Author’s response to reviews

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

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Author’s response to reviews:

Dear Editor

Thank you for considering our study for the BMC Psychiatry Journal. We are most grateful to the two reviewers who took the time to review the manuscript and provide some insightful constructive criticism. We have amended the manuscript following consideration of the feedback.

Please find below details accounts of the updates to the manuscript following feedback:

Reviewer 1:

1. Line 111-115 has been reworded to enhance clarity about which mental health issues were covered by the study. Table 1 has also been included which includes details of the sample including a breakdown of frequency of mental illness for clarity.

2. Line 75 now explicitly includes clarification that the study took place in Manchester, United Kingdom. Further in lines 252-262 there is further discussion to remove the implication that all areas in the United Kingdom share the same underlying characteristics as the study area.

3. Lines 80-85 now includes a broad description of the current prevalence of severe and enduring mental illness and commentary on current service utilisation by the local population to provide context to the study. As described in point (1), clarity has been added to describe the mental illnesses included in the study, and there are several instances where the impact of particular illnesses (specifically psychotic illnesses) is an important factor in influencing length of stay within the results and discussion section. Lines 181-182 have been amended to make clear the influence of particular illnesses on the length of stay.

4. Information on SPSS has been removed from the abstract.

5. The attached tabled (now labelled as table 4 rather than 3) is in a frequently used format for presenting results of multiple linear regression. Beta value is provided in column 4 (β). The table includes p-values by assignment of single or double asterisks to the β value in column 4 to indicate
those variables with statistical significance, as detailed in the ledger. The inclusion of the standard error of B is included in column 3 to give an indication as to the degree of uncertainty with which the correlation is held, and therefore confidence intervals need not necessarily replace these. We feel that the addition of individual p-values for insignificant results and a further measure of confidence would reduce the clarity of the results table provided, rather than improve it. The style of table was chosen so as to reduce superfluous information and provide concise and coherent results. We feel that we have explained within the body of the text the results and conclusions that can be drawn from table 4.

Reviewer 2:

1. Lines 43-45 now includes commentary on the significance of the NHS Mental Health Implementation Plan. Lines 49-50 now includes comments on funding for service change relevant to the NHS Long Term Plan and the NHS Mental Health Improvement Plan. Both these provide extra context to the study. In addition, we feel we have added a flavour of the importance of the plan in terms of the outcome of the study within the revised discussion and conclusions, although do not reference these explicitly in this section.

2. A table describing the sample demographics, diagnosis and medication has been included (table 1). Information on comorbidity was not available.

3. We agree that comorbidities are likely to be significant patient-level factors. Due to the extremely inconsistent documentation on the electronic patient record at the time, the authors did not feel they had the confidence to accurately record comorbidities as part of this study. Clarification regarding this has been included in line 112-113, and there is a discussion in terms of study limitations in lines 267-270.

4. We are grateful for comments on the limitations of the study and have expanded the discussion on study limitations to cover small sample size (lines 247-250) and potential poor generalisability (252-262). We offer suggestions for further research to address these limitations in our study in lines 308-317.

5. As described above we have commented on limitations and questions remaining unanswered in terms of varying practices in other trusts, rending these results potentially poorly generalisable. These changes have been made as described above in lines 308-317. We specifically comment on variations in physical environment and variation in therapeutic make-up of multidisciplinary teams between Trusts. We also comment on potential tentative solutions in terms of discharge planning, accommodation interface and continuity of care in lines 290-292 and 297-300.

We hope you find the amended manuscript more informative. As you will recognise this is a small but interesting study which we hope will be a springboard for other, larger studies within mental health services that can help to shape our understanding of factors influencing length of stay in order to develop robust systems to reduce delays and unnecessary bed days for patients.

Warmest regards
Neil Crossley and Brian Sweeney