Reviewer's report

Title: Prevalence and Predictors of Resistant Hypertension in Primary Care
Setting: A cross-sectional study

Version: 4  Date: 3 June 2014
Reviewer: Rupert Payne

Reviewer's report:

Thank you for addressing the concerns raised by myself and Dr Gee. Although I believe the study now appears scientifically sound, there remain a few minor issues which would benefit from addressing:

Table 1 presentation of IQR - it defeats the purpose of demonstrating asymmetry of the distribution if IQR is presented as the difference between the lower and upper quartiles; better to write as X (Y to Z). I would suggest using the abbreviation IQR in the body of the table, with a footnote below the table defining IQR.

Table 3: 95% CI are still presented to 3 decimal point precision; please change to 2. Also (for both Table 2 and 3), where the P values should be given to no more than 2 significant places (or 1 SP where p<0.01) (i.e. keep 0.001, 0.007 and 0.080, but change 0.640 to 0.64, 0.587 to 0.59, etc.).

Discussion: "Our study has also shown obesity is not associated with resistant hypertension and this is not consistent with findings in other studies [3]." This ignores the fact that there is some weak evidence for an association (P=0.08). I would suggest rephrasing as "Previous studies have shown obesity to be associated with resistant hypertension [3], although we only found weak evidence (p=0.08) for such an association."

Methods: add word height in BMI definition: "...(BMI) was calculated as weight in kilograms per square meter HEIGHT (kg/m²)"

Methods: spelling "Performa" should read "proforma"

Results, final sentence: I would delete this sentence "When we ran ... no interaction", and limit to the discussion (see my next point)

Discussion, last para pg 11. It is a little unclear why the lack of interaction between BMI/CKD is reported, but not other potential interactions (particularly age/CKD). It sounds like this stems from when you originally found BMI to be statistically significant in the multivariate model. I would suggest this paragraph is rephrased as "In our study, it is possible that interaction between some of the factors of interest may explain the stronger associations evident in the multivariate compared with univariate regressions, particularly for CKD. However, this was not evident when interaction terms were included between CKD and
either BMI (p=0.79) and age (p=X)." Of course, this will need to be phrased slightly differently if the interaction between age and CKD IS significant.

Discussion, second last para pg 11. The sentence "Because the definition ... with a diuretic" is very hard to understand. Suggest you rephrase as "The definition of resistant includes use of a diuretic. Therefore, those patients on triple antihypertensive therapy but not a diuretic, are not considered to have resistant hypertension in this study. This may therefore result in an underestimation of the true prevalence of resistant hypertension in our population."

**Declaration of competing interests:**

None