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: 1 Date: 12 Apr 2019

Reviewer: Research Square

Reviewer's report:

"STATISTICAL REVIEWER ASSESSMENT:

Is the study design appropriate for the research question (considering whether the analyzed population accurately reflects the design and whether you see any problems with control/comparison groups, e.g., likely confounders)?

Yes - overall design, population, and control groups are appropriate

Are methodologies adequate and well implemented (considering whether assumptions are addressed and whether analyses are robust)?

Yes - methodologies are adequate and well implemented, assumptions are addressed, analysis is robust

Are the analyses adequately communicated (considering whether reporting details are adequate and whether figures and tables are well labeled and described)?

No - there are minor issues

Does the interpretation accurately reflect the analyses without overstatement (considering whether limitations/bias are acknowledged and whether accurate descriptors, e.g., 'significant', are used)?

Yes - interpretation accurately reflects analyses, limitations/bias are acknowledged, accurate descriptors are used

Could an appropriately REVISED version of this work represent a statistically sound contribution?
Probably - with minor revisions

STATISTICAL REVIEWER COMMENTS:

The authors have addressed most previous comments sufficiently. But I still have some additional revisions that are needed. However, there are also grammatical errors throughout, which I have not made an exhaustive list but their work will likely need to be reviewed by a copyeditor.

REQUESTED REVISIONS:

You still haven’t presented p-values for covariates as a whole. For example, Table 2, Model 1 has BP divided into 4 categories with p-values for each category. However, a Wald test for all these categories taken together (i.e. BP level as a whole) should be performed to determine the association between BP level and stroke, when BP level is divided into categories. Model 2 and Model 3 do suggest that increased SBP is associated with stroke, so we would expect that to also hold true in Model 1. Similarly, for Table 3, Model 1.

Results, incidence rate of stroke, second sentence. "There was an increase in incidence of stroke that occurred across the four BP level: …" What you describe in this sentence is not an incidence rate, but the % who had stroke in each BP level. As previously described, incidence is calculated as the number of events divided by the total person-years of follow-up multiplied by 100,000 to represent incidence per 100,000 person-years. I’m still a little concerned that you haven’t calculated incidence correctly. You can calculate the incidence in each BP level, if you have the number of events and the total person-years follow-up in each BP level.

Why is the incidence by sex described in the text different from Figure 2? In text, incidence