Reviewer’s report

Title: Varicella and weather factors in Jinan, eastern China, 2012-2014

Version: 4
Date: 13 August 2015

Reviewer: mark quinlivan

Reviewer’s report:

Minor essential revisions

Language, spelling and grammatical errors are present throughout the article and need attention

Abbreviations should not be used in the abstract

Line 50. Morbidity and mortality are very minor findings. They are not mentioned in the results section of the abstract so should not be in the conclusion.

Line 56. Introduce shingles as caused by reactivation and the common complication of PHN

Line 67. Don’t use “et al” in this context

Line 72. Indicate what the incidences were in the countries

Line 73. I think “climate” should replace “weather”

Line 74. Reword “fend off”

Line 112 & 115. Don’t use “etc” in this context

Figure 2. I presume the Y-axis should be “per 100,000 inhabitants”.

Major compulsory revisions

General statement. Being a non-stats person, could the authors explain a little simpler how the data was analysed with the various models. The percentage increases seem very small and I struggle to see how they are significant.

Line 190-192. Why are there two percentages for humidity, sunshine and rain?

Lines 84-90. Why the differences between studies. Comment on whether it is or could be due to differences in study structure, different methods of measuring climatic variables, under/over reporting, which might relate to inclusion or not of Lab and/or clinical diagnosis

Line 124. Measuring from one fixed site station. Is this representative of the whole of Jinan? For examples there is likely to be more rain and less pressure in hilly regions Any comments

Figure 3 It is crucial to bring the whole thing together by including a similar plot
showing varicella incidence to bring all the findings of the study together and easier for the ready to interpret. Varicella should be at the top with the other graphs beneath in a column format

Line 199. “Highly effective”. State the percentages efficacy and/or effectiveness in adults and children

Line 200. Who does receive the vaccine? Is it targeted to healthcare workers and adolescents?

Line 207. Any comments on why incidence is higher in women?

Lines 234-254. Where are the possible explanations for temperature, pressure and wind?

Line 267. “multifactorial[34, 35] ; besides meteorological factors, other environmental and host factors”. Is there any evidence of HLA-type predisposition, ethnic susceptibility?

Line 199. “Highly effective”. State the percentages efficacy and/or effectiveness in adults and children

Discretionary revisions
Figure 1 is perhaps not necessary

Level of interest: An article of limited interest

Quality of written English: Not suitable for publication unless extensively edited

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
'I declare that I have no competing interests'