Reviewer's report

**Title:** Age, neurological injury, trauma and prolonged acute respiratory failure are the most important factors for physical functional status long-term after critical illness: a prospective, longitudinal, multicentre trial

**Version:** 1  **Date:** 6 May 2012

**Reviewer:** Fernando Abelha

**Reviewer's report:**

The authors sought to assess long-term physical function status in patients after critical illness.

They conclude that ICU survivors presented physical function status reduction regardless of the reason for ICU admission and that neurological injury, trauma patients, age, and prolonged acute respiratory failure are the factors that had the strongest impact on the physical performance.

The subject of this manuscript is clinically relevant but I have to put some concerns on the manuscript:

**Major Compulsory Revisions**

1. Is there any kind of particularity in these ICU to have 70% of patients without mechanical ventilation and a mean APACHE II of only 12.5? These figures are according to a group of not very sick patients and surely they cannot be considered the usual critical care group of patients what may be important for the generalization of the results. We surely understand that the authors are indicating figures for survivors but it was important to have a comparison between all patients admitted to the study and survivors. Does this means that nearly all patients who died had been ventilated and have certainly higher APACHE II? We only may suppose that from the manuscript. A selection bias may be present, which could have influenced the results.

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

2. 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.

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

**Minor Essential Revisions**

1. 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.

2. 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?

3. 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”.

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

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

I have no competing interests in relation to the paper