT 2023

Developer Name	**ZH Healthcare, Inc.**
Product Name(s)	**blueEHR**
Version Number(s)	**3.0**
Certified Health IT Product List (CHPL) ID(s)	**15.02.05.3076.ZHHC.01.02.1.220119**
Developer Real World Testing Page URL	**https://blueehr.com/certifications-and-costs/**
Result Report ID Number	**20221020zhh**

Table of Contents

I. Revision History

Date	Version	Reason for Change
01/19/2024	1.0	Initial draft of the Real World Test Result Report for the year 2023

II. 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 speciality 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.

III. Certification Criteria Tested

- 170.315 (b)(1): Transitions of Care
- 170.315 (b)(2): Clinical Information Reconciliation and Incorporation
- 170.315 (b)(6): Data 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 (h)(1): Direct Project

IV. Care setting addressed

blueEHR markets its modules in integrated care settings supporting physical (general practitioners) and behavioural health. This is the care setting in which the Real World Testing is done.

V. Scenario 1 – External Facility Referral

A. Description

The highlighted scenario primarily centers on the process of forwarding a patient to an external facility. The objective of this approach is to showcase the application's capability to transmit medical records to an external system. It is worth noting that not all clients currently utilize this feature within our application.

B. Changes made in the measurement/metric

There were no modifications made to any of the result metrics.

C. 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 21 emails between January 1, 2023, and December 31, 2023. 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 indicated in the preceding metrics, all emails dispatched by blueEHR from the chosen clients during the specified timeframe were executed through the Direct method. Emails transmitted via the Direct method are deemed secure. Based on the log records, there were no instances of unsuccessful email deliveries within the specified period. This is regarded as a 100% success rate.
- Data format used for transfer – A total of 21 emails were transmitted via blueEHR, each featuring an attached CCDA file. This achievement is considered a 100% success rate.

D. Associated Certification Criteria

- 170.315 (b)(1): Transitions of Care
- 170.315 (b)(6): Data Export
- 170.315 (h)(1): Direct Project

VI. Scenario 2 – Incoming Patient Data from External Facility

A. 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.

B. Changes made in the measurement/metric

There were no modifications made to any of the result metrics.

C. Result of Measurement/Metric

- Successfully receive the data from external entity – We used the same clients from Scenario 1. The emails will come to EMR Direct application. blueEHR uses APIs to pull the same from EMR Direct application to blueEHR application. We have checked with the client about any failure intimations they got regarding direct email. Client has not received any failure intimations during the period 01/01/2023 to 12/31/2023. We consider this as 100% success.
- Importing of data received – The CCDAs received through email are stored in the application as raw data. The CCDA that are imported into the system are flagged. Client received 34 CCDA files during the period 01/01/2023 to 12/31/2023 out of which 23 CCDA files were imported into the system. This shows the ability of the application to import the files without any errors. We consider this 100% success.

D. 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

VII. Scenario 3 – CQM Reporting

A. 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).

B. Changes made in the measurement/metric

Some of our clients are using CQM reporting, but none of the clients are exporting and reporting to any registry. The reporting in registries is done through manual entry only. We requested couple of clients to export the QRDA files. There is no impact in measuring the capability of the application to generate QRDA files.

C. Result of Measurement/Metric

- Export Report – The export functionality it not used by any of our clients. We have selected couple of our clients and requested them to test the export functionality in CQM report. The client was able to export QRDA Cat I and Cat II files. There were nine exports done over different time periods by different clients. We consider this as 100% success.

D. Associated Certification Criteria

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

VIII. Scenario 4 – Transmitting Immunization Information

A. Description Use Case 1

Transmitting existing and new Immunization details to Immunet.

B. Changes made in the measurement/metric

Currently, none of our clients have utilized this feature. We chose couple of our clients and asked them to evaluate the functionality of exporting immunization data. There is no impact in measuring the capability of the application to generate HL7 files.

C. Result of Measurement/Metric

- Generate Immunization information of a patient – All the files generated from Immunization module will be stored in the application. From the log tables, we can determine that the files are generated in the standard format. We checked the log for the period 01/01/2023 to 12/31/2023, there were 16 files generated by multiple clients. All the files were generated in HL7 format. We consider this 100% success.

D. Description Use Case 2

Pull immunization history information from Immunet.

E. Changes made in the measurement/metric

Currently, none of our clients are not using the functionality to pull immunization history from registries. So, we used ZH's account in production environment to test this functionality. We used the same patient from NIST test tool and used the tool to test the functionality. There is no impact in measuring the capability of the system to pull immunization history from external applications.

F. Result of Measurement/Metric

- Generate message to pull Immunization history – All the request from blueEHR to registries will be stored in the log tables. Using the NIST Testing Tool, we tested this functionality in production. The HL7 message generated for pulling the immunization history is stored in the log and verified. We consider this 100% success.

G. Associated Certification Criteria

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

IX. Scenario 5 – Using APIs to Access Data

A. 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.

B. Changes made in the measurement/metric

The client that uses our API does not use CCDA pull API. So, we requested the client to perform this action to test the ability of the system to pull partial/complete CCDA. The client pulled the CCDA of a single patient upon our request. To validate the structure of the CCDA exported, we used a sample patient from NIST tool. We cannot use live patient's CCDA to upload the file in NIST tool and validate the format. For this we used ZH's account in production environment that we use to check issues reported by the client. There is no impact in measuring the capability of the system to generate CCDA response for API request.

C. 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 01/01/2023 to 12/31/2023. There were 55,403 requests made during this period by different clients, out of which 14 requests failed because of invalid connectivity credentials. So, we can consider as 100% success.
- Completeness of the data exported – There were multiple APIs available in blueEHR. When we checked the API logs for the period 01/01/2023 to 12/31/2023, the client has mostly used the APIs to pull details, Rx, problem etc. The client retrieved the CCDA for a single patient upon our request. They were able to view the complete data as per standards. We consider this 100% success.

D. Associated Certification Criteria

- 170.315 (g)(7): Application Access - Patient Selection

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

X. Scenario 6 – Patient Portal

A. 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.

B. Changes made in the measurement/metric

There were no modifications made to any of the result metrics.

C. Result of Measurement/Metric

- View and Share information – All the activities made by the patient are recorded. From the logs we can identify the count of patients who has viewed and shared the information to external party and in which format it is done. We checked the logs for the period 01/01/2023 to 12/31/2023. We have identified 11,257 patients have viewed/ downloaded/shared the information to external party. We consider this 100% success.

D. Associated Certification Criteria

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

XI. Scenario 7 – Syndromic Surveillance Registry

A. 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).

B. Changes made in the measurement/metric

As of now our clients are not using this module to report to registries. We used ZH's account in production environment to generate the HL7 file for a sample patient. There is no impact

in measuring the capability of the system to generate Syndromic Surveillance information in HL7 format.

C. Result of Measurement/Metric

- Generate Syndromic Surveillance information for a patient – All the documents generated from Syndromic surveillance module are stored in the application. We created the HL7 files using the module for 13 sample patients spanning from 01/01/2023 to 12/31/2023. The files were generated successfully in the standard format. So, we can consider as 100% success.

D. Associated Certification Criteria

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

XII. Relied upon software

- EMR Direct is applicable for measure (b)(1) and (h)(1) in Scenario 1 and Scenario 2.

XIII. Standards update

A. 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
Conformance measure	**Scenario 1 - (b)(1)** **Scenario 2 - (b)(1), (b)(2)** **Scenario 5 - (g)(9)** Scenario 6 - (e)(1)

XIV. Schedule of key milestones

We had taken the data from all quarters in 2023. The data is taken from application database and verbal discussion with client. blueEHR markets its modules in integrated care settings supporting physical (general practitioners) and behavioural health, so this is the care setting in which Real World Testing is done.

Key Milestones	Date/Time
Meet with stakeholders to discuss about data collection	Feb 2023
Data collection and analysis for Q1 and Q2	July 2023
Data collection and analysis for Q3	October 2023
Data collection and analysis for Q4	January 2024
Analysis of data and result report creation	January 2024
Report submission	January 2024

XV. 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 report is up to date and fully addresses the health IT developer's Real World Testing requirements.

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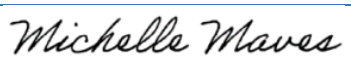
Authorized Representative Signature	
Date	01/25/2024