Reviewer's report

Title: Organizational conditions for quality improvement based on national registry data in Sweden: a qualitative study using the consolidated framework for implementation research

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Reviewer: Per Nilsen

Reviewer's report:

1. Is the question posed original, important and well-defined?

The question posed is original and important, but not as well-defined as it could be since it does not fully correspond with the contents. The title does not fully reflect the aim or the framework applied in the study since the study is not restricted to merely organizational conditions for QI based on NQR data. The CFIR framework specifies five types of determinants/conditions (called domains) for implementation outcomes, of which inner setting, i.e. the organization, is only one. The authors identify three domains, which means they clearly do not limit themselves to looking for just organizational conditions. I think the paper deals with “Conditions for using NQR data for QI” (or “…in QI efforts”). This should be changed so the title reflects the aim and approach taken in the study. The aim also needs to be adjusted.

Another concern I have regarding the aim is whether the focus of the study is on how NQRs are used in QI efforts, rather than the operation of (reporting data) and/or a more general use (such as obtaining an overall picture of various health issues) of NQRs. The connection between NQRs and their use specifically in QI efforts is emphasized in the introduction, but somehow gets “lost” in the results, which seem more geared towards work with NQRs in more general terms and what might affect that (or even attitudes to NQRs in general), with relatively limited regard to their actual use. The authors specify three potential uses for NQRs (reference lacking so it is not clear who has stipulated this use), of which QI is one. The questions in the interview guide do not seem to explicitly talk about the use of NQRs in QI efforts, as the speak about “how the county council works with NQRs and QI” and “how the different levels work with NQRs and QI”, etc. In other words: the questions do not specifically ask about how NQRs are used in QI efforts. I also think many results do not link the NQRs to QI. The authors need to be consistent here: is the paper about factors impacting on the work with or use of NQRs more generally or is the focus on what affects the actual or intended use of NQRs in QI efforts? As it reads, the paper deals with both issues but this is not reflected in the aim or the title.

Still another important issue is whether the key informants really talk about the actual use of NQRs (in QI efforts or otherwise) or if they are also talking about “the idea of using the NQRs as a basis for QI”, as is stated in the discussion, i.e.
a more hypothetical, potential or intended use. I assume they are talking about both, but this should be clarified. I have more “trust” in the relevance of determinants that have actually been experienced and encountered rather than determinants that the informants speculate, imagine or assume to exist.

Linked to my above comment: some of the key informants talk about what needs to/should be accomplished for the use of NQRs in QI. To some extent, one could say that they speculate based on perceived barriers. I would hesitate to place the same emphasis on these determinants as facilitators/barriers that have been encountered and experienced when actually using NQRs in QI efforts. Here are some examples of what I see as more “hypothetical” determinants that the key informants speculate might affect the use:

• “IT solutions must be enhanced and shared across registries as well as across county councils”
• “…it is crucial that output data can be attained”
• “Politicians should investigate the results…”
• “…goals which can be followed up…”

I think the authors need to acknowledge and somehow address this. The potential determinants/conditions might be just as relevant, but they could also be “in the eye of the beholder” and not really of great importance in “real life” when undertaking work with NQRs for QI purposes.

2. Are the data sound and well controlled?
3. Is the interpretation well balanced and supported by the data?

There were some inconsistencies in the use of CFIR. We have applied it in a few research studies in a similar way to the authors, in a “deductive mapping” process to structure/categorize data collected in inductive, explorative studies. It is an excellent tool. The key informants talk about “positive attitude toward the use of NQRs” and the “clinics are perceived to be competent”, yet the authors disregard the domain of the individual users’ characteristics. Although the attitudes and competence are attributed to the clinics (as a whole) here, these attributes surely are those of the individuals working in these clinics. I would like to see a better, more elaborated rationale for discarding the two of the five domains of CFIR.

I’m not sure how the authors have interpreted the classic Rogers attribute of “relative advantage”. What do they compare the use of NQR for QI with? Just stating that the key informants believe NQRs are an “outstanding data source of QI” does not say anything about this being a relative advantage over something else. What about the comparison of not using NQRs for QI? The authors need to examine what is meant by relative advantage and reconsider if they really believe there is such an advantage concerning NQR for QI.

The data seem sound, but the paper could benefit from a few improvements with regard to some methodological issues. It is very important to problematize the
means of gathering data to answer research questions, as all methods have their weaknesses. However, the authors do not address any methodological shortcomings, which gives the impression of the study (and its findings) taking itself for granted. The authors have used what I would refer to as a key informant approach, by letting a number of individuals “speak on behalf” of their organizations. We have used this approach in a few studies and I find it very useful. However, the approach definitely has a number of pros and cons, yet the authors do not acknowledge this at all. They neglect an important discussion of what the shortcomings (and strengths) of this approach might be, both more generally and more specifically, in their study. This has to be addressed in the Discussion. I also think the rationale for using this approach should be made explicit in the Methods section.

An obvious shortcoming of using key informants is that they do not always have full or sufficient knowledge about the matters they are being interviewed about. This is evident in some instances in the paper, for example:

• “…the directorates assume that hospital clinics already use…”
• “…are thought to be responsible for NQR work.”
• “How operations managers progress after meeting central management is not always clear to the directorates.”

I think it is important that the authors address uncertainties like these; what is their impact on the findings, if any?

Why did people decline being interviewed? How many did decline? In what ways might this have affected or biased the findings? People who participate and those who do not often differ in some respects. It might be worthwhile to at least address the reasons for non-participation.

What can be said about the use of telephone interviews vs. face-to-face interviews?

4. Does the manuscript adhere to the relevant standards for reporting and data desposition?

Overall, the manuscript is fine. However, there are some easily resolved form issues that I would consider minor essential revisions.

I would like to see the section “National Quality Registries and the national stroke registry” placed in the Methods section. It can be said to be the study object of the study and would therefore fit much better as part of the Methods. It is somewhat confusing to finish the introduction with this more specific description.

The aim is typically placed towards the end of an introduction and I think this would be beneficial in this paper, as the aim is sort of hidden in the text, being placed midway through a paragraph, halfway through the introduction.

The authors need to specify/define QI, for improved understanding of the concept as used in this paper. It is, after all, a key concept if the focus of the
The results are written in present tense, which is highly unusual and at odds with more textbooks on scientific writing. Why was this used? It is customary to write in past tense.

I think Table 2 needs a column where the domain is briefly explained. What is the meaning or understanding of “Process,” “Outer setting”, etc.? As it reads, the constructs appear somewhat cryptic to the general reader. I think just a few words/a sentence would be sufficient to clarify the “essence” of each domain.

5. Are the discussion and conclusions well balanced and adequately supported by the data?

The Conclusion is not really a conclusion. “In conclusion, the use of the CFIR framework helped us to discover…” The aim was not to “test” the use of CFIR. The framework was simply a tool, a means, towards an end. The fact that the use of CFIR was beneficial, etc., can be addressed as part of the discussion, but it is not a conclusion of the conducted study. The abstract has a much more appropriate conclusion.

6. Do the title and abstract accurately convey what has been found?

Please see my comments above regarding the title and the focus and contents of the paper. The abstract is fine, with the type of conclusion that I would like to see in the discussion (please see above comment on this).

7. Is the writing acceptable?

The writing is very good.

Level of interest: An article of importance in its field

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.