Reviewer's report

Title: Effects of Neighborhood Geodemographic Profiles on Healthcare Service Wait Time: A Case Study on Cardiac Care

Version: 6 Date: 13 March 2013

Reviewer: Lu Wang

Reviewer's report:

The revision made much effort to address the comments made by the reviewers.

• The term patient arrival is used to represent the use of hospital services. The term is still quite confusing to me. For example, in Background the authors wrote “Although the literature has associated neighborhood geodemographic factors with patient arrivals, little is known about how such factors (e.g., population size, age profile, service accessibility, and educational profile) interact to influence healthcare service characteristics (e.g., arrival, capacity, supply, and wait time). Do the two arrivals have the same meaning? I also suggest to improve the clarity of the sentence and minimize the use of brackets here and throughout the paper, which makes it hard to read.

• The maps originally included in the first draft were removed. Why?

• The number of hypotheses made does seem to be quite high for the length of the paper.

• P.7. The authors provided justifications for using 30min driving time. The authors also added “The driving time from each sampled city/town to the nearest hospital that provides cardiac surgery services was estimated by the “Get directions” function in Google Maps [31]. We tabulated the driving time for each sampled city/town to all of the hospitals providing cardiac surgery services and selected the routes with the shortest driving time to approximate the service accessibility of LHINs.” How was city/town represented when getting the travel time in Google? Centre point? What are the pros and cons of using Google Maps instead of using a GIS for obtaining more accurate calculations?

• The writing improved after the revision but there are still places that lack of clarity and need to be fixed, for example, “Another limitation is in regard to with the data” on p13.

• p. 4, “…to investigate the potential effects of geodemographic profiles on cardiac surgery characteristics”. It is unclear what cardiac surgery characteristics. The assumption of a causal effect relationship is problematic. The authors should revise this argument throughout the paper.

Level of interest: An article of importance in its field
Quality of written English: Needs some language corrections before being published

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.