

**OMB Control No. – 0693-0043 –
NIST Generic Clearance for Usability Data Collections
Project title: Study of Electronic Health Record Usability.
PART 4 – Usability testing of commercial EHR products
Usability Test Questions**

Background questionnaire

- Please indicate your age range.
 - 18 - 24
 - 25 - 34
 - 35 - 44
 - 45 - 54
 - 55 - 64
 - 65 or older

- Which one of the following educational background descriptions applies to you?
 - Some high school
 - G.E.D. (General Education Development)
 - High school diploma
 - College degree
 - Associate's degree
 - Undergraduate degree; specify which one (e.g., BA, BS)
 - Graduate degree; specify which one (e.g., MA, MS, PhD, MD, RN)
 - Special certifications; specify which ones
 - Other; describe

- What is your occupational title?

- How many years have you worked as a [occupation title]?

- What is your comfort level using computers in the workplace?
 - *Low*: I am somewhat intimidated using computers
 - *Medium*: I am relatively comfortable using computers
 - *High*: I am very comfortable using computers

- What is your comfort level using computers at home?
 - *Low*: I am somewhat intimidated using computers
 - *Medium*: I am relatively comfortable using computers
 - *High*: I am very comfortable using computers

- How frequently do you use computers outside of work?
 - *Rarely*: Less than once a month
 - *Infrequently*: Several times a month
 - *Regularly*: Several times a week or more

- How long have you have you been interacting with your current electronic health record system (what we will now refer to as an EHR)?
- Did you have any prior experience with other EHR systems before you started using your current system?
[If yes], in what ways are these EHR systems different?
[If yes], did you find that certain EHR functions or EHR-facilitated tasks were easier to perform using one EHR system than the other(s)? Please explain.
- In general, do you like or dislike the EHR? Why?
- What characteristics make your current EHR particularly easy to use?
- What characteristics make your current EHR particularly difficult to use?
- Describe the environment(s) in which you use your EHR (e.g., in the exam room with the patient, during rounds, in an office, at an open workstation in the unit, at home)?
- On what kinds of device(s) do you interact with your EHR (e.g., workstation, workstation on wheels, laptop computer, PDA, smartphone)?
- How do you interact with your EHR (e.g., touchscreen, mouse and keyboard, keypad, stylus, voice entry)?

Post-task questions

- Please rate the task's ease of use (scale: 1=low, 7=high)
- What EHR characteristics made the task easy to complete?
- What EHR characteristics made the task difficult to complete?
- Please rate the likelihood of committing a use error use (scale: 1=low, 7=high)
- Do you recall committing any use errors, or times when you made a mistake while performing the task?
- Do you recall any "close calls," cases in which you almost committed a use error or did so but were immediately able to recover from the use error?
- Do you recall experiencing any "operational difficulties," cases in which you encountered obstacles to completing the task with the desired confidence, accuracy, precision or speed, for example?
- What EHR changes would make the task easier to complete?

Post-test questions

- What is your overall impression of the EHR you interacted with today?
- What 3 things did you like most about the EHR?
- What 3 things did you like least about the EHR?

- What suggestions do you have for making the EHR easier to use?
- What suggestion do you have for making the EHR more efficient to use?
- What suggestions do you have for making the EHR safer to use?
- Which aspects of the system, if any, might lead users to commit use errors that could negatively affect patients' health? How could you improve the system to decrease the likelihood that clinicians might make use errors?
- What suggestions do you have for making the user interface more appealing?

NOTE: This questionnaire contains collection of information requirements subject to the Paperwork Reduction Act (PRA). Notwithstanding any other provisions of the law, no person is required to respond to, nor shall any person be subject to penalty for failure to comply with, a collection of information subject to the requirements of the PRA, unless that collection of information displays a currently valid OMB Control Number. The estimated response time for this questionnaire is **90** minutes. The response time includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this estimate or any other aspects of this collection of information, including suggestions for reducing the length of this questionnaire, to the National Institute of Standards and Technology, Attn., [Svetlana Lowry, svetlana.lowry@nist.gov](mailto:Svetlana.Lowry@nist.gov), (301) 975-4995. The OMB Control No. is 0693-0043, which expires on 10/31/2012.