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: 15 Nov 2019

Reviewer: Katrin Gerber

Reviewer's report:

Thank you for the opportunity to review this manuscript. I would like to compliment the authors on this well-written and comprehensive review. This is a highly relevant topic. There are a few minor amendment and questions I would like to suggest that can be addressed at the authors' and editors' discretion.

Content-related suggestions

Background:

p. 4, line 5-8. In the first paragraph, you state that patients are "often admitted with little or no benefit to their clinical state". While this may be the case for some, I would suggest to briefly acknowledge that many hospital admissions at the end of life have a valid medical reason and may even reflect patients' or families' preference as it is, for example, the case in admissions for respite care to ease the burden on exhausted family caregivers.

p. 5, line 36-39. You state: "A more useful proxy measure for the success of a palliative care innovation may be a reduction in hospital bed days." On a similar note as my previous comment, please add: "…when hospital admissions are not medically indicated or in accordance with patients' or families' wishes."

p. 5, line 59. "…identify initiatives which may avoid or shorten hospital admissions at the end of life". Please insert: "…unnecessary or unwanted hospital admissions…"

Methodology:

p. 6, line 21. "The second part explored objective reasons for success…" Can I suggest to rephrase this to be more specific? Maybe "success of the intervention by reducing bed days".

p. 6, line 24. Who screened and selected the studies? One or multiple authors? This needs to be specified.

p. 6, line 30-31 (and also in the abstract). You mentioned that Part 1 included "discussions with experts". By that I suspect you mean discussions among the authorial team or were other experts included? It would be worthwhile specifying who was involved and what the purpose/content of those discussions was.
Care home innovations:
p. 9, line 10-13. "possibly due to knowledge gaps…” Please specify whose knowledge gaps you are referring to (staff's, administrators'…).

Palliative care support in community:
p. 11, line 44. "... this effect was only seen in male patients". How odd. Was there any explanation given as to why this might be? Did any of the other studies explore gender effects of their interventions?

Ambulance and paramedic education:
p. 13. This is very interesting! Was it only the Kirk 2017 study that addressed this? It might be worth highlighting this in the discussion under directions for future research.

Discussion - main findings:
p. 18, line 29: You wrote: "Some studies failed to demonstrate benefits in the intervention group…” Please change this to: "Some studies found no benefits…” or something similar. I am sure you will agree that the lack of a significant finding is not a failure. It is a finding in and of itself.

Strengths and weaknesses:
p. 19, line 1-3. "some studies… appeared to be driven by one or more enthusiastic healthcare professionals". I think this needs to be explained further. How would you have known which studies were driven by more or less enthusiastic healthcare professionals and how does this impact the findings?
Another limitations concerns that not all studies identified whether the aim to reduce hospital admissions was actually in accordance with patients'/ families' wishes. This could be linked nicely to the point I proposed at the beginning that it must be considered that not all hospital admissions are "bad", unnecessary or unwanted.

Limitations of study:
p. 21. Could this section possibly be combined with the 'strengths and weaknesses' section on p. 18/19?

Conclusions and future research
p. 21, line 51-52. "Many people working in palliative care are convinced that what they are doing brings benefit…” - Please specify what kind of benefit you are referring to here. Maybe change to: "…what they are doing can benefit patients and families through a reduction of unnecessary and burdensome end-of-life hospital admissions…”
p. 21, line 54-57. "Where success is claimed…” - Again, I would suggest avoiding to imply that hospital admissions are a failure. They can be extremely useful and necessary at times. I think it is important to provide a balanced argument here and consider both sides.

Formatting-relating suggestions
May I propose to spell out numbers up to ten, as is common in most publications? For example, "…with one year of admission to two UK hospitals" or "...identification of ten initiatives grouped under three broad headings." Consider checking this throughout.
Please check that abbreviations are explained when you first use them and are included in the list of abbreviations at the end. This concerns, for instance, NHS (first use on p.5 not explained and not in abbreviation list), SPA (first use on p.8 not explained) and RCT (first use on p.13 not explained, although this is a very commonly used abbreviation). Also, TDS is only used twice and I wonder if it is worth spelling this out on both occasions given that this is such a rarely used abbreviation. The same applied to DCP. Maybe check if this would be within your word limit. Avoiding abbreviations often improves readability.

Use square brackets and add closing bracket on p. 14, line 16-18: [cancer: 7 (60-66), … neurodegenerative disease 1 (17)]

p. 14 and 15. Italicise 'n = …' and add space on p. 15, line 10: "usual care, n = 36"

Figure 1. The flow chart is very pixelated and hence difficult to read. I am sure you will amend this. I would also centre the text in the boxes on the left.

Tables. Please italicise 'p' and 'n' in your tables.

Overall, great work. Well done!

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

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

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.

Not relevant to this manuscript

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Please indicate the quality of language in the manuscript:

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