Reviewer’s report

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

Version: 1 Date: 1 September 2006

Reviewer: Isabelle Colombet

Reviewers report:

General comments:

This paper describes a study subsequent to the one published in BMC Medical Informatics and Decision Making in April 2006. This previous paper reported an evaluation of ISABEL thanks to simulated cases. One step forward, this paper reports a study which evaluates ISABEL with the same design (within subject before-after evaluation) but in a different setting (multicenter and in the routine of care). One major interest of this study is to estimate in real setting, the frequency of use of ISABEL, “in intention to help”. The results shows a relatively low frequency which is somehow disappointing. This reinforces the necessity to evaluate the implementation and acceptability of computer decision systems in the routine of care, before evaluating their impact on patient care. The limitations of the design are well discussed. However, the possibility of clustering effects is not discussed. The perspectives brought by the results could be mentioned:

Major Compulsory Revisions

1 - I do not agree to qualify the study as a “controlled clinical trial”, as it is in the abstract, in the introduction (p3) and also in the conclusion. According to the Cochrane Collaboration handbook and description of study checklist, the term “controlled” refer to the comparison with a different group observed in parallel with the experimental group. The study reported in this paper is not a controlled before-after study as there is no control group of clinician who would not use the system. The design is more appropriately stated as a within subjects before-after evaluation (as it is in the Method section).

2 - Some information is missing concerning the number of physicians who actually attempted to use the system and complete the episodes. These information would allow to estimate the mean number of cases by physicians, whether the number of unsuccessful attempts is due to a few clinicians or not. Since the intervention targets the physicians more than the patients, this information is important to add in the flow diagram.

3 - In this kind of evaluation, the between-user (i.e. physician) variability may differ from the within user variability. This problem should be addressed by the statistical methods of analysis.

Minor Essential Revisions

4 - I have got a mess in figures (this may be a problem of downloading). The flow diagram is referred to as figure 3 in text and it is numbered Figure 1. So is the allocation scheme. Besides, I have got one figure 5, and 2 parts of inappropriately sized screen captures…

Discretionary Revisions

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…

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes

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