Reviewer’s report

Title: Treatment Approaches and Costs of Surgical Site Infections post Hip Arthroplasty in Australia: a retrospective Analysis.

Version: 1 Date: 30 August 2012

Reviewer: Michelle M Dowsey

Reviewer’s report:

The stated aims of this study are to identify treatment approaches, compare treatment costs and success rates for treatment of deep surgical site infection following primary total hip arthroplasty in Queensland, Australia. Diagnosis and treatment of infection was based on ICD codes extracted from hospital databases and treatment costs were estimated based on DRG codes assigned to patient episodes. The paper is novel and interesting in that there are very few published reports addressing this issue. While the manuscript provides a comparison of treatment costs for different “surgical” interventions for treating SSI's, I don't consider it a paper about the success rates of these interventions.

Major Compulsory Revisions

1. With regard to the 1 patient whose cost data was excluded as the patient underwent multiple related and unrelated treatments (page 9) – If the patient was admitted for treatment of SSI then all costs are related, whereas if the patient was admitted for other reasons and during that episode developed an SSI then the statement is correct. Please clarify.

2. The average costs are provided for the different treatment scenarios. Was the data evenly distributed or skewed? There are no standard deviations/ranges provided in the tables and the range of costs is provided inconsistently throughout the manuscript.

3. Overall one third of deep SSI patients underwent multiple surgical procedures. A breakdown of the number of procedures according to whether 1-stage/2-stage/DAIR would be interesting.

4. As the Authors point out, they are unable to provide data on outpatient costs and this is acknowledged as a limitation. The authors also do not provide information on the types of pathogens, the nature and duration of treatment outside surgical interventions; such as antibiotic therapy and duration of therapy. As such the paper does not really address the stated aims of identifying treatment approaches and success rates other than the surgical component of the treatment approach. I suggest that the focus of the manuscript should be limited to quantifying the costs of the different surgical treatment approaches.

Minor Essential Revisions

5. In the results section it states that “patient characteristics are described in Table 3 but I think this should be Table 1
Discretionary Revisions

6. I am not sure if the statement that patients generally prefer to undergo on-stage/DAIR over 2-stage revision for SSI treatment is correct.

Level of interest: An article whose findings are important to those with closely related research interests

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