Reviewer's report

Title: Impact of a hospice rapid response service on preferred place of death, and costs: a stepped wedge randomised trial

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Reviewer: SARA BOOTH

Reviewer's report:

This is an important article on a very current topic and in an area where economic analysis is unusual but badly needed. The question is well defined. The methodology is appropriate and well described and makes use of events that were happening already thus getting over the usual ethical issues of providing or not providing a service to test effectiveness. The inclusion of a health economic analysis is excellent and rarely done.!

The results show that the new service is cost neutral and increases death in PPC but the important metric that is missing is whether quality of care is increased, remains the same or is reduced. I realise that was not an objective of the study but it limits the usefulness of the findings - though it is still an important study.!

The quantitative methodology was particularly apt for a particular point in time when three services were being initiated sequentially - it would be helpful for other researchers in this area if you can discuss what you features of the methodology would work if other researchers were trying to evaluate the impact of such a service where there was only one service being rolled out or if the service was already in operation?!

I realise that the focus of the study was one economic/demographic analysis but, given that the service was cost neutral it fits non-financial value to patients and carers, could have been assessed in a mixed methods study if it might have provided further evidence of its usefulness beyond simply where patients died (accepting that this is important). Could you please comment on this? The lack
of information on patients' and carers' experience of the service seems to be the main limitation of the study, although as you say in your discussion it is difficult to measure quality of care, the quality of the service is fundamental in palliative care. You could help future researchers in this area even if you did not have the resources to do this in your study.

It is interesting that although costs were neutral between RRS users/non-users it is important (and usually of great interest) to commissioners that non-users used acute hospital services more often as this may indicate inappropriate care and inappropriate admissions may stop other people using hospital services (e.g. for routine surgery).

General point: the description of the service and the way it operates throughout the paper seems to imply that the service was provided by HCAS with only distant support from specialist staff. This would be very unusual as assessing and managing end-of-life problems in people at home can be as challenging as in any other setting and this would not be carried out by unsupported HCAs. A box outlining the composition of the team and the way it operates would be helpful and clarify at what points specialist assessment or advice might be used and who would be providing it. Note it was setup in line with best practice (101-106) but feel this needs explanation/description!
Are the data sound? They seem so. Very helpful figures and tables. Good access to data!

Do the figures appear to be genuine, i.e., without evidence of manipulation? Yes!

Does the manuscript adhere to the relevant standards for reporting and data deposition? Yes!

Are the discussion and conclusions well balanced and adequately supported by the data?!

Are limitations of the work clearly stated? See comments!

Do the authors clearly acknowledge any work upon which they are building, both published and unpublished? Yes!

Do the title and abstract accurately convey what has been found? Yes!

Is the writing acceptable? Good standard of writing.!

Minor Essential Revisions! The author can be trusted to make these. For example, missing labels on figures, the wrong use of a term, spelling mistakes.!
Discretionary Revisions!

General point; it is interesting that there is no mention of any changes in the way the service was provided in the whole period of time that it was rolled out over three areas. Often something about a service is modified/altered when it is implemented over time. There is no mention of needing to work differently with other services already in place when the services were restarted. This may be because the hospice is so well-established and known in the area, but it is certainly unusual.

A word about the implementation how acceptable, etc would be helpful, realising this is not essentially about implementation but it makes this process feel real.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests