



# Benefits of Usability Testing for the Integration of a National Substance Use Screen Tool into the Electronic Health Record

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## TOPICS FOR DISCUSSION

1. Increase in Electronic Health Record (EHR) use and the importance of usability testing of clinical decision support tools
2. Is paper or an EHR version of a nationally recognized screening tool better?
3. Usability testing of multilevel consideration of System, Clinic, and Personal workflows

## BACKGROUND

- The Screening, Brief Intervention, and Referral to Treatment (SBIRT) tool is a screen to determine risky substance use
- SBIRT is currently being implemented into health systems nationally via paper and electronic mediums
- Hypothesis: Electronic SBIRT tool will seamlessly integrate into workflow versus the traditional paper version

## METHODS & RESULTS

**METHODS:** Medical Office Assistants (MOAs) from a primary care practice received trainings on paper and electronic versions of SBIRT. Usability testing was done with the MOAs, conducting the screen with mock patient visits, using the new electronic version versus paper. Each session was timed, audio and video recorded, followed by informant interviews. Three constructs and the length of time to complete each interview was examined to determine efficiency of paper and EHR tool.

**RESULTS: 1) Quantitative:** The *paper screen* is on average 48.5 seconds faster than the EHR tool and was 100% accurate. The *electronic screen* was 50% accurate. (Table #1)

**2) Qualitative:** Paper was favored. The set up/layout of the EHR tool was confusing, had less patient eye contact, and the flow of the tool has too many steps (scrolling, selecting). (Table #2)

**TABLE 1. Usability Testing: Narrative Patient and MOA Interaction**

Method	Total Time	Rater #1	Rater #2
Paper Screen: MOA #1	0.32	-Smooth flow between questions -More eye contact with patient (pt), reading the patient, and patient interaction	-4 sec intro -Few interruptions with workflow -No questions with tool
Paper Screen: MOA #2	0.58	-More pt eye contact, interaction, and engagement	-20 sec intro of tool -At Q4 by 40 sec
Electronic Screen: MOA #1	1.42	-Slow transition between questions -Slow to initially start the questions after first introducing to pt - Less eye contact and pt interaction	-27 sec intro of tool -At Q4 by 47 sec -Struggle to find box to click -Couldn't calculate score
Electronic Screen: MOA #2	1.25	- Less looking at pt – less pt interaction/ perceiving pt - Difficultly with flow through the questions	-53 sec intro of tool -At Q4 by 52 sec -Needed guidance with clicks -Far from patient

**TABLE 2. Usability Constructs**

Method	Workflow	Patient Interaction	Ease of Use
Paper	<b>MOA#1:</b> "It was not inconvenient with the paper to add into my workflow... I don't mind doing it" <b>MOA#2:</b> "Paper is so easy – you can do it while you are doing vitals"	<b>MOA#1:</b> "More patient eye contact"	<b>MOA#1:</b> "It's easy and fast to circle the answers" <b>MOA#2:</b> "It's easy to work with"
Electronic	<b>MOA#1:</b> "There is too much to do to navigate through the electronic versions..a lot of scrolling and selecting" <b>MOA#2:</b> "A lot of clicking within EHR, it takes a long time and gets in the way of other things I have to do with the patient"	<b>MOA#1:</b> "Less patient eye contact and interaction" "Waste of patient's time because it takes so long" <b>MOA#2:</b> "Working a lot more with the screen instead of with patient"	<b>MOA#1:</b> "If setup better and more like the paper it would be easier and faster to use" <b>MOA#2:</b> "Electronic is confusing - where are you supposed to go next?"

## LIMITATIONS

- Small sample size
- No test done to measure MOAs experience with each tool: paper vs. EHR

## DISCUSSION

- SBIRT is a national initiative which includes integrating a screening tool into the workflow of various clinical practices
- Usability testing allows developers to understand the barriers and facilitators to integrating an SBIRT EHR tool
- Inconsistencies in the tool led to disruptions across mediums
- While EHR tools can streamline processes, collect data on quality measures, and standardize care, they can also be burdens to workflow
- Usability testing of SBIRT integration can help guide EHR tool development and insure user friendly models for national dissemination
- Further usability testing at the system, clinical, and personal workflow levels will allow for better integration and dissemination of the electronic version SBIRT tool

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