Reviewer’s report

Title: Outcomes after Long-term Mechanical Ventilation of Cancer Patients

Version: 0 Date: 20 Dec 2019

Reviewer: Reviewer 2

Reviewer's report:

PEER REVIEWER ASSESSMENTS:

OBJECTIVE - Full research articles: is there a clear objective that addresses a testable research question(s) (brief or other article types: is there a clear objective)?
Yes - there is a clear objective

DESIGN - Is the current approach (including controls and analysis protocols) appropriate for the objective?
No - there are major issues

EXECUTION - Are the experiments and analyses performed with technical rigor to allow confidence in the results?
No - there are minor issues

STATISTICS - Is the use of statistics in the manuscript appropriate?
Yes - appropriate statistical analyses have been used in the study

INTERPRETATION - Is the current interpretation/discussion of the results reasonable and not overstated?
No - there are minor issues

OVERALL MANUSCRIPT POTENTIAL - Is the current version of this work technically sound? If not, can revisions be made to make the work technically sound?
Probably - with minor revisions

PEER REVIEWER COMMENTS:

GENERAL COMMENTS:
On the whole the manuscript is prepared well.
It is an important area where a clear gap in the literature exists.
It is limited in being a single center, retrospective review, but this is transparently and explicitly stated.
it is also dated - the review period was 2008-2012, so the contemporary nature of the results may be queried as if successful any publication will not be publicly available until 2020 at the earliest

REQUESTED REVISIONS:
Suggest that the authors depersonalize the language throughout the manuscript. For example, Abstract, line 32 - suggest amending to '...decisions. It was sought to...' Background, line 79 'A single-institution... study was performed of cancer...'
Suggest review syntax of Abstract, line 39 '...risk. prognostic...' as this does not flow / make sense.

Background, line 60 - suggest make explicit that this is USD, but also suggest this is old data - is there more contemporary costing information available to cite here?

Why the specific data extraction period of 2008-2012 was chosen is not clear, and why this was not extended to encompass a more recent time-frame is questionable and limits external validity. The decision to include data collection across a period in which the service provision model changed (introduction of SACU) is questionable, as it introduces an obvious confounder - as a reader one wonders why the retrospective period was not chosen to avoid this (accepting authors state there was no difference in outcomes around this - lines 214-6).
Suggest also there may be merit in the authors explaining why a retrospective chart review rather than prospective audit was done. Also why a single center design?

Why did the authors use two statistical packages for this project (pg 8, lines 129-130) - both R & Stata?

The limitations identified (pg 11-12) do not offer specific recommendations to address in future research (other than to say that palliative care teams should be included)(line 240).

There is a lack of a clear conclusion / summation of findings against the stated goal / aims of the project, as listed (lines 81-2) . It is suggested that the authors need to give the reader a clear take home message & answer the 'so what?’ question.

References, #12 - review capitalization of manuscript title for consistency with rest of list

In figures suggest amend language to 'ICU discharge' rather than 'ICU exit'

ADDITIONAL REQUESTS/SUGGESTIONS:
see comments above in #5

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.

No

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 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:

Needs some language corrections before being published

**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.

This reviewer has been recruited by a partner organization, Research Square. Reviewers with declared or apparent competing interests are not utilized for these reviews. This reviewer has agreed to publication of their comments online under a Creative Commons Attribution License attributed to Research Square and was paid a small honorarium for completing the review within a specified timeframe. Honoraria for reviews such as this are paid regardless of the reviewer recommendation.

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