MediFusion

2023 Real World Testing Plan

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Executive Summary

This is the real world test plan for 2023 for Medifusion certified EHR solution. It provides the real world test measurements and metrics that meet the intent and objectives of ONC's Condition of Certification and Maintenance of Certification requirement for real world testing (§ 170.405 Real world testing) to evaluate compliance with the certification criteria and interoperability of exchanging electronic health information (EHI) within the care and practice setting which it is targeted for use.

As ONC has stated in its rule, "The objective of real world testing is to verify the extent to which certified health IT deployed in operational production settings is demonstrating continued compliance to certification criteria and functioning with the intended use cases as part of the overall maintenance of a health IT's certification." We have worked toward this objective in designing our test plan and its subsequent real world testing measurements and metrics. This document builds toward the final testing measurements and metrics we will use to evaluate our product interoperability within production settings. Within each use case, we document our testing methodology for the measure/metric we plan to employ. We also include the associated ONC criteria, our justification for measurement selection, our expected outcomes from the testing, the care settings applied for this measure, and if applicable the number of clients to use in our real world testing. We have included our timeline and milestones for completing the real world testing in 2023, and information about compliance with the Standards Version Advancement Process updates. A table of contents is provided later in the plan quick access to any document section, including the testing measurements and metrics found at the end of this document. Our signed attestation of compliance with the real world testing requirements is on the following page.

Developer 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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General Information

Plan Report ID Number: 20221017med

Developer Name: MediFusion, LLC

Certified Health IT Criteria: 315(b)(1), (b)(6), (c)(1)-(3), (e)(1), (f)(1)-(3), (g)(7), (g)(9), (b)(2), (b)(7),(b)(8), (h)(1).

Product Name(s): MediFusion

Version Numbers(s): V 2.0

Product List (CHPL) ID(s) and Link(s):

- 15.05.05.3102.MEDF.01.00.1.220228
- https://chpl.healthit.gov/#/listing/10845

Real Worl Testing Plans URL: https://www.medifusion.com/real-world-testing

Timeline and Milestones for Real World Testing CY 2023

• 1Q-2023: Begin communication with clients to ask for their support and participation in real world testing. The goal is to have a sufficient number of clients committed for real world testing by the end of 1Q-2023.

• 2Q-3Q 2023. During the 2nd and 3rd quarter of CY 2023, the real world testing with clients will be scheduled and performed. It is expected that a preparatory call will be done with clients to prepare them for testing activities. Results will be documented in the test results section of the test methods and ultimately used to build the test report. If any non-compliances are observed, we will notify the ONC-ACB of the findings and make the necessary changes required.

• 4Q-2023. During the last quarter of the year, the CY 2023 real world test plan will be completed according to ONC and ONC-ACB requirements and expectations. Test plan will be prepared for submission before the end of the year.

• 1Q-2024. Results will be Submitted to SLI by 01/15/2024

Standards Version Advancement Process (SVAP) Updates

For CY 2023, we are not planning to make any version updates on approved standards through the SVAP process.

Standard (and version)	None
Updated certification criteria and associated product	None
Health IT Module CHPL ID	None
Method used for standard update	None
Date of ONC-ACB notification	None
Date of customer notification (SVAP only)	None
Conformance measure	None
USCDI-updated certification criteria (and USCDI version)	None

Real World Testing Measurements

The measurements for our real world testing plan are described below. Each measurement contains:

- Associated ONC criteria
- Testing Methodology used
- Description of the measurement/metric
- Justification for the measurement/metric
- Expected outcomes in testing for the measurement/metric
- Number of client sites to use in testing (if applicable)
- Care settings which are targeted with the measurement/metric

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

Testing Methodologies

For each measurement, a testing methodology is used. For our test plan, we use the following methodologies.

Reporting/Logging: This methodology uses the logging or reporting capabilities of the EHR to examine functionality performed in the system. A typical example of this is the measure reporting done for the automate measure calculation required in 315(g)(2), but it can also be aspects of the audit log or customized reports from the EHR. This methodology often provides historical measurement reports which can be accessed at different times of the year and evaluate interoperability of EHR functionality, and it can serve as a benchmark for evaluating real world testing over multiple time intervals.

Compliance with Reporting Metric or Scoring Tool: This methodology uses inspection to evaluate if EHR is supporting to the ONC criteria requirements in interoperability compliance. It can be done through 1-v-1 inspection testing and utilizing various tools to measure or evaluate compliance and interoperability. It either includes tool which produces a quantifiable result or uses specific metrics to evaluation real world interoperability.

Number of Clients Sites

Within each measure, we note the minimum number of clients or client sites we plan to use for this measure evaluation. The numbers vary depending on the methodology as well as overall use of the associated EHR Module criteria by our users. For criteria that are not widely used by our customer base, we may test the respective measure in our own production-sandbox environment given lack of customer experience with the criteria functionality.

Care and Practice Settings Targeted

Our EHR is targeted to general ambulatory practices, and our measures were design for this setting in mind.

RWT Measure #1. Number of Transition of Care C-CDAs Successfully Sent

Associated Criteria: 315(b)(1)

Testing Methodology: Reporting/Logging

Measurement Description

This measure is tracking and counting how many C-CDAs are created and successfully sent from the EHR Module to a 3rd party via Direct messaging during a transition of care event over the course of a given interval.

The interval for this measure will be three (3) months.

Measurement Justification

This measure will provide a numeric value to indicate both the how often this interoperability feature is being used as well as its compliance to the requirement. An increment to this measure indicates that the EHR can create a C-CDA patient summary record, including ability to record all clinical data elements, and by sending the C-CDA patient summary record, the EHR demonstrates successful interoperability of an exchanged patient record with a 3rd party. This measurement shows support for Direct Edge protocol in connecting to a HISP for successful transmission.

Measurement Expected Outcome

The measurement will produce numeric results over a given interval. We will utilize various reports and audit logs, including Automated Measure (315.g.2) reports, to determine our measure count.

A successful measure increment indicates compliance to the underlying ONC criteria. It will show that the EHR can create the C-CDA patient summary record, including record required clinical data elements. In sending the C-CDA patient summary record, the EHR will demonstrate ability to confirm successful interoperability of an exchanged patient record with a 3rd party, including support for Direct Edge protocol in connecting to a HISP. Successfully completing this measure also implies users have a general understanding of the EHR functional operations for this EHR Module and an overall support for the user experience while not completing this measure may indicate lack of understanding or possibly lack of use or need for this functionality.

We will use the measure count to establish a historic baseline of expected interoperability use so it can be used in subsequent real world testing efforts.

Care Settings and Number of Clients Site to Test

We designed this measure to test the general ambulatory setting that we support and target. We will test a minimum of two (2) client practice(s). This number covers a sufficient percentage of existing practices to provide a viable sample of users of the certified EHRs.

RWT Measure #2. Number of Patient Batch Exports Run

Associated Criteria: 315(b)(6)

Testing Methodology: Reporting/Logging

Measurement Description

This measure is tracking and counting how many batch exports of C-CDAs were successfully performed by the EHR Module over the course of a given interval.

The interval for this measure will be three (3) months.

Measurement Justification

This measure will provide a numeric value to indicate both the how often this interoperability feature is being used as well as its compliance to the requirement. An increment to this measure indicates that the EHR can create a batch export of multiple C-CDA patient summary records.

Measurement Expected Outcome

The measurement will produce numeric results over a given interval. We will utilize various reports and audit logs to determine our measure count.

A successful measure increment indicates compliance to the underlying ONC criteria. It will show that the EHR can create a batch export of multiple C-CDA patient summary records, which can be used in means of health IT interoperability. Successfully completing this measure also implies users have a general understanding of the EHR functional operations for this EHR Module and an overall support for the user experience while not completing this measure may indicate lack of understanding or possibly lack of use or need for this functionality.

We will use the measure count to establish a historic baseline of expected interoperability use so it can be used in subsequent real world testing efforts.

Care Settings and Number of Clients Site to Test

We designed this measure to test the general ambulatory setting that we support and target. We will test a minimum of two (2) client practice(s). This number covers a sufficient percentage of existing practices to provide a viable sample of users of the certified EHRs.

