Reviewer's report

Title: Effect of a multi-faceted quality improvement intervention on inappropriate antibiotic use in children with non-bloody diarrhoea admitted to district hospitals in Kenya.

Version: 1 Date: 9 August 2011

Reviewer: Girdhar Agarwal

Reviewer's report:


The present study is ill-planned. None of the ingredients (objective, method, analysis and result) of an epidemiological study is presented in a proper manner. Even the abstract has not elaborated on the main findings. The written language makes the contents incomprehensible at many places.

Setting:

Here the subjects (1160 non-bloody diarrhoea children) are selected retrospectively from hospital records. The intervention is given to health workers, whom are studied prospectively. This fact should have been written exclusively.

Objective:

The primary objective is to study the effect of intervention given to health workers. This is not mentioned anywhere in straight forward terms.

Analysis:

The authors are trying to use multi-level model, in which some variables are measured on individual level and some variables are measured on cluster (hospital) level. This is as simple as that. But they have described the analysis and results in such a complicated manner that one gets lost in reading the results and can not make out anything out of that. There is no need to describe the model separately in an appendix. Multi-level models are well known. A proper reference would serve the purpose. At the most, they could have given the equation of model used.

Results:

Table 1 is redundant as a large proportion of data are not available.

The main results are in Table 3, which is confusing. It is supposed to present the results of a multi level model. The numbers (N) presented are actually denominators of a fraction. They should be accompanied with the number of
outcomes (numerators). The crude or unadjusted odds ratios should be presented along with adjusted odds ratios. The variable crackle has no meaning as three levels (absent, present and not recorded) do not make any sense.

In view of the above comments, I can not recommend it for publication in this esteem journal.

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

**Quality of written English:** Not suitable for publication unless extensively edited

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

**Declaration of competing interests:**

'I declare that I have no competing interests'