CY 2022 Real World Testing Plan for Kareo

Executive Summary

This is the real world test plan for CY 2022 for Kareo 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 measure, we document planned testing methodology, associated ONC criteria, justification for measurement, expected outcomes from the testing, care settings applied for this measure, and if applicable the number of clients to use the real world testing approach, including how our test cases were created, our selected methodology, the number of client/practice sites to use, and our general approach and justification for decisions.

We have included our timeline and milestones for completing the real world testing in CY 2022, and information about compliance with the Standards Version Advancement Process updates.

A table of contents with hyperlinks 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.

Authorized Representative Name: **Andrea Kowalski**

Authorized Representative Email: **andrea.kowalski@kareo.com**

Authorized Representative Phone: **1-888-775-2736**

Authorized Representative Signature: _____

Signature: _____

Date: _____ 11/9/2021 _____

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General Information

Plan Report ID Number: [For ONC-Authorized Certification Body use only]

Developer Name: **Kareo, Inc.**

Product Name(s): **Kareo EHR**

Version Numbers(s): **4.1**

Certified Health IT Criteria: **315(b)(1)-(3), (b)(6), (e)(1), (g)(7)-(9)**

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

- 15.04.04.2777.Kare.04.01.1.210101

- https://chpl.healthit.gov/#/listing/10517

Developer Real World Testing Page URL: http://www.kareo.com/macra

Timeline and Milestones for Real World Testing CY 2022

- 1Q-2022: 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-2022.

- 2Q-3Q 2022. During the 2nd and 3rd quarter of CY 2022, 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-2022. 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.

Standards Version Advancement Process (SVAP) Updates

For CY 2022, we are not planning to make any version updates on approved standards through the SVAP process. We plan on implementing USCDI v1 in our C-CDAs and API support during CY 2022, but we have not finalized an exact date for rollout.

Standard (and version)	N/A
Updated certification criteria and associated product	N/A
Health IT Module CHPL ID	N/A
Method used for standard update	N/A
Date of ONC-ACB notification	N/A
Date of customer notification (SVAP only)	N/A
Conformance measure	N/A
USCDI-updated certification criteria (and USCDI version)	N/A

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 Measurements

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

- 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.

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

Kareo EHR is primarily targeted to small practice, general ambulatory practices, and our measures were design for this setting in mind. In each measure, we do also address the care settings targeted and note any necessary adjustment or specific factor to consider with this specific measure.

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 capturing this metric will be a minimum of three (3) months for the sites chosen for testing.

Measurement Justification

Interoperability of C-CDA exchange is a critical need for the small practice sites we support with our EHR. They use this capability to share data with local hospitals as well as make referrals out to specialists. Because of this use case, we will create a RWT measure capturing the number of C-CDAs sent out of EHR to other providers.

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 small practice, general ambulatory sites that we support and target. We will test a minimum of three (3) 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 C-CDAs Received and/or Incorporated

Associated Criteria: 315(b)(2)

Testing Methodology: Reporting /Logging

Measurement Description

This measure is tracking and counting how many C-CDAs are successfully received and/or incorporated upon receipt from a 3rd party via Direct messaging during a transition of care event over the course of a given interval.

The interval for capturing this metric will be a minimum of three (3) months for the sites chosen for testing.

Measurement Justification

Because our user community receives many inbound C-CDA patient record, they need the EHR to support them in this receipt as well as incorporation of problems, medications, and medication allergies into the patient record. This measure providers real world interoperability insight into its use.

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 receive a C-CDA patient summary record, and by incorporating the C-CDA patient summary record, the EHR demonstrates successful interoperability of problems, medications, and medication allergies of 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 that the EHR can receive a C-CDA patient summary record and then incorporate the problems, medications, and medication allergies into patient record. This will also demonstrate ability to exchange data by ability to use using the Direct Edge protocol via our HISP, Updox.

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 small practice, general ambulatory sites that we support and target. We will test a minimum of three (3) 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 NewRx Prescriptions Messages Successfully Sent

Associated Criteria: 315(b)(3)

Testing Methodology: Reporting /Logging

Measurement Description

This measure is tracking and counting how many NewRx electronic prescriptions were created and successfully sent from the EHR Module to a pharmacy destination over the course of a given interval.

The interval for capturing this metric will be a minimum of three (3) months for the sites chosen for testing.

Measurement Justification

The Rcopia DrFirst e-Prescribing solution is integrated into our EHR workflow, and our providers use this regularly for their prescribing needs. 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 NewRx SCRIPT electronic prescription message and transmit it to a pharmacy, typically via the Surescripts Network. This will also show that our integration with DrFirst is working in production just as we demonstrated in our certification.

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 NewRx message and send over a production network, like the Surescripts Network, to a pharmacy. 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 small practice, general ambulatory sites that we support and target. We will test a minimum of three (3) 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 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 capturing this metric will be a minimum of three (3) months for the sites chosen for testing.

Measurement Justification

Batch exporting can be a useful function for interoperability to allow providers to share large volumes of patient data. However, we are not sure how often this functionality is being used in production. We will capture its execution to document its interoperability performance.

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 likely utilize a database report 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 small practice, general ambulatory sites that we support and target. We will test a minimum of three (3) 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 Patients Given Access to Portal

Associated Criteria: 315(e)(1)

Testing Methodology: Reporting /Logging

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 capturing this metric will be a minimum of three (3) months for the sites chosen for testing.

Measurement Justification

Access to patient portal is a necessary feature of patient engagement with their healthcare. 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 small practice, general ambulatory sites that we support and target. We will test a minimum of three (3) 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.   Number of Patients Who Accessed/Logged in to Portal

Associated Criteria: 315(e)(1)

Testing Methodology: Reporting /Logging

Measurement Description

This measure is tracking and counting how many patients are successfully logged into and accessed their patient portal account over the course of a given interval.

The interval for capturing this metric will be a minimum of three (3) months for the sites chosen for testing.

Measurement Justification

This measure will provide a numeric value to indicate both the how often patients are logging into their portal account to view their record. An increment to this measure indicates that patients can log into their patient portal to view, download, or transmit their health data as well as its compliance to the requirement.

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 patients can log into their patient portal to view, download, or transmit their health 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 small practice, general ambulatory sites that we support and target. We will test a minimum of three (3) 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 #7.   Number of API Queries Made for Data Elements

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

Testing Methodology: Reporting /Logging

Measurement Description

This measure is tracking and counting how many successful API queries of patient data elements, including C-CDAs, from the EHR Module to a 3rd party via API over the course of a given interval.

The interval for capturing this metric will be a minimum of three (3) months for the sites chosen for testing.

Measurement Justification

API access will be an important part of the future of health IT, but we are unsure how often it is presently being used in our system. This measure use case will document the number of 3rd party applications which connect to our EHR using our API functionality with our sampled client users.

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 a 3rd party can query the clinical resources of the patient health record via the API interface and thus demonstrate API interoperability.

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 a 3rd party client can be authenticated, that the patient record can be properly identified and selected, and that the EHR can make patient data accessible via its API interface. Successfully completing this measure also implies the public API documentation is accurate and sufficient for 3rd parties to connect and use the API 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 small practice, general ambulatory sites that we support and target. We will test a minimum of three (3) client practice(s). This number covers a sufficient percentage of existing practices to provide a viable sample of users of the certified EHRs.