Author's response to reviews

Title: Implementing change in primary care practices using electronic medical records: a conceptual framework

Authors:

Lynne S. Nemeth (nemethl@musc.edu)
Chris Feifer (feifer@usc.edu)
Gail W. Stuart (stuartg@musc.edu)
Steven M. Ornstein (ornstesm@musc.edu)

Version: 4 Date: 3 December 2007

Author's response to reviews:

December 1, 2007

To the Implementation Science editors:

Thank you for the opportunity to resubmit this manuscript, which has been revised considering the reviewers and editors comments as well as the comments of senior research colleagues not associated with this project. We have appreciated all of the comments which have inspired reconsideration of several areas within the manuscript. Revisions were made according to the reviews as follows:

Reviewer (Leeman)

Major compulsory revisions:

1. The sampling strategy for those interviewed is still unclear. The table provides information about who was sampled but this would be clearer if also summarized in text.

More detail on the sample and sampling strategy was added to the text and to Table 1.

2. The article still provides too little information on Microsystems in Healthcare-the guiding framework for the study. Adding table 3 with your codes is not sufficient. Framing the background to introduce Microsystems and the change management/barriers to change concepts that were the focus of the interviews would be one option.

Extensive revisions were made to provide more information on Microsystems as the guiding framework for this study in the methods section and in the discussion and conclusions. Table 3 was deleted. Methods were revised and specific detail was inserted regarding the coding and analytic process used.

3. Results: I find Table 4 very confusing. Starting your results section with
reference to Figure 1 and a brief discussion of components would provide readers with an overview of your framework.

Table 4 was deleted, as it was confusing to the reviewers. The results section was revised to discuss in more detail the Figure, to provide a stronger overview.

Reviewer (Yano)

Major compulsory revisions:

1. While the authors have added the microsystems framework up front, as well as created a table placing their conceptual framework in line with the work of others, the table is hard to follow since there are constructs that overlap in different ways. More work is needed to take this to the level where it will demonstrate the added value and educate readers to the context of these models. In the discussion the translation of Microsystems framework¿s four concepts to the seven of their framework should be made more clear.

As noted above, for the first reviewer¿s comments, extensive revisions were made to make explicit how Microsystems guided this research, in the methods, discussion and conclusion section. As the table comparing the conceptual frameworks of other researchers was confusing and there were overlaps, the table was deleted and replaced with a more expanded discussion of these concepts in the discussion. The revision emphasizes how this conceptual framework can guide implementation and evaluation of change in practice, serving as a mental model to approach the process of change.

2. While the issue about the fundamental nature of the EMR in organizational change was taken to heart, the degree to which ¿assimilating the EMR to maximize clinical effectiveness¿ is adequately present in the domains and then results underlying each domain is variable. The EMR issue does not appear to penetrate all domains and when it does, its focus is on template use.

The results and exemplars were modified to illustrate the essential nature of the EMR that penetrated all aspects of this conceptual framework. Staff used the EMR as a tool to communicate with one another and the patients, to embed reminder systems, call back patients as needed and as a source for discussing with patients disease management processes and goals.

Minor essential revisions:

1. More information on the practices was requested so that the external validity of the conceptual framework, domains and lessons drawn from this work could be better placed in context for readers working with or within other types of practices. A sentence that deals with the external validity of their findings based on the nature of these practices and the implications for practices outside of PPRNet should be added. Knowing something about the #s of providers and patients seen would be helpful.

More information about the practices was added to Table 1 and to the text. Information about the numbers of patients at the time of this study was not
collected. Limitations were added that speak to generalizing findings outside of PPRNet.

2. Abstract’s background 1st sentence should be revised.
   This was revised as suggested.

3. Page 12, under Enhance Communication Systems, 2nd sentence is not clear.
   This section was modified to clarify meaning.

Sincerely,
Lynne Nemeth