Reviewer's report

Title: Association between different measurements of blood pressure variability by ambulatory blood pressure monitoring (ABPM) and ankle-brachial index

Version: 4 Date: 15 September 2010

Reviewer: Beth Weatherley

Reviewer's report:

The authors have addressed the majority of my comments and the manuscript is improved.

Major compulsory revisions:
1. It is unfortunate that a linear regression model that seems to make sense (modelling the minimum ABI in the patient) does not support the author’s conclusions. That this is due to a reduced range of responses seems improbable. A lack of association could be generated, for example if higher time-rate index is associated with both high and low values of the ABI. The authors are using the ABI as a marker of atherosclerosis. As such, separate models in each leg misclassify in each model some patients who have a ‘normal’ ABI in one leg and an ‘abnormal’ leg in the other. These models are also inconsistent with the notion that a single patient can be classified as having PVD using the minimum value between the two legs. If the mean response for a subject is a better marker of the degree of burden of atherosclerosis, then a mixed model could be used to model this.

Minor essential revisions: None

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

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests