Author's response to reviews

Title: The effectiveness of clinical computerized guidelines in the process of care: a systematic review

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Version: 2 Date: 27 July 2009

Author's response to reviews: see over
The Editor,

BMC Health Services Research

Dear Editor,

We would like to thank you for revising our manuscript. We also thank the reviewers for their critical comments, which helped us to improve our article significantly. Please, find below our point to point responses to the comments.

Yours Sincerely

Gianfranco Damiani, Luigi Pinnarelli, Simona Carmela Colosimo, Roberta Almiento, Lorella Sicuro, Rocco Galasso, Lorenzo Sommella, Walter Ricciardi.
Paul Glasziou

Major Suggestions
1. It would be helpful to provide a "forest plot" of the results of the individual studies (this does *not* need to have a pooled overall result). It may also be helpful to show these in the subgroups, particularly the "in workflow" "not in workflow" split, to get some idea of individual study effects and their heterogeneity.

We provided a plot showing the positive or negative effect of each single study, stratified by feature “Automatic provision of recommendation in electronic version as part of clinician workflow” (please see figure 2)

2. I think there should be a table listing the studies and showing the quality criteria. I realise this is large (45 studies) but important for readers who will want to be guided to look at individual studies for picking up on systems.

On the basis of your advice, we added a table with the quality assessment for each study (please see table 3)

3. The Discussion is weak currently. Tow things that would help are (a) to discuss the findings of previous reviews and what the current review adds, and (2) to discuss some of the implementation issues of the findings, e.g. some examples of what it mean to have the system in the workflow.

We took into account your suggestions. Findings of previous reviews and what the current review adds were discussed (please see page 7 lines 22-30). We also discussed some of the implementation issues of the findings related to the presence of the feature “Automatic provision of recommendation in electronic version as part of clinician workflow” (please see page 8 lines 5-9).

4. Related to this some previous systematic reviews are omitted, in particular Hunt's Cochrane Review (update of reference 14).

The bibliography was updated.

Some minor things:
5. The numbers should be rounded, eg the OR of 17.45 could be 17.5 and the CI 193.69 should be 193).

The numbers of OR and CI were rounded on the basis of your suggestions.

6. I would provide the list of databases searched in the abstract.

The abstract was modified adding the list of databases searched (please see page 2 lines 10-11).
Pierre Durieux

1. The authors do define clearly which study designs are taken into account: Observational studies is too much imprecise to be accepted. For example, how interrupted time series, controlled before after studies or uncontrolled before after studies are taken into account?

The selected studies were evaluated on the basis of a ten point scale according to criteria set down by Chalmers et al (1981). We included studies with a minimum score of 5 in final analysis and according to this assessment only 6 observational studies were included in our analysis. The design of selected observational studies are detailed in table 3 (please see table 3).

In the paragraph "inclusion and exclusion criteria" they say that they will compare electronic guidelines with what they name traditional methods. In the following phrase the comparison arm is routine care which is different.

We acknowledged your suggestions and “routine care” was replaced by “traditional methods” (please see page 4 line 15).

They exclude studies involving children because they say that there is a problem of adherence to guidelines in this age group but, as far as we understand the paper, interventions are on health professionals, not on patients.

We decided to exclude studies involving children and adolescents because often paediatricians show critical limitations to comply with clinical guidelines treating patients aged <18 years. (please see page 4 lines 20-22)

2. Data extraction: it is unacceptable to say that positive or negative effect of intervention were defined according to the authors' opinion. Outcomes presented in each paper should have been reviewed and analysed by the authors according to pre defined criteria.

We took into account your indications and reviewed the methods section (please see page 5 lines 4-8). We elucidated the specific criteria to identify positive and negative effect of computerized guidelines. These criteria were defined before extracting data.

Moreover, we clarified that the final step of the process for the definition of CCG positive/negative effect was confirmed according to “authors’ judgment in the conclusions’ section of each single assessed paper” (this sentence replaced the previous “according to authors’ opinion”.(please see page 5 lines 8-10).

3. Quality assessment. Not clear for me. What do the authors means by "appropriete statistical analysis"? What about cluster trials, did they review if and how the authors took into account the cluster effect in their analysis.

According to above mentioned Chalmers criteria the item “appropriate statistical analysis” provided an overall assessment of the statistical analysis, evaluating elements such as statistical inference analysis, statistical significance of primary outcomes, methods to show the end results.