Reviewer's report

Title: Male Gender is Independently Associated with Pulmonary Tuberculosis among sputum and non-sputum producers Suspects in Southwestern Uganda

Version: 2 Date: 28 July 2014

Reviewer: Claude Bernard CB Uwizeye

Reviewer's report:

I. Major Compulsory Revisions
The author must respond to these before a decision on publication can be reached. For example, additional necessary experiments or controls, statistical mistakes, errors in interpretation.

1. Study objectives:
   a. Line 1 to 3: the study look at the gender imbalances among sputum and non-sputum producers suspects.
   c. Line 77 to 79: Examine gender differences in non-sputum producers HIV infected patients, AND gender effect on TB diagnosis among non-sputum producers HIV infected patients.
   d. Line 82 to 85: Prevalence of culture confirmed among men and women, with presumptive TB, and effect of gender on diagnosis of TB by culture.

From all these statements and from what I learned from the paper, it is important that authors clarify if their objective was:

• Primary to assess gender imbalances (male predominance) among sputum producers versus sputum non-producers from patients with presumptive TB, OR from patients with confirmed TB; And secondary whether they wanted to do it among HIV infected people or among both HIV infected and HIV non-infected people,

2. Methods:
   a. Line 118 to 128: As authors used different TB diagnosis methods for a same person, authors should report on how different results by methods for a same person were used to define him as a TB case, or if they considered only the result of LJ culture?

II. Minor Essential Revisions

1. Introduction:
   a. Line 50 to 51: Authors could consider to use a current reference if there is any (the currently used reference lasts since 2003).
b. Line 64: the reference 5 didn’t conclude to less access to health care for women, rather to potentially less sensitive screening and diagnosis strategies for women than for men.

c.

2. Methods:

a. Line 106: Remove the sentence “All participants gave written informed consent” from here to the “ethics paragraph”.

b. Line 109 to 110: What were the main characteristics evaluated?

c. Line 118 to 128: What were the technical definition of a positive TB diagnosis tests, for each of the methods used?

d. In the statistical analysis section, authors should say something on the level of confidence for statistical significance.

e.

3. Results:

a. Line 338: regarding table 1, not all variables in the column “characteristics” have “N and %”, as example HIV status, locality, etc.

b. Line 338: regarding table 1, 664 sputum producers were recorded. Line 352: regarding table 2, 689 persons provided sputum in the colorimetric study. Where came the additional 25 persons, as only sputum producers were entered in the colorimetric study?

c. Line 352: regarding table 2, OR line 160 to 161: authors should consider to add data on volume and quality of induced sample.

d. Line 355: the title of the table should be completed, by adding “among sputum producers” or “for the colorimetric study”. Again, authors should replace “adjusted an unadjusted” by “unadjusted and adjusted”. Authors should explain why this analysis was performed for only the colorimetric study, the alternative should be to do it also for the induction study, and if no difference is detected the explanation would be that more female may be detected by practicing sputum induction.

e. It would be better if authors present the found association between male gender and culture positive TB, by HIV strates (HIV positive vs HIV negative). The other interesting stratification authors should look for is by microscopy result to see how many microscopy negative female may be detected by culture.

III. Discretionary Revisions

NONE

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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

Authors of this paper used my paper as their reference (reference N05).

I declare that I have no competing interests.

The views and opinions expressed in this review report are those of the reviewer and do not in any way represent an official position of the U.S. Centers for Disease Control and Prevention.