Reviewer's report

Title: How protective is cervical cancer screening against cervical cancer mortality in developing countries? The Colombian case.

Version: 2 Date: 18 February 2010

Reviewer: Nancy Breen

Reviewer's report:

This MS emphasizes the important point that gaps in continuity of health care, even after women have obtained cervical cancer screening, may lead to health disparities. In short, to evaluate disparities in cervical cancer, it is not adequate to simply consider screening. Nevertheless, several improvements to the MS are needed; it is worth noting that these concerns were indicated in the previous review which the authors claim to have addressed. I don't think they were adequately addressed. I've organized my comments into major, minor and discretionally revisions below.

Major Compulsory Revisions:

1. The methods section still is not clear. Because the readership for this paper is international, it is important for the authors to provide information about the data sources used for this analysis. There is little information in the text and one government document is provided. Is this the source for all the data in this MS? Readers cannot be expected to access and review the document. Rather the authors need to answer the obvious questions begged about the data. Mortality rates are from the DANE mortality records. Since an algorithm was used to address "potential misclassification bias", the data are presumably not complete. Are the alpha and beta coefficients from a previous study (there's no reference) or how were they chosen? How complete are the DANA mortality records and are they equally complete for all departments? Have studies been done on the accuracy of this vital statistic? Screening data are described in the text as coming from the ENDS, a national survey. What is the response rate for this survey? Do response rates vary by department? What questions are asked to elicit the information presented? This additional information can be provided in a sentence or two; but it is important for the study, especially since conclusions drawn by the authors rest on findings from a single medium-sized department Boyaca.

2. The five screening variables are unconventionally presented. Again, the highlighted result is for Boyaca, because the largest proportion of women who failed to "collect the results" for their test was in this department. While findings from this department are suggestive, a regression analysis would be more likely to uncover actual relationships. Whereas the text describes Poisson regression analysis reported as rate ratios, the MS had only one table (Table 1). Perhaps another table of results is missing from this submission?
3. There are allusions to the "current managed health system" and "health care reform in Columbia". Since international readers are unlikely to know about these, and can't be expected to read other MS to find out, the authors should provide some background. Also, only one reference is provided for "recent studies" about "deleterious effect of health care reform".

4. The final conclusion that "new technologies ... may help reduce the burden of disease" is not spelled out and how it would is not clear.

Minor Essential Revisions

In the first paragraph of the discussion, the second sentence should say was NOT protective.

In the last para of page 6, change "subside" to "subsidie".

Table 1: "media" deaths by year should be "mediaN"

Limitations of the study should be indicated.

Discretionary Revisions

In Table 1, it would be useful to spell out the "screening variables 1-5" more clearly.

**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:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests.