Author's response to reviews

Title: Diagnostic omission errors in acute paediatric practice: impact of a reminder system on decision-making

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Author's response to reviews: see over
Dear Editor-

Thank you for the reviewers’ comments. We have made changes to the manuscript to reflect their comments, as detailed below:

REVIEWER 1 COMMENTS:

We notice that there are no compulsory revisions. The general comment indicates that the reviewer believes that usage statistics of the DDSS were very good, in contrast to reviewer 2 who believes that there was poor usage.

Minor essential revisions:

1. "Data...are/were", not "data...is/was"

This has been changed throughout the article.

2. Results - paragraph 2, you say "majority", but you really mean "largest subgroup, since 34.5% is not a majority.

This has been changed (page 13, line 7)

3. Figures 3 and 4 are mislabeled - both as "Figure 1"

This has been checked and corrected.

4. The caption for Table 3 should be more complete. Why are there ?'s in the "DDSS log in" row, yet the total is known? What is the difference between a log in and incomplete usage? The "Incomplete" row is really "step 1 completion", right? Otherwise, one might conclude that incomplete+complete=total.

5. Figure 4 would benefit from a bit of a caption (the captions/legends for tables and figures should allow them to "stand on their own", without requiring the reader to flip back and forth to the text).

The captions have all been revised. Further explanations for the questions raised in point 4 are now provided below the table (see page 30). For clarity, figures are given for step 1 and steps 1&2 completion now.

Discretionary revisions:

These comments were particularly useful. We have addressed some of the comments under this section:

1. You might say a word or two about how ISABEL works....
Under the introduction section, further detail on how Isabel works, including a reference to MS Blois work has been added (page 5).

2. You might way a word about what a registrar is…

This has been addressed. Where there may be differences from US and UK terminology, these have been clarified (page 6).

3. In the discussion, you might point out that ISABEL was not given the full case, so it was at a disadvantage when compared to the expert reviewers.

This was a useful point, and has been mentioned in the discussion (page 19).

4. You might comment on the variability of the lists generated by ISABEL…

This was again a very useful point; although the study did not focus on the suggestions produced by the DDSS itself, this data was available. We have now analysed the number of unique diagnostic suggestions produced by Isabel for the entire set of 125 cases, and described the findings on page 15.

5. When discussing barriers to use, you allude to, but don't say explicitly, that real use of the system is likely to be better accepted than the experience of the study subjects, since the study protocol required additional, onerous steps.

This was a significant barrier to trial completion, and hence it has been explicitly described on page 19.

REVIEWER 2 COMMENTS:

Major compulsory revisions:

1. I do not agree to qualify the study as a “controlled clinical trial”…

We have now deleted all references to controlled trial from the abstract, introduction and conclusion.

2. Some information is missing concerning the number of physicians who actually attempted to use the system and complete the episodes.

The design of the study website did not allow precise characterization of who attempted to access the DDSS and failed, unless they had entered (some) data into screen 1 and submitted it. However, the reviewer raises a valid point about the fact that further detail on how many subjects used the system (complete and incomplete) would be crucial. We have provided this information and a new figure (page 13, and figure 5).
3. In this kind of evaluation, the between-user (i.e. physician) variability may differ from the within user variability.

We recognize this effect of clustering. We have reanalyzed the data for ‘unsafe’ diagnostic workups as well as for diagnostic quality scores using subjects as the unit of analysis. This information has been provided on page 11 (methods) and 14 (results). Table 7 has been updated.

**Minor essential revisions:**

We have checked all tables and figures.

**Discretionary revisions:**

1. The table 3 is redundant with flow diagram. The numbers for each center could be reported in the figure and the table could be omitted. Page numbering would help the reviewers…

We felt that the figure would become quite unwieldy with all centres’ data on it, hence left the table to provide this information. This also provided us the opportunity to mention some explanations below the table. Page numbers have now been inserted.