Reviewer's report

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

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Reviewer: Epco Hasker

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The manuscript has improved but needs further revision before it will be ready to be published. I will point out just a few issues, there are more.

Abstract:
<<Default occurred most frequently during the intensive phase of treatment, 43% defaulting within initial 2 months.>> If 43% defaulted in the intensive phase, than most patients defaulted during the continuation phase.

Conclusion: <<Patients in Nairobi default more frequently during the intensive phase of treatment. Reasons patients attribute to their default include ignorance, traveling away from treatment centers, feeling better and side-effects. Predictive factors for default are inadequate knowledge on TB, herbal medication use, low income, alcohol use, previous default, HIV co-infection and the male sex.>> This is not a conclusion, it’s just a repetition of what was said in the results paragraph above.

Background:
<<In the intensive phase of treatment, patients collect drugs from facilities weekly while monthly collections are done during the continuation phase. Both phases are delivered via direct observation (DOTS).>> How can you talk of DOT if drugs are given to the patient for one week or one month? At the very least this requires better explanation.

<<Incident cases of tuberculosis increased nine-fold from 11,625 in 1990 to 116,723 cases in 2007[6] and was largely attributed to the HIV pandemic.>> This sentence is grammatically not correct.

<<It had the highest Case Notification Rate (652 /100,000 population and defaulter (Out of Control) rate (16.7% all cases) among provinces (National defaulter rate was 9% all cases) within the same period [6].>> In this sentence at least some parentheses are missing, better to split it into two sentences.

<< This study aimed to determine the duration TB patients stayed in treatment before default and factors associated with default. in Nairobi (to determine the timing of treatment default among defaulters; to determine risk factors for treatment default; and to evaluate health attitudes and beliefs associated with default should be described).>> This sentence needs to be revised, why is there
Methods:
<< The study population comprised of the cohort of patients (adult and children) registered during the period January 2005 to March 2007 from 30 purposively sampled high-volume public TB treatment facilities distributed in all the 8 health districts of Nairobi. About 14% of Nairobi’s TB caseload was registered in these facilities.>> If only 14% of the total number of patients are treated in those facilities, which were purposefully sampled and are different from other facilities (high volume), than inference to the total TB patient population of Nairobi is not valid.

Sampling procedure: << A total of 1033 controls were randomly selected from among 5659 patients who completed treatment course (matched for case and treatment site).>> What do you mean by ‘matched for case and treatment site’? Were they individually matched or group matched?

Results:
In table 1 children are compared to adults, adolescents are compared to other ages, young adults are also compared to other ages. Why not create a dummy variable for age groups?

<<Default from treatment occurred most frequently during the initial 2 months of treatment, the intensive phase, with 43.8% of cases defaulting.>> Same comment as in abstract, the default rate (per month) may have been highest during the intensive phase but most patients defaulted during the continuation phase. The abstract mentions 43% instead of 43.8%.

<< All sampled controls and 120 cases participated in the. Of the sampled 154 cases, 23(14.9%) had died while 21(13.7%) could not be traced.>> There’s a mistake in this sentence.

<<Univariate analysis indicated that long waiting for delivery of services (OR 2.34, CI 1.32-4.16) was significantly associated with default (OR 2.6; CI 1.48-4.4) (Table 2).>> Why present just the result for univariate analysis? Was the effect still there after controlling for confounding?

<< Use of herbal medication (OR 10.76; 95% CI 4.0-28.6) was significantly associated with default and predictive for default (OR 5.7; 95% CI 1.37-23.7).>> Why two odds ratio’s for the same factor?

<< Inadequate knowledge on TB (OR 8.67; 95% CI 1.47-51.3) was significantly associated with default on univariate analysis and predictive factors for default.>> What does this sentence mean?

Discussion:
The discussion is still too much a summing up of results without a clear structure. I would recommend to start by summarizing the most important findings and then comment on them in a systematic manner. As it is right now I find it very hard to
get a clear picture of which are the most important factors and how things can be improved. It is not necessary to address all factors, better to focus on those that are amenable to change.

**Level of interest:** An article of importance in its field

**Quality of written English:** Needs some language corrections before being published

**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.