Reviewer's report

Title: Community-acquired diarrhea among children and adults in urban setting in Senegal: clinical, epidemiological and microbiological aspects

Version: 1 Date: 10 June 2013

Reviewer: Estelle Kanyala

Reviewer's report:

The manuscript describes clinical, epidemiological and microbiological aspects of diarrhea in the urban region of Dakar and two suburban areas close to Dakar.

I. Major concerns

The authors acquired interesting data and performed detailed analysis of the data, which is worthwhile to be published, but the presentation of the data may be considerably improved.

The spelling and grammar of the whole manuscript must be thoroughly reworked: Some parts of the manuscript were copied from the protocol without changing the orthography. Before resubmitting the manuscript must be checked by a native speaker.

The methodology of this study is not clearly described. The authors should restructure the whole section and describe the different procedures in different paragraphs to make it more comprehensible.

II. Minor comments

The aim of the study not clearly defined and not consistent with the rest of the manuscript: In the abstract and in the background section the authors formulate the aim to describe the epidemiology and etiology of community acquired diarrheal infections, in children and adults living in urban settings in Senegal. In the manuscript they describe clinical, epidemiological and microbiological aspects of diarrheal infection in urban and suburban areas.

Line numbers should be added to the manuscript II.1. Abstract The abstract contains several orthographic mistakes (eg. line 2: adult (adults), line 3: setting (settings), line 6: virus (viral), parasites (parasitic), line 7 over 5 (children up to five years of age....older than five years of age)).

II.2. Methods

II.2.1. Study area, target population and samples collection

Paragraph 1

This section is not detailed enough. It needs a clearer structure using subheadings for each technique.

Why did the authors choose specially those areas? What motivated their choice?

Why did they not include a control group without diarrhea?
- Paragraph 2
How many subjects were included in the study? What is the sample size?
The authors should describe the criteria more clearly a subject had to meet to be included in study (how, when and where the subjects were recruited).
Clinical examination may be described in more detail. What exactly has been investigated (fever, weight…..)?

II.2.2.Laboratory methods
The author should give references for the applied laboratory methods or describe the methods in more detail. Which PCR methods with which primers were used?

II.3. Results
In Table 1 there is a foot note saying that only 185 samples were tested for enteric viruses. This should be explained in detail in the methods section and clearly stated in the results section.

Page 6, line 4: The number of patients included in the study was 223, so the authors must use 223 to calculate the different percentages.

Page 6, line 4: Author must not include patients which lived outside the study area

Page 6, line 8: Dehydration should be defined in the methods section

Page 6, line 19: The questionnaire should be described in the methods section

Page 7 line 1: I cannot find the described information in Table 1

Page 7 line 7: I cannot find that numbers in Table 2.

Page 7. Line 7:I doubt that Citrobacter, Klebsiella, Enterobacter cloacae are causes of diarrhea. I assume the authors could have isolated much higher numbers of these and related enterobacteria, if they had used corresponding methods. The analysis of the data is significantly hampered by the lack of a control group.

Page 7, line 12: The rates of infections with different helminthes are interesting. But again these helminths(and Trichomonas and Giardia)are probably not a true cause of diarrhea and again a control group would be desirable.

The different areas may be described in more detail and analyzed separately.

II.4. Discussion
Page 8, line 19 -21 may be deleted.

Page 8 line 23: The authors should discuss that most of the parasites are probably not a true course of diarrhea
Page 8, line 24: This age group does not exist in the study. Please consider the real age group (children up to five years of age instead less than 5).

Page 9 line 3: see comment page 8 line 23: The authors should discuss that most of the parasites are probably not a true course of diarrhea.

Page 9 line 8: The authors may discuss reasons for the higher rate of infections of Schistosomiasis in older age groups.

Page 9 line 22: see comment page 8 line 23 The authors should discuss that most of the bacteria are probably not a true course of diarrhea. They should add that the significance cannot be determined because of the lack of a control group.

Page 10, line 1: The high prevalence of Rota Virus in children (and the low rate in adults) is an interesting finding that should be discussed in more detail. How is the situation in other African countries? May that disease be prevented by a vaccine?

Page 10 line 1: The relevance of the further viruses may also be discussed. To me the comparably low rate of Noro-Virus seems interesting. Did the authors determine the Enteroviruses in more detail. Why did they decide to investigate the samples for Enterovirus?

Page 10 line 15 and 16 may be deleted

Page 10 line 26: and children are more prone develop diarrhea.

**Level of interest:** An article of importance in its field

**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 declare that I have no competing interests