Reviewer’s report

Title: Mapping the Reach of a Rural Transitions Nurse Program for Veterans with Geographic Information Systems

Version: 0 Date: 13 Oct 2019

Reviewer: Geoffrey Curran

Reviewer's report:

This manuscript strives to assess the potential value of GIS maps in helping healthcare systems to understand the reach of programs. In general, I think the manuscript succeeds here. Further, the manuscript strives to describe the potential usefulness of GIS maps as part of audit and feedback system, compared to other data presentation methods (e.g., text). In general, I think the manuscripts succeeds here as well. It is a qualitative look at the issue, so it is not generalizable per se, but it provides richness and context. That being said, I found numerous examples where the writing and description could be clearer. The following comments are offered for consideration by the authors.

1. In the "Contributions to the literature" section, the third entry ("The Veterans Health Administration has many systems and structures in place and we were able to do this work because of those resources") does not seem to belong. I don't see the contribution to the literature here. I suggest omitting.

2. The description of GIS in the background section could be clearer and use less jargon. The section starts out by saying that GIS is a technology, science, and a framework. I find this confusing. Next, a statement is made that I don't follow very well, and if kept, needs clarification: It "provides better insight in making collective decisions based on real-world problems." What does this mean? And better than what? Also, please define/describe what a "geographical layer" is.

3. Please provide a sense of how many/rate of TNP enrollees not included due to missing addresses. Either where it is mentioned (page 5) or elsewhere.

4. I am not following this statement on page 7—"However, one participant voiced concern that the maps depicted overlapping care coordination service providers, which might be a red flag to leadership and TNP might be viewed as redundant." Perhaps gives some more description about what this means exactly?

5. Perhaps "advertising" is the not right word here (page 8): "...would be a great advertising tool to help leadership understand..." I was thinking "informational" tool. I'm not sure that advertising is really designed to encourage "understanding."

6. By "participants" here (page 8), whom do you mean? "The GIS maps were reported to keep participants engaged and enthused due..."
7. On page 8 there is the following statement—"the GIS maps created for TNP did not calculate the proportion [see comment 3 above] and representativeness of individuals enrolled in the program...." Could you have? Why not? If not, how much of a problem is this within the VA context? Would these data be (considerably) more useful with that information?

**Level of interest**
Please indicate how interesting you found the manuscript:

An article of importance in its field

**Quality of written English**
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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I am a part-time employee of the US Department of Veterans Affairs. The manuscript describes a study in the VA context. I do not feel this is a COI but a positive--I bring contextual understanding.

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