Reviewer's report

Title: Variations and inter-relationship in outcome from emergency admissions in England. A retrospective analysis of Hospital Episode Statistics from 2005-2010

Version: 3 Date: 3 March 2014

Reviewer: Rupert Pearse

Reviewer's report:

Very interesting paper and one which will have an important impact because it demonstrates not only important variation but the pattern of that variation across diagnoses. The clinical relevance and topicality is undoubted and not being an expert in the detailed methods, I have few comments. I assume that a health services researcher with experience of using HES data will also review.

Minor Essential Revisions

1. The authors make some reasonable points about the accuracy of HES data. However, many readers from an international audience may not be familiar with the data source and its strengths and limitations. I think the description of the possible flaws in HES analyses could go a little further. I agree that coding is better but it still has some way to go! Some codes are better than others primarily because certain diagnoses/procedures may still fit under more than one code. I don't see that any change to the methods or results is needed but a minor revision of the discussion would be helpful.

2. Some thought could be given to the headline findings. In one sentence, what is most important about these data? The current conclusion is a little wordy and doesn't quite bring this out.

Discretionary Revisions

Funnel plots really help to make the argument. Given this is an online open access journal, the authors could provide funnel plots on more of the diagnoses (not all). This will help others to disseminate the work in talks etc.

Rupert Pearse

Level of interest: An article of outstanding merit and interest 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 am a research collaborator with the first author. I have no other conflicts of interest.