Reviewer's report

Title: Hospital-based, prospective, multicentre surveillance to determine the incidence of intussusception in children aged < 15 years in Germany

Version: 1 Date: 10 November 2010

Reviewer: Mahomed Patel

Reviewer's report:

This paper offers an interesting statistical technique to incorporate under-reporting of intussusception in estimating disease incidence and has a sound rationale. Its focus is primarily for validating the technique. However, I do not have the appropriate statistical expertise required to comment on the appropriateness of using the model in this context.

1. Is the question posed by the authors well defined?  
Yes

2. Are the methods appropriate and well described?  
The epidemiological techniques are appropriate, but I do not have the required expertise to comment on the statistical methods.

3. Are the data sound?  
Yes.

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?  
Yes

5. Are the discussion and conclusions well balanced and adequately supported by the data?  
The epidemiological aspects are described adequately.  
Minor essential revision: An alternative method to assess under-reporting cited by the authors is the capture-recapture technique. It would be helpful to describe the relative merits of the two techniques.

6. Are limitations of the work clearly stated?  
Yes.  
Minor essential revision: It would be useful if the authors would (a) comment on the validity of the ICD codes for identifying all cases with IS at the hospitals (e.g. the quality assurance methods used to assess validity of the codes in identifying all cases with IS); and (b) provide some indicators on the quality of the ESPED data (e.g. peer-reviewed publications of the data or evidence of the quality and usefulness of the system).
7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
Yes.

8. Do the title and abstract accurately convey what has been found?
Yes.

9. Is the writing acceptable?
It is acceptable, but some sentences need further editing to simplify the message e.g. second sentence under the 'Background' of the Abstract.

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

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

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