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

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Reviewer: Nikki Turner

Reviewer's report:

Overall this is a very well thought out and well presented study. The statistical analysis I am not qualified to review thoroughly as I am not a biostatistician, but the variables chosen and the basis for the variables in the multi-analysis seems reasonable.

I have one concern about the described conclusion of "in the presence of information about specific symptoms and clinical signs, gut feeling does not have an additional prognostic value". I have listed my concern under the discussion heading below.

A few issues that would benefit from further clarification or expansion:

1. Introduction

The literature presented in the introduction focuses on the difference between 'intuitive' processing and 'analytic reasoning'. In particular there is described a sense of dissonance between the two processes: as referenced to 13. 'a gut feeling something is wrong'. However the results from this study would suggest that 'gut feeling' has considerable correlation with clinical markers. I would like the authors to consider more in the discussion as to whether there is much more overlap with 'gut feeling' and 'analytic reasoning' that the literature quoted describes i.e. whether an experienced clinician is making rapid decisions based on their underlying experience of analytics with unwell children, and may not even be consciously aware that they are doing this.

2. Methods

Participants: Please could the authors explain 'self-reported prescription of antibiotics in 30% or less" - where does this come from, and what is 30% or less….of what?
Data collection:

While I am aware much of the methodology is listed in the original study that this secondary analysis is based on, please could the authors add information on how children were recruited - was this in regular hours, sequential recruitment etc.... then in results how many were missed in the recruitment process.

3. Results

Please could the authors clarify in the methodology how the clinical reported illness severity was undertaken. Is this a scale measure and what does it consist of?

Prognostic value of gut feeling. The final sentence stating 'there was evidence of clinician clustering effect for re-consultation but not hospitalisation'. I am not sure I understand what this is, please clarify

4. Discussion

A well written discussion.

My one major concern is with the final conclusion that 'we did not find evidence that gut feeling was associate with subsequent reconsultations with evidence of deterioration..." . As 'gut feeling' was associated with higher use of antibiotics, if we assume antibiotics has a role to play in improving outcomes there surely one cannot assume gut feeling was not a good thing as you do not know what the effect would have been without the use of antibiotics. This issue is listed in the limitations, but despite that the authors conclude "in the presence of information about specific symptoms and clinical signs, gut feeling does not have an additional prognostic value". However as gut feeling was independently associated with increased antibiotic prescribing I do not think the authors can answer whether this helped to improve prognostic value or not and I would not accept the statement 'does not have an additional prognostic value'. I would suggest the authors cannot answer that question one way or the other.
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?
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No

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