Reviewer’s report

**Title:** Efficacy of N-acetylcysteine in preventing atrial fibrillation after cardiac surgery: a meta-analysis of published randomized controlled trials

**Version:** 2  **Date:** 13 February 2014

**Reviewer:** Louis-Mathieu M Stevens

**Reviewer’s report:**

**Major Compulsory Revisions**
- The manuscript abstract, introduction and method up to page 3 is well presented, however the quality of written English decrease importantly afterwards, limiting the overall appreciation of the manuscript. I believe this manuscript should be published, but a thorough revision by an expert in English scientific writing should be completed before publication.
- It is said that 15 studies were excluded since “they did not evaluate POAF as an outcome” - I would strongly encourage the Authors of this meta-analysis to contact the authors of these excluded trial to see if this data is available even if not published. Also, it seems that no authors of the 10 included studies were contacted to inquire about unreported "method of AF assessment", "definition of AF" or unreported secondary outcome including ICU and hospital length of stay. I would also strongly suggest the Authors to contact the PI of these 10 studies with a limited set of questions in addition to the 15 excluded trials.

**Minor Essential Revisions**
- There are several typo “Tabled”, “NCA”, “Stains”.
- In Table 1, CLD and COPD describe the same pathology and could all be reported as CLD. ACEI/ARB and "RAI" is the same medication - change "RAI" to "ACEI".
- Please add the figure of the subgroup analysis of studies with short-term NAC vs long-term NAC.
- Format all p-values with the same number of decimal (I would recommend p-values with 3 decimals everywhere - if the p-value is 0.0004, simply report <0.001).

**Level of interest:** An article of importance in its field

**Quality of written English:** Not suitable for publication unless extensively edited

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**
'I declare that I have no competing interests'