ISO/IEC 205062
Common Industry Format for Usability Test Reports

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Executive Summary

A core part of our Software Development Lifecycle (SDLC) includes integration of a US (User Experience) team with a focus on usability based upon safety-enhanced design including patient safety, increased individual effectiveness and efficiency through increased user productivity/efficiency, decreased user errors, and increase in safety and improved cognitive support. A user centered design process is integrated into the SDLC to ensure a safety-enhanced design is achieved.

The User Centered Design process that is utilized at Adaptamed is the NISTIR 7741. Standard is aimed to improve the usability enhancing the effectiveness, efficiency, and satisfaction with which the intended users can achieve their tasks in the intended context of product use. This document includes the following steps: description of the product, goals of the test, test participants, tasks the users were asked to perform, experimental design of the test, the method or process by which the test was conducted, the usability metrics and data collection methods, and the numerical results. This process is used because it very closely aligns with the requirements set for Safety-Enhanced Design. It also provides the most clarity on what the best practice is for execution of each step.

This standard was applied to the usability test of EHR YOUR WAY Certified Edition version 9.2.0.0 which was conducted July1, 2018 at Adaptamed's facility in San Diego, CA. Report related to this test is prepared on 08/15/2018. This test measured the usability of the application by tracking efficiency, effectiveness, and satisfaction. Ten participants of varying experience levels completed tasks which were reflective of frequently used tasks in the application, such as medication/lab/radiology ordering, recording problems and medication allergies, and viewing drug-drug and drug-allergy interactions.

Experienced usability specialists moderated the tests and compiled the metrics. Key metrics that were tracked included task completion rate, task time, error rate, task deviations, satisfaction ratings, and participant verbalizations and recommendations.

The testing showed a 100% task completion rate and a less than a minute average task time.
 And while these metrics support the usability of the application, there is always room for improvement. Based on recommendations voiced during the tests and the rate of errors/task times associated with certain tasks, there were a few notable improvement ideas.

Date of Usability Test: 07/01/2018

Date of Report Prepared: 08/15/2018

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Introduction

Full Product Description

The Order Entry component of EHR YOUR WAY Certified Edition is designed to maximize the workflows for managing outpatient lab, radiology and medications orders. EHR YOUR WAY provides our users with an efficient workflow to review, add, and change medication, laboratory, and radiology orders as well as laboratory order results. Information like allergies, diagnoses, and interactions are displayed to the user as they work with the various orders. Users can also review, add, and change problems, demographics, and implantable devices as well.

Test Objectives

This test was to evaluate the usefulness and functionality (does the application work as intended), ease of use (do both physicians and non-physicians understand how to use the application), safety (ability to avoid errors), and satisfaction (what is the desirability of the application of EHR YOUR WAY Certified Edition.

The goals for this usability test for the EHR YOUR WAY Certified Edition were to test against 10 different areas being certified:

- 170.315(a)(1) CPOE - Medications
- 170.315(a)(2) CPOE - Laboratory
- 170.315(a)(3) CPOE – Diagnostic Imaging (NEW)
- 170.315(a)(4) Drug-drug, Drug-allergy Interaction Checks
- 170.315(a)(5) Demographics (NEW)
- 170.315(a)(6) Problem List
- 170.315(a)(7) Medication List
- 170.315(a)(8) Medication Allergy List
- 170.315(a)(14) Implantable Device List (NEW)
- 170.315(b)(3) Electronic Prescribing
- 170.315(a)(9) Clinical Decision Support
- 170.315(b)(2) Clinical Information Reconciliation and Incorporation

Methods

Participants

Ten participants were tested in this study. Our intended users are clinicians, so we used participants with a clinical background. We also used participants with varying professional experience and licenses, computer experience levels, and experience with the product. We used these different experience levels because we believe that in a real-world setting, users would have varying computer and product experience levels. The below represents the demographics that were collected from each participant. The participants chosen were not compensated fiscally. These participants were no directly involved in the development of the application.

Additional Technology used: None is used

S. No	Participant ID	Occupation/Role	Professional Experience	Age	Sex	Education	Computer Experience	Product Experience
1	ID1	Clinician	35 years	60-69	M	MD	25 years	5 years
2	ID2	Clinician	30 years	60-69	F	MD	25 years	5 years
3	ID3	Clinician	26 years	60-69	M	MD	25 Years	8 years
4	ID4	Nurse Practitioner	18 years	60-69	M	NP	20years	5 years
5	ID5	Medical Asst	30 years	60-69	F	Medical assistant certificate	25 years	5 years
6	ID6	Medical assistant	2 years	20-29	F	Medical assistant certificate	5 years	2 years
7	ID7	Receptionist	2 years	20-29	F	Medical assistant certificate	5 years	2 years
8	ID8	Clinician	25 years	60-69	M	MD	25 Years	8 years
9	ID9	Front End Staff	6 years	20-29	F	no degree	6 years	4 years
10	ID10	Front End Staff	2 years	30-39	F	no degree	2 years	1.5 years

Participant Instructions

All participants were given a short explanation of what the tests are about and were given the ability to ask questions before the test was administered. The test moderator read the tasks to each participant and the participant then attempted the explained task. We measured task completion rate, task time, error rate, and satisfaction ratings. We observed their behavior and documented verbalizations to see patterns of across participants. This information was reviewed after the session to collect metrics.

Experimental/Study Design

The objective of this test was to measure effectiveness, efficiency, and satisfaction. The participants' vocal feedback and reactions were recorded. This qualitative feedback was analyzed for patterns in their responses. This feedback was used to inform the design. Quantitative observations were made through the dependent variables below. The quantitative metrics measured were task success rate, task failure rate, task deviation rate, error rate, task time, and user satisfaction rating. The participants filled out the SUS questionnaire to assess the satisfaction of the participant after using the application.

Tasks/Scenarios

The participant was given the set of tasks below which reflect tasks that a user of the application would complete. The tasks were chosen because of their importance in regards to functionality, criticality in regards to safety, and frequency of use in the application. The participants were welcome to ask the moderator questions and refer back to the task sheet given. Below are the scenarios that were given to participants.

Scenario 1 – Patient 1 – Tasks: Record demographics (170.315 (a)(5))

- A new client comes in for an appointment. Verify if that patient exists in your system and Add if not available.
- Document patients Last Name (Richard), First Name(John), Sex(Male), DOB(25/06/1962) and Save.
- Search for the existing patient and add More information by Editing the patient demographics.
- Edit the patient and enter Home Address (1357 Amber Drive, Beaverton, OR 97006, US) Home Telephone((816)276-6909), Ethnicity(Not Hispanic or Latino), Race (white), Preferred Language(English), Gender Identity(Male) and Save.

Scenario 2 – Patient 2 – Tasks: View demographics (170.315 (a)(5)), Change demographics (170.315 (a)(5))

- Patient has changed the address. He wants his address to be changed to 1369 Amber Drive, Beaverton, OR 97006, US). Change the address.

Scenario 3 – Patient 2 – Tasks: View medications/medication list (170.315 (a)(1)) & (170.315 (a)(7)), View medication allergy list (170.315 (a)(8)), Change medication/medication list (170.315 (a)(1)) & (170.315 (a)(7)), Electronically Prescribe (170.315 (b)(3))

- Based on your patients input you understood that Paxil 10 mg is not giving good progress, and observed he has Paxil 10 mg in drug allergy list. So you decided to give "Lexapro" and stop Paxil 10mg.
- You prescribe a new drug, Lexapro 10 mg table oral, 1 tab, QD.
- Upon completing the prescription will send via eRx to the CVS pharmacy.
- Change the frequency of Lexapro 10 mg from QD to BID.

Scenario 4 – Patient 2– Tasks: View medication allergies (170.315 (a)(8)), Record medication allergy (170.315 (a)(8)), Change medication allergy (170.315 (a)(8)), View lab tests (170.315 (a)(2)), Order lab test (170.315 (a)(2)), Record medication (170.315 (a)(1)), View drug-allergy interactions (170.315 (a)(4)), View drug-drug interactions (170.315 (a)(4)), Change medication (170.315 (a)(1)), Change the level of severity for drug-drug interactions (170.315 (a)(4))

- Patient has come for regular visit. After few mins of discussion with him you understood that patient is experiencing Mild Irritable after he takes Hydralazine drug. Update the chart with this information
- View all allergies for the patient. Verify that the Hydralazine allergy appears in the client's known allergies list.
- The client also indicates that their Egg allergy has gone away and they no longer have any reactions to eating Egg. Discontinue the Egg allergy. Return to allergies, change the severity of the Hydralazine allergy to Moderate, because the patient indicated that their Irritable gets severe after taking Hydralazine.
- The patient complains about painful urinating. Order urinalysis and CMP.
- You also want to prescribe Bactrim for the suspected UTI.
- Proceed to prescribe Bactrim.
- After you speak to your client more, you decide to add a Comprehensive Metabolic Panel.

• The patient reports they don't feel like the Flonase has been working, so you decide to discontinue Flonase as well as Hydralazine, since the client reported the allergic reaction.

Scenario 5 – Patient 2 – Tasks: View implantable device list (170.315 (a)(14)), Change implantable device list (170.315 (a)(14)), Record implantable device list (170.315 (a)(14))

• The client tells you that they just had an implantable device removed. You want to see if the history of this implantable device is in their record. Open the Implantable Device List.

• Enter the unique device identifier (00643169007222). Get the information of device using Parse functionality in EHR. Review the information that has been returned and save to patient.

• Since the device is removed from the patient currently, Edit the record and set the status as inactive.

Scenario 6 – Patient 2 – Tasks: View problem list (170.315 (a)(6)), Record problem (170.315 (a)(6)), Change problem (170.315 (a)(6))

• The patient has been complaining of a Foot Pain.

• Add the problem Foot Pain to the patient's problem list and the Date Identified.

• The patient also tells you they no longer have the Low back pain. Convert the status of low back pain to resolve.

Scenario 7 – Patient 3 – Tasks: View lab test results (170.315 (a)(2)), Change lab test (170.315 (a)(2)), Add radiology order (170.315 (a)(3)), Change radiology order (170.315 (a)(3)), View radiology order (170.315 (a)(3)), Change medication (170.315 (a)(1))

• At the last visit you ordered a urinalysis lab test. Review the lab test results for the order.

• You decide to order a CT scan to determine if the patient's symptoms could be related to a stroke.

• After placing the order, the patient tells he will be out of town for 1 week, Now change the order start date to 1 week later. Edit the placed order and re-order the new order with the new start date. Confirm the order change.

Scenario 8 – Patient 3 – Tasks: Clinical Decision Support (170.315(a) (9))

• Enable the Clinical Decision Support for a provider through the CDS admin.

• Configure each CDS alert with a combination of:

o 1 Problem & 1 Medication

o Patient Gender & Problem List

o 1 Medication & 1 Allergy

o Hba1c >8.0 & High Blood Pressure

• The Patient was added with CDS Intervention and /or reference resource for all the 7 required elements listed below:

1) Problem List;

2) Medication List;

3) Medication allergy list;

4) At least one demographic (specified in 170.315(a)(5)(i));

5) Laboratory tests;

6) Vital Signs; and

7) Combination (based on at least two of the elements listed above)

• Now the user triggers the CDS interventions/resources added using the applicable data elements from each of the required elements.

• Verify that the user can view the intervention/resource information using the Infobutton standard for data elements in the problem list, medication list, and demographics

- Create a new patient and import a CDA through incorporate CCDA module with at least one matching alert from above configured rules.
- Verify that the CDS alert gets triggered post successful incorporation of data from CCDA.
- Verify that following attributes exists for one of the triggered CDS interventions/resources: bibliographic citation, developer, funding source, release/revision date.

Scenario 9 – Patient C – Tasks: Clinical Information Reconciliation and Incorporation 170.315(b) (2)

- Verify that you have received a sample CCDA for Isabella Jones before executing this test.
- Search a patient with name "Isabella Jones". If not found, create a new patient with same first name, last name and DOB as in sample CCDA.
- Import the sample CCDA into "Isabella Jones" clinical documents.
- Right click and select incorporate data.
- Verify that reconciliation confirmation dialog shows you external data with respect to problems and medications as in sample CCDA.
- Accept the changes and verify that problems and medications are added to patient chart, post successful reconciliation.
- Navigate to release of information module and create a new transition of care document for the patient.
- Verify that the reconciled data shows in generated CCDA.

Test Procedure

The tests were moderated by experienced usability specialists. The moderators gave each participant a brief explanation of what they could expect in the test, read through each task and scenario to the user, and tracked comments and behaviors of the participants. Participants were instructed that they could ask for clarification along the way and were able to refer to a printed copy of the task. Task timing began at the point that the task had begun and ended once the participant had completed that task. Following the test, the participant was given an SUS questionnaire to complete. Metric information was stored into a report following the testing.

Test Location

Testing was conducted on July 1, 2018 at Adaptamed LLC, San Diego CA. In-person tests were conducted with participants who were onsite and virtually with remote participants. The tests were completed in a quiet meeting room with, at most, one other user test being conducted at the same time.

Test Environment

The intended facility would be an Outpatient Medical health facility where orders are recorded and used in a clinical setting. In this instance, the testing was conducted in the Adaptamed building. Testing was conducted on Windows 10Pro, Dell24 Inches;1920 X 1080 pixels resolution laptops. Color settings is set to "Night light".Laptop is connected to a LAN. The laptops were provided and setup by Adaptamed for the duration of the test. The participants used a standard keyboard and mouse for input. The environment had content similar to what appears in the field on this application. The system performance during the testing is reflective of what would be experienced in the field.

Test Forms and Tools

The laptops were equipped withZoom meeting (screen recording/audio recording tool).

Usability Metrics

The usability metrics captured during the test were based on the NIST Guide to the Processes Approach for Improving the Usability of Electronic Health Records. These metrics include effectiveness, efficiency, and satisfaction.

Effectiveness was measured by tracking success and error rates. Efficiency was measured through task time and deviations. Satisfaction was measured with a satisfaction questionnaire (SUS).

Effectiveness

A task was considered a success if the user was able to complete the task. If the participant abandoned the task, it was counted as a failure. If a participant deviated away from the optimal path to complete a task, but ultimately was still able to accomplish the task, then the task was marked as a success. A percentage was measured for success and failure rate. Any errors that occurred during tasks were recorded as well. An error was defined as an action taken that disrupted the completion of the task.

Efficiency

Task time was measured for each task based on when the user first began a task to when the user finished the task. An average task time was measured at a task level and individual level and the standard deviation of these times were also measured. Task deviation was recorded to measure the amount of deviation from the optimal or quickest path through the task.

Satisfaction

In systems engineering, the SUS is a simple, ten-item attitude Likert scale giving a global view of subjective assessments of usability. It was developed by John Brooke at Digital Equipment Corporation in the UK in 1996 as a tool to be used in usability engineering of electronic office systems. An SUS questionnaire was given to each participant after completing the tasks in the application. Common conventions find that systems with a rating of 66 of higher can be seen as easy to use. See J. Sauro, Measuring Usability With the System Usability Scale (SUS)

Results

Data Analysis and Reporting

The findings and details of the usability testing are detailed below. The results were measured based on explanations in the "Usability Metrics" section above. Detailed description of tasks are mentioned in page : 6

Task Description	No Of participants	Task Success mean %	Path Deviation			Task Time			Task Errors - Standard Deviation (%)	Errors %	Rating 5= Easy 1= Very Hard	Task Rating - Standard Deviation
			Path Deviations Observed / Optimal	Optimal No. of Steps	Observed No.of Steps	Mean SD Secs	Deviations Observed	Optimal Time				
Record Demographics	10	100	0	4	4	99	21	120	0	0	5	0
View and Change Demographics	10	100	0	5	5	56	4	60	0	0	5	0
View Medication list, Medication allergy list, change Medication list and Prescribe drug electronically	10	100	0	10	10	187	23	210	0	0	4	0

Task												
View, change and Record medication allergy;View, Order and Record Lab Test;View Drug - Allergy; Drug - Drug allergy interactions and change Medication.	10	100	0	16	16	318	42	360	0	0	4	0
Record, View and change Implantable device list	10	100	0	7	7	96	23	120	0	0	5	0
Record, View and change Problem list	10	100	0	10	10	92	27	120	0	0	5	0
View and change lab results Order, view and change radiology order Change Medication	10	100	0	15	16	290	69	360	0	0	4	0
Configure Clinical Decision support rules and view if alert gets triggered	10	100	0	12	13	324	24	300	0	0	4	0
View CCDA message and import to patient chart; Perform Reconciliation for the imported files.	10	100	0	14	16	392	32	360	0	0	4	0

Analysis (Participant)

Participant	Success/Failure	Number/Type of Errors	Avg Task Time (seconds)	SUS
ID1	100% Success	0	204	4
ID2	100% Success	0	204	5
ID3	100% Success	0	205	5
ID4	100% Success	0	205	4
ID5	100% Success	0	205	4
ID6	100% Success	0	206	4

ID7	100% Success	0	207	5
ID8	100% Success	0	208	5
ID9	100% Success	0	209	4
ID10	100% Success	0	207	4

Effectiveness

100% of the tasks were successfully completed by the participants. There were tasks that involved more effort than others, but even so, every task was successfully completed by all of the participants. There were no system errors that presented themselves during the test.

