Reviewer's report

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

Version: 3 Date: 15 January 2010

Reviewer: 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.

Minor Essential Revisions
1. Throughout the manuscript, please eliminate the term “binary” prior to logistical regression.
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…”
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.
4. Methods section – the description of the laboratory tests should be greatly shortened into a couple of sentences as these are all standard assays.
5. Statistical analysis section – in the second line the word “were” should be deleted.
6. Results section – odds ratios should be reported to no more than 2 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.

8. Page 9 – the authors should report the statistical significance of the trends in seroprevalence of the various pathogens.

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

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

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%.

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”.

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.

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

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”.

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

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

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.

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.

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