Reviewer’s report

Title: Patient and Service-Level Factors Affecting Length of Inpatient Stay in an Acute Mental Health Service: A Retrospective Case Cohort Study

Version: 0 Date: 16 Aug 2020

Reviewer's report:

This is a timely study of patient level factors that drive length of stay in service users with SMI. It adds to existing knowledge by looking at both patient level factors and service level factors.

It is well written and uses appropriate methods.

I have a few comments about how the paper can be put in a context a bit more and some thoughts about limitations.

1. The policy background cited in the introduction is a little dated and the authors might want to put the study in the context of the NHS Long Term Plan and the NHS Mental Health Implementation Plan, not least as that plan aims to reduce length of stay for patients admitted to acute inpatient services to 32 days or fewer, but it does not say how this is to be achieved.

2. The results could benefit from a table that describes the sample by age and gender and diagnosis, and where possible by medication and comorbidity.

3. Was it not possible to look at whether comorbidities were important patient level factors?

4. The authors acknowledge that the sample is small and it might be that in the limitations they can say a bit more about how generalisable these data are. There are further opportunities to undertake individual level patient level analysis with large samples using linked data sets such as HES and CPRD and it could be that this study is a forerunner and proof of concept study to be confirmed in a much bigger sample.

5. The discussion is a bit light on clear ideas for research and pratice and saying further research is needed is not that helpful. What questions remain unanswered? What solutions can be drawn on to reduce LOS? What about the therapeutic environment and the fact that much of the NHS estate for inpatient acute mental health is not high quality and needs upgrading in line with the findings of the the report of the Mental Health Act. These discussion points could be explored in relation to their findings.
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Is the study design appropriate to answer the research question (including the use of appropriate controls), and are the conclusions supported by the evidence presented?

Yes

Are the methods sufficiently described to allow the study to be repeated?

Yes

Is the use of statistics and treatment of uncertainties appropriate?

Yes

Is the presentation of the work clear?

Yes

Are the images in this manuscript (including electrophoretic gels and blots) free from apparent manipulation?

Yes