Author's response to reviews

Title: Evidence for handheld electronic medication records in improving care: a systematic review

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Author's response to reviews: see over
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RE: MS: 1516443112973500 - Evidence for handheld electronic medication records in improving care: a systematic review

Response to reviewers:

We thank the reviewers for their time in reviewing our manuscript and for their comments. Responses to specific comments follow.

Reviewer: J. Handler

In order to assure readers that the search for quality data was truly comprehensive, the authors should do a second level search for all controlled trials, perhaps excluding those that used convenience samples. For that round, I believe it would be reasonable to search CINAHL, PubMed, etc... I think that reviewing the citations in every identified article would be nice, but not absolutely necessary, for this second round. If this were done and the results were included in the paper, then I think this would be a much stronger paper -- one that should be published.

Please note that in our initial search strategy, we used the EPOC search strategy to find relevant studies. This search strategy (below) has been optimized to find RCTs as well as non-randomized studies such as controlled clinical trials and interrupted times series:

(randomized controlled trial or controlled clinical trial).pt. or exp Intervention Studies/ or intervention studies.mp. or experiment$.mp. or (time adj series).mp. or (pre test or pretest or (posttest or post test)).mp. or exp RANDOM ALLOCATION/ or random allocation$.mp. [mp=title, original title, abstract, name of substance, mesh subject heading] or impact or intervention? or chang$ or exp EVALUATION STUDIES/ or evaluation studies or evaluat$ or effect? or COMPARATIVE STUDY/ or case control or controls or (control adj (group? or subject? or patient?!)) or compara$

Thus, we feel that the current search of 1773 abstract likely captured all controlled studies. Our selection process for obtaining full text retrieval was also broad, to avoid missing any relevant study. Since we were unsure at this stage if we would have any RCTs to review, controlled trials, interrupted-time series and before-after trials were included for full text retrieval.

Of the 29 excluded abstracts, 22 were excluded since they were not RCTs. Of these, none were controlled studies. As shown in the updated Figure 1, 9 were before-after studies (but not controlled before-after), and 13 were observational studies. In the discussion, we have included a limitation that high quality studies may have been missed, but that no controlled studies were excluded.

Finally, studies had to be a RCT to be included in our review. However, it is important to note that there were no controlled trials excluded (Figure 1), minimizing the chance that a high quality study was missed. Less rigorous study designs such as before-after studies were not included.

Reviewer: D. Stengel

I wonder whether the authors are aware of recruitment rates or even results of the American RCT announced in the Lancet a couple of years ago.

While we did exclude several papers that described just the methods of RCTs of handheld EMRs (with no results), we were unable to find a study in the Lancet evaluating at handheld electronic medical records. We both have independently searched Medline and pre-medline for this Lancet article. We would appreciate the reference if available.
Yours sincerely,

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