Reviewer's report

Title: Process evaluation of a point-of-care cluster randomised trial using a computer-delivered intervention to reduce antibiotic prescribing in primary care

Version: 1 Date: 17 June 2014

Reviewer: Enrique Castro-Sánchez

Reviewer's report:

1. Is the question posed by the authors well defined?
   Whilst the question is well defined (process evaluation of an intervention...), I wonder whether the authors report any prior piloting experience that would have affected the results reported here.

2. Are the methods appropriate and well described?
   Methodologically there are areas for improvements considering the selection of qualitative approaches that the authors used.

3. Are the data sound? Yes

4. Does the manuscript adhere to the relevant standards for reporting and data deposition? Not in the qualitative portion of the study.

5. Are the discussion and conclusions well balanced and adequately supported by the data?

6. Are limitations of the work clearly stated? Yes

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished? Yes

8. Do the title and abstract accurately convey what has been found? Yes

9. Is the writing acceptable? Yes

Reviewer's report

Please number your comments and divide them into

Major Compulsory Revisions
(The author must respond to these before a decision on publication can be reached. For example, additional necessary experiments or controls, statistical mistakes, errors in interpretation.)

1) Methodology reporting: as the authors introduce a qualitative approach, it would be necessary to strengthen the quality of the reporting of this aspect of the study. For example, it would be necessary to indicate if thematic saturation was achieved after the interview with the 24th individual. It would be useful to know
whether any of the authors involved have got prior experience of qualitative analysis. We also don’t have any information regarding the participants in the interview (gender, age, experience as GP, etc..) which may be relevant considering some of the themes proposed...

2) Methodologically, and as some of the questions and analysis refer to the impact on patients, it would have been perhaps appropriate to include some interviewing to the patients who experienced consultations with/without the prompts, rather than offering a proxy measure such as the opinion of clinicians about the impact on patients’ consultation...

3) Methodologically, I wonder if some of the conclusions and responses provided by the participants in the process evaluation would have been different had a piloting of the experience taken place. I am not sure whether the authors report any prior piloting of the prompts before the roll-out.

4) Theoretically, the authors indicate that some literature provides evidence on optimal roll-out practices to ensure high adoption of electronic prompts. For example, adequate information to participants as well as communication about the roll out of the intervention are identified as key to ensure such adoption; however, in their experience, the authors fail to take into account this evidence and end up with staff reporting delays due to unawareness etc. Why was this evidence not taken into consideration, even in a pragmatic trial?

5) Thematic analysis: Whilst Table 2 indicates the themes and sub themes identified in the interviews, besides the minimal quotes included in the body of the paper, there are no other quotes presented nor any evidence illustrating a thematic analysis process. It very much feels that there has been little analysis and mere reporting of the responses to the questions. The sub themes are not illustrated in either the body of the paper and could be integrated further (for example, "awareness of implementation" is broken down into "aware...") and "unaware...", which again seem to demonstrate a superficial analysis.

6) GP themes described:
6a) Usefulness for inexperienced practitioners- the theme then assumes that there would be more experienced and less experienced practitioners, but as there is no triangulation with quotes from less experienced practitioners, it is not possible to know whether the theme is solid.

6b) Support for decision- I feel that the analysis misses an opportunity to reflect upon the use of prompts as reinforcers of already made therapeutic decisions, and does not delve into the psychological approaches for prescribers who find the prompt not supporting their decision. We have got a growing body of literature touching upon cognitive dissonance and reported experiences about disregard of electronic prompts, but these or similar elements are not considered by the authors.

6c) Positive impact on patients- would be perhaps better described as "Impact on patients". Whilst the interview guide is semi-structured, it is not possible to know
whether there was any chance to probe the respondents regarding the perceived lack of negative impact on patients.

6d) Usability issues- was there any piloting of the experience before roll-out?

7) Implementation staff themes described:
7a) The paper does not address the reasons for the lack of advertising of the introduction of the intervention to staff. See note above re: not including evidence of useful implementation measures...

8) Discussion
Middle paragraph ("GPs who were aware of the implementation of the prompts reported..." until "...more likely to use and engage with the prompts...") seems to offer limited useful information. The following page discusses the evidence about adoption initiatives and the paper could do with some reflection about the reasons for not following such evidence, amongst others...

9) Minor Essential Revisions
9a) I would suggest that Figure 1 is modified to include 2 arms following the first text box ("100 GP practices enter trial of computer delivered intervention"")

9b) Paragraph starting "the self-efficacy questionnaire was designed to measure GP's self-efficacy...", on 4th line, "issues which had been highlighted in previous research..." sentence requires some references to support that statement.

9c) Table 3: for clarity, it would be useful to combine the columns for intervention and control group, per response, and classified per option. For example:
Reduce antibiotic resistance Strongly disagree Disagree
Intervention Control Intervention Control
0% 0% 0% 1.8%
And so on, so comparisons across groups are easier, even allowing for p values?

Level of interest: An article of limited interest

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'