Reviewer's report

Title: Hypertension: Comparison of self reported data on hypertension and measured blood pressure in a tri-ethnic community

Version: 3 Date: 30 November 2011

Reviewer: José María Huerta

Reviewer's report:

Dear Editor,

The authors have conducted an interesting investigation aimed at assessing the underestimation of high blood pressure (HBP) by self-reports in a multi-ethnic population. They have also worked out a calibration to obtain more accurate estimates of HBP using covariate data. The calibration seems to work fine in this population. However, the manuscript still needs to be improved before it can be considered ready for publication.

- Mayor compulsory revisions.

Overall, the tables are poor, not self-explanatory, and they miss important data the reader would expect to find according to the study objectives. The paper fails to characterise the extent of the underestimation of HBP in the study population.

a) The objectives should be defined more concisely.

b) The discussion about whether prevalence of HBP would be higher in urban than non-urban areas is speculative and falls beyond the scope of the present analysis. Please, delete it or shorten this paragraph.

c) The discrepancies between self-reported and clinically measured HBP referred to in the discussion (page 12, second paragraph) are not analysed in the paper. Please include sensitivity, specificity and agreement indicators for each determinant investigated (sex, educational level, income level...) (See below.)

d) There is almost no discussion of the previous literature.

e) A table is missing showing the prevalence of self-reported and clinically measured HBP in each ethnic group overall, and stratified by levels of the covariates included in the prediction models.

f) Estimates of sensitivity, specificity, overall agreement and kappa should be included for each ethnic group, stratified at least by sex and age. This could be done as an extension of table 2.

g) Table 3 should be also stratified by ethnic group (and sex). The self-report should be used as the dependent variable in the logistic regression so that it can be estimated the probability that a person with HBP reports it correctly (or
wrongly). This is a better way to explore the determinants of population awareness (or unawareness) of the condition. Public Health initiatives should be aimed at those unaware of their HBP.

- Minor essential revisions.

The tables need to be improved with all abbreviations spelt out and clear captions.

a) Table 1: please indicate what HEP, NHANES, HU, StdErr... stand for.

b) Table 2: spell out abbreviations. Also, what does the footnote refer to (‘Decision rule...‘)?

c) Table 3: the title is confusing, since the table refers to both participants diagnosed of HBP and those never told to be so.

d) Table 4: please write a clear caption and define what do 'method 1' and 'method 2' refer to, and what do the threshold values mean. Also, do not use abbreviations.

The authors should have to address these issues before the manuscript can be further considered for publication.

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

**Quality of written English:** Acceptable

**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.