Reviewer’s report

Title: Quantification of vision by visual evoked potential in visual disability assessment

Version: 11 Date: 22 May 2012

Reviewer: Benjamin Thompson

Reviewer’s report:

The manuscript is much improved. There are, however, some remaining issues that should be addressed.

Minor essential revisions

1) One of the main conclusions of the study is that there were no reliable differences between the measured acuity in patients with optic neuritis and the acuity predicted by the linear regression model generated using data from normal and amblyopic observers. While this is true in the strictest sense it is worth noting that the p value the authors report for the t-test comparing these values is 0.07 with a significant difference being 0.05. It would be useful for the authors to state in the limitations of the study that this statistical result is marginal and that the non-significant difference might be due to a lack of statistical power and/or high levels of variability in their data. In addition, the average difference between the actual and predicted acuities was 0.18 logMAR which is approaching the clinically significant level of 2 lines of letters on a logMAR chart. This is also a point that would be worth mentioning in the limitations of the study.

2) The authors state that the linear regression results for the normal+amblyopia and the optic neuritis datasets are not significantly difference from one another. How was statistical significance determined for this comparison?

3) Many sections of the manuscript are still rather difficult to follow. The abstract in particular is hard to understand. I suggest avoiding terms such as “evaluate for registry” as these are difficult to understand. A term such as “diagnose the presence or absence of visual disability” may be better. The title is also hard to understand. One possibility might be “Assessment of visual disability using visual evoked potentials”. The subheadings in the results sections may be better as “predicting visual acuity in patients with optic neuritis” and “predicting visual acuity in patients with visual pathway lesions”.

4) Information relating to the case study patients should be provided in the “patients” sub-section of the “methods” section.

5) The term “interrelationship” is a little unusual. I suggest replacing this with “relationship”.

6) The manuscript that would benefit from close proof reading for grammatical errors.
**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

**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 interests'