Reviewer's report

Title: Cost effectiveness of total knee arthroplasty from the health care providers' perspective before and after introduction of an interdisciplinary clinical pathway - is investment always improvement?

Version: 1 Date: 17 March 2011

Reviewer: Kris Vanhaecht

Reviewer's report:

I appreciate the paper of our German colleagues who performed an interesting project on care pathways. I think the paper is interesting but needs some clarification before the paper can be accepted. I think all the necessary information is available to improve the quality of this version.

My suggestions:

1) the design
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The design of this study is a sequential cohort design as explained in the material and methods section of the paper. The authors refer to two cohorts. My suggestion is to explain more about the two groups (ex. the time period in which the patients were included) and to use also terms as pre- and post pathway implementation as the authors use in the tables. In the design part the authors talk about two groups, in the tables we see 3 groups.

It would maybe be helpful to make a figure that explains the design of the study and includes the pre-post part, the 3 groups and the indicators measured in every time period.

2) Setting:
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As this paper is a study on the implementation of a care pathway in one specific organization, basic information is needed on the hospital, department, ward and interdisciplinary team. This will be necessary to understand the possible impact of the context of the organization.

3) Content of the pathway:
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As suggested by the SQUIRE guidelines the authors explain the content of the pathway, this is a very interesting and positive section in the paper. For our understanding it is important to know what "usual care" (pre pathway) care was like. What was already available or provided to patients before the implementation of the pathway? Maybe the care process was already very well structured and organized and maybe it was impossible to further improve the
outcomes? This topic could also be included in the discussion of the paper.

4) Discussion:

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The discussion is an interesting discussion on both the content and effect of the intervention but also on methodological issues.

Would it be possible to inform the readers about the effect of the pathway on the interdisciplinary team or was this not measured in the study?

My suggestion is to further improve this discussion with a section on "pathways as complex interventions". Because pathways are complex interventions, it is very hard to extrapolate the effect of one pathway to other settings. The effect of the care pathway, because it is a complex intervention (also known as multicomponent intervention), will depend on the active ingredients of the intervention.

Also within this study it might be interesting to inform the readers of this open access journal, about the possible pitfalls of being over enthusiastic about the effect of pathways.

I will be happy to provide the authors the necessary recent papers to cover this discussion on complex interventions.

I look forward to the next version of the paper so the findings of this study can be published.

**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'