Reviewer's report

**Title:** Does place of residence affect risk of suicide? A spatial epidemiologic investigation in Kentucky from 1999 to 2008

**Version:** 1  **Date:** 21 November 2011

**Reviewer:** Nathalie Huguet

Reviewer's report:

The study use an innovative approach to examining suicide however the discussion section needs to explain/speculate as to why some of these counties are clustering.

Introduction: Given that suicide most recently reached the mark of being the 10th leading cause of death, updating the first paragraph with more recent data would be useful.

It is not clear why the SEER program was used rather than Census for example, please clarify.

The description of the spatial and temporal cluster of suicide Line 225-236 could be shorten since the information is available in the table. I suggest you only discuss the RR and not provide details on observe and expect frequencies to make readership easier.

The authors do not discuss how counties with very small numbers of suicide are treated and the effect it may have on the statistical estimates.

I am not convinced that the comparison of Exeter et al and the authors’ results is needed (line 277-290). The two studies have different populations making the comparison difficult. The authors suggest that the different rates between Kentucky and Scotland may be explained by other factors such as SES, unemployment, which are related to social deprivation the Exeter suggest. So in other worlds, the authors agrees with Exeter. I suggest that this section be changed. The authors, however, make a good point that (on line 291-293) both studies reveal that suicide is not randomly distributed and thus spatial analyses are useful.

The authors should discuss what makes these groups of counties at higher risk. There is no need for further analysis. Are these counties more metropolitan or rural than the rest of Kentucky? Is there evidence that these counties have more social deprived? Examining the census data would be enough to provide a discussion of what might link these counties together.

**Level of interest:** An article of importance in its field
Quality of written English: Acceptable

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

Declaration of competing interests:

I declare that I have no competing interests.