Reviewer's report

Title: Health care seeking behavior for diarrhea in children under 5 in rural Niger: results of a cross-sectional survey

Version: 1 Date: 8 February 2011

Reviewer: Christiane Horwood

Reviewer's report:

Major compulsory revisions

Background: If there are guidelines on management & referral for severe diarrhoea (from IMCI) this needs to be explained. For example, are children with severe diarrhoea given intravenous fluids and then discharged home at every level of care? Under what circumstances do the protocols advise health workers to refer children with severe diarrhoea?

There is a lack of clarity in the definitions of severe diarrhoea, between what is mentioned in the methods and what is mentioned in the results (do the criteria for severe diarrhoea include only unconsciousness, or is fatigue also a criterion?).

Results: The analysis presented is almost entirely incorrect, most of the proportions presented that can be calculated are incorrect. The analysis (including all the tables) needs to be carefully checked, redone and corrected.

All proportions presented should include a numerator and denominator.

In table 1 number of education years is unclear – does this refer to the mother or the respondent?

I do not think table 3 is relevant. There is no discussion/comment about the differences observed between districts and this is not the focus of this paper.

The main message of this paper is to determine at what level surveillance of severe diarrhoea would be most effective, it is therefore important to know where those children with severe diarrhoea received care. The authors state that 1/3 of carers sought care at health posts staffed by community health workers, is intravenous rehydration available at this level? If not, how many of the diarrhoea cases were referred and where were they referred to? Few carers sought care at the hospital, but this does not mean they were not referred on to a higher level of care. It is not possible to determine from these results how many of the children received care at another level to that at which care was sought. This is mentioned in the discussion and the authors state their assumption that children in urban areas are referred but not those from rural areas, but no data is presented to support this. This makes the main conclusion of the paper inappropriate, since it is possible that all children with severe diarrhoea were referred to the district hospital and received treatment there.

The discussion should be shorter and more focussed on the main message of the paper.
Minor compulsory revisions
The last sentence in paragraph 3 of the background is not clear. Please clarify that severe dehydration can be managed at the facility, and exactly at what level of care this can be done.
Last sentence of definitions paragraph is incorrect not ‘intravenous oral rehydration solution’.
Discretionary revisions
The introduction and methods could be made more succinct without losing information.

**Level of interest:** An article of limited interest

**Quality of written English:** Acceptable

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

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