Reviewer's report

**Title:** A Study of General Practitioners' Perspectives on Electronic Information Management Systems in NHS Scotland. Mixed-Methods Analysis of Barriers and Facilitators

**Version:** 1 **Date:** 12 January 2013

**Reviewer:** Jim Warren

**Reviewer's report:**

This study gives rich insight into general practice EMR system use in a mature IT setting, and in the context of a specific relatively-recent change (the move away from a single state-sponsored solution). The authors show good insight and give good supporting references with respect to clinical IT adoption. This is a very useful case study. I have no major compulsory revisions but a number of suggestions for improving the manuscript and/or thoughts on areas where the authors may wish to elaborate.

Discretionary Revisions (in order of appearance in the manuscript):

1. I wonder if the abstract could be balanced to give a sentence or two less on Methods and instead a bit more on Results.

2. In 2.1, the 3 sentences starting from "A small number of practices in Scotland are single-handed..." provide no supporting references. Is there any source data about Scottish practice sizes, or is this just an estimate in the authors' experience?

3. Section 3.1, it's redundant to tell us the total interview time, number of interviewees _and_ the mean time (I'd prefer just number of interviewees and mean). Also, I'd prefer if 'mean' were said rather than 'average' throughout.

4. Also in section 3.1, the source of the list from which interviewees were recruited is described, but I'd like to know a bit more about the recruitment process / protocol. E.g., how many GPs were contacted to get 23 respondents?

5. Section 3.2 spends a lot of time justifying the methods rather than explaining the specific approach used. While I know that it has a times been an uphill battle to gain acceptance for qualitative methods, I don't think the reader of the article should be burdened with all of the justification. I believe the work would be perfectly understandable if about 18 lines starting from "Mixed methods research combines..." were omitted. I think it starts to get relevant to the present study at "We used the framework approach for qualitative data analysis"

6. I'm unsure that Table 1 is necessary, or appropriate. I believe that the words provided in 4.1 accomplish most of what's needed. Moreover, the amount of data
on each subject seems sufficient that readers in Scotland may be tempted to
guess the identity of each participant. I'd prefer summaries of the most relevant
variables over providing the precise values on each participant. Later graphs
indicate some of the values anyway (i.e. we can derive the distributions of years
as a GP and years with current system from figure 2).

7. "Outwith" is a chiefly Scottish word choice... 'Beyond' would be better
recognised by most readers.

8. In section 6, with respect to "multiple clicks", I agree with and am happy to see
exposition on the issue that it's difficult to discern suboptimal usability from lack
of training. I would add, however, that the perception of too much effort could
also relate to the lack of buy-in on behalf of the GP users with respect to the
features (i.e. it can seem like too many clicks because they don't really want the
feature in question, or because they don't consider themselves part of the
solution). This is more just a comment than a criticism (also see next point).

9. I find the final point of section 6 about Reflexive Monitoring to be fascinating
and important. Maybe more could be said about this. And in relation to it, is there
a potential - and I'd say under-developed - responsibility for the GPs to 'own' the
human-computer interaction result - i.e. is the problem that they haven't been
monitored/asked, or that the GPs haven't bothered to take proactive measures in
communicating concerns and putting themselves forward to improve the
interaction? (Of course, the responsibility goes both ways to some extent.)

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a
statistician.

Declaration of competing interests:

I declare that I have no competing interests'