REAL WORLD TESTING RESULTS REPORT 2023 - NeoMed 4.0

BACKGROUND

Under the ONC Health IT Certification Program (Certification Program), health IT developers are required to conduct Real World Testing (RWT) of their certified health IT (45 CFR 170.405). The Office of the National Coordinator for Health Information Technology (ONC) issues RWT resources to clarify health IT developers' responsibilities for conducting RWT, to identify topics and specific elements of RWT that ONC considers a priority, and to assist health IT developers in developing their RWT plans and results reports.

NeoDeck is submitting this report that covers one year of results to address RWT of NeoMed as outlined in the 2023 RWT plan. This report reflects adjustments to approaches made throughout RWT and includes a list of these changes, the reasons for them, and how intended outcomes were more efficiently met as a result.

The following resources were used in preparation of this report.

- Real World Testing–What It Means for Health IT Developers – Fact Sheet
- Real World Testing Resource Guide
- Real World Testing Certification Companion Guide
- 21st Century Cures Act: Interoperability, Information Blocking, and the ONC Health IT Certification Program final rule, 85 FR 25642 (May 1, 2020) (ONC Cures Act Final Rule)
  - Section VII.B.5 — *"Real World Testing"*

REPORT ORGANIZATION

This document is organized by elements required to be submitted in the RWT results report. Each section provides a field for submitting responses and/or explanations for how NeoDeck addressed each required element in our RWT approach. This report has been expanded with additional rows or columns to address the specific needs of the RWT results being submitted.

GENERAL INFORMATION

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

Developer Name:	**NeoDeck Holdings, Corp**
Product Name(s):	**NeoMed 4.0**
Version Number(s):	**4.0**
CHPL ID(s):	**15.04.04.2814.NeoM.04.02.1.221230**

Developer Real World Testing Plan and Results Report Page URL:
https://neodeck.atlassian.net/wiki/spaces/NPS/pages/3047325701/Real+World+Testing+RWT+Plans+and+Results+Reports

CHANGES TO ORIGINAL PLAN

There are no changes to the original 2023 Real World Testing Plan.

WITHDRAWN PRODUCTS

Product Name(s):	**Patient Vault**
Version Number(s):	**2.0**
CHPL ID(s):	**15.04.04.2814.PVau.02.00.1.191209**
Date(s) Withdrawn:	**December 31, 2022**
Inclusion of Data in Results Report:	**No Patient Vault data was captured. Patient Vault is a pass-through patient portal of NeoMed EHR.**

SUMMARY OF TESTING METHODS AND KEY FINDINGS

Testing Methods

Real World Testing methods were deployed to demonstrate real-world interoperability focused on capturing and documenting the number of instances that certified capability is successfully utilized in the real world. We used a threefold approach that included adoption rate, summative testing, and interactive testing. The adoption rate demonstrated if/when a certified capability was being used in the real world. On the other hand, summative testing used values from reports and audit logs to measure which certified actions were performed. Lastly, interactive live-testing sessions were used to demonstrate conformance to requirements where the adoption rate of a given certified capability is zero.

Key Findings

Any challenges encountered or lessons learned from the chosen approach are also mentioned below. The goal is to demonstrate real-world interoperability and point out any non-conformities that were discovered and reported to the ONC-ACB during testing.

As mentioned below, we are able to demonstrate the certified capability is available and compliant with the certification criteria to support real-world interoperability. Unfortunately, some metrics were absent in the selected evaluation period due to lack of activity.

- Context - During the evaluation period: CCDAs were created, sent, and received; and prescriptions were transmitted and received successfully but data was exported only for a single patient in a single transaction. Health records and direct messages were exported, viewed, downloaded, sent, or received successfully.

- Compliance - Metrics for b.1, b.3, b.6, e.1 and h.1 criteria demonstrate that these criteria are available, effective and compliant. However, no CCDAs were sent (b.2) and not a single provider imported or exported CQM files.

- Exchange - For the most part, metrics for b.1, b.3, b.6, e.1, and h.1 criteria demonstrate effective EHI. However, there was no clinical information reconciled under b.2 criterion.

- Outcome – Metrics demonstrate that all criteria met expectations. Metrics also demonstrate a success rate for

all criteria except b.2 and c.3 due to no CCDAs reconciliation and no CQMs imported or exported by a provider.

- Challenges - Although providers did not import or export any CQM files during the evaluation period, we recently were able to confirm that the certified criterion is available and effective. On January 18, 2023 a provider requested a QRDA Type III file for reporting period 01/01/2020 to1/31/2020 which was successfully exported.

