Reviewer's report

Title: The structure of quality systems is important to the process and outcome. An empirical study of 386 hospital departments in Sweden.

Version: Date: 12 February 2007

Reviewer: PY Boelle

Reviewer's report:

General

This paper aims at analyzing whether quality systems conform to Donabedian’s description, consisting of Structure, Process and Outcome. The authors developed a questionnaire [18 items] to address this issue. The questions were subdivided as “Structure”, “Process” or “Outcome”. Then, they evaluated whether answers to questions of the same type clustered together; and if there was overall correlation between the three types.

How these results may be of use for quality improvement is not very apparent from this report.

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

- In the questionnaire sent to the hospitals, was the subdivision (Structure/Process/Outcome) made apparent? In this case, it must be evaluated how this presentation could have led to some of the reported associations.

- I find it very troubling that on 6 carefully crafted questions, 1 or 2 may not be associated with the corresponding factor (once for Outcome, once for Process). Although the authors claim (p.7) that “the questions were able to represent the different factors with adequate precision”, I find otherwise that this very much questions the sensitivity and specificity of the questionnaire; it also emphasizes the fuzziness in the distinction between the three item types.

- This study addresses “Attitude” rather than “Practice”, furthermore it may be based on a very partial view of the quality system. For example, take question “B3: Are the clinic's employees positive to reporting incidents?” How may the answer be evaluated? Is this based on the “feeling” of the person who fills the questionnaire? In this case, it will likely depend on its role in the clinic. This issue could have been addressed by having multiple answers from the same department. More generally, the questions are very general (as the authors acknowledge) and therefore may be very open to “subjective” judgement. It is not clear how this may depict the reality of quality systems implementation.

- It is not clear how much support for Donabedian’s description lies in these numbers. It is obvious that provided a large number of subjects, one may eventually find significant associations everywhere. The magnitude is much more at stake here. The association 0.2 between process and outcome is rather weak, and gives little support to the “Process -> Outcome” link.

- It is essential to analyze quantitatively, for example by sensitivity analysis, how the non responding hospitals may affect these conclusions.

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

- It would be nice to display the result of the 18 questions in terms of percentages.

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Discretionary Revisions (which the author can choose to ignore)

**What next?:** Reject because too small an advance to publish

**Level of interest:** An article of limited interest

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**
None.