Reviewer’s report

Title: Elevated Blood Pressure Level Based on 2017 ACC/AHA Guideline in Relation to Stroke Risk in Rural Areas of Liaoning Province

Version: 0 Date: 10 Sep 2018

Reviewer: Reviewer 2

Reviewer's report:

PEER REVIEWER COMMENTS: To view the full report from the academic peer reviewer, please see the attached file.

REVIEWER COMMENTS FROM REPORT: This is an interesting prospective study exploring the associations between the new ACC/AHA blood pressure classification and the incidence of stroke in rural China, over 4.8 years of follow-up. The objective is a little unclear in terms of what the study will add to the literature - it is purely a descriptive study? The study design is fairly well designed but there are some additional statistical analyses and adjustments the authors should make. Also, the conclusions are not supported by the data provided. Lastly, the grammar and language has several errors and is unclear in places.

REQUESTED REVISIONS:

The objective is a little unclear in terms of what the study will add to the literature - the authors should add information on whether this is purely a descriptive study or whether it is to be used to inform whether to adopt the new AHA BP guidelines in China.

Abstract - The results section only mentions the risk of stroke in the old BP classification (stage 2) - it should also mention risk in the new BP classification (stage 1) as this is surely what the study set out to do. Also, the conclusion section is unclear. The first sentence reads: "higher prevalence of hypertension and incidence of stroke were observed" - higher than what? The authors need to clarify. The second sentence doesn't make sense - "there was an increase in risk of BP level to stroke across the four BP level." The authors should reword this.

Statistical analysis - there are some additional statistical analyses and adjustments the authors should make:
* Further adjustment for physical activity levels and family history of CVD, as these confounders are major cardiovascular risk factors.

* The authors should test whether there is any effect medication by sex or age group.

* The authors should include sensitivity analysis excluding those on anti-hypertensive drugs

* For the Cox models, did the authors test the proportional hazards assumption?

Conclusion - The conclusions are not supported by the data provided. The authors have suggested that adopting the new guidelines for BP in China is a good idea but the results of this study do not provide any evidence for this. In fact, the authors state: "the data also showed that there was no significant association between stage 1 group and stroke."

The grammar and language has several errors and is unclear in places. The authors should check throughout. For example: "Many studies have also reported that China is a major stroke country and a major hypertension country"/ May be better phrased as "China has one of the highest incidences of stroke worldwide" or something similar perhaps.

ADDITIONAL REQUESTS/SUGGESTIONS:

na

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No
Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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