

# EHR Usability Test Report of OmniMD Version 18.0

## by DOCS Medical group - 12/19/2017

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**Date of Report:** 12/19/2017  
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### **Executive Summary**

The usability test of OmniMD Version 18.0 was conducted on 12/12/2017, 12/14/2017, 12/15/2017 and 12/18/2017 at 4 locations of DOCS Medical Group by DOCS Medical Group.

- DOCS South Yonkers (Raceway) - 471 Central Park Avenue, Yonkers, NY, 10704
- DOCS Pelham - 116 5th Avenue, Pelham, NY, 10803
- DOCS North Yonkers - 2422 Central Park Avenue, Yonkers, NY, 10710
- DOCS Bronx - 3251 Westchester Avenue, Bronx, NY 10461

The purpose of this test was to test and validate the usability of the user interface, and provide evidence of usability in the EHR Under Test (EHRUT). During the usability test, 10 healthcare providers and medical assistants matching the target demographic criteria served as participants and used the EHRUT in simulated, but representative tasks.

This study collected performance data on 49 tasks typically conducted on an EHR. Tasks included:

- Computerized Provider Order Entry (CPOE) - Medications
- Computerized Provider Order Entry (CPOE) – Laboratory
- Computerized Provider Order Entry (CPOE) – Diagnostic Imaging
- Drug-Drug, Drug Allergy Interaction checks for CPOE
- Demographic
- Problem List

- Medication List
- Medication Allergy List
- Implantable Device
- Clinical Decision Support
- Implantable Device List
- Clinical Information Reconciliation and Incorporation
- E-Prescription

During the process one-on-one usability test, each participant was greeted by the administrator and asked to review and sign an informed consent/release form and were instructed that they could withdraw at any time. Participants had and did not have prior experience with the EHR. Training was given to each participant based on the same type of training conducted for a client. The administrator introduced the test, and instructed participants to complete a series of tasks (given one at a time) using the EHRUT. During the testing, the administrator timed the test and, along with the data logger(s) recorded user performance data on paper and electronically. The administrator did not give the participant assistance in how to complete the task.

Participant screens, head shots and audio were recorded for subsequent analysis. The following types of data were collected for each participant:

- Number of tasks successfully completed within the allotted time without assistance
- Time to complete the tasks
- Number and types of errors
- Path deviations
- Participant’s verbalizations
- Participant’s satisfaction ratings of the system

All participant data was de-identified – no correspondence could be made from the identity of the participant to the data collected. Following the conclusion of the testing, participants were asked to complete a post-test questionnaire and a System Usability Survey. Various recommended metrics were used to evaluate the usability of the EHRUT. Following is a summary of the performance and rating data collected on the EHRUT.

### Description of Participants :

Occupation	Education Type	Product Experience (Months)	Professional Experience (Months)	Computer Experience (Months)	Age (Years)	Gender	Assistive Technology Needs
MD	MD	132	264	132	50-59	Male	No
MA	Bachelor’s degree	24	36	36	20-29	Female	No
MD	MD	12	48	120	40-49	Female	No

MD	Master's degree	60	120	144	40-49	Female	No
MD	MD	42	240	168	50-59	Male	No
MD	MD	108	240	108	50-59	Female	No
MA	MA	36	36	144	30-39	Female	No
MA	Bachelor's degree	26	36	36	20-29	Female	No
MA	Bachelor's degree	12	48	48	20-29	Female	No
MA	Bachelor's degree	12	24	120	20-29	Female	No

### SED Report Hyperlink :

Once certified, SED Reports will be available on below Path:

[www.omnimd.com/sedreport.html](http://www.omnimd.com/sedreport.html)

### System Usability Scale

#### Questions

1. I think that I would like to use this system frequently
2. I found the system unnecessarily complex
3. I thought the system was easy to use
4. I think that I would need the support of a technical person to be able to use this system
5. I found the various functions in this system were well integrated
6. I thought there was too much inconsistency in this system
7. I would imagine that most people would learn to use this system very quickly
8. I found the system very cumbersome to use

9. I felt very confident using the system

10. I needed to learn a lot of things before I could get going with this system

### Results/Data

	Question	Value	Score
<b>User#1</b>	1	5	4
	2	4	1
	3	5	4
	4	2	3
	5	5	4
	6	2	3
	7	5	4
	8	1	4
	9	4	3
	10	2	3
		Total	33
		<b>SUS Score</b>	<b>82.5</b>

	Question	Value	Score
<b>User#2</b>	1	5	4
	2	1	4
	3	5	4
	4	1	4
	5	5	4
	6	1	4
	7	5	4
	8	1	4
	9	5	4
	10	1	4
		Total	40
		<b>SUS Score</b>	<b>100</b>

	Question	Value	Score
<b>User#3</b>	1	5	4
	2	2	3
	3	5	4
	4	3	2
	5	5	4
	6	1	4
	7	4	3
	8	1	4
	9	5	4
	10	3	2
		Total	34
		<b>SUS Score</b>	<b>85</b>

	Question	Value	Score
<b>User#4</b>	1	3	2
	2	2	3
	3	3	2
	4	4	1
	5	4	3
	6	3	2
	7	4	3
	8	2	3
	9	3	2
	10	1	4
		Total	25
		<b>SUS Score</b>	<b>62.5</b>

	Question	Value	Score
<b>User#5</b>	1	5	4
	2	1	4

	Question	Value	Score
<b>User#6</b>	1	5	4
	2	1	4

	3	5	4
	4	1	4
	5	1	0
	6	2	3
	7	1	0
	8	5	0
	9	1	0
	10	5	0
		Total	19
		<b>SUS Score</b>	<b>47.5</b>

	3	5	4
	4	1	4
	5	5	4
	6	1	4
	7	5	4
	8	1	4
	9	5	4
	10	1	4
		Total	40
		<b>SUS Score</b>	<b>100</b>

	Question	Value	Score
<b>User#7</b>	1	5	4
	2	1	4
	3	5	4
	4	3	2
	5	3	2
	6	1	4
	7	5	4
	8	1	4
	9	5	4
	10	3	2
		Total	34
		<b>SUS Score</b>	<b>85</b>

	Question	Value	Score
<b>User#8</b>	1	4	3
	2	2	3
	3	4	3
	4	2	3
	5	4	3
	6	2	3
	7	4	3
	8	3	2
	9	4	3
	10	3	2
		Total	28
		<b>SUS Score</b>	<b>70</b>

	Question	Value	Score
<b>User#9</b>	1	4	3
	2	1	4
	3	2	1
	4	2	3
	5	4	3
	6	1	4
	7	5	4
	8	4	1
	9	4	3
	10	2	3
		Total	29
		<b>SUS Score</b>	<b>72.5</b>

	Question	Value	Score
<b>User#10</b>	1	5	4
	2	1	4
	3	5	4
	4	1	4
	5	5	4
	6	1	4
	7	5	4
	8	1	4
	9	5	4
	10	1	4
		Total	40
		<b>SUS Score</b>	<b>100</b>

The results from the System Usability Scale scored the subjective satisfaction with the system based on performance with these tasks to be: **80.5**

In addition to the performance data, the following qualitative observations were made:

- Major findings
  - o Many of the errors involved users not clicking on the correct links, completing actions they would not perform on a regular basis, and newer modules required for 2015 Edition certification. Items that tested well include tasks that did not involve many steps to perform and tasks that were generally within the scope of the participants job function.
  
- Areas for improvement
  - o Making links more prominent on screens, making items within screens more visible with larger fonts and colors that stand out.

## Introduction

The EHRUT(s) tested for this study was (were) OmniMD Version 18.0. Designed to present medical information to healthcare providers in ambulatory and urgent care settings, the EHRUT consists of performing common tasks associated with inputting of clinical patient information and creation of orders. The usability testing attempted to represent realistic exercises and conditions.

The purpose of this study was to test and validate the usability of the current user interface, and provide evidence of usability in the EHR Under Test (EHRUT). To this end, measures of effectiveness, efficiency and user satisfaction, such as time to complete the tasks, participant comments and ease/difficulty of tasks, were captured during the usability testing.

## Method

### UCD Process

We have referred NISTIR 7741 process to prepare UCD Process.

NISTIR 7741 NIST Guide to the Processes Approach for Improving the Usability of Electronic Health Records

[www.nist.gov/publications/nistir-7741-nist-guide-processes-approach-improving-usability-electronic-health-records](http://www.nist.gov/publications/nistir-7741-nist-guide-processes-approach-improving-usability-electronic-health-records)

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## Participants

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MA	Bachelor's degree	12	48	48	20-29	Female	No
MA	Bachelor's degree	12	24	120	20-29	Female	No

A total of 10 participants were tested on the EHRUT(s). Participants in the test were providers and medical assistants. Participants were recruited by DOCS Medical Group.

Participants were given the opportunity to have the same orientation and level of training as the actual end users would have received.

For the test purposes, end-user characteristics were identified and translated into a recruitment screener used to solicit potential participants.

Recruited participants had a mix of backgrounds and demographic characteristics conforming to the recruitment screener. The following is a table of participants by characteristics, including demographics, professional experience, computing experience and user needs for assistive technology. Participant names were replaced with Participant IDs so that an individual's data cannot be tied back to individual identities.

12 participants were recruited and 10 participated in the usability test. 2 participants failed to show for the study.

Participants were scheduled for one 90 minute session. A spreadsheet was used to keep track of the participant schedule, and included each participant’s demographic characteristics as provided by DOCS Medical Group.

### Study Design

Overall, the objective of this test was to uncover areas where the application performed well – that is, effectively, efficiently, and with satisfaction – and areas where the application failed to meet the needs of the participants. The data from this test may serve as a baseline for future tests with an updated version of the same EHR and/or comparison with other EHRs provided the same tasks are used. In short, this testing serves as both a means to record or benchmark current usability, but also to identify areas where improvements must be made.

During the usability test, participants interacted with 1 EHR(s). Each participant used the system in the same location, and was provided with the same instructions.

The system was evaluated for effectiveness, efficiency and satisfaction as defined by measures collected and analyzed for each participant:

- Number of tasks successfully completed within the allotted time without assistance
- Time to complete the tasks
- Number and types of errors
- Path deviations
- Participant’s verbalizations (comments)
- Participant’s satisfaction ratings of the system

### Tasks

A number of tasks were constructed that would be realistic and representative of the kinds of activities a user might do with this EHR, including:

CPOE
1. Add Pre-Existing Medication for Past Visit
2. Create Medication for Today's visit
3. View Medication
4. Edit Medication
5. Stop Medication
6. Override Interaction
7. Add Lab Test for Past visit

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8. Add Lab Test for today's visit

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9. View Lab Orders

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10. Edit Lab Orders

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11. Add Radiology Test for Past visit

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12. Add Radiology Test for today's visit

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13. View Radiology Orders

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14. Edit Radiology Orders

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### **Drug-Drug and Drug Allergy interaction**

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1. Indicate Drug-allergy Interactions on Current Medication

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2. Indicate Drug-drug Interactions on Current Medication

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3. Indicate Drug-allergy Interactions on Prescription

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4. Indicate Drug-drug Interactions on Prescription

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5. Adjust interaction level (Doctor)

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6. Indicate Drug-allergy Interactions on Current Medication – Alert set to Major Alerts only

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### **Patient Demographics**

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1. Add Patient Demographic

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2. View Patient Demographics

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3. Edit and View Patient Demographics

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### **Problem**

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1. Add New Problem

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2. View Problem

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3. Edit and view Problem

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### **Medication List**

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1. Add Medication for Past visit

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2. Add Medication for Today's visit

---

3. View Medication

---

---

4. Edit Medication

---

5. Stop Medication

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### **Medication Allergy**

1. Add Medication Allergy for Past visit

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2. Add Medication Allergy for Today's visit

---

3. View Medication Allergy

---

4. Edit Medication Allergy

---

5. Mark inactive Medication Allergy

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### **Clinical Decision Support**

1. CDS- based on Patient Demographics

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2. CDS- based on Vital

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### **Implantable Device**

1. Add Implantable Device

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2. View Implantable Device

---

3. Edit Implantable Device

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### **Clinical Information Incorporation**

1. Review and Reconcile Medication and Confirm Medication

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2. Review and Reconcile Allergen

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3. Review and Reconcile Problem

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### **e-Prescription**

1. Add Medication

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2. Check Formulary- Alert message

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3. Check Formulary

---

4. Signoff and Send Medication

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5. Copy Prescription

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Tasks were selected based on their frequency of use, criticality of function, and those that may be most troublesome for users.

## Procedures

Upon arrival, participants were greeted; their identity was verified and matched with a name on the participant schedule. Participants were then assigned a participant ID. Each participant reviewed and signed an informed consent and release form. A representative from the test team witnessed the participant's signature.

To ensure that the test ran smoothly, two staff members participated in this test, the usability administrator and the data logger. The usability testing staff conducting the test was experienced usability practitioners with 10 years of experience.

The administrator moderated the session including administering instructions and tasks. The administrator also monitored task times, obtained post-task rating data, and took notes on participant comments. A second person served as the data logger and took notes on task success, path deviations, number and type of errors, and comments.

Participants were instructed to perform the tasks (see specific instructions below):

- As quickly as possible making as few errors and deviations as possible.
- Without assistance; administrators were allowed to give immaterial guidance and clarification on tasks, but not instructions on use.
- Without using a think aloud technique.

For each task, the participants were given verbal instructions for each task. Task timing began once the administrator finished reading the question. The task time was stopped once the participant indicated they had successfully completed the task.

Following the session, the administrator gave the participant the post-test questionnaire and System Usability Scale and thanked each individual for their participation.

Participants' demographic information, task success rate, time on task, errors, deviations, verbal responses, and post-test questionnaire were recorded on paper and then into a spreadsheet.

## Test Location

The test facility included a waiting area and a quiet testing room with a table, computer for the participant, and recording computer for the administrator. Only the participant and administrator were in the test room. All observers and the data logger worked from a separate room where they could see the participant's screen and face shot, and listen to the audio of the session. To ensure that the environment was comfortable for users, noise levels were kept to a minimum with the ambient temperature within a normal range. All of the safety instruction and evacuation procedures were valid, in place, and visible to the participants.

## Test Environment

The EHRUT would be typically be used in a healthcare office or facility. In this instance, the testing was conducted in ambulatory/outpatient clinics. For testing, the computer used a laptop running Windows 8 Pro. The participants used the laptop keyboard and a wireless mouse interacting with the EHRUT.

The EHRUT used a 15.6" screen with a screen resolution of 1366 x 768 and system default color settings of sRGB IEC61966-2.1. The application was set up by DOCS Medical Group according to the vendor's documentation describing the system set-up and preparation. The application itself was running on a web platform using a test database over a wireless Verizon 4G LTE (890L-5A5B) connection device. Technically, the system performance was representative to what actual users would experience in a field implementation. Additionally, participants were instructed not to change any of the default system settings.

## Test Forms and Tools

During the usability test, various documents and instruments were used, including:

- Participant Demographics Form
- Informed Consent Form
- Orientation/Participant Instructions
- NDA Form
- Post-test Questionnaire
- System Usability Scale Form

The participant's interaction with the EHRUT was captured and recorded digitally with screen capture software running on the test machine. A web camera recorded each participant's facial expressions synced with the screen capture, and verbal comments were recorded with a microphone. The test session were electronically transmitted to a nearby observation room where the data logger observed the test session.

## Participant Instructions

The administrator reads the following instructions aloud to the each participant:

*Thank you for participating in this study. Your input is very important. Our session today will last about 90 minutes. During that time you will use an instance of an electronic health record. I will ask you to complete a few tasks using this system and answer some questions. You should complete the tasks as quickly as possible making as few errors as possible. Please try to complete the tasks on your own following the instructions very closely. Please note that we are not testing you we are testing the system, therefore if you have difficulty all this means is that something needs to be improved in the system. I will be here in case you need specific help, but I am not able to instruct you or provide help in how to use the application. Overall, we are interested in how easy (or how difficult) this system is to use, what in it would be useful to you, and how we could improve it. I did not have any involvement in its creation, so please be honest with your opinions. All of the information that you provide will be kept confidential and your name will not be associated with your comments at any time. Should you feel it necessary you are able to withdraw at any time during the testing.*

Following the procedural instructions, participants were shown the EHR and as their first task, were given time 60 minutes to explore the system, make comments, and ask questions.

Once this task was complete, the administrator gave the following instructions:

*For each task, I will read the description to you and say “Begin.” At that point, please perform the task and say “Done” once you believe you have successfully completed the task. I would like to request that you not talk aloud or verbalize while you are doing the tasks. I will ask you your impressions about the task once you are done.*

Participants were then given 49 tasks to complete. Tasks are listed in the **TASKS** section above.

### Usability Metrics

According to the NIST Guide to the Processes Approach for Improving the Usability of Electronic Health Records, EHRs should support a process that provides a high level of usability for all users. 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 were captured during the usability testing. The goals of the test were to assess:

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

### Data Scoring

The following table details how tasks were scored, errors evaluated, and the time data analyzed:

Measures	Rationale and Scoring
<p><b>Effectiveness:</b> Task Success</p>	<p>A task was 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. The total number of successes were calculated for each task and then divided by the total number of times that task was attempted. The results are provided as a percentage.</p> <p>Task times were recorded for successes. Observed task times divided by the optimal time for each task is a measure of optimal efficiency.</p> <p>Optimal task performance time, as benchmarked by expert performance under realistic conditions, is recorded when constructing tasks. Target task times used for task times in the Moderator’s Guide must be operationally defined by taking multiple measures of optimal performance and multiplying by some factor [e.g., 1.25] that allows some time buffer because the participants are presumably not trained to expert performance. Thus, if expert, optimal performance on a task was [x] seconds then allotted task time performance was [x * 1.25] seconds. This ratio should be aggregated across tasks and reported with mean and variance scores.</p>
<p><b>Effectiveness:</b> Task Failures</p>	<p>If the participant abandoned the task, did not reach the correct answer or performed it incorrectly, or reached the end of the allotted time before successful completion, the task was counted as a “Failures.” No task times were taken for errors.</p> <p>The total number of errors was calculated for each task and then divided by the total number of times that task was attempted. Not all deviations would be counted as</p>

	<p>errors. This should also be expressed as the mean number of failed tasks per participant.</p> <p>On a qualitative level, an enumeration of errors and error types should be collected.</p>
<b>Efficiency:</b> Task Deviations Means	<p>The participant's path (i.e., steps) through the application was 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 was 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 Means.</p> <p>It is strongly recommended that task deviation means be reported. Optimal paths (i.e., procedural steps) should be recorded when constructing tasks.</p>
<b>Efficiency:</b> Task Time	<p>Each task was timed from when the administrator said "Begin" until the participant said, "Done." If he or she failed to say "Done," the time was stopped when the participant stopped performing the task. Only task times for tasks that were successfully completed were included in the average task time analysis. Average time per task was calculated for each task. Variance measures (standard deviation and standard error) were also calculated.</p>
<b>Satisfaction:</b> Task Rating	<p>Participant's subjective impression of the ease of use of the application was measured by administering both a simple post-task question as well as a post-session questionnaire. After each task, the participant was asked to rate "Overall, this task was:" on a scale of 1 (Very Easy) to 5 (Very Difficult). These data are averaged across participants. 12</p> <p>Common convention is that average ratings for systems judged easy to use should be 1.7 or below.</p> <p>To measure participants' confidence in and likeability of the [EHRUT] overall, the testing team administered the System Usability Scale (SUS) post-test questionnaire. Questions included, "I think I would like to use this system frequently," "I thought the system was easy to use," and "I would imagine that most people would learn to use this system very quickly." See full System Usability Score questionnaire in Appendix 5.13</p>

**Results :**

Rating Scale	Ratings	Task Rating - Standard Deviation	Task Time Mean (s)	Task Time - Standard Deviation (s)	Task Time Deviation - Mean Observed Seconds	Task Time Deviation - Mean Optimal Seconds	Task Success - Mean (%)	Task Success - Standard Deviation (%)	Task Errors - Mean (%)	Task Errors - Standard Deviation (%)	Task Path Deviation - Observed (# of Steps)	Task Path Deviation - Optimal (# of Steps)
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Likert	5	0	32	4	3	3	100	0	0	0	4
Likert	5	0	32	4	3	3	100	0	0	0	4
Likert	5	0	32	4	3	3	100	0	0	0	4

§ 170.315(a)(8) Add Medication Allergy for Past visit

Likert	5	0	27	5	4	4	100	0	0	0	3
Likert	5	0	27	5	4	4	100	0	0	0	3
Likert	5	0	27	5	4	4	100	0	0	0	3
Likert	5	0	27	5	4	4	100	0	0	0	3
Likert	5	0	27	5	4	4	100	0	0	0	3
Likert	5	0	27	5	4	4	100	0	0	0	3
Likert	5	0	27	5	4	4	100	0	0	0	3
Likert	5	0	27	5	4	4	100	0	0	0	3
Likert	5	0	27	5	4	4	100	0	0	0	3
Likert	5	0	27	5	4	4	100	0	0	0	3
Likert	5	0	27	5	4	4	100	0	0	0	3

§ 170.315(a)(8) Add Medication Allergy for Today's visit

Likert	5	0	29	10	9	9	100	0	0	0	3
Likert	5	0	29	10	9	9	100	0	0	0	3
Likert	5	0	29	10	9	9	100	0	0	0	3
Likert	5	0	29	10	9	9	100	0	0	0	3
Likert	5	0	29	10	9	9	100	0	0	0	3
Likert	5	0	29	10	9	9	100	0	0	0	3
Likert	5	0	29	10	9	9	100	0	0	0	3
Likert	5	0	29	10	9	9	100	0	0	0	3
Likert	5	0	29	10	9	9	100	0	0	0	3
Likert	5	0	29	10	9	9	100	0	0	0	3
Likert	5	0	29	10	9	9	100	0	0	0	3

§ 170.315 (a)(7) Add Medication for Past visit

Likert	5	0	46	10	7	7	100	0	0	0	3
Likert	5	0	46	10	7	7	100	0	0	0	3
Likert	5	0	46	10	7	7	100	0	0	0	3
Likert	5	0	46	10	7	7	100	0	0	0	3
Likert	5	0	46	10	7	7	100	0	0	0	3
Likert	5	0	46	10	7	7	100	0	0	0	3
Likert	5	0	46	10	7	7	100	0	0	0	3
Likert	5	0	46	10	7	7	100	0	0	0	3
Likert	5	0	46	10	7	7	100	0	0	0	3
Likert	5	0	46	10	7	7	100	0	0	0	3
Likert	5	0	46	10	7	7	100	0	0	0	4

§ 170.315 (a)(7) Add Medication for Today's visit

Likert	5	0	40	9	6	7	100	0	0	0	3
Likert	5	0	40	9	6	7	100	0	0	0	3
Likert	5	0	40	9	6	7	100	0	0	0	3
Likert	5	0	40	9	6	7	100	0	0	0	3

Likert	5	0	40	9	6	7	100	0	0	0	3
Likert	5	0	40	9	6	7	100	0	0	0	3
Likert	5	0	40	9	6	7	100	0	0	0	3
Likert	5	0	40	9	6	7	100	0	0	0	3
Likert	5	0	40	9	6	7	100	0	0	0	3
Likert	5	0	40	9	6	7	100	0	0	0	3

§ 170.315(a)(6) Add New Problem

Likert	5	0.32	34	7	6	5	100	0	0	0	6
Likert	5	0.32	34	7	6	5	100	0	0	0	6
Likert	5	0.32	34	7	6	5	100	0	0	0	6
Likert	5	0.32	34	7	6	5	100	0	0	0	6
Likert	5	0.32	34	7	6	5	100	0	0	0	6
Likert	5	0.32	34	7	6	5	100	0	0	0	6
Likert	5	0.32	34	7	6	5	100	0	0	0	6
Likert	5	0.32	34	7	6	5	100	0	0	0	6
Likert	5	0.32	34	7	6	5	100	0	0	0	6
Likert	4	0.32	34	7	6	5	100	0	0	0	7

§ 170.315(a)(5) Add Patient Demographic

Likert	5	0.42	59	30	26	26	100	0	0	0	10	1
Likert	5	0.42	59	30	26	26	100	0	0	0	10	1
Likert	5	0.42	59	30	26	26	100	0	0	0	10	1
Likert	4	0.42	59	30	26	26	100	0	0	0	10	1
Likert	4	0.42	59	30	26	26	100	0	0	0	10	1
Likert	5	0.42	59	30	26	26	100	0	0	0	10	1
Likert	5	0.42	59	30	26	26	100	0	0	0	10	1
Likert	5	0.42	59	30	26	26	100	0	0	0	10	1
Likert	5	0.42	59	30	26	26	100	0	0	0	10	1
Likert	5	0.42	59	30	26	26	100	0	0	0	10	1

§ 170.315(a)(1) Add Pre-Existing Medication for Past Visit

Likert	5	0.42	47	15	9	9	100	0	0	0	5
Likert	5	0.42	47	15	9	9	100	0	0	0	5
Likert	5	0.42	47	15	9	9	100	0	0	0	5
Likert	4	0.42	47	15	9	9	100	0	0	0	5
Likert	4	0.42	47	15	9	9	100	0	0	0	6
Likert	5	0.42	47	15	9	9	100	0	0	0	5
Likert	5	0.42	47	15	9	9	100	0	0	0	5
Likert	5	0.42	47	15	9	9	100	0	0	0	5
Likert	5	0.42	47	15	9	9	100	0	0	0	5
Likert	5	0.42	47	15	9	9	100	0	0	0	5

§ 170.315(a)(3) Add Radiology Test for Past visit

Likert	5	0	31	9	7	7	100	0	0	0	5
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Likert	5	0	31	9	7	7	100	0	0	0	5
Likert	5	0	31	9	7	7	100	0	0	0	5
Likert	5	0	31	9	7	7	100	0	0	0	5
Likert	5	0	31	9	7	7	100	0	0	0	5
Likert	5	0	31	9	7	7	100	0	0	0	5
Likert	5	0	31	9	7	7	100	0	0	0	5
Likert	5	0	31	9	7	7	100	0	0	0	5
Likert	5	0	31	9	7	7	100	0	0	0	5
Likert	5	0	31	9	7	7	100	0	0	0	5
Likert	5	0	31	9	7	7	100	0	0	0	5

§ 170.315(a)(3) Add Radiology Test for today's visit

Likert	5	0	19	6	5	5	100	0	0	0	6
Likert	5	0	19	6	5	5	100	0	0	0	6
Likert	5	0	19	6	5	5	100	0	0	0	6
Likert	5	0	19	6	5	5	100	0	0	0	6
Likert	5	0	19	6	5	5	100	0	0	0	6
Likert	5	0	19	6	5	5	100	0	0	0	6
Likert	5	0	19	6	5	5	100	0	0	0	6
Likert	5	0	19	6	5	5	100	0	0	0	6
Likert	5	0	19	6	5	5	100	0	0	0	6
Likert	5	0	19	6	5	5	100	0	0	0	6
Likert	5	0	19	6	5	5	100	0	0	0	6

§ 170.315(a)(4) Adjust interaction level (Doctor)

Likert	3	1.18	26	11	8	8	100	0	0	0	3
Likert	3	1.18	26	11	8	8	100	0	0	0	3
Likert	5	1.18	26	11	8	8	100	0	0	0	3
Likert	5	1.18	26	11	8	8	100	0	0	0	3
Likert	2	1.18	26	11	8	8	100	0	0	0	4
Likert	2	1.18	26	11	8	8	100	0	0	0	3
Likert	4	1.18	26	11	8	8	100	0	0	0	4
Likert	3	1.18	26	11	8	8	100	0	0	0	3
Likert	3	1.18	26	11	8	8	100	0	0	0	3
Likert	5	1.18	26	11	8	8	100	0	0	0	3

§ 170.315(a)(9) CDS- based on Patient Demographics

Likert	5	0	24	13	9	9	100	0	0	0	3
Likert	5	0	24	13	9	9	100	0	0	0	3
Likert	5	0	24	13	9	9	100	0	0	0	3
Likert	5	0	24	13	9	9	100	0	0	0	3
Likert	5	0	24	13	9	9	100	0	0	0	3
Likert	5	0	24	13	9	9	100	0	0	0	3
Likert	5	0	24	13	9	9	100	0	0	0	3
Likert	5	0	24	13	9	9	100	0	0	0	3
Likert	5	0	24	13	9	9	100	0	0	0	3
Likert	5	0	24	13	9	9	100	0	0	0	3

Likert	5	0	24	13	9	9	100	0	0	0	3
§ 170.315(a)(9) CDS- based on Vital											
Likert	5	0	40	9	6	8	100	0	0	0	3
Likert	5	0	40	9	6	8	100	0	0	0	3
Likert	5	0	40	9	6	8	100	0	0	0	3
Likert	5	0	40	9	6	8	100	0	0	0	3
Likert	5	0	40	9	6	8	100	0	0	0	3
Likert	5	0	40	9	6	8	100	0	0	0	3
Likert	5	0	40	9	6	8	100	0	0	0	3
Likert	5	0	40	9	6	8	100	0	0	0	3
Likert	5	0	40	9	6	8	100	0	0	0	3
Likert	5	0	40	9	6	8	100	0	0	0	3
§ 170.315(a)(10) Check Formulary											
Likert	5	0	31	14	13	13	100	0	0	0	3
Likert	5	0	31	14	13	13	100	0	0	0	3
Likert	5	0	31	14	13	13	100	0	0	0	3
Likert	5	0	31	14	13	13	100	0	0	0	3
Likert	5	0	31	14	13	13	100	0	0	0	3
Likert	5	0	31	14	13	13	100	0	0	0	4
Likert	5	0	31	14	13	13	100	0	0	0	3
Likert	5	0	31	14	13	13	100	0	0	0	3
Likert	5	0	31	14	13	13	100	0	0	0	3
Likert	5	0	31	14	13	13	100	0	0	0	3
§ 170.315(a)(10) Check Formulary- Alert message											
Likert	5	0	34	11	8	13	100	0	0	0	5
Likert	5	0	34	11	8	13	100	0	0	0	5
Likert	5	0	34	11	8	13	100	0	0	0	5
Likert	5	0	34	11	8	13	100	0	0	0	5
Likert	5	0	34	11	8	13	100	0	0	0	5
Likert	5	0	34	11	8	13	100	0	0	0	5
Likert	5	0	34	11	8	13	100	0	0	0	5
Likert	5	0	34	11	8	13	100	0	0	0	5
Likert	5	0	34	11	8	13	100	0	0	0	5
Likert	5	0	34	11	8	13	100	0	0	0	5
§ 170.315(b)(3) Copy Prescription											
Likert	5	0.32	26	11	9	9	100	0	0	0	8
Likert	5	0.32	26	11	9	9	100	0	0	0	8
Likert	5	0.32	26	11	9	9	100	0	0	0	8
Likert	5	0.32	26	11	9	9	100	0	0	0	8
Likert	5	0.32	26	11	9	9	100	0	0	0	8
Likert	5	0.32	26	11	9	9	100	0	0	0	8

Likert	4	0.32	26	11	9	9	100	0	0	0	8
Likert	5	0.32	26	11	9	9	100	0	0	0	8
Likert	5	0.32	26	11	9	9	100	0	0	0	8
Likert	5	0.32	26	11	9	9	100	0	0	0	8

§ 170.315(a)(1) Create Medication for Today's visit

Likert	5	0.42	50	19	13	14	100	0	0	0	5
Likert	5	0.42	50	19	13	14	100	0	0	0	5
Likert	5	0.42	50	19	13	14	100	0	0	0	5
Likert	5	0.42	50	19	13	14	100	0	0	0	5
Likert	5	0.42	50	19	13	14	100	0	0	0	5
Likert	4	0.42	50	19	13	14	100	0	0	0	5
Likert	4	0.42	50	19	13	14	100	0	0	0	5
Likert	5	0.42	50	19	13	14	100	0	0	0	5
Likert	5	0.42	50	19	13	14	100	0	0	0	5
Likert	5	0.42	50	19	13	14	100	0	0	0	5

§ 170.315(a)(5) Edit and View Patient Demographics

Likert	5	0.42	37	11	10	10	100	0	0	0	7
Likert	5	0.42	37	11	10	10	100	0	0	0	7
Likert	5	0.42	37	11	10	10	100	0	0	0	6
Likert	4	0.42	37	11	10	10	100	0	0	0	6
Likert	5	0.42	37	11	10	10	100	0	0	0	6
Likert	5	0.42	37	11	10	10	100	0	0	0	6
Likert	4	0.42	37	11	10	10	100	0	0	0	6
Likert	5	0.42	37	11	10	10	100	0	0	0	7
Likert	5	0.42	37	11	10	10	100	0	0	0	7
Likert	5	0.42	37	11	10	10	100	0	0	0	6

§ 170.315(a)(6) Edit and view Problem

Likert	5	0	26	10	8	8	100	0	0	0	5
Likert	5	0	26	10	8	8	100	0	0	0	5
Likert	5	0	26	10	8	8	100	0	0	0	5
Likert	5	0	26	10	8	8	100	0	0	0	5
Likert	5	0	26	10	8	8	100	0	0	0	5
Likert	5	0	26	10	8	8	100	0	0	0	5
Likert	5	0	26	10	8	8	100	0	0	0	5
Likert	5	0	26	10	8	8	100	0	0	0	5
Likert	5	0	26	10	8	8	100	0	0	0	5
Likert	5	0	26	10	8	8	100	0	0	0	5

§ 170.315(a)(14) Edit Implantable Device

Likert	5	0.32	37	12	9	8	100	0	0	0	9
Likert	5	0.32	37	12	9	8	100	0	0	0	9
Likert	5	0.32	37	12	9	8	100	0	0	0	9

Likert	4	0.32	37	12	9	8	100	0	0	0	10
Likert	5	0.32	37	12	9	8	100	0	0	0	9
Likert	5	0.32	37	12	9	8	100	0	0	0	9
Likert	5	0.32	37	12	9	8	100	0	0	0	9
Likert	5	0.32	37	12	9	8	100	0	0	0	9
Likert	5	0.32	37	12	9	8	100	0	0	0	9
Likert	5	0.32	37	12	9	8	100	0	0	0	9

§ 170.315(a)(2) Edit Lab Orders

Likert	5	0.32	41	10	6	7	100	0	0	0	6
Likert	5	0.32	41	10	6	7	100	0	0	0	6
Likert	5	0.32	41	10	6	7	100	0	0	0	6
Likert	5	0.32	41	10	6	7	100	0	0	0	6
Likert	5	0.32	41	10	6	7	100	0	0	0	6
Likert	4	0.32	41	10	6	7	100	0	0	0	6
Likert	5	0.32	41	10	6	7	100	0	0	0	6
Likert	5	0.32	41	10	6	7	100	0	0	0	6
Likert	5	0.32	41	10	6	7	100	0	0	0	6
Likert	5	0.32	41	10	6	7	100	0	0	0	6
Likert	5	0.32	41	10	6	7	100	0	0	0	6

§ 170.315 (a)(7) Edit Medication

Likert	5	0	45	19	14	14	100	0	0	0	3
Likert	5	0	45	19	14	14	100	0	0	0	3
Likert	5	0	45	19	14	14	100	0	0	0	3
Likert	5	0	45	19	14	14	100	0	0	0	3
Likert	5	0	45	19	14	14	100	0	0	0	3
Likert	5	0	45	19	14	14	100	0	0	0	3
Likert	5	0	45	19	14	14	100	0	0	0	3
Likert	5	0	45	19	14	14	100	0	0	0	3
Likert	5	0	45	19	14	14	100	0	0	0	3
Likert	5	0	45	19	14	14	100	0	0	0	3

§ 170.315(a)(1) Edit Medication (Pre-Existing)

Likert	5	0.32	28	8	7	6	100	0	0	0	4
Likert	5	0.32	28	8	7	6	100	0	0	0	4
Likert	5	0.32	28	8	7	6	100	0	0	0	4
Likert	5	0.32	28	8	7	6	100	0	0	0	4
Likert	5	0.32	28	8	7	6	100	0	0	0	4
Likert	5	0.32	28	8	7	6	100	0	0	0	4
Likert	4	0.32	28	8	7	6	100	0	0	0	5
Likert	5	0.32	28	8	7	6	100	0	0	0	4
Likert	5	0.32	28	8	7	6	100	0	0	0	4
Likert	5	0.32	28	8	7	6	100	0	0	0	5

§ 170.315(a)(8) Edit Medication Allergy

Likert	5	0	20	9	7	7	100	0	0	0	4
Likert	5	0	20	9	7	7	100	0	0	0	4
Likert	5	0	20	9	7	7	100	0	0	0	4
Likert	5	0	20	9	7	7	100	0	0	0	4
Likert	5	0	20	9	7	7	100	0	0	0	4
Likert	5	0	20	9	7	7	100	0	0	0	4
Likert	5	0	20	9	7	7	100	0	0	0	4
Likert	5	0	20	9	7	7	100	0	0	0	4
Likert	5	0	20	9	7	7	100	0	0	0	4
Likert	5	0	20	9	7	7	100	0	0	0	4

§ 170.315(a)(3) Edit Radiology Orders

Likert	5	0	49	13	9	10	100	0	0	0	5
Likert	5	0	49	13	9	10	100	0	0	0	5
Likert	5	0	49	13	9	10	100	0	0	0	5
Likert	5	0	49	13	9	10	100	0	0	0	5
Likert	5	0	49	13	9	10	100	0	0	0	6
Likert	5	0	49	13	9	10	100	0	0	0	5
Likert	5	0	49	13	9	10	100	0	0	0	5
Likert	5	0	49	13	9	10	100	0	0	0	5
Likert	5	0	49	13	9	10	100	0	0	0	5
Likert	5	0	49	13	9	10	100	0	0	0	5

§ 170.315(a)(4) Indicate Drug-allergy Interactions on Current Medication

Likert	5	0.42	64	13	10	13	100	0	0	0	6
Likert	5	0.42	64	13	10	13	100	0	0	0	6
Likert	5	0.42	64	13	10	13	100	0	0	0	6
Likert	5	0.42	64	13	10	13	100	0	0	0	6
Likert	5	0.42	64	13	10	13	100	0	0	0	6
Likert	4	0.42	64	13	10	13	100	0	0	0	6
Likert	5	0.42	64	13	10	13	100	0	0	0	6
Likert	5	0.42	64	13	10	13	100	0	0	0	6
Likert	5	0.42	64	13	10	13	100	0	0	0	6
Likert	4	0.42	64	13	10	13	100	0	0	0	6

§ 170.315(a)(4) Indicate Drug-allergy Interactions on Current Medication – Alert set to Major Alerts only

Likert	5	0.32	66	15	11	14	100	0	0	0	6
Likert	5	0.32	66	15	11	14	100	0	0	0	6
Likert	5	0.32	66	15	11	14	100	0	0	0	6
Likert	5	0.32	66	15	11	14	100	0	0	0	6
Likert	5	0.32	66	15	11	14	100	0	0	0	6
Likert	5	0.32	66	15	11	14	100	0	0	0	6
Likert	5	0.32	66	15	11	14	100	0	0	0	6
Likert	5	0.32	66	15	11	14	100	0	0	0	6

Likert	5	0.32	66	15	11	14	100	0	0	0	6
Likert	4	0.32	66	15	11	14	100	0	0	0	7
§ 170.315(a)(4) Indicate Drug-allergy Interactions on Prescription											
Likert	5	0.63	48	19	15	14	100	0	0	0	6
Likert	5	0.63	48	19	15	14	100	0	0	0	6
Likert	5	0.63	48	19	15	14	100	0	0	0	7
Likert	5	0.63	48	19	15	14	100	0	0	0	
Likert	5	0.63	48	19	15	14	100	0	0	0	7
Likert	5	0.63	48	19	15	14	100	0	0	0	
Likert	3	0.63	48	19	15	14	100	0	0	0	7
Likert	5	0.63	48	19	15	14	100	0	0	0	6
Likert	5	0.63	48	19	15	14	100	0	0	0	6
Likert	5	0.63	48	19	15	14	100	0	0	0	6
§ 170.315(a)(4) Indicate Drug-drug Interactions on Current Medication											
Likert	5	0.32	47	22	16	16	100	0	0	0	6
Likert	5	0.32	47	22	16	16	100	0	0	0	6
Likert	5	0.32	47	22	16	16	100	0	0	0	6
Likert	5	0.32	47	22	16	16	100	0	0	0	6
Likert	4	0.32	47	22	16	16	100	0	0	0	6
Likert	5	0.32	47	22	16	16	100	0	0	0	6
Likert	5	0.32	47	22	16	16	100	0	0	0	6
Likert	5	0.32	47	22	16	16	100	0	0	0	6
Likert	5	0.32	47	22	16	16	100	0	0	0	6
Likert	5	0.32	47	22	16	16	100	0	0	0	6
§ 170.315(a)(4) Indicate Drug-drug Interactions on Prescription											
Likert	5	0	47	14	10	10	100	0	0	0	6
Likert	5	0	47	14	10	10	100	0	0	0	6
Likert	5	0	47	14	10	10	100	0	0	0	7
Likert	5	0	47	14	10	10	100	0	0	0	6
Likert	5	0	47	14	10	10	100	0	0	0	6
Likert	5	0	47	14	10	10	100	0	0	0	6
Likert	5	0	47	14	10	10	100	0	0	0	6
Likert	5	0	47	14	10	10	100	0	0	0	6
Likert	5	0	47	14	10	10	100	0	0	0	6
Likert	5	0	47	14	10	10	100	0	0	0	6
§ 170.315(a)(8) Mark inactive Medication Allergy											
Likert	5	0	16	6	5	5	100	0	0	0	4
Likert	5	0	16	6	5	5	100	0	0	0	4
Likert	5	0	16	6	5	5	100	0	0	0	4
Likert	5	0	16	6	5	5	100	0	0	0	4
Likert	5	0	16	6	5	5	100	0	0	0	4

Likert	5	0	16	6	5	5	100	0	0	0	4
Likert	5	0	16	6	5	5	100	0	0	0	4
Likert	5	0	16	6	5	5	100	0	0	0	4
Likert	5	0	16	6	5	5	100	0	0	0	4
Likert	5	0	16	6	5	5	100	0	0	0	4
§ 170.315(a)(4) Override Interaction											
Likert	5	0.48	42	18	12	11	90	4.35	10	0.09	6
Likert	5	0.48	42	18	12	11	90	4.35	10	0.09	6
Likert	4	0.48	42	18	12	11	90	4.35	10	0.09	8
Likert	4	0.48	42	18	12	11	90	4.35	10	0.09	7
Likert	5	0.48	42	18	12	11	90	4.35	10	0.09	6
Likert	4	0.48	42	18	12	11	90	4.35	10	0.09	6
Likert	5	0.48	42	18	12	11	90	4.35	10	0.09	6
Likert	5	0.48	42	18	12	11	90	4.35	10	0.09	6
Likert	5	0.48	42	18	12	11	90	4.35	10	0.09	6
Likert	5	0.48	42	18	12	11	90	4.35	10	0.09	6
§ 170.315(b)(2) Review and Reconcile Allergen											
Likert	5	0.63	28	14	11	13	100	0	0	0	6
Likert	5	0.63	28	14	11	13	100	0	0	0	6
Likert	5	0.63	28	14	11	13	100	0	0	0	6
Likert	5	0.63	28	14	11	13	100	0	0	0	6
Likert	5	0.63	28	14	11	13	100	0	0	0	6
Likert	5	0.63	28	14	11	13	100	0	0	0	6
Likert	3	0.63	28	14	11	13	100	0	0	0	6
Likert	5	0.63	28	14	11	13	100	0	0	0	6
Likert	5	0.63	28	14	11	13	100	0	0	0	6
Likert	5	0.63	28	14	11	13	100	0	0	0	6
§ 170.315(b)(2) Review and Reconcile Medication and Confirm Medication											
Likert	5	0.63	45	18	14	15	100	0	0	0	7
Likert	5	0.63	45	18	14	15	100	0	0	0	7
Likert	5	0.63	45	18	14	15	100	0	0	0	7
Likert	5	0.63	45	18	14	15	100	0	0	0	7
Likert	5	0.63	45	18	14	15	100	0	0	0	7
Likert	5	0.63	45	18	14	15	100	0	0	0	8
Likert	3	0.63	45	18	14	15	100	0	0	0	7
Likert	5	0.63	45	18	14	15	100	0	0	0	7
Likert	5	0.63	45	18	14	15	100	0	0	0	7
Likert	5	0.63	45	18	14	15	100	0	0	0	7
§ 170.315(b)(2) Review and Reconcile Problem											
Likert	5	0.67	30	13	9	10	100	0	0	0	6
Likert	5	0.67	30	13	9	10	100	0	0	0	6

Likert	5	0.67	30	13	9	10	100	0	0	0	6
Likert	5	0.67	30	13	9	10	100	0	0	0	6
Likert	5	0.67	30	13	9	10	100	0	0	0	6
Likert	4	0.67	30	13	9	10	100	0	0	0	6
Likert	3	0.67	30	13	9	10	100	0	0	0	6
Likert	5	0.67	30	13	9	10	100	0	0	0	6
Likert	5	0.67	30	13	9	10	100	0	0	0	6
Likert	5	0.67	30	13	9	10	100	0	0	0	6
§ 170.315(b)(3) Signoff and Send Medication											
Likert	5	0	27	8	7	7	100	0	0	0	8
Likert	5	0	27	8	7	7	100	0	0	0	8
Likert	5	0	27	8	7	7	100	0	0	0	8
Likert	5	0	27	8	7	7	100	0	0	0	8
Likert	5	0	27	8	7	7	100	0	0	0	8
Likert	5	0	27	8	7	7	100	0	0	0	8
Likert	5	0	27	8	7	7	100	0	0	0	8
Likert	5	0	27	8	7	7	100	0	0	0	8
Likert	5	0	27	8	7	7	100	0	0	0	8
Likert	5	0	27	8	7	7	100	0	0	0	8
§ 170.315 (a)(7) Stop Medication											
Likert	5	0	21	5	4	4	100	0	0	0	4
Likert	5	0	21	5	4	4	100	0	0	0	4
Likert	5	0	21	5	4	4	100	0	0	0	4
Likert	5	0	21	5	4	4	100	0	0	0	4
Likert	5	0	21	5	4	4	100	0	0	0	4
Likert	5	0	21	5	4	4	100	0	0	0	4
Likert	5	0	21	5	4	4	100	0	0	0	4
Likert	5	0	21	5	4	4	100	0	0	0	4
Likert	5	0	21	5	4	4	100	0	0	0	4
Likert	5	0	21	5	4	4	100	0	0	0	4
§ 170.315(a)(1) Stop Medication (Pre-existing)											
Likert	5	0	25	6	4	5	100	0	0	0	5
Likert	5	0	25	6	4	5	100	0	0	0	5
Likert	5	0	25	6	4	5	100	0	0	0	5
Likert	5	0	25	6	4	5	100	0	0	0	5
Likert	5	0	25	6	4	5	100	0	0	0	5
Likert	5	0	25	6	4	5	100	0	0	0	5
Likert	5	0	25	6	4	5	100	0	0	0	5
Likert	5	0	25	6	4	5	100	0	0	0	5
Likert	5	0	25	6	4	5	100	0	0	0	5
Likert	5	0	25	6	4	5	100	0	0	0	5



