

## Reviewer's report

**Title:** Effects of ozone and particulates on pediatric patient asthma-related emergency department visits in Washington, DC, from 2001-2004

**Version: 1 Date:** 1 October 2006

**Reviewer:** Francesco Forastiere

### Reviewer's report:

#### General

The paper presents the results of a time-series study on air pollution (PM and ozone) and ER visits for asthma among children in Washington. The study is not original as previous studies have addressed the issue.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1. The methods adopted for the analysis are not appropriate. Control for time is essential but it should be conducted with simultaneous adjustment for other time-varying variables like temperature. Generalized Additive Models (GAM) are appropriate for that, or, as an elegant alternative, case-cross over design can be used. The authors have used a predefined spline without allowing the variation with temperature. This approach is wrong. I suggest to perform a new analysis with the proper control for time-varying factors using GAM or, better, the case-crossover approach.

2. The authors do not consider previous literature (list of references very incomplete) and they do not give to their findings the appropriate weight. The discussion should be completely re-written with a better view on the specific new findings of the study in relation to the previous work. In particular try have specific points for the social class differences.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Tables and figures are too many. They should be reorganized.

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Discretionary Revisions (which the author can choose to ignore)

**What next?:** Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

**Level of interest:** An article of limited interest

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.