Reviewer's report

Title: Leading the implementation of change in primary care: a conceptual framework

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Reviewer: Elizabeth Yano

Reviewer's report:

General

This paper outlines a conceptual framework for fostering effective implementation of change in primary care practices based on a series of qualitative interviews of 28 stakeholders in 8 family medicine practices of varying size and performance but all with a common electronic medical record. These 8 practices were selected among an unspecified number enrolled in a clinical trial of process improvement that has shown benefit in intervention practices (published elsewhere). Seven core concepts are presented: leaders set a vision with clear goals, involving the team, enhancing communication systems, developing the team, taking small steps, assimilating the electronic medical record to maximize clinical effectiveness, and providing feedback within a culture of improvement.

The science of implementation would benefit from stronger conceptual frameworks for fostering process improvement in a replicable fashion across diverse practices. Several have been promulgated, two of which the authors cite, but none appear to have become widely accepted or commonly applied. Using a Microsystems framework, the authors used grounded theory techniques via semi-structured interviews among high, medium and low performing practices to develop their framework. The paper would benefit from a stronger delineation between where Microsystems end and their framework begins (or what refinements it makes), and how their seven core concepts relate to Solberg's 12 principal attributes or Cohen's model for change. Complexity science is also referenced but not woven through the presentation of the framework and its implications for process change. A summary diagram or table across these other frameworks may help readers discern what is unique about this particular framework, which in turn would facilitate its adoption or adaptation to other implementation research efforts. The area of particular contribution may chiefly be in the centrality of the assimilation of the electronic medical record into process improvement or change efforts in primary care practices. Other studies have empirically examined the quality impacts of EMRs, as well as the human factors involved in increasing their general use and improved application for management and delivery of health care services. This study's contribution may be in putting forward a conceptual framework for specifically enhancing the contribution of EMR to quality improvement, especially given the many jumpstarts and expensive failures early adoption without attention to change processes that have occurred.

The degree to which this framework may be generalizable to different types of primary care practices (i.e., small internal medicine practices, larger multispecialty or interdisciplinary primary care programs) should also be addressed. The authors allude to the notion that these practices have voluntarily agreed to participate in the practice-based research network and thus may not be representative of non-PBRN practices, but a little more exploration would be helpful. This is especially true in relation to thinking through what this framework may mean for sites that are within the medium to low performing range. No quotes or exemplars are provided for the sites outside the high performing practices. The paper would be even more informative with from greater explication of the patterns amongst practices of varying performance or instead be reframed to indicate that the focus is on high-performing practices alone.

The methods appear appropriate and are fairly well described, with a few minor exceptions. Sampling: How were these 8 practices selected and from how many of the total number participating in the PPRNet-TRIP II intervention? Based on the PPRNet-TRIP II being a clinical trial, is it safe to assume that all 8 practices sampled for this study were intervention sites, some of which did not respond as well to the intervention? Or are some from low-performing control sites? What preventive practices were under scrutiny? Is there anything particularly important about the preventive practices that would influence the nature of the proposed conceptual framework (e.g., tasks that could be automated more readily than others, tasks that require greater coordination across team members)? The interviewees are described as being part of casting a wide net but this appears to be 28 participants among 8 practices, so represents about 3-4 individuals per practice. More information about the nature of these practices would help us interpret whether the 3-4 interviews/practice is a lot or a fraction of a much larger practice, which in turn
Data collection and analysis: Details of the development of the semi-structured tool are laid out well, but would benefit from greater explication of each step was conducted, e.g., how were field notes and quantitative evaluation data used to inform the interview’s development? What quantitative evaluation data were used? How did questions guide the discovery about the culture of each microsystem (bottom of pg 6)? The lead author inserts mention of being strongly influenced by an organizational culture perspective, and that her acute care experience means that she has few preconceptions about primary care practice. While sharing priors is important, especially since the lead author was the solo interviewer, the degree to which a culture of improvement can be gleaned from the available quotes is not entirely clear and warrants further exploration in the paper. Was there a particular sorting process used to identify the transcripts of practices with different experiences in the process of change (what vs. what) and different levels of performance outcomes (high vs. low)?

The use of exemplar quotes under each core concept under Results was useful. How common were the attributes or activities represented in these quotes to other high-performing practices? Are there any exemplar quotes from low-performing practices that would further anchor each concept? I am struck by the implications of these high-performing practices for helping lower-performing practices improve their change processes. The paper does not address how practices without evidence of these concepts might be able to use the framework to improve how they operate. In other words, are these just good practices with all the right stuff such that they will be do well with any intervention or change effort, and they valued clear leadership because they happened to have it? Or are there messages or lessons here that could be used to improve care in less homogeneous and well-endowed practices? How actionable are these concepts in the context of busy practices?

