Reviewer's report

Title: Costs and Effects of Interventions targeting Frequent Presenters to the Emergency Department: a Systematic and Narrative Review

Version: 1 Date: 20 Aug 2019

Reviewer: Sharif Ismail

Reviewer's report:

Thank you for the opportunity to review this paper, which addresses an important and under-researched topic. I would recommend revisions to the manuscript as outlined below, by section.

GENERAL

1. The draft needs proof-reading - there are a number of typos and missing words throughout and some specific instances (see below) where language is confusing (e.g. pg 4 "there were two main aims of the inclusion criteria).

BACKGROUND

1. There is a need in this section to be clearer about the cost implications of frequent ED attendance/use - which is not made explicit in the current draft. What are the data on costs associated with regular ED attendance (insofar as it is possible to estimate this in different health systems)? This is particularly important given what you say about the complexity of needs among individuals in this group and to make clear the rationale for doing a SR on cost/CE of interventions for this group specifically.

2. Para 3: the argument here feels somewhat backwards. ED use is not on the rise BECAUSE spending on healthcare is increasing; the causes of rising ED use are multifactorial. If your argument is that you think frequent attenders as a group are actually driving some of the rise in ED use, then say so.

METHODS

1. Please specify clearly the primary and secondary outcomes. My assumption is that cost and/or cost-effectiveness was primary and ED attendance (as a proxy for cost) was secondary but this is not explicitly stated and it is not clear whether you also looked at other outcomes.

2. Line 98: you say reviews were excluded - does this mean systematic reviews were excluded? There have been several systematic reviews of effectiveness of interventions for frequent
attenders recently that did pick up some cost data so I would be interested to know the rationale for the decision if SRs were excluded.

3. Line 100 "stringent inclusion and exclusion criteria": I do not understand this statement. Clear criteria certainly do help reduce bias and risk of disagreement between team members in screening etc, but they need not be stringent necessarily.

4. Line 104: you say grey literature searches were performed, but how and in what databases? There is not real information on grey literature anywhere in the paper.

5. Line 109: language - clearer to say articles were "screened" rather than searched (similarly line 123)

RESULTS

General comment: there is no PRISMA flow chart here to describe papers included/excluded at each stage of screening, rationales for exclusion, and details of any snowball searches carried out. I would strongly recommend the authors include it as it is standard practice for PRISMA-reported systematic reviews.

1. Line 124: no kappa scores for agreement between screeners are reported here - how close was the agreement between team members

2. Line 134: suggest the authors state clearly in the text that numerically the vast majority of the studies came from the US (this is flagged finally in the discussion, and has important implications for the findings from the review - which is after all a global systematic review - because the US healthcare financing model is unusual and does not mirror well models used elsewhere)

3. Line 162/3: I was surprised not to see here some assessment of effect size for reductions in ED attendance, and the statistical significance of reductions (where reported). How big were these reductions?

4. Line 173ff: is there a reason why the authors have not calculated per patient costs (e.g. differences in what is included in the reported programme costs)? There is seemingly enough information to do so to help the reader gauge overall costs here. Similarly line 182ff where only some of the figures are reported as percentage reductions? I am not an economist, however, so may not have properly understood why this is not possible.

DISCUSSION

1. This section appears somewhat unbalanced. Lines 212-230 describe a single study in detail and it is not clear why it has been given this level of attention in a summative section like the discussion. Consider shifting parts or all of this to the results. Similarly lines 231-45 compared
intervention structures in some depth but with only passing reference to cost/cost-effectiveness, which is the focus of this SR. I would suggest moving some of this comparative assessment of intervention design (which is certainly relevant) to the results as it helps orientate the reader to the kinds of programmes discussed in included papers.

2. Line 268ff: there are some methodological limitations to include here - e.g. breadth of databases searched (DARE and CRD for historical records were not included, for example, but also CINAHL given the case management focus) and the perennial risk in systematic reviews of publication bias. Finally, were the search terms comprehensive enough to capture everything (e.g. "regular" as a search term alongside "frequent"? And it is not clear whether the terms used for the search were MeSH verified or not?).

CONCLUSION

This line does not make sense: "A range of interventions based on case management approaches was adopted and no difference was found. There is no discernible pattern." Do you mean there was no pattern in terms of the cost reduction/effectiveness implications of different case management approaches?

Finally - is there a specific policy recommendation that you can make based on the findings? The call for further research is clear enough, but is the sense (as it is appears from the manuscript) that there simply isn't enough evidence to steer decision-making on implementation of case management approaches for frequent attenders one way or the other? It would have been good here to read the authors views on this question, linking to the wider literature on the clinical effectiveness of these interventions.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
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Unable to assess

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