Reviewer's report

Title: Health information technology capacity at federally qualified health centers: a mechanism for improving quality of care

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Reviewer: Joshua Vest

Reviewer's report:

The authors report on the results of the extent of HIT use and outcomes measures using an organizational level survey of FQHCs. This is an important set of organizations to examine and findings in this area and worth reporting. However, there are some questions (or points that need to be cleared up) about the manuscript's methodology.

Each of the following would fall under the Major Compulsory Revisions category:

Methods

Most of my concerns revolve around the methodology:

1. While the documentation about the survey available at the Commonwealth fund does not say this was a stratified sample, there is a lot there that would suggest it is. It does not say it is a simple random sample, it is weighted, and the documentation reports percentages by several variables that would be logical stratification variables. If the sample is truly a simple random sample, it would be nice if the authors would say it. This might require a double check with the data provider.

2. It took some re-reading and looking at the tables to figure out the categorical nature of the DVs. I would be useful if the exact questions and the available categories were reproduced verbatim. It would help illustrate some of the subjective nature of the questions. The exact distributions of responses should be reported also before they authors grouped them into binary responses.

3. There are a lot of questions about the IV:

1. If the authors created a clearly categorical variable describing HIT adoption (non, base, advanced) why are there two separate regressions? For the HIT as the DV model a multinomial or ordinal logistic model seems a lot more appropriate. The IV models why not just have it as a categorical variable?

2. Having an EMR is probably is probably completely redundant (or at least in the causal pathway) for the basic/advance measure.

3. While the use basic/advanced definition is useful, it is pre-MU and conceptually some of these capabilities are much more important to the outcomes than others. For example having a process to track reminders or alert / prompts for services seems to be related to reminders. However, none of those things should really matter to being able to receive a discharge summary.
the definition is supportable, but it might not show all the real key important relationships.

4. Also the authors set up a definition of basic and advanced (table 1) but then allow FQHCs to meet the definitions without hitting those thresholds. With that variation (without defining capabilities that “have to be there”) it creates a lot of within category variation and a harder to exactly say what each FQHC can do with their EHR.

4. In Table 4 it is very difficult to tell what factors are actually adjusted for in the full models. The authors report some variables in the text that were adjustment factors, but the inclusion of all factors in the table looks like everything was adjusted for (like EMR). Is that the case?

The following would be Discretionary Revisions

Introduction

The research question is reasonable, but not exactly for the reasons the authors provide in the Background section (2nd paragraph - the copy does not have page numbers). For one the authors state "However, studies that have examined the effects of HIT on service delivery and quality of care have revealed mixed results", but in the same paragraph cite a recent review that "overwhelmingly" found HIT was positive. It is hard to be in both places. Part of the difficulty is the citation of studies conducted in hospitals and with several different technologies. The authors may make a stronger case by focusing on and expanding the issues they raise on the next page: little knowledge about this in the FQHC setting, the importance of getting this work in FQHCs for an important part of the population, and maybe even the historical IT challenges in FQHCs.

Methods

Examining the structural factors for EHR adoption or extent of HIT usage does not add a lot to the paper. On one hand organizational characteristics are fairly fixed (so little policy & practice issues) and on the other, since (almost) everyone will want MU dollars adoption seems to be fairly inevitable.

Limitations

The authors mention the length of implementation, but not that they can't establish temporal sequence. They also have selection bias - it may be that the better FQHCs went out and got EHRs.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests:

I declare that I have no competing interests