Reviewer’s report

Title: Modeling early recovery of physical function following hip and knee arthroplasty

Version: 1 Date: 14 June 2006

Reviewer: Nadine Foster

Reviewer’s report:

General

This is a well-written and well-argued study which I believe adds to the current literature in a useful way. Clear arguments are made about the need for the study, using relevant and recent literature.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

None

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

Please make it clear in the abstract that the participants were having post-operative rehabilitation. In the methods section, page 6, add some detail to explain to the reader what types of arthroplasty were used, and some information about what ‘standardised inpatient treatment’ consisted of, and what post-operative pathways were followed. This is needed as different pathways are used across countries/regions. In Methods, page 6, I recommend adding a couple of examples of the timings of the participants assessments, so the reader can quickly get a picture of these - what was the ranges of times between follow-up assessments (smallest to largest)?

Please explain how many patients were approached to take part in the study, who were potentially eligible, so the reader can see the difference between this figure and the 188 patients who provided informed consent. If you do not know the total number approached, state this and explain why.

Page 7, sentence in which 'overlapping' sample of patients is mentioned - I am sorry but I do not completely understand what is meant by this. Could it be reworded for clarity?

Page 10: error - reference Snijders should read 38.

Page 10 and the discussion section: please reflect on whether there are sufficient numbers in the sample for the type of analysis chosen, given that for many patients, there was only one or two assessments. Related to this, is there a way of estimating the precision of the results from this analysis in a similar fashion to the use of confidence intervals? If so, please include mention of what the precision is estimated to be, given the problems of missing data and limited number of follow-ups for many patients.

Results and discussion: The difference between the self-report and the performance measures is quite striking. Could the authors mention the small, at best, benefits seen even at 9 to 15 weeks post surgery in the performance measures as a whole in the results and discussion? In the discussion, could the authors consider whether a longer-term follow-up should have been included beyond 15 weeks. At what point should these patients be viewed as having reached the stage of most benefit from surgery? Looking at the curves, one wonders if surgery was really that beneficial.

Where there any complications from the surgery? This is not mentioned.

Page 13: mentions positional restrictions to avoid dislocation - this type of information would be better in the methods section, with other information about the standard post-operative care of these patients.

Discretionary Revisions (which the author can choose to ignore)

What next?: Accept after minor essential revisions

Level of interest: An article of importance in its field
Quality of written English: Acceptable

Statistical review: Yes

Declaration of competing interests:

I declare that I have no competing interests