Efficiency

The average task time for all tasks and all participants was under one minute.

Satisfaction

We used the System Usability Scale (SUS) to gauge participant satisfaction. This is a 10 question weighted scale that scores the application from 0-5 with 5 being the most usable, but there are few negative questions for which rating is given 1 it is considered as good. However we asked the participants to rate the product from 1-5 (1 bad experience and 5 Excellent experience). The average score amongst the participants was 4.4.

Major Findings

It can be deducted that with a 100% task completion rate, a less than 3 minute average task time, and an SUS of 4.4, the applications are indeed user-friendly based on the three criteria above that were measured. In addition, there were no critical safety concerns that presented themselves during the test.

In all instances where specific safety /risk scenarios were presented, the participants were supplied with accurate information and were able to use that information to keep from risking the patient's safety. For example, when the participant was tasked to consider placing an order for Hydralazine while the patient has a Hydralazine drug allergy, the system effectively presented the user with the critical information and the participant was able to avoid a safety issue.

Areas for Improvement

The application overall performed well in the three areas being measured: efficiency, effectiveness, and satisfaction.

Appendix 2:

PARTICIPANT DEMOGRAPHICS:

Gender:

Men: 4

Women: 6

Total(participants): 10

15-Nov-10

Occupation/Role

RN/BSN : 1

Physician : 4

Admin Staff: 5

Total(participants) : 10

Years of Experience Years experience: 20 – 25 years

 Facility Use of EHR

All paper: 0

Some paper, some, electronic: 0

All electronic: 10 years

Total (participants): 10

Appendix 4: EXAMPLE MODERATOR'S GUIDE:

EHRUT Usability Test Moderator's Guide

 Administrator: Kumra Prathipati MD

 Data Logger: Kiran Ghantasala

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 Participant # : 1

Location: 4276 54th place, San Dieog, CA, 92115

Date: 07/01/2018

 Time: 09.00 AM

<u>Prior to testing</u>
- Confirm schedule with Participants
- Ensure EHRUT lab environment is running properly
- Ensure lab and data recording equipment is running properly

<u>Prior to each participant:</u>
- Reset application
- Start session recordings with *tool*

<u>Prior to each task:</u>

▪   Reset application to starting point for next task

After each participant:
▪   End session recordings with *tool*

After all testing
▪   Back up all video and data files

Orientation (*10 mins*)

Thank you for participating in this study. Our session today will last *60 mins*. During that time you will take a look at an electronic health record system.

I will ask you to complete a few tasks using this system and answer some questions. 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. You will be asked to complete these tasks on your own trying to do them as quickly as possible with the fewest possible errors or deviations. Do not do anything more than asked. If you get lost or have difficulty I cannot answer help you with anything to do with the system itself. Please save your detailed comments until the end of a task or the end of the session as a whole when we can discuss freely.

I did not have any involvement in its creation, so please be honest with your opinions.

The product you will be using today is *EHR Your Way (6.9.0.0)*
 Some of the data may not make sense as it is placeholder data.

We are recording the audio and screenshots of our session today. All of the information that you provide will be kept confidential and your name will not be associated with your comments at any time.

Do you have any questions or concerns?

Preliminary Questions (*2 minutes*)

        What is your job title / appointment? I am a Physician.
        How long have you been working in this role? About 25 years
        What are some of your main responsibilities? I am an Internal Medicine Specialist.
        Tell me about your experience with electronic health records. : I have been using EHR for approximately 4-5 years. Initially it was a great hassle, but I am able to overcome the problems upon using it daily. May it take some time because I am not good with technology and computer usage.

Task 0: First Impressions (45 *Seconds*)

This is the application you will be working with. Have you heard of it?
Yes, I have heard about it. I am using this application from past few years. Its been great and user friendly application. Performance and support is pretty good. It is customizable according to my needs.

Please don't click on anything just yet.
What do you notice? : I see "Scheduler", icon to "Add Demographics", "Dashboard folders", "Inbox" and my "To do list".
What are you able to do here? : I will be able ot see and book appointments, add patient demographic information, Inbox will help me to find all pending documents and notes which need my signature. To do list will show my messages, fax and Refill requests.
Notes / Comments: None

Task 1: Record Demographics (*98 Seconds*)

Take the participant to the starting point for the task.
Record demographics (170.315 (a)(5))
•   A new client comes in for an appointment. Verify if that patient exists in your system and Add if not available.
•   Document patients Last Name (Richard), First Name(John), Sex(Male), DOB(25/06/1962) and Save.
•   Search for the existing patient and add More information by Editing the patient demographics.
•   Edit the patient and enter Home Address (1357 Amber Drive, Beaverton, OR 97006, US) Home
Telephone((816)276-6909), Ethnicity(Not Hispanic or Latino), Race (white), Preferred Language(English), Gender Identity(Male) and Save.

Success:
[X] Easily completed
☐   Completed with difficulty or help :: Describe below
☐   Not completed *Comments:*

 Task Time: 98 Seconds

Optimal Path: *Dashboard → Add Patient Icon → Enter data and click Save button*
 Optimal Path is Correct

Observed Errors and Verbalizations: No errors observed

Comments: Looks good

Rating: Overall, this task was: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)

Administrator / Note taker Comments: Client is enthusiastic and happy that he is able to finish his first task successfully.

Task 2: View and Change Demographics (*56 Seconds*)

Patient 2 – Tasks: View demographics (170.315 (a)(5)), Change demographics (170.315 (a)(5))

•Patient has changed the address. He wants his address to be changed to 1369 Amber Drive, Beaverton, OR 97006, US). Change the address.

Success:
[X]   Easily completed
☐   Completed with difficulty or help :: Describe below
☐   Not completed *Comments:*

Task Time: 56 Seconds
Optimal Path: *Dashboard → Search Patient → Edit Demographics*
[X]   Correct
☐   Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors. Participant said it is easy.
Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)

Administrator / Notetaker Comments: None

Task 3: View Medication list, Medication allergy list, change Medication list and Prescribe drug electronically (*180 Seconds*)

Patient 2 –: View medications/medication list (170.315 (a)(1)) & (170.315 (a)(7)), View medication allergy list (170.315 (a)(8)), Change medication/medication list (170.315 (a)(1)) & (170.315 (a)(7)), Electronically Prescribe (170.315 (b)(3))
•   Based on your patients input you understood that Paxil 10 mg is not giving good progress, and observed he has Paxil 10 mg in drug allergy list. So you decided to give "Lexapro" and stop Paxil 10mg.
•   You prescribe a new drug, Lexapro 10 mg table oral, 1 tab, QD.
•   Upon completing the prescription will send via eRx to the CVS pharmacy.
•   Change the frequency of Lexapro 10 mg from QD to BID.

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time:180 Seconds

Optimal Path: 1. *Open Chart* → *Summary* → *Current Medications*
                      2. *Open Chart* → *Chart Left Folders* → *Prescription folder* → *Order Rx*
                      3. *Open Chart* → *Summary* → *Allergies*

[X] Correct
[ ] Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made. User felt difficult in recalling the path to identify order rx window.

Rating: 2
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)

Administrator / Notetaker Comments: None

Task 4: Patient 2– Tasks: View medication allergies (170.315 (a)(8)), Record medication allergy (170.315 (a)(8)), Change medication allergy (170.315 (a)(8)), View lab tests (170.315 (a)(2)), Order lab test (170.315 (a)(2)), Record medication (170.315 (a)(1)), View drug-allergy interactions (170.315 (a)(4)), View drug-drug interactions (170.315 (a)(4)), Change medication (170.315 (a)(1)), Change the level of severity for drug-drug interactions (170.315 (a)(4))

• **Patient has come for regular visit. After few mins of discussion with him you understood that patient is experiencing Mild Irritable after he takes Hydralazine drug. Update the chart with this information**

• **View all allergies for the patient. Verify that the Hydralazine allergy appears in the client's known allergies list.**

• **The client also indicates that their Egg allergy has gone away and they no longer have any reactions to eating Egg. Discontinue the Egg allergy. Return to allergies, change the severity of the Hydralazine allergy to Moderate, because the patient indicated that their Irritable gets severe after taking Hydralazine.**

• **The patient complains about painful urinating. Order urinalysis and CMP.**

• **You also want to prescribe Bactrim for the suspected UTI.**

• **Proceed to prescribe Bactrim.**

• **After you speak to your client more, you decide to add a Comprehensive Metabolic Panel.**

• **The patient reports they don't feel like the Flonase has been working, so you decide to discontinue Flonase as well as Hydralazine, since the client reported the allergic reaction.. (315 seconds)**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 315 Seconds

Optimal Path: 1. *Open Chart → Summary → Current Medications*
              2. *Open Chart → Chart Left Folders → Prescription folder → Order Rx*
              3. *Open Chart → Summary → Allergies*
              4. *Open Chart → Chart Left Folders → Lab Orders*

[X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.
        Comments:

Rating: 2
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)

Administrator / Note taker Comments: None

Task 5: Patient 2 – Tasks: View implantable device list (170.315 (a)(14)), Change implantable device list (170.315 (a)(14)), Record implantable device list (170.315 (a)(14))
•   **The client tells you that they just had an implantable device removed. You want to see if the history of this implantable device is in their record. Open the Implantable Device List.**
•   **Enter the unique device identifier (00643169007222). Get the information of device using Parse functionality in EHR. Review the information that has been returned and save to patient.**
•   **Since the device is removed from the patient currently, Edit the record and set the status as inactive.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time:100 Seconds

Optimal Path: 1. *Open Chart → Chart Left Folders → Implantable Device*

[X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.
        Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)

Administrator / Note taker Comments: None

Task 6:

Patient 3 – Patient 2 – Tasks: View problem list (170.315 (a)(6)), Record problem (170.315 (a)(6)), Change problem (170.315 (a)(6))
•   **The patient has been complaining of a Foot Pain.**
•   **Add the problem Foot Pain to the patient's problem list and the Date Identified.**
•   **The patient also tells you they no longer have the Low back pain. Convert the status of low back pain to resolve.**
Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time:85 Seconds

Optimal Path: 1. *Open Chart* → *Summary* → *Problem list.*

[X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made. Felt that completing task is easy and application is user friendly in finding the appropriate diagnosis code.
        Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)

Administrator / Note taker Comments: None

Task 7: Patient 3 – Tasks: View lab test results (170.315 (a)(2)), Change lab test (170.315 (a)(2)), Add radiology order (170.315 (a)(3)), Change radiology order (170.315 (a)(3)), View radiology order (170.315 (a)(3)), Change medication (170.315 (a)(1))
•   **At the last visit you ordered a urinalysis lab test. Review the lab test results for the order.**
•   **You decide to order a CT scan to determine if the patient's symptoms could be related to a stroke.**
•   **After placing the order, the patient tells he will be out of town for 1 week, Now change the order start date to 1 week later. Edit the placed order and re-order the new order with the new start date. Confirm the order change.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 298 Seconds

Optimal Path: 1. *Open Chart* → *Chart Left side folders* → *Labs Folder*

15-Nov-10

[X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made. Participant took time to find the option to enter result for the test.

Rating: 2
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)

Administrator / Notetaker Comments: Even though participant did not find the lab result path, took few seconds to observe the screen and get to the location. Participant felt that it will be good if he spent time on this before the test.

Task 8: Patient 3 – Tasks: Clinical Decision Support (170.315(a) (9))
•   **Enable the Clinical Decision Support for a provider through the CDS admin.**
•   **Configure each CDS alert with a combination of:**
o   **1 Problem & 1 Medication**
o   **Patient Gender & Problem List**
o   **1 Medication & 1 Allergy**
o   **Hba1c >8.0 & High Blood Pressure**
•   **The Patient was added with CDS Intervention and /or reference resource for all the 7 required elements listed below:**
1) Problem List;
2) Medication List;
3) Medication allergy list;
4) At least one demographic (specified in 170.315(a)(5)(i));
5) Laboratory tests;
6) Vital Signs; and
7) Combination (based on at least two of the elements listed above)
•   **Now the user triggers the CDS interventions/resources added using the applicable data elements from each of the required elements.**
•   **Verify that the user can view the intervention/resource information using the Infobutton standard for data elements in the problem list, medication list, and demographics**
•   **Create a new patient and import a CDA through incorporate CCDA module with at least one matching alert from above configured rules.**
•   **Verify that the CDS alert gets triggered post successful incorporation of data from CCDA.**
•   **Verify that following attributes exists for one of the triggered CDS interventions/resources: bibliographic citation, developer, funding source, release/revision date.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 315 Seconds

Optimal Path: 1. *Dashboard → Settings → Add/ Edit/Delete clinical decision support rules (HM Rules)*

[X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made. Participant says; tasks looks too heavy and took time to accomplish it.
        Comments:

Rating: 2
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)

Administrator / Note taker Comments: Participant felt comfortable in creating the rules.

Task 9: Patient C – Tasks: Clinical Information Reconciliation and Incorporation 170.315(b) (2)
•   **Verify that you have received a sample CCDA for Isabella Jones before executing this test.**
•   **Search a patient with name "Isabella Jones". If not found, create a new patient with same first name, last name and DOB as in sample CCDA.**
•   **Import the sample CCDA into "Isabella Jones" clinical documents.**
•   **Right click and select incorporate data.**
•   **Verify that reconciliation confirmation dialog shows you external data with respect to problems and medications as in sample CCDA.**
•   **Accept the changes and verify that problems and medications are added to patient chart, post successful reconciliation.**
•   **Navigate to release of information module and create a new transition of care document for the patient.**
•   **Verify that the reconciled data shows in generated CCDA.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time:395 Seconds

Optimal Path: 1. *Dashboard → Import Clinical Message Received Electronically*
                 2. *Open Chart → Patient chart left folders → Clinical Information Reconciliation*

 [X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made. User felt difficult in recalling the path to identify clinical information reconciliation of Problem list in chart. Finally able to get it after thinking for 2 seconds.
Comments:

Rating: 2
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)

Administrator / Note taker Comments: None

<div align="center">

End of Participant # 1

</div>

Participant # : 2

Location: 4276 54th place, San Dieog, CA, 92115

Date: 07/01/2018

 Time: 10.30 AM

Prior to testing
▪   Confirm schedule with Participants
▪   Ensure EHRUT lab environment is running properly
▪   Ensure lab and data recording equipment is running properly

Prior to each participant:
▪   Reset application
▪   Start session recordings with *tool*

Prior to each task:
▪   Reset application to starting point for next task

After each participant:
▪   End session recordings with *tool*

After all testing
▪   Back up all video and data files

Orientation (*10 mins*)
Thank you for participating in this study. Our session today will last ***60 mins***. During that time you will take a look at an electronic health record system.

I will ask you to complete a few tasks using this system and answer some questions. 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. You will be asked to complete these tasks on your own trying to do them as quickly as possible with the fewest possible errors or deviations. Do not do anything more than asked. If you get lost or have difficulty I cannot answer help you with anything to do with the system itself. Please save your detailed comments until the end of a task or the end of the session as a whole when we can discuss freely.

I did not have any involvement in its creation, so please be honest with your opinions.

The product you will be using today is *EHR Your Way (6.9.0.0)*
 Some of the data may not make sense as it is placeholder data.

We are recording the audio and screenshots of our session today. All of the information that you provide will be kept confidential and your name will not be associated with your comments at any time.

Do you have any questions or concerns?

Preliminary Questions (5 minutes)
_____

        What is your job title / appointment? I am a Physician.
        How long have you been working in this role? About 25 years
        What are some of your main responsibilities? I am an Internal Medicine Specialist.
        Tell me about your experience with electronic health records. : I have been using EHR for approximately 4-5 years.

_____

Task 0: First Impressions (45 *Seconds*)

This is the application you will be working with. Have you heard of it?
I heard about it. I have experience working with this application.

Please don't click on anything just yet.
What do you notice? Scheduler, demogrpahics and few other basic functionalities.
Notes / Comments: None

Task 1: Record Demographics (*101 Seconds*)

Take the participant to the starting point for the task.
Record demographics (170.315 (a)(5))
•   A new client comes in for an appointment. Verify if that patient exists in your system and Add if not available.
•   Document patients Last Name (Richard), First Name(John), Sex(Male), DOB(25/06/1962) and Save.
•   Search for the existing patient and add More information by Editing the patient demographics.
•   Edit the patient and enter Home Address (1357 Amber Drive, Beaverton, OR 97006, US) Home Telephone((816)276-6909), Ethnicity(Not Hispanic or Latino), Race (white), Preferred Language(English), Gender Identity(Male) and Save.

