Reviewer’s report

Title: Hospital deaths and adverse events in Brazil

Version: 1 Date: 6 April 2011

Reviewer: Zaina Qureshi

Reviewer’s report:

This is an interesting manuscript that evaluates the association between mortality and adverse events controlling for patient risk factors in Brazilian patients. Adverse events associated with hospitalizations are an important concern in developing countries. What is more important is the focus on preventable adverse events and the opportunity these events provide the healthcare professional and the system as a whole for improvement, thereby promoting patient safety.

Major Compulsory Revisions

1. Reference for the first sentence of background is needed.

2. The third sentence in the background section leads us to believe that there may be numerous studies regarding the association of adverse events with hospital care but only one reference is provided.

3. The third paragraph on page 3 in the background section requires references for the first and second sentence.

4. In the second paragraph on page 5, the methodology used for random sampling needs more clarification. Whether each university hospital had equal number of patients to choose from? Which seems unlikely seeing as the total number of patients was 27,350. If there were unequal numbers then was the sampling random within each institution or was this not considered?

5. Please include the reason for excluding patients admitted under the age of 18.

6. One of the variables considered by the authors was preventable adverse events, while this is an extremely important variable, a definition, be it standard or operationalized to the study, needs to be included.

7. Table 2 the formula for % deaths should be reversed from \( \frac{A}{B} \times 100 \) to \( \frac{B}{A} \times 100 \).

8. The first paragraph of the discussion is a reiteration of the results, which can be eliminated to provide more space for discussion if the reason for a short discussion was space limitations.

9. The second sentence in principal study limitations on page 11, that states that “Importantly, the study population was limited to admissions to three public university hospitals in a single State of Brazil, which could partially explain the results” – requires further clarification. Which part of the results in particular is the author referring to here and what would be the implication of this limitation?
Minor Essential Revisions

1. While the second sentence of the background attempts at building an argument for the study, it is vague and would benefit from some clarification from the text of the IOM report regarding the specific causes of mortality rather than stating “principal causes of mortality”.

2. There are many different views every author has regarding writing style and the concept of smooth transitioning between each sentence/paragraph to provide a convincing line of reasoning for the study, and I believe that this paper has room for improvement both in terms of language and flow.

3. Please include the start date and the ending date of the study i.e. All patient admitted to each of the hospitals between January 1, 2003 to December 31, 2003.

4. In Table 2 the reference category for age is not highlighted with an asterisk.

5. The text states that the variables surgical procedure and clinical specialty were included in the second model but were excluded in the final model due to lack of statistical significance. On the other hand Table 3 shows that the second model did not include those variables either. The addition or deletion of the variables needs to be made clear in the text and the table either ways.

6. Overall document needs to be assessed for appropriate grammar and other minor errors like on page 3, the third paragraph 1st line – Few studies have analyzed the presence of “an” association…

Discretionary Revisions

None

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

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

Declaration of competing interests:

I declare that I have no competing interests