Reviewer’s report

Title: Medication error in primary care: mapping the problem, working to a solution - a systematic review of the literature.

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Reviewer: Camilla Haw

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Medication error in primary care: mapping the problem, working to a solution – a systematic review of the literature

This is an interesting and well written paper concerning a less well studied area of medication error research, i.e. primary care. The authors have adopted a relatively novel approach to displaying what is known about errors in primary care. They have carried out a systematic review of UK medication error studies in primary care and then used the findings of this, together with data on patient adherence rates and medication efficacy, to construct a quality filter map. This is an interesting and useful approach and the paper deserves publication after some revision. There are a number of relatively minor points that need addressing before the manuscript is acceptable for publication:

1. The title of the manuscript does not reflect the fact that data on medication adherence and medication efficacy were included in the study and map.

2. In the abstract, the findings that only 4-21% of patients derive full benefit and no errors from their medication should be expressed more tentatively. The wording on page 8 about this point also should be expressed more provisionally.

3. Abstract – the phrase ‘error free health outcomes’ should be re-worded.

4. Background, page 4, second paragraph – please add greater explanation and an example of a medicines reconciliation intervention.

5. Methods, page 5, second paragraph – please further justify only searching from 1996 onwards. Why this date? What % of GP practices had electronic prescribing in 1996?

6. Methods, page 6 – no definition of medication error is given to indicate which studies were included or excluded in the review. Please indicate how you defined an error.

7. Methods, page 6, last paragraph – Why did only one author extract the data from the included papers? This is a potential source of error.

8. Methods, page 7, first paragraph – non-adherence is not a type of medication error, so please re-word the text to indicate this. It is useful to include this problem in the study wrt the mapping though and also the data on efficacy.

9. Results – there should be a second, brief section on the methodological weaknesses of the review and mapping itself. e.g. data extraction by one author
only, area of map where greatest uncertainly exists and weaknesses in the mapping process itself, for example by combining the results from very different studies.

10. Table of included studies – it would be helpful if this could include the definition of medication error used in each study and the percentage of items or patients with errors.

**Which journal?:** Appropriate or potentially appropriate for BMC Medicine: an article of importance in its field

**What next?:** Accept for publication in BMC Medicine after minor essential revisions

**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