Reviewer’s report

Title: Hospital deaths and adverse events in Brazil

Version: 1 Date: 25 April 2011

Reviewer: Hillegonda Maria Dutilh Novaes

Reviewer’s report:

Major Compulsory Revisions

1) General comment: The data source for this study was a previous, pioneer and successful, study on the occurrence of adverse events in 3 university hospitals in Rio de Janeiro, Brazil in 2003, based on the utilization of a Canadian methodology, and testing its utility in Brazilian hospitals was also an objective. For this study no new patient data were produced, and the discussions concerning the methodological dilemmas of the identification of adverse events and their classification in preventable or not should be mentioned but are at this point not a central issue in this paper. The main contribution of this study is the development of a statistical model with in-hospital mortality as the dependent variable and the occurrence of an adverse event, including its preventability, as the main independent variable, with the inclusion of other variables known to be related to hospital death (patient and process of care characteristics). In order to emphasize this contribution, in the background section a synthetic analysis of the literature concerning in-hospital mortality models in general and those including adverse events should be mentioned, since the main topic of interest is the (statistical) importance of adverse events, and its behaviour when controlling for case severity, or other variables which may influence the model results. Abstract and background should be revised considering this perspective. A recent article may be helpful to insert the hospitals of this study in a frame of reference for brazilian public hospitals (annex).

2) Methods and results are well written, but more details of the model should be presented, with less emphasis on the different ways of calculating the prevalence of AE in general and preventable AE, they are important but of less interest in this article, except for the influence their high frequency may have on the model results. The justifications for the size of the sample (4% of the hospitalizations in these hospitals in 2003) should be presented.

3) Discussion: The statistical strategies should be emphasized, valued and their effect on the results discussed more explicitly. And a return to the main discussion in the background should be included.

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published
**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**
I declare I have no competing interests.