Reviewer's report

Title: Compliance Potential Mapping: A Tool to Assess Potential Contributions of Walking Towards Physical Activity Guidelines

Version: 2
Date: 21 January 2014

Reviewer: Paul Kelly

Reviewer's report:

- Major Compulsory Revisions

1. General
What is the source of the input data for this model? Is it self-report or GPS collected? How valid is this data and what are the implications for the model. These issues need to be addressed in the strengths and limitations of this paper.

2. General
What is the validity of this model? Have the authors compared the results to other techniques? The authors need to at least suggest a plan for validating these results against an established method.

3. General
The authors describe results for Profile 1 and Profile 2 based on the figures. A table of results for proportion of areas where 20% PA recommendations are met would be very helpful as the figures are hard to quantify visually. The selection of 20% of recommendations should also be justified, and other levels of adherence included in the table.

4. General
The conclusion section is very long and much of this should be moved to the discussion.

5. General
The authors suggest some uses for their demonstrated technique. They need to provide more justification that this method is preferable to existing methods. E.g. is it cheaper? Does it provide information other techniques cannot?

6. Abstract; Purpose
This paper addresses contributions of walking to PA in seniors rather than all ages – the purpose of the abstract should reflect this

7. Abstract; Methods
The authors state their approach is “conceptually intuitive”. This is their opinion and should be removed
8. Introduction; paragraph 1
Reference [1] does not support the statement that PA provides health benefits to children and youth as it is an examination of travel trends. It could be replaced with a more general reference e.g. WHO Guidelines, or the Toronto Charter for PA.

9. Introduction; paragraph 3
The authors state they will demonstrate their approach in older adults without giving any justification as to why. This choice needs to be clarified. For example, does walking have more potential in older adults?

10. Methods; paragraph 1
The authors state that generation of compliance maps depends on 2 elements; walking length and frequency. It is not clear why a 3rd element, location of start and finish, is not also necessary.

11. Methods; paragraph 3
The authors report “geographical sub-unit i”. How are these sub-units defined?

12. Methods; paragraph 5
The New Canadian Physical Activity Guidelines are referenced. The actual PA guideline should be stated here.

13. Materials; Paragraph 1
Is the Montreal Travel Household Survey data publically available? A web link could be provided.

14. Materials; Paragraph 1
Justify why only home-based trips were included. What is missed by doing this and what bias may be introduced? This should be included in the discussion. Similarly for including only walk, car and transit.

15. Materials; Paragraph 2
Does the standard deviation cited refer to walk modes or the three modes?

- Minor Essential Revisions
1. Introduction; paragraph 1; line 52
“an” should read “and”

2. Methods; line 84
Missing word “of” between “advantage “and “jointly”

3. Results and discussion; line 136
“vehicle” should be “vehicles”
4. Results and discussion; line 154
Should the word “the” be removed?

5. Results and discussion; line 155
Quarter mile buffer is used here. 400m buffer is used on line 123. Consistent units should be used.

6. Conclusion; line 213
1.14m/s is used here. Meters per minute is used on line 196. Consistent unit should be used.

- Discretionary Revisions

Introduction; paragraph 2
The term “total walking length” would more commonly be called “total walking distance”. Consider revising where necessary.

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

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