Reviewer's report

Title: Association between sugar cane burning and acute respiratory illness on the island of Maui

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Reviewer: Mohamed Aqiel Dalvie

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The manuscript describes the impact of sugar cane burning on respiratory health using an original design whereby areas of burning where mapped out and respiratory morbidity are compared during days of burning and no burning in both areas where there was burning and no-burning. The design which results from the unique geographic characteristic of the island of Maui allows for the control of confounding factors Volcanic smog and as well as other confounders. The article is generally well written and the results will be a significant addition to the literature. The article is suitable for publication in the journal after addressing the minor comments below.

Minor essential revisions

Background
1. The 2nd sentence of the last paragraph, P4 (study by Lehman) is not clear. Additionally it is not stated if association were significant and the setting is not specified.
2. In the 1st sentence on page 5: “insignificant” should read “not significant.”
3. In the 1st two paragraphs on page 5, the significance of the associations, number of participants and concentrations of pollutants are not specified in the description of studies from the literature.

Methods
4. I suggest that Figure 1 be enhanced to indicate exposure areas and mapping as described in the first paragraph of page 7.

Results
5. The 2nd sentence of the 1st paragraph on page 10 should be written more clearly and Table 3 should be referenced.

Discussion
6. Virtually all of the first paragraph on pages 10 and 11 are repetitions of the methods and results section and should be reduced substantially.

Level of interest: An article of importance in its field

Quality of written English: Acceptable
Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests