REAL WORLD TESTING

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REAL WORLD TESTING PLAN

Plan Report ID Number: 20241030mdt

September 2024

RWT For Period Jan-Dec 2025

PRODUCT

Developer Name: MDToolbox

Product Name: MDToolbox Rx

Version Number: 5

Certified Health IT CHPL Number: 15.02.05.1832.MDTB.01.01.1.211105

Developer RWT Plan URL: https://mdtoolbox.com/meaningfuluse-stage3.aspx

REAL WORLD TESTING APPROACH (Usability Testing)

Product Summary

MDToolbox Rx is a specialized electronic prescribing application that allows tracking patients, patient records and writing and sending electronic prescriptions. Real World Testing is conducted annually and on an as needed basis to make sure the product is compliant and user friendly for all target end users.

Scope of Certification

Real World Testing will only cover two Certification criterion:

- 170.315(b)(3) Electronic prescribing
- 170.315(b)(10) Electronic Health Information export

Relied upon software: Multum/Lexi (Drug Database)

Justification

Usability testing with current active users of varying experience and background is the best way to identify any usability problems, collect qualitative and quantitative data and determine our user's satisfaction with the product. Direct communication during this process will allow for understanding any suggestions, frustrations, or improvements from our user-base.

Target Settings

MDToolbox Rx target market is small private ambulatory practices. Typical clients have 1 to 5 providers and typically use the product to write all of their prescriptions. The workflow and general product usage is the same across all practices/clients regardless of size or specialty of the practice.

Real World Testing Test Method

MDToolbox Rx Real World Testing will include the following steps:

1. Create test script / end user task list with goals
2. Per remote session with participants, MDToolbox QA/Staff person initiates one on one sessions with each participant in their Care Setting / Real World setting, asking them to perform each task/goal and observing/rating each task (a fictious/test patient will be used in the Real World setting for patient privacy/no PHI).
3. MDToolbox Administrator will Compile all data points, build final report – Report is then submitted to Product Managers for evaluation of future improvements.

Real World Testing will involve 1 to N participants from:

- Settings: small private ambulatory practices
- Credentialed End User: MD, NP, MA
- Computer skilled: entry level user, seasoned user
- Age: 20-40, 40-65, 65+

Real World Testing will at minimum include scope:

- Criteria B3: Electronic sending of prescription
- Criteria B10: Electronic export of patient medical record
- RELIED UPON SOFTWARE: Drug Database Lookup

The goal is for users to interact with the system effectively, efficiently, and with an acceptable level of satisfaction. To this end, metrics for effectiveness, efficiency and user satisfaction are captured during the real world testing. The goals of the test are to assess:

- Effectiveness of MDToolbox-Rx by measuring participant success rates and errors
- Efficiency of MDToolbox-Rx by measuring the average task time and path deviations
- Satisfaction with MDToolbox-Rx by measuring ease of use ratings

Data Scoring will be analyzed, reported on and used for future potential improvements in software.

Real World Test Data Scoring

The following table details how tasks are scored, errors evaluated, and the time data analyzed.

Actual Tasks will be defined in the TEST SCRIPT/REAL WORLD TESTING GOALS SCRIPT REPORT as determined by product Real World Testing scope.

Below shows the Data Scoring for each test.

Measures	Rationale and Scoring
Effectiveness: Task Success	A task is counted as a "Success" if the participant was able to achieve the correct outcome, without assistance, within the time allotted on a per task basis in Real World Setting. The total number of successes is calculated for each task and then divided by the total number of times that task was attempted. The results are provided as a percentage. Task times are recorded for successes. Observed task times divided by the optimal time for each task is a measure of optimal efficiency. Optimal task performance time, as benchmarked by expert performance under realistic conditions, is recorded when constructing tasks. Target task times are operationally defined by taking multiple measures of optimal performance and multiplying by 2, that allows some time buffer because the participants are presumably not trained to expert performance. Thus, if expert, optimal performance on a task was 20 seconds then allotted task time performance was 40 seconds. This ratio was aggregated across tasks and reported with mean and variance scores.
Effectiveness: Task Failures	If the participant abandoned the task, did not reach the correct goal or performed it incorrectly, or reached the end of the allotted time before successful completion, the task was counted as an "Failures." No task times are taken for errors. The total number of errors are calculated for each task and then divided by the total number of times that task was attempted. Not all deviations are counted as errors. Task failures are expressed as the mean number of failed tasks per participant. On a qualitative level, an enumeration of errors and error types are collected.
Efficiency: Task Deviations	The participant's path (i.e., steps) through the application is recorded. Deviations occur if the participant, for example, went to a wrong screen, clicked on an incorrect menu item, followed an incorrect link, or interacted incorrectly with an

	on-screen control. This path is compared to the optimal path. The number of steps in the observed path is divided by the number of optimal steps to provide a ratio of path deviation.
Efficiency: Task Time	Each task is timed from when the administrator says "Begin" until the participant says, "Done." If he or she failed to say "Done," the time is stopped when the participant stopped performing the task. Only task times for tasks that were successfully completed are included in the average task time analysis. Average time per task is calculated for each task. Variance measures (standard deviation and standard error) are also calculated.
Satisfaction: Task Rating	Participant's subjective impression of the ease of use of the application is measured by administering a simple post-task question. After each task, the participant is asked to rate "Overall, this task was:" on a scale of 1 (Very Difficult) to 5 (Very Easy). These data are averaged across participants.

STANDARDS UPDATES PLAN

MDToolbox Rx performs standards updates as required by certification. MDToolbox updated the e-prescribing module to the latest SCRIPT version as required (2070101) in previous years. When a new script standard is released, it will be evaluated and road mapped. After completed, internal testing verified, then Real World Testing is completed.

There were no standards updates completed in the last year.

MEASURES USED IN OVERALL APPROACH AND EXPECTED OUTCOMES

Measurement	Criteria	Description	Justification	Care Settings	Expected Outcome
170.315(b)(3) Electronic prescribing	e-Prescribing functions	e-Send / e-Prescribing allows preview of the rx order, and then electronic sending of the order to the pharmacy.	Usability testing with various end users writing and sending Rx will help capture usage data, feedback and any workflow	small private ambulatory practices	Compliant with Certification. Works as expected in target setting End user satisfaction Data Points met

			improvements needed		
170.315(b)(10) Electronic Health Information export	Electronic export of patient charts	Electronic Health Information Export allows an authorized end user to seamlessly export the selected patient data (1..N records as selected by end user)	Usability testing with various end users performing patient export will help capture usage data, feedback and any workflow improvements needed	small private ambulatory practices	Compliant with Certification. Works as expected in target setting End user satisfaction Data Points met

SCHEDULE OF KEY MILESTONES

Key Milestone	**Care Setting**	**Date/Timeframe**
Q1 Real World QA Test Planning	small private ambulatory practices	**Q1 2025**
Build Test Scripts/Goal list	small private ambulatory practices	**Q2 2025**
Perform Real World Testing & Gather Data	small private ambulatory practices	**Q3 & Q4 2025**
Create final reports and submit	small private ambulatory practices	**Q4 2025**

ATTESTATION

This Real-World Testing Plan is complete with all required elements, including measures that address all certification criteria and care settings to the best of my knowledge. All information in this plan is up to date and fully addresses the health IT developer's Real World Testing requirements.

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Signed Douglas Tiegs Date: 10/10/2024