Reviewer’s report

Title: Emergent approaches to the meta-analysis of multiple heterogeneous complex interventions

Version: 4 Date: 28 January 2015

Reviewer: Howard White

Reviewer’s report:

These are all discretionary revisions

I am not that keen on the use of the word complex, although I recognize it is now common. Patricia Rogers has distinguished between complex and complicated. Complicated are interventions with many components. Complex has complex causal pathways which are difficult to disentangle (I don’t agree, but that is how it’s presented). Anyway, the definition used by the authors seems to fall somewhere between the two: multiple components, but with some interest in interactive effects.

So my main comment is that there is something of a disconnect between the different parts of the paper. As presented, the method can generate comparisons of A vs B, A vs C and B vs C. But we also want A+B vs C (and if there is no untreated, treatment as usual or placebo control, vs that also), A+C vs B, B+C vs A, and A+B+C vs control. Can the method do that? (I assume so if there are some factorial designs in the set of studies available for meta-analysis, but the authors need make this explicit).

Once that issue is addressed, then there can be a discussion of ‘disentangling’. Studies may not be a factorial design, but just of say A+B. So if we have studies of A and B separately, we can presumably use these data to estimate the effect of A and B, and synergy or redundancy from having the two components together in the A+B study.

Level of interest: An article of importance in its field

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 interests