Reviewer’s report

Title: The influence of geographic and climate factors on the timing of dengue epidemics in Peru, 1994-2008

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Reviewer: scott ritchie

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This ms details epidemiological patterns for purported dengue outbreaks in Peru from 1994-2008. Patterns from jungle, mountainous and coastal areas are described. The authors state that the patterns suggest that persistent endemic dengue in jungle areas serves as a reservoir that sparks dengue in other areas. Unfortunately, there is no real data to indicate this. Ultimately, analysis of imported coastal/mountain cases with a travel history from jungle areas would be useful.

I found the manuscript tedious and overwhelming with detail and complicated graphics. Some simple spatial maps showing the spatial movement of dengue incidence through time would be useful and more intuitive than the wavelet figures. I suspect that the statistical analysis is technically correct, but the presentation left me confused. This manuscript would appeal to statisticians with an interest with dengue, but dengue workers without a high level statistics background would be lost.

On Page 7: case defintion based on fever + headache and bodyache??? Sounds like flu to me! And you only state 18% of the cases were confirmed by IgM. I am worried that the definition is too broad and will include other illness in addition to dengue. I really think, based upon the ambiguous case definition, that probable cases should be excluded from the analysis. This will mean redoing the analysis. But I do think you must use confirmed dengue cases, not suspected ones.

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

Quality of written English: Acceptable

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

Declaration of competing interests:

no to all