Author's response to reviews

Title: Pulmonary Tuberculosis among Women Attending Clinics for Family Planning and Maternal and Child Health in Dar Es Salaam, Tanzania.
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Version: 3 Date: 19 May 2009

Author's response to reviews: see over
02nd May 2009

Dear Editor, BMC

Thank you for the comments from reviewers on our article entitled “Pulmonary Tuberculosis among Women Attending Clinics for Family Planning and Maternal and Child Health in Dar Es Salaam, Tanzania”, with reference number MS 2173318332504143. We have reviewed the article and incorporated all comments raised by the reviewers. I am glad to re-submit it for possible publication.

Find the attached reviewed manuscript as recommended by reviewers as well as the document which narrate what and where exactly the changes have been made. The highlighted blue in the manuscript are the places where the changes have been made.

Thank you in advance,

With best regards
Esther Ngadaya
Corresponding author
RESPONSE TO REVIEWER’S REPORT

Reviewer’s report

Title: Pulmonary Tuberculosis among Women Attending Family Planning and Maternal and Child Health Clinics in Dar Es Salaam, Tanzania.

Version: 2 Date: 17 March 2009

Reviewer: Ekkehardt Altpeter

Reviewer’s report:

The study question is well posed by the authors. It covers an important subject: integration of TB services. The data are sound.

The main outcome (PTB yes/no) should be included for all items tested. Table 1 should include odds ratios with confidence intervals rather than chi2 with p-values.

Response: We agreed with the reviewer. We have re-analysed our data with the outcome variable of smear positive TB patient and smear negative non TB patients. Odds ratios and confidence intervals are given.

All digits should be checked since in Table 1 and Figure 1 the totals are not summing up to the grand total (N=749). The discussion and the conclusion are well supported by the data. Unfortunately the limitations of the study are not discussed. The published literature seems to be cited adequately (only the WHO reports are out of date). Title and abstract are accurately conveyed. The writing is clear.

Response: Numerator and denominator for each variable are provided. The total doesn’t add up to 749 owing to some missing information. As shown in the figure 36 (4.8%) of the women did not show up for sputum test so their smear results were not known.

Limitation of the study is now given.

Abstract: Please represent odds ratios instead of chi2 and p-values.

Response: Odds ratios and 95%CI are now provided.

Background: Last paragraph: As not all readers are familiar with the differences between passive and active case finding, please define what you mean. Please write all abbreviations once in the text.

Response: This has been given in the background section. Passive as oppose
to active TB case finding is when symptomatic patients present themselves to the outpatient department (OPD) with cough of two or more weeks with or without accompanying symptoms, and screened for TB.

**Methods:** Please present odds ratios and 95% C.I. in Table 1 with diagnosis of smear positive TB as outcome. The risk factors of prolonged cough are of minor interest.

**Response:** Agreed with the reviewer. We have re-analysed our data with PTB results as our outcome variable. Odds ratios and confidence intervals are provided as well.

**Results:**
Baseline profile of the study participants: The precision of mean age and its 95% C.I. is too high. 3 digits are precise enough. Age: Please present either the range (minimum to maximum) or quartiles (25% to 75%).

**Response:** Mean (SD) age was 27.6 (5.2) years (95% CI 27.2-28.0). Median age was 27 years with age ranging from 16 to 50 years.

Table 1 and figure 1: The totals are not summing up. In Table 1 it concerns “occupation” and in Figure 1 the totals are not adding up to the grand total (N=749). There must be an error anywhere or an explanation is needed. Please give the varying number of missing values in Table 1 and Figure 1.

**Response:** Numerator and denominator for each variable are provided. The total doesn't add up to 749 owing to some missing information. As shown in the figure 36 (4.8%) of the women did not show up for sputum test so their smear results were not known.

**Discussion and conclusion:**
The limitations of the study are not discussed. The impact of a missing control group is not considered, e.g. a control group without screening despite cough. The data could be taken from the period before introducing an active case finding strategy (historical comparison). Confounding (e.g. by social status) is not evaluated.

**Response:** Limitation of the study has been discussed in the discussion part. However, for the control group was not possible to get since we would not know who was coughing (for less than two weeks) but not screened as this was not the practice before the study. Patient cards would have reliable information about this but the hospitals visited normally don’t keep patient record cards but rather every patient is responsible for his/her record card keeping after consultation. As shown in this study many of patients who were diagnosed with TB have been at some health facilities before and not being recognized as TB suspects, either because they did not cough for two weeks or more, or they did not have symptoms.
The wording is clear. But is a yield of about 4% (according to Figure 1) cost effective (compared to the approximately 10% smear positive cases found in passive case detection of a standard National TB Program)?

Response: This is what we don’t know for sure. One might see the yield of only 4% Vs 10% as a small increase but when looking at how much the 4% will transmit the disease to others coupled with the HIV/AIDS status in the country, it might be worth doing. That is why we suggest a cost effectiveness study which will also look at the direct and indirect cost over effect associated with either of the two methods.

Literature: In the meantime, there are newer versions of the WHO-Report on TB.
Response: We agree with the reviewer, we have used it.
Reviewer’s report

Title: Pulmonary Tuberculosis among Women Attending Family Planning and Maternal and Child Health Clinics in Dar Es Salaam, Tanzania.

Version: 2 Date: 1 May 2009

Reviewer: Marieke J. van der Werf

Reviewer’s report:

The authors describe an intervention in MCH and FP clinics in Dar Es Salaam. From the manuscript it is not clear what the objective is.

1) Assess prevalence of pulmonary TB among women attending Family Planning and Maternal and Child Clinics (title)
2) Determine the contribution of screening for TB all women with cough attending FM and MCJ clinic (abstract)
3) To explore the possibility of screening all women attending FP and MCH clinics for TB (background)

This makes it very difficult to assess whether the methods used are appropriate.

Response: We overlooked this and we have corrected it. This study was conducted to determine the proportion of smear positive TB among women with cough regardless of the duration attending FP and MCH clinics in Dar es Salaam. However, to our understanding the methodology for all objectives would not differ.

1) Is the question posed by the authors well defined?

In the background section the authors indicate that their objective is to explore the possibility of screening women attending FP en MCH clinics for TB. The objective described in the abstract is different. There the authors write that they want to determine the contribution of screening for TB all women with cough. The authors should resolve this inconsistency and make the conclusion related to the objective.

Response: The confusion has been corrected.

2) Are the methods appropriate and well described?
The methods focus on measuring part of the information that is needed to assess whether it is possible to screen women attending FP and MCH clinics. Information that is not measured and that should be measured in my opinion to assess the feasibility of screening women attending FP and MCH clinics for TB is:

- Number of women that were screened by the study clinicians
- Number of women that were not screened by the study clinicians and why
- Number of women that refused to participate in the study
- Number of women that provided one, two or three sputum samples
- Number of women that returned to collect the result of the sputum examination

**Response:** 713 out of 749 women were screened. None of the study participants refused to participate into the study though 36 women refused to give their sputum for examination. We did not ask them why because ethically we promised not to ask why if somebody refuse to participate into the study or drop out from the study at any point. All 713 women produce three sputum samples and all women returned to collect results of their sputum. Those who were smear positive they were referred to district tuberculosis and leprosy coordinator for further management.

However, our study was not designed to look at the feasibility of screening women attending FP and MCH clinics for TB but rather the proportion of TB among women attending FP and MCH clinics. The sentence “to explore the possibility of screening all women attending FP and MCH clinics for TB” at the end of the background was just a mistake and we have corrected it.

In the methods section the authors mention that they ‘enrolled all women’. How was this ensured?

**Response:** Some of the data collectors were placed at the MCH and FP registration area so every woman was asked if she has cough. Those with cough were directed to another study clinician. Through this way we believe that we recruited all women with cough attending FP and MCH clinics. This explanation has been added into the method section.

And was a woman only included once or could she be included several times if she visited the clinic several times. If she can only be included once, how was this ensured?

**Response:** A woman could be included several times whenever she attends MCH and or FP clinic and she has cough. However, we did not get such a case.

It is not possible for the reader to repeat the sample size calculation since only
the assumed prevalence of pulmonary tuberculosis was given. Please also provide the other assumptions. And did the authors take into account for the sample size calculation that they are likely to have a certain percentage of women with incomplete information?

**Response:** See the note below.

Why did the authors do the sample size calculation for pulmonary tuberculosis whereas they measure smear positive pulmonary tuberculosis. This is not correct! The sample size calculation should be performed to ensure that you are able to obtain sufficient information to be able to reach the main objective. Since the main objective is not clear I do not know whether this samples size calculation is appropriate.

**Response:** A minimum sample size calculated was 567 patients; however, we did not stop after we reached 567.

It was just a mistake of the wording but we calculated sample size using the prevalence of newly smear positive TB cases in Dar es Salaam among women aged 15-44 years of 0.3% (NTLP annual report, 2005), total population of Dar es Salaam among women aged 15-44 years of 710,486 (Tanzania population and housing census report, 2002) and the worst acceptable proportion of 0.75%.

The authors should provide the definition of when a sputum smear is considered positive for acid fast bacilli? Also scanty?

**Response:** The sputum smear was considered 1+ve when number of bacilli seen in the smear was 10-99 per 100 immersion fields; 2+ve when number of bacilli seen in the smear was 1-10 per 1 immersion field and 3+ve when number of bacilli seen in the smear was more than 10 AFB per 1 immersion field. When number of bacilli seen in the smear was 1-9 per 100 immersion fields this was labeled scanty. Citation is given in the manuscript under operational definition.

The authors should provide the exact ages that are considered to belong to the reproductive age group.

**Response:** The age is now provided.

Are the data sound?

☐ As far as can be assessed the data that are presented are sound.

Does the manuscript adhere to the relevant standards for reporting and data deposition?

☐ In general yes but not everywhere in the manuscript. E.g. in the results section the authors provide a lot of decimals for percentages (95% CI 27.228-27.979). I would say one decimal is more than enough.

**Response:** Done
Also in Table 1 they provide the percentages in different age groups and education level in the notes. Also this I find rather unusual.

**Response:** Done

Are the discussion and conclusions well balanced and adequately supported by the data?

In general the discussion is well balanced.

The conclusion is not related to the objective stated in the background section. Also the data do not support the conclusion. Most likely the women are detected earlier with TB due to the screening at the MCH and FP clinics. It is not proven by this study that the intervention leads to increases in TB notification.

**Response:** We agree with the reviewer and we have changed our conclusion to reflect our results. See the conclusion part.

Are limitations of the work clearly stated?

One limitation of the study is stated.

**Response:** We overlooked this and we have added some more limitation. See the discussion part.

Do the authors clearly acknowledge any work upon which they are building both published and unpublished?

The authors refer to comparable work done by others.

Do the title and abstract accurately convey what has been found?
No. The title suggests that the authors aim at assessing the prevalence of pulmonary TB among women attending MCH and FP clinics, this is not the objective stated in the background section. As already reported above the objectives stated in the abstract is different from the objective mentioned in the background section.

**Response:** We have corrected this, see the manuscript. Our study objective was to determine the proportion of smear positive TB among women with cough regardless of the duration attending FP and MCH clinics in Dar es Salaam.

Is the writing acceptable?

In general yes.
Background row 14: intervention should be interventions.
**Response:** Done

Discussion row 8: increase in TB/HIV co-infection
**Response:** Done

Discussion row 23: government hospital attendees
**Response:** Done

Table 1: Married should be married. I find the term couples not very clear. Suggest to use married or cohabiting vs single, divorced, or widow
**Response:** We agreed with the reviewer, we have changed the wording as suggested.

Reference 1 and 2 are rather old. The 2008 report is available. I suggest to refer to that report.
**Response:** Done

What is the difference between reference 3 and 4?
**Response:** There is no difference, we overlooked it. However, we have corrected it.

**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