Reviewer's report

Title: Agreement between patient-reported EQ-5D responses and EQ-5D responses mapped from the SF-12 in an injury population

Version: 2  Date: 10 September 2014

Reviewer: Juanita Haagsma

Reviewer's report:

Thank you for inviting me to review this interesting study. The manuscript is concise and well written. The subject of the paper is well defined and new in the area of injury.

Strengths of this paper are empirical data from a large sample size with expected high prevalence of disability (patients with severe injury (ISS>15) and elderly admitted to hospital because of orthopaedic trauma).

I do have a few questions and suggestions for improving the paper.

Major revisions

1) The supplementary material that shows the results of the analysis for VOTOR and VSTR separately are interesting. However, I wonder if the effect of more severe injury (VSTR) and the effect of age (VOTOR) on HRQL measured by EQ-5D and SF-12 may partly cancel each other out. Do you think this may have had an effect?

2) I suggest to include an additional analysis to investigate if there are differences in agreement by ISS category (VSTR) e.g. ISS 16-25 and >25? Or maybe it is better to use the VOTOR if the registry includes a variable that registers severity of the injury?

Minor revisions

Introduction

3) The authors state that both the EQ-5D and SF-12 are commonly used in injury populations. I wonder if this is true. From Figure 1 in the Polinder review that is referred to by the authors and that included 41 articles there appear to be only three studies that used SF-12 and 5 studies that used EQ-5D to assess HRQL.

Methods

4) This section is clear and explains the study design and measures very well. The EQ-5D and SF-12 data were collected at 6 and 12 months post-injury. Were the EQ-5D and SF-12 presented in the same order?

5) In the VSTR there may be patients with severe cognitive problems that may have caused inconsistencies in the answers to the EQ-5D and SF-12 questions.
How did the authors take this into account?

Results

6) Number of patients that were included in the analysis: I don’t understand the explanation of the total number of patients at each of the follow up points. “….7504 patients had data available at 6-months only, 8722 patients had 12-month data only, and 6060 patients had data at both time points”.

7504 + 8277 + 6060 = 21841 patients, but the authors report 10166 patients were included in the study. Could you please explain this?

7) How many patients were included from the VOTOR and how many from the VSTR?

8) Table 1: cause of injury. The causes of injury seem to be a mixture of mechanism of injury (fall) and type of road user (e.g. motor vehicle). I suggest changing the road users to “road user accident” (e.g. motor vehicle accident).

9) Table 2: light shading is missing in the cell 12 months, mobility, some problems (actual)/severe problems (estimated).

Discussion and conclusions

The discussion and conclusions well balanced and adequately supported by the data.

10) Do the authors have any recommendations for future research in this area?

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**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