Reviewer's report

Title: Fidelity and moderating factors in complex interventions: A case study of a continuum of care program for frail elderly people in health and social care

Version: 1 Date: 15 September 2011

Reviewer: Amy Kilbourne

Reviewer's report:

Major Comments:
The manuscript discusses the key issues in implementation fidelity, that is, the need to systematically evaluate implementation fidelity and to determine the moderating factors that influence the degree of fidelity. The authors specifically describe a qualitative case study in which they determine the moderating factors that influenced the fidelity of a care coordination program for frail elderly, and modify Carroll et al.'s 2007 Conceptual Framework for Implementation Fidelity based on their findings. While understanding what factors influence implementation fidelity are essential for the implementation and dissemination of evidenced based interventions, I do not think that authors’ data included in the paper allows for the conclusions that they reached and I am not convinced that their findings are generalizable to other studies. Also, I found that the writing was unclear at times and needed some reorganization. Below are specific comments that I hope will be helpful to the authors in revising this manuscript:

1. Page 4: Introduction: This section of the paper could be more concise and better organized as it is difficult for the reader to follow. In the first paragraph, the first sentence could be more concise, e.g. “In intervention research, the implementation activities associated with the intervention have not been systematically documented, e.g., whether defined implementation activities actually occurred and how they were delivered.”

2. The study should also be placed within the context of REP, including the role of core elements (Kegeles AIDS Education and Prevention 2000 or Neumann 2000)

3. Page 5- the paper suddenly switches to talking about adaptation, but not all adaptation results in loss of fidelity as long as the intervention’s core logic is intact. Also, other barriers to fidelity presented had to do more with the feasibility of the intervention it self- such as limited access to transportation, or respondent burden.

4. Page 5, line 17: The authors should define what “enthusiastic” means in this context, for example, those responsible for delivery of the intervention saw the value in implementing the intervention and were able and ready to do so?

5. Page 10, second paragraph (bottom of page): Did the authors calculate a kappa value for interrater agreement? How did the authors resolve any differences in coding?
6. Methods, Page 7: the authors should define what a “care chain” is.
7. Under results, it would be helpful to quantify the number of times a moderator was related to a fidelity component
8. Page 11, Results:
   a. In general, I would like to see some numbers in all subsections here. E.g. how many staff respondents had previous positive experiences of working with care continuum models for the elderly? How many elderly did not contact the case manager on their own?
   b. Also, it might be helpful to list all the components that were not delivered, were modified, or added.
   c. A table with process measures and data would be helpful for the reader to get a sense of adherence rates, e.g., how many patients had follow-up monthly contacts, how many had 3-, 6-, and 12-month assessments, etc.
9. Page 12, second paragraph: Who are the respondents?
10. Page 14: third paragraph: How often were participants referred to the ED?
11. Page 15: first paragraph: How many participants had contact once a month?
12. Page 16: It is unclear to the reader what the dose and content of intervention received was or how this changed over time.
13. Page 16, Discussion: It would be helpful to note that (from Table 2) 16 of the 18 intervention components were always delivered indicating high fidelity to the intervention.
14. Page 16: How specifically was the Conceptual Framework for Implementation Fidelity useful?
15. Page 17: How did the authors determine that “the main moderating factor causing adding components was still staff responsiveness?”
16. Page 18: The authors may want to review Eric Coleman’s work on transitions of care and compare his findings on implementation to theirs.
17. Page 20: How were the data from the different data collection methods compared and weighted? This was not discussed in the results section.

Minor comments:
1. Page 1: Abstract, Background, Sentence 1 is awkward, I would recommend rewriting.
2. Page 4, lines 3-4: The authors need to define “nature science paradigm”
3. Page 4, lines 8-9: The sentence “Experimental studies in general….” is awkward.
4. Page 4 Paragraph 2: I would add to the definition of implementation fidelity the “degree to which a particular program follows the ‘original’ program model” or say something about the degree to which the program is implemented as intended by the original developers.
5. Page 5, lines 2-3, the sentence “Thus, program adaptation includes both
substantive deletions and enhancements…” is unclear.

6. Page 5, line 9-10, the sentence “Other have suggested..” is awkward and unclear to the reader. The sentence discusses specific changes from the original program that can both enhance and detract from the program implementation. It would be helpful to note these different factors separately.

7. Page 5, line 11: “The Conceptual Framework for Implementation Fidelity…” should be a new paragraph

8. Page 6, The last paragraph “In order to gain understanding…” should be placed in front of the second paragraph to transition the reader from the conceptual framework information to the current study. The last paragraph and second paragraph should be combined.

9. Table 1: Please use bullet points or spaces to make this table easier to read.

10. Page 8, second paragraph: the authors should reference Table 2 not Table 3.

11. Page 8: second paragraph: Are the essential steps in the intended delivery of the intervention the same as the intervention components?

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

Quality of written English: Needs some language corrections before being published

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

Declaration of competing interests:

No conflicts of interest