RESPONSE TO REVIEWERS

3rd January 2017

The Authors would like to thank the Reviewers for their recommendations. The manuscript has been extensively revised to reflect these improvements, and we hope the reviewers believe the manuscript to be of higher quality as a result of these changes. Please see the direct responses to the recommendations below;

Reviewer 1 (Reviewer: 03609779)

The choice of risk factors should be discussed: Especially infectious diseases risk factors. Nasal MRSA infection is selected but what about the other risk factors? Nasal S. aureus infection, distant organ infection, genitourinary infection? Factors of immunosuppression remain unclear: what about prednisone use?

We would like to thank the reviewer for their comments. We have reviewed a wider range of risk factors within the Discussion section.

There are no data about patients with chronic renal failure. Most of the time there are only one article selected to evaluate each risk factor. It has to be compared to other main studies especially regarding infectious risk factors.

We would like to thank the reviewer for their comments. To clarify, as part of the systematic review process we did not search for individual risk factors, but included studies with 'risk factor' in their title/abstract. Therefore, in the Results section we only included the risk factors identified by the included papers. We have gone into more depth in the Discussions section of other important risk factors that were not identified.

Reviewer 2 (Reviewer: 03675863)

The introduction requires references for the statements made in the first sentence of the first paragraph and the first sentence of the second paragraph…In the second to last paragraph of the methods, the Prisma model should be referenced.

We would like to thank the reviewer for their comments, and have now referenced these.

The result section requires significantly more detail. While the tables are referred, the most significant data should be presented (as the tables are not self explanatory).

We thank the reviewer for their comments, and have explained in detail the tables in the Results section.

The results with CI and p-values in the discussion should be presented in the results section. The discussion should be limited to discussing those highlights again, but the statistics should be in the results section.

We thank the reviewer for their comments and have adjusted the text accordingly.

Please review the factors specific to provider not only in the results, but in the conclusion.

We thank the reviewer for their comments and have adjusted the text accordingly.

One factor that has recently been shown to affect outcomes is surgical time. Please indicate whether you found this to be true.

This is stated within the Results section; 'Prolonged operative duration of greater than 115 minutes in hip arthroplasty is a strong predictor of infection [5,14,23]'

Reviewer 3 (Reviewer: 03518606)

I miss quality assessment criteria for inclusion of the individual studies.

We thank the reviewer for their comments, and have now undertaken an assessment of the quality of the included papers as referenced in the Results section, and in Table 2.

Results are a little too short and the discussion section should include other meta-analysis and reviews published 2015 and 2016.

We thank the reviewer for their comments, and have now extensively revised the Results and Discussion section to include more recent publications.