Reviewer's report

Title: Quality of life 6 months after surgical intensive care

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Reviewer: Jürgen Graf

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General
Journal: BMC Anaesthesiology

Title: Quality of life 6 months after surgical intensive care

Authors: Abelha et al.

Referee: Jürgen Graf, MD

Thank you very much for the opportunity to review the above manuscript. Abelha and colleagues evaluated the health-related quality of life (HRQL) of their patients (surgical ICU) utilizing SF-36 and a questionnaire related to the capability to perform activities of daily living (ADL).

The topic is of interest for the general intensivist since development of patients’ well-being or their functional outcome beyond the ICU is limited. Moreover, implementing strategies to further improve health-care services may necessitate sound data on mid- or long-term outcomes of patients cared for in the ICU. However, an above average quality of the data is mandatory to enable meaningful inferences and avoid fruitless discussion.

The time horizon of the work seems adequate, nevertheless a one year period would have been desirable to control for seasonal changes in case-mix. The measure to assess HRQL (SF-36) is both, valid and reliable in critically ill patients, and a specific Portuguese version already exists. The results are in agreement with the current literature which has been cited appropriately. The response rate is again comparable to what has been achieved by other authors (and could thus be expected). The discussion could improve illuminating inferences drawn from the results in more depth.

A number of typing and language errors may warrant careful editing (I have mentioned only a few later on). In addition, sometimes the train of thoughts is hard to follow, most likely due to some language errors.

Detailed assessment:

ABSTRACT
1. Results are mentioned in the Methods Section of the abstract (e.g. number of patients screened, number of patients enrolled) – please rearrange it to the Results Section.
2. Please explain the abbreviation ASA, ADLP and ADLI.
3. In the Results Section you mentioned an improvement in general health after 6 month – compared to what?
4. Results Section, line 5: SAPS II associated with health changes – what are you referring to? Changes in health, or changes in health-related quality of life? Please name it explicitly.
5. what does “OR de xxx” mean? Translational error?
6. Last line, page 3: higher dependency
7. Conclusion: redundant sentences.

INTRODUCTION
1. Please name all abbreviations when used for the first time (eg ICU)
2. page 5, line 9: how are patient-centred outcomes such as HRQL associated with cost- and resource-savings in the ICU.
3. page 6, line 3: first of all, the project where the MOS SF-36 comes from is much older, but truly the 36 item instrument has been published by Ware 1992 for the first time; second, SF-36 is valid but cannot be classified “excellent”. It is probably better than many other instruments for a variety of reasons (eg
development background, psychometric testing, culture and language translation, norm population), however, shortcomings do exist as well: differences with respect to socioeconomic patient status, education, pre-survey HRQL, responsiveness, cut-off for clinical meaningful differences, to name just a few.

4. page 6, line 12: I am not aware of a definition for “functional status” but would not limit it to performance of activities in daily living.
5. page 6, 14-16: delete the paragraph here and discuss your rationale for a 6 month survey either in the Method Section, and/or in the Discussion Section of your manuscript
6. The Introduction could be shortened by 20% without loosing relevant information.

METHODS
1. page 7, line 5: please explain the abbreviation and cite the appropriate reference for the ASA classification
2. There is neither a reference, nor an appendix illuminating the content of the somewhat cryptic ADL/ADLI/ADLP. Reliability, validity and/or responsiveness should be known to judge the clinical meaning of this measure.
3. Are there any data for Portuguese norm population with regard to the SF-36? Age, gender matched?
4. page 9, employment status etc.: was the change before/after ICU considered?
5. Statistics: Did you calculate Cronbach’s alpha to assess contingency of the SF-36 items?

RESULTS
1. patients died on the ward
2. delete (333)
3. 69 patients did not answer the questionnaire but were known to be alive
4. page 10, Quality of Life Measures: the questionnaire ask whether the health status has changed in between the 1st twelve month, whether this refers to the pre-ICU status or to any time in between the last six month post-ICU remains unclear.
5. page 11, line 2: older men, aged <65 years – typing error?
6. page 10, line 8ff: the observed difference is most likely due to related comorbidities that are the reason for classifying patients into the different ASA-classes. The concept, that comorbidities and pre-existing disease or functional limitations are major predictors for post-ICU or post-hospital HRQL has already been proven.
7. page 10, line 20f: was SAPS II adjusted for age (i.e. points deducted)? Why did you adjust for marital status, but not for socio-economic status (the latter is already known to influence perceived HRQL)?
8. page 10, last but one line: dependency is of course related to ASA-class – that is trivial.
9. page 12, line 4: also
10. apart from the mentioned statistical differences (or the lack thereof) – what would you consider clinically relevant?
11. table 1: more than 40% of your patients belong to ASA I and II, but the rate of emergency procedures or major surgery is only average – what is the justification for these patients to be cared on an ICU? Lack of post-operative surveillance or intermediate care unit? What was the amount of active treatment (i.e. therapeutic interventions that are exclusively or best performed in an ICU setting)? I miss the admission diagnosis of the patients and the major comorbidities – this may shed some light on the low ASA-classification.
12. table 2: again, many patients in ASA I and II. Why did you use the LOS ICU cut-off of 7 days?
13. table 3: what was the ratio for the cut-off 65 years? 145 men, but only 31 below and/or above 65 years – how did you calculate that?
14. SF-36 scores normalized for the norm population (age and gender matched) would greatly enhance comprehensibility (refer to Bunch et al, NEJM).
15. table 5: ASA II/III and ASA III/IV – overlap? Typing error?
16. table 6: again, how did you generate the cut-offs?
17. table 7: what was explicitly the question you did ask the patients? Health changes in between the last 12 month, or changes before and after ICU and/or hospital stay, respectively?
18. table 8: here you refer to a LOS ICU cut-off of 3 days, in the other tables and the text 7 days – what was the reason?!? Professional activity – before after?

DISCUSSION
1. page 13, line 3: I would not coin HRQL a better assessment of outcome – it is just different, patient centred, captures other perspectives and for me is adjunctive to survival.
2. page 13, line 5ff: see one of the earlier comments with respect to the six month follow-up period – restitution, at least in older patients with comorbidities, is likely to take longer than six month, it is probably ir between 12 and 24 month … if you have chosen six month for a) convenience, and b) to prevent too many drop-outs, that would be perfectly all right with me – just name it like it is!
3. page 13, line 14ff: younger men may have been more severely ill?! Same SAPS II in younger and older patients means less severe illness (based on APS) in the older patients since age alone is awarded significant points (especially with means/medians seen in your patient cohort, age alone may contribute 20% of the points in some instances)

4. page 13, last paragraph: ASA is nothing else than a crude and largely subjective measure of comorbidities and demonstrates in your data set again, how valid the subjective of assessment of trained physician with respect to patient classification for a cohort – not the individual – can be!

5. page 14, line 4ff: why should SAPS II affect HRQL – we could not proof this hypothesis. With respect to the Ridley data: expectations alone may largely influence how patients perceive the achieved results

6. Limitations: I would like to stimulate you to create a section entitled “Limitations” – here you can sum up the weaknesses of your study with some short and explicit explanation why and how to overcome these problems (or why not …) – a critical self-reflection of what you have done and what you may have missed would largely improve your manuscript. Don’t be afraid, frankly describe what went wrong!

7. Please delete the last sentence (“ Further studies …”) – won’t help anybody, just trivial.

8. Conclusions – what are we going to do with it? Inferences? That what we wanna read!

REFERENCES
Ref 11: typing error? Missing author(s)?
Ref 33: typing error?!

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of importance in its field

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

Statistical review: No, the manuscript does not need to be seen by a statistician.