Author's response to reviews

Title: Appropriateness of acute admission and in-patient stay for patients with long term neurological conditions

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Author's response to reviews: see over
Date: 28th Oct 2008

Re: MS: 9292106332091268

Dear Natalie Pafitis

We have attached a revised copy of a paper entitled ‘Appropriateness of acute admission and last in-patient day for patients with long term neurological conditions’. We have amended the manuscript, where possible, and have commented below on the issues and suggestions the reviews have raised:

Reviewer: Jee-In I Hwang

Major revisions:
1. The last four days of each patient’s in-patient stay was examined by the expert panel. The length of stay was judged inappropriate if at least one day was found to be inappropriate, according to the definition used. The study therefore assessed appropriateness of the last inpatient day. This has been clarified in the paper (see methods section).
2. The definition of ‘long term neurological conditions’ has been specified in the paper as an inclusion criterion.
3. The suggested amendment has been made.
4. In order to improve clarity, we have described the data we collected, as suggested by the reviewer, in accordance with the method of collection (see methods section).
5. The sentence has been rewritten.
6. Tables 1, 4, 5 and 6 have been incorporated into the text as suggested. We feel that the information given in table 2 is too extensive to present concisely in the text. However, if the editorial team feel this would be helpful then we would be happy to do this.

Minor revisions:
1. The length of stay has been re-analysed as suggested by the reviewer (Andrew Worthington). The IQR of the length of stay has also been recalculated.

Discretionary revisions:
1. We feel that the level of care studied is reflected in the title – “appropriateness of acute admission”. However, if the editorial team feel this is not adequate we would be happy to amend the title.
Reviewer: Jon Glasby

Comments:
1. The background section has been revised to incorporate and discuss studies which were carried out by McDonagh, Glasby and Worthington.
2. The limitations of using an expert panel method to determine appropriateness are discussed (see discussion section).
3. The recruitment process has been described further and the data collected during the interviews has been clarified.
4. The appropriateness of admissions and lengths of stay were determined according to the medical necessity of the admission/continued stay. For the definition used in this study it was necessary for the panel members to be medically qualified. It was not possible, therefore, to include a patient in the expert panel. The patient’s views regarding the circumstances of admission were gathered, however, and these views were presented to the expert panel in full. In view of this, we feel that the patients’s views were represented in the study.
5. We agree that a separate discussion of the three admissions where appropriateness could not be determined might highlight the issues that arise when seeking to determine appropriateness. However, we believe that to explore these issues in sufficient depth, a case study approach would be necessary. We feel this could not be included in the current paper.
6. The data have been re-analysed to ensure that the length of stay of only those patients whose admissions were found to be appropriate were included.
7. The limitation of examining the last four inpatient days rather than the whole length of stay is acknowledged (see discussion section). A number of practical factors (including time and the availability of several panel members) limited the objectives and remit of the study. Irrespective of this, we believe that useful evidence has been gained from the study which should be useful to practitioners and mangers in this field.
8. In relation to the discussion concerning the need for social care the following appears in the discussion section:

“It appears that access to some secondary care services needs to be more immediate, if unnecessary or extended hospital admissions are to be minimised. Increased availability of social care services, especially ‘out of hours’ has long been called for and our findings indicate that a
number of inappropriate admissions documented in this study could have been avoided if such services had been accessed.“

The rationale for making this statement is that 28% of the patients who were admitted inappropriately, health or social care at home was required and 15% required respite or palliative care in a nursing home. In terms of inappropriate lengths of stay, in five cases transfer to rehabilitation/sub-acute facilities were delayed (in three cases there was a delayed transfer to long term care and in two cases there was a delay in community social care provision.) Leading on from this the expert panel suggested that increased capacity of long term, rehabilitation and sub-acute facilities would have facilitated a timely discharge for a number of participants. We believe, therefore, that access to these services could be improved further.

9. Further policy background has been added to both the background section and the discussion section of the paper. Specifically, the significance of the Older Persons National Service Framework, the Long Term (neurological) Conditions National Service Framework, the NHS plan and relevant Public Service Agreement Target/s have been discussed.

Reviewer: Andrew Worthington

Major compulsory revisions

1. We have re-analysed the data as suggested. The lengths of stay of those whose admission was appropriate only were taken forward for analysis.

2. Table 4 (previously 8) has been amended to improve its clarity. The full results are now given. Also, it is clarified in the paper that ‘living in your own home’ was the factor associated with an inappropriate admission.

3. Table 7 (now table 3) has been amended to improve its clarity. A proportion of patients had multiple long term neurological conditions, the table represented the prevalence of the conditions (due to those with multiple conditions the number of conditions were greater than the total sample size). The table has now been modified to represent the patients and therefore separates those with one long term neurological condition and those with multiple conditions (see table 3).

Minor essential revisions

1. The process for selecting the patients has been clarified in the methods section of the paper. Patient eligibility was determined from information contained in the patient’s health records. The consent/assent procedures are detailed.
2. The majority decision of the expert panel was taken forward as the final panel decision and this has been clarified in the paper. The information given to the panel is detailed in the method section (full details given in the data collection sub-section).

3. The sample size was based on acute stroke data due to the limited volume of literature examining long term neurological conditions. A systematic review conducted prior to this piece of research (unpublished) found that only three studies examined appropriateness of admission and/or length of stay for patients with long term medical conditions. The three studies, however, were very old and were therefore considered an inappropriate source on which to base a sample size calculation. The full sample size was not achieved due to difficulties with recruitment and time limitations, and such limitations are acknowledged in the discussion section. With regard to the question of how the confidence interval was derived the primary endpoint of the project was the estimation of the proportion of inappropriate LoS. When a proportion is estimated then the Confidence Interval of this proportion should be estimated in order to show the accuracy of our estimate. Therefore, the sample size estimation was based on an accuracy of +/-5% for the proportion of inappropriate LoS that was referred to in the stated literature. The number 5% was chosen as it would provide very good precision of our estimate.

4. The information on which the decision regarding appropriateness of admissions and length of stay was based was collected mainly from the health records. If an assessment of a patient’s psychological needs was undertaken then this would have been presented to the expert panel and therefore considered. In terms of whether or not a patient with psychological needs who isn’t coping well will a chronic illness would be considered appropriate or not, this would depend on whether or not the services the patient required could only be provided in an acute hospital setting. In terms of the wider panel used to determine care needs and therefore appropriate alternative services we feel the panel was comprehensive, however, may have benefited from a psychological representative.

Reviewer: Paolo Villari

Major compulsory revisions

1. A section discussing the reasons why the calculated sample size was not achieved has been inserted (see discussion section). The most common reason for failure to recruit was that patients were discharged before consent/assent could be obtained. The possibility of a selection bias is acknowledged in the discussion section.
2. The sentence has been amended to improve clarity. The sentence states that living at home was a factor associated significantly with an inappropriate admission.

3. Table 4 (previously 8) has been amended to improve clarity further. The full results are now given.

**Minor revisions**

1. The manuscript has been reformatted, all pages (excluding the pages in which table 4 appear) now appear in portrait only.

Please do not hesitate to contact us if you feel any further revisions are needed.

We look forward to hearing from you.

Yours sincerely

Christina Hammond, Margaret Phillips, Lorraine Pinnington.