Reviewer's report

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

Version: 3 Date: 30 April 2014
Reviewer: Rupert Payne

Reviewer's report:

Major Compulsory Revisions

Abstract
1. Results - the odds ratios for age and BMI are not interpretable - they should state "per year of age" (rather than having this in the conclusions) and "per kg/m²"
2. Conclusions - some interpretation, such as implications for health service policy, would be useful as a final sentence.

Background
3. It is mentioned that little is known about prevalence of resistant hypertension in primary care. However, I would suggest that it is worth expanding this to say there is little known about resistant hypertension in the south east Asian population - this is surely what sets the current work aside from studies of resistant hypertension elsewhere. The authors might like to comment on why this is important - is hypertension viewed as a specific growing problem in this part of the world for example?

Methods
4. Setting - further information should still be added to clarify who the population included in the study are. Is this a general population sample? Or is it restricted in some way - for example, ability to pay for health care, need for specialist hypertension care, etc? Many readers who are unfamiliar with the Malaysian health system will be uncertain as to exactly what part of the population is being studied.
5. Data collection - there is still insufficient information about BP measurement, to allow the reader to draw conclusions about the robustness of the BP measurements:
   i) the authors should be explicit about who measured BP. Was it carried out by a researcher? Or was it carried out as part of routine clinical care?
   ii) was BP taken from a single measurement? Or was it from repeated measurements either i) at a single point in time, or ii) from different points in time. Guidelines often advise that a diagnosis of hypertension is confirmed by 3 separate measurements, around a week apart. If this was not the case, it should be made clear to the reader and acknowledged in the limitations.
6. statistical analysis - mention is made of ethnicity as an independent variable - the classification of this should be given in the preceding section on data collection.

Results
7. Multivariable logistic regression - there are a number of areas that raise concern:
i) Although the authors state in the methods how variable selection was conducted, it is hard to see how "clinically significant" was defined - surely gender, dyslipidaemia and smoking, which are all excluded from the multivariable model, could all be considered clinically significant?
ii) Table 3 - there appears to be something wrong with the results for diabetes - the odds CI is not symmetrical about the point estimate, and the P value is >1!
iii) Ethnicity reports a single OR - but this is a 3-category variable?
8. Table 3 - no need to state "The finding is significant..."

Discussion
9. First para - the statement "This fall within the range that had been reported in other studies", is followed immediately by "this is lower than secondary care and similar to one of the primary care study" - these statements are slightly at odds with one another; at any rate, it would be useful to provide references in the second sentence.
10. it would be helpful to explain why the adjusted OR appear to differ considerably from the unadjusted (e.g. for CKD, 2.8 vs. 1.6), as well as three factors becoming statistically significant. How about confounding?
11. re. the negative association with age, I wonder if this could be expanded upon?
12. some discussion of drug types being used might be of interest.

Minor Essential Revisions
13. There are a number of grammatical errors throughout the manuscript; the authors may wish to seek help with this.

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, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests