Real World Testing Plan

Astronaut LLC
7505 Fannin St. Suite 170
Houston TX 77054
(O) 713-750-9045
(F) 832-667-8162
(e) info@astronautehr.com
(w) www.astronautehr.com

General Information	
Plan Report ID#:	20231025ast
Developer Name:	Astronaut LLC
Product Name:	Astronaut
Version Number:	1709
Product List (CHPL) ID	15.02.05.3099.ASTR.01.00.1.220201
Certified Health IT:	170.315 (a)(1), 170.315 (a)(2), 170.315 (a)(3), 170.315 (a)(4), 170.315 (a)(5), 170.315 (a)(9), 170.315 (a)(12), 170.315 (a)(14), 170.315 (b)(1), 170.315 (b)(3), 170.315 (b)(10), 170.315 (c)(1), 170.315 (d)(1), 170.315 (d)(2), 170.315 (d)(3), 170.315 (d)(4), 170.315 (d)(5), 170.315 (d)(6), 170.315 (d)(7), 170.315 (d)(8), 170.315 (d)(9), 170.315 (d)(12), 170.315 (d)(13), 170.315 (e)(3), 170.315 (g)(3), 170.315 (g)(4), 170.315 (g)(5), 170.315 (g)(6), 170.315 (g)(7), 170.315 (g)(9), 170.315 (g)(10), 170.315 (h)(1)

Developer Real World Testing Page URL:	https://astronautehr.com/index.php/real-world-test-plan/
Contact Name:	Ignacio Valdes, MD, MS, D-ABPM, D-ABPN
Contact Number:	713-750-9045

Real World Testing Approach and Methodology

Astronaut is a browser-based Electronic Health Record system designed for medical settings, with a primary focus on psychiatry. The core objective remains to showcase effective patient charting methods, enabling physicians to spend more valuable time with their clients and less time grappling with inefficient software. Astronaut continues to prioritize reliability, security, and accessibility, ensuring that authorized users have access to patient charts. Our methodology and functionality remain consistent with the certified criteria.

Interoperability continues to be an important feature for Astronaut. Data exportation is conducted using the C-CDA format through a FHIR server, ensuring compatibility with various healthcare systems and data standards. In addition, various features have been refined based on feedback and insights gained from real-world testing conducted in 2023, ensuring an enhanced user experience in 2024. Astronaut's reliability and efficiency have been rigorously tested in diverse healthcare settings, including Blue Bonnet Clinic, a psychiatric office that has relied on Astronaut for many years, along with several other clinics in the healthcare field.

In summary, the 2024 test plan for Astronaut EHR Software maintains its commitment to efficient patient charting, interoperability, and user satisfaction. Our continuous collaboration with healthcare facilities and practitioners, combined with our emphasis on security and compliance, ensures that Astronaut remains a trusted and dependable tool for medical professionals in the field of psychiatry and beyond.

Standards Updates (Including Standards Version Advancement Process (SVAP) and United States Core Data for Interoperability (USCDI))

Standards Updates (SVAP and USCDI)	
Standard (and version)	USCDI v1
Updated Certification Criteria and Associated Product	b1, g9
Health IT Module CHPL ID	15.02.05.3099.ASTR.01.00.1.220201
Date of ONC-ACB notification	Oct 26, 2022

Date of customer notification	N/A
Conformance Measure	Transitions of Care for b1 Application Access - All Data Requests for g9
Method used for Standard Update	Cures Update
USCDI – update criteria	b1, g9 - USCDI v1

Measures, Criteria, Relied Software, and Description

Measure Name	Associated Criteria	Relied Upon Software	Description of Metric
Transitions of Care	170.315 (b)(1)	N/A	The software can send and receive transitions of care/referral summaries. The software can also create a C-CDA that includes relevant information.
Electronic Prescribing (Cures Update)	170.315 (b)(3)	NewCropRx	A user can send, receive, and view Prescriptions electronically (per the NCPDP SCRIPT Standards). Prescription data is also properly displayed as per the criterion listed.
Electronic Health Information Export	170.315 (b)(10)	N/A	Enable authorized users to timely create an export file(s) with all of a single patient's electronic health information. A user must be able to execute this capability at any time the user chooses and without subsequent developer assistance to operate.
Clinical Quality Measures - Record and Export	170.315 (c)(1)	N/A	The software must be able to record all data necessary to calculate CQMs for certification. The exported files can be formatted in accordance with the HL7 QRDA standard.
Application Access - Patient Selection	170.315 (g)(7)	N/A	The technology must be able to receive a request with sufficient information to uniquely identify a patient and return an ID or token.

Application Access - All Data Requests	170.315 (g)(9)	N/A	The system responds to requests for patient data (based on an ID or other token) for all of the data classes expressed in the standards at one time. The system also returns such data in a summary record formatted in accordance with the CCD document template.
Standardized API for patient and population services	170.315 (g) (10)	N/A	Respond to requests for a patient's data according to the certification standards and implementation specifications. This may be done through a FHIR server where authentication/authorization is closely monitored by Astronaut's IT staff.
Direct Project	170.315 (h)(1)	NewCropRx	Able to send and receive health information in accordance with the standard specified for certification.

Justification for Selected Measures

Associated Criteria - Measure Name	Justification
170.315 (b)(1) - Transitions of Care	Transferral of care and referral summaries are often used when it comes to patient's who are switching their clinic. Having the ability to create a C-CDA of a profile aids this process.
170.315 (b)(3) - Electronic Prescribing (Cures Update)	Having electronic prescriptions (NewCropRx) assists the doctor and allows him/her to have more time to spend with the patient. This results in streamlining the process of prescribing medication.
170.315 (b)(10) - Electronic Health Information Export	Exporting patient data is necessary at times, and the addition of our FHIR server will be a user-friendly way for authorized entities to access patient data with little to no action required on the developer's side. Ideally, this secure system is the next step in enhancing our software's interoperability.

