REAL WORLD TESTING RESULTS REPORT

GENERAL INFORMATION

Report ID Number	20231106eir
Developer Name	Synapse Medicine Inc. (current), EirSystems Inc (previous)
Product Name(s)	P.A.G.R. Prescriptions
Version Number(s)	1.2
Certified Health IT Product List (CHPL) ID(s)	15.05.05.3167.EIRS.01.00.1.230807
Developer Real World Testing PLAN Page URL	https://www.pagrprescribing.com/rwtandehi
Developer Real World Testing RESULTS Page URL	https://www.pagrprescribing.com/rwtandehi

CHANGES TO ORIGINAL PLAN

Summary of Change [Summarize each element that changed between the plan and actual execution of Real World Testing]	Reason [Describe the reason this change occurred]	Impact [Describe what impact this change had on the execution of your Real World Testing activities]
Measurement timeframe expanded to 1 year from 1 month.	For both measurement 1 and measurement 2, the proposed schedule of key milestones had a 1-month data collection window for each care setting. Given the transfer of ownership of the product during this year from the previous owners who designed this plan, we made the decision to expand the measurement period to a full year so that we could have a better view of the product's prior year performance ahead of our first full year of ownership.	Better view of product performance pre-and-post acquisition, as well as in current state to better support planning for our roadmap efforts for product enhancements in 2025.
Removal of negative control milestone	The previous owners of the product had included a negative control metric in the "Schedule of Key Milestones" that was not included as its own metric in the overall plan. We made the decision to remove this milestone as it is impossible to collect from the data (without prescriber credentials, there is no access attempt that is ever made in the system/database for patient data so there is no access denied evidence) and we did not think it added sufficient value to testing to ask our customers to provide us live access to screen share with them while they access patient records so that we could collect qualitative proof of the control.	We were still able to test the access success rate of verified prescribers in accessing patient medication history (which is the measurement defined in our plan) and removal of the negative control had no impact on our ability to make this measurement.
Change definition of Small-to-Medium Sized Clinics	Updated the definition of Small-to-Medium Sized Clinics (Care Setting 2) to include practices with 2-5 providers. In the previous definition, it included practices with 3-5 providers which excluded practices with 2 providers from being included in either care setting definition, since they are also not Individual Doctor's Offices.	Increased total available data pool for collection

SUMMARY OF TESTING METHODS AND KEY FINDINGS

Step 1: Practice selection for real-world data analysis
We selected n=10 practices to analyze a full year of prescription history data for: n=5 Individual Doctor's Offices (Care Setting 1) and n=5 Small-to-Medium Sized Clinics (Care Setting 2). The total number of practices (10) was selected randomly as an assumed representative sample size for all practice locations that use our software and the criteria used to select the specific practices was random, other than an initial filter for only locations where each prescriber(s) had written more than 100 prescriptions on our software over the course of the 2024 calendar year. The resulting selection covered a wide range of prescription frequencies, with the most active prescriber having written 22581 prescriptions and the least active prescriber having written 164 prescriptions (average of 7,121 prescriptions across the 16 prescribers measured).

Step 2: Measurement 1 calculation
For each prescriber at the selected practice locations, we extracted from our database every prescription record for all prescriptions written in 2024. The report included the prescription create date, the prescription status, and the unique ID for each script from our database (to support further investigation on specific records as needed). No PHI/PII was included in the extract. For each prescriber, we then summed the prescription count to get the total prescriptions written by each prescriber (duplicative summary to what was done in step 1 to identify practices that met criteria for testing selection), summed the prescription count where status = FAILED to get the number of failed prescriptions, and divided the latter number by the former to derive the prescription failure rate and prescription success rate for each prescriber. Note: All statuses other than "Failed" indicate that the prescription was transmitted to the pharmacy successfully from our system.

Step 3: Measurement 2 calculation
For each prescriber at the selected practice locations, we extracted from our database every medication history request record for all patient records accessed in 2024. The report included the patient history request date, the request status (processed/not processed) and the unique ID for each request from our database (to support further investigation on specific records as needed). For each prescriber, we then summed the medication history request count to get the total requests made by each prescriber, summed the count of requests where processed=0 (medication history was not accessed from this request), and divided the latter by the former to derive the medication history failure rate and medication history success rate for each prescriber.

Step 4: Complete Analysis

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Key Results
- Overall (10 practices, 16 prescribers):
  - Total Prescriptions Analyzed: 113,934
  - Total Prescription Success Rate: 99.24%
  - Total Prescription Failure Rate: 0.76%
  - Total Medication History Requests Analyzed: 8,863
  - Total Medication History Success Rate: 99.65%
  - Total Medication History Failure Rate: 0.35%
- Individual Doctor's Office (5 practices, 5 prescribers):
  - Avg. Prescriptions Analyzed Per Prescriber: 7,303
  - Avg. Prescription Success Rate Per Prescriber: 99.35%
  - Avg. Prescription Failure Rate Per Prescriber: 0.65%
  - Avg. Medication History Requests Analyzed Per Prescriber: 594
  - Avg. Medication History Success Rate Per Prescriber: 99.91%
  - Avg. Medication History Failure Rate Per Prescriber: 0.09%
- Small-to-Medium Sized Clinic (5 practices, 11 prescribers):
  - Avg. Prescriptions Analyzed Per Prescriber: 7,038
  - Avg. Prescription Success Rate Per Prescriber: 99.42%
  - Avg. Prescription Failure Rate Per Prescriber: 0.58%

o   Avg. Medication History Requests Analyzed Per Prescriber: 536
o   Avg. Medication History Success Rate Per Prescriber: 99.74%
o   Avg. Medication History Failure Rate Per Prescriber: 0.26%

Step 5: Discussion of Findings

While the outcomes from our real-world testing included in the above analysis (and summarized in ***Metrics and Outcomes*** below) fell short of the expected outcomes that were predicted in the report plan itself (100% prescription success rate / 100% medication history success rate), we believe they are still demonstrative of the compliance of our software with the B3 criteria and represent more realistic outcomes for a product performing complex processing functionality for a high volume of patients/prescriptions with dependencies on third-party software outside our control to be fully effective. In summary, we believe that the overall utilization numbers, consistency of results across care settings, and 99%+ prescription and medication history success rates demonstrate that our software is being used as expected and maintains compliance with and reliability of our interoperability with Surescripts to satisfy the core requirements of our users to be able to send prescriptions to pharmacies for their patients electronically and to be able to receive medication history data from pharmacies and PBMs to support medication reconciliation and informed prescribing decisions.

