Reviewer’s report

Title: Cognitive, functional, physical, and nutritional status of the oldest old encountered in primary care: a systematic review

Version: 0 Date: 07 Nov 2019

Reviewer: Claire Goodman

Reviewer's report:

This is an interesting review relevant for those working in primary care and community services. It has the potential to refine thinking and challenge assumptions about people who are amongst the oldest old in our populations.

The background provides a rationale for the review. Some of the references used are over ten years old and do not reflect more recent discussions and reviews on the needs of this population. There is a growing literature on the health status of centenarians, (that does not meet the inclusion criteria of the review) relevant to this work.

A brief acknowledgement of global differences in longevity and the impact of health inequalities and genetic factors would strengthen this section

Was the protocol registered with Prospero or an equivalent review registry?

The authors state that they did the review as a first step in designing a multi-domain intervention. Why they excluded measures of well being and sources of social support should be explained or at least discussed in the limitations of the study.

A sentence explaining why the Norway Ottawa scale was chosen. The supporting reference for using an adapted version does not appear to be a methodological one and there is a literature that challenges its use. Were all the included studies judged to be of equal quality?

Did the reviewers complete any lateral searches or consider Google Scholar and forward citations and if not why not?

The results are systematically described with limited commentary. It is interesting and worth discussing that only 4 studies included all four characteristics of interest.

The discussion needs further work. The finding there is considerable heterogeneity in this population is a) significant and b) previously unknown is open to challenge. How do these findings compare with what is already documented about these characteristics in younger (but older) populations, including those living with frailty?

The review selected studies based on age and four characteristics. There were a range of measures used in the included studies. Does the review contribute to arguments for the need to
standardise e.g. assessment of cognitive function (https://doi.org/10.1371/journal.pone.0179521.) and other measures? If so, based on the findings can the authors offer a critical commentary on what might be the favoured methods of assessment?

How did this review findings inform the development of a multi domain intervention?

The implications section is aspirational and should be linked more closely to the review findings.

The authors argue that person centred care and possible use of the CGA as the way forward. It is difficult to argue that there is a patient group who would not benefit from/deserve person centred care, comprehensive assessment and coordinated care, patient input and goal-oriented care planning. Are the authors recommending that all people over 90 should be offered this, and if so is this feasible? A counter argument could be this needs to start earlier in the ageing trajectory.

**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.

No

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

I recommend additional statistical review

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

Acceptable

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