Reviewer's report

Title: Spatial clusters of suicide in Australia

Version: 2 Date: 27 April 2012

Reviewer: Tonelle Handley

Reviewer's report:

This is an interesting and valuable paper exploring the spatial distribution of suicide across Australia. Some minor revisions would greatly improve this manuscript.

1. GIS methods are not my area of expertise, and as such I found the methods section hard to follow. It may be useful to give an overview of GIS methods in the data analysis section. Considering that, as the authors point out, GIS techniques have rarely been used in Australia, the majority of readers may be unfamiliar with this process, so it would be beneficial to provide a more non-specialist explanation. Also, the authors make the statement “descriptive analysis was conducted to explore the characteristics of each variable” but do not state which variables they are referring to. One additional issue which should be clarified is the decision to use cluster length radii of 100km and 400km – are these values meaningful, or are they selected by SaTScan? (Minor Essential Revisions)

2. The study uses data from some time ago (1999-2003); while I understand that there can be a considerable delay in new data becoming available, it should be acknowledged in the manuscript that this data was collected during a time when Australian suicide rates were declining after a peak in 1997, and may not represent the current patterns of suicide. There also appears to be an error in the second sentence of the Results section; it states that 8,076 suicides were aged between 15 and 44, with 5,664 males and 1,412 females. However 5,664 + 1,412 adds up to 7,076 not 8,076. (Minor Essential Revisions)

3. The introduction makes reference to a range of similar (mostly international) studies. However, as the authors have previously conducted similar Australian-based research in Queensland, it would be interesting to describe in the introduction how the current Australia-wide research builds on this. It would also improve the paper to elaborate a little more on the value of spatial analysis in an Australian context, as this is only referred to briefly in one sentence. (Minor Essential Revisions)

4. Overall the writing is acceptable, however there are numerous grammatical errors throughout the manuscript. It would be beneficial for the authors to review the manuscript again to rectify these. Also, as a minor point, the term “SLA” is used throughout the manuscript, but no extension of this abbreviation is given in the body on the text, only in the abstract. (Minor Essential Revisions)
Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

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