Author's response to reviews

Title: Factors Associated with Default from Treatment among Tuberculosis Patients in Nairobi Province, Kenya: A Case Control Study

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Version: 4 Date: 17 May 2011

Author's response to reviews: see over
Background

1. Up to 2006 the treatment, success rate stagnated at 80% but has since improved. The current level is 86.4% for the 2009 cohort and has been inserted.

2. The reported 16.7% defaulter rate for Nairobi was the highest among provinces and national was 9%. The high TB burden and defaulter rate were the reasons why Nairobi was purposively selected for the study.

3. The last two sentences of the section giving a summary findings have be moved to the ‘results’ section as suggested.

4. Some published ‘factors for from other Sub Saharan African countries have been presented in the background.

5. A brief description of how TB is treated in Kenya given. In the first two months of treatment (intensive phase), patients collect medicines from facilities weekly while monthly (4 weeks) collections are done during the continuation phase.

Methods:

1. The methods section has been divided into sections namely study population, sampling procedure, study procedure, statistical analysis and ethical issues as suggested.

2. In the sampling procedure section of the methods section, a description of how the 1978 were chosen is stated. All 945 defaulters in sampled facilities during the study period were enrolled. A total of 1033 controls were randomly selected from among 5659 patients who completed treatment course (matched for case, treatment sites). Matching has been taken into account in the analysis.

3. Proportions of the total caseload of Nairobi being treated in selected facilities was 14% facilities and has been provided.

4. In the sampling procedure section of the methods section, a description of how the sample population was selected is given. A sample of 154 cases and controls, each were randomly selected from the study population and 120 cases were traced and interviewed. All sampled controls participated while 23(14.9%) of defaulters had died while 21(13.7%) could not be traced.

5. Study population consisted of adult and children. Children excluded from sample
population that was interviewed. This is now

Results

1: Findings have been **restructured and presented** using a WHO conceptual framework with consideration of the five interactive dimensions that affect adherence, *(Social and economic, patient related, therapy related, health system and condition related).*

2. Alcohol use redefined to **alcohol abuse** (recurring use of alcohol during TB treatment was used in univariate analysis.

3 Assessment of knowledge about TB was done using a series of questions as presented in table 3. For the purpose of univariate analysis, these questions were merged.

4. The ‘limitation’ section moved to the discussion

5. In the methods section, the sample size was calculated using an assumption of a 10% default rate removed.

6. In table 1, patient are classified using WHO case definitions as ‘Return after default’ and ‘New/Relapse’

7. In the section ‘Duration of treatment before default’ default in the first two months (intensive phase) and default later in treatment (continuation phase) distinguished. Default from treatment occurred most frequently during the initial two months of treatment (43%).

8. Through an open ended question, patients who defaulted from treatment were asked to state what they considered their main reason for not completing treatment. The reasons given by the defaulting patients are referred to as ‘Factors attributed to default’. Further, cross tabulation of various variables from the questionnaire in a univariate analysis yields ‘Factors associated with default’.

9. Age, more strata used, children (<15yrs), adolescents (14-19 yrs), young adults (20-40), elderly (60+).

10. In the ‘factors associated with default’ section, cases compared to figures among controls.

11. In the first paragraph, ‘characteristics of the study population’ separate figures for cases and controls presented

12. ‘Factors attributed to default’ are different from those in table 2: **They are actually not supposed to be the same.** Note that these factors were the reasons defaulters gave as having been the main contributor to their default. Controls were not supposed to answer this question because they had not defaulted.

13 Figure 1 needing gridlines: I have tried to add gridlines to the figure, obtained through Epi info, *(Kaplan Meir analysis)* and **was unable** to. For the purpose of clarity, I have presented the same information in Figure 1a and 1b. At your discretion, you can choose any of the two figures (or even both)

14. Data applying to the chart review study of 1978 people and which data are from the analyses involving the 274 patients who participated in the interview clarified.

15. In the results section, the sub-sections organized according to “Patient Characteristics”, “Timing of default”, “Risk factors for default” as suggested

16 Interviews conducted using a **close and open-ended** structured questionnaire as described in the methods section.

(17) In figure 2, the respondents were to give one most important reason for default?
Patients who attributed their default to "misdiagnosis" or "multidrug resistant TB" had been declared defaulters in the treatment register. It is after they sought services elsewhere that they were found to be suffering from other deceases other than TB or observed to be MDR respectively. The reason that they are considered defaulters is because this information was not available to their initial treatment sites.

**Discussion:**

1. The discussion has been structure according to conceptual framework as with results.

**Conclusion and recommendations**

1. The ‘conclusion’ and ‘recommendations’ sections have been merged into one.