Reviewer’s report

Title: The role of a specialist neurological infection service at a university teaching hospital in Northwest England

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Reviewer: Licia Denti

Reviewer’s report:

This study is a retrospective review of the activity of a specialist neurological infection service. It is a description of patients referred to this service within a four year period, in terms of presentation, diagnosis and short-term outcome. Some inference to the general population of patients with neurological infection can be made, but, as acknowledged by the authors in the discussion, the generalizability of results is limited since the sample examined is highly selected.

The study has some strengths.
First of all it addresses a relevant topic in terms of clinical impact. Secondly, the manuscript is well written: the objective is clearly stated the methods are appropriate and well described.

Besides, Authors avoided any over-interpretation of their results, which are viewed only as a source of information to increase the knowledge about the epidemiology of this kind of diseases. Unfortunately, as mentioned above, the study is about a selected cohort and the generalizability of the results is limited.

So, above all, I have some concern about what the study can really add to our knowledge about the topic of neurological infection.

In my opinion, the most innovative aspect is the model of care that the Authors has investigated, that is a service run by neurologists and infectious disease specialists, for out-patients and in-patients. It is an interesting model of interaction and cooperation of different specialties, which should have positive impact on patient outcome. The service is supposed to be run according to some standardized procedures, which should be of some interest for the reader. The effectiveness of such a model could be investigated only by a comparison with the usual care as control and possibly by a randomized design. However, some kind of evaluation the quality of the process of care implemented in the service, in terms of pre-specified process and outcome indicators, possibly according to reference guidelines, would have given useful information about the applicability and quality of the process of care under investigation.

As a matter of fact, according to the title, the role of a specific model of care is under investigation, while most data are a description of the clinical characteristics of patients admitted to the service.

In my opinion, the Authors should change the title, which should anticipate that the study is a mere description of case mix of patients admitted to the service and their outcome, while the “role” of the model of care is not under issue, since
no control is available, nor the study protocol includes an analysis of predefined process and outcome indicators against appropriate standards.

So, as major compulsory revision I suggest:
1. Changing the title to make it more informative about the content of the paper.
2. Adding in the background some information about the process of monitoring the quality of care of the service under investigation, if available.

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

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interest