Reviewer's report

Title: Time to first consultation, diagnosis and treatment of TB among patients attending a referral hospital in Bahir Dar, Ethiopia

Version: 1 Date: 18 July 2013

Reviewer: Sven Gudmund Hinderaker

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The paper can be improved, make more readable and interesting for reader.

GENERAL
1. The pages MUST have side numbers! It is cumbersome to comment without line numbers or pagenumbers.

2. For the content I suggest you drop the TOTAL DELAY. The more specific patient and HS delay is much more informative, and total delay is redundant. OK for conclusion.

3. Analysis you must do again. You cannot use health post as reference category, there are TOO FEW non-delayed in health-post so that the estimates are TOO WIDE intervals. I suggest you look at ALL your categories and check that you have chosen a good reference value. In selecting reference you must also include some statistical perspectives! It may be more natural to select HIV neg than pos as reference?

4. Many results have too many digits, giving an impression that your precision is MUCH higher than it is! E.g. AOR 3.39, 95% CI 1.29-8.93, say AOR 3.4, 95% CI 1.3-8.9.

TITLE
5. Delete name of facility. Say “referral hospital in northern Ethiopia”.

ABSTRACT:

7. Results: abbreviations first time give full, e.g (Interquartile range IQR 7-60 days)

8. Avoid words like «Inadmissibly», try be scientific. If interviewed be “politician”

9. «TB test will reduce…» this is NOT what you have shown. May be true. But dont claim!

10. In conclusion you have not even mentioned that the important determinant of delay is RURAL living, most consistent! In all tables that is obvious! Focus on
11. In conclusion of abstract you indicate that pt delay is acceptable, but HS delay is not acceptable. Fairly equal size. Reader may wonder why.

INTRO:
12. There is nothing about HIV in the intro, only TB. HIV must be mentioned! This is an important addition to make. Need not be long.

13. In SAME paragraph you need not refer to a paper TWICE even if different sentences.

14. “Delay studies...” You talk about it as if known. Your reader may not know. Rephrase it maybe “Studies on delay in starting TB treatment ...” or similar

15. EPTB contagious: yes they have sometimes cough! as you show in table. EPTB can often have an UNRECOGNISED PTB in addition, which would be potential transmitter. Not surprising as they are all infected via lungs before disseminating, but EPTB itself can hardly do so. ALWAYS suspect concomitant PTB! That is why sputum always should be taken from EPTB!

METHODS.
16. The setting needs MUCH more info. Where do people live? How do they live rural/urban? Standard of living? What do they do when sick? How far must they go? Do they all use modern health system? Traditional healers? Transport systems! Cars? Buses? Trains? Bikes? Rivers? Distribution of health facilities? Hospitals? How to get there? Rural/urban? Make this interesting so that people understand why urban/rural is a risk factor. This is important because the only important determinant is rural/urban living. You MUST give more info about it. Likely cultural differences rural/urban? E.g. use of traditional more in rural? Rural people less used to health care and get lost? A qualitative study would be nice as additional info.

17. You indicate details of demographic and clinical characteristics. They are in the tables and need not take space here. Refer to table 1.

Data analysis:
18. You say in line 3: «A and delay of more...». delete «and»

19. «patients with a median delay...» should be «patients with delay», delete median

20. You say you use multivariate log.regression. In abstract univariate. In tables both. Be consistent!

21. You must mention how ou adjusted, what was your regression model? Did you adjust for ALL variables? Selected some? How selected?

Definitions:
22. Patient delay indicate only time since started COUGH! In EPTB only 3 patients
23. Sample size considerations have not been mentioned!

RESULTS
24. You state that age among PTB and EPTB was significantly different and you give CI 2.15-9.06. You do NOT indicate what this number represents.
25. You could consider baseline info to show if categories are significantly different. In Table.
26. You give symptoms for Sm+ and SmNeg patients + EPTB. Therefore «all PTB» not needed, delete.
27. Are symptoms recorded «present symptom» or «FIRST symptom» or otherwise?

Predictors of delay:
28. In your text there are too many numbers, they are all in the table! Do not repeat all the numbers. Only sufficient to get the message and refer more to table.
29. If you MUST give numbers make it more readable e.g : adjusted odd ratio (AOR) 3.4; 95% CI 1.3-8.9. Try make it pleasant to read it.
30. I suggest you drop TOTAL DELAY, delete table and text. It does not give more than you have in pt and HS delay. Redundant.

DISCUSSION
31. Delete the first paragraph in discussion.
32. In para 2 you say: «Our findings indicate…» Actually you claim that main problem is HEALTH SYSTEM delay, and not patient delay. But they were not very different, 27 and 21, and you give no reason for your claim. You consider it obvious. And you even use in abstract.
33. Drop total delay.
34. In para 4 you say “..may result in …MDR…”. I suggest you rather state the generic fact that is can lead to drug resistance (which then may be MDR).
35. Para 5: You say “Urgently needed”. Delete “urgent”. There are many things more urgent than treating a chronic disease. It is not an emergency admission. You are a scientist, not politician.
36. Para 6. You talk very little about rural residence as a risk factor. This is your most consistent finding. There must be several cultural factors involved, aren’t there? Do rural people feel less welcome at health facilities? More use of traditional healers? Perhaps suggest “more research is needed”, e.g a qualitative study? Perhaps rural people do not have relatives working there and helping
them around, as many “urbanites” have? They don’t understand system? MUCH less exposure to it??

37. Total delay drop it.

38. Para 11 conclusion. Sentence starting “Patients with EPTB..” is too heavy and can be rephrased, “higher risk of increased delay” is same as “longer delays”.

39. Do not say “Urgently needed…”, “..highly recommended”. It is very good if we get it, and same day referral would be lovely, but for a chronic disease it is not emergency.

40. Do you find it surprising that HIV gives surprising results? HIV NEG have higher risk of HS delay, is it because HIV pos are always suspected of TB? What about patient delay? The estimate of pt delay suggests lower risk in HIV neg than pos, but not statistically significant. Be VERY careful stating NO ASSOCIATION in your study, your POWER to claim no association is fairly low.

REFERENCES:
41. Do references correctly. Do not trust the electronic reference manager. Look at every one. Especially those documents that are not journal papers.

42. Take a look at these references:: #1, 2, 11 need bold title, 20 bold author, 31 bold title

TABLES:
43. Give tables number!

44. Table 1. Baseline characteristics. This gives the same info in many tables. The only reason to keep it is if you check whether the categories in each variable are similar or significantly different, creating a potential confounder in regression analysis. Do you adjust for ALL variables in baseline in adjusted log.regression? All in table? All in baseline table?

45. Table 2. Patient delay. Title OK, column headings have errors:

46. % delayed should be delayed (%)

47. Table 3. Health system delay: Column 3 Heading says P-value. Delete. Should be only Delayed (%). The analysis must be done again. FHP visited uses as reference HEALTH POST. Only one was not delayed. This cannot be used as reference! Perhaps also change reference in HIV variable as mentioned above.

48. Table 4. Total delay: This table can be deleted. There is no additional info in this table. Errors: used comma not fullstop. “P-value” in column heading misplaced.

**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