Reviewer's report

Title: Patients' functioning as predictor of nursing workload in the acute hospital: a multi-centre cohort study.

Version: 2 Date: 3 August 2010

Reviewer: Caitlin Brennan

Reviewer's report:

The authors have done a great job addressing the reviewers’ comments. The concept explored in this study is a promising area and is important for the future of nurse staffing decisions. However, I remain skeptical that the methods and available data provide convincing results that will add to the literature in this area.

The following are my main concerns:

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1. Figures 2, 3, & 4 need to be labeled with more specific information about what the authors are trying to convey to the reader.

Major Compulsory Revisions

1. It is concerning that a large number of ICF categories were excluded because of too little variation. Given the exclusion of so many of the ICF categories, I question whether the ICF is an appropriate tool to predict workload.

2. In aim 3, the authors’ goal was to validate the ICF Core Sets by demonstrating their ability to predict workload. Predictive validity is a necessary, but not sufficient aspect of validating an instrument.

3. It remains unclear whether the setting is acute care or rehabilitation and what the difference between these two settings might be in the hospitals where the study took place.

4. The small sample size for each population remains a concern, especially given that the data come from multiple sites. It is unclear if the demographics of patients at each site are significantly different from each other. The authors address this in the limitations section by stating that “the KFJS is certainly comparable to the other two study centres with respect of nursing skills and patient characteristics...” However, the authors do not include any data on nursing skills and patient characteristics to demonstrate that there were no statistically significant differences between study sites.

5. In the initial sections of the background, the authors make the case that managers need better data with regard to nursing workload, in order to make sound staffing decisions. How will the ICF assist managers in making staffing decisions? Are the authors recommending that the ICF data be used on the hospital level, in order to make decisions about the number of full-time
equivalents that are needed? Or are the authors suggesting that the ICF could be used on the unit level for staffing decisions each shift?

6. Although this area of study is very important, this secondary analysis seems to be missing key components:

a. There is a great deal of missing data due to doubts about the quality of data collection and due to a lack of variability in the ICF categories.

b. The Barthel Index performed quite well, in terms of the variance in workload explained by the items, for all 3 condition groups. The ICF seems quite labor intensive, in terms of the number of categories that are included in each rating, and it is unclear how the ICF results in a more parsimonious measure of workload than the Barthel.

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests.