



EHRUT USABILITY TEST: MODERATOR'S GUIDE

System: _____

Administrator: _____

Data Logger: _____

Date: _____ Time: _____

Participant #: _____

Location: _____

PRIOR TO THE TESTING SESSION

ENSURE THAT THE EQUIPMENT AND SOFTWARE IS RUNNING PROPERLY

PREPARE TURF

- Open TURF
- Configure *audio, keystroke, and screen* settings in the *Capture Media* panel
 - Verify that the correct microphone is selected in *audio settings*
 - Deselect the *video* checkbox in the *Capture Media* panel
 - Click the *full screen* button and set a 10 second delay in the *screen settings*
- Verify that the *Data Capture configuration* is correct
 - Set proper folder for saving user testing media and documents
- Press the autoflow button to open to the demographic survey

SIGN INTO EHRTESTSYSTEM.COM

- Turn on the testing computer
- Open the Firefox web browser
- Go to: www.XXXXX.com
- For practice name, type in: XXXXXXX
- For physician ID, type in: XXXXX
- For the password, type in: XXXXX

UPON PARTICIPANT ARRIVAL

OBTAIN CONSENT AND NDA

- Read the following:

"Thank you for coming today. My name is _____, and I'll be working with you today."

"In this study, we're evaluating the usability of electronic health record systems. To do this, you will be asked to complete some surveys and perform eight tasks. We will be watching and recording how the EHR supports the execution of these tasks. This will include us taking notes, as well as recording screenshots and audio of your feedback. All recordings and information that you provide will be kept confidential, and you will in no way be identified in any of our reports."

"Each task will include a scenario to explain why you are doing the task. As you work, feel free to perform whatever steps you feel are necessary to complete the

tasks. I can try to answer questions about information that you might feel is missing, but I cannot provide you with directions on how to complete the task."

"You are free to stop or take a break at any time, and that will not affect any consideration we will be providing. Please let me know if you need anything to make yourself more comfortable."

"Before we begin, I will need you to read over these documents and sign them. The first describes the study and your rights as participant and the other is a non-disclosure agreement. When you have read and signed them, you may give them to me."

"Do you have any questions for me?"

- **Obtain Signed Consent Form**
- **Obtain Signed Non-Disclosure Agreement**

INTRODUCE TURF

- **Read the following:**

"We will be using the TURF software to record your answers to a few surveys and to record your interactions with the EHR systems. You will navigate through TURF with the NEXT button located here [POINT TO NEXT BUTTON]. Note that there is no BACK button, so please be sure to carefully read the instructions and answer the questions before moving on."

DURING THE TESTING SESSION

PROVIDE TASK INSTRUCTIONS

- **Read the following:**

"Here are the instructions for the first task. Each set of instructions provides you with a brief scenario explaining the task that you are to accomplish using the ehrTestSystem. In some cases, you will be required to input data into the EHR system to complete the task. You may refer to these instructions at any time. I will provide the next set of instructions when you finish the task."

"Once you click on the NEXT button, the TURF software will minimize and I will take control of the computer for a moment to prepare the task. I will then hand control back over to you for the task. Once you feel that you have accomplished the task, please verbally indicate that you have finished, and then press the F9 key on the keyboard to pause the recording as we prepare for the next task. After pressing F9, I will again briefly take control of the computer to prepare the next task. If you forget which key to press to pause the recording, you can reference the corner of the instruction page [INDICATE F9 REFERENCE]."

"In this study we are interested in how well the EHR design facilitates your ability to complete the tasks, not about your medical decision making skills or ability to catch a mistake in the record, so please do not spend time reviewing the patients' histories in detail. Assume that everything in the record is accurate unless otherwise specified in the task instructions. Work as quickly as possible, but focus on completing the task rather than worry about how long it might be taking."

"Do you have any questions?"

ADMINISTER TASKS

- **When the participant presses F9 and ends the current task, provide the next set of instructions**
- **Ensure that the participant presses the NEXT button to begin each new trial**
- **Briefly take control of the testing machine and navigate to the main screen to open the appropriate patient record when the onscreen timer**
- **Allow the participant complete the task**
- **Use the attached data collection forms to make notes and measure performance**
- **When the participant finishes, ensure they press F9**
- **Repeat this process until all tasks have been completed**

TASK 1 A – MEDICATION LIST: RECORD, REVIEW, & MODIFY (JULIE)

Start: Patient chart summary screen

End: Navigates to full medication list and correctly identifies the name and strength of the first medication on the list

Effectiveness

<input type="checkbox"/> Easily completed <input type="checkbox"/> Completed with difficulty or help (describe) <input type="checkbox"/> Not completed	Notes:
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Efficiency

Task Time: _____ (mm:ss)	Notes:
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Satisfaction

"On a scale from 1 to 5, 1 being very easy and 5 being very difficult, how would you rate this task?" Rating: _____	Notes:
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TASK 1 B – MEDICATION LIST: RECORD, REVIEW, & MODIFY (JULIE)

Start: Full Rx/medication list

End: Successfully removes 40mg Atorvastatin and adds 80mg Atorvastatin using dialog box

Effectiveness

<input type="checkbox"/> Easily completed	Notes:
<input type="checkbox"/> Completed with difficulty or help (describe)	
<input type="checkbox"/> Not completed	

Efficiency

Task Time: _____ (mm:ss)	Notes:
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Satisfaction

"On a scale from 1 to 5, 1 being very easy and 5 being very difficult, how would you rate this task?"	Notes:
Rating: _____	

TASK 1 C – MEDICATION LIST: RECORD, REVIEW, & MODIFY (JULIE)

Start: Full Rx/medication list

End: Adds multivitamin, ibuprofen, and Claritin to medication list

Effectiveness

<input type="checkbox"/> Easily completed <input type="checkbox"/> Completed with difficulty or help (describe) <input type="checkbox"/> Not completed	Notes:
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Efficiency

Task Time: _____ (mm:ss)	Notes:
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Satisfaction

"On a scale from 1 to 5, 1 being very easy and 5 being very difficult, how would you rate this task?" Rating: _____	Notes:
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TASK 1 TOTAL – MEDICATION LIST: RECORD, REVIEW, & MODIFY (JULIE)

Effectiveness

- Easily completed
- Completed with difficulty or help (describe)
- Not completed

Notes:

Efficiency

Total Task Time:

(mm:ss)

Notes:

Satisfaction

Part A: _____

Part B: _____

Part C: _____

Total: _____

Mean: _____

Notes:

TASK 2 A- CPOE LAB ORDERS: RECORD & REVIEW (RORY)

Start: Patient chart summary screen

End: Navigates to full list of lab orders and verbally states the LDL cholesterol level from the most recent lipid panel

Effectiveness

<input type="checkbox"/> Easily completed	Notes:
<input type="checkbox"/> Completed with difficulty or help (describe)	
<input type="checkbox"/> Not completed	

Efficiency

Task Time: _____ (mm:ss)	Notes:
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Satisfaction

"On a scale from 1 to 5, 1 being very easy and 5 being very difficult, how would you rate this task?" Rating: _____	Notes:
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TASK 2 B- CPOE LAB ORDERS: RECORD & REVIEW (RORY)

Start: Full list of lab orders

End: Navigates to test order module and correctly orders routine fasting glucose, urine micro albumin, and HbA1c tests

Effectiveness

<input type="checkbox"/> Easily completed <input type="checkbox"/> Completed with difficulty or help (describe) <input type="checkbox"/> Not completed	Notes:
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Efficiency

Task Time: _____ (mm:ss)	Notes:
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Satisfaction

"On a scale from 1 to 5, 1 being very easy and 5 being very difficult, how would you rate this task?" Rating: _____	Notes:
--	--------

TASK 2 CPOE TOTAL- CPOE LAB ORDERS: RECORD & REVIEW (RORY)

Effectiveness

- Easily completed
- Completed with difficulty or help (describe)
- Not completed

Notes:

Efficiency

Total Task Time:

(mm:ss)

Notes:

Satisfaction

Part A: _____

Part B: _____

Total: _____

Mean: _____

Notes:

TASK 3 A – CPOE RADIOLOGY: RECORD & REVIEW (KAREN)

Start: Patient chart summary screen

End: Navigates to the full list of medical images/results and opens most recent screening mammogram image or results

Effectiveness

<input type="checkbox"/> Easily completed <input type="checkbox"/> Completed with difficulty or help (describe) <input type="checkbox"/> Not completed	Notes:
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Efficiency

Task Time: _____ (mm:ss)	Notes:
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Satisfaction

"On a scale from 1 to 5, 1 being very easy and 5 being very difficult, how would you rate this task?" Rating: _____	Notes:
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TASK 3 B – CPOE RADIOLOGY: RECORD & REVIEW (KAREN)

Start: Full list of medical images/results

End: Successfully orders a routine chest x-ray with AP & Lat views as well as an MRI without contrast of the lumbar spine

Effectiveness

<input type="checkbox"/> Easily completed <input type="checkbox"/> Completed with difficulty or help (describe) <input type="checkbox"/> Not completed	Notes:
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Efficiency

Task Time: _____ (mm:ss)	Notes:
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Satisfaction

"On a scale from 1 to 5, 1 being very easy and 5 being very difficult, how would you rate this task?" Rating: _____	Notes:
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TASK 3 TOTAL – CPOE RADIOLOGY: RECORD & REVIEW (KAREN)

Effectiveness

- Easily completed
- Completed with difficulty or help (describe)
- Not completed

Notes:

Efficiency

Total Task Time:

(mm:ss)

Notes:

Satisfaction

Part A: _____

Part B: _____

Total: _____

Mean: _____

Notes:

TASK 4 – DDI CHECK: MEDICATION ORDER (TOM)

Start: Patient chart summary screen

End: Overrides drug-drug interaction with a note to follow-up

Effectiveness

- Easily completed
- Completed with difficulty or help (describe)
- Not completed

Notes:

Efficiency

Task Time: _____
(mm:ss)

Notes:

Satisfaction

“On a scale from 1 to 5, 1 being very easy and 5 being very difficult, how would you rate this task?”

Rating: _____

Notes:

TASK 5 – DAI CHECK: MEDICATION ORDER (JOHN)

Start: Patient chart summary screen

End: Overrides drug-allergy interaction with a note that the patient has tolerated the drug in the past

Effectiveness

<input type="checkbox"/> Easily completed <input type="checkbox"/> Completed with difficulty or help (describe) <input type="checkbox"/> Not completed	Notes:
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Efficiency

Task Time: _____ (mm:ss)	Notes:
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Satisfaction

"On a scale from 1 to 5, 1 being very easy and 5 being very difficult, how would you rate this task?" Rating: _____	Notes:
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TASK 6 – MED ALLERGY LIST: RECORD (HELEN)

Start: Patient chart summary screen

End: Successfully records codeine to the allergy list

Effectiveness

- Easily completed
- Completed with difficulty or help (describe)
- Not completed

Notes:

Efficiency

Task Time: _____
(mm:ss)

Notes:

Satisfaction

“On a scale from 1 to 5, 1 being very easy and 5 being very difficult, how would you rate this task?”

Rating: _____

Notes:

TASK 7 – MED ALLERGY LIST: REVIEW (WENDY)

Start: Patient chart summary screen

End: Locates full allergy list (i.e., not the list on a “summary page”) and verbally identifies the penicillin allergy

Effectiveness

<input type="checkbox"/> Easily completed <input type="checkbox"/> Completed with difficulty or help (describe) <input type="checkbox"/> Not completed	Notes:
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Efficiency

Task Time: _____ (mm:ss)	Notes:
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Satisfaction

“On a scale from 1 to 5, 1 being very easy and 5 being very difficult, how would you rate this task?” Rating: _____	Notes:
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TASK 8 – MED ALLERGY LIST: MODIFY (LAURA)

Start: Patient chart summary screen

End: Successfully deletes or deactivates the penicillin allergy from the allergy list

Effectiveness

<input type="checkbox"/> Easily completed <input type="checkbox"/> Completed with difficulty or help (describe) <input type="checkbox"/> Not completed	Notes:
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Efficiency

Task Time: _____ (mm:ss)	Notes:
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Satisfaction

"On a scale from 1 to 5, 1 being very easy and 5 being very difficult, how would you rate this task?" Rating: _____	Notes:
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TASK 9 – ELECTRONIC PRESCRIBING (MARTHA)

Start: Patient chart summary screen

End: Successfully orders albuterol

Effectiveness

- Easily completed
- Completed with difficulty or help (describe)
- Not completed

Notes:

Efficiency

Task Time: _____
(mm:ss)

Notes:

Satisfaction

“On a scale from 1 to 5, 1 being very easy and 5 being very difficult, how would you rate this task?”

Rating: _____

Notes:

TASK 10 A – ELECTRONIC PRESCRIBING (AMANDA)

Start: Patient chart summary screen

End: Navigates full allergy list and verbally states that the patient has a penicillin allergy

Effectiveness

<input type="checkbox"/> Easily completed <input type="checkbox"/> Completed with difficulty or help (describe) <input type="checkbox"/> Not completed	Notes:
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Efficiency

Task Time: _____ (mm:ss)	Notes:
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Satisfaction

"On a scale from 1 to 5, 1 being very easy and 5 being very difficult, how would you rate this task?" Rating: _____	Notes:
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TASK 10 B – ELECTRONIC PRESCRIBING (AMANDA)

Start: Full allergy list

End: Successfully modifies penicillin allergy to indicate a clerical error

Effectiveness

- Easily completed
- Completed with difficulty or help (describe)
- Not completed

Notes:

Efficiency

Task Time: _____
(mm:ss)

Notes:

Satisfaction

“On a scale from 1 to 5, 1 being very easy and 5 being very difficult, how would you rate this task?”

Rating: _____

Notes:

TASK 10 C – ELECTRONIC PRESCRIBING (AMANDA)

Start: Full allergy list

End: Successfully adds codeine syrup to the allergy list

Effectiveness

- Easily completed
- Completed with difficulty or help (describe)
- Not completed

Notes:

Efficiency

Task Time: _____
(mm:ss)

Notes:

Satisfaction

“On a scale from 1 to 5, 1 being very easy and 5 being very difficult, how would you rate this task?”

Rating: _____

Notes:

TASK 10 TOTAL – ELECTRONIC PRESCRIBING (AMANDA)

Effectiveness

- Easily completed
- Completed with difficulty or help (describe)
- Not completed

Notes:

Efficiency

Total Task Time:

(mm:ss)

Notes:

Satisfaction

Part A: _____

Part B: _____

Part C: _____

Total: _____

Mean: _____

Notes:

TASK 11 – ELECTRONIC PRESCRIBING (STEVEN)

Start: Patient chart summary screen

End: Successfully locates HbA1c notification alert and orders HbA1c

Effectiveness

- Easily completed
- Completed with difficulty or help (describe)
- Not completed

Notes:

Efficiency

Task Time: _____
(mm:ss)

Notes:

Satisfaction

“On a scale from 1 to 5, 1 being very easy and 5 being very difficult, how would you rate this task?”

Rating: _____

Notes:

TASK 12 – ELECTRONIC PRESCRIBING (ROGER)

Start: Patient chart summary screen

End: Successfully locates aspirin alert notification and prescribes aspirin

Effectiveness

<input type="checkbox"/> Easily completed <input type="checkbox"/> Completed with difficulty or help (describe) <input type="checkbox"/> Not completed	Notes:
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Efficiency

Task Time: _____ (mm:ss)	Notes:
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Satisfaction

"On a scale from 1 to 5, 1 being very easy and 5 being very difficult, how would you rate this task?" Rating: _____	Notes:
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UPON TEST COMPLETION

- **Read the following:**

“Great, now we have two surveys for you to complete. Please fill them out to the best of your ability and click the NEXT button when you have finished with each survey.”

ADMINISTER POST-TEST SURVEYS

- **Ensure the participant completes any post-test surveys**

END SESSION RECORDING

- **Ensure that TURF has finished recording**

ADMINISTER DEMOGRAPHIC SURVEY

- **Read the following:**

“Please complete this survey before pressing the NEXT button and move on. When you have finished, please let me know so that I can provide you with the instructions and task scenarios.”

DEBRIEF PARTICIPANT

- **Read the following:**

“Great! That completes our study. I want to thank you for taking the time to complete this study. As you know, the purpose of this study is to allow us to assess the usability of an EHR system and your input has been very valuable.”

“Do you have any questions before you go?”

“Thanks again!”

UPON PARTICIPANT DEPARTURE

BACK-UP PARTICIPANT DATA

- **Back up participant data, using removable media (e.g., USB drives) where possible**

RESET PATIENT SCENARIOS

- **Open each patient chart and either add or remove data that was removed or added as part of the task, so that the next participant will start with a clean slate.**

