Reviewer's report

**Title:** Spatial distribution of Parkinson's disease mortality in Spain, 1989-1998, as a guide for focused aetiological research or health-care intervention.

**Version:** 4 **Date:** 12 September 2009

**Reviewer:** Denis Zmirou-Navier

**Reviewer's report:**

The recommendations made by the reviewers have been taken into account. In particular, table 3 (with cities where PD mortality is low) now exhibits those where there is at least one EPER facility. Just comparing the occurrence of such cities in tables 2 (high PD mortality and RRs) and 3 (low mortality and RRs) shows similar numbers, which calls for caution in ascribing the spacial heterogeneity of PD mortality to industrial emissions. The discussion is now more balanced.

**Minor Essential Revisions**

However, one comment brought in the revised discussion about some statistical artifact due to EPER provisions is confusing: Bottom of p 10 and p 11: “First, because registration at EPER of emissions below threshold values may conceal an additionally not registered high emission.”

The authors should make the point clearer that, because EPER facilities are registered insofar as the emissions levels EXCEED certain threshold levels, absence of EPER facilities in the database does not necessarily mean that industrial emissions are low. In several countries or regions within the EU, there is a concentration of small to medium size industries, none attaining the threshold for any single pollutant, and where cumulative total emissions are high. Hence caution should be given not to equate absence of EPER facility in a given city and “low industrial activity”.

**Level of interest:** An article whose findings are important to those with closely related research interests

**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'