

Reviewer's report

Title: A Multi-city Time-series Analysis of Air Pollution and Emergency Department Visits for Cardiac and Respiratory Conditions

Version: 1 **Date:** 20 February 2009

Reviewer: Bin Jalaludin

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The authors have conducted a multi-city time series analysis of ambient air pollution and ED visits for cardiac and respiratory conditions. The methods that the authors have used (data sources, statistical methods, presentation of results) are valid and consistent with currently accepted methods. The manuscript is well written and the discussion is balanced.

Although there have been many time series studies investigating deaths and hospital admissions and air pollution, there are far fewer studies that have reported on air pollution and ED visits. Further, very few studies have reported on multi-city analyses. Lastly, the authors also looked at shorter periods of exposure which have been rarely done before. For these reasons this manuscript makes an important contribution to the literature.

Major Compulsory Revisions

I do not have any major revisions for the authors.

Minor Essential Revisions

I have a number of minor revisions for the authors:

1. It would be useful to make some comments on the correlation among air pollutants especially when the authors do present the results from two pollutant models.
2. The authors should define summer and winter months.
3. Although the authors have adjusted for seasonal variations, it would be useful for the authors to describe whether this would have also adjusted for influenza and other respiratory disease outbreaks.

Discretionary Revisions

I do not have any discretionary revisions for the authors.

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.