Reviewer's report

Title: Exploring the impact of intravenous thrombolysis on length of stay for acute ischemic stroke: a retrospective cohort study

Version: 2
Date: 17 August 2015

Reviewer: Frances Horgan

Reviewer's report:

Title of paper – Exploring the impact of intravenous thrombolysis on length of stay for acute ischemic stroke – a retrospective cohort study.

Authors – Hung et al

1. Is the question posed by the authors well defined? – yes
2. Are the methods appropriate and well described? - yes
3. Are the data sound? – yes, large sample size, retrospective data
4. Do the figures appear to be genuine, i.e. without evidence of manipulation? - yes
5. Does the manuscript adhere to the relevant standards for reporting and data deposition? - yes
6. Are the discussion and conclusions well balanced and adequately supported by the data? - yes
7. Are limitations of the work clearly stated? - yes
8. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished? – yes, some old references
9. Do the title and abstract accurately convey what has been found? - yes
10. Is the writing acceptable? – yes

Overall
This paper is very well written.
There is a large data set, 3054 patients.
The statistical analysis is well justified and very detailed.
This is an important topic and highly relevant in the context of Taiwanese health care delivery and stroke care.
The background to the study is clearly justified by the authors in relation to funding models for acute stroke care and thrombolysis.
The data is sourced from the Taiwan Stroke Registry.
The statistical analysis seems appropriate and justified.
I am not familiar with CART analysis.
In the limitations section, refer to the use of register data and retrospective nature of the data.

The results and data analysis are very detailed.

Other Minor changes suggested as follows;
Background section
page 3 line 2, change 3 to three
page 4 line 2, references 21/22 quite old

Methods
page 4 line 24, when was functional status assessed using the mRS
Page 5 line 2 define NHI

Tables / figures
Review font size/style in Figure 1

Accept paper for publication with minor revisions

Level of interest: An article of importance 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:

No competing interests to declare