The link between some of the quotes and the interpretation and promulgation of a particular concept do not always line up. Developing staff knowledge and Taking small steps fall in this category. The quote under the former does not provide much insight into how practices provide avenues for staff to ask questions (bottom of pg 11) or how understanding the rationale for the work they are engaged in functions in relation to high- vs. low-performance. Similarly, the notion of small (presumably vs. big) steps does not seem to relate to the quote (bottom of pg 12). That is not to say that I do not agree with the value of small steps, but that the foundation here is not as strong as it could be in order for others to adopt this framework.

The discussion is well-written and presents some important points. It would nonetheless benefit from stronger framing as it is currently more descriptive and poses a broad array of terms that are not defined nor necessarily easily anchored depending on the disciplines represented by Implementation Science’s readership (e.g., motivational reciprocity, change trajectories, change option landscape). These terms presume substantial advance knowledge and make the discussion harder to embrace. As suggested earlier, inclusion of a table or diagram that integrates the proposed framework with other frameworks and theoretical foundations, as well as defines terms, would be very useful.

Title and abstract: The title suggests that the paper’s conceptual framework focuses on leadership of change, but the paper is not cast as a platform for health care leaders to learn how to enhance change processes. More intentional framing of the paper in this direction would be helpful (i.e., what leaders should be considering when working to become a learning practice or organization, when faced with quality deficits and needs for improving guideline adherence, when faced with EMR implementation). However, if revisions move this paper toward making a contribution more specifically within the context of EMR assimilation for process improvement, the title ought to reflect that shift. The abstract is basically well-written, though the introduction of How to Lead Improvement for PPRNet-TRIP in the Results section is a little confusing. I am not sure that naming the framework is helpful this early and may make it sound like the framework is equivalent to the intervention itself from the clinical trial (or is it?). If they are one and the same, then these interviews do not provide a new framework synthesized from on-the-ground implementation as much as they serve to demonstrate variation in practices’ ability to effectively adopt and deploy the change intervention.

Tables and figures: Table 2 would benefit from being more self-documenting, e.g., include the distribution of the 20 TRIP practices alongside the 8 that were sampled for this work, clarify the number of targets possible (denominator) to facilitate interpretation of the %s for high, medium, and low, define achievement. Figure 1 is interesting and would benefit from greater explication of the relationships among the seven concepts. The four within the main circle appear to be linearly related with equal impact on assimilation of the EMR, with vision and feedback having very distinct relationships to the main four. While a diagram can be a useful visual, the relationships, interactions and degree of import of different concepts are not clear.
For example, is there a sense of where vision is most important? Are all concepts equally important or can you make gains with some of the â€œpistonsâ€ not firing?

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1. Delineate the concepts in the proposed conceptual framework with those of other related frameworks (e.g., Solbergâ€™s, Cohenâ€™s) and/or theoretical frameworks (e.g., complexity science). Consider inclusion of a summary diagram or table across these other frameworks to help readers discern what is unique about this particular framework.

2. The area of particular contribution may chiefly be in the centrality of the assimilation of the electronic medical record into process improvement or change efforts in primary care practices. In fact, it is not clear that the framework would be applicable to practices without an EMR. The authors should consider whether the framework should be presented in that context moreso than general process improvement.

3. Add quotes from medium-to-low performing sites that help frame the concepts and quotes from high-performing sites. Incorporate exploration of the degree to which these concepts may be key ingredients for change and how medium-to-low performing sites might go about adopting them. Determine degree to which incorporation of quotes from medium-to-low performing sites corroborate concepts identified from examining high-performing sites.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1. The authors should add to their mention of how well the framework may apply to non-PPRNet practices by describing implications for non-family medicine practices, large and small practices, etc.

2. Add information about the 8 practices in relation to the 20 from which they were sampled. Also include information about the nature of these practices (urban/rural, size, staffing) to help readers place them in organizational context.

3. Include a list of the preventive practices that were the focus of the intervention, clarifying how these concepts may relate to the processes of improvement surrounding their performance.

4. Clarify some of the methodological issues of how the interview tool was developed.

5. Include definitions for terms from other conceptual frameworks and change models.

6. Make Table 2 more self-documenting (see above).

7. Clarify relationships and interactions and importance of different relationships suggested in Figure 1.

Discretionary Revisions (which the author can choose to ignore)

1. Consider changing the title to better reflect the EMR angle of the results or more firmly framing the paperâ€™s content to demonstrate the perspective of process improvement leadership throughout.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

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.