Reviewer’s report

Title: Regional variations in trajectories of long-term readmission rates among patients in England with heart failure

Version: 1 Date: 16 Jan 2019

Reviewer: Reviewer 2

Reviewer's report:

PEER REVIEWER ASSESSMENTS:

OBJECTIVE - Full research articles: is there a clear objective that addresses a testable research question(s) (brief or other article types: is there a clear objective)?
Yes - there is a clear objective

DESIGN - Is the current approach (including controls and analysis protocols) appropriate for the objective?
No - there are minor issues

EXECUTION - Are the experiments and analyses performed with technical rigor to allow confidence in the results?
No - there are minor issues

Statistics - Is the use of statistics in the manuscript appropriate?
Yes - appropriate statistical analyses have been used in the study

INTERPRETATION - Is the current interpretation/discussion of the results reasonable and not overstated?
No - there are minor issues

OVERALL MANUSCRIPT POTENTIAL - Is the current version of this work technically sound? If not, can revisions be made to make the work technically sound?
Probably - with minor revisions

PEER REVIEWER COMMENTS:

GENERAL COMMENTS: This study evaluates the presence of groups of heart failure patients classified according to readmission rates over a 5 year follow-up and geographical differences in these trajectories.

The authors identified between 3 and 5 groups of HF patients in the different regions and reported factors associated with classification into specific groups.
Healthcare utilization in patients with HF is an important topic and identifying subgroups defined by their readmission rates may be useful to develop specific preventive and therapeutic strategies.

REQUESTED REVISIONS:
The objective and overall methodological approach seem reasonable. My main criticism is how death was considered in the analysis: patients who die are probably those with more severe disease earlier and will not count towards rates of readmission. How is that information included in the analysis?

Another important issue is that the regions being considered are large and heterogeneous enough (e.g. London) that any observed differences between regions may not be particularly informative. A more thorough discussion of this issue as a potential limitation needs to be provided.

Note: This reviewer report can be downloaded - see attached pdf file.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable
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