Author’s response to reviews

Title: Cost-effectiveness and value of information analysis of a low-friction environment following skin graft in patients with burn injury

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Author’s response to reviews:

Reviewer #2: The paper is clearly presented and the logic for the model, and assumptions are explained. The analysis of bias and sensitivity analysis is helpful.

While a number of limitations of the study are discussed, I think more consideration needs to be given to the time horizon and measurement of utilities.

The short time horizon of 28 days is appropriate from the point of view of costs, as this will pick up differences in inpatient costs. However, this does not seem appropriate for benefits, given the higher risk of long-term scarring for patients requiring a re-graft could presumably have life-long consequences.

The lack of QALY information in this respect needs to be considered in more detail. Given the very short time horizon it is not surprising that alternative QALY values do not have an impact on the results - this needs to be discussed.

It would also be helpful to know if patients/families are among the stakeholders who were included in validating the assumptions (page 9).

Response: Thank you for raising this important point. We have added the following paragraph to discuss the issue (p.9, line 211):

We note that the short-time horizon of this model made it unlikely that we would identify differences in QALYs, and this may mean that we did not consider the inclusion of potentially relevant effects. These effects could be substantial if repeat skin grafts cause long-term or permanent scarring and the utility
decrement (and associated loss in QALYs) can be quantified. Further work could set out to collect data on utilities or elicit informative priors to describe uncertainty in these parameters (31) in order to populate a long-term model. Any future model development should foreseeably involve patients and public to validate such long-term assumptions.

Reviewer #3: Thank you to the authors for what I consider to be a very well written article, applying a health economic model suitably and clearly. My comments are all exceedingly minor. I believe the authors have dealt well with the previous reviewer’s comments.

Minor:

- A little more background would be useful for those from elsewhere. For example – what does “low friction bedding” mean? We could look up the main study, but I think it would further polish this work just to explain how it compares to standard practise etc.

- CHEERS checklist: I note item 20b was marked as NA – is this really appropriate? Don’t the authors consider the uncertainty in their work?

If CHEERS will be published, reference this in the main text, where the authors note reporting following it.

Response

We have rewritten the background in clear English.

Item checklist 20b contained a typo which we correct. Our hope would be to make the CHEERS checklist available as an online appendix. We have actioned the below incredibly helpful line by line clarifications maintaining track changes.

Pedantry:

L16: For a general audience, define what is meant by "lost"?

L17: "Low friction bedding" was not actually explained anywhere - could it be?

L49: "130,000" is used to begin the sentence; restructure, so it does not begin with a number

L53/54: I find the first clause in the sentence hard to parse

L56: Again, for the general audience - define "full thickness"?

L57: Insert comma in "1000" - eg "1,000"

L61: Again, define shearing for general audience?

L68: As with above - define "low friction bedding"
L78: Worth including costs briefly to give an order of magnitude?

L107: Make dash an em-dash

L148: "beddingwas" -&gt; "bedding was"

L208: Decapitalise "H" in health

L222: "standardbedding" -&gt; "standard bedding"

L226: Has "CrI" been spelt out anywhere?

L238: Double space before "The" at end of line

L241: Decapitalise "S"

L246: Capitalise "Appendix"

L263: For formality: "Aren't" -&gt; "are not"

L304-307: Don't think this captures all abbreviations used in the manuscript - eg RCT, NHS, CrI

L305: Remove bracks around NB - this format is used in the rest of the text.

Table 3: Make INB column a little wider to increase its readability and decrease height of table.

Figure 3: Rotate y-axis labels to increase readability? Decrease space at top of plot? Doesn't seem like it is really needed.