Non-conformities were not found this evaluation period. Improved tools were implemented were implemented during the 2023 RWT plan period to capture and monitor metrics.

STANDARDS UPDATES (INCLUDING STANDARDS VERSION ADVANCEMENT PROCESS (SVAP) AND UNITED STATES CORE DATA FOR INTEROPERABILITY (USCDI))

NeoMed did not include updates to newer versions of standards prior to August 31, 2023.

Care Settings

NeoMed is marketed primarily to ambulatory providers. It was designed to be flexible and customizable so it could be used by a variety of different clinical specialties. Although our system can be adapted to various specialties, the following specialties comprise most of our clients. Therefore, they were selected to be evaluated for the RWT certification.

- Primary Care (e.g., Internal Medicine, Pediatrics, Obstetrics)
- Cardiology
- Physical therapy
- Behavioral Health

Metrics and Outcomes

The table shown below, lists outcomes from testing that successfully demonstrate that NeoMed:

- is compliant with the certification criteria, including the required technical standards and vocabulary codes sets;
- is exchanging electronic health information (EHI) in the care and practice settings for which it is marketed for use; and/or,
- EHI is received by and used in NeoMed.

In addition, outcomes that did not result from measurements might be included, as deem necessary, to better describe testing effort.

The goal is to describe how the specific data collected from Real World Testing measures demonstrate the results. Whenever possible but most often than not, some context about the measures and results is provided to understand the number of licenses tested for the specified measures. The following number of licenses were used in calculations as the denominator for percent or proportion comparisons to the reported results.

Licenses	Count	Criteria
Non-prescriber	198	b.3
Prescriber	567	
Total	765	b.1, b.6, e.1

Any Relied Upon Software that is used to meet certification requirements for a criterion is also mentioned in this section.

NeoMed 4 criteria g.7 through g.9 were removed and it was not certified to the g.10 criterion. However, NeoMed uses a certified FHIR API/Server (Dynamic Health IT, Inc. ConnectEHR +BulkFHIR) as relied-upon software to ensure interoperability compliance.

All metrics and, specifically, those with "0" value such as b.2, were tested internally to validate results.

Criterion	Metric	Value	Justification and Expected Outcome	Results
170.315(b)(1) Transitions of care	Number of CCDAs created	1,170	This criterion requires the ability of a certified Health IT module to create CCDAs according to specified standards and vocabulary code sets, as well as send and receive CCDAs via edge protocols. However, it is not possible to consistently and reliably demonstrate that all required standards and code sets were used because not all CCDAs created in a real-world setting contain all the necessary data elements. Furthermore, it is not feasible to obtain copies of CCDA documents from "outside" developers or providers who have no incentive to participate in this exercise. Therefore, we intend **to demonstrate the required certified capabilities by showing how often CCDAs are created and exchanged with other systems to demonstrate the certified capability is available and effective, regardless of the frequency it is used.** Our expectation is there will be moderate utilization by providers with a high success rate.	**Context** In a period of 90 days, an average of approximately 390 CCDAs were created monthly at a rate of 2 CCDAs per licensed user. Although a small number of CCDAs were received via edge protocol, none were sent. **Compliance** This demonstrates that CCDAs are being created and received consistently and that the certified capability is available and compliant with this certification criterion. **Exchange** Although only 15 CCDAs were received via edge protocols, this demonstrates effective EHI exchange. **Outcome** A consistent number of CCDA creations exceeds expectations of moderate utilization by providers and confirms a high success rate. **Relied-upon Software** Datamotion service for edge protocols is used as relied-upon software for this criterion.
	Number of CCDAs sent via edge protocols	0		
	Number of CCDAs received via edge protocols	15		
315(b)(2) Clinical information reconciliation and incorporation	Number of times a user reconciled medication list data from a received CCDA	0	This criterion requires the ability of a certified Health IT module to take a CCDA received via an outside system and match it to the correct patient; reconcile the medication, allergy, and problem lists; and then incorporate the lists into the patient record. The expectation is each of these steps is done electronically within the certified Health IT module. While this certified capability is available to our users, most providers in the real world typically prefer to perform these steps manually and elect to save any outside received CCDAs as attachments to the patient record. Therefore, we intend **to record the frequency that providers are electronically reconciling and incorporating CCDAs that were received from outside providers to demonstrate the certified capability is available and effective, regardless of the frequency it is used.** Our expectation is there will be low utilization by providers with a high success rate.	**Context** In a period of 90 days, CCDAs were neither received via an outside system nor reconciled. **Compliance** We are unable to demonstrate that this capability was available, effective, and compliant to this criterion due to inactivity in this time period. **Exchange** We are unable to demonstrate data exchange due to lack of CCDAs received from outside providers. **Outcome** These metrics also proved our expectation for low utilization and does not demonstrate a success rate.
	Number of times a user reconciled allergies and intolerance list data from a received CCDA	0		
	Number of times a user reconciled problem list data from a received CCDA	0		
170.315(b)(3) Electronic prescribing	Number of prescriptions created	140,753	This criterion requires the ability of a certified Health IT module to perform prescription-related electronic transactions (eRx) using required standards. However, it is not possible to demonstrate the correct standards were used because it is not feasible to obtain copies of eRx documents from "outside" companies or pharmacies who have no incentive to participate. Therefore, we intend **to**	**Context** In a period of 90 days, an average of approximately 47,000 prescriptions were created monthly at a rate of 248 per licensed prescriber. An insignificant number of the prescriptions created were either cancelled or changed. **Compliance**
	Number of prescriptions changed	6		
	Number of prescriptions canceled	231		

	Number of prescriptions renewed	0	**demonstrate the required certified capabilities are effective by showing how often eRx transactions are performed by examining reports from our eRx partner. This will confirm that not only are the eRx transactions sent from the certified Health IT module, but that the transactions are successfully received by the eRx clearinghouse.** Our expectation is there will be high utilization by providers with a high success rate.	This metric shows how successful and effective eprescribing transactions are and that NeoMed is compliant with this criterion. **Exchange** Surescripts confirmed that although a Partnership Value Report was not issued for 2023, NeoMed transactions are being received successfully. **Outcome** This high number of successful eprescribing transactions confirmed our expectations of high utilization with a high success rate.
170.315(b)(6) Data export	Number of times a data export was performed for a single patient in a single transaction	1,998	This criterion requires the ability of a certified Health IT module to export a summary of a patient's record in CCDA format according to specified standards and vocabulary code sets. However, it is not possible to consistently and reliably demonstrate that all required standards and code sets were used because not all CCDAs created in a real-world setting contain all the necessary data elements. Therefore, we intend **to demonstrate the certified capability is available and effective, regardless of the frequency it is used.** Our expectation is there will be very low utilization by providers with a high success rate.	**Context** In a period of 90 days, an average of approximately 666 single-patient records were exported monthly at a rate of 3 data exports per licensed user. However, only an average of approximately 67 multi-patient records were exported monthly at a rate of less than a data export per licensed user. **Compliance** Most of the data exports were performed for a single patient in a single transaction demonstrating that the certified capability is available, effective, and compliant with this criterion. **Exchange** The number of exported records for this time period demonstrates that EHI records are being exchanged. **Outcome** The significant number of data exports exceeded our expectation for a moderate utilization but with a high success rate.
	Number of times a data export was performed for multiple patients in a single transaction	200		
170.315(c)(1- 3) Clinical quality measures (CQMs)	Number of measures recorded during the period Number of QRDA Category 1 files exported Number of QRDA Category 1 files imported (if applicable)	0	These criteria will be tested together. C1 requires a certified Health IT module to record required data, calculate CQMs from the recorded data, and export the data in QRDA Category 1 format. C2 requires a certified Health IT module must be able to import data from a QRDA Category 1 formatted file and calculate the CQMs based on that data. C3 requires a certified Health IT module must be able to create a QRDA Category 1 formatted file and a QRDA Category 3 aggregate report to be used for transmitting CQM data to CMS. We intend **to record the frequency that CQM files are imported and/or exported by providers to demonstrate the certified capability is available and effective, regardless of the frequency it is used.** Our expectation is there will be moderate utilization by providers with a high success rate.	**Context** Providers did not import or export any CQM files. **Compliance** We are unable to demonstrate that the certified capability is available and effective since providers did not import or export CQM files. **Exchange** N/A **Outcome** Lack of results does not support our expectation for moderate utilization by the providers and we are unable to demonstrate any kind of success rate. **Challenge** We note that on 1/18/2023 a QRDA Type III file for reporting period 01/01/2020 to1/31/2020 was

				exported successfully to demonstrate that the certified capability is available and effective. **Relied-upon Software** Dynamic Health IT CQMsolution is used as relied-upon software for this criterion.
170.315(e)(1) View, download, and transmit to 3rd party	Number of views of health information by a patient or authorized representative	369	This criterion requires the ability of a certified Health IT module to provide patients access to a patient portal with the ability to view, download, and send their health care records to other providers via encrypted or unencrypted transmission methods in CCDA format. We intend **to record the frequency that patients are viewing, downloading, and transmitting their records from the portal using the certified capabilities to demonstrate the certified capability is available and effective, regardless of the frequency it is used.** Our expectation is there will be moderate utilization by patients for view and lower utilization for download and transmit with a high success rate for all certified capabilities.	**Context** In a period of 90 days, an average of approximately at least 2 transactions were viewed, downloaded, or transmitted monthly. **Compliance** A significant combined number of records that were viewed, downloaded, and transmitted demonstrates that the capability is available, effective, and compliant with this criterion. **Exchange** Sixty-six percent (66%) of the viewed records were downloaded and almost 2% were transmitted via encrypted or unencrypted email demonstrating that EHI records are being exchanged with patients or an authorized representative. **Outcome** This metric supports our expectation for moderate utilization by patients for view and lower utilization for download and transmit with a high success rate for all certified capabilities.
	Number of downloads of health information by a patient or authorized representative	243		
	Number of transmissions of health information by a patient or authorized representative, whether via an encrypted method or unencrypted email	6		
170.315(h)(1) Direct Project	Number of Direct Messages sent	527	This criterion requires the ability of a certified Health IT module to record the frequency that direct messages are sent and received by providers. Since not all systems respond with MDNs, we cannot reliably use that metric to define success. Furthermore, it is not feasible to obtain copies of Direct Messages from "outside" developers or providers who have no incentive to participate in this exercise. Therefore, we intend **to demonstrate the required certified capabilities by showing how often Direct Messages are exchanged with other systems to confirm the certified capability is available and effective, regardless of the frequency it is used.** Our expectation is there will be moderate utilization by providers with a high success rate.	**Context** In a period of 90 days, an average of approximately 176 and 359 direct messages were sent and received respectively. More direct messages were received than sent per licensed user. **Compliance** The number of direct messages sent and received demonstrates that the certified capability is available, effective, and compliant with this criterion. **Exchange** The number of direct messages sent and received also demonstrates that EHI is being exchanged. **Outcome** Results are lower than expected but success rate is high for direct messages received. Results support our expectation for moderate utilization with a high success rate for all certified capabilities.
	Number of Direct Messages received	1077		

Interactive Testing

Interactive testing is performed to demonstrate Real World certified capabilities for criteria where metrics are not available. To date, the *170.315(f)(2) Transmission to public health agencies — syndromic surveillance* criterion has not had any mandates associated with it and has not been prioritized by providers.

Two interactive sessions were run. One interactive session was run with a primary care clinician and another with a cardiologist. Both clinicians used test data to create encounters in a production environment. The whole test was recorded and the PHIN ADT message exported, checked against the NIST syndromic surveillance HLv2 tool, and confirmed to be successful.

Criterion	Goal	Justification and Expected Outcome	Setting	Results
• Creating Test Patients and encounters • PHIN ADT message confirmation	• To demonstrate NeoMed capability for transmitting effectively syndrome-based public health surveillance data to a registry • To check PHIN ADT message produced is checked using NIST syndromic surveillance HLv2 tool syndrome-based public health surveillance data to a registry using a specified format.	This criterion requires the ability of a certified Health IT module to transmit syndrome-based public health surveillance data to a registry using a specified format. We intend to record the frequency that syndromic surveillance data is submitted to registries by providers to demonstrate the certified capability is available and effective, regardless of the frequency it is used. Our expectation is there will be zero adoption of this certified capability by our users, so we have added interactive testing methodology for these capabilities to the test plan below to demonstrate the feature is available and functions as expected should any users elect to begin using this feature.	Primary Care	• Clinician created encounters with test data in a production environment. • Interactive session was recorded. • The PHIN ADT message was exported, checked against the NIST syndromic surveillance HLv2 tool, and confirmed to be successful.
			Cardiologist	• Clinician created encounters with test data in a production environment. • Interactive session was recorded. • The PHIN ADT message was exported, checked against the NIST syndromic surveillance HLv2 tool, and confirmed to be successful.

KEY MILESTONES

The table shown below lists relevant milestones that were met during the Real World Testing process. Details on how and when measures were implemented and collected are included. A key milestone is defined as a relevant event that is directly related to the outcomes discussed in this report. For each key milestone, the date/timeframe during which data was collected in a specific care setting is described. Metrics include measures from all care settings.

Key Milestone	Care Setting	Timeframe
• Interactive Testing	Primary Care and Cardiologist	Quarter 4 2023 and Quarter 1 2024
• Data was successfully collected for all the metrics.	• Primary Care • Cardiology • Physical therapy • Behavioral Health	Quarters 3 and 4 2023

• Service tickets were created to validate metrics collection and monitoring • Mixpanel dashboards were improved	• Primary Care • Cardiology • Physical therapy • Behavioral Health	Quarters 3 and 4 2023