Success:
[X] Easily completed
☐   Completed with difficulty or help :: Describe below
☐   Not completed *Comments:*

 Task Time: 101 Seconds

Optimal Path: *Dashboard → Add Patient Icon → Enter data and click Save button*
Optimal Path is Correct

Observed Errors and Verbalizations: No errors observed.

Comments: Looks good

Rating: Overall, this task was: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: Participant made a good start.

Task 2: View and Change Demographics (*55 Seconds*)

Patient 2 – Tasks: View demographics (170.315 (a)(5)), Change demographics (170.315 (a)(5))

•Patient has changed the address. He wants his address to be changed to 1369 Amber Drive, Beaverton, OR 97006, US). Change the address.

Success:
[X]   Easily completed
☐   Completed with difficulty or help :: Describe below
☐   Not completed *Comments:*

Task Time: 55 Seconds
Optimal Path: *Dashboard → Search Patient → Edit Demographics*
[X]   Correct
☐   Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below
☐   *Comments:*

Observed Errors and Verbalizations: No errors.
Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)

Administrator / Notetaker Comments: None

Task 3: View Medication list, Medication allergy list, change Medication list and Prescribe drug electronically (*178 Seconds*)

Patient 2 –: View medications/medication list (170.315 (a)(1)) & (170.315 (a)(7)), View medication allergy list (170.315 (a)(8)), Change medication/medication list (170.315 (a)(1)) & (170.315 (a)(7)), Electronically Prescribe (170.315 (b)(3))

- Based on your patients input you understood that Paxil 10 mg is not giving good progress, and observed he has Paxil 10 mg in drug allergy list. So you decided to give "Lexapro" and stop Paxil 10mg.
- You prescribe a new drug, Lexapro 10 mg table oral, 1 tab, QD.
- Upon completing the prescription will send via eRx to the CVS pharmacy.
- Change the frequency of Lexapro 10 mg from QD to BID.

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time:178 Seconds

Optimal Path: 1. *Open Chart → Summary → Current Medications*
             2. *Open Chart → Chart Left Folders → Prescription folder → Order Rx*
             3. *Open Chart → Summary → Allergies*

[X] Correct
[ ] Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

**Observed Errors and Verbalizations: No errors made. Completed the task without deviations and comfortably.
Rating**: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Notetaker Comments: None

Task 4: Patient 2– Tasks: View medication allergies (170.315 (a)(8)), Record medication allergy (170.315 (a)(8)), Change medication allergy (170.315 (a)(8)), View lab tests (170.315 (a)(2)), Order lab test (170.315 (a)(2)), Record medication (170.315 (a)(1)), View drug-allergy interactions (170.315 (a)(4)), View drug-drug interactions (170.315 (a)(4)), Change medication (170.315 (a)(1)), Change the level of severity for drug-drug interactions (170.315 (a)(4))
- **Patient has come for regular visit. After few mins of discussion with him you understood that patient is experiencing Mild Irritable after he takes Hydralazine drug. Update the chart with this information**
- **View all allergies for the patient. Verify that the Hydralazine allergy appears in the client's known allergies list.**
- **The client also indicates that their Egg allergy has gone away and they no longer have any reactions to eating Egg. Discontinue the Egg allergy. Return to allergies, change the severity of the Hydralazine allergy to Moderate, because the patient indicated that their Irritable gets severe after taking Hydralazine.**
- **The patient complains about painful urinating. Order urinalysis and CMP.**
- **You also want to prescribe Bactrim for the suspected UTI.**
- **Proceed to prescribe Bactrim.**
- **After you speak to your client more, you decide to add a Comprehensive Metabolic Panel.**
- **The patient reports they don't feel like the Flonase has been working, so you decide to discontinue Flonase as well as Hydralazine, since the client reported the allergic reaction.. (315 seconds)**

Success:

[X]   Easily completed

[ ]   Completed with difficulty or help :: Describe below

[ ]   Not completed *Comments:*

Task Time: 316 Seconds

Optimal Path: 1. *Open Chart → Summary → Current Medications*

     2. *Open Chart → Chart Left Folders → Prescription folder → Order Rx*

     3. *Open Chart → Summary → Allergies*

     4. *Open Chart → Chart Left Folders → Lab Orders*

[X] Correct

Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.

  Comments:

Rating: 2

Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)

Administrator / Note taker Comments: None

Task 5: Patient 2 – Tasks: View implantable device list (170.315 (a)(14)), Change implantable device list (170.315 (a)(14)), Record implantable device list (170.315 (a)(14))

• **The client tells you that they just had an implantable device removed. You want to see if the history of this implantable device is in their record. Open the Implantable Device List.**

• **Enter the unique device identifier (00643169007222). Get the information of device using Parse functionality in EHR. Review the information that has been returned and save to patient.**

• **Since the device is removed from the patient currently, Edit the record and set the status as inactive.**

Success:

[X]   Easily completed

[ ]   Completed with difficulty or help :: Describe below

[ ]   Not completed *Comments:*

Task Time:98 Seconds

Optimal Path: 1. *Open Chart → Chart Left Folders → Implantable Device*

[X] Correct

Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.

  Comments:

Rating: 1

Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)

Administrator / Note taker Comments: None

Task 6:
Patient 3 – Patient 2 – Tasks: View problem list (170.315 (a)(6)), Record problem (170.315 (a)(6)), Change problem (170.315 (a)(6))
•   **The patient has been complaining of a Foot Pain.**
•   **Add the problem Foot Pain to the patient's problem list and the Date Identified.**
•   **The patient also tells you they no longer have the Low back pain. Convert the status of low back pain to resolve.**
Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 88 Seconds

Optimal Path: 1. *Open Chart* → *Summary* → *Problem list.*

[X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made. Felt that completing task is easy and application is user friendly in finding the appropriate diagnosis code.
        Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

Task 7: Patient 3 – Tasks: View lab test results (170.315 (a)(2)), Change lab test (170.315 (a)(2)), Add radiology order (170.315 (a)(3)), Change radiology order (170.315 (a)(3)), View radiology order (170.315 (a)(3)), Change medication (170.315 (a)(1))
•   **At the last visit you ordered a urinalysis lab test. Review the lab test results for the order.**
•   **You decide to order a CT scan to determine if the patient's symptoms could be related to a stroke.**
•   **After placing the order, the patient tells he will be out of town for 1 week, Now change the order start date to 1 week later. Edit the placed order and re-order the new order with the new start date. Confirm the order change.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 295 Seconds

Optimal Path: 1. *Open Chart* → *Chart Left side folders* → *Labs Folder*

[X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made. Participant took time to find the option to enter result for the test.

Rating: 2
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Notetaker Comments: None

Task 8: Patient 3 – Tasks: Clinical Decision Support (170.315(a) (9))
•   **Enable the Clinical Decision Support for a provider through the CDS admin.**
•   **Configure each CDS alert with a combination of:**
o   **1 Problem & 1 Medication**
o   **Patient Gender & Problem List**
o   **1 Medication & 1 Allergy**
o   **Hba1c >8.0 & High Blood Pressure**
•   **The Patient was added with CDS Intervention and /or reference resource for all the 7 required elements listed below:**
1) Problem List;
2) Medication List;
3) Medication allergy list;
4) At least one demographic (specified in 170.315(a)(5)(i));
5) Laboratory tests;
6) Vital Signs; and
7) Combination (based on at least two of the elements listed above)
•   **Now the user triggers the CDS interventions/resources added using the applicable data elements from each of the required elements.**
•   **Verify that the user can view the intervention/resource information using the Infobutton standard for data elements in the problem list, medication list, and demographics**
•   **Create a new patient and import a CDA through incorporate CCDA module with at least one matching alert from above configured rules.**
•   **Verify that the CDS alert gets triggered post successful incorporation of data from CCDA.**
•   **Verify that following attributes exists for one of the triggered CDS interventions/resources: bibliographic citation, developer, funding source, release/revision date.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 320 Seconds

Optimal Path: 1. *Dashboard → Settings → Add/ Edit/Delete clinical decision support rules (HM Rules)*

[X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made. Participant says; tasks look too heavy and took time to accomplish it.
        Comments:

Rating: 2
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: Participant is excited to see the alerts after creating rules.

Task 9: Patient C – Tasks: Clinical Information Reconciliation and Incorporation 170.315(b) (2)
•   **Verify that you have received a sample CCDA for Isabella Jones before executing this test.**
•   **Search a patient with name "Isabella Jones". If not found, create a new patient with same first name, last name and DOB as in sample CCDA.**
•   **Import the sample CCDA into "Isabella Jones" clinical documents.**
•   **Right click and select incorporate data.**
•   **Verify that reconciliation confirmation dialog shows you external data with respect to problems and medications as in sample CCDA.**
•   **Accept the changes and verify that problems and medications are added to patient chart, post successful reconciliation.**
•   **Navigate to release of information module and create a new transition of care document for the patient.**
•   **Verify that the reconciled data shows in generated CCDA.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time:390 Seconds

Optimal Path: 1. *Dashboard → Import Clinical Message Received Electronically*
                2. Open Chart → Patient chart left folders → Clinical Information Reconciliation

 [X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made. Took few seconds to find the accurate path and able complete without errors.
Comments:
Rating: 2

Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

<div align="center">

End of Participant # 2
</div>

Participant # : 3

Location: 4276 54th place, San Dieog, CA, 92115

Date: 07/01/2018

 Time: 11.30 AM

Prior to testing
- Confirm schedule with Participants
- Ensure EHRUT lab environment is running properly
- Ensure lab and data recording equipment is running properly

Prior to each participant:
- Reset application
- Start session recordings with *tool*

Prior to each task:
- Reset application to starting point for next task

After each participant:
- End session recordings with *tool*

After all testing
- Back up all video and data files

Orientation (*10 mins*)

Thank you for participating in this study. Our session today will last *60 mins*. During that time you will take a look at an electronic health record system.

I will ask you to complete a few tasks using this system and answer some questions. 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. You will be asked to complete these tasks on your own trying to do them as quickly as possible with the fewest possible errors or deviations. Do not do anything more than asked. If you get lost or have difficulty I cannot answer help you with anything to do with the system itself. Please save your detailed comments until the end of a task or the end of the session as a whole when we can discuss freely.

I did not have any involvement in its creation, so please be honest with your opinions.

The product you will be using today is *EHR Your Way (6.9.0.0)*
 Some of the data may not make sense as it is placeholder data.

We are recording the audio and screenshots of our session today. All of the information that you provide will be kept confidential and your name will not be associated with your comments at any time.

Do you have any questions or concerns?

Preliminary Questions (5 minutes)

     What is your job title / appointment? I am a Physician.
     How long have you been working in this role? About 25 years
     What are some of your main responsibilities? I am Gastroenterologist, my responsibility to treat patients with GI problems..
     Tell me about your experience with electronic health records. : I have been using different HER Products for approximately 8 years.

Task 0: First Impressions (45 *Seconds*)

This is the application you will be working with. Have you heard of it?
I know this application but I stopped using this from past 1 year.

Please don't click on anything just yet.
What do you notice? My scheduler, To do and my Inbox.
Notes / Comments: None

Task 1: Record Demographics (*105 Seconds*)

Take the participant to the starting point for the task.
Record demographics (170.315 (a)(5))
•   A new client comes in for an appointment. Verify if that patient exists in your system and Add if not available.
•   Document patients Last Name (Richard), First Name(John), Sex(Male), DOB(25/06/1962) and Save.
•   Search for the existing patient and add More information by Editing the patient demographics.
•   Edit the patient and enter Home Address (1357 Amber Drive, Beaverton, OR 97006, US) Home Telephone((816)276-6909), Ethnicity(Not Hispanic or Latino), Race (white), Preferred Language(English), Gender Identity(Male) and Save.

Success:
[X] Easily completed
☐   Completed with difficulty or help :: Describe below
☐   Not completed *Comments:*

Task Time: 105 Seconds

15-Nov-10

Optimal Path: *Dashboard → Add Patient Icon → Enter data and click Save button*
 Optimal Path is Correct

Observed Errors and Verbalizations: No errors observed.

Comments:

Rating: Overall, this task was: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: Participant made a good start.

Task 2: View and Change Demographics (*55 Seconds*)

Patient 2 – Tasks: View demographics (170.315 (a)(5)), Change demographics (170.315 (a)(5))

•Patient has changed the address. He wants his address to be changed to 1369 Amber Drive, Beaverton, OR 97006, US).
Change the address.

Success:
[X]   Easily completed
☐   Completed with difficulty or help :: Describe below
☐   Not completed *Comments:*

Task Time: 55 Seconds
Optimal Path: *Dashboard → Search Patient → Edit Demographics*
[X]   Correct
☐   Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below
☐   *Comments:*

Observed Errors and Verbalizations: No errors.
Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)

Administrator / Notetaker Comments: None

Task 3: View Medication list, Medication allergy list, change Medication list and Prescribe drug electronically (*178 Seconds*)

Patient 2 –: View medications/medication list (170.315 (a)(1)) & (170.315 (a)(7)), View medication allergy list (170.315 (a)(8)), Change medication/medication list (170.315 (a)(1)) & (170.315 (a)(7)), Electronically Prescribe (170.315 (b)(3))

• Based on your patients input you understood that Paxil 10 mg is not giving good progress, and observed he has Paxil 10 mg in drug allergy list. So you decided to give "Lexapro" and stop Paxil 10mg.
• You prescribe a new drug, Lexapro 10 mg table oral, 1 tab, QD.
• Upon completing the prescription will send via eRx to the CVS pharmacy.
• Change the frequency of Lexapro 10 mg from QD to BID.

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time:182 Seconds

Optimal Path: 1. *Open Chart → Summary → Current Medications*
                 2. *Open Chart → Chart Left Folders → Prescription folder → Order Rx*
                 3. *Open Chart → Summary → Allergies*

[X] Correct
[ ] Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.
Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Notetaker Comments: None

Task 4: Patient 2– Tasks: View medication allergies (170.315 (a)(8)), Record medication allergy (170.315 (a)(8)), Change medication allergy (170.315 (a)(8)), View lab tests (170.315 (a)(2)), Order lab test (170.315 (a)(2)), Record medication (170.315 (a)(1)), View drug-allergy interactions (170.315 (a)(4)), View drug-drug interactions (170.315 (a)(4)), Change medication (170.315 (a)(1)), Change the level of severity for drug-drug interactions (170.315 (a)(4))
• **Patient has come for regular visit. After few mins of discussion with him you understood that patient is experiencing Mild Irritable after he takes Hydralazine drug. Update the chart with this information**
• **View all allergies for the patient. Verify that the Hydralazine allergy appears in the client's known allergies list.**
• **The client also indicates that their Egg allergy has gone away and they no longer have any reactions to eating Egg. Discontinue the Egg allergy. Return to allergies, change the severity of the Hydralazine allergy to Moderate, because the patient indicated that their Irritable gets severe after taking Hydralazine.**
• **The patient complains about painful urinating. Order urinalysis and CMP.**
• **You also want to prescribe Bactrim for the suspected UTI.**
• **Proceed to prescribe Bactrim.**
• **After you speak to your client more, you decide to add a Comprehensive Metabolic Panel.**
• **The patient reports they don't feel like the Flonase has been working, so you decide to discontinue Flonase as well as Hydralazine, since the client reported the allergic reaction. (312 seconds)**

Success:

[X]   Easily completed

[ ]   Completed with difficulty or help :: Describe below

[ ]   Not completed *Comments:*

Task Time: 312 Seconds

Optimal Path: 1. *Open Chart* → *Summary* → *Current Medications*

    2. *Open Chart* → *Chart Left Folders* → *Prescription folder* → *Order Rx*

    3. *Open Chart* → *Summary* → *Allergies*

    4. *Open Chart* → *Chart Left Folders* → *Lab Orders*

[X] Correct

Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.

  Comments:

Rating: 2

Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)

Administrator / Note taker Comments: None

Task 5: Patient 2 – Tasks: View implantable device list (170.315 (a)(14)), Change implantable device list (170.315 (a)(14)), Record implantable device list (170.315 (a)(14))

•   **The client tells you that they just had an implantable device removed. You want to see if the history of this implantable device is in their record. Open the Implantable Device List.**

•   **Enter the unique device identifier (00643169007222). Get the information of device using Parse functionality in EHR. Review the information that has been returned and save to patient.**

•   **Since the device is removed from the patient currently, Edit the record and set the status as inactive.**

Success:

[X]   Easily completed

[ ]   Completed with difficulty or help :: Describe below

[ ]   Not completed *Comments:*

Task Time:98 Seconds

Optimal Path: 1. *Open Chart* → *Chart Left Folders* → *Implantable Device*

[X] Correct

Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.

  Comments:

Rating: 1

Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)

Administrator / Note taker Comments: None

Task 6:
Patient 3 – Patient 2 – Tasks: View problem list (170.315 (a)(6)), Record problem (170.315 (a)(6)), Change problem (170.315 (a)(6))
•   **The patient has been complaining of a Foot Pain.**
•   **Add the problem Foot Pain to the patient's problem list and the Date Identified.**
•   **The patient also tells you they no longer have the Low back pain. Convert the status of low back pain to resolve.**
Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 90 Seconds

Optimal Path: 1. *Open Chart* → *Summary* → *Problem list.*

[X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations:
Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

Task 7: Patient 3 – Tasks: View lab test results (170.315 (a)(2)), Change lab test (170.315 (a)(2)), Add radiology order (170.315 (a)(3)), Change radiology order (170.315 (a)(3)), View radiology order (170.315 (a)(3)), Change medication (170.315 (a)(1))
•   **At the last visit you ordered a urinalysis lab test. Review the lab test results for the order.**
•   **You decide to order a CT scan to determine if the patient's symptoms could be related to a stroke.**
•   **After placing the order, the patient tells he will be out of town for 1 week, Now change the order start date to 1 week later. Edit the placed order and re-order the new order with the new start date. Confirm the order change.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 295 Seconds

Optimal Path: 1. *Open Chart* → *Chart Left side folders* → *Labs Folder*

[X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Notetaker Comments: None

Task 8: Patient 3 – Tasks: Clinical Decision Support (170.315(a) (9))
•   **Enable the Clinical Decision Support for a provider through the CDS admin.**
•   **Configure each CDS alert with a combination of:**
o   **1 Problem & 1 Medication**
o   **Patient Gender & Problem List**
o   **1 Medication & 1 Allergy**
o   **Hba1c >8.0 & High Blood Pressure**
•   **The Patient was added with CDS Intervention and /or reference resource for all the 7 required elements listed below:**
1) Problem List;
2) Medication List;
3) Medication allergy list;
4) At least one demographic (specified in 170.315(a)(5)(i));
5) Laboratory tests;
6) Vital Signs; and
7) Combination (based on at least two of the elements listed above)
•   **Now the user triggers the CDS interventions/resources added using the applicable data elements from each of the required elements.**
•   **Verify that the user can view the intervention/resource information using the Infobutton standard for data elements in the problem list, medication list, and demographics**
•   **Create a new patient and import a CDA through incorporate CCDA module with at least one matching alert from above configured rules.**
•   **Verify that the CDS alert gets triggered post successful incorporation of data from CCDA.**
•   **Verify that following attributes exists for one of the triggered CDS interventions/resources: bibliographic citation, developer, funding source, release/revision date.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 325 Seconds

Optimal Path: 1. *Dashboard → Settings → Add/ Edit/Delete clinical decision support rules (HM Rules)*

[X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made. OMG…big task
        Comments:

Rating: 2
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: Satisfied looking at the alerts.

Task 9: Patient C – Tasks: Clinical Information Reconciliation and Incorporation 170.315(b) (2)
•   **Verify that you have received a sample CCDA for Isabella Jones before executing this test.**
•   **Search a patient with name "Isabella Jones". If not found, create a new patient with same first name, last name and DOB as in sample CCDA.**
•   **Import the sample CCDA into "Isabella Jones" clinical documents.**
•   **Right click and select incorporate data.**
•   **Verify that reconciliation confirmation dialog shows you external data with respect to problems and medications as in sample CCDA.**
•   **Accept the changes and verify that problems and medications are added to patient chart, post successful reconciliation.**
•   **Navigate to release of information module and create a new transition of care document for the patient.**
•   **Verify that the reconciled data shows in generated CCDA.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time:390 Seconds

Optimal Path: 1. *Dashboard → Import Clinical Message Received Electronically*
                2. Open Chart → Patient chart left folders → Clinical Information Reconciliation

 [X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.
Comments:
Rating: 2
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

End of Participant # 3

Participant # : 4

Location: 4276 54th place, San Dieog, CA, 92115

Date: 07/01/2018

 Time: 12.45 PM

<u>Prior to testing</u>
▪   Confirm schedule with Participants
▪   Ensure EHRUT lab environment is running properly
▪   Ensure lab and data recording equipment is running properly

<u>Prior to each participant:</u>
▪   Reset application
▪   Start session recordings with *tool*

<u>Prior to each task:</u>
▪   Reset application to starting point for next task

<u>After each participant:</u>
▪   End session recordings with *tool*

<u>After all testing</u>
▪   Back up all video and data files

Orientation (*10 mins*)

Thank you for participating in this study. Our session today will last ***60 mins***. During that time you will take a look at an electronic health record system.

I will ask you to complete a few tasks using this system and answer some questions. 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. You will be asked to complete these tasks on your own trying to do them as quickly as possible with the fewest possible errors or deviations. Do not do anything more than asked. If you get lost or have difficulty I cannot answer help you with anything to do with the system itself. Please save your detailed comments until the end of a task or the end of the session as a whole when we can discuss freely.

I did not have any involvement in its creation, so please be honest with your opinions.

The product you will be using today is *EHR Your Way (6.9.0.0)*
 Some of the data may not make sense as it is placeholder data.

We are recording the audio and screenshots of our session today. All of the information that you provide will be kept confidential and your name will not be associated with your comments at any time.

Do you have any questions or concerns?

Preliminary Questions (5 minutes)

_____

What is your job title / appointment? I am a Nurse Practitioner.

How long have you been working in this role? About 18 years

What are some of your main responsibilities? To assist provider in treating his patients.

Tell me about your experience with electronic health records. : I had bitter experience with medical recors.
They are difficult to learn

_____

Task 0: First Impressions (45 *Seconds*)

This is the application you will be working with. Have you heard of it?
Not much. .!

Please don't click on anything just yet.
What do you notice? Some thing looks like scheduler, some folders, Inbox, it is probably email box.
Notes / Comments: Explained that Inbox shows all pending unsigned documents and is not email box.

Task 1: Record Demographics (*102 Seconds*)

Take the participant to the starting point for the task.
Record demographics (170.315 (a)(5))

•   A new client comes in for an appointment. Verify if that patient exists in your system and Add if not available.

•   Document patients Last Name (Richard), First Name(John), Sex(Male), DOB(25/06/1962) and Save.

•   Search for the existing patient and add More information by Editing the patient demographics.

•   Edit the patient and enter Home Address (1357 Amber Drive, Beaverton, OR 97006, US) Home
Telephone((816)276-6909), Ethnicity(Not Hispanic or Latino), Race (white), Preferred Language(English), Gender
Identity(Male) and Save.

Success:
[X] Easily completed
☐   Completed with difficulty or help :: Describe below
☐   Not completed *Comments:*

 Task Time: 102 Seconds

Optimal Path: *Dashboard → Add Patient Icon → Enter data and click Save button*
 Optimal Path is Correct

Observed Errors and Verbalizations: No errors observed.

Comments:

Rating: Overall, this task was: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: Participant started with the impression that E H R Your way is difficult and not easy to accomplish the task. But found it is easy and finished task successfully.

Task 2: View and Change Demographics (*55 Seconds*)

Patient 2 – Tasks: View demographics (170.315 (a)(5)), Change demographics (170.315 (a)(5))

•Patient has changed the address. He wants his address to be changed to 1369 Amber Drive, Beaverton, OR 97006, US). Change the address.

Success:
[X]   Easily completed
☐   Completed with difficulty or help :: Describe below
☐   Not completed *Comments:*

Task Time: 55 Seconds
Optimal Path: *Dashboard → Search Patient → Edit Demographics*
[X]   Correct
☐   Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below
☐   *Comments:*

Observed Errors and Verbalizations: No errors.
Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)

Administrator / Note taker Comments: Participant felt confident that this application is user friendly and not bad as he experienced with other products.

Task 3: View Medication list, Medication allergy list, change Medication list and Prescribe drug electronically (*182 Seconds*)

Patient 2 –: View medications/medication list (170.315 (a)(1)) & (170.315 (a)(7)), View medication allergy list (170.315 (a)(8)), Change medication/medication list (170.315 (a)(1)) & (170.315 (a)(7)), Electronically Prescribe (170.315 (b)(3))
•   Based on your patients input you understood that Paxil 10 mg is not giving good progress, and observed he has Paxil 10 mg in drug allergy list. So you decided to give "Lexapro" and stop Paxil 10mg.
•   You prescribe a new drug, Lexapro 10 mg table oral, 1 tab, QD.
•   Upon completing the prescription will send via eRx to the CVS pharmacy.
•   Change the frequency of Lexapro 10 mg from QD to BID.

Success:

[X]   Easily completed

[ ]   Completed with difficulty or help :: Describe below

[ ]   Not completed *Comments:*

Task Time:182 Seconds

Optimal Path: 1. *Open Chart → Summary → Current Medications*
                   2. *Open Chart → Chart Left Folders → Prescription folder → Order Rx*
                   3. *Open Chart → Summary → Allergies*

[X] Correct

[ ] Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.

Rating: 1

Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)

Administrator / Notetaker Comments: None

Task 4: Patient 2– Tasks: View medication allergies (170.315 (a)(8)), Record medication allergy (170.315 (a)(8)), Change medication allergy (170.315 (a)(8)), View lab tests (170.315 (a)(2)), Order lab test (170.315 (a)(2)), Record medication (170.315 (a)(1)), View drug-allergy interactions (170.315 (a)(4)), View drug-drug interactions (170.315 (a)(4)), Change medication (170.315 (a)(1)), Change the level of severity for drug-drug interactions (170.315 (a)(4))

•   **Patient has come for regular visit. After few mins of discussion with him you understood that patient is experiencing Mild Irritable after he takes Hydralazine drug. Update the chart with this information**

•   **View all allergies for the patient. Verify that the Hydralazine allergy appears in the client's known allergies list.**

•   **The client also indicates that their Egg allergy has gone away and they no longer have any reactions to eating Egg. Discontinue the Egg allergy. Return to allergies, change the severity of the Hydralazine allergy to Moderate, because the patient indicated that their Irritable gets severe after taking Hydralazine.**

•   **The patient complains about painful urinating. Order urinalysis and CMP.**

•   **You also want to prescribe Bactrim for the suspected UTI.**

•   **Proceed to prescribe Bactrim.**

•   **After you speak to your client more, you decide to add a Comprehensive Metabolic Panel.**

•   **The patient reports they don't feel like the Flonase has been working, so you decide to discontinue Flonase as well as Hydralazine, since the client reported the allergic reaction. (315 seconds)**

Success:

[X]   Easily completed

[ ]   Completed with difficulty or help :: Describe below

[ ]   Not completed *Comments:*

Task Time: 315 Seconds

Optimal Path: 1. *Open Chart → Summary → Current Medications*

       2. *Open Chart → Chart Left Folders → Prescription folder → Order Rx*

       3. *Open Chart → Summary → Allergies*

       4. *Open Chart → Chart Left Folders → Lab Orders*

[X] Correct

Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made. Participant felt happy with the functionality of search suggestions of drugs while searching.

    Comments:

Rating: 1

Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)

Administrator / Note taker Comments: Search of drug names is made easy. This made participant feel satisfied about the application.

Task 5: Patient 2 – Tasks: View implantable device list (170.315 (a)(14)), Change implantable device list (170.315 (a)(14)), Record implantable device list (170.315 (a)(14))

•   **The client tells you that they just had an implantable device removed. You want to see if the history of this implantable device is in their record. Open the Implantable Device List.**

•   **Enter the unique device identifier (00643169007222). Get the information of device using Parse functionality in EHR. Review the information that has been returned and save to patient.**

•   **Since the device is removed from the patient currently, Edit the record and set the status as inactive.**

Success:

[X]   Easily completed

[ ]   Completed with difficulty or help :: Describe below

[ ]   Not completed *Comments:*

Task Time: 95 Seconds

Optimal Path: 1. *Open Chart → Chart Left Folders → Implantable Device*

[X] Correct

Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.

    Comments:

Rating: 1

Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)

Administrator / Note taker Comments: None

Task 6:
Patient 3 – Patient 2 – Tasks: View problem list (170.315 (a)(6)), Record problem (170.315 (a)(6)), Change problem (170.315 (a)(6))
•   **The patient has been complaining of a Foot Pain.**
•   **Add the problem Foot Pain to the patient's problem list and the Date Identified.**
•   **The patient also tells you they no longer have the Low back pain. Convert the status of low back pain to resolve.**
Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 92 Seconds

Optimal Path: 1. *Open Chart* → *Summary* → *Problem list.*

[X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations:
Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

Task 7: Patient 3 – Tasks: View lab test results (170.315 (a)(2)), Change lab test (170.315 (a)(2)), Add radiology order (170.315 (a)(3)), Change radiology order (170.315 (a)(3)), View radiology order (170.315 (a)(3)), Change medication (170.315 (a)(1))
•   **At the last visit you ordered a urinalysis lab test. Review the lab test results for the order.**
•   **You decide to order a CT scan to determine if the patient's symptoms could be related to a stroke.**
•   **After placing the order, the patient tells he will be out of town for 1 week, Now change the order start date to 1 week later. Edit the placed order and re-order the new order with the new start date. Confirm the order change.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 287 Seconds

Optimal Path: 1. *Open Chart* → *Chart Left side folders* → *Labs Folder*

 [X] Correct

Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Notetaker Comments: None

Task 8: Patient 3 – Tasks: Clinical Decision Support (170.315(a) (9))
•   **Enable the Clinical Decision Support for a provider through the CDS admin.**
•   **Configure each CDS alert with a combination of:**
o   **1 Problem & 1 Medication**
o   **Patient Gender & Problem List**
o   **1 Medication & 1 Allergy**
o   **Hba1c >8.0 & High Blood Pressure**
•   **The Patient was added with CDS Intervention and /or reference resource for all the 7 required elements listed below:**
1) Problem List;
2) Medication List;
3) Medication allergy list;
4) At least one demographic (specified in 170.315(a)(5)(i));
5) Laboratory tests;
6) Vital Signs; and
7) Combination (based on at least two of the elements listed above)
•   **Now the user triggers the CDS interventions/resources added using the applicable data elements from each of the required elements.**
•   **Verify that the user can view the intervention/resource information using the Infobutton standard for data elements in the problem list, medication list, and demographics**
•   **Create a new patient and import a CDA through incorporate CCDA module with at least one matching alert from above configured rules.**
•   **Verify that the CDS alert gets triggered post successful incorporation of data from CCDA.**
•   **Verify that following attributes exists for one of the triggered CDS interventions/resources: bibliographic citation, developer, funding source, release/revision date.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 325 Seconds

Optimal Path: 1. *Dashboard → Settings → Add/ Edit/Delete clinical decision support rules (HM Rules)*

[X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

15-Nov-10

Observed Errors and Verbalizations: No errors made. Very satisfied after finishing the task, since participant is able to find the alerts working.
   Comments: Since it is big task, participant is not sure if whatever he/she is doing is correct or not.

Rating: 2
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None.

Task 9: Patient C – Tasks: Clinical Information Reconciliation and Incorporation 170.315(b) (2)
•   **Verify that you have received a sample CCDA for Isabella Jones before executing this test.**
•   **Search a patient with name "Isabella Jones". If not found, create a new patient with same first name, last name and DOB as in sample CCDA.**
•   **Import the sample CCDA into "Isabella Jones" clinical documents.**
•   **Right click and select incorporate data.**
•   **Verify that reconciliation confirmation dialog shows you external data with respect to problems and medications as in sample CCDA.**
•   **Accept the changes and verify that problems and medications are added to patient chart, post successful reconciliation.**
•   **Navigate to release of information module and create a new transition of care document for the patient.**
•   **Verify that the reconciled data shows in generated CCDA.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time:399 Seconds

Optimal Path: 1. *Dashboard → Import Clinical Message Received Electronically*
                       2. *Open Chart → Patient chart left folders → Clinical Information Reconciliation*

 [X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made. Took long time to import the clinical message and import the message to client chart.
Comments:
Rating: 2
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

<center>**End of Participant # 4**</center>

Participant # : 5

Location: 4276 54th place, San Dieog, CA, 92115

Date: 07/01/2018

 Time:02.45 PM

<u>Prior to testing</u>
- Confirm schedule with Participants
- Ensure EHRUT lab environment is running properly
- Ensure lab and data recording equipment is running properly

<u>Prior to each participant:</u>
- Reset application
- Start session recordings with *tool*

<u>Prior to each task:</u>
- Reset application to starting point for next task

<u>After each participant:</u>
- End session recordings with *tool*

<u>After all testing</u>
- Back up all video and data files

Orientation (*10 mins*)

Thank you for participating in this study. Our session today will last *60 mins*. During that time you will take a look at an electronic health record system.

I will ask you to complete a few tasks using this system and answer some questions. 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. You will be asked to complete these tasks on your own trying to do them as quickly as possible with the fewest possible errors or deviations. Do not do anything more than asked. If you get lost or have difficulty I cannot answer help you with anything to do with the system itself. Please save your detailed comments until the end of a task or the end of the session as a whole when we can discuss freely.

I did not have any involvement in its creation, so please be honest with your opinions.

The product you will be using today is *EHR Your Way (6.9.0.0)*
 Some of the data may not make sense as it is placeholder data.

We are recording the audio and screenshots of our session today. All of the information that you provide will be kept confidential and your name will not be associated with your comments at any time.

Do you have any questions or concerns?

15-Nov-10

Preliminary Questions (5 minutes)

What is your job title / appointment? I am a Medical assistant.

How long have you been working in this role? About 30 years

What are some of your main responsibilities? I do appointment booking, collecting vitals and send Provider authorized ERx to pharmacy etc.,.

Tell me about your experience with electronic health records. : I had good experience with EHR. Most of them are not user friendly, but there are few products like EHR Your way which are user interactive.

Task 0: First Impressions (45 *Seconds*)

This is the application you will be working with. Have you heard of it?
Yes, I know this application and had +ve opinion

Please don't click on anything just yet.
What do you notice?Scheduler, Inbox and To do list
Notes / Comments: None

Task 1: Record Demographics (*100 Seconds*)

Take the participant to the starting point for the task.
Record demographics (170.315 (a)(5))
•   A new client comes in for an appointment. Verify if that patient exists in your system and Add if not available.
•   Document patients Last Name (Richard), First Name(John), Sex(Male), DOB(25/06/1962) and Save.
•   Search for the existing patient and add More information by Editing the patient demographics.
•   Edit the patient and enter Home Address (1357 Amber Drive, Beaverton, OR 97006, US) Home Telephone((816)276-6909), Ethnicity(Not Hispanic or Latino), Race (white), Preferred Language(English), Gender Identity(Male) and Save.

Success:
[X] Easily completed
☐   Completed with difficulty or help :: Describe below
☐   Not completed *Comments:*

Task Time: 100 Seconds

Optimal Path: *Dashboard → Add Patient Icon → Enter data and click Save button*
 Optimal Path is Correct

Observed Errors and Verbalizations: No errors observed.

Comments:

Rating: Overall, this task was: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

Task 2: View and Change Demographics (*55 Seconds*)

Patient 2 – Tasks: View demographics (170.315 (a)(5)), Change demographics (170.315 (a)(5))

•Patient has changed the address. He wants his address to be changed to 1369 Amber Drive, Beaverton, OR 97006, US). Change the address.

Success:
[X]   Easily completed
☐   Completed with difficulty or help :: Describe below
☐   Not completed *Comments:*

Task Time: 55 Seconds
Optimal Path: *Dashboard → Search Patient → Edit Demographics*
[X]   Correct
☐   Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below
☐   *Comments:*

Observed Errors and Verbalizations: No errors.
Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)

Administrator / Note taker Comments: None

Task 3: View Medication list, Medication allergy list, change Medication list and Prescribe drug electronically (*182 Seconds*)

Patient 2 –: View medications/medication list (170.315 (a)(1)) & (170.315 (a)(7)), View medication allergy list (170.315 (a)(8)), Change medication/medication list (170.315 (a)(1)) & (170.315 (a)(7)), Electronically Prescribe (170.315 (b)(3))
•   Based on your patients input you understood that Paxil 10 mg is not giving good progress, and observed he has Paxil 10 mg in drug allergy list. So you decided to give "Lexapro" and stop Paxil 10mg.
•   You prescribe a new drug, Lexapro 10 mg table oral, 1 tab, QD.
•   Upon completing the prescription will send via eRx to the CVS pharmacy.
•   Change the frequency of Lexapro 10 mg from QD to BID.

Success:
[X]   Easily completed

[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time:182 Seconds

Optimal Path: 1. *Open Chart → Summary → Current Medications*
            2. *Open Chart → Chart Left Folders → Prescription folder → Order Rx*
            3. *Open Chart → Summary → Allergies*

[X] Correct
[ ] Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.
Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Notetaker Comments: None

Task 4: Patient 2– Tasks: View medication allergies (170.315 (a)(8)), Record medication allergy (170.315 (a)(8)), Change medication allergy (170.315 (a)(8)), View lab tests (170.315 (a)(2)), Order lab test (170.315 (a)(2)), Record medication (170.315 (a)(1)), View drug-allergy interactions (170.315 (a)(4)), View drug-drug interactions (170.315 (a)(4)), Change medication (170.315 (a)(1)), Change the level of severity for drug-drug interactions (170.315 (a)(4))
•   **Patient has come for regular visit. After few mins of discussion with him you understood that patient is experiencing Mild Irritable after he takes Hydralazine drug. Update the chart with this information**
•   **View all allergies for the patient. Verify that the Hydralazine allergy appears in the client's known allergies list.**
•   **The client also indicates that their Egg allergy has gone away and they no longer have any reactions to eating Egg. Discontinue the Egg allergy. Return to allergies, change the severity of the Hydralazine allergy to Moderate, because the patient indicated that their Irritable gets severe after taking Hydralazine.**
•   **The patient complains about painful urinating. Order urinalysis and CMP.**
•   **You also want to prescribe Bactrim for the suspected UTI.**
•   **Proceed to prescribe Bactrim.**
•   **After you speak to your client more, you decide to add a Comprehensive Metabolic Panel.**
•   **The patient reports they don't feel like the Flonase has been working, so you decide to discontinue Flonase as well as Hydralazine, since the client reported the allergic reaction. (315 seconds)**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 315 Seconds

Optimal Path: 1. *Open Chart → Summary → Current Medications*

> *2. Open Chart → Chart Left Folders → Prescription folder → Order Rx*
> *3. Open Chart → Summary → Allergies*
> *4. Open Chart → Chart Left Folders → Lab Orders*

[X] Correct
Minor Deviations / Cycles :: Describe below □ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.
   Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

Task 5: Patient 2 – Tasks: View implantable device list (170.315 (a)(14)), Change implantable device list (170.315 (a)(14)), Record implantable device list (170.315 (a)(14))
•   **The client tells you that they just had an implantable device removed. You want to see if the history of this implantable device is in their record. Open the Implantable Device List.**
•   **Enter the unique device identifier (00643169007222). Get the information of device using Parse functionality in EHR. Review the information that has been returned and save to patient.**
•   **Since the device is removed from the patient currently, Edit the record and set the status as inactive.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 95 Seconds

Optimal Path: 1. *Open Chart → Chart Left Folders → Implantable Device*

[X] Correct
Minor Deviations / Cycles :: Describe below □ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.
   Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

Task 6:
Patient 3 – Patient 2 – Tasks: View problem list (170.315 (a)(6)), Record problem (170.315 (a)(6)), Change problem (170.315 (a)(6))
•   **The patient has been complaining of a Foot Pain.**
•   **Add the problem Foot Pain to the patient's problem list and the Date Identified.**

•   **The patient also tells you they no longer have the Low back pain. Convert the status of low back pain to resolve.**
Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 92 Seconds

Optimal Path: 1. *Open Chart* → *Summary* → *Problem list.*

[X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations:
Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

Task 7: Patient 3 – Tasks: View lab test results (170.315 (a)(2)), Change lab test (170.315 (a)(2)), Add radiology order (170.315 (a)(3)), Change radiology order (170.315 (a)(3)), View radiology order (170.315 (a)(3)), Change medication (170.315 (a)(1))
•   **At the last visit you ordered a urinalysis lab test. Review the lab test results for the order.**
•   **You decide to order a CT scan to determine if the patient's symptoms could be related to a stroke.**
•   **After placing the order, the patient tells he will be out of town for 1 week, Now change the order start date to 1 week later. Edit the placed order and re-order the new order with the new start date. Confirm the order change.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 287 Seconds

Optimal Path: 1. *Open Chart* → *Chart Left side folders* → *Labs Folder*

 [X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.

Rating: 1

Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Notetaker Comments: None

Task 8: Patient 3 – Tasks: Clinical Decision Support (170.315(a) (9))
•   **Enable the Clinical Decision Support for a provider through the CDS admin.**
•   **Configure each CDS alert with a combination of:**
o   **1 Problem & 1 Medication**
o   **Patient Gender & Problem List**
o   **1 Medication & 1 Allergy**
o   **Hba1c >8.0 & High Blood Pressure**
•   **The Patient was added with CDS Intervention and /or reference resource for all the 7 required elements listed below:**
1) Problem List;
2) Medication List;
3) Medication allergy list;
4) At least one demographic (specified in 170.315(a)(5)(i));
5) Laboratory tests;
6) Vital Signs; and
7) Combination (based on at least two of the elements listed above)
•   **Now the user triggers the CDS interventions/resources added using the applicable data elements from each of the required elements.**
•   **Verify that the user can view the intervention/resource information using the Infobutton standard for data elements in the problem list, medication list, and demographics**
•   **Create a new patient and import a CDA through incorporate CCDA module with at least one matching alert from above configured rules.**
•   **Verify that the CDS alert gets triggered post successful incorporation of data from CCDA.**
•   **Verify that following attributes exists for one of the triggered CDS interventions/resources: bibliographic citation, developer, funding source, release/revision date.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 325 Seconds

Optimal Path: 1. *Dashboard → Settings → Add/ Edit/Delete clinical decision support rules (HM Rules)*

[X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.
        Comments:

Rating: 2

Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None.

Task 9: Patient C – Tasks: Clinical Information Reconciliation and Incorporation 170.315(b) (2)
•   **Verify that you have received a sample CCDA for Isabella Jones before executing this test.**
•   **Search a patient with name "Isabella Jones". If not found, create a new patient with same first name, last name and DOB as in sample CCDA.**
•   **Import the sample CCDA into "Isabella Jones" clinical documents.**
•   **Right click and select incorporate data.**
•   **Verify that reconciliation confirmation dialog shows you external data with respect to problems and medications as in sample CCDA.**
•   **Accept the changes and verify that problems and medications are added to patient chart, post successful reconciliation.**
•   **Navigate to release of information module and create a new transition of care document for the patient.**
•   **Verify that the reconciled data shows in generated CCDA.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time:400 Seconds

Optimal Path: 1. *Dashboard* → *Import Clinical Message Received Electronically*
                  2. *Open Chart* → *Patient chart left folders* → *Clinical Information Reconciliation*

 [X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.
Comments:
Rating: 2
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

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End of Participant # 5

</div>

Participant # : 6

Location: 4276 54th place, San Dieog, CA, 92115

Date: 07/01/2018

 Time: 04.15 PM

Prior to testing

                                                                                    15-Nov-10

- Confirm schedule with Participants
- Ensure EHRUT lab environment is running properly
- Ensure lab and data recording equipment is running properly

Prior to each participant:
- Reset application
- Start session recordings with *tool*

Prior to each task:
- Reset application to starting point for next task

After each participant:
- End session recordings with *tool*

After all testing
- Back up all video and data files

Orientation (*10 mins*)

Thank you for participating in this study. Our session today will last **60 mins**. During that time you will take a look at an electronic health record system.

I will ask you to complete a few tasks using this system and answer some questions. 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. You will be asked to complete these tasks on your own trying to do them as quickly as possible with the fewest possible errors or deviations. Do not do anything more than asked. If you get lost or have difficulty I cannot answer help you with anything to do with the system itself. Please save your detailed comments until the end of a task or the end of the session as a whole when we can discuss freely.

I did not have any involvement in its creation, so please be honest with your opinions.

The product you will be using today is *EHR Your Way (6.9.0.0)*
 Some of the data may not make sense as it is placeholder data.

We are recording the audio and screenshots of our session today. All of the information that you provide will be kept confidential and your name will not be associated with your comments at any time.

Do you have any questions or concerns?

Preliminary Questions (5 minutes)

What is your job title / appointment? Medical assistant.
How long have you been working in this role? About 2 years
What are some of your main responsibilities? I assist provider in treating patients.

Tell me about your experience with electronic health records. : I did not work on multiple functionalities, but scheduler, vitals and current medications are only modules on which I worked more.

Task 0: First Impressions (45 *Seconds*)

This is the application you will be working with. Have you heard of it?
Yes, looks good for me.

Please don't click on anything just yet.
What do you notice? Dashboard, scheduler, refill requests, inbox
Notes / Comments: None

Task 1: Record Demographics (*100 Seconds*)

Take the participant to the starting point for the task.
Record demographics (170.315 (a)(5))
•   A new client comes in for an appointment. Verify if that patient exists in your system and Add if not available.
•   Document patients Last Name (Richard), First Name(John), Sex(Male), DOB(25/06/1962) and Save.
•   Search for the existing patient and add More information by Editing the patient demographics.
•   Edit the patient and enter Home Address (1357 Amber Drive, Beaverton, OR 97006, US) Home
Telephone((816)276-6909), Ethnicity(Not Hispanic or Latino), Race (white), Preferred Language(English), Gender
Identity(Male) and Save.

Success:
[X] Easily completed
☐   Completed with difficulty or help :: Describe below
☐   Not completed *Comments:*

 Task Time: 99 Seconds

Optimal Path: *Dashboard → Add Patient Icon → Enter data and click Save button*
 Optimal Path is Correct

Observed Errors and Verbalizations: No errors observed.

Comments:

Rating: Overall, this task was: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

Task 2: View and Change Demographics (*58 Seconds*)

Patient 2 – Tasks: View demographics (170.315 (a)(5)), Change demographics (170.315 (a)(5))

•Patient has changed the address. He wants his address to be changed to 1369 Amber Drive, Beaverton, OR 97006, US). Change the address.

Success:
[X]   Easily completed
☐   Completed with difficulty or help :: Describe below
☐   Not completed *Comments:*

Task Time: 58 Seconds
Optimal Path: *Dashboard → Search Patient → Edit Demographics*
[X]   Correct
☐   Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below
☐   *Comments:*

Observed Errors and Verbalizations: No errors.
Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

Task 3: View Medication list, Medication allergy list, change Medication list and Prescribe drug electronically (*185 Seconds*)

Patient 2 –: View medications/medication list (170.315 (a)(1)) & (170.315 (a)(7)), View medication allergy list (170.315 (a)(8)), Change medication/medication list (170.315 (a)(1)) & (170.315 (a)(7)), Electronically Prescribe (170.315 (b)(3))
•   Based on your patients input you understood that Paxil 10 mg is not giving good progress, and observed he has Paxil 10 mg in drug allergy list. So you decided to give "Lexapro" and stop Paxil 10mg.
•   You prescribe a new drug, Lexapro 10 mg table oral, 1 tab, QD.
•   Upon completing the prescription will send via eRx to the CVS pharmacy.
•   Change the frequency of Lexapro 10 mg from QD to BID.

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time:185 Seconds

Optimal Path: 1. *Open Chart → Summary → Current Medications*
              2. *Open Chart → Chart Left Folders → Prescription folder → Order Rx*

3. Open Chart → Summary → Allergies

[X] Correct
[ ] Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.
Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Notetaker Comments: None

Task 4: Patient 2– Tasks: View medication allergies (170.315 (a)(8)), Record medication allergy (170.315 (a)(8)), Change medication allergy (170.315 (a)(8)), View lab tests (170.315 (a)(2)), Order lab test (170.315 (a)(2)), Record medication (170.315 (a)(1)), View drug-allergy interactions (170.315 (a)(4)), View drug-drug interactions (170.315 (a)(4)), Change medication (170.315 (a)(1)), Change the level of severity for drug-drug interactions (170.315 (a)(4))

• **Patient has come for regular visit. After few mins of discussion with him you understood that patient is experiencing Mild Irritable after he takes Hydralazine drug. Update the chart with this information**

• **View all allergies for the patient. Verify that the Hydralazine allergy appears in the client's known allergies list.**

• **The client also indicates that their Egg allergy has gone away and they no longer have any reactions to eating Egg. Discontinue the Egg allergy. Return to allergies, change the severity of the Hydralazine allergy to Moderate, because the patient indicated that their Irritable gets severe after taking Hydralazine.**

• **The patient complains about painful urinating. Order urinalysis and CMP.**

• **You also want to prescribe Bactrim for the suspected UTI.**

• **Proceed to prescribe Bactrim.**

• **After you speak to your client more, you decide to add a Comprehensive Metabolic Panel.**

• **The patient reports they don't feel like the Flonase has been working, so you decide to discontinue Flonase as well as Hydralazine, since the client reported the allergic reaction. (319 seconds)**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 319 Seconds

Optimal Path: 1. *Open Chart → Summary → Current Medications*
                    2. *Open Chart → Chart Left Folders → Prescription folder → Order Rx*
                    3. *Open Chart → Summary → Allergies*
                    4. *Open Chart → Chart Left Folders → Lab Orders*
[X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.

Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

Task 5: Patient 2 – Tasks: View implantable device list (170.315 (a)(14)), Change implantable device list (170.315 (a)(14)), Record implantable device list (170.315 (a)(14))
•   **The client tells you that they just had an implantable device removed. You want to see if the history of this implantable device is in their record. Open the Implantable Device List.**
•   **Enter the unique device identifier (00643169007222). Get the information of device using Parse functionality in EHR. Review the information that has been returned and save to patient.**
•   **Since the device is removed from the patient currently, Edit the record and set the status as inactive.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 95 Seconds

Optimal Path: 1. *Open Chart* → *Chart Left Folders* → *Implantable Device*

[X] Correct
Minor Deviations / Cycles :: Describe below □ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.
          Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

Task 6:
Patient 3 – Patient 2 – Tasks: View problem list (170.315 (a)(6)), Record problem (170.315 (a)(6)), Change problem (170.315 (a)(6))
•   **The patient has been complaining of a Foot Pain.**
•   **Add the problem Foot Pain to the patient's problem list and the Date Identified.**
•   **The patient also tells you they no longer have the Low back pain. Convert the status of low back pain to resolve.**
Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 92 Seconds

Optimal Path: 1. *Open Chart* → *Summary* → *Problem list.*

[X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations:
Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

Task 7: Patient 3 – Tasks: View lab test results (170.315 (a)(2)), Change lab test (170.315 (a)(2)), Add radiology order (170.315 (a)(3)), Change radiology order (170.315 (a)(3)), View radiology order (170.315 (a)(3)), Change medication (170.315 (a)(1))
•   **At the last visit you ordered a urinalysis lab test. Review the lab test results for the order.**
•   **You decide to order a CT scan to determine if the patient's symptoms could be related to a stroke.**
•   **After placing the order, the patient tells he will be out of town for 1 week, Now change the order start date to 1 week later. Edit the placed order and re-order the new order with the new start date. Confirm the order change.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 289 Seconds

Optimal Path: 1. *Open Chart* → *Chart Left side folders* → *Labs Folder*

 [X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Notetaker Comments: None

Task 8: Patient 3 – Tasks: Clinical Decision Support (170.315(a) (9))
•   **Enable the Clinical Decision Support for a provider through the CDS admin.**
•   **Configure each CDS alert with a combination of:**
o   **1 Problem & 1 Medication**

o   **Patient Gender & Problem List**
o   **1 Medication & 1 Allergy**
o   **Hba1c >8.0 & High Blood Pressure**
•   **The Patient was added with CDS Intervention and /or reference resource for all the 7 required elements listed below:**
1) Problem List;
2) Medication List;
3) Medication allergy list;
4) At least one demographic (specified in 170.315(a)(5)(i));
5) Laboratory tests;
6) Vital Signs; and
7) Combination (based on at least two of the elements listed above)
•   **Now the user triggers the CDS interventions/resources added using the applicable data elements from each of the required elements.**
•   **Verify that the user can view the intervention/resource information using the Infobutton standard for data elements in the problem list, medication list, and demographics**
•   **Create a new patient and import a CDA through incorporate CCDA module with at least one matching alert from above configured rules.**
•   **Verify that the CDS alert gets triggered post successful incorporation of data from CCDA.**
•   **Verify that following attributes exists for one of the triggered CDS interventions/resources: bibliographic citation, developer, funding source, release/revision date.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 320 Seconds

Optimal Path: 1. *Dashboard → Settings → Add/ Edit/Delete clinical decision support rules (HM Rules)*

[X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.
          Comments:

Rating: 2
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: User able to complete the task faster than others and looks like he/she understood the actual need of the CDS module in EHR.

Task 9: Patient C – Tasks: Clinical Information Reconciliation and Incorporation 170.315(b) (2)
•   **Verify that you have received a sample CCDA for Isabella Jones before executing this test.**

- **Search a patient with name "Isabella Jones". If not found, create a new patient with same first name, last name and DOB as in sample CCDA.**
- **Import the sample CCDA into "Isabella Jones" clinical documents.**
- **Right click and select incorporate data.**
- **Verify that reconciliation confirmation dialog shows you external data with respect to problems and medications as in sample CCDA.**
- **Accept the changes and verify that problems and medications are added to patient chart, post successful reconciliation.**
- **Navigate to release of information module and create a new transition of care document for the patient.**
- **Verify that the reconciled data shows in generated CCDA.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time:396   Seconds

Optimal Path: 1. *Dashboard → Import Clinical Message Received Electronically*
                            2. *Open Chart → Patient chart left folders → Clinical Information Reconciliation*

 [X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.
Comments:
Rating: 2
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

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End of Participant # 6

</div>

Participant # : 7

Location: 4276 54th place, San Dieog, CA, 92115

Date: 07/01/2018

 Time: 05.30 PM

<u>Prior to testing</u>
- Confirm schedule with Participants
- Ensure EHRUT lab environment is running properly
- Ensure lab and data recording equipment is running properly

<u>Prior to each participant:</u>

- Reset application
- Start session recordings with *tool*

Prior to each task:
- Reset application to starting point for next task

After each participant:
- End session recordings with *tool*

After all testing
- Back up all video and data files

Orientation (*10 mins*)

Thank you for participating in this study. Our session today will last **60 mins**. During that time you will take a look at an electronic health record system.

I will ask you to complete a few tasks using this system and answer some questions. 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. You will be asked to complete these tasks on your own trying to do them as quickly as possible with the fewest possible errors or deviations. Do not do anything more than asked. If you get lost or have difficulty I cannot answer help you with anything to do with the system itself. Please save your detailed comments until the end of a task or the end of the session as a whole when we can discuss freely.

I did not have any involvement in its creation, so please be honest with your opinions.

The product you will be using today is *EHR Your Way (6.9.0.0)*
 Some of the data may not make sense as it is placeholder data.

We are recording the audio and screenshots of our session today. All of the information that you provide will be kept confidential and your name will not be associated with your comments at any time.

Do you have any questions or concerns?

Preliminary Questions (5 minutes)

What is your job title / appointment? Receptionist.
 How long have you been working in this role? About 2 years
What are some of your main responsibilities? I do check in the patients in clinic, verify insurance eligibility and enter vitals and current medications. .
Tell me about your experience with electronic health records. : As far as I know most of the EHR are good for front desk managing appointments and vitals, current meds etc.,.

Task 0: First Impressions (45 *Seconds*)

This is the application you will be working with. Have you heard of it?
Yes, but not much

Please don't click on anything just yet.
What do you notice? Dashboard, scheduler, refill requests, inbox
Notes / Comments: None

Task 1: Record Demographics (*100 Seconds*)

Record demographics (170.315 (a)(5))
•   A new client comes in for an appointment. Verify if that patient exists in your system and Add if not available.
•   Document patients Last Name (Richard), First Name(John), Sex(Male), DOB(25/06/1962) and Save.
•   Search for the existing patient and add More information by Editing the patient demographics.
•   Edit the patient and enter Home Address (1357 Amber Drive, Beaverton, OR 97006, US) Home
Telephone((816)276-6909), Ethnicity(Not Hispanic or Latino), Race (white), Preferred Language(English), Gender
Identity(Male) and Save.

Success:
[X]   Easily completed
☐   Completed with difficulty or help :: Describe below
☐   Not completed *Comments:*

 Task Time: 100 Seconds

Optimal Path: *Dashboard → Add Patient Icon → Enter data and click Save button*
 Optimal Path is Correct

Observed Errors and Verbalizations: No errors observed.

Comments:

Rating: Overall, this task was: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

Task 2: View and Change Demographics (*55 Seconds*)

Patient 2 – Tasks: View demographics (170.315 (a)(5)), Change demographics (170.315 (a)(5))

•Patient has changed the address. He wants his address to be changed to 1369 Amber Drive, Beaverton, OR 97006, US).
Change the address.

Success:
[X]   Easily completed
☐   Completed with difficulty or help :: Describe below
☐   Not completed *Comments:*

Task Time: 55 Seconds
Optimal Path: *Dashboard → Search Patient → Edit Demographics*
[X]   Correct
☐   Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below
☐   *Comments:*

Observed Errors and Verbalizations: No errors.
Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)

Administrator / Note taker Comments: None

Task 3: View Medication list, Medication allergy list, change Medication list and Prescribe drug electronically (*189 Seconds*)

Patient 2 –: View medications/medication list (170.315 (a)(1)) & (170.315 (a)(7)), View medication allergy list (170.315 (a)(8)), Change medication/medication list (170.315 (a)(1)) & (170.315 (a)(7)), Electronically Prescribe (170.315 (b)(3))
•   Based on your patients input you understood that Paxil 10 mg is not giving good progress, and observed he has Paxil 10 mg in drug allergy list. So you decided to give "Lexapro" and stop Paxil 10mg.
•   You prescribe a new drug, Lexapro 10 mg table oral, 1 tab, QD.
•   Upon completing the prescription will send via eRx to the CVS pharmacy.
•   Change the frequency of Lexapro 10 mg from QD to BID.

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time:189 Seconds

Optimal Path: 1. *Open Chart → Summary → Current Medications*
               2. *Open Chart → Chart Left Folders → Prescription folder → Order Rx*
               3. *Open Chart → Summary → Allergies*

[X] Correct
[ ] Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

15-Nov-10

Observed Errors and Verbalizations: No errors made.
Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Notetaker Comments: None

Task 4: Patient 2– Tasks: View medication allergies (170.315 (a)(8)), Record medication allergy (170.315 (a)(8)), Change medication allergy (170.315 (a)(8)), View lab tests (170.315 (a)(2)), Order lab test (170.315 (a)(2)), Record medication (170.315 (a)(1)), View drug-allergy interactions (170.315 (a)(4)), View drug-drug interactions (170.315 (a)(4)), Change medication (170.315 (a)(1)), Change the level of severity for drug-drug interactions (170.315 (a)(4))
• 	**Patient has come for regular visit. After few mins of discussion with him you understood that patient is experiencing Mild Irritable after he takes Hydralazine drug. Update the chart with this information**
• 	**View all allergies for the patient. Verify that the Hydralazine allergy appears in the client's known allergies list.**
• 	**The client also indicates that their Egg allergy has gone away and they no longer have any reactions to eating Egg. Discontinue the Egg allergy. Return to allergies, change the severity of the Hydralazine allergy to Moderate, because the patient indicated that their Irritable gets severe after taking Hydralazine.**
• 	**The patient complains about painful urinating. Order urinalysis and CMP.**
• 	**You also want to prescribe Bactrim for the suspected UTI.**
• 	**Proceed to prescribe Bactrim.**
• 	**After you speak to your client more, you decide to add a Comprehensive Metabolic Panel.**
• 	**The patient reports they don't feel like the Flonase has been working, so you decide to discontinue Flonase as well as Hydralazine, since the client reported the allergic reaction. (319 seconds)**

Success:
[X]	Easily completed
[ ]	Completed with difficulty or help :: Describe below
[ ]	Not completed *Comments:*

Task Time: 319 Seconds

Optimal Path: 1. *Open Chart → Summary → Current Medications*
		2. *Open Chart → Chart Left Folders → Prescription folder → Order Rx*
		3. *Open Chart → Summary → Allergies*
		4. *Open Chart → Chart Left Folders → Lab Orders*
[X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.
	Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

Task 5: Patient 2 – Tasks: View implantable device list (170.315 (a)(14)), Change implantable device list (170.315 (a)(14)), Record implantable device list (170.315 (a)(14))
•   **The client tells you that they just had an implantable device removed. You want to see if the history of this implantable device is in their record. Open the Implantable Device List.**
•   **Enter the unique device identifier (00643169007222). Get the information of device using Parse functionality in EHR. Review the information that has been returned and save to patient.**
•   **Since the device is removed from the patient currently, Edit the record and set the status as inactive.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 95 Seconds

Optimal Path: 1. *Open Chart → Chart Left Folders → Implantable Device*

[X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.
         Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

Task 6:
Patient 3 – Patient 2 – Tasks: View problem list (170.315 (a)(6)), Record problem (170.315 (a)(6)), Change problem (170.315 (a)(6))
•   **The patient has been complaining of a Foot Pain.**
•   **Add the problem Foot Pain to the patient's problem list and the Date Identified.**
•   **The patient also tells you they no longer have the Low back pain. Convert the status of low back pain to resolve.**
Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 96 Seconds

Optimal Path: 1. *Open Chart → Summary → Problem list.*

[X] Correct

Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations:
Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

Task 7: Patient 3 – Tasks: View lab test results (170.315 (a)(2)), Change lab test (170.315 (a)(2)), Add radiology order (170.315 (a)(3)), Change radiology order (170.315 (a)(3)), View radiology order (170.315 (a)(3)), Change medication (170.315 (a)(1))
•   **At the last visit you ordered a urinalysis lab test. Review the lab test results for the order.**
•   **You decide to order a CT scan to determine if the patient's symptoms could be related to a stroke.**
•   **After placing the order, the patient tells he will be out of town for 1 week, Now change the order start date to 1 week later. Edit the placed order and re-order the new order with the new start date. Confirm the order change.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 290 Seconds

Optimal Path: 1. *Open Chart → Chart Left side folders → Labs Folder*

 [X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Notetaker Comments: None

Task 8: Patient 3 – Tasks: Clinical Decision Support (170.315(a) (9))
•   **Enable the Clinical Decision Support for a provider through the CDS admin.**
•   **Configure each CDS alert with a combination of:**
o   **1 Problem & 1 Medication**
o   **Patient Gender & Problem List**
o   **1 Medication & 1 Allergy**
o   **Hba1c >8.0 & High Blood Pressure**
•   **The Patient was added with CDS Intervention and /or reference resource for all the 7 required elements listed below:**

1) Problem List;
2) Medication List;
3) Medication allergy list;
4) At least one demographic (specified in 170.315(a)(5)(i));
5) Laboratory tests;
6) Vital Signs; and
7) Combination (based on at least two of the elements listed above)
•   **Now the user triggers the CDS interventions/resources added using the applicable data elements from each of the required elements.**
•   **Verify that the user can view the intervention/resource information using the Infobutton standard for data elements in the problem list, medication list, and demographics**
•   **Create a new patient and import a CDA through incorporate CCDA module with at least one matching alert from above configured rules.**
•   **Verify that the CDS alert gets triggered post successful incorporation of data from CCDA.**
•   **Verify that following attributes exists for one of the triggered CDS interventions/resources: bibliographic citation, developer, funding source, release/revision date.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 325 Seconds

Optimal Path: 1. *Dashboard → Settings → Add/ Edit/Delete clinical decision support rules (HM Rules)*

[X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.
        Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: Participant looks like familiar with this kind of functionality and finished the task comfortably.

Task 9: Patient C – Tasks: Clinical Information Reconciliation and Incorporation 170.315(b) (2)
•   **Verify that you have received a sample CCDA for Isabella Jones before executing this test.**
•   **Search a patient with name "Isabella Jones". If not found, create a new patient with same first name, last name and DOB as in sample CCDA.**
•   **Import the sample CCDA into "Isabella Jones" clinical documents.**
•   **Right click and select incorporate data.**
•   **Verify that reconciliation confirmation dialog shows you external data with respect to problems and medications as in sample CCDA.**

- **Accept the changes and verify that problems and medications are added to patient chart, post successful reconciliation.**
- **Navigate to release of information module and create a new transition of care document for the patient.**
- **Verify that the reconciled data shows in generated CCDA.**

Success:

[X]   Easily completed

[ ]   Completed with difficulty or help :: Describe below

[ ]   Not completed *Comments:*

Task Time:396   Seconds

Optimal Path: 1. *Dashboard → Import Clinical Message Received Electronically*
                              2. *Open Chart → Patient chart left folders → Clinical Information Reconciliation*

 [X] Correct

Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.

Comments:

Rating: 2

Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)

Administrator / Note taker Comments: None

End of Participant # 7

Participant # : 8

Location: 4276 54th place, San Dieog, CA, 92115

Date: 07/01/2018

 Time: 07.00 PM

Prior to testing

- ▪ Confirm schedule with Participants
- ▪ Ensure EHRUT lab environment is running properly
- ▪ Ensure lab and data recording equipment is running properly

Prior to each participant:

- ▪ Reset application
- ▪ Start session recordings with *tool*

Prior to each task:

- ▪ Reset application to starting point for next task

<u>After each participant:</u>
▪   End session recordings with *tool*

<u>After all testing</u>
▪   Back up all video and data files

Orientation (*10 mins*)

Thank you for participating in this study. Our session today will last ***60 mins***. During that time you will take a look at an electronic health record system.

I will ask you to complete a few tasks using this system and answer some questions. 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. You will be asked to complete these tasks on your own trying to do them as quickly as possible with the fewest possible errors or deviations. Do not do anything more than asked. If you get lost or have difficulty I cannot answer help you with anything to do with the system itself. Please save your detailed comments until the end of a task or the end of the session as a whole when we can discuss freely.

I did not have any involvement in its creation, so please be honest with your opinions.

The product you will be using today is *EHR Your Way (6.9.0.0)*
 Some of the data may not make sense as it is placeholder data.

We are recording the audio and screenshots of our session today. All of the information that you provide will be kept confidential and your name will not be associated with your comments at any time.

Do you have any questions or concerns?

Preliminary Questions (5 minutes)

 What is your job title / appointment? Clinician.
 How long have you been working in this role? 25 years
What are some of your main responsibilities? I am a doctor and treat patients with GI problems.
Tell me about your experience with electronic health records. : Good to maintain health records. Helps to give better care to my patients. It reduces lot of paper work.

Task 0: First Impressions (45 *Seconds*)

This is the application you will be working with. Have you heard of it?
Yes, know the other version of this product for 8 years and I feel new one is web based and gives better performance.

Please don't click on anything just yet.
What do you notice? My scheduler, Inbox
Notes / Comments: None

Task 1: Record Demographics (*101 Seconds*)

Record demographics (170.315 (a)(5))
•   A new client comes in for an appointment. Verify if that patient exists in your system and Add if not available.
•   Document patients Last Name (Richard), First Name(John), Sex(Male), DOB(25/06/1962) and Save.
•   Search for the existing patient and add More information by Editing the patient demographics.
•   Edit the patient and enter Home Address (1357 Amber Drive, Beaverton, OR 97006, US) Home
Telephone((816)276-6909), Ethnicity(Not Hispanic or Latino), Race (white), Preferred Language(English), Gender
Identity(Male) and Save.

Success:
[X]   Easily completed
☐   Completed with difficulty or help :: Describe below
☐   Not completed *Comments:*

 Task Time: 101 Seconds

Optimal Path: *Dashboard → Add Patient Icon → Enter data and click Save button*
 Optimal Path is Correct

Observed Errors and Verbalizations: No errors observed. Client said wow its faster.

Comments:

Rating: Overall, this task was: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

Task 2: View and Change Demographics (*59 Seconds*)

Patient 2 – Tasks: View demographics (170.315 (a)(5)), Change demographics (170.315 (a)(5))

•Patient has changed the address. He wants his address to be changed to 1369 Amber Drive, Beaverton, OR 97006, US).
Change the address.

Success:

[X]   Easily completed

☐   Completed with difficulty or help :: Describe below

☐   Not completed *Comments:*

Task Time: 59 Seconds

Optimal Path: *Dashboard → Search Patient → Edit Demographics*

[X]   Correct

☐   Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below

☐   *Comments:*

Observed Errors and Verbalizations: No errors. Expressed the satisfaction that application performance is fast.
Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)

Administrator / Note taker Comments: None

Task 3: View Medication list, Medication allergy list, change Medication list and Prescribe drug electronically (*199 Seconds*)

Patient 2 –: View medications/medication list (170.315 (a)(1)) & (170.315 (a)(7)), View medication allergy list (170.315 (a)(8)), Change medication/medication list (170.315 (a)(1)) & (170.315 (a)(7)), Electronically Prescribe (170.315 (b)(3))

•   Based on your patients input you understood that Paxil 10 mg is not giving good progress, and observed he has Paxil 10 mg in drug allergy list. So you decided to give "Lexapro" and stop Paxil 10mg.

•   You prescribe a new drug, Lexapro 10 mg table oral, 1 tab, QD.

•   Upon completing the prescription will send via eRx to the CVS pharmacy.

•   Change the frequency of Lexapro 10 mg from QD to BID.

Success:

[X]   Easily completed

[ ]   Completed with difficulty or help :: Describe below

[ ]   Not completed *Comments:*

Task Time:199 Seconds

Optimal Path: 1. *Open Chart → Summary → Current Medications*
                    2. *Open Chart → Chart Left Folders → Prescription folder → Order Rx*
                    3. *Open Chart → Summary → Allergies*

[X] Correct

[ ] Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.
Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Notetaker Comments: None

Task 4: Patient 2– Tasks: View medication allergies (170.315 (a)(8)), Record medication allergy (170.315 (a)(8)), Change medication allergy (170.315 (a)(8)), View lab tests (170.315 (a)(2)), Order lab test (170.315 (a)(2)), Record medication (170.315 (a)(1)), View drug-allergy interactions (170.315 (a)(4)), View drug-drug interactions (170.315 (a)(4)), Change medication (170.315 (a)(1)), Change the level of severity for drug-drug interactions (170.315 (a)(4))

• 	Patient has come for regular visit. After few mins of discussion with him you understood that patient is experiencing Mild Irritable after he takes Hydralazine drug. Update the chart with this information
• 	View all allergies for the patient. Verify that the Hydralazine allergy appears in the client's known allergies list.
• 	The client also indicates that their Egg allergy has gone away and they no longer have any reactions to eating Egg. Discontinue the Egg allergy. Return to allergies, change the severity of the Hydralazine allergy to Moderate, because the patient indicated that their Irritable gets severe after taking Hydralazine.
• 	The patient complains about painful urinating. Order urinalysis and CMP.
• 	You also want to prescribe Bactrim for the suspected UTI.
• 	Proceed to prescribe Bactrim.
• 	After you speak to your client more, you decide to add a Comprehensive Metabolic Panel.
• 	The patient reports they don't feel like the Flonase has been working, so you decide to discontinue Flonase as well as Hydralazine, since the client reported the allergic reaction. (320 seconds)

Success:
[X] 	Easily completed
[ ] 	Completed with difficulty or help :: Describe below
[ ] 	Not completed *Comments:*

Task Time: 320 Seconds

Optimal Path: 1. *Open Chart → Summary → Current Medications*
		   2. *Open Chart → Chart Left Folders → Prescription folder → Order Rx*
		   3. *Open Chart → Summary → Allergies*
		   4. *Open Chart → Chart Left Folders → Lab Orders*
[X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.
	Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

Task 5: Patient 2 – Tasks: View implantable device list (170.315 (a)(14)), Change implantable device list (170.315 (a)(14)), Record implantable device list (170.315 (a)(14))
•   **The client tells you that they just had an implantable device removed. You want to see if the history of this implantable device is in their record. Open the Implantable Device List.**
•   **Enter the unique device identifier (00643169007222). Get the information of device using Parse functionality in EHR. Review the information that has been returned and save to patient.**
•   **Since the device is removed from the patient currently, Edit the record and set the status as inactive.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 99 Seconds

Optimal Path: 1. *Open Chart → Chart Left Folders → Implantable Device*

[X] Correct
Minor Deviations / Cycles :: Describe below □ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.
        Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

Task 6:
Patient 3 – Patient 2 – Tasks: View problem list (170.315 (a)(6)), Record problem (170.315 (a)(6)), Change problem (170.315 (a)(6))
•   **The patient has been complaining of a Foot Pain.**
•   **Add the problem Foot Pain to the patient's problem list and the Date Identified.**
•   **The patient also tells you they no longer have the Low back pain. Convert the status of low back pain to resolve.**
Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 93 Seconds

Optimal Path: 1. *Open Chart → Summary → Problem list.*

[X] Correct
Minor Deviations / Cycles :: Describe below □ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors, participant is happy to see multiple options to search the required Diagnosis code and flexibility make their common list.
Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

Task 7: Patient 3 – Tasks: View lab test results (170.315 (a)(2)), Change lab test (170.315 (a)(2)), Add radiology order (170.315 (a)(3)), Change radiology order (170.315 (a)(3)), View radiology order (170.315 (a)(3)), Change medication (170.315 (a)(1))
•   **At the last visit you ordered a urinalysis lab test. Review the lab test results for the order.**
•   **You decide to order a CT scan to determine if the patient's symptoms could be related to a stroke.**
•   **After placing the order, the patient tells he will be out of town for 1 week, Now change the order start date to 1 week later. Edit the placed order and re-order the new order with the new start date. Confirm the order change.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 292 Seconds

Optimal Path: 1. *Open Chart → Chart Left side folders → Labs Folder*

 [X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Notetaker Comments: None

Task 8: Patient 3 – Tasks: Clinical Decision Support (170.315(a) (9))
•   **Enable the Clinical Decision Support for a provider through the CDS admin.**
•   **Configure each CDS alert with a combination of:**
o   **1 Problem & 1 Medication**
o   **Patient Gender & Problem List**
o   **1 Medication & 1 Allergy**
o   **Hba1c >8.0 & High Blood Pressure**
•   **The Patient was added with CDS Intervention and /or reference resource for all the 7 required elements listed below:**

1) Problem List;
2) Medication List;
3) Medication allergy list;
4) At least one demographic (specified in 170.315(a)(5)(i));
5) Laboratory tests;
6) Vital Signs; and
7) Combination (based on at least two of the elements listed above)
•   **Now the user triggers the CDS interventions/resources added using the applicable data elements from each of the required elements.**
•   **Verify that the user can view the intervention/resource information using the Infobutton standard for data elements in the problem list, medication list, and demographics**
•   **Create a new patient and import a CDA through incorporate CCDA module with at least one matching alert from above configured rules.**
•   **Verify that the CDS alert gets triggered post successful incorporation of data from CCDA.**
•   **Verify that following attributes exists for one of the triggered CDS interventions/resources: bibliographic citation, developer, funding source, release/revision date.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 329 Seconds

Optimal Path: 1. *Dashboard → Settings → Add/ Edit/Delete clinical decision support rules (HM Rules)*

[X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.
        Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: Participant looks like familiar with this kind of functionality and finished the task comfortably.

Task 9: Patient C – Tasks: Clinical Information Reconciliation and Incorporation 170.315(b) (2)
•   **Verify that you have received a sample CCDA for Isabella Jones before executing this test.**
•   **Search a patient with name "Isabella Jones". If not found, create a new patient with same first name, last name and DOB as in sample CCDA.**
•   **Import the sample CCDA into "Isabella Jones" clinical documents.**
•   **Right click and select incorporate data.**
•   **Verify that reconciliation confirmation dialog shows you external data with respect to problems and medications as in sample CCDA.**

- **Accept the changes and verify that problems and medications are added to patient chart, post successful reconciliation.**
- **Navigate to release of information module and create a new transition of care document for the patient.**
- **Verify that the reconciled data shows in generated CCDA.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time:382   Seconds

Optimal Path: 1. *Dashboard → Import Clinical Message Received Electronically*
                                2. *Open Chart → Patient chart left folders → Clinical Information Reconciliation*

 [X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.
Comments:
Rating: 2
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

<div align="center">

End of Participant # 8

</div>

Participant # : 9

Location: 4276 54th place, San Dieog, CA, 92115

Date: 07/01/2018

 Time: 08.00 PM

<u>Prior to testing</u>
- Confirm schedule with Participants
- Ensure EHRUT lab environment is running properly
- Ensure lab and data recording equipment is running properly

<u>Prior to each participant:</u>
- Reset application
- Start session recordings with *tool*

<u>Prior to each task:</u>
- Reset application to starting point for next task

<u>After each participant:</u>
- End session recordings with *tool*

<u>After all testing</u>
- Back up all video and data files

Orientation (*10 mins*)

Thank you for participating in this study. Our session today will last **60 mins**. During that time you will take a look at an electronic health record system.

I will ask you to complete a few tasks using this system and answer some questions. 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. You will be asked to complete these tasks on your own trying to do them as quickly as possible with the fewest possible errors or deviations. Do not do anything more than asked. If you get lost or have difficulty I cannot answer help you with anything to do with the system itself. Please save your detailed comments until the end of a task or the end of the session as a whole when we can discuss freely.

I did not have any involvement in its creation, so please be honest with your opinions.

The product you will be using today is *EHR Your Way (6.9.0.0)*
 Some of the data may not make sense as it is placeholder data.

We are recording the audio and screenshots of our session today. All of the information that you provide will be kept confidential and your name will not be associated with your comments at any time.

Do you have any questions or concerns?

Preliminary Questions (5 minutes)

What is your job title / appointment? Front End Staff.
 How long have you been working in this role? 6 years
What are some of your main responsibilities? Check in and check out the patients and take care of their insurance eligibility. Documenting vitals and current medications.
Tell me about your experience with electronic health records. : I am using EHR since 4 years. I faced really minor issues in initial days due to lack of knowledge. Rest all went good.

Task 0: First Impressions (45 *Seconds*)

This is the application you will be working with. Have you heard of it?
I have been using this for 4 years and helps me keep track of my daily work effectively.

Please don't click on anything just yet.
What do you notice? Scheduler of our Doctors and Scanned documents. Inbox and To do list.
Notes / Comments: None

Task 1: Record Demographics (*95 Seconds*)

Record demographics (170.315 (a)(5))
•   A new client comes in for an appointment. Verify if that patient exists in your system and Add if not available.
•   Document patients Last Name (Richard), First Name(John), Sex(Male), DOB(25/06/1962) and Save.
•   Search for the existing patient and add More information by Editing the patient demographics.
•   Edit the patient and enter Home Address (1357 Amber Drive, Beaverton, OR 97006, US) Home
Telephone((816)276-6909), Ethnicity(Not Hispanic or Latino), Race (white), Preferred Language(English), Gender
Identity(Male) and Save.

Success:
[X]   Easily completed
☐   Completed with difficulty or help :: Describe below
☐   Not completed *Comments:*

 Task Time: 95 Seconds

Optimal Path: *Dashboard → Add Patient Icon → Enter data and click Save button*
 Optimal Path is Correct

Observed Errors and Verbalizations: No errors observed.

Comments:

Rating: Overall, this task was: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

Task 2: View and Change Demographics (*59 Seconds*)

Patient 2 – Tasks: View demographics (170.315 (a)(5)), Change demographics (170.315 (a)(5))

•Patient has changed the address. He wants his address to be changed to 1369 Amber Drive, Beaverton, OR 97006, US).
Change the address.

Success:

[X]   Easily completed

☐   Completed with difficulty or help :: Describe below

☐   Not completed *Comments:*

Task Time: 59 Seconds

Optimal Path: *Dashboard → Search Patient → Edit Demographics*

[X]   Correct

☐   Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below

☐   *Comments:*

Observed Errors and Verbalizations: No errors.

Comments:

Rating: 1

Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)

Administrator / Note taker Comments: None

Task 3: View Medication list, Medication allergy list, change Medication list and Prescribe drug electronically (*206 Seconds*)

Patient 2 –: View medications/medication list (170.315 (a)(1)) & (170.315 (a)(7)), View medication allergy list (170.315 (a)(8)), Change medication/medication list (170.315 (a)(1)) & (170.315 (a)(7)), Electronically Prescribe (170.315 (b)(3))

•   Based on your patients input you understood that Paxil 10 mg is not giving good progress, and observed he has Paxil 10 mg in drug allergy list. So you decided to give "Lexapro" and stop Paxil 10mg.

•   You prescribe a new drug, Lexapro 10 mg table oral, 1 tab, QD.

•   Upon completing the prescription will send via eRx to the CVS pharmacy.

•   Change the frequency of Lexapro 10 mg from QD to BID.

