Author’s response to reviews

Title: Defining the gap: A systematic review of the difference in rates of diabetes-related foot complications in Aboriginal and Torres Strait Islander people and non Indigenous Australians

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Author’s response to reviews:

Editorial comments:

As stated by reviewer 3, the paper is not really a systematic review of prevalence. For an example of a prevalence review and meta-analysis of foot disorders, see: Pain. 2011 Dec;152(12):2870-80. Rather, this paper is review of whether aboriginality is a risk factor for foot disorders, as it compares rates in indigenous and non-indigenous people. As such, it only provides an indication of the relative (as opposed to absolute) prevalence of foot disorders in indigenous people. This is an important distinction that needs to be taken into account when revising the paper.

Response: Thank you for this comment. We have amended the title and aim to focus on relative prevalence and risk.

Reviewer reports:

Reviewer #1: Thank you for the opportunity to re-review this really nice systematic review on the prevalence of diabetic foot complications in indigenous compared with non-indigenous populations in Australia. Again I congratulate the authors for the paper and now also for comprehensively addressing my specific revision comments from my original review. Overall the paper reads very nicely now and from my perspective the paper is nearly there. However, there are a handful of discretionary and minor revisions that remain that I think the authors still need to reflect on that I think are important to the paper. Once the editors feel these revision comments below have been satisfactorily addressed I would be more than happy to see this paper
published in JFAR and I really look forward to citing it in future. Again may I say well done to the authors for undertaking this really important piece of work.

Abstract

1. Terminology: This is at the discretion of the authors, but I note you use both the terms "indigenous" and "Aboriginal and Torres Strait Islanders" in the abstract to mean the same population. If the term "indigenous" is permissible it would make the paper easier to read if it were able to be used consistently throughout the paper as it would mean one word instead of five words is used each time to describe the primary population of this paper. However, again please continue to use the term "Aboriginal and Torres Strait Islander" if this is the more culturally appropriate term as this is not my area of expertise.

Response: Thank you for this comment. As reference to Aboriginal and Torres Strait Islander people is more culturally appropriate, all references to the Indigenous populations have been changed to Aboriginal and Torres Strait Islander people.

2. Results: Just be careful with "up to" in your Odds Ratios as that could mean 0 up to 3.7. I realise it can be a little difficult to display but perhaps simply just display a range of Odds Ratio reported by the different studies without confidence intervals, e.g. from my read of Table 3 it could be simply 'and amputation (OR range: 3.1 - 6.2)'

Response: Thank you for pointing this out- this section has been updated as per your suggestion.

3. Conclusion: Again I'd suggest reporting a range in the first sentence for diabetes-related foot complications would be more useful and actually more accurate than what you currently have as "5 fold". For example, looking at your new Table 3 (which is great by the way and well done) it looks like 'Aboriginal and Torres Strait Islander Australians have 3-6 fold increased odds of having diabetes-related foot complications' or something would be much more useful and technically accurate than "5 fold"

Response: Thank you for this comment. We have altered this section to read;

Aboriginal and Torres Strait Islander people have a 3-6 fold increased likelihood of experiencing a diabetes related foot complication compared to non-Indigenous Australians.
Methods

1. Data sources: I am happy you have corrected that reports were not eligible for inclusion now in the methods "No language, publication date or publication status restrictions were used but only original published articles from academic journals were eligible for inclusion.", however, it is still confusing when the next paragraph leads with "Published reports .... were eligible for this review". Perhaps just use "Studies" instead of "published reports" throughout to denote the papers that were eligible so its not confusing to the reader

Response: Thank you for this comment. This section has been altered to read

Published studies providing cross-sectional or longitudinal data on the prevalence of diabetes related foot complications in both a cohort of Indigenous Australians and a cohort of one other Australian population of any age with diabetes were eligible for this review

Results

1. Rates of foot complications: Thank you for including Table 3 as it makes the findings much easier to read. However, I feel you haven't made enough of this Table in your results. At present Table 3 is only mentioned in the first paragraph of the Discussion. As these are results to me this needs to be in results at the very least; however, this is the results section where you probably should report the OR ranges for your foot complications as well so the reader can quickly scan them in the results and understand your findings as per my comments re: your abstract. Plus you have reported (and rightly so) your Table 3 findings in the results of your abstract.

Response: Thank you for this comment. We have included reference to table three in the results section:

Thematic analysis of extracted data from included studies relating to specific foot complications including amputation, peripheral neuropathy, peripheral arterial disease (PAD), ulceration and infection is shown in Table 3.

Discussion

1. First paragraph: As per point above, need to have Table 3 reported in Results and not mentioned in Discussion for the first time

Response: Thank you for this comment. We now make reference to table three in the results as per your previous suggestion.
2. Conclusion: As per point 4 in the conclusion it would be more useful (and accurate) to report the range of increased odds for diabetes-related foot complications rather than a 'flat figure' of 5 which isn't quite accurate, ie I would suggest from my read of Table 3 this is 3-6.

Response: Thank you for this comment we have altered this to:

In the limited available comparative data, we found Aboriginal and Torres Strait Islander Australians had between a 3-6 fold increased risk of both foot ulcer and minor or major amputation and that these occurred at a younger age

Reviewer #2: The authors have done a great job of processing and incorporating a huge amount of feedback. This is now high quality paper that provides important but previously lacking information on this patient group.

Response: Thank you for this comment. It is greatly appreciated.

Reviewer #3: I would like to thank the authors for taking the time to revise their manuscript. Overall, the paper is now improved. However, I think some further refinement is required.

1. The paper includes results on prevalence, incidence, odds ratios (OR) and relative risk (RR), but this is inconsistent with the stated aim which is to report on prevalence of diabetic foot complications in Indigenous and non-Indigenous Australians. Prevalence and incidence are absolute measures used to describe the numbers of people with the disease or developing the disease, and OR and RR are measures describing associations between risk factors and disease. In this paper the risk factor is Indigenous status. Prevalence and OR are derived from cross-sectional studies, and incidence and RR are derived from longitudinal studies.

Perhaps the aims could be expanded to include both absolute and relative measures, and the results and tables divided accordingly. Hence, the first section discusses the prevalence of foot complications in Indigenous Australians (here the number of papers included could be increased to also include those that report prevalence only in Indigenous Australians), and the second section discuss Indigenous status as a risk factor for foot complications (i.e. reporting OR for cross-sectional and RR from longitudinal studies). The second section needs to be restricted to studies with both Indigenous and non-Indigenous Australians. Thus, the conclusions will report on (i) the prevalence of foot complications for Indigenous Australians (eg. XX% to XX%) to give results on how many Indigenous people with diabetes have or develop foot complications,
Response: Thank you for your comment. We believe it is important to have regionally appropriate comparative data in non-Indigenous Australians to determine the extent of the problem of diabetes related complications in Aboriginal and Torres Strait Islander people. Discussing the extent of the problem without the context of occurrence in an equivalent general population risks diluting the extent of the disparity in health outcomes. Due to the lack of available data comparing foot complications in Aboriginal and Torres Strait Islander people to non-Indigenous Australians we believe it is important report the breadth of data available. We take your point about the specific choice of word in the aim and title of the paper as not reflecting this. We have amended the aim and the paper title and now refer to ‘rates’ of foot complications as a general term to encompass all the above data.

Title:
Defining the gap: A systematic review of the difference in rates of diabetes-related foot complications in Aboriginal and Torres Strait Islander people and non Indigenous Australians

Aim: The aim of this review was to systematically evaluate the literature reporting rates of diabetes related foot complications for Aboriginal and Torres Strait Islander Australians compared to non-Indigenous Australians.

2. Suggest the authors use a references program like EndNote or Reference Manager to ensure the references are formatted appropriately. It is usual to provide volume, issue and page numbers rather than a web-site address.

Response: Thank you for this comment. The references have been checked and updated as appropriate.

3. References 3 and 5 are outdated, and reference 5 only relates to Insulin Dependent Diabetes. The correct references are: "Australian Institute of Health and Welfare 2015. The health and welfare of Australia's Aboriginal and Torres Strait Islander peoples 2015. Cat. no. IHW 147. Canberra: AIHW" and "4727.0.55.003 - Australian Aboriginal and Torres Strait Islander Health Survey: Biomedical Results, 2012-13" and/or refs 10 and 11 as already referred to in the paper. Also the sentence in the Background, first paragraph that begins: "....This same report found diabetes accounted for 16% ....." should also be updated with the more recent data from these references. It may also be useful to report hospitalisation data for Indigenous
relative to non-Indigenous as this would help to demonstrate the greater morbidity experienced by Indigenous Australians.

Response: Thank you for your comment. We have updated and removed references as required.