Reviewer's report

Title: Assessment of water, sanitation, and hygiene practice and associated factors in a Buruli ulcer-endemic district in Benin (West Africa)

Version: 1 Date: 21 March 2015

Reviewer: Ernest Kenu

Reviewer's report:

Major

Abstract:
The background of the abstract did not clearly define the problem for which the study was done. The authors indicated the growing importance of the use of WASH in controlling NTDs but failed to link this statement with the baseline study. A clear link between the two will ensure coherence and manuscript easily comprehensible.

Check line 44, 45 and 46. The linkage is missing here

Main Manuscript

The authors studied an important subject that require a lot of attention particularly in line with improving the health of disease burden communities. However, few areas need some attention to improve on the manuscript as well as readability.

Background

The authors clearly defined WASH, NTDs and their importance from line 71 through to 86. They went on further to talk about Buruli ulcer from line 87 to 96.

The authors failed to link the evaluation of WASH indicator performance and BU. This missing link makes it difficult to follow the argument since the authors discussed the relationship between WASH indicators and BU in line 224 to 227. A clear link will improve on the work and will clearly state the problem for the baseline study as has been done for soil transmitted helminthiasis, trachoma, LF, Guinea worm and schistosomiasis (check line 78 to 83).

Methods

1. The method used was appropriate, data used for analysis was sound and the figures had no evidence of manipulation

2. The use of the word “triangulation” under study site was inappropriate. Triangulation is part of the analysis hence should be put in the analysis section of the methods. I suggest the authors delete it from line 107 and put it under data processing and analysis possibly after line 138.

3. It is unclear how the 600 participants were selected, the authors should detail
how the sample size was calculated and the sampling done. This was missing under the sampling section.

4. The statement “Univariate analysis was conducted. Multivariate analysis was carried out using multiple logistic regression, with odds ratio, and 95% confidence interval (CI), to determine the effect of factors on the outcome variables and to control confounding factors. The analysis was used to determine the relationships between the associated factors and the sanitation and hygiene status”. Line 133 to 137 is too generic, it is important to be specific in terms of the outcome variable at least. The statement need to be written well by a statistician.

5. Good discussion but it should start with the primary work, use STROBE checklist for guidance.

6. Kindly rephrase line 300 to 304, the link between recommendation for WASH and BU is not clear.

MINOR

The method section and the results needs to be improved- Use the STROBE checklist for cross-sectional study to improve on the sections.

The section subtitle Variables should come before data analysis.

The write up of the results should be improved upon using STROBE Checklist for cross-sectional study. It is important to start the results section with the demographic characteristics of the respondents. This will help the reader appreciate the findings being reported. Record review of BU cases may be reported last since that is not the main work but was done to show the burden of BU in the district.

Some of the findings from the key informant interview were mixed with discussion. The authors should report their findings or what was said by the key informant under this section and take the possible explanations to the discussion section. Eg “We have always drunk water like that” or “We do not have disinfectants”. Generally, people had experience of using disinfection techniques such as chlorination, but did not implement them, for various reasons, probably the extra work or additional costs required. The bold portion is an explanation from the authors and should be under discussion.

The authors should be consistent with the number of decimal places.

Table 2 should rather be table 1 to show the demographic characteristics of the respondents. The title may be improved upon since it contained the WASH indicators assessed.

Table 3 and 4- There was repetition of analysis on Sanitation status and Hygiene status. The authors should just keep it in one of the tables and delete from the other.
Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests