

## **Reviewer's report**

**Title:** Hazardous Waste Sites and Stroke: A New York State Ecologic Study

**Version:** 1 **Date:** 7 May 2005

**Reviewer:** Jean Brender

### **Reviewer's report:**

General comments: This study examined the relation between living in zip code areas containing hazardous waste sites with persistent organic pollutants and rates of hospital discharge for stroke. Past studies suggest that exposure to these pollutants might increase risk for cardiovascular disease. Overall, the authors address the important question of whether living near hazardous waste sites with persistent organic pollutants increases risk for cerebrovascular diseases.

Major compulsory revisions:

1. In the discussion, the issue of ecologic fallacy needs to be addressed. For instance, the information obtained on behavioral factors from the Behavioral Risk Factor Surveillance System may not reflect the health behaviors of those hospitalized for cerebrovascular disease. The issue of completed exposure pathways also needs to be discussed in more depth in the discussion. Living in a zip code area containing a waste site with persistent organic pollutants does not necessarily equate with a completed exposure pathway or close residential proximity (i.e. within a mile) to these sites.

2. In the analyses, race is divided into two categories: white and African American. There might be some residual confounding, however, by not accounting for other ethnic/racial groups such as Hispanics, Asians, etc.; this potential residual confounding might have led to some of the positive associations found. The choice of just two racial groups needs to be commented on as well as limitations that this choice might pose on the interpretation of the positive associations

Minor essential revisions:

1. The authors refer to the comparison zip codes as clean sites and as zip codes without any contamination. It is recommended that the authors refer to the referent zip codes as zip codes without documented hazardous waste sites. Clean sites may include areas with yet-undiscovered hazardous waste sites or other environmental entities that could be a source of pollution.

2. There needs to be some indication in the abstract that age and race were adjusted for in the analyses and/or results. The analysis in the abstract would also be clearer if the authors indicated that the referent group was zip codes without any documented hazardous waste sites rather than clean sites.

Discretionary revisions:

1. In the statistical model, it would be helpful if the authors indicated what values each variable contains, i.e. what are the values for AGE5?

**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 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.