Reviewer's report

Title: Validation of triggers and development of a pediatric trigger tool to identify adverse events

Version: 3  Date: 17 October 2014

Reviewer: David Inwald

Reviewer's report:

The manuscript is much improved. In particular the Methodology is much better explained. There are still some problems, however.

Minor essential revisions

1. Methods. Please clarify that the physicians ONLY reviewed records with at least one potential AE identified by the RNs. And therefore that the additional AEs identified were only from these records (p12).

2. The methodology for determining inter-rate reliability (Reliability and validity, p10) is not robust. This should be acknowledged in the Limitations section.

3. Results p12. "The PPV for records containing at least one trigger and an AE was 48.9% (204/417)". I assume this means one trigger and a potential AE (ie a potential AE as detected by the RNs). Please clarify both here and in the Discussion (p15).

4 Discussion p15. The paragraph entitled "There does not seem to be a shared definition of what an acceptable PPV for a trigger tool is" - is unclear. Please either delete or rewrite.

5. Discussion p15-16. The paragraph entitled "There is variability in the outcomes of different studies" notes the variability between studies but fails to offer an explanation.

6. Discussion p16. Paragraph entitled "There are several factors influencing the information yield from a record review". The reported AE rate in all the previous studies cited in the Introduction was below 20%, yet in this study the rate is 34%. The authors have suggested that previous studies have under-reported AEs due to a too stringent definition of harm but it seems more likely that the definition of harm is too lax in the present study. It seems to this reviewer highly unlikely that 34% of admissions to a tertiary children's hospital in the developed world came to harm due to faulty healthcare. The definition of "harm" should be given alongside the definition of "AE" on page 7 for clarification. Some reference to this problem should also be made in the Limitations section.

Level of interest: An article of importance in its field
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 I have no competing interests.