Reviewer’s report

Title: Assessing the magnitude and uncertainties of the burden of selected diseases attributable to extreme heat and extreme precipitation under a climate change scenario in Michigan for the period 2041-2070

Version: 1 Date: 14 Feb 2019

Reviewer: Zoe Chafe

Reviewer's report:

Thanks to the authors for the thoughtful and thorough changes made to this version of the manuscript, in response to the first round of review comments. In general, my comments have been addressed. Here I suggest a few points that the authors may wish to take into account:

Title: The title has been improved. However, this analysis focuses on two types of exposure that change due to climate change: extreme heat and extreme precipitation. The analysis is more clearly bounded by the relationship between EH and EP and climate change, rather than selected diseases. I would encourage authors to consider changing the title to something such as "Assessment of the burden of selected diseases attributable to extreme heat and extreme precipitation under a climate change scenario in Michigan for the period 2041-2070." As noted in the author responses and in the text, extreme heat and extreme precipitation are just two of the potential changes due to climate change that could be relevant to health.

Discussion: In the paragraph on pollen (beginning L4, no page number found), the authors may want to clarify at the beginning of the paragraph that burden of health due to pollen exposure is not quantified in this analysis, as was done for the subsequent paragraph on legionellosis.

Conclusions: The authors may wish to consider stating that, given the focus on EH and EP burdens here, a fuller analysis of all expected health burdens (from pollen, moderate heat etc.) would likely find a greater burden, making the findings described here a conservative estimate of the impacts of climate change on health.

The authors may wish to consider the conclusions in the following recent article, which addresses problems with extreme precipitation data and epidemiological studies, especially given the downscaling in this analysis: Levy et al. 2019 DOI 10.1093/aje/kwz010/5301284.

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