REAL WORLD TESTING RESULTS REPORT 2022 - NeoMed 3.0.0.8

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 2022 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 3.0 / Legacy**
Version Number(s):	**3.0.0.8**
CHPL ID(s):	**15.05.04.2814.1739.03.01.1.221230**

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

After developing NeoMed's Real World Testing approach and mainly due to the eventual adoption of relied-upon software for standardized API for patient and population services, the following criteria were removed from the original plan.

Summary of Change	Reason	Impact
Withdrawal of 170.315 (f)(6): Transmission to Public Health Agencies - Antimicrobial Use and Resistance Reporting	This criterion applies to technology in the inpatient setting while both NeoMed EHR versions are implemented in an ambulatory setting.	This criterion will no longer be executed to demonstrate Real World certified capabilities for criteria where metrics are not available as initially planned.
Withdrawal of 170.315 (g)(7): Application Access - Patient Selection	Full adoption of certified relied upon software for standardized API for patient and population services	This criterion will no longer be executed to demonstrate interoperability and the success rate of this certification criterion.
Withdrawal of 170.315 (g)(8): Application Access - Data Category Request	Full adoption of certified relied upon software for standardized API for patient and population services	This criterion will no longer be executed to demonstrate interoperability and the success rate of this certification criterion.
Withdrawal of 170.315 (g)(9): Application Access - All Data Request	Full adoption of certified relied upon software for standardized API for patient and population services	This criterion will no longer be executed to demonstrate interoperability and the success rate of this certification criterion.

WITHDRAWN PRODUCTS

Patient Vault, NeoMed's patient portal, was withdrawn in 2022. Patient Vault had initially its separate Real World Testing plan. Information specific to Patient Vault is shown below.

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 but none were reconciled. Prescriptions were transmitted, and records were exported, viewed, and downloaded 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 received via an outside system or reconciled (b.2) and no direct messages were sent but few were received. Not a single provider imported or exported CQM files either.

- Exchange - For the most part, metrics for b, e.1, and h.1 criteria demonstrate effective EHI. There were no direct messages sent under h.1 criterion either.

- 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 - We encountered duplicate viewed, downloaded, or transmitted records. It is also worth mentioning that 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 but improved metrics monitoring and methods to prevent duplicate records are among the lessons learned in this evaluation period.

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, 2022.

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	448	b.3
Prescriber	117	
Total	565	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.

Criterion	Metric	Value	Justification and Expected Outcome	Results
170.315(b)(1) Transitions of care	Number of CCDAs created	263,807	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 87,935 CCDAs were created monthly at a rate of 467 CCDAs per licensed user. The same number of CCDAs that are being sent by one provider, are being used by another provider. **Compliance** This demonstrates that CCDAs are being created consistently and that the certified capability is available and compliant with this certification criterion. **Exchange** A significant number (30%) of CCDAs were sent and received via edge protocols demonstrating effective EHI exchange. **Outcome** A consistent number of CCDAs creation exceeds expectations of moderate utilization by providers and 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	78,280		
	Number of CCDAs received via edge protocols	78,280		
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	424,797	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	**Context** In a period of 90 days, an average of approximately 141,607 prescriptions were created monthly at a rate of 948 prescriptions per licensed user.
	Number of prescriptions changed	0		

	Number of prescriptions canceled	24	of eRx documents from "outside" companies or pharmacies who have no incentive to participate. Therefore, we intend **to 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.	An insignificant number (0.005%) of the prescriptions created were canceled. **Compliance** This metric shows how successful and effective eprescribing transactions are and that NeoMed is compliant with this criterion. **Exchange** Surescripts Partnership Value Report for July 2022 showed lower Directory Message (13.33%) and NewRx errors (0.13%) rates compared to the network 16.46% and 3.42% respectively confirming that not only the transactions are being sent from NeoMed, but that the transactions are also successfully received by Surescripts. **Outcome** This high number of successful eprescribing transactions confirmed our expectations of high utilization with a high success rate.
	Number of prescriptions renewed	0		
170.315(b)(6) Data export	Number of times a data export was performed for a single patient in a single transaction	22	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 7 records were exported monthly at a rate of less than one data export per licensed user. Data was exported for 9 patients but 4 of them had multiple duplicates. **Compliance** All 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 small number of data exports confirmed our expectation for a very low utilization but with a high success rate.
	Number of times a data export was performed for multiple patients in a single transaction	0		
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	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	**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

	files imported (if applicable)		expectation is there will be moderate utilization by providers with a high success rate.	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	1,349	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 450 transactions were created monthly at a rate of 2 transactions per licensed user. **Compliance** A significant combined number of records that were viewed, downloaded, and transmitted demonstrate that the capability is available, effective, and compliant with this criterion. **Exchange** Sixteen percent (19%) of the records were downloaded and very few (0.37%) 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	259		
	Number of transmissions of health information by a patient or authorized representative, whether via an encrypted method or unencrypted email	5		
170.315(h)(1) Direct Project	Number of Direct Messages sent	0	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, no direct messages were sent. However, a few were received at a rate lower than one percent per licensed user. **Compliance** The number of direct messages received demonstrates that the certified capability is available, effective, and compliant with this criterion. **Exchange** The number of direct messages received demonstrates that EHI is being exchanged. **Outcome** Results are lower than expected but success rate is high for direct messages received.
	Number of Direct Messages received	5		

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 2022 and Quarter 1 2023
• Data was successfully collected for all the metrics.	• Primary Care • Cardiology • Physical therapy • Behavioral Health	Quarters 3 and 4 2022
• Specific metrics in support of RWT were identified • Service tickets created to ensure the data is retrievable if it is not already readily available • SQL statements and Mixpanel dashboard were completed	• Primary Care • Cardiology • Physical therapy • Behavioral Health	Quarters 3 and 4 2021