Author's response to reviews

Title: Seroprevalence of HIV, HBV, HCV and syphilis infections among blood donors at Gondar University Teaching Hospital, Northwest Ethiopia: declining trends over a period of five years.

Authors:

Belay Tessema (bt1488@yahoo.com)
Gizachew Yismaw (gizachewyismaw@yahoo.com)
Afework Kassu (afework.gizaw@ucdenver.edu)
Anteneh Amsalu (ant.amsalu@gmail.com)
Andargachew Mulu (andargachewmulu@yahoo.com)
Frank Emmrich (Frank.Emmrich@medizin.uni-leipzig.de)
Ulrich Sack (Ulrich.Sack@medizin.uni-leipzig.de)

Version: 4 Date: 11 March 2010

Author's response to reviews: see over
Authors’ response to reviews

10th March 2010

The Editor

BMC Infectious Diseases

Re: MS: 5496971193277156 - Seroprevalence of human immunodeficiency virus, hepatitis B virus, hepatitis C virus and syphilis infections among blood donors at Gondar University Teaching Hospital, Northwest Ethiopia.

Dear Editor,

Thank you very much for your e-mail of 18th February 2010. We are very grateful for the constructive comments forwarded by the reviewers. We have addressed their comments and have revised the manuscript in line with their suggestions. Below, we have provided a point-by-point response to the reviewers’ comments.

Sincerely,

Belay Tessema
Reviewer 1: Gregory Lucas

Reviewer's report:

Summary
This manuscript by Tessema and colleagues examined seroprevalence of multiple infections in 6361 consecutive blood donors at a teaching hospital in northwest Ethiopia. The overall seroprevalence rates of HIV, hepatitis B virus, hepatitis C virus, and syphilis were 3.8%, 4.7%, 0.7%, and 1.3%, respectively. The manuscript makes an incremental advance to the knowledge of regarding the prevalence of these pathogens in this region.

Major Compulsory Revisions
1. In general, the discussion section is meandering. It could be improved by adding sections such as temporal trends in Ethiopia, comparison with nearby regions, and risk factors for infections.

*We appreciate the reviewer’s comment and we have now improved the discussion section by adding temporal trends in Ethiopia (paragraph 1), comparison with nearby regions and risk factors for infections.*

Minor Essential Revisions
1. Throughout the manuscript, please eliminate the term “binary” prior to logistical regression.

*We have omitted the term “binary” prior to logistical regression throughout the manuscript.*

2. Abstract – the statement about co-occurring infections should occur after the statement about the overall prevalence of the individual pathogens. Moreover, the sentence should be rewritten as follows, “Among those with multiple infections, the most common combinations were…”

*Corrected as per the reviewer’s suggestion.*

3. Background section, second paragraph – the phrase “Despite the growing list of emerging viruses” should be deleted and the sentence should begin with “Hepatitis B”. Additionally this
paragraph should be shortened. For example, the background information about hepatitis B epidemiology worldwide is extraneous.

*Corrected as per the reviewer’s suggestion.*

4. Methods section – the description of the laboratory tests should be greatly shortened into a couple of sentences as these are all standard assays.

*We appreciate the reviewer’s comment and we have now greatly shortened the description of the laboratory tests.*

5. Statistical analysis section – in the second line the word “were” should be deleted.

*The word “were” has now deleted.*

6. Results section – odds ratios should be reported to no more than 2 decimal places.

*Odds ratios have now reported with two decimal places.*

7. Page 9, second paragraph – this text implies that the prevalence of hepatitis B and hepatitis C is lower among HIV-infected donors than in HIV seronegative donors, which seems unlikely.

*We are very grateful for the reviewer’s meticulous observation. Now the paragraph has corrected as follow “The prevalence rate of syphilis, HBV and HCV among HIV infected donors was 7.9%, 7.1%, and 2.2% respectively, compared with the prevalence rate of 1.0%, 4.6% and 0.6% among HIV-seronegative donors. Furthermore, statistically significant association was observed between syphilis and HIV infection (P<0.001) (Table 4), and HCV and HIV infection (P=0.002) (Table 5).”*

8. Page 9 – the authors should report the statistical significance of the trends in seroprevalence of the various pathogens.
We have now reported the statistical significance of the trends in seroprevalence of the various pathogens over the study period.

9. Discussion section page 10, paragraph 1, line 8 – please replace the word “shows” with the words “may be due to”.

Corrected as per the reviewer’s suggestion.

10. Discussion section, page 10, second paragraph, line 1 – please replace the words “agrees with” with the words “is similar to”.

Corrected as per the reviewer’s suggestion.

11. Discussion section, page 10, second paragraph – the authors cited HIV seroprevalence of 2.9% in the United States. This is actually closer 0.3%.

This reference has now omitted.

12. Discussion section, page 11, paragraph 1, last two lines – the term “HIV carriers” should be deleted and the word “contamination” should be replaced with “infection”.

Corrected as per the reviewer’s suggestion.

13. Discussion section, page 11, paragraph 3 – the prevalence rate of 10.4% for hepatitis B surface antigen in the United States seems too high.

This reference has now omitted.

14. Discussion section, page 12, first paragraph -- the final sentence beginning with the word “however” can be deleted.

The sentence has now deleted.
15. Discussion section, page 12, last two lines – it is misleading to refer to co-infection rates of 34% and 38%. These are, in fact, the proportions of the small subset people with multiple infections. Co-infection rates should be expressed with a denominator of the complete population, or the proportions should be properly described.

_The proportions have now properly described._

16. Table 1 – under the title “occupation” the specific items should be indented the same amount. Additionally, the term “repeated donation” should be replaced with “repeat donation”.

_Corrected as per the reviewer’s suggestion._

17. Table 2 – the statistical significance of temporal changes should be reported.

_The statistical significance of temporal changes has now reported_

18. Table 3 – the indentation in this table also needs to be corrected.

_Corrected as per the reviewer’s suggestion._

19. Table 4 – the 56 to 65-year-old age group, which has a small number of individuals, should not be used as the withhold group in the logistic regression model. Rather, the withhold group should be one of the groups with larger numbers. Additionally, all odds ratios should be shown to no more than two decimal places.

_We appreciate the reviewer’s valuable comment. We have now merged the last two age groups and used as reference category in the logistic regression model. In addition, all odds ratios have reported with two decimal places._

20. Table 5—as above, in the age range other than 56 to 65 should be used as the withhold group. Additionally, the odds ratio and P. values for hepatitis C positive zero status in 56 to 65-year-olds should not be shown as a number but rather with a dash.
Corrected as number 19 above.

Discretionary Revisions
N/A

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: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I have no competing interests
Reviewer 2: TAHZIBA HUSSAIN

Reviewer's report:

1. “Seroprevalence of human immunodeficiency virus, hepatitis B virus, hepatitis C virus and syphilis infections among blood donors at Gondar University Teaching Hospital, Northwest Ethiopia”. It is a good attempt but very lengthy and not written concisely as a research paper. Thus, it does not provide complete information. The manuscript needs major revisions.

We are very thankful for the reviewer’s constructive comment. The manuscript has now greatly shortened and written concisely.

2. Title: “Seroprevalence of HIV, HBV, HCV and Syphilis infections among blood donors at ............. Ethiopia”. Including “trend over a period of 5 years” would be better.

We appreciate the reviewer’s comment. The title has modified as “Seroprevalence of HIV, HBV, HCV and syphilis infections among blood donors at Gondar University Teaching Hospital, Northwest Ethiopia: declining trends over a period of five years.”

Abstract:

3. Background: “The aim of the study ............ Ethiopia”. Include this also “to monitor trends of these infections over a period of time”.

This part has modified as “This study aimed to determine the seroprevalence, risk factors and trends of HIV, HBV, HCV and syphilis infections among blood donors over a period of five years at Gondar University Teaching Hospital, Northwest Ethiopia.”

4. Conclusion: It is not the right conclusion. Blood donors are usually screened for these infections namely, HIV, HBV, HCV and Syphilis. It may be replaced with “A substantial percentage of the blood donors harbor HIV and viral hepatitis infections, which otherwise would remain undiagnosed without serological screening”.

The conclusion has revised as “A substantial percentage of the blood donors harbour HIV, HBV, HCV and syphilis infections. Strict selection of blood donors and comprehensive
screening of donors’ blood using standard methods are highly recommended to ensure the safety of blood for recipient.”

5. Keywords : Instead of the full form of HIV, only HIV may be written. Include Ethiopia also. The place of study is important.

Corrected as per the reviewer’s suggestion.

Methodology :
6. The details of the HIV, HBsAg, HCV and RPR kits, (name, manufacturer, etc.) are enough. The specificity and sensitivity is not required. This will considerably reduce the length of the paper.

Corrected as per the reviewer’s suggestion.

Results:
7. In the Table 1, numbers and percentages may be given in the single column, like n (%).

Corrected as per the reviewer’s suggestion.

8. Sex may be replaced by Gender in all the Tables.

Corrected as per the reviewer’s suggestion.

9. Table 2 is fine. The title may be changed to the “Trend of seropositivity of HIV, HBV, HCV and Syphilis”. The calculation of percentages is incorrect in the HCV column in Table 2.

The title has changed as per the reviewer’s suggestion and the calculation of percentages in the HCV column has corrected.

10. Table 3 multiple infections may be written as co-infections. Instead of and, only – is enough for coinfections, i.e., HIV and Syphilis may be written as HIV-Syphilis. Similarly, HIV-HBV, HIV-HCV and so on.
Corrected as per the reviewer’s suggestion.

11. Table 4 and Table 5 may be combined and data of HIV, HBV, HCV and Syphilis-positive maybe clubbed, i.e., given side by side in separate columns and OR (95% CI and p values may be given in the last column.

We have tried to combine the two tables as per the reviewer’s suggestion but it is quite difficult to show the data of HIV, HBV, HCV and syphilis side by side in separate columns and OR, 95% CI and p values in the last column. Thus, we prefer to show the data by two separate tables.

12. The calculation of syphilis positive with reference to occupation is incorrect. The Table 4 shows 75 whereas the actual number is 83.

We are very grateful for the reviewer’s careful observation. Now the calculation has corrected.

13. The calculation of percentages is incorrect in Table 5.

The calculation of percentages has now corrected.

14. Blood group and Rh typing although is given but it is not relevant with reference to transmission of viral diseases. There is no new information with regard to the blood groups.

Though it is not relevant with the reference to transmission of viral diseases, we do believe that this data is helpful as there is very little information about the proportion of ABO groups and Rh types among blood donors in the study area.

15. It is not required to repeat the results given in Tables in the text with OR, CI and p values. Simply state whether it is significant or not.

Corrected as per the reviewer’s suggestion.
16. It appears from the Table 1 that labourers, farmers and students constitute a major chunk of the blood donors. Explain, what are the reasons for which students donate blood frequently.

*We have explained the possible reasons on the result section paragraph 1.*

Discussion:
17. Some statements are just not needed example, page 11: “The partner……contamination”.

*Corrected.*

18. The reasons for high HIV positivity among merchants, soldiers and carpenters and high syphilis among labourers and carpenters may not be given. This paper deals with seroprevalence and there is no need of such assumptions.

*This part has now deleted.*

19. page 11: second line. “first time donators” It is wrong. Please write donors.

*Corrected.*

20. There is too much comparison with other studies. Ideally, the authors should first analyse the observations of the present study and then quote what other studies report.

*We appreciate the reviewer’s comment. Now we have minimized comparisons with other studies.*

References:
21. The authors have quoted references mostly from South Africa. Cite some more references from other regions of the world as well.

*We have now cited more references from other regions of the world.*

22. Reference no.24 – check the spelling of potential.
Corrected.

23. Reference no.18 and 27 are conference papers. So, they may be deleted.

These references have now deleted.

24. Reference no.40 is wrongly written as 34.

Corrected.

1. Is the question posed by the authors well defined? Yes.
2. Are the methods appropriate and well described? Yes but not described as in a research paper.
3. Are the data sound? Yes.
4. Does the manuscript adhere to the relevant standards for reporting and data deposition? Yes.
5. Are the discussion and conclusions well balanced and adequately supported by the data? Partially Yes.
6. Are limitations of the work clearly stated? Yes.
7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished? Yes.
8. Do the title and abstract accurately convey what has been found? Yes.

If the authors revise their manuscript with suggested changes, the message that they wish to convey will be clear.

Considering the Impact Factor of the journal, wide readership, etc., I feel, if more matter is included in the study, it would provide a useful information on the status of coinfections among blood donors in Ethiopia. I thank you once again for giving me a chance to review the manuscript.

**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, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**
'I declare that I have no competing interests'