Reviewer's report

Title: Determinants of long-term physical functional status after critical illness: a prospective, longitudinal, multicentre trial

Version: 3 Date: 13 August 2012

Reviewer: Chris Winkelman

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All of these comments reflect the need for major, compulsory revision

1. Is the question posed by the authors well defined?

While a purpose is now stated, the linkages between the purpose the data analysis and the results are still not clear to me.

I think the authors are (a) reporting the 24-month outcome of PRS in survivors of critical illness and (b) explore relationships between patient characteristics (age, severity of illness) and their change scores (PRS baseline - PFS at 24 months). Or it may be that they are exploring the determinants of 24-month PFS scores (either combined K and L scores or separate scores), using patient characteristics as the title implies. The data for change scores are not reported.

2. Are the methods appropriate and well described?

No, I still do not understand how and when the baseline PFS scores were obtained by the trained investigators. It sounds like these data were collected from proxies several weeks after discharge from the ICU, asking the proxy to recall PRS as they observed it PRIOR to the ICU admission. At one point the authors say they collected PRS during the ICU stay. I am just not sure.

If the baseline score was generated by a proxy, was the follow-up score also generated by the same proxy?

There is simply not enough clarity in the writing to provide any time of reproduction of this study.

3. Are the data sound?

If I understand the results, the overall PFS decreased (both K scores, L scores and the combine K and L score) (a high score is desirable and indicates greater physical function or more independent function in both tools used to measure PFS in this manuscript). However, in over half, there were either no change or improvements in K score or L scores (Table 2).

The numbers in the sample do not add up. In the beginning of the report 540 patients (with 34 declining to participate and 7 lost to follow-up) At the end of the report, there are 499 participants.

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?

The description of enrollment in the manuscript and the COSRT figure do not add
up.

5. Are the discussion and conclusions well balanced and adequately supported by the data?
The discussion is poorly organized and does not return to the purpose

6. Are limitations of the work clearly stated?
This section is underdeveloped. Consider addressing 2-3 threats to design validity.

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
I am not sure why there is so much discussion about mortality since mortality is neither part of the purpose or the results.

7. Do the title and abstract accurately convey what has been found?
The title is fine, although “critical” is misspelled. The abstract would benefit from having the purpose in it and avoid the use of pronouns in the first sentence. The conclusion of one sentence is inadequate.

8. Is the writing acceptable?
No, there are many grammatical errors. The authors should consider defining physical functional status and then using that concept to convey their main points, the association of that concept with their selected tools and return to that concept in the discussion and conclusion.

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

**Quality of written English:** Not suitable for publication unless extensively edited

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**
I declare I have no competing interests