Reviewer's report

Title: Assessment of Paediatric Inpatient Care during a Multifaceted Quality Improvement Intervention in Kenyan District Hospitals _ Use of Prospectively Collected Case Record Data

Version: 2 Date: 5 June 2014

Reviewer: Stephen John Walters

Reviewer's report:

Major:

As one of the main aims of the manuscript appears to be the comparison of prospectively and retrospectively collected outcome data from the same population I would have expected to see a more detailed systematic review, in the background section, of the merits (and weakness) of each data collection approach and also a brief summary of previous research in this area.

The manuscript need to be clear whether or not it is reporting the results of the prospectively collected outcome data and comparing it with the previously reported results using retrospective data. Or a methodological paper comparing and contrasting the merits of prospective vs. retrospective data collection on the same population, using the Kenyan hospital study as an example population/case study.

If it is the former; then the manuscript should comply with established standards for reporting cluster randomised trials e.g. CONSORT.


If the latter then the manuscript needs a more detailed systematic review, in the background section, of the merits (and weakness) of each data collection approach and also a brief summary of previous research in this area.

The study would benefit from a diagram clearly detailing with calendar year clearly detailing over what periods the retrospective and prospective data were collected.

Have there been any major policy or organisational changes in Kenya and Kenyan hospitals over the time period?

Ideally all the supplementary material particularly Supplementary Tables 3 and 4 should be included in the main text.

It is important to show that the characteristics of the populations (and samples) for the retrospective and prospective data collection periods are the same and that we are comparing like with like. At present given the data that is actually
presented this is very difficult to do.

I would like to see a table with the demographic characteristics of the 4 Intervention group hospitals combined into one group; the 4 control hospitals combined into one group for both the retrospective and prospective data collection periods.

e.g., four columns
1) Control - retrospective data
2) Control - prospective data
3) Intervention - retrospective
4) Intervention - prospective

This table would help show whether or not the prospective and retrospective samples have similar demographic characteristics.

This table could also be repeated and have the 6 month and 18 month data as well.

The statistical analysis of the data is acceptable.

Minor

Figure 1 - detonation style plunger graphs
The bars in the detonation style plunger graphs are not required. What is required is a symbol for the point estimate of the difference (effect size).

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

None