Glenwood Systems

Real World Testing Results – 2022 Plan

Version: 1.0
January 2023

This document contains the Results of the Real World Testing Plan of Glenwood System's GlaceEMR for the year 2022.

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Introduction

Real World Testing is an annual requirement outlined in the ONC 21st Century Cures Act Final Rule for health IT developers participating in the ONC Health IT Certification Program. The purpose of this Condition and Maintenance of Certification requirement is for Certified Health IT Developers to demonstrate interoperability and functionality of their certified health IT in real world settings and scenarios, rather than in a controlled test environment with an ONC-Authorized Testing Lab. Real World Testing verifies that deployed Certified Health IT continues to perform as intended by conducting and measuring observations of interoperability and data exchange. These observations are described in a public and transparent way through Real World Testing plans and reported as Real World Testing results. This document contains the results of execution of the test plan for the following criteria.

Transition Of Care:

§ 170.315(b)(1) Transitions of care

§ 170.315(b)(2) Clinical information reconciliation and incorporation

§ 170.315(b)(7) Security tags - summary of care - send

§ 170.315(b)(8) Security tags - summary of care - receive

§ 170.315(b)(9) Care plan

§ 170.315(e)(1) View, download, and transmit to 3rd party

ePrescription:

§ 170.315(b)(3) Electronic prescribing

Data Export:

§ 170.315(b)(6) Data export

Clinical Quality Measures:

§ 170.315(c)(1)—record and export

§ 170.315(c)(2)—import and calculate

§ 170.315(c)(3)—report

Application Programming Interfaces:

§ 170.315(g)(7) Application access — patient selection

§ 170.315(g)(8) Application access — data category request

§ 170.315(g)(9) Application access — all data request

Electronic Exchange:

§ 170.315(h)(2) Direct Project, Edge Protocol, and XDR/XDM

Public Health:

§ 170.315(f)(1) Transmission to immunization registries

§ 170.315(f)(2) Transmission to public health agencies — syndromic surveillance

§ 170.315(f)(4) Transmission to cancer registries

§ 170.315(f)(5) Transmission to public health agencies — electronic case reporting

§ 170.315(f)(7) Transmission to public health agencies — health care surveys

Applicable Real World Testing Certification Criteria

Transition Of Care

General Information

Developer Name:	**Glenwood Systems LLC**
Product Name(s):	**GlaceEMR**
Version Number(s):	**6.0**
Certified Health IT Product List (CHPL) ID(s):	**15.04.04.1535.Glac.06.00.1.180629**
Developer Real World Testing Page URL:	**https://docs.glaceemr.com/Glenwood/rwt.html**

Summary of Testing Methods and Key Findings:

Our plan was to utilize the system logs, and communication logs to determine the send and receive transitions of care using Edge protocols and downloading or transmitting EHI by patients using the patient portal. During the course we have added additional Outcome information to track the transactions. In Patient portal majority of the patients viewed their summary document, far fewer downloaded the document and no significant patient population transmitted the document.

Standards Updates (Including Standards Version Advancement Process (SVAP) And United States Core Data For Interoperability (USCDI))

Standard (and version)	All standards versions are those specified in USCDI v1. The developer plans to use SVAP to update its (e)(1) module to support the new version of the Direct transport protocol (now known as Secure Health Transport) during the testing period.
Method used for standard update	SVAP
Updated certification criteria and associated product	2015 Edition
Certified Health IT Product List (CHPL) ID(s):	15.04.04.1535.Glac.06.00.1.180629

Care Setting(S):
We have utilized ambulatory care setting in a pulmonary practice.

Metrics and Outcomes:

Measurement /Metric	Associated Criterion	Outcome	Challenges (if applicable)
Sending	§ 170.315(b)(1) Transitions of care § 170.315(e)(1) View, download and transmit § 170.315(b)(9) Care plan § 170.315(b)(7) Security tags - summary of care - send	On average we saw 5% failures.	
Receiving	§ 170.315(b)(1) Transitions of care § 170.315(b)(9) Care plan § 170.315(b)(8) Security tags - summary of care - receive	On average we saw 10% failures.	

