

# 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](mailto:info@astronautehr.com)  
(w) [www.astronautehr.com](http://www.astronautehr.com)

| General Information    |  |
|------------------------|--|
| Plan Report ID#:       | 20241105ast  |
| 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),<br>170.315 (a)(4), 170.315 (a)(5), 170.315 (a)(9),<br>170.315 (a)(12), 170.315 (a)(14), 170.315 (b)(1),<br>170.315 (b)(3), 170.315 (b)(10), 170.315 (c)(1),<br>170.315 (d)(1), 170.315 (d)(2), 170.315 (d)(3),<br>170.315 (d)(4), 170.315 (d)(5), 170.315 (d)(6),<br>170.315 (d)(7), 170.315 (d)(8), 170.315 (d)(9),<br>170.315 (d)(12), 170.315 (d)(13), 170.315 (e)(3),<br>170.315 (g)(3), 170.315 (g)(4), 170.315 (g)(5),<br>170.315 (g)(6), 170.315 (g)(7), 170.315 (g)(9),<br>170.315 (g)(10), 170.315 (h)(1) |

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

## [Real World Testing Approach and Methodology](#)

Astronaut is a web-based Electronic Health Record (EHR) system tailored for medical environments, with a strong emphasis on psychiatric care. For 2025, we intend to remain committed to the core objective of optimizing patient charting workflows, allowing clinicians to focus more on patient care and less on navigating software. Astronaut has continued to evolve with a focus on reliability, security, and ease of access, ensuring that authorized healthcare providers can seamlessly access patient information.

This coming year, our methodology continues to align with certified criteria, and we've built upon past successes by incorporating feedback from users to further enhance the system's stability and functionality. The 2025 test plan reflects our ongoing efforts to maintain high standards of interoperability, efficiency, and user satisfaction. By strengthening partnerships with healthcare facilities and practitioners, as well as keeping security and compliance at the forefront, Astronaut remains a trusted and innovative tool for professionals in psychiatry and other medical specialties.

## [Standards Updates \(Including Standards Version Advancement Process \(SVAP\)\)](#)

No SVAP Updates are applicable at this time.

## [Measures, Criteria, Relied Software, and Description](#)

| <b>Measure Name</b> | <b>Associated Criteria</b> | <b>Relied Upon Software</b> | <b>Description of Metric</b>   |
|---------------------|----------------------------|-----------------------------|--|
| 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. |

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|--|------------------|-----------|--|
| Electronic Prescribing                               | 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

| <b>Associated Criteria - Measure Name</b>                      | <b>Justification</b>   |
|--|--|
| 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                        | 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.  |

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| <p>170.315 (g)(10) - Standardized API for patient and population services</p> | <p>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.</p> |
| <p>170.315 (h)(1) - Direct Project</p>  | <p>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.</p>                                |

Care Settings

Astronaut’s versatility continues to be demonstrated in its ability to support a range of care environments, including Outpatient, Intensive Outpatient, and Inpatient settings. The software is designed to meet the unique needs of these diverse facilities, ensuring smooth operational management while keeping patient care at the forefront. In 2025, we are proud to report that new healthcare facilities have joined our growing network of users, contributing valuable insights that have further validated Astronaut’s effectiveness in real-world settings. These partnerships have enhanced our testing efforts and confirmed Astronaut’s adaptability across various care environments.

## 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.

| <b>Associated Criteria - Measure Name</b>                      | <b>Expected Outcomes</b>  |
|--|---|
| 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                        | 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%.  |

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| <p>170.315 (g)(10) - Standardized API for patient and population services</p> | <p>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 &gt;99% accurate.</p> |
| <p>170.315 (h)(1) - Direct Project</p>  | <p>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 &lt;1%.</p>   |

In 2024, our testing methodology for Astronaut EHR Software remained comprehensive and meticulous, solidifying the system's reliability across a variety of use cases. We continued employing both white-box and black-box testing approaches, ensuring full coverage of the system's functionality, security, and performance. White-box testing enabled us to closely examine the internal workings of the software, while black-box testing allowed us to simulate real-world user interactions without visibility into the internal code. This combination has been instrumental in identifying and resolving potential issues before they impact clinical operations.

Dynamic testing in 2024, utilizing both real-world scenarios and fictional patient profiles, validated Astronaut’s practical capabilities in diverse healthcare settings. Our continuous integration of stress testing and regression testing ensured that the system maintained peak performance and stability, even under high usage loads. These testing efforts have been crucial in proving the system’s overall reliability.

Security remained a key focus area, with patient EHI protected by strict access control measures, tokenization, and robust encryption protocols. Auditing mechanisms continue to track user activity, and comprehensive logs provide system administrators with actionable insights into system usage. These controls, coupled with incident response protocols, help prevent misuse while ensuring the integrity of patient data. EHI information is transferable through the use of our FHIR server to authorized bodies in accordance with the certification criteria.

In 2025, our commitment to maintaining high standards of data accuracy continues. We are consistently targeting an error rate as close to 0% as possible. Any identified issues are quickly addressed by our dedicated team of programmers and system administrators through automated testing suites and manual interventions where necessary. Feedback from physicians and clinical staff remains an integral part of this process, gathered through usability testing and day-to-day system interactions. This feedback has helped Astronaut remain aligned with the practical needs of healthcare professionals, supporting its ongoing refinement and trustworthiness in medical settings.

## Key Milestones

| Milestone  | Timeframe           |
|--|---------------------|
| Real World Test Plan 2025 Submission   | Oct - 2024          |
| Consolidate 2024 test data and report findings by the Feb 1st due date         | Nov 2024 – Jan 2025 |
| Analyze gathered test data for determination of further testing needs          | Feb – Apr 2025      |
| Perform further testing based on our analyses                                  | May – Aug 2025      |
| Report findings/update test plan as per required by the certification entities | Sept – Dec 2025     |

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: 11/5/2024