Reviewer's report

Title: WHAT GIVES RISE TO CLINICIAN GUT FEELING, ITS INFLUENCE ON MANAGEMENT DECISIONS AND ITS PROGNOSTIC VALUE FOR CHILDREN WITH RTI IN PRIMARY CARE: A PROSPECTIVE COHORT STUDY

Version: 0 Date: 22 Apr 2017

Reviewer: Ann Van Den Bruel

Reviewer's report:

This manuscript describes secondary analysis of a well-known research study. The methods are clearly described and are valid.

The findings are interesting and offer additional information to what is already available on the topic.

I have two concerns that I would like to bring to the authors' attention:

1. the definition of gut feeling that was given to the participating clinicians appears to have lead to a different interpretation of what gut feeling is. When clinicians express gut feeling in 20% of children, this no longer seems to correspond to a feeling that something is wrong without having clear arguments for this feeling, but rather suggests they have interpreted it as a measure of severity. The authors have briefly commented on this in the discussion section, but the impact on the results is potentially very large. The other available study in children presenting to primary care found a prevalence of 3.1% of gut feeling, suggesting that that cohort of GPs did not experience gut feeling very often and certainly did not equate it with clinical impression of severity. Was clinical impression collected in this study, and if so, how did the two concepts compare? Do you have any qualitative evidence on how they interpreted gut feeling? If gut feeling arises from conflict between intuition and reasoning, or from contextual information that is not strictly clinical, then the occurrence of gut feeling would be rare and cannot be fully explained by clinical variables. Neither seem to be the case in this study, which suggests strongly that what the authors are examining is not gut feeling.

2. reconsultation and hospital admission are defined as health outcomes. Although both can be considered as signs of a negative health outcome, behavioural and contextual factors certainly also come into play. In this study, only 38% of children were admitted for lower respiratory tract infection or bronchiolitis and a substantial proportion was admitted for upper respiratory tract...
infection. Similarly for reconsultation for symptom deterioration, which is also in part driven by parental health-seeking behaviour. The quoted prognostic value therefore reflects true negative health outcomes and perceived negative health outcomes not necessarily corresponding to the child's actual health. I would recommend abstract, discussion and conclusion would include this nuance, because it is believed and shown in earlier studies that gut feeling is especially useful in serious illness prediction.

Minor remarks

Severity dichotomisation: I did not understand how this was done; please clarify.

Few typos: clinician's where it should have been clinicians.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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Please indicate the quality of language in the manuscript:

Acceptable

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