

# HIMSS EMR Usability Evaluation Guide

For Clinicians' Practices

## Sample Usability Task Scenarios



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The following scenarios demonstrate how you can structure scenarios for your usability test. You should create your own scenario based on the key practice goals you have defined, the most frequent types of tasks performed, as well as the most critical.

### Scenario 1: New Patient with Multiple Complaints

New patient presents with 3 days of dysuria, hematuria, urgency and frequency. No fevers, chills, or back pain. Physician orders Bactrim DS 1 tab bid x 3 days, phenazopyridine 200 mg tid after meals. Two days later, patient phones in that she has an itchy rash between the toes of her left foot. Physician recommends OTC terbinafine cream to apply bid x 10 days.

#### Tasks:

- 1) Establish new patient record
- 2) Enter current medications, allergies, and patient medical history
- 3) Enter complaints and assessments for first visit and establish the problem list
- 4) Order a urinalysis
- 5) Order prescription medication: choose ciprofloxacin (or an alternative of your choice), complete order entry of other medications, change ciprofloxacin to bactrim
- 6) Generate encounter form for billing purposes
- 7) Enter additional complaint for the itchy rash
- 8) Note recommendation for OTC medication on record

#### *Evaluate Task 1: Establish new patient record*

- a) How many steps does it take to establish a new patient record? Is the process straightforward? Would training have been necessary to figure it out?
- b) Does the sequence of the screens used to collect the information make sense to you?
- c) Does it accommodate who would be actually entering in the information (e.g., front desk, medical assistant, etc.)?

*Evaluate Task 2: Enter current medications, allergies, and patient medical history*

- a) Upon the patient's first visit, does the system provide a screen(s) to collect all critical information typically obtained during an initial visit such as medications, allergies, and patient medical history?
- b) If there are multiple screens, do the screens flow in a logical sequence? Did you have to jump around across different screens to enter standard questions?

*Evaluate Task 3: Enter complaints and assessments for first visit and establish the problem list*

- a) When entering patient's complaints, is supportive information provided to indicate potential conditions/diagnosis?
- b) Were examination, progress note, and other assessment screens set up in a way to allow you to efficiently document your assessments while matching your documentation habits? Are assistive features such as "smart text" templates or auto-completion features provided to aid you in documenting efficiently? Were these features effective or did they get in your way?
- c) Does the system support your workflow when the patient adds an additional complaint via phone shortly after the first visit?
- d) Does the information entered in your assessments flow into the problem list? Did you need to reenter the information in the problem list? If the system automatically carries forward the assessment information to the problem list, should it have done that or would you have wanted to indicate the types of items that should show up on the problem list?

*Evaluate Task 4: Order a urinalysis*

- a) How are outside lab orders handled? Could you stay within the system or did you need to go to an entirely different system to order the labs? Did the experience feel consistent with the way your EMR works (e.g., are key items such as categories of diagnostic tests labeled and presented similarly)?
- b) When ordering the labs, are you able to get an estimated time for when the results would be available?

### *Evaluate Task 5: Order prescription medication*

- a) What steps did you have to take to put in the new prescription order? Is it quick and easy to create a new order?
- b) Was it easy for you to find and select the medications you were looking for? Were you presented with irrelevant options based on your diagnosis?
- c) When you had to select a medication, were the formulary categories presented in a way that made sense to you? Does the system let you type in the name of the medication?
- d) Are you able to determine whether the selected medications were covered by your patient's insurance? Could you ascertain that from your prescription order screen?
- e) As you enter each medication, are your choices including the dosage information efficiently summarized for your review?
- f) When you had to change the choice of antibiotic, what steps did you have to take to make the change? Did the sequence of steps make sense to you?
- g) How is the prescription given to the patient/pharmacy? If transmitted electronically, is there a copy (that cannot be filled against) easily provided to the patient? Is there a record of the script in your EMR?

### *Evaluate Task 6: Generate encounter form for billing purposes*

- a) What steps are necessary to enter in diagnosis and level of visit?
- b) How is the encounter information sent to the billing/AR system?

### *Evaluate Task 7: Enter additional complaint*

- a) Upon reviewing the patient's record after several days, were you able to quickly get a sense of the patient's problems?
- b) Where would you go to enter the additional "itchy rash" complaint? Did this make sense to you?

### *Evaluate Task 8: Note recommendation for OTC medication*

- a) Where would you enter the recommendation for the OTC cream? Would you want to have this documented on the patient's medication list?
- b) Were you able to associate the OTC cream recommendation with your diagnosis for the complaint?
- c) Are there any follow-ups necessary for this patient? Is it clear from the record whether there are any pending actions?

## Scenario 2: Chronic Patient Recheck on Weight and Diabetes

Chronic patient with HTN, Obesity, Type 2 Diabetes and elevated LDL comes in for a recheck of his weight and diabetes. Doctor wants fasting BS (in office), Lipid panel & HbA1c (sent out), VS including weight, diabetic foot exam, and intervening history before seeing patient. At end of visit, doctor increases glipizide from 5 mg bid to 10 mg bid.

### Task:

- 1) Review patient record
- 2) Enter instructions to staff for preparations prior to seeing patient
- 3) Staff receives physician instructions and performs instructions: Obtain fasting BS, vital signs including weight, perform diabetic foot exam, get intervening history and send out lab orders for lipid panel and HbA1c
- 4) Review staff updates to patient record
- 5) Evaluate lab results: lipid panel, HbA1c
- 6) Change existing prescription based on diagnosis: increase glipizide from 5 mg bid to 10 mg bid
- 7) Review care management plan and develop treatment plan.

### *Evaluate Task 1: Review patient record*

- a) Are you able to get a rapid snapshot of the patient's current health status?
- b) Is the patient's historical record presented in a way that makes sense for you to 1. quickly review the patient history? and 2. look for specific occurrences of a condition?
- c) Were you able to quickly get a sense of the patient's existing treatment plan?
- d) Is the patient's demographic information such as gender and age displayed prominently and in a location that makes it easy for you to reference? Does this information stay on a consistent location throughout the various screens or in a location that makes sense to you?
- e) Are tests and procedures that are due to be performed on the patient clearly indicated?
- f) Are you able to efficiently identify these tests and procedures and determine why they need to be performed?

### *Evaluate Task 2: Enter instructions to staff for preparations prior to seeing patient*

- a) What steps did you need to take to enter instructions to staff?
- b) If you have fixed procedures on the types of activities performed for all your hypertensive patient consults, were you able to efficiently specify those activities?

### *Evaluate Task 3: Staff receive physician instructions and perform instructions*

- a) What steps did you (staff) need to take to retrieve physician instructions?
- b) When performing the various instructions, how easy was it for you to update the patient's record with the relevant information, i.e. fasting BS, vital signs, result of exam?
- c) Were you able to quickly figure out the period for intervening history you needed obtain? What steps did you need to take to add to the patient's history?
- d) How are outside lab orders handled? Could you stay within the system or did you need to go to an entirely different system to order the labs? Did the experience feel consistent with the way your EMR works, e.g. are key items such as categories of diagnostic tests labeled and presented similarly?
- e) When ordering the labs, are you able to get an estimated time for when the results would be available?

### *Evaluate Task 4: Review staff updates to patient record*

- a) Were you, the physician, able to see the status of the activities you had provided instructions to perform? How was this information presented? Was there sufficient information presented or too much irrelevant information?
- b) When reviewing the updates to the patient's history, is it clear to you who the source of the information was? Were you able to tell where this information originated from?

### *Evaluate Task 5: Evaluate lab results: lipid panel, HbA1c*

- a) How were you informed that the outside lab results came in?
- b) How were the lab results presented? Were abnormal results clearly differentiated from normal results?
- c) How does the system handle the construction of flow sheets? Did you have to create a flow sheet manually? Were you able to easily include the most recent results on the flow sheet?
- d) Were there any visual displays that helped you evaluate the results in the context of this specific patient (e.g., comparisons of patient's results vs. average for demographic category or graphs/sparklines of patient's glucose or HbA1c over time--before and after treatment plan)?
- e) Did you have to perform any manual calculations to figure out the lab results (e.g., did you have to calculate LDL or did the system calculate it and present it to you)?
- f) How do you send a lab result letter/notification to the patient?

*Evaluate Task 6: Change existing prescription based on diagnosis: increase glipzide from 5 mg bid to 10 mg bid*

- a) Upon evaluating the lab result and the other information required for the patient's visit, were you able to get to your next action quickly?
- b) Based on your diagnosis to change the patient's prescription, what steps did you need to take to make the changes? Were you able to indicate your reasoning for adjusting the prescription?

*Evaluate Task 7: Review care management plan and develop treatment plan*

- a) In formulating or revisiting a care management plan for the patient, does the system offer decision support for factors such as target LDL, aspirin therapy indication, reminders for periodic testing and immunizations?
- b) Does the system display the appropriate risk factors for the patient based on their demographics and conditions? Were you able to determine how many coronary artery disease risk factors the patient has currently and the predictive risk for a coronary-disease-related event in the future?
- c) Based on the various risks scores, does the system provide information to help guide your decisions about the treatment plan?
- d) Were you able to provide the patient with intuitive and patient-friendly lab report results?
- e) If you had patient education materials and handouts, were you able to provide them to the patient at the end of the visit? How did you obtain this material? What methods were available for providing the materials to the patient (e.g., print out from the system, e-mail to the patient)?

## Scenario 3: Existing Patient Phones in Request for Medication Refill

An existing patient phones in a request for a medication refill.

### Scenario variations:

- ❖ Patient ran out of refills for a drug taken regularly (e.g., allergy medication)
- ❖ Patient ran out of refills for a drug taken for a specific treatment event (e.g., antibiotics)
- ❖ Drug is a controlled substance
- ❖ Patient's insurance no longer covers the drug, switch to a different drug
- ❖ Patient has known allergy to NSAIDs
- ❖ Pharmacy contacts your office about the refill
- ❖ Patient needs refill to be sent to a new pharmacy
- ❖ Patient requests refill through a patient portal

### Task:

- 1) Access and review patient's record
- 2) Determine if prescription should/can be refilled
  - ❖ Alternate task: Prescription requires phone conversation with patient
- 3) Enter prescription refill order
  - ❖ Alternate task: Switch to a different medication for patient with known drug allergies

### *Evaluate Task 1: Access and review patient's record*

- a) Does the system allow specialized workflows for different types of prescription refills? (examples listed above in scenario variations)
- b) Upon accessing the patient's record, what steps did you need to take to verify that the patient does indeed have an existing script for the desired refill?
- c) How does the system handle the display of the patient's current medications? Are they displayed on a single screen or several screens? Is it clear which medications are current vs. past medications? Are you able to easily verify the last fill dates for past
- d) medications?
- e) How does the system handle the display of other key information, such as allergies? Is all the important information you might want to quickly reference readily available on the display or quickly accessible with little disruption?
- f) Were you able to ascertain from the record that the specific medication is indeed due for a refill? Could you find the specific medication quickly?
- g) When reviewing the record, were you able to quickly re-familiarize yourself with the patient's medication history, problem list and the care/treatment plan associated with that medication? How many steps did it take to find the problem list associated with the medication?

### *Evaluate Task 2: Determine if prescription should/can be refilled*

- a) When determining whether the prescription can/should be refilled, were you presented with all the supporting information that you needed? Were you able to reference information such as your treatment plan notes, and lab tracking studies for the medication?
- b) When reviewing the list of medications, were you able to get a sense of other prescriptions that are due/have an upcoming refill?
- c) How does the system track medications that require refills? How are dates and refill intervals calculated and displayed? Is the information displayed efficiently for your prescription refill workflow?

#### *Alternate Task: Prescription requires phone conversation with patient*

- ❖ If you need to have a quick conversation with the patient to verify the effect of the medication on their condition, and then subsequently decide to change the dosage of the drug, what steps did you need to take to change the dosage?
- ❖ Were you able to capture observations based on the patient's reports on the medication effects?
- ❖ When entering the dosage change, were you able to enter relevant notes to update your treatment plan?

### *Evaluate Task 3: Enter prescription refill order*

- a) If you decide that the prescription should be refilled, did you have quick access to select the appropriate action (e.g., renew, discontinue directly from the medication list)?
- b) If the refill requires a patient visit, are you able to indicate that patient visit is necessary
- c) and provide an interim (temporary) refill (e.g., for a reasonable dosage cycle until the patient can come in for a visit)? What steps did you need to take to enter a temporary refill?
- d) If the patient's insurance will no longer cover the drug, are you notified prior to completing the refill? At what stage does the system inform you? Is this marked clearly?
- e) If the medication refill is to be filled at a different pharmacy, how does the system accommodate this? Do you have to reenter the prescription from scratch? What steps do you need to take to change the pharmacy at this stage?
- f) How are prescriptions presented for signature? If you tend to have refill approvals queued up for your signature, are you able to approve these all at once or do you have to go through each one?

#### *Alternate Task: Switch to different medication for patient with known drug allergies*

- ❖ If you need to switch to a different medication (e.g., due to insurance coverage), how does the system handle this change? What steps did you need to take to enter the change? Did you have to discontinue the medication and reenter information from scratch for the new drug? Is the replacement medication associated with the appropriate set of treatment plans/notes?
- ❖ If the patient has a known drug allergy, is it clear from reviewing the patient's record that you're dealing with a patient who has a drug allergy?
- ❖ When selecting the new medication, does the system allow you to select from a medication list that includes NSAIDs that the patient has indicated allergic reactions to? Does the system provide a warning if you select a drug that the patient is allergic to? If a warning is provided, was it clear from the warning that the patient is allergic to the NSAID you are about to prescribe and a potential allergic reaction may result?