Reviewer’s report

Title: Detailed statistical analysis plan for the Target Temperature Management after Out-of-hospital Cardiac Arrest trial

Version: 1 Date: 27 June 2013

Reviewer: Brian P Kavanagh

Reviewer’s report:

I have read this account carefully – I congratulate the authors for undertaking such an important study and for outlining the analysis and data presentation plan with such clarity and rigor.

The rational for the study is powerful, underscores major concerns with wholesale promulgation and uptake of several current guidelines, and will likely shape care in this area for a decade or more. It may be among the most important and most generalizable practical issues in medicine.

The key issues are the intention to treat analysis, the sequence of -and approach to- primary and secondary analyses and the plans to compare adjusted and unadjusted analyses as sensitivity to the potential for the presence of unmeasured confounders.

The study appears to be based on sensible effect sizes and seems adequately powered.

I suggest a clear statement that in the event of significant missing data (this is NOT anticipated), ‘raw’ (unadjusted, non-imputed) data and analysis be presented, if only in an appendix.

A small suggestion: consider adding a question to the spouse/life partner about the patient’s comparative mental state (in addition to the ‘self question’).

I have no comment on the alternative options outlined for the sequence of analyses of the multiple secondary outcomes. However, I suggest that priority be accorded to definitions that are more solid/less nebulous (e.g. renal replacement therapy, seizures, specific bleeding vs. ‘sepsis’).

Congratulations.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.
Declaration of competing interests:

no conflicts