ATTACHMENT G

Interview Guide for Clinicians and Office Staff

If necessary [health IT] will be replaced by: patient portal, secure messaging, and/or e-forms,

depending on the health IT implemented in a particular practice

Thank you for participating in the study today. The goal of the study is to understand the influence of things such as patient or provider characteristics; physical environment and layout; technical training and support; functionality and usability of health IT; worker roles; staff workload, stress, and job satisfaction; and communication flows —in capturing and using patient-reported information in ambulatory health IT systems and associated workflows.

Your participation includes an interview where we will ask you questions about the use of health IT to record patient-reported information and its impact on your workflow. In this interview we will ask you questions about health IT used at your practice that allows patients to provide information electronically and whether these technologies facilitate or hinder the way you organize your work. These types of health IT systems can include:

- Patient portals (sometimes referred to as [electronic] personal health records or PHRs; allow patients to view portions of their medical records [e.g., laboratory test results] and support other health-related tasks such as making appointments or requesting medication refills. Some patient portal applications exist as stand-alone Web sites; other portal applications are integrated into an existing electronic health record [EHR] system);

- Secure messaging with patients (use of secure e-mail between patients and clinicians, typically using the secure messaging functionality in the EHR and/or patient portal); and

- e-forms (surveys that are administered using computerized media [e.g., tablets, laptops] to collect information from patients using pre-formatted forms before or during patient visits).

First we need to review an information sheet describing the study.

[Give subject copy of information sheet and review it with them].

Please read the sheet carefully. If you still would like to participate in the interview, please let me know. Do you have any questions before we move on?

[After respondent agrees to participate]

Thank you again for agreeing to participate in the study today. As I mentioned before, the goal of the study is to help us understand the influence of different factors—for clinicians and their office staff, and for patients—in capturing and using patient-reported information in ambulatory health IT systems and associated workflows. We would like to audio-record the interview to help us capture your responses. May we record the interview?

- *If subject has agreed to audio-recording:*
  I have set up the tape recorder here in front of us. Please speak clearly during the interview so that the tape will record your voice accurately. I may ask you to repeat a response to make sure that it is recorded.

- *If subject has not agreed to audio recording and a note taker is not available:*
  I will take notes during our conversation today. I may ask you to slow down or pause for a moment so that I can record what you say accurately.

- *If subject has not agreed to audio recording and a note taker is available:*
  My colleague [NAME] will take notes during our conversation today. He/she may ask you to slow down or pause for a moment so that he/she can record what you say accurately.

During the interview, please use only your first name if you refer to yourself. This will help us keep your responses private. Your answers will not be individually reported to your care team members here at the clinic. If we do share information from the interview with clinic staff, we will only report it at the aggregate level, so that it is not obvious who said what.

The interview will take about 60 minutes to complete. If you need to take a break during the interview to use the restroom or get a drink, please let me know and we will pause the interview.

If any of my questions aren't clear or you don't understand a word that I use, please let me know and I will rephrase the question for you.

Please remember that you are not required to answer any specific question. You may also leave the interview at any time.

Do you have any questions before we start the interview?

1. **Impact of patient-reported information on workflow**
   First, based on our observations, we want to ask you some questions about the impact of patient-reported information on your workflow. When we were observing you, we noticed the following instances where you used information that the patient reported using health information technology.
   o Are those instances correct?
   o Can you please elaborate a bit about those instances?
   o For example, how does the use of that information fit into your workflow?

   Can you think of other instances where you use information that the patient provided electronically, that we did not observe?

   o If yes, what impact do they have on your workflow?

Next, we have some questions about how [health IT] and the information patients provide, using this [health IT] has an impact on different aspects of your work.

2. **Changes with regard to the (physical) environment**

- What changes did [health IT] implementation create for your work environment?
  PROMPTS IF NEEDED:
  o Less paper to deal with?
  o Spending more time with computers? Less on the phone or faxing?
  o Walking less, or more?
  o Computer work stations located where needed?

➔ **Interactions:** Did changes in the physical environment cause changes in the way your work is organized?
➔ **Interactions:** Did changes in the physical environment cause changes in the way you perform your tasks?
➔ **Interactions:** Did changes in the physical environment cause changes in the way you interact with other people (colleagues and patients)?

3. Changes with regard to the person(s)

- Did you receive (extensive) training in the [health IT]?
- Are there changes in the way people in the practice perform their work?
  PROMPTS IF NEEDED:
  o Who takes care of [health IT] in the clinic
  o Who customizes [health IT]
  o Can users make changes to the [health IT]

4. Changes with regard to tasks you perform

- What activities do you do now (with [health IT]) that you did not do before (when you used a paper system)?
  PROMPTS IF NEEDED:
  o Spending more on certain tasks than before [health IT] implementation?
     - More or less time examining the patient? Talking with the patient?
     - Talking about different things when patients come for office visits (e.g., histories vs. current problems)?
     - Spending time helping patients use the [health IT] to report information (how to use the technology)?
  o How do you access the information patients now report using [health IT] and what do you do with the information?
  o Does [health IT] save you time?
  o Does [health IT] help you prepare for a patient's visit?

➔ **Interactions:** What effects have these changes in tasks had on how you organize your work and your workflow?

5. Changes with regard to tools and technology

- How did [health IT] implementation change the way you use *tools and technology, such as the telephone, fax, and computers*?
  PROMPTS IF NEEDED:
  o Using certain tools less or more?
     - Phone with patients less or more? Email with patients less or more?
     - Helping patients use technology?
     - Spending more/less time looking for patient information?
     - Spending more/less time passing information back and forth with others, or waiting for someone else to finish with a chart?
  o What kind of topics do you discuss with patients, or gather information from them about, using [health IT]?
     - Immediate health concerns and follow-up
     - General health issues such as lifestyle changes
     - Patient self-monitoring/self-management
     - Medication questions
     - Test results
- Do you examine/analyze the use of data from [health IT]?
  PROMPTS IF NEEDED:
  o How many patients use it

- o How much time you spend using it
- o Effect on patient visits or phone calls
- o How do you use the [health IT] to redesign your workflow and improve quality of care?
- Do you think that "automation" of certain processes allows you to spend more time on patients? How do you adapt when the system is down and patients cannot use [health IT]?

→ **Interactions:** Has the way you changed your use of tools and technology impacted the tasks that you do and the way the work is organized?

6. Changes with regard to the organization of the practice

General questions:

- How has [health IT] affected the (organizational) structure of the clinic? For example, new people hired, such as medical assistants.
- How has [health IT] affected the *processes* in the clinic? Do you do other things and you spend your time differently?

Specific questions:

- How has [health IT] implementation affect the number of patient visits? The length of patient visits?
- How many of [your] patients report information to the clinic using [health IT]?
  - o # per day
  - o # per week
- What percent of all your patients use [health IT] on a regular basis?
- How does [health IT] affect the number of visits per day or the length of patient visits?
- How does [health IT] affect referrals?
- How does [health IT] affect information about test results? For example, do patients have questions about the test results they see in the patient portal?
- How does [health IT] affect prescription changes and medication monitoring/management?
- After [health IT] implementation, do processes seem more or less efficient?
- Do you use [health IT] for activities such as preventive screening and patient education?
- Does [health IT] impact how you measure quality of care provided?

7. Use of [health IT] in daily practice

- What does your workday look like? How do you use [health IT] during your workday?
- How does [health IT] affect workflow?
PROMPTS IF NEEDED:
  - o Frequency and timing for checking and responding to e-mail
  - o Triage of patient information
  - o Use of scripted templates or other mechanisms to manage patient information and communication
  - o Decisions about seeing patients in-person
- How does [health IT] affect your workload?
- How does [health IT] affect communication?
- Have you had any problems using [health IT] to communicate with patients? Example?

8. Usefulness and usability of [health IT]

- What do you think about the *usefulness* of [health it] and potential benefits of [health it]? Does health IT have benefits?

PROMPTS IF NEEDED:
- o Useful for you individually
- o Useful for patients
- o Useful to redesign the practice for improved efficiency or effectiveness
- What do you think of *usability* of [health IT]?

PROMPTS IF NEEDED:
- o Easy for yourself
- o Easy for patients
- What part(s) of [health IT] do you like best?
- What part(s) of [health IT] could be improved?

9. [Health IT] implementation and practice redesign

- Does [health IT] implementation provide you with opportunities to redesign your work and workflow? Can you please provide some examples?
  Does [health IT] allow you to spend more time on the direct care activities, the "core processes" of your practice, such as patient examination, patient communication? Can you provide some examples?

10. [Health IT] implementation and quality and safety of patient care

- How do you think that [health IT] affects quality of care?
- How does [health IT] affect continuity of care and care coordination?
- How do you think that [health IT] affects patient involvement and participation in decision making?
- What effect does [health IT] have on patient adherence? Patient self-management?
- How do you think that [health IT] affects patient safety or reducing medical errors?

11. Security and privacy

- What do you think about security, privacy, and confidentiality and [health IT]?
- How much of an issue is this for you? For your patients?

12. [Health IT] implementation and patient satisfaction

- Do you think that patients appreciate the clinic's use of [health IT]?
- Do some patients benefit more from [health IT] than others (e.g., patients with chronic care needs)?

13. Barriers

- What are the main barriers against using [health IT] to do your work?

PROMPTS IF NEEDED:
- o Start-up costs
- o Maintenance costs

- o Reimbursement for time spent using [health IT]
- o Privacy, security
- o Privacy and security concerns of patients
- o Skills of you and your colleagues
- o Computer skills of patients
- o Workflow adjustments
- o Training
- o Skepticism
- o Increase in workload
- o Lack of computer support in your workplace
- o Lack of computer support (or hardware, internet access) for patients
- o Legal risks
- o Loss of face-to-face contact with patients
- o Negative effect on patient-physician communication
- **o** Other

14. Facilitators

- Does [health IT] make your life easier?
- Do you use data from your [health IT] to (further) improve/redesign your work?
- Do you think [health IT] makes life easier for patients?
- Other

15. Final questions

- How does [health IT] affect you (personally)?
- Overall, how satisfied are you with [health IT]?