Reviewer's report

Title: Pre-fracture residence, rehabilitation, complications and comorbidities: quantifying the components and determinants of total hospital stay for hip fracture

Version: 2 Date: 7 October 2014

Reviewer: Antoine Duclos

Reviewer's report:

Major Compulsory Revisions:
1) This study has three concomitant objectives which may impair consistency of the employed methodology for responding to every of these. In addition this may impair message clarity for the reader. To my opinion, major goal was to explore the determinants of length of stay associated with hip fracture during all the care process, from acute phase to rehabilitation.

2) The employed statistics are rudimentary. Especially, multivariate modeling should consider the clustered nature of the data in order to consider the variability of length of stay within and between individual hospitals. For example, using hierarchical model would allow to identify hospital characteristics associated with lengthen stay duration as fixed effects. Presented investigation is restricted to patient characteristics, while one may expect that hospital organization is strong predictor of length of stay.

Minor Essential Revisions
3) Quality of information extracted from hospital administrative databases is debatable. Especially, patient comorbidities and minor complications are frequently underreported. Do you have any arguments regarding coding exhaustiveness and accuracy in Australian databases? In addition, is "present on admission code" available in those data in order to distinguish between patient comorbidities at admission and complications that may have occurred during the index stay?

4) There in an error in references indexation on line 64. Indeed, the reference «9» was not only interested in acute phase of hip fracture care but has also investigated the patient's subsequent rehabilitation.

5) The reading of tables 3 and 4 is not easy. Perhaps the authors could limit the amount of numbers in order to facilitate understanding their content and underline the key factors influencing the length of stay.

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:

'I declare that I have no competing interests' below