Success:

[X]   Easily completed

[ ]   Completed with difficulty or help :: Describe below

[ ]   Not completed *Comments:*

Task Time:206 Seconds

Optimal Path: 1. *Open Chart → Summary → Current Medications*

                    2. *Open Chart → Chart Left Folders → Prescription folder → Order Rx*

                    3. *Open Chart → Summary → Allergies*

[X] Correct

[ ] Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.
Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Notetaker Comments: None

Task 4: Patient 2– Tasks: View medication allergies (170.315 (a)(8)), Record medication allergy (170.315 (a)(8)), Change medication allergy (170.315 (a)(8)), View lab tests (170.315 (a)(2)), Order lab test (170.315 (a)(2)), Record medication (170.315 (a)(1)), View drug-allergy interactions (170.315 (a)(4)), View drug-drug interactions (170.315 (a)(4)), Change medication (170.315 (a)(1)), Change the level of severity for drug-drug interactions (170.315 (a)(4))

• **Patient has come for regular visit. After few mins of discussion with him you understood that patient is experiencing Mild Irritable after he takes Hydralazine drug. Update the chart with this information**

• **View all allergies for the patient. Verify that the Hydralazine allergy appears in the client's known allergies list.**

• **The client also indicates that their Egg allergy has gone away and they no longer have any reactions to eating Egg. Discontinue the Egg allergy. Return to allergies, change the severity of the Hydralazine allergy to Moderate, because the patient indicated that their Irritable gets severe after taking Hydralazine.**

• **The patient complains about painful urinating. Order urinalysis and CMP.**

• **You also want to prescribe Bactrim for the suspected UTI.**

• **Proceed to prescribe Bactrim.**

• **After you speak to your client more, you decide to add a Comprehensive Metabolic Panel.**

• **The patient reports they don't feel like the Flonase has been working, so you decide to discontinue Flonase as well as Hydralazine, since the client reported the allergic reaction. (322 seconds)**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 322 Seconds

Optimal Path: 1. *Open Chart → Summary → Current Medications*
                    2. *Open Chart → Chart Left Folders → Prescription folder → Order Rx*
                    3. *Open Chart → Summary → Allergies*
                    4. *Open Chart → Chart Left Folders → Lab Orders*
[X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.
        Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

Task 5: Patient 2 – Tasks: View implantable device list (170.315 (a)(14)), Change implantable device list (170.315 (a)(14)), Record implantable device list (170.315 (a)(14))
•   **The client tells you that they just had an implantable device removed. You want to see if the history of this implantable device is in their record. Open the Implantable Device List.**
•   **Enter the unique device identifier (00643169007222). Get the information of device using Parse functionality in EHR. Review the information that has been returned and save to patient.**
•   **Since the device is removed from the patient currently, Edit the record and set the status as inactive.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 92 Seconds

Optimal Path: 1. *Open Chart* → *Chart Left Folders* → *Implantable Device*

[X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made. This new feature is good to have.
        Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

Task 6:
Patient 3 – Patient 2 – Tasks: View problem list (170.315 (a)(6)), Record problem (170.315 (a)(6)), Change problem (170.315 (a)(6))
•   **The patient has been complaining of a Foot Pain.**
•   **Add the problem Foot Pain to the patient's problem list and the Date Identified.**
•   **The patient also tells you they no longer have the Low back pain. Convert the status of low back pain to resolve.**
Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 98 Seconds

Optimal Path: 1. *Open Chart* → *Summary* → *Problem list.*

[X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

                                                                                          15-Nov-10

Observed Errors and Verbalizations: No errors
Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

Task 7: Patient 3 – Tasks: View lab test results (170.315 (a)(2)), Change lab test (170.315 (a)(2)), Add radiology order (170.315 (a)(3)), Change radiology order (170.315 (a)(3)), View radiology order (170.315 (a)(3)), Change medication (170.315 (a)(1))
•   **At the last visit you ordered a urinalysis lab test. Review the lab test results for the order.**
•   **You decide to order a CT scan to determine if the patient's symptoms could be related to a stroke.**
•   **After placing the order, the patient tells he will be out of town for 1 week, Now change the order start date to 1 week later. Edit the placed order and re-order the new order with the new start date. Confirm the order change.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 286 Seconds

Optimal Path: 1. *Open Chart* → *Chart Left side folders* → *Labs Folder*

 [X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Notetaker Comments: None

Task 8: Patient 3 – Tasks: Clinical Decision Support (170.315(a) (9))
•   **Enable the Clinical Decision Support for a provider through the CDS admin.**
•   **Configure each CDS alert with a combination of:**
o   **1 Problem & 1 Medication**
o   **Patient Gender & Problem List**
o   **1 Medication & 1 Allergy**
o   **Hba1c >8.0 & High Blood Pressure**
•   **The Patient was added with CDS Intervention and /or reference resource for all the 7 required elements listed below:**
1) Problem List;

2) Medication List;
3) Medication allergy list;
4) At least one demographic (specified in 170.315(a)(5)(i));
5) Laboratory tests;
6) Vital Signs; and
7) Combination (based on at least two of the elements listed above)
•   **Now the user triggers the CDS interventions/resources added using the applicable data elements from each of the required elements.**
•   **Verify that the user can view the intervention/resource information using the Infobutton standard for data elements in the problem list, medication list, and demographics**
•   **Create a new patient and import a CDA through incorporate CCDA module with at least one matching alert from above configured rules.**
•   **Verify that the CDS alert gets triggered post successful incorporation of data from CCDA.**
•   **Verify that following attributes exists for one of the triggered CDS interventions/resources: bibliographic citation, developer, funding source, release/revision date.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 335 Seconds

Optimal Path: 1. *Dashboard → Settings → Add/ Edit/Delete clinical decision support rules (HM Rules)*

[X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.
     Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

Task 9: Patient C – Tasks: Clinical Information Reconciliation and Incorporation 170.315(b) (2)
•   **Verify that you have received a sample CCDA for Isabella Jones before executing this test.**
•   **Search a patient with name "Isabella Jones". If not found, create a new patient with same first name, last name and DOB as in sample CCDA.**
•   **Import the sample CCDA into "Isabella Jones" clinical documents.**
•   **Right click and select incorporate data.**
•   **Verify that reconciliation confirmation dialog shows you external data with respect to problems and medications as in sample CCDA.**
•   **Accept the changes and verify that problems and medications are added to patient chart, post successful reconciliation.**

- **Navigate to release of information module and create a new transition of care document for the patient.**
- **Verify that the reconciled data shows in generated CCDA.**

Success:

[X]   Easily completed

[ ]   Completed with difficulty or help :: Describe below

[ ]   Not completed *Comments:*

Task Time: 390 Seconds

Optimal Path: 1. *Dashboard → Import Clinical Message Received Electronically*
                         2. *Open Chart → Patient chart left folders → Clinical Information Reconciliation*

 [X] Correct

Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.

Comments:

Rating: 2

Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)

Administrator / Note taker Comments: None

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End of Participant # 9

</div>

Participant # : 10

Location: 4276 54th place, San Dieog, CA, 92115

Date: 07/01/2018

 Time: 07.30 AM

<u>Prior to testing</u>

- Confirm schedule with Participants
- Ensure EHRUT lab environment is running properly
- Ensure lab and data recording equipment is running properly

<u>Prior to each participant:</u>

- Reset application
- Start session recordings with *tool*

<u>Prior to each task:</u>

- Reset application to starting point for next task

<u>After each participant:</u>

- End session recordings with *tool*

<u>After all testing</u>

- Back up all video and data files

Orientation (*10 mins*)

Thank you for participating in this study. Our session today will last ***60 mins***. During that time you will take a look at an electronic health record system.

I will ask you to complete a few tasks using this system and answer some questions. 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. You will be asked to complete these tasks on your own trying to do them as quickly as possible with the fewest possible errors or deviations. Do not do anything more than asked. If you get lost or have difficulty I cannot answer help you with anything to do with the system itself. Please save your detailed comments until the end of a task or the end of the session as a whole when we can discuss freely.

I did not have any involvement in its creation, so please be honest with your opinions.

The product you will be using today is *EHR Your Way (6.9.0.0)*
 Some of the data may not make sense as it is placeholder data.

We are recording the audio and screenshots of our session today. All of the information that you provide will be kept confidential and your name will not be associated with your comments at any time.

Do you have any questions or concerns?

Preliminary Questions (*5 minutes*)

What is your job title / appointment? Front End Staff.
 How long have you been working in this role? 2 years
What are some of your main responsibilities? Documenting vitals, current meds and appointments.
Tell me about your experience with electronic health records. : They are good.

Task 0: First Impressions (45 *Seconds*)

This is the application you will be working with. Have you heard of it?
I know but did not use it much.

Please don't click on anything just yet.
What do you notice? Dashboard , scheduler.
Notes / Comments: None

Task 1: Record Demographics (*90 Seconds*)

Record demographics (170.315 (a)(5))
•   A new client comes in for an appointment. Verify if that patient exists in your system and Add if not available.
•   Document patients Last Name (Richard), First Name(John), Sex(Male), DOB(25/06/1962) and Save.
•   Search for the existing patient and add More information by Editing the patient demographics.
•   Edit the patient and enter Home Address (1357 Amber Drive, Beaverton, OR 97006, US) Home Telephone((816)276-6909), Ethnicity(Not Hispanic or Latino), Race (white), Preferred Language(English), Gender Identity(Male) and Save.

Success:
[X]   Easily completed
☐   Completed with difficulty or help :: Describe below
☐   Not completed *Comments:*

 Task Time: 90 Seconds

Optimal Path: *Dashboard → Add Patient Icon → Enter data and click Save button*
 Optimal Path is Correct

Observed Errors and Verbalizations: No errors observed.

Comments:

Rating: Overall, this task was: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

Task 2: View and Change Demographics (*54 Seconds*)

Patient 2 – Tasks: View demographics (170.315 (a)(5)), Change demographics (170.315 (a)(5))

•Patient has changed the address. He wants his address to be changed to 1369 Amber Drive, Beaverton, OR 97006, US).
Change the address.

Success:

[X]   Easily completed
☐   Completed with difficulty or help :: Describe below
☐   Not completed *Comments:*

Task Time: 54 Seconds
Optimal Path: *Dashboard → Search Patient → Edit Demographics*
[X]   Correct
☐   Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below
☐   *Comments:*

Observed Errors and Verbalizations: No errors.
Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)

Administrator / Note taker Comments: None

Task 3: View Medication list, Medication allergy list, change Medication list and Prescribe drug electronically (*206 Seconds*)

Patient 2 –: View medications/medication list (170.315 (a)(1)) & (170.315 (a)(7)), View medication allergy list (170.315 (a)(8)), Change medication/medication list (170.315 (a)(1)) & (170.315 (a)(7)), Electronically Prescribe (170.315 (b)(3))
•   Based on your patients input you understood that Paxil 10 mg is not giving good progress, and observed he has Paxil 10 mg in drug allergy list. So you decided to give "Lexapro" and stop Paxil 10mg.
•   You prescribe a new drug, Lexapro 10 mg table oral, 1 tab, QD.
•   Upon completing the prescription will send via eRx to the CVS pharmacy.
•   Change the frequency of Lexapro 10 mg from QD to BID.

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time:200 Seconds

Optimal Path: 1. *Open Chart → Summary → Current Medications*
                           2. *Open Chart → Chart Left Folders → Prescription folder → Order Rx*
                           3. *Open Chart → Summary → Allergies*

[X] Correct
[ ] Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.
Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
                                                                    15-Nov-10

Administrator / Notetaker Comments: None

Task 4: Patient 2– Tasks: View medication allergies (170.315 (a)(8)), Record medication allergy (170.315 (a)(8)), Change medication allergy (170.315 (a)(8)), View lab tests (170.315 (a)(2)), Order lab test (170.315 (a)(2)), Record medication (170.315 (a)(1)), View drug-allergy interactions (170.315 (a)(4)), View drug-drug interactions (170.315 (a)(4)), Change medication (170.315 (a)(1)), Change the level of severity for drug-drug interactions (170.315 (a)(4))

•   **Patient has come for regular visit. After few mins of discussion with him you understood that patient is experiencing Mild Irritable after he takes Hydralazine drug. Update the chart with this information**

•   **View all allergies for the patient. Verify that the Hydralazine allergy appears in the client's known allergies list.**

•   **The client also indicates that their Egg allergy has gone away and they no longer have any reactions to eating Egg. Discontinue the Egg allergy. Return to allergies, change the severity of the Hydralazine allergy to Moderate, because the patient indicated that their Irritable gets severe after taking Hydralazine.**

•   **The patient complains about painful urinating. Order urinalysis and CMP.**

•   **You also want to prescribe Bactrim for the suspected UTI.**

•   **Proceed to prescribe Bactrim.**

•   **After you speak to your client more, you decide to add a Comprehensive Metabolic Panel.**

•   **The patient reports they don't feel like the Flonase has been working, so you decide to discontinue Flonase as well as Hydralazine, since the client reported the allergic reaction. (322 seconds)**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 328 Seconds

Optimal Path: 1. *Open Chart → Summary → Current Medications*
           2. *Open Chart → Chart Left Folders → Prescription folder → Order Rx*
           3. *Open Chart → Summary → Allergies*
           4. *Open Chart → Chart Left Folders → Lab Orders*
[X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.
     Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

Task 5: Patient 2 – Tasks: View implantable device list (170.315 (a)(14)), Change implantable device list (170.315 (a)(14)), Record implantable device list (170.315 (a)(14))
•   **The client tells you that they just had an implantable device removed. You want to see if the history of this implantable device is in their record. Open the Implantable Device List.**

•   **Enter the unique device identifier (00643169007222). Get the information of device using Parse functionality in EHR. Review the information that has been returned and save to patient.**
•   **Since the device is removed from the patient currently, Edit the record and set the status as inactive.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 95 Seconds

Optimal Path: 1. *Open Chart → Chart Left Folders → Implantable Device*

[X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.
        Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

Task 6:
Patient 3 – Patient 2 – Tasks: View problem list (170.315 (a)(6)), Record problem (170.315 (a)(6)), Change problem (170.315 (a)(6))
•   **The patient has been complaining of a Foot Pain.**
•   **Add the problem Foot Pain to the patient's problem list and the Date Identified.**
•   **The patient also tells you they no longer have the Low back pain. Convert the status of low back pain to resolve.**
Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 99 Seconds

Optimal Path: 1. *Open Chart → Summary → Problem list.*

[X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors
Comments:

Rating: 1

Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

Task 7: Patient 3 – Tasks: View lab test results (170.315 (a)(2)), Change lab test (170.315 (a)(2)), Add radiology order (170.315 (a)(3)), Change radiology order (170.315 (a)(3)), View radiology order (170.315 (a)(3)), Change medication (170.315 (a)(1))
•   **At the last visit you ordered a urinalysis lab test. Review the lab test results for the order.**
•   **You decide to order a CT scan to determine if the patient's symptoms could be related to a stroke.**
•   **After placing the order, the patient tells he will be out of town for 1 week, Now change the order start date to 1 week later. Edit the placed order and re-order the new order with the new start date. Confirm the order change.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 289 Seconds

Optimal Path: 1. *Open Chart* → *Chart Left side folders* → *Labs Folder*

 [X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Notetaker Comments: None

Task 8: Patient 3 – Tasks: Clinical Decision Support (170.315(a) (9))
•   **Enable the Clinical Decision Support for a provider through the CDS admin.**
•   **Configure each CDS alert with a combination of:**
o   **1 Problem & 1 Medication**
o   **Patient Gender & Problem List**
o   **1 Medication & 1 Allergy**
o   **Hba1c >8.0 & High Blood Pressure**
•   **The Patient was added with CDS Intervention and /or reference resource for all the 7 required elements listed below:**
1) Problem List;
2) Medication List;
3) Medication allergy list;
4) At least one demographic (specified in 170.315(a)(5)(i));
5) Laboratory tests;
6) Vital Signs; and
7) Combination (based on at least two of the elements listed above)

• **Now the user triggers the CDS interventions/resources added using the applicable data elements from each of the required elements.**
• **Verify that the user can view the intervention/resource information using the Infobutton standard for data elements in the problem list, medication list, and demographics**
• **Create a new patient and import a CDA through incorporate CCDA module with at least one matching alert from above configured rules.**
• **Verify that the CDS alert gets triggered post successful incorporation of data from CCDA.**
• **Verify that following attributes exists for one of the triggered CDS interventions/resources: bibliographic citation, developer, funding source, release/revision date.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 325 Seconds

Optimal Path: 1. *Dashboard* → *Settings* → *Add/ Edit/Delete clinical decision support rules (HM Rules)*

[X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.
        Comments:

Rating: 1
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

Task 9: Patient C – Tasks: Clinical Information Reconciliation and Incorporation 170.315(b) (2)
• **Verify that you have received a sample CCDA for Isabella Jones before executing this test.**
• **Search a patient with name "Isabella Jones". If not found, create a new patient with same first name, last name and DOB as in sample CCDA.**
• **Import the sample CCDA into "Isabella Jones" clinical documents.**
• **Right click and select incorporate data.**
• **Verify that reconciliation confirmation dialog shows you external data with respect to problems and medications as in sample CCDA.**
• **Accept the changes and verify that problems and medications are added to patient chart, post successful reconciliation.**
• **Navigate to release of information module and create a new transition of care document for the patient.**
• **Verify that the reconciled data shows in generated CCDA.**

Success:
[X]   Easily completed
[ ]   Completed with difficulty or help :: Describe below
[ ]   Not completed *Comments:*

Task Time: 386 Seconds

Optimal Path: 1. *Dashboard* → *Import Clinical Message Received Electronically*
        2. *Open Chart* → *Patient chart left folders* → *Clinical Information Reconciliation*

 [X] Correct
Minor Deviations / Cycles :: Describe below ☐ Major Deviations :: Describe below *Comments:*

Observed Errors and Verbalizations: No errors made.
Comments:
Rating: 2
Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)
Administrator / Note taker Comments: None

<div align="center">

End of Participant # 10

</div>

Appendix 5: SYSTEM USABILITY SCALE QUESTIONNAIRE

Participant # 1	Strongly Disagree				Strongly Agree
	1	2	3	4	5
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	☐	☐	☐	☑	☐

Participant # 2	Strongly Disagree				Strongly Agree
	1	2	3	4	5
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	☐	☐	☐	☑	☐

Participant # 3	Strongly Disagree				Strongly Agree
	1	2	3	4	5
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	☐	☑	☐	☐	☐

Participant # 5	Strongly Disagree				Strongly Agree
	1	2	3	4	5
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	☑	☐	☐	☐	☐

Participant # 6	Strongly Disagree				Strongly Agree
	1	2	3	4	5
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	☑	☐	☐	☐	☐

Participant # 7	Strongly Disagree				Strongly Agree
	1	2	3	4	5
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	☑	☐	☐	☐	☐

Participant # 8	Strongly Disagree				Strongly Agree
	1	2	3	4	5
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	☑	☐	☐	☐	☐

Participant # 9	Strongly Disagree				Strongly Agree
	1	2	3	4	5
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	☑	☐	☐	☐	☐

Participant # 10	Strongly Disagree				Strongly Agree
	1	2	3	4	5
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	☑	☐	☐	☐	☐