Reviewer's report

Title: Between-centre differences and treatment effects in randomized controlled trials: A case study in traumatic brain injury

Version: 3 Date: 6 July 2011

Reviewer: Karla Hemming

Reviewer's report:

1. The between centre 95% range in Table 2. On page 11 and 12 the formula for the 95% range includes $\tau^2$. From the estimated $\tau^2$ in Table 2, I have tried to reproduce the 95% range. However, I do not come up with the same values as the authors do. I believe that some mis-labeling of $\tau^2$ and $\tau$ has happened, since the 95% range quoted would appear to be based on a $\tau$ (i.e $\sqrt{0.447}$) rather than $\tau^2$ (i.e. 0.447).

2. I believe that there may be a typing error in Appendix 1 equation 1, notation immediately below. I believe that $j$ should refer to the centre and $i$ to the patient.

3. Range of centre effects formula. Could the authors provide a reference for this 95% range formula.