Likert	5	0	12	3	3	3	100	0	0	0	3
Likert	5	0	12	3	3	3	100	0	0	0	3
Likert	5	0	12	3	3	3	100	0	0	0	3

§ 170.315(a)(8) View Medication Allergy

Likert	5	0	9	4	3	4	100	0	0	0	3
Likert	5	0	9	4	3	4	100	0	0	0	3
Likert	5	0	9	4	3	4	100	0	0	0	3
Likert	5	0	9	4	3	4	100	0	0	0	3
Likert	5	0	9	4	3	4	100	0	0	0	3
Likert	5	0	9	4	3	4	100	0	0	0	3
Likert	5	0	9	4	3	4	100	0	0	0	3
Likert	5	0	9	4	3	4	100	0	0	0	3
Likert	5	0	9	4	3	4	100	0	0	0	3
Likert	5	0	9	4	3	4	100	0	0	0	3
Likert	5	0	9	4	3	4	100	0	0	0	3

§ 170.315(a)(5) View Patient Demographics

Likert	5	0	17	7	6	6	100	0	0	0	3
Likert	5	0	17	7	6	6	100	0	0	0	3
Likert	5	0	17	7	6	6	100	0	0	0	3
Likert	5	0	17	7	6	6	100	0	0	0	3
Likert	5	0	17	7	6	6	100	0	0	0	3
Likert	5	0	17	7	6	6	100	0	0	0	3
Likert	5	0	17	7	6	6	100	0	0	0	3
Likert	5	0	17	7	6	6	100	0	0	0	3
Likert	5	0	17	7	6	6	100	0	0	0	3
Likert	5	0	17	7	6	6	100	0	0	0	3
Likert	5	0	17	7	6	6	100	0	0	0	3

§ 170.315(a)(6) View Problem

Likert	5	0	12	6	5	5	100	0	0	0	3
Likert	5	0	12	6	5	5	100	0	0	0	3
Likert	5	0	12	6	5	5	100	0	0	0	3
Likert	5	0	12	6	5	5	100	0	0	0	3
Likert	5	0	12	6	5	5	100	0	0	0	3
Likert	5	0	12	6	5	5	100	0	0	0	3
Likert	5	0	12	6	5	5	100	0	0	0	3
Likert	5	0	12	6	5	5	100	0	0	0	3
Likert	5	0	12	6	5	5	100	0	0	0	3
Likert	5	0	12	6	5	5	100	0	0	0	3
Likert	5	0	12	6	5	5	100	0	0	0	3

§ 170.315(a)(3) View Radiology Orders

Likert	5	0	16	4	3	3	100	0	0	0	4
Likert	5	0	16	4	3	3	100	0	0	0	4
Likert	5	0	16	4	3	3	100	0	0	0	4
Likert	5	0	16	4	3	3	100	0	0	0	4

Likert	5	0	16	4	3	3	100	0	0	0	4
Likert	5	0	16	4	3	3	100	0	0	0	4
Likert	5	0	16	4	3	3	100	0	0	0	4
Likert	5	0	16	4	3	3	100	0	0	0	4
Likert	5	0	16	4	3	3	100	0	0	0	4
Likert	5	0	16	4	3	3	100	0	0	0	4

### ***Data Analysis and Reporting***

The results of the usability test were calculated according to the methods specified in the Usability Metrics section above. Participants who failed to follow session and task instructions had their data excluded from the analyses.

The usability testing results for the EHRUT are detailed below. The results should be seen in light of the objectives and goals outlined in the **Study Design** section. The data should yield actionable results that, if corrected, yield material, positive impact on user performance.

The results from the SUS (System Usability Scale) scored the subjective satisfaction with the system based on performance with these tasks to be: 80.5

### ***Discussion of the Findings***

Based on the participants and testing scenarios, reporting is broken down in to 5 major headings listed below.

#### ***Effectiveness***

Based on the success, failure and path deviation data, for the most part, participants were able to successfully complete each task, but there were some variations in workflow which accounted for mostly minor (but some major) path deviations.

#### ***Efficiency***

Based on the observations of the task time and deviation data, efficiency of the system was accounted for by the results that most users were able to successfully complete the tasks within the allotted time without deviation and other were able to complete them with minor deviations.

#### ***Satisfaction***

Based on the task ratings and SUS results data, OmniMD Version 17 has been accepted by the participants as a usable system with a SUS Score of 80.5

#### ***Major Findings***

Participants expressed their happiness with the system, functions and the user interface. Other overall impressions of the system include:

- “Very user friendly, not a lot of clicks and dropdowns; compared to other systems, it’s easy.”

- “Good alerts and prompts.”
- “Interface is pretty good.”
- Would recommend to colleagues: “Oh yeah!”
- “Very easy; most of the time it’s common sense once you know the system.”
  - “CDA Reconciliation is very good; will prevent a lot of overlap and money for healthcare.”
  - Would recommend to colleagues: “Yes, simple to use actually.”
- “Excellent system!”
  - “Like all aspects of the system.”
  - Would recommend to colleagues: “Sure!”
- “Clinical reconciliation is a good feature.”
  - “Labs look good in patient chart.”
  - Would recommend to colleagues: “Yes.”
- “Easy to use.”
  - “Like the clinical charting portion.”
  - Would recommend to colleagues: “Yes.”
- “System is good!”
  - “Patient dashboard is a nice feature.”
  - Would recommend to colleagues: “Yes.”
- “Similar to other version but much easier to use.”
  - “Liked the clinical reconciliation section.”
  - Would recommend to colleagues: “Yes.”

### *Areas for Improvement*

Areas for improvement include reducing the number of clicks within screens as well as reduce the amount of scrolling. The clinical reconciliation module was welcomed by providers, but less so by assistants. Editing of items that have already been captured should be made easier and links on all pages should be displayed more prominently and towards the center of the screens.

----- End of the Report -----