Reviewer’s report

**Title:** Barriers To Women's Participation In Inter-Conceptional Care: A Cross-sectional Analysis

**Version:** 1  **Date:** 9 August 2011

**Reviewer:** Sarah Brennenstuhl

**Reviewer’s report:**

Review’s report

This interesting and potentially important paper describes women’s rates of participation in an inter-conceptional care program using Andersen’s behavioural model. While this well-written paper addresses a very important topic, several questions are left remaining which, if answered by the authors, would make the paper much clearer for the readers. In particular, I am left uncertain about what specific barriers were addressed by the intervention and how. I am also unclear about why the authors choose the analysis strategy they did, and importantly, why they did not control for intervention intensity. I provide more details about these issues below, while also posing some questions and offering some suggestions about a number of smaller issues.

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

**General Comments:**

- The authors state that “all traditionally known barriers to care were addressed” in the intervention; however, it is not clear what these barriers are and how well they were addressed. For example, the authors state that all women were provided with transportation, but did not describe how this occurred (e.g., were the participants given free bus tokens?) Indeed, without knowing what the barriers are and how well they were addressed I am not convinced with the conclusion the authors reach that “Actively removing common barriers to care does not guarantee the long-term and consistent participation of vulnerable women in preventive care”. In order to better support their conclusion, if possible, it would be helpful to provide a specific list of the barriers addressed, how were they addressed.

- The authors state that “The number and magnitude of risk factors identified determined the intensity (duration and number of visits) of the intervention”. Among these risk factors included smoking. However, smoking was also used in the model under predisposing factors (even though none of the others risk factors were included). Smoking was significantly related to service uptake; however, isn’t it possible that smoking simply acted as a proxy for intervention intensity? That is, b/c smokers were at a higher risk, they were prescribed more
intervention sessions and, therefore, were less likely to attend them all.

-As eluded to above, why was intervention intensity not controlled for in the modelling? Indeed, the authors acknowledge this issue as a potential limitation.

-Why was smoking included in the model and not the other risk factors (e.g., genito-urinary infection, weight control, depression, housing inadequacy (stressor), smoking cessation and periodontal disease) which could be included under the need category?

-Why did the authors decide to recode the count-based dependent variable (i.e. number of scheduled visits attended/total prescribed) into categories? Much information is lost when variables are recoded this way. Moreover, the cutoff points seem to be arbitrary. For example, is there a theoretical reason why there would be much difference between women attending 99% (included in category 3) versus 100% (included in category 4) of their visits? Did the authors consider using a count-based model such as Poisson?

-Given that the authors chose to use a categorical outcome rather than a count-based one, analyzing the data using a proportional odds model makes sense. Indeed, one the advantages of this model versus others like multinomial logistic regression is its more simplistic interpretation (i.e., there is only 1 coefficient to interpret rather than 3 in this case). While the authors stated that the proportional odds assumption was not met, rather than jumping straight to the multinomial model, did the authors consider testing whether some of the categories could be collapsed? Alternatively, did they consider using different cut off points to create categories?

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

Research Design and Methods:

-I feel that a number of the variables were inadequately described. For example, “availability of social support (Y/N)” – how was this measured? “Self report of prior experience with providers (Good/Poor)” – again, what does this entail? Moreover, are you referring to medical providers or social service providers?

-Related to above, it is not clear what the following referred to: “size (1 or 2 members vs 2 or more)”. I assume it means family size? Also, Table 1 indicates smoking status is a predisposing factor but it is not mentioned in the measures section of the paper.

-The authors mention that other system factors were not addressed because they were not included in the parent model. What are these system factors and why were they not included?

Results:

-It is unclear what model the authors are referring to when they report the results of Table 4 (i.e., the full model of the other specific models). Do the authors ever
report the results of the full model presented in Table 4? To me, this model is the most important as it controls for all factors simultaneously.

-When the authors report the results of the “predictive power of the model components” they refer to table 4. It seems to me that they should be referring to Table 3. If that is the case, why did they round down to p=0.05 in the text when the figure reported in the table is 0.058?

Discretionary Revisions (which are recommendations for improvement but which the author can choose to ignore)

Theoretical Framework

-I would recommend adding more details about the theoretical framework and, specifically, how the model was adapted to apply to vulnerable populations. Also, while the authors stated that “This model is well documented and widely used to determine predictors of access to care”, they did not provide any citations to support this fact. In particular, are there other studies that use Andersen’s model in a similar way?

Research Design & Methods:

- Based on the description of the study population provided in the paper itself, it is not clear how women were selected for the original study. For example, was the only inclusion criterion “Resident women experiencing a preterm birth at <34 weeks of gestation”. What were the exclusion criteria? I know the authors provide a reference to the original study; however, I think it is important to provide the basic inclusion/exclusion criteria in this paper too.

Discussion:

- I think the following statement (originally found in the discussion) should be moved to the end of the introduction in order to improve the overall clarity of the paper:

“In this study, we applied the model to a population that differed from previous studies in two fundamental ways: (1) the population of women was receiving preventive care in the interconceptional period, and (2) as part of the care protocol, all traditionally known barriers to care were addressed to facilitate participation in the clinical trial. We expected to be able to identify which factors above and beyond those already addressed as part of the care protocol exerted impact on women’s participation in interconceptional care.”

- The authors should add the word “attended” in front of ALL visits in brackets at the end of the first paragraph of the discussion.

Tables:

- In Table 3, I suggest writing out the labels of the individual models in full.
- In Table 4, while I appreciate the “sample interpretations” I think these descriptions may be more appropriate in the text. That being said, I am not sure
any of the 5 interpretations provided are good examples given that the odds ratio is not significant (maybe use smoking as an example?). Also, the footnotes are not in order.

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

**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