Reviewer's report

Title: Paediatric Palliative Care improves patient outcomes and reduces healthcare costs: Evaluation of a home-based program

Version: 0 Date: 18 Aug 2017

Reviewer: Joel E Frader

Reviewer's report:

The manuscript from Chong et al. provides a valuable addition to the growing literature on the contributions pediatric palliative care can provide for children and families experiencing a life-shortening illness. The study uses appropriate methods to review the actual experiences of a cohort and a comparison cohort of those not receiving home-based palliative care services, as well as an economic analysis. There are a few details in the manuscript that deserve additional attention. The authors should also acknowledge, either in the introduction or the discussion, that the systems of care are quite different in different countries, and in the U.S., from state to state or even city to city, and the findings in Singapore might differ depending on where children receive care.

1) On page 6, lines 9-11, the authors should expand somewhat on the population. What diagnoses, or types of diagnoses, were involved? On what basis did the authors decide the patients were "unlikely to survive into adulthood?"

2) In the same paragraph, the authors say they excluded patients who survived less than 30 days after hospital admission. Why? In many PPC programs in the U.S., that would exclude a substantial proportion of patients referred for home-based PPC.

3) On page 7, lines 14-15 the authors noted that they assumed a mortality rate of 33%. Does that mean they expected 33% to die within a year or some other period. Based on much experience in the U.S. with referrals to home-based PPC that seems like a very low 1-year mortality.

4) In the first paragraph of the Results section the authors note that in the control group the patients "died in the two hospitals..." Did all the patients in the control group die in hospital? That seems surprising. Was the control group somehow designed to only include those dying in the hospital? It does not appear that way based on other statements in the manuscript, but I am surprised that all of the control patients had hospital deaths. This may mean the intervention and control groups are not quite as comparable as it might seem at first.

5) On page 11, lines 3-4 the authors refer to the PPC group spending 2 more months at home than the control group in the last year. Elsewhere the manuscript describes this in
terms of the proportion of time spent at home. This becomes confusing and the authors should consider using one set of terms in all places.

6) On page 12, line 6 the authors refer to "cost savings after adjusting for baseline differences." The authors need to explain this. What baseline and what sorts of differences.

7) On page 15, line 18, the authors stated that there may be skewing due to the "predominance of patients in the control group being in hospital at the time (they had all died in hospital)." The phrase about predominance just adds confusion and it might be best to simply delete that.

8) Page 16, line 3, the authors need to cite reference #10 (Kaye et al).

9) Page 16, lines 23-24: why couldn't the authors "extract data" about control group patients who died outside the hospital?

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.

I recommend additional statistical review

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

Acceptable
Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests.

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal