Reviewer’s report

**Title:** Prevalence of Hepatitis B virus in High School and University in Bangui, Central African Republic

**Version:** 1  **Date:** 13 March 2010

**Reviewer:** EPHRAIM AYOOLA

**Reviewer’s report:**

THE STUDY:

The authors surveyed 801 students of high schools and university in Bangui and determined the prevalence of HBV markers. They examined some risk factors in the survey.

This survey provided yet another report indicating the high HBV prevalence among some african populations despite the availability of vaccines and advancing knowledge.

SPECIFIC COMMENTS

TITLE

Title needs to be changed to reflect the content: Example “The prevalence of hepatitis B virus markers in a cohort of students in Bangui....”

ABSTRACT

1. The abstract should be shortened. For example the third sentence... “Because.... attributable to HBV” can easily be expunged.

2. The conclusion is weak. Furthermore, what is meant by the statement “The results suggest that both vertical and horizontal are responsible for maintaining high prevalence....” The study reported here is a cross-sectional survey and not a study of transmission! The data cannot support such inference.

3. What is meant by “familial antecedent”? This has to be well defined in the methodology for it to mean much

BACKGROUND

1. The background is too lengthy and should be shortened

2. If previous surveys had shown high prevalence the authors need to provide the basis for wanting to re survey and state it clearly. For example could they want to determine whether the epidemiology had changed and if so why? And if not, why not? (This my suggestion) I am not sure the authors need 10 references (See references 9-19) to convey the content of the second paragraph under this section. I suggest shortening and changing this paragraph to make the basis of study meaningful.

3. Since the author used the finger stick (capillary) method instead of venous
blood they should establish comparability and concordance from the literature of highlight any limitation in addition to the advantage mentioned.

4. What is “ besides serology”?

METHODS:

1. From what month to what month was the survey carried out? How did you select the schools? Randomly? How did you determine an expected HBsAg rate of 22.3% in determining the sample size when the reported prevalence was much less by your literature review? (your reference #8)

2. The last two sentences under “methods’ belong better under” results”

3. Grammatical errors “ Individual were insured” instead of assured

4. How many students were invited to participate but declined? What were specifically asked to convey “Familial antecedents” though I am not quite clear what is meant by this!

5. The authors tested for HDV but the date was not included in the result

Statistical analysis:

The authors are better served if they were to limit themselves to reporting positivity of these markers instead of referring to “being in contact” or being infected in the past or in the present’ since no IgM – anti HBc was tested and no biochemical date was done or needed in a prevalence study

RESULTS:

1. Expunge the second line about seroconversion among 6 individuals especially since the other participants could have also changed in their serologic profile. In any case this observation contributes little to the objective of the study

2. Fig 1 can be reported in prose in the text. Was the difference statistically significant? Were the ages and sexual activities, number of sexual partners etc different between districts? Reference to “socioeconomic conditions or status” invites strict definition of parameters used in stratify these sub – populations. I suggest that the authors limit the analysis to specific variable that they questioned about ( paragraphs 2 and 3. ) Reference to “population in high promiscuity… may therefore not be necessary.

3. Again how was” familial antecedent” determined? ( paragraph 3) In African populations caution is needed in interpreting what is frequently reported as “hepatitis”

DISCUSSION

GENERAL COMMENTS: The discussion needs to be shortened, succinct and better focused.

SPECIFIC COMMENTS:

1. The first paragraph about the study being “representative” of “young educated people” is speculative. For example, what proportion of young population is ” uneducated”. What about those who had elementary and technical education in
the population. I think this paragraph should simply highlight the limitation of a cohort study and that it might not be applicable to the general population etc.

2. It is important to show the concordance, limitation in terms of comparative sensitivity either from your own data or the literature (Reference to “data not shown” is not helpful)

3. (a) Your second paragraph “The persistence of high prevalence …..” does not clearly confirms that there is a complete absence of program for fighting against hepatitis B”. For example, if a program started a few years ago whereby children are vaccinated the impact would not be seen in this age category. Also is there no health education program in the schools and Universities?

(b) I suggest that the high prevalence and risk factors should be the focus of the discussion. The limitation of the study should be highlighted. The last paragraph on page 9 under discussion is very confusing. One is not quite sure of what the authors are trying to communicate here.

(c) Also the reference to “acute infection” is untenable in a cross-sectional (non clinical) study that did not test for IgM anti HBC.

4. On page 10 reference to “a silent HBV infection’ was made. What does that mean .. What “anomaly”?

5. Paragraph 2 on page 10 states “HBV infection is linked mainly to sexual transmission”. In what populations? State reference, though I suggest that this is not the case in most African populations where HBV infections occur in early childhood.

6. The last paragraph is not helpful or meaningful. The entire last paragraph under discussion contributes little and should be removed.

TABLES
1. Tables 1 and 2 can easily be merged into 1
2. Table 3 contains many elements that need either removal or clear definition. For example how was “familial antecedent of HBV” determined and validated? Also if the HBV in “public school” was much and significantly higher, it might be interesting to analyze and compare the frequency of some risk factors in the three subgroups of students.

FIGURE
Figure 1 can easily be reported in the text

Some typographic and grammatical errors need to be corrected editorially

REFERENCES
The number of references should be reduced to about 20 that are relevant.
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 interest