Reviewer's report

Title: Is There Much Variation in Variation? Revisiting Statistics of Small Area Analysis in Health Services Research

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Reviewer: Lawrence Ndekeneni Kazembe

Reviewer's report:

General comments
The article investigates the performance of various techniques in their ability to determine/detect small area variation in health services. The authors have carried out a good review of existing methods, and used simulation techniques to assess the capacity of each statistic to discriminate real from random variation. The topic is without a doubt relevant.

Minor comments
1. It would be helpful to readers to know what software was used to carry out the simulations.
2. Can the authors discuss the performance of these statistics under the case of under/overdispersion. Am thinking here of the zero-inflated data, if that is a possibility in health services research. Am aware of what has been mentioned in the discussion, page 20, line -6 to -4. Can the authors expand on expected results under such conditions. Please refer to Ugarte et al., ref 29.
3. page 12, line 7. The choice of RR 1.2 and 1.6 (line 9), needs some justification.

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Acceptable

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