170.315 (c)(1) - Clinical Quality Measures - Record and Export	Astronaut must be able to record necessary data to calculate CQMs that are required for certification in a format that is understandable for the entities involved (HL7 QRDA).
170.315 (g)(7) - Application Access - Patient Selection	Having a unique ID for each patient is essential as it prevents a provider from mixing up patient files, and also allows the system administrator to extract chosen data using a unique patient ID for criteria "(g)(9)".
170.315 (g)(9) - Application Access - All Data Requests	Using the patient's unique ID, extraction of a lump summary of data structured in CCD format is essential so that all relevant data classes are accessible.
170.315 (g)(10) - Standardized API for patient and population services	Since we are using a FHIR server for interoperability, it is essential for our software to be able to provide the necessary data specified by the certification entities so that Astronaut is compliant with governmental regulations.
170.315 (h)(1) - Direct Project	Being able to send and receive health data in accordance with the standards for the relevant criterion is necessary as there are criteria that are dependent on the ability for health data extraction.

Care Settings

Astronaut's adaptability shines through its capability to seamlessly serve both **Inpatient and Outpatient** care settings. The software is optimized to meet the specific requirements of these diverse healthcare environments. The extensive feature set of Astronaut empowers these facilities to efficiently manage their operations, ensuring that patient care is the central focus. It's worth mentioning that our 2023 testing and real-world usage data have further refined Astronaut's suitability for these care settings in 2024.

Expected Outcomes

Clinicians, such as therapists and psychiatrists, as well as authorized office staff will utilize the effectiveness of the software and will ensure the expected outcomes are met.

Associated Criteria - Measure Name	Expected Outcomes
170.315 (b)(1) - Transitions of Care	These features are present in the system and follow the relevant certification protocols. Summaries are consistently produced with a <1% error rate.
170.315 (b)(3) - Electronic Prescribing (Cures Update)	Prescriptions are sent through Newcrop and are pulled back into Astronaut for easy viewing. Prescriptions display accurately and update properly when changes are made in Newcrop's E-Prescribing system with a <1% error rate.
170.315 (b)(10) - Electronic Health Information Export	Export functionality is present and contains the data specified in the criterion. The file is configured for interoperability and is accessible based on the authorized user's needs. The exporting functionality is aimed to have an error rate of <1%.
170.315 (c)(1) - Clinical Quality Measures - Record and Export	Astronaut can export relevant data reliably in a format that fits with the criterion for certification. Exporting the data should be reliable and will have an error rate of <1%.
170.315 (g)(7) - Application Access - Patient Selection	Every patient created has a unique ID that can be identified in their demographics file. Because of the way the system is configured, the error rate for this should be less than or extremely close to 0.00001%. Any anomalies will be immediately identified and corrected by IT staff.
170.315 (g)(9) - Application Access - All Data Requests	The API responds to requests for patient data for all of the data categories specified in the USCDI at one time in a summary record formatted according to the C-CDA template. Patient data requests should have an error rate of <1%.

170.315 (g)(10) - Standardized API for patient and population services	The system is able to respond to patient data requests efficiently and as specified by the certification entities, enabling applications to register with Astronaut's authorization server. The standardized API exportation should result in an interoperable format that is >99% accurate.
170.315 (h)(1) - Direct Project	The health IT can electronically transmit (send and receive) health information to a 3rd party in the proper format and following the criteria required for certification. Transmitting this data is aimed to have an error rate of <1%.

In 2023, our testing methodology for Astronaut EHR Software remains thorough and refined. We employ a combination of white-box and black-box testing to ensure the software's reliability and quality. Dynamic testing, through real-world scenarios and fictional profiles, is used to validate Astronaut's practical capabilities. Crucially, our data exportation validation, including printed XMLs, guarantees compliance with industry standards.

Our approach to security continues to prioritize the safeguarding of patient data and system integrity. Astronaut employs proper tokenization when accessing patient data, upholding strict access control. The system is fortified with auditing mechanisms that track and display user activity intuitively, acting as a deterrent against misuse. Additionally, administrators maintain the capability to review data sent, received, and transmitted, enhancing oversight. Provider training remains pivotal to ensure proper system use, with stringent accountability measures in place to uphold responsible actions and system usage.

Our data analysis remains focused on accuracy metrics, striving for an error rate as close to 0% as possible. Any identified bugs are promptly addressed by our dedicated team of programmers and system administrators, ensuring the software's continuous refinement and reliability. Vital feedback from physicians and staff, gathered through manual testing and day-to-day usage relevant to their clinical duties, plays a pivotal role in this process, contributing to Astronaut's ongoing improvement and alignment with the practical needs of healthcare professionals.

Key Milestones

Milestone	Timeframe
Real World Test Plan 2024 Submission	Oct - 2023
Consolidate 2023 test data and report findings by the Feb 1st due date	Nov 2023 – Jan 2024

Analyze gathered test data for determination of further testing needs	Feb – Apr 2024
Perform further testing based on our analyses	May – Aug 2024
Report findings/update test plan as per required by the certification entities	Sept – Dec 2024

Milestones will be conducted within an inpatient/outpatient care setting. Users include authorized staff, physicians, therapists, and IT/System Administrators.

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: Ignacio Valdes

Authorized Representative Email: astronautvista@gmail.com

Representative Phone: 713-750-9045

Signature: Ignacio Valdes

Date: 10/10/2023