We were aware of 1 interoperability interruption between our system and Surescripts that occurred on 10/10/24 which resulted in failed prescriptions sent from our system due to a node restart triggered by AWS that was not properly connected to the Elastic IP for Surescripts connection. This incident was resolved within 24 hours, a post-mortem was conducted with our infrastructure team, and procedures and alerting infrastructure were put in place to prevent it from occurring again. This contributed in part to the small reduction is success rates, especially for our more active offices. The real world testing enabled us to identify other improvement opportunities for closing the gap to 100% prescription and medication history success rates including:

1. **Adapting favorite pharmacies feature:** we regularly update our pharmacy directory (provided by Surescripts) to ensure that providers are only able to search for active pharmacy listings for sending their e-prescriptions. However, we have a favorite pharmacy feature that we identified is not as regularly updated to remove deactivated pharmacy records from patient favorite lists, which resulted in a small volume of the observed failed scripts being sent to inactive pharmacy listings and being rejected by Surescripts. Feature adaption to prevent this from occurring is now prioritized on our roadmap.

2. **Improving address validation prior to script submission:** We found a low volume of failed scripts to be the result of patient address validation issues, including when a character such as "-" is included in the Address Line 2 field, resulting in us correctly removing and validating the special character that is not accepted by the NCPDP Script Standard, but still sending a blank space, resulting in the script failing validation. Feature adaption to prevent this from occurring is now prioritized on our roadmap.

Additionally, we learned from the approach to better refine our testing plan for next year and adapt our ongoing operations to better support our real world testing efforts and outcomes. We felt that the original timelines/milestones outlined in the plan by the predecessor owners of our product did not meet the needs of the testing because they viewed only a short window of time on the year. This is why we decided to adapt the testing for this results report to include a full year of data to have a better picture of ongoing product performance. However, for next year, we think it would be even more appropriate to have testing broken into quarterly increments so we can both capture a more holistic view of performance, but also be able to compare testing overtime to demonstrate potential improvements in outcomes. That is why our RWT Plan for 2025 includes milestones for each metric on a quarterly basis. We also adapted our expected outcomes in our RWT Plan for 2025 to be more comprehensive and realistic for the performance of a product with third-party dependencies (as discussed above) and adapted our Care Settings to be more representative of the different markets we serve (vs. only practice size). We believe the two care settings used in the 2024 report are representative of our client care settings, but they miss the nuance of how the product is used by different types of providers at different parts of a patient's care journey. Lastly, we adopted an internal operating procedure to review weekly Error reports provided by Surescripts between our customer operations and product teams so we can have a more consistent view of where there are improvement opportunities or issues occurring that impact the real world performance of the product. We expect this more frequent "outcomes" reporting to result in more over time improvements seen in our RWT results report next year.

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

_____ Yes, I have products certified with voluntary SVAP or USCDI standards. (If yes, please complete the table below).

__X__ No, none of my products include these voluntary standards

Standard (and version)	N/A
Updated certification criteria and associated product	N/A
Health IT Module CHPL ID	N/A
Conformance measure	N/A

Care Setting(s)

1. Care Setting 1: Individual Doctor's Offices (5 practice locations, 5 individual prescribers measured)
2. Care Setting 2: Small to medium size clinic with multiple practitioners and nurses (5 practice locations, 11 individual prescribers measured)

METRICS AND OUTCOMES

Measurement /Metric	Associated Criterion(a)	Relied Upon Software (if applicable)	Outcomes	Challenges Encountered (if applicable)
[Measurement 1] How many successful prescriptions are sent to a pharmacy by a prescriber	B3	Surescripts	**See below**	None
[Measurement 2] What is the failure/success rate in which a verified prescriber can and cannot access a patient's medication history	B3	Surescripts	**See below**	None

Care Setting	SUM of Total Prescriptions Created	SUM of Successful Prescriptions	Total Prescription Success Rate	
Individual	36516	36,171	99.06%	
Small to Medium	77418	76,901	99.33%	
Grand Total	**113934**	**113,072**	**99.24%**	

Care Setting	SUM of Total Patient History Requests Created	SUM of Patient History Requests Failed	Total Medication History Failure Rate	Total Medication History Success Rate
Individual	2972	7	0.24%	99.76%
Small to Medium	5891	24	0.41%	99.59%
Grand Total	**8863**	**31**	**0.35%**	**99.65%**

KEY MILESTONES

Key Milestone	Care Setting	Date/Timeframe
All observed prescriptions should be sent successfully to the pharmacy	Individual Doctor Office	01/01/2024 – 12/31/2024
All observed prescriptions should be sent successfully to the pharmacy	Small to medium size clinic	01/01/2024 – 12/31/2024
All verified users should successfully access patient data	Individual Doctor Office	01/01/2024 – 12/31/2024
All verified users should successfully access patient data	Small to medium size clinic	01/01/2024 – 12/31/2024