Schedule Of Key Milestones

Key Milestone	Care Setting	Date/ Timeframe
Release of documentation for the Real-World Testing to be provided to authorized representatives and providers. This includes surveys, specific instructions on what to look for, how to record issues encountered, and Customer Agreements.	Ambulatory	December 1, 2021
Collection of information as laid out by the plan for the period.	Ambulatory	January 1, 2022
Planned System updates to allow for collection of data after a SVAP update.	Ambulatory	April 1, 2022
Follow-up with providers and authorized representatives on a regular basis to understand any issues arising with the data collection.	Ambulatory	Quarterly, 2022
End of Real-World Testing period/final collection of all data for analysis.	Ambulatory	January 1, 2023
Analysis and report creation.	Ambulatory	January 15, 2023
Submit Real World Testing report to ACB (per their instructions)	Ambulatory	February 1, 2023

ePrescription

General Information

Developer Name:	**Glenwood Systems LLC**
Product Name(s):	**GlaceEMR**
Version Number(s):	**6.0**
Certified Health IT Product List (CHPL) ID(s):	**15.04.04.1535.Glac.06.00.1.180629**
Developer Real World Testing Page URL:	**https://docs.glaceemr.com/Glenwood/rwt.html**

Summary of Testing Methods and Key Findings:

Our plan was to utilize the system logs, and communication logs to determine the ePrescription performance. During the course we have found most providers do not select the Dx code for the Rx entries. We are planning to encourage the providers to select the Dx for the Rx.

Standards Updates (Including Standards Version Advancement Process (SVAP) And United States Core Data For Interoperability (USCDI))

Standard (and version)	§ 170.205(b)(1) NCPDP SCRIPT Standard, Implementation Guide, Version 2017071
	§ 170.207(d)(3) RxNorm, September 8, 2015 Full Release Update
Updated certification criteria and associated product	2015 Edition
Certified Health IT Product List (CHPL) ID(s):	15.04.04.1535.Glac.06.00.1.180629

Care Setting(S):

We have utilized ambulatory care setting in a primary care practice.

Metrics and Outcomes:

Measurement /Metric	Associated Criterion	Outcome	Challenges (if applicable)
New Rx		Overall 0% average failures	
Refill Rx	§ 170.315(b)(3) Electronic prescribing	On average we saw 2% failures.	
Rx with Dx		On average we saw more than 90% of Rx didn't contain Dx.	

Schedule Of Key Milestones

Key Milestone	Care Setting	Date/ Timeframe
Release of documentation for the Real-World Testing to be provided to authorized representatives and providers. This includes surveys, specific instructions on what to look for, how to record issues encountered, and Customer Agreements.	Ambulatory	December 1, 2021
Collection of information as laid out by the plan for the period.	Ambulatory	January 1, 2022
Follow-up with providers and authorized representatives on a regular basis to understand any issues arising with the data collection.	Ambulatory	Quarterly, 2022
End of Real-World Testing period/final collection of all data for analysis.	Ambulatory	January 1, 2023
Analysis and report creation.	Ambulatory	January 15, 2023
Submit Real World Testing report to ACB (per their instructions)	Ambulatory	February 1, 2023

Data Export.

General Information

Developer Name:	**Glenwood Systems LLC**
Product Name(s):	**GlaceEMR**
Version Number(s):	**6.0**
Certified Health IT Product List (CHPL) ID(s):	**15.04.04.1535.Glac.06.00.1.180629**
Developer Real World Testing Page URL:	**https://docs.glaceemr.com/Glenwood/rwt.html**

Summary of Testing Methods and Key Findings:

Our plan was to utilize the system logs, and communication logs to determine batch data export utilization. As per our findings the export process Is running without any error. We are considering even granular logging to find the outcome of individual records rather than the outcome of the batch operation.

Standards Updates (Including Standards Version Advancement Process (SVAP) And United States Core Data For Interoperability (USCDI))

Standard (and version)	§ 170.205(a)(4) HL7® Implementation Guide for CDA® Release 2: Consolidated CDA Templates for Clinical Notes (US Realm), Draft Standard for Trial Use Release 2.1, August 2015 § 170.207(a)(4) International Health Terminology Standards Development Organization (IHTSDO) Systematized Nomenclature of Medicine Clinical Terms (SNOMED CT®), U.S. Edition, September 2015 Release § 170.207(i) ICD-10-CM
Updated certification criteria and associated product	2015 Edition
Certified Health IT Product List (CHPL) ID(s):	15.04.04.1535.Glac.06.00.1.180629

Care Setting(S):

We have utilized ambulatory care setting in a primary care practice.

Metrics and Outcomes:

Measurement /Metric	Associated Criterion	Outcome	Challenges (if applicable)
Data Export	§ 170.315(b)(6) Data Export	On average we saw 0% failures.	

Schedule Of Key Milestones

Key Milestone	Care Setting	Date/ Timeframe
Release of documentation for the Real-World Testing to be provided to authorized representatives and providers. This includes surveys, specific instructions on what to look for, how to record issues encountered, and Customer Agreements.	Ambulatory	December 1, 2021
Collection of information as laid out by the plan for the period.	Ambulatory	January 1, 2022
Follow-up with providers and authorized representatives on a regular basis to understand any issues arising with the data collection.	Ambulatory	Quarterly, 2022
End of Real-World Testing period/final collection of all data for analysis.	Ambulatory	January 1, 2023
Analysis and report creation.	Ambulatory	January 15, 2023
Submit Real World Testing report to ACB (per their instructions)	Ambulatory	February 1, 2023

Clinical Quality Measures

General Information

Developer Name:	**Glenwood Systems LLC**
Product Name(s):	**GlaceEMR**
Version Number(s):	**6.0**
Certified Health IT Product List (CHPL) ID(s):	**15.04.04.1535.Glac.06.00.1.180629**
Developer Real World Testing Page URL:	**https://docs.glaceemr.com/Glenwood/rwt.html**

Summary of Testing Methods and Key Findings:

Our plan was to utilize the system logs, and communication logs to determine QRDA-I, QRDA-III export, import and report functions. Since none of our customers utilized the import function, we have used the Cypress tool to verify.

Standards Updates (Including Standards Version Advancement Process (SVAP) And United States Core Data For Interoperability (USCDI))

Standard (and version)	§ 170.205(h)(2) Health Level 7 (HL7®) CDA® Release 2 Implementation Guide for: Quality Reporting Document Architecture – Category I (QRDA I); Release 1, DSTU Release 3 (US Realm), Volume 1
	§ 170.205(k)(3) CMS Implementation Guide for Quality Reporting Document Architecture: Category III; Eligible Clinicians and Eligible Professionals Programs; Implementation Guide for 2020
Updated certification criteria and associated product	2015 Edition
Certified Health IT Product List (CHPL) ID(s):	15.04.04.1535.Glac.06.00.1.180629

Care Setting(S):

We have utilized ambulatory care setting in a primary care and many specialty practices.

Metrics and Outcomes:

Measurement /Metric	Associated Criterion	Outcome	Challenges (if applicable)
Export	§ 170.315(c)(1)—record and export	We do not see any errors or failures.	
Import	§ 170.315(c)(2)—import and calculate	We do not see any errors or failures.	
Report	§ 170.315(c)(3)—report	We do not see any errors or failures.	

Schedule Of Key Milestones

Key Milestone	Care Setting	Date/ Timeframe
Release of documentation for the Real-World Testing to be provided to authorized representatives and providers. This includes surveys, specific instructions on what to look for, how to record issues encountered, and Customer Agreements.	Ambulatory	December 1, 2021
Collection of information as laid out by the plan for the period.	Ambulatory	January 1, 2022
Follow-up with providers and authorized representatives on a regular basis to understand any issues arising with the data collection.	Ambulatory	Quarterly, 2022
End of Real-World Testing period/final collection of all data for analysis.	Ambulatory	January 1, 2023
Analysis and report creation.	Ambulatory	January 15, 2023
Submit Real World Testing report to ACB (per their instructions)	Ambulatory	February 1, 2023

Application Programming Interfaces

General Information

Developer Name:	**Glenwood Systems LLC**
Product Name(s):	**GlaceEMR**
Version Number(s):	**6.0**
Certified Health IT Product List (CHPL) ID(s):	**15.04.04.1535.Glac.06.00.1.180629**
Developer Real World Testing Page URL:	**https://docs.glaceemr.com/Glenwood/rwt.html**
Relied Upon Software (if applicable)	**GlaceEMR API Gateway (included with GlaceEMR)**

Summary of Testing Methods and Key Findings:

Our plan was to utilize the system logs, and communication logs to determine API functions. We do not see any errors. But APIs failed many times due to searched patient not found or requested data do not exist.

Standards Updates (Including Standards Version Advancement Process (SVAP) And United States Core Data For Interoperability (USCDI))

Standard (and version)	§ 170.213 United States Core Data for Interoperability (USCDI) Version 1
	§ 170.205(a)(4) Health Level 7 (HL7®) Implementation Guide for CDA Release 2 Consolidation CDA Templates for Clinical Notes (US Realm), Draft Standard for Trial Use Release 2.1 C-CDA 2.1, August 2015, June 2019 (with Errata)
	§ 170.205(a)(5) HL7® CDA R2 IG: C-CDA Templates for Clinical Notes R2.1 Companion Guide, Release 2, October 2019, IBR approved for § 170.205(a)(5)
Updated certification criteria and associated product	2015 Edition
Certified Health IT Product List (CHPL) ID(s):	15.04.04.1535.Glac.06.00.1.180629

Care Setting(S):

Since GlaceEMR supports ambulatory care setting we are going to use a primary care and few specialty practices

Metrics and Outcomes:

Measurement /Metric	Associated Criterion	Outcome	Challenges (if applicable)
Search	§170.315(g)(7) Application access — patient selection	We do not see any errors.	
Get Clinical Data	§170.315(g)(8) Application access — data category request	We do not see any errors.	
Get Document	§170.315(g)(9) Application access — all data request	We do not see any errors.	

Schedule Of Key Milestones

Key Milestone	Care Setting	Date/ Timeframe
Release of documentation for the Real-World Testing to be provided to authorized representatives and providers. This includes surveys, specific instructions on what to look for, how to record issues encountered, and Customer Agreements.	Ambulatory	December 1, 2021
Collection of information as laid out by the plan for the period.	Ambulatory	January 1, 2022
Follow-up with providers and authorized representatives on a regular basis to understand any issues arising with the data collection.	Ambulatory	Quarterly, 2022
End of Real-World Testing period/final collection of all data for analysis.	Ambulatory	January 1, 2023
Analysis and report creation.	Ambulatory	January 15, 2023
Submit Real World Testing report to ACB (per their instructions)	Ambulatory	February 1, 2023

Electronic Exchange

General Information

Developer Name:	**Glenwood Systems LLC**
Product Name(s):	**GlaceEMR**
Version Number(s):	**6.0**
Certified Health IT Product List (CHPL) ID(s):	**15.04.04.1535.Glac.06.00.1.180629**
Developer Real World Testing Page URL:	**https://docs.glaceemr.com/Glenwood/rwt.html**

Summary of Testing Methods and Key Findings:

Our plan was to utilize the system logs, and communication logs to determine Direct Messaging functions. During the course we have added additional Outcome information to track the transactions.

Standards Updates (Including Standards Version Advancement Process (SVAP) And United States Core Data For Interoperability (USCDI))

Standard (and version)	§ 170.202(a)(2) Direct Project: ONC Applicability Statement for Secure Health Transport, Version 1.2, August 2015
	§ 170.202(b) ONC XDR and XDM for Direct Messaging Specification
	§ 170.202(d) ONC Implementation Guide for Direct Edge Protocols, Version 1.1, June 25, 2014
	§ 170.202(e)(1) Delivery Notification - Implementation Guide for Delivery Notification in Direct v1.0
Updated certification criteria and associated product	2015 Edition
Certified Health IT Product List (CHPL) ID(s):	15.04.04.1535.Glac.06.00.1.180629

Care Setting(S):

Since GlaceEMR supports ambulatory care setting we are going to use a primary care and few specialty practices

Metrics and Outcomes:

Measurement /Metric	Associated Criterion	Outcome	Challenges (if applicable)
Send	§ 170.315(h)(2) Direct Project, Edge Protocol, and XDR/XDM	On average we saw 5% failures.	
Receive		On average we saw 10% failures.	

Schedule Of Key Milestones

Key Milestone	Care Setting	Date/ Timeframe
Release of documentation for the Real-World Testing to be provided to authorized representatives and providers. This includes surveys, specific instructions on what to look for, how to record issues encountered, and Customer Agreements.	Ambulatory	December 1, 2021
Collection of information as laid out by the plan for the period.	Ambulatory	January 1, 2022
Follow-up with providers and authorized representatives on a regular basis to understand any issues arising with the data collection.	Ambulatory	Quarterly, 2022
End of Real-World Testing period/final collection of all data for analysis.	Ambulatory	January 1, 2023
Analysis and report creation.	Ambulatory	January 15, 2023
Submit Real World Testing report to ACB (per their instructions)	Ambulatory	February 1, 2023

Public Health

General Information

Developer Name:	Glenwood Systems LLC
Product Name(s):	GlaceEMR
Version Number(s):	6.0
Certified Health IT Product List (CHPL) ID(s):	15.04.04.1535.Glac.06.00.1.180629
Developer Real World Testing Page URL:	https://docs.glaceemr.com/Glenwood/rwt.html

Summary of Testing Methods and Key Findings:

Our plan was to utilize the system logs, and communication logs to determine Public Health agency updates. We do not have any customers using cancer registry, syndromic surveillance registry and healthcare survey. At the beginning we saw more failures in transmission due to missing fields, warned by registry which were optional fields in EMR. We made more fields mandatory and added registry specific validations to avoid such situation. As the year progressed the rate of error decreased drastically. In addition, Error rate widely varies between different registries due to data validation policies. Many of the registries do not support the query facility yet.

Standards Updates (Including Standards Version Advancement Process (SVAP) And United States Core Data For Interoperability (USCDI))

Standard (and version)	§ 170.205(e)(4) Health Level 7 (HL7®) 2.5.1 Implementation Specifications. HL7® 2.5.1 Implementation Guide for Immunization Messaging, Release 1.5, October 2014 and HL7® Version 2.5.1 Implementation Guide for Immunization Messaging (Release 1.5)—Addendum, July 2015
	§ 170.207(e)(3) HL7® Standard Code Set CVX— Vaccines Administered, updates through August 17, 2015
	§ 170.207(e)(4) National Drug Code (NDC) Directory– Vaccine NDC Linker, updates through August 17, 2015
	§ 170.205(d)(4) Health Level 7 (HL7®) 2.5.1. Implementation specifications. PHIN Messaging Guide for Syndromic Surveillance: Emergency Department, Urgent, Care, Inpatient and Ambulatory Care, and Inpatient Settings, Release 2.0, April

	21, 2015 and Erratum to the CDC PHIN 2.0 Implementation Guide, August 2015
	§ 170.205(i)(2) Health Level 7 (HL7®) Implementation Guide for CDA© Release 2: Reporting to Public Health Cancer Registries from Ambulatory Healthcare Providers, Release 1, DSTU Release 1.1, April 2015
	§ 170.207(a)(4) International Health Terminology Standards Development Organization (IHTSDO) Systematized Nomenclature of Medicine Clinical Terms (SNOMED CT®), U.S. Edition, September 2015 Release
	§ 170.213 United States Core Data for Interoperability (USCDI)
	§ 170.207(a)(4) International Health Terminology Standards Development Organization (IHTSDO) Systematized Nomenclature of Medicine Clinical Terms (SNOMED CT®), U.S. Edition, September 2019 Release

	§ 170.207(i) Encounter diagnoses: The code set specified at 45 CFR 162.1002(c)(2) for the indicated conditions ICD-10-CM as maintained and distributed by HHS, for the following conditions:
	    Diseases.
	    Injuries.
	    Impairments.
	    Other health problems and their manifestations.
	    Causes of injury, disease, impairment, or other health problems.

	§ 170.205(s)(1) Health Level 7 (HL7®) Implementation Guide for CDA Release 2: National Health Care Surveys (NHCS), Release 1 – US Realm, Draft Standard for Trial Use, December 2014
	Errata for NHCS V1.0
	Standards Version Advancement Process (SVAP) Version(s) Approved

	HL7® CDA® R2 Implementation Guide: National Health Care Surveys (NHCS), R1 STU Release 3 - US Realm Optional HL7® CDA® R2 Implementation Guide: National Health Care Surveys (NHCS), R1 DSTU Release 1.2 - US Realm
Updated certification criteria and associated product	2015 Edition
Certified Health IT Product List (CHPL) ID(s):	15.04.04.1535.Glac.06.00.1.180629

Care Setting(S):

Since GlaceEMR supports ambulatory care setting we are going to use a primary care and few specialty practices

Metrics and Outcomes:

Measurement /Metric	Associated Criterion	Outcome	Challenges (if applicable)
Transmit	§170.315(f)(1) Transmission to immunization Registries	Error rate varies between 10% to 20%	
Query		Error rate varies between 2% to 4% where available.	

Schedule Of Key Milestones

Key Milestone	Care Setting	Date/ Timeframe
Release of documentation for the Real-World Testing to be provided to authorized representatives and providers. This includes surveys, specific instructions on what to look for, how to record issues encountered, and Customer Agreements.	Ambulatory	December 1, 2021
Collection of information as laid out by the plan for the period.	Ambulatory	January 1, 2022
Follow-up with providers and authorized representatives on a regular basis to understand any issues arising with the data collection.	Ambulatory	Quarterly, 2022
End of Real-World Testing period/final collection of all data for analysis.	Ambulatory	January 1, 2023
Analysis and report creation.	Ambulatory	January 15, 2023
Submit Real World Testing report to ACB (per their instructions)	Ambulatory	February 1, 2023

Attestation

I do hereby attest that Real World Testing plan for 2022 is executed for the year 2023 is completed as per the ONC requirements on the expected time frame. This document is submitted to the ONC Approved Certification Body.

Authorized Representative is   Samuel Raj
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                                (877) 728-7070
                                Technical Director
                                Glenwood Systems, LLC.
                                1389 West Main Street, Suite 308
                                Waterbury, CT 06709=8

Sincerely

Signed by Glenwood System, LLC's Technical Director, Samuel Raj on 01/30/2023.