Reviewer's report

Title: Active transport between home and school assessed with GPS: a cross-sectional study among Dutch elementary school children

Version: 1 Date: 18 December 2013

Reviewer: Matthew Burke

Reviewer's report:

A paper on a topic of interest in the 'active transport' field. It is well written.

The methods are what will be of interest here, not so much the findings, which are similar to those reported in previous studies of mode choice vs. distance from home for children and adults across a range of cities.

Major Revisions

The methods are only slightly innovative. GPS has been used to explore children's travel and in particular their journey to school for some time now. It is indeed useful for capturing actual routes used, and getting observed data on trip frequency, length, travel time, etc.. The innovation appears to be not that the tracks were coded automatically (this is now common - see Peter Stopher's work) but how they were coded. These methods seem to open up potential ways to use GPS tracks in future research using the now ubiquitous smart phones and other enabled devices, in studies where additional information from students cannot be obtained to isolate and code journeys-to-school as active or not. Such methods could be quite helpful in that context and this should be stated in the paper.

However, the methods in this paper have a major limitation in that the GPS was not accompanied by a travel diary as occurred in the CAPABLE project (uncited - see Mackett, Banister et al. 2007 - http://www.casa.ucl.ac.uk/capableproject/download/CAPABLE_finalReport.pdf), the PEACH study in the UK, the CATCH project in Australia and others. Alternatively, Danish researchers have already combined accellerometer data with GPS tracks to categorise travel as active or not. This matters. That the 'automatic' methods provided in the paper may be around 30% inaccurate in allocating a GPS track to a particular mode of travel (walk, bicycle, bus, etc.) is a major problem that can readily be overcome by supplementing the GPS units with basic travel diaries. I suggest a) making this limitation clearer, b) highlighting the role travel diaries can make, c) citing the relevant studies that have used this approach, and maybe d) highlighting that future research may also better refine these metrics to increase the accuracy of automatic coding, to void the need for travel diaries in future studies.

Minor Essential Revisions

There is some interest in the Netherlands angle given that Dutch mode shares and cities are quite different to either US or many Asian cities in key ways (lots of
small schools, short travel distances to schools, high cycling rates), but this is not given sufficient focus in the paper at present. The Netherlands is highlighted by Pucher and others as a place that offers vulnerable road users 'safety in numbers'. Given the slim contribution of the work at present, the question of mode share decline by distance in cycling cities, such as most Netherlands' cities, should be highlighted.

**Discretionary revisions**

Re p14, final para, when discussing the role of safety in determining mode share. I suggest you include here mention of safety in numbers in terms of children both living in close proximity to school, and having such high proportions of active travel.

It would also be preferable to mention issues of perceived traffic danger and parental attitudes to 'stranger danger' (threats against a child's person by outsiders) in Dutch cities at some point in the paper, which appear to be very different to that in the US, and may also be explanatory factors in these results.

**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.