Reviewer’s report

Title: Mortality trends in Australian Aboriginal peoples and New Zealand Māori

Version: 0  Date: 05 Aug 2016

Reviewer: Laura Dwyer-Lindgren

Reviewer's report:

This manuscript reviews various previously published estimates of mortality rates and life expectancy among New Zealand Maori and Australian indigenous populations and uses these estimates to track the gap in life expectancy between indigenous and non-indigenous populations in both countries over time. The authors also consider the gap in adult mortality, as measured by 45q15, and decompose the life expectancy gap by age.

I have the following comments:

1. I had an extremely hard time following the different data sources utilized in this analysis. A primary component of this manuscript is essentially a literature review and evaluation of previous estimates of Maori and indigenous life expectancy, and as such I think it is worth the effort to find a clearer way to organize this information. To this end, it may be useful to provide a table that describes the key points of each study cited (e.g., the date range, underlying data, any corrections used, and whether or not the estimates have since been discredited).

2. I think more detail as to the different methods used in generating the life expectancy data is warranted: as is, it's difficult for the reader to know what the important differences are in the analysis methods without reading all of the cited papers.

3. The introduction states that the analysis is carried out 'taking account of changing estimation methods,' but it is not obvious how the different methods are (or could be) accounted for. If nothing has been done to adjust for differences in the method, the authors should provide evidence as to why this isn't necessary.
4. Why is the comparison in Australia for indigenous population to total population rather than indigenous to non-indigenous population, as in New Zealand? The authors state that this is how it is traditionally reported, but in the context of this analysis, it makes more sense to use the same comparison. Is this a matter of data availability?

5. What do the authors mean by 'credible estimates' (e.g., line 47) and 'credible data' (e.g., line 193)?

6. The discussion is very long and difficult to follow. It would likely help to add some headings to separate out the different topics covered. I also had trouble figuring out why some of the information in the discussion was included - it would be useful to make this link more explicit throughout.

7. The authors conclude that 'the NZ LE decline does suggest the extent that changes to the socio-economic environment can impact on the LE gap' and also that 'the wider LE gap in Australia than NZ is a direct reflection of the substantially wider Indigenous/non-Indigenous economic disparity in Australia'. These are both fairly strong conclusions about the relationship between socioeconomic disparity and life expectancy which I don't think are supported by this particular analysis.

8. The markers on figures 1 and 2 are very small and hard to distinguish - could they be made larger and perhaps filled with different colors?
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