Reviewer's report

Title: Risk and clinical-outcome indicators of delirium in an emergency department intermediate care unit (EDIMCU): an observational prospective study

Version: 2 Date: 30 October 2012

Reviewer: Dimitrios Adamis

Reviewer's report:

This study evaluates delirium in an emergency department intermediate care unit. Although there is a lack of data in those units the present study has serious problems in the design.

1. Regarding the exclusion criteria:
   How the authors assessed dementia and neuropsychiatric disorders? “Inability to follow simple comments before acute illness” This was due to what? Deafness? Coma? other reasons? How the investigators known it?

2. Outcomes: The authors reported as a good outcome the “recovery without complication”. However actually (page5 middle of second paragraph) they have use as outcome placement or death.

3. Delirium subtype: in the results section the authors have reported for first time subtypes of delirium but nothing has been reported in the methods section. How they have evaluated the delirium subtypes?

4. Statistical analysis: Logistic regression: It is supposed that in logistic regression the predictor variables (and consequently the errors) are independent and that correlation among predictor variables are low (multicollinearity). Did the authors check those issues before embarked on regression analysis? Often urea and creatinine are correlated and similarly (negatively) haemoglobin.

5. Finally to have a good indication of the occurrence of delirium in those units we need prevalence and incident rates. Similarly the duration of delirium may is affected from a previously delirium status from the unit from which the patient had been transferred. Thus delirium duration maybe miscalculated.

Level of interest: An article whose findings are important to those with closely related research interests

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