Reviewer’s report

Title: Spatial-temporal detection of risk factors for bacillary dysentery in Beijing, Tianjin and Hebei, China

Version: 0 Date: 03 Feb 2017

Reviewer: Lawrence Kazembe

Reviewer's report:

The present manuscript considers a spatial and temporal analysis of risk factors of bacillary dysentery in Beijing-Tianjin-Hebei. The authors apply a GeoDetector methods.

The paper in my view is concerned with an important disease affecting many urban areas in Asia. This paper seems to be an extension of a previous work done by Xiao et al (2014), however, the review is silent or offer little comparison to what was done earlier- and what the present manuscript does or differs from or adds to it. I suggest that there be discussion to this effect.

Other issues that need to be considered in the revision are:

1. Abstract: There is no objective in the background

2. Abstract: Sentence on line 22-23 is incomplete.

3. line 73: where GeoDetector is mentions please provide a reference and also explain briefly what it does. Or do mention that "this will be expanded in the methods section"

4. line 141: insert a reference for the GeoDetector.

5. line 147: the R need to be explained or defined more explicitly. R is said to move in space and time yet this is not clear at this point.

6. line 163: to aid better understanding of the results, it is important that as you mention the counties, please include the code- which has been listed in Figures 4 and 5. Or alternatively just give full names of counties in Figures 4 and 5.
7. line 165: write "value is about 29.75...".

8. The issues of non-linearity need to be explained in Table 2, as well as in the methods.

9. Figure 4: please provide the X and Y -axis labels

10. Figure 5: please provide the X and Y -axis labels.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

No

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Unable to assess

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

**Quality of written English**
Please indicate the quality of language in the manuscript:

Acceptable
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