Reviewer's report

Title: Quantitative measurements of inequality in geographic accessibility to pediatric care in Oita Prefecture, Japan: Standardization with complete spatial randomness

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Reviewer: Nadine Schuurman

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The goals of this paper are laudable but the analysis is a simple measure of distance and measures of inequality. Since the literature was conducted, there have been a great number of papers dealing with ways to more accurately calculate potential spatial access (see below).


-Given that this paper’s main innovation is spatial access, it would be useful to update both the literature review and the methods of travel time calculation.

- In addition, it is not useful to calculate travel distance from zonal centroids if the zones are too large. See the paper below for a method for individual calculation:


- Figure 1-3 do not tell us much and do not have captions.

- Given the mountainous topography of the study area, it is especially important that the authors incorporate measures of real road travel time.

- The authors side step this issue by saying (p. 8) that "a more complex approach could hamper a coherent explanation of this paper." The opposite is true.

- Finally most of the references for key statements are a decade old. They need refreshing.

- I suggest that the analysis be re-run with a clear explanation of the GIS methods and rationale for their choice. Then the authors need to make policy relevant suggestions wrt pediatric care and implications for low spatial access.

- Good luck.

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

**Quality of written English:** Acceptable
**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.