Reviewer’s report

Title: A scoping review of initiatives to reduce inappropriate or non-beneficial hospital admission and bed days in people nearing the end of their life: Much innovation but limited supporting evidence

Version: 1 Date: 05 Dec 2019

Reviewer: Natasja Raijmakers

Reviewer's report:

This is a very interesting review about initiatives to reduce inappropriate or non-beneficial hospital admission and bed days in palliative care patients. The conclusion is clear and valuable. However I do have some suggestions to improve the quality of this paper.

Background:

- Cost reduction is described extensively in the background. However, in the results and discussion, it was barely mentioned. Did you search for articles about cost reductions? Please include the results of this search, or adjust the background.

- In the introduction, three main aims of this research were mentioned: identify, analyse and determine (page 5, line 57). However, the aim 'determine' is not included in methods and results. It is shortly mentioned in the discussion (page 20, line 44), but based on the discussion, it was not one of the aims but an interesting question that has arisen during the study. Please clarify if it was one of the aims (and include this aim in the methods and results) or not (and delete this aim from the introduction).

Methods:

- It is mentioned that a degree of judgement was required in part 1 (page 6, line 49) . Please explain what kind of judgement this is about, by whom this judgement was made and how.

- I suggest to move table 1 to the results section. This is a result of part 1.

- Please explain how the 10 innovation groups and 3 broad headings were formed and move this part to the results section too.

- In part 2, were the search terms used for each of the ten initiative groups separately?

- Text in part 2 (page 7, line 23) about exclusion of the studies where palliative intervention considered to be routine practice is at odds with figure 1: " full-text articles excluded: the intervention was not routine practice'. Please correct text in the figure.
Results:

- Please divide your results in part 1 and part 2, like you introduced those parts in the method section.

- In the results, the ten initiative groups were discussed separately, please use numbers which corresponded to table 1.

- In the result section about 'Care home innovations' the red bag is mentioned (page 10, line 23). This is an innovation within care homes, however it does not match with the broad heading: 'prevent hospital admission'. Please consider to move this innovation to another group.

- Please take a close look at the different tables:
  - Article #39 was included in table 3, 4 and 5. However table 5 did not contain any information about this article, just a reference to table 4. When looking at table 4, there is a reference to table 3. I suggest to include information about this article in all the tables, with emphasize on the innovation to which this table belongs.
  - Article #46 belongs to table 3 and 4, but was not mentioned, nor referenced to in table 4.
  - Article #58 belongs to table 5, but was not included in any table.

Discussion:

- I suggest to merge the sections 'Strengths and weaknesses' and 'Limitations of study' of the discussion part

- In the section 'Main findings' (page 18) it is unclear what the main finding was. It is mentioned that "in general interventions showed a reduction in emergency attendance and hospital bed days" (line 18) but also that "studies failed to demonstrate benefits". This contradicts each other.

**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?**
If not, please specify which controls are required in your comments to the authors.

Unable to assess

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Yes
Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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