Author's response to reviews

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

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Author's response to reviews:

Response to Reviewer 1

What did the authors have done with 36% of readmissions? Readmissions were excluded? It is not clear.

Suggestions were accepted and presents in the new version of the manuscript. Presents in Data Collection.

The study included all patients admitted in the ICUs and there were no exclusion criteria at this point what may signify that patients that stayed less than 24 hours because they died or were too healthy to be in an ICU were admitted. It was important to know how many were disabled at admission or have any disease that indicates they have physical incapacities.

Suggestions were accepted and presents in the new version of the manuscript. Presents in Study population.

It was important to describe the surgical population: there were programmed admission patients?

Suggestions were accepted and presents in the new version of the manuscript.
Minor Essential Revisions

When the authors state that 506 answer the questionnaire they are indicating to have 506 answers but not 506 patients’ answers. In discussion the author’s state that 44% of the interviews were completed from information given by proxies. In results the authors do not indicate how many were done at admission by proxies (100%?) although in methodology they refer that functional status were collected by proxies. Two years later the questionnaire is said to be answered by the patients or “if the patients were unable to carry out a telephone interview” the indices were completed again by proxies. It was desirable that in results the authors correctly state how many answers patients and proxies at the different two points of data collection completed.

Not accepted.

It was important to describe what were considered proxies: all proxies had a regular close contact with the patient? Proxies were asked to answer the questions on behalf of the patient?

Suggestions were accepted and presents in the new version of the manuscript. Presents in Data Collection.

It is not understandable the meaning of the d) in limitations of the study: “the use of general indices can did not cover specific characteristics of all subgroups of patients”.

Accepted and modified.

Response to Reviewer 2

While this study presents original and important information, the research question(s) are never explicitly posed.

Included in the end of Introduction

The introduction is somewhat misleading in that it addresses mortality and health-related quality of life (HRQoL) but the study really measures physical function status in survivors 2 years after at least a 24 hour stay in the ICU.

Suggestions were accepted and presents in the new version of the manuscript.

There is some muddling of content in many sections, adding to lack of clarity. For example, under study population, a sentence describes the second phase of the study, which belongs in design.

Accepted..

Additional clarity is also needed in the section labeled data collection. Specifically, were the tools used to capture physical functional status documented in patient records (during the sentinel ICU stay) or were they
reconstructed from records by study staff? 
Presented in Data Collection.

The authors report SOFA and TISS scores but do not report collecting that from records.
Not modified.

Were records paper-based? Were any records missing? The authors need to address the validity and reliability of the tools they used (i.e., Karnofsky and Lawton-ADL) as well as reliability when used with proxies.
Not modified.

More details are need in the methods section.
Suggestions were accepted and presents in the new version of the manuscript.

When the data collectors were trained, were there any periodic evaluations to determine inter-rater reliability or to examine whether ongoing quality of interviews remained similar/high among data collectors?
Reference 6 (a pilot study).

It would be helpful to describe how proxies were identified during the telephone call.
Suggestions were accepted and presents in the new version of the manuscript.

When reporting results, if the first study question is to examine 2-year survival, then survival should not be included in describing the characteristics of the sample; mortality should receive a separate subheading.
Not modified.

In Table 1, delete the K and L baseline scores as these are really part of the results.
Suggestions were accepted and presents in the new version of the manuscript.

Are the scores reported in Table 2 the ICU admission scores or the final scores—revise the label to add accuracy, please, and ease readability.
Not modified.

The authors do not really discuss the interpretation of findings from Table 2.
For example, the proportion of obese patients who demonstrated improvement in Karnofsky scores is much different that the proportion or subjects with a BMI < 30 kg/m2 (24% vs. 5%); the Lawton scores show a similar albeit less dramatic pattern. What do the authors’ think this means? The Discussion is somewhat confusing, mixing the HRQoL data with the Physical Functional Status data. While affect and social support do affect physical Functional status, this report does not measure or attribute declines in function to affect, mood, or other
psychosocial attributes or measures.
Suggestions were accepted and presents in the new version of the manuscript.

Response to Reviewer 3

Several numbers in the data classification don’t make sense. A decrease of K by 21 to 29 does not fit in any category. A decrease in L by 11 or 12 is both moderate and major.
Suggestions were accepted and presents in the new version of the manuscript.

About the factors suspected to influence long-term status. How did the authors select these factors? When was the SOFA score computed? Why was APACHE or SAPS score, the ICU LOS and the hospital LOS not taken into account? The significant factors should be included in a multivariable analysis to identify independent factors.
Suggestions were accepted and presents in the new version of the manuscript. No significance with these analysis.

Statistics. "Poisson regression was used to estimate ... the relative risk ...". Many results include such a relative risk. Please clarify to what relative risk you are referring.
Not modified.

Results. What was the proportion of patients admitted for routine postoperative care, who remained in the ICU less than 24 or 48h. How did these patients influence the results?
Not modified.

Results. In view of the impact of the "neurological admission" on outcome, should the Glasgow coma scale score (a more quantitative variable) not be included in the analysis?
Not modified.

I would propose to emphasize the high 2-year mortality rate (about 50%) in the conclusions.
Suggestions were accepted and presents in the new version of the manuscript.

Key messages 3 to 5 are just statements and are disputable. They do not rely on the study results.
Suggestions were accepted and presents in the new version of the manuscript.

Minor comments
A shorter and more striking title would have more impact on readers (e.g.
"Determinants of long-term physical functional status after critical illness"). Does the inclusion of 2 centers really justify the "multicentric" descriptor? Why is age mentioned in 1st position.

Suggestions were accepted and presents in the new version of the manuscript.

The title of the disclosure form does not match the title of the manuscript.

Suggestions were accepted and presents in the new version of the manuscript.

Data collection. Please reference the original papers describing the Karnofsky and Lawton indices.

Suggestions were accepted and presents in the new version of the manuscript.

Data collection. Please mention clearly that K-ICU and L-ICU reflect the patient status before - not during - the ICU stay.

Suggestions were accepted and presents in the new version of the manuscript.

Were neurosurgical patients listed as neurological or postoperative?

Suggestions were accepted and presents in the new version of the manuscript.

Analysis of medical and unplanned surgical vs. planned surgical patients.

The discussion repeats parts of the introduction. It should be more focused on the results.

Suggestions were accepted and presents in the new version of the manuscript.

How does the present manuscript differ from ref 6, except for the 506 instead of 100 patients.


Table 1. Line 5: replace "<= 2" with "1 or 2" (to exclude 0 which is already listed just above).

Suggestions were accepted and presents in the new version of the manuscript.

Table 3. Many erroneous numbers in the n values (last line of almost each "L" subdivision).

It is not "n". It is %.

Figure 1. Please give the number of patients who were discharged alive from the hospital.

Suggestions were accepted and presents in the new version of the manuscript.

Figure 3. Title. Remove "between mean scores" and avoid abbreviations.

Suggestions were accepted and presents in the new version of the manuscript.