RWT Measure #3. Number of Quality Measures Successfully Reported on to CMS

Associated Criteria: 315(c)(1)-(c)(3)

Testing Methodology: Reporting/Logging

Measurement Description

This measure is tracking and counting how many eCQM quality measures were successfully reported on by the EHR Module to CMS over the course of a given interval.

The interval for this measure will be twelve (12) months.

Measurement Justification

This measure will provide a count and list of electronic clinical quality measures (eCQMs) which are calculated and submitted to CMS for a given program, like MIPS. Clinical quality measures are only used for the respective CMS programs and any production measures should utilize submission to CMS. Because CQM criteria, 315(c)(1)-(c)(3), all work collectively together in the eCQM functionality of the EHR Module, this measurement is used for all three.

Measurement Expected Outcome

The measurement will a count and list of eCQMs submitted to CMS over a given interval. We will utilize various reports and audit logs to determine our measure count.

A successful measure submission indicates compliance to the underlying ONC criteria. It will show that the EHR can do calculations on the eCQM and that they are accepted by CMS. Successfully completing this measure also implies users have a general understanding of the EHR functional operations for this EHR Module and an overall support for the user experience while not completing this measure may indicate lack of understanding or possibly lack of use or need for this functionality.

We will use the measure result to establish a historic baseline of expected interoperability use so it can be used in subsequent real world testing efforts.

Care Settings and Number of Clients Site to Test

We designed this measure to test the general ambulatory setting that we support and target. We will test a minimum of two (2) client practice(s). This number covers a sufficient percentage of existing practices to provide a viable sample of users of the certified EHRs.

RWT Measure #4. Number of Patients Given Access to Portal

Associated Criteria: 315(e)(1)

Testing Methodology: Reporting/Logging

Relied Upon Software: Chrony NTP/3.4

Measurement Description

This measure is tracking and counting how many patients are given login access to their patient portal account over the course of a given interval.

The interval for this measure will be three (3) months.

Measurement Justification

This measure will provide a numeric value to indicate how often this interoperability feature is being used. An increment to this measure indicates that the EHR can supply patient health data to the patient portal and provide an account for the patient to use in accessing this data.

Measurement Expected Outcome

The measurement will produce numeric results over a given interval. We will utilize various reports and audit logs, including Automated Measure (315.g.2) reports, to determine our measure count.

A successful measure increment indicates compliance to the underlying ONC criteria. It will show that the EHR can submit patient health data to the patient portal on a regular and consistent basis as well provide an account for the patient to use in accessing this data. Successfully completing this measure also implies users have a general understanding of the EHR functional operations for this EHR Module and an overall support for the user experience while not completing this measure may indicate lack of understanding or possibly lack of use or need for this functionality.

We will use the measure count to establish a historic baseline of expected interoperability use so it can be used in subsequent real world testing efforts.

Care Settings and Number of Clients Site to Test

We designed this measure to test the general ambulatory setting that we support and target. We will test a minimum of two (2) client practice(s). This number covers a sufficient percentage of existing practices to provide a viable sample of users of the certified EHRs.

RWT Measure #5. Number of Electronic Reportable Lab Messages Successfully Sent

Associated Criteria: 315(f)(3)

Testing Methodology: Reporting/Logging

Measurement Description

This measure is tracking and counting how many electronic reportable messages are created and successfully sent from the EHR Module to a public health registry over the course of a given interval.

The interval for this measure will be three (3) months.

Measurement Justification

This measure will provide a numeric value to indicate both the how often this interoperability feature is being used as well as its compliance to the requirement. An increment to this measure indicates that the EHR can create an electronic reportable lab message, including ability to record all clinical data elements, and by sending the message, the EHR demonstrates successful interoperability with a public health registry.

Measurement Expected Outcome

The measurement will produce numeric results over a given interval. We will utilize various reports and audit logs, to determine our measure count.

A successful measure increment indicates compliance to the underlying ONC criteria. It will show that the EHR can create the HL7 electronic reportable lab record, including ability to record the required clinical data elements. In sending the ELR message, the EHR will demonstrate ability to confirm successful interoperability with a public health registry. Successfully completing this measure also implies users have a general understanding of the EHR functional operations for this EHR Module and an overall support for the user experience while not completing this measure may indicate lack of understanding or possibly lack of use or need for this functionality.

We will use the measure count to establish a historic baseline of expected interoperability use so it can be used in subsequent real world testing efforts.

Care Settings and Number of Clients Site to Test

We designed this measure to test the general ambulatory setting that we support and target. We will test a minimum of two (2) client practice(s). This number covers a sufficient percentage of existing practices to provide a viable sample of users of the certified EHRs.

RWT Measure #6. Compliance of C-CDA Error Detection

Associated Criteria: 315(b)(1)

Testing Methodology: Compliance with Reporting Metric

Relied Upon Software: EMR Direct

Measurement Description

This measure is tracking compliance of the EHR Module criteria functionality of detecting errors within a received or imported C-CDA.

Measurement Justification

This measure will provide assurance of compliance to the EHR Module criteria, specifically ability to detect any conformance or vocabulary standard errors of a received or imported in CCDA.

C-CDA error detection provides assurance to the user of the validity of received or imported in C-CDAs which is both a certification requirement and supports interoperability within production setting. The error detection will give a quantifiable and numeric result to evaluate real world interoperability.

To avoid disclosing PHI, we will only work with test patients from the actual production environment or an appropriately production-mirrored environments to best evaluate production capabilities available to end users.

Measurement Expected Outcome

The user will import in, either through upload or inbound messages, C-CDAs with different known errors. The user will use the EHR functions to parse the C-CDA document and perform errors detection which will be reviewed by the user. We will confirm the process and steps done by the user meet the criteria requirements of the EHR Module and works as expected in production-type environment.

We will use the measure count to establish a historic baseline of expected interoperability use so it can be used in subsequent real world testing efforts.

Care Settings and Number of Clients Site to Test

We designed this measure to test the general ambulatory setting that we support and target. We will test with either a minimum of one (1) client practice(s) or use internal resources if necessary to evaluate this measure. This number covers a sufficient percentage of existing practices to provide a viable sample of users of the certified EHRs.

RWT Measure #7. Problem/Medication/Allergy Incorporation from C-CDA – C-CDA Scorecard Quantifiable Result

Associated Criteria: 315(b)(2)

Testing Methodology: Scoring Tool

Measurement Description

This measure is tracking compliance of the EHR Module criteria functionality of incorporating problem/medication/allergy from a C-CDA and doing a quantifiable evaluation using the ONC CCDA Scorecard tool.

Measurement Justification

This measure will provide assurance of compliance to the EHR Module criteria, specifically ability to select the appropriate patient and then incorporate the problems, medications, and allergies values into the patient record.

Incorporating external clinical data into the patient record is critical for patient care, and this measure will give assurance of compliance of this functionality.

This measure will also query the patient's C-CDA and evaluate it against the ONC C-CDA Scorecard tool. The C-CDA scorecard is designed for production use and measures how artifacts created by health IT compare against the HL7 C-CDA implementation guide and HL7 best practices.

To avoid disclosing PHI, we will only work with test patients from the actual production environment or an appropriately production-mirrored environments to best evaluate production capabilities available to end users.

Measurement Expected Outcome

Upon receipt of the C-CDA document, the EHR should allow the user to identify the correct patient the document is to be associated with, incorporate the document into the patient record, and merge and reconcile the problems, medications, and medication allergies into their respective lists. We will also confirm the process and steps done by the user meet the criteria requirements of the EHR Module and works as expected in production as in a controlled test environment.

After this is done, the user will query the C-CDA of the patient record and will run the C-CDA through the Scorecard tool to obtain a result to give us a numeric and quantifiable value to evaluate interoperability compliance.

We will use the measure count to establish a historic baseline of expected interoperability use so it can be used in subsequent real world testing efforts.

Care Settings and Number of Clients Site to Test

We designed this measure to test the general ambulatory setting that we support and target. We will test with either a minimum of one (1) client practice(s) or use internal resources if necessary to evaluate this measure. This number covers a sufficient percentage of existing practices to provide a viable sample of users of the certified EHRs.

RWT Measure #8. Immunization Message – Number of Compliant Conformance Statements and Errors Detected

Associated Criteria: 315(f)(1)

Testing Methodology: Scoring Tool

Measurement Description

This measure is tracking compliance of the EHR Module criteria functionality of creating an immunization message.

Measurement Justification

This measure will provide assurance of compliance to the EHR Module criteria, specifically ability to record immunization admission information on a patient and create an immunization message which can be delivered to a public health registry.

To avoid disclosing PHI, we will only work with test patients from the actual production environment or an appropriately production-mirrored environments to best evaluate production capabilities available to end users.

Measurement Expected Outcome

The user will use the EHR functions to document immunization information typical to their workflow including vaccination name, dosage amount, lot number, manufacturer name, and any other required elements. Then, the user will use the EHR functions to produce the HL7 VXU immunization message according the ONC standards.

We will inspect the message to confirm compliance with the required standard. We will also confirm the process and steps done by the user meet the criteria requirements of the EHR Module and works as expected in production as in a controlled test environment.

We will also use a test tool to produce a numeric count of number of successful compliances as well as errors to evaluate real world interoperability.

We will use the measure count to establish a historic baseline of expected interoperability use so it can be used in subsequent real world testing efforts.

Care Settings and Number of Clients Site to Test

We designed this measure to test the general ambulatory setting that we support and target. We will test with either a minimum of one (1) client practice(s) or use internal resources if necessary to evaluate this measure. This number covers a sufficient percentage of existing practices to provide a viable sample of users of the certified EHRs.

RWT Measure #9. Syndromic Surveillance Message – Number of Compliant Conformance Statements and Errors Detected

Associated Criteria: 315(f)(2)

Testing Methodology: Scoring Tool

Measurement Description

This measure is tracking compliance of the EHR Module criteria functionality of creating a syndromic surveillance message.

Measurement Justification

This measure will provide assurance of compliance to the EHR Module criteria, specifically ability to record syndromic surveillance information and create a syndromic surveillance message which can be delivered to a public health registry. To avoid disclosing PHI, we will only work with test patients from the actual production environment or an appropriately production-mirrored environments to best evaluate production capabilities available to end users.

Measurement Expected Outcome

The user will use the EHR functions to document clinical data which produce an electronic reportable lab message typical to the user's workflow and clinical documentation (e.g., influenza). After completing the encounter, the EHR will create HL7 Syndromic Surveillance ADT message regarding the patient's diagnosis which would be sent to the public health registry. We will inspect the message to confirm compliance with the required standard. We will also confirm the process and steps done by the user meet the criteria requirements of the EHR Module and works as expected in production as in a controlled test environment. We will also use a test tool to produce a numeric count of number of successful compliances as well as errors to evaluate real world interoperability.

We will use the measure count to establish a historic baseline of expected interoperability use so it can be used in subsequent real world testing efforts.

Care Settings and Number of Clients Site to Test

We designed this measure to test the general ambulatory setting that we support and target. We will test with either a minimum of one (1) client practice(s) or use internal resources if necessary to evaluate this measure. This number covers a sufficient percentage of existing practices to provide a viable sample of users of the certified EHRs.

RWT Measure #10. API Resource Query Support – C-CDA Scorecard Quantifiable Result

Associated Criteria: 315(g)(7) and (g)(9)

Testing Methodology: Scoring Tool

Measurement Description

This measure is tracking compliance of the EHR Module criteria functionality of support of API query of patient data resources.

Measurement Justification

This measure will provide assurance of compliance to the EHR Module criteria, specifically ability to connect to the EHR's API resources and query patient clinical data through the API. This measure will also query the patient's C-CDA through the API and evaluate it against the ONC C-CDA Scorecard tool. The C-CDA scorecard is designed for production use and measures how artifacts created by health IT compare against the HL7 C-CDA implementation guide and HL7 best practices.

Because API criteria, 315(g)(7) and (g)(9), all work collectively together in the API functionality of the EHR Module, this measurement is used for all three.

To avoid disclosing PHI, we will only work with test patients from the actual production environment or an appropriately production-mirrored environments to best evaluate production capabilities available to end users.

Measurement Expected Outcome

The user connects to the EHR through a client application via the API and is prompted for credentials and authentication according to the EHR's publicly available API documented specification. After supplying the correct credentials, the EHR returns a valid ID or token for the API Client to access the patient data. The user will query the patient clinical data resources via the API and receive access to them through the client application.

Next, the user will query the C-CDA of the patient record and will run C-CDA through the Scorecard tool to obtain a result to give us a numeric and quantifiable value to evaluate interoperability compliance.

We will also confirm the process and steps done by the user meet the criteria requirements of the EHR Module and works as expected in production as in a controlled test environment.

We will use the measure count to establish a historic baseline of expected interoperability use so it can be used in subsequent real world testing efforts.

Care Settings and Number of Clients Site to Test

We designed this measure to test the general ambulatory setting that we support and target. We will test with either a minimum of one (1) client practice(s) or use internal resources if necessary to evaluate this measure. This number covers a sufficient percentage of existing practices to provide a viable sample of users of the certified EHRs.

RWT Measure #11. Direct Project

Associated Criteria: 315(h)(1)

Relied Upon Software: EMR Direct

Measurement Description

- Demonstration of creation of a C-CDA at the end of an ambulatory encounter with transmission to the next provider of care via Direct Messaging with a confirmation of receipt in a client production environment .
- Spot check of evidence of successful C-CDA transmissions in the client's production environment from the timeline Tab with referral option selected.
- Demonstration of the ability to receive a C-CDA via Direct messaging into the Inbound Documents Queue and save it into the EHR.

Measurement Justification

- To demonstrate the ability to send C-CDAs to the next provider of care via Direct Messaging upon ambulatory visit departure.
- To demonstrate the ability to receive C-CDAs from external sources via Direct Messaging upon patient arrival as an admission, in transition or inbound referral.

Measurement Expected Outcome

- Documentation evidencing receipt of C-CDAs into recipient EHRs when sent by the client via Direct Messaging statuses in timeline
- Documentation evidencing receipt of external C-CDAs into the client's EHR via Direct messaging into the Inbound External Documents Queue.
- We will use the measure count to establish a historic baseline of expected interoperability use so it can be used in subsequent real world testing efforts.

Care Settings and Number of Clients Site to Test

We designed this measure to test the general ambulatory setting that we support and target. We will test with either a minimum of one (1) client practice(s) or use internal resources if necessary to evaluate this measure. This number covers a sufficient percentage of existing practices to provide a viable sample of users of the certified EHRs.

RWT Measure #12. Data Segmentation Send

Associated Criteria: 315(b)(7)

Measurement Description

Total number of protected C-CDA documents successfully sent via Direct messaging with MDN ACK message status

Measurement Justification

- To demonstrate the volume of protected C-CDAs successfully transmitted via Direct messaging.

Measurement Expected Outcome

- Identification of standard/baseline aggregated volume of transmission of protected C-CDA documents by month.

Care Settings and Number of Clients Site to Test

We designed this measure to test the general ambulatory setting that we support and target. We will test with either a minimum of one (1) client practice(s) or use internal resources if necessary to evaluate this measure. This number covers a sufficient percentage of existing practices to provide a viable sample of users of the certified EHRs.

RWT Measure #13. Data Segmentation Receive

Associated Criteria: 315(b)(8)

Measurement Description

Total number of protected C-CDA documents successfully received via Inbound Direct messaging.

Measurement Justification

- To demonstrate the volume of protected C-CDAs received into the client database inblound External Documents Queue.

Measurement Expected Outcome

- Identification of standard/baseline aggregated volume of received protected C-CDA documents by month.

Care Settings and Number of Clients Site to Test

We designed this measure to test the general ambulatory setting that we support and target. We will test with either a minimum of one (1) client practice(s) or use internal resources if necessary to evaluate this measure. This number covers a sufficient percentage of existing practices to provide a viable sample of users of the certified EHRs.