Reviewer's report

Title: The impact of ICU format change on the outcome of high risk surgical patients: a cohort analysis

Version: 1 Date: 8 August 2010

Reviewer: Bernhard Frey

Reviewer's report:

This is an important study of the impact of ICU organisation on patient outcome. The probable bias of comparing two time periods has been addressed and the citation of the nationwide trend in postoperative mortality in the same country is a good argument. The strength of the study is the examination of a well defined subgroup of high risk patients.

Minor Essential Revisions:

The authors should give more details, relating to:

The complication form which was completed at patient discharge.

The organisation of ICU before and after the change (details on physician and nursing staffing, responsibilities of staff, staff rosters, organisation of work, such as rounds, meetings, regular discussions, quality initiatives such as critical incident monitoring).

The nationwide trend in postoperative mortality: more detailed description (time period, numbers).

The IRIS score, severity of surgery: detailed description of the severity of surgery score.

The authors correctly comment on the association between severity of illness and mortality. Even better: The authors should calculate the standardized mortality ratio (SMR=observed/expected mortality) for the two time periods.

Further Minor essential revisions:

Page 4, line 6: cause (not case).

Page 4, line 8-9: The sentence "Several peer reviewed papers..." is not relevant to the actual paper and should be deleted.

Page 5, Statistical analysis: "average" is not correct and should be changed to "mean".

Page 5, Results: "Mortality due to a cardiopulmonary complication was higher in the open format group (not closed format group).

Page 6: The second paragraph (In the year 2000, the organizational...) is a repetition from the Methods and should be deleted.

Page 7, line 10-11: The sentence "Since age is associated..." is a repetition and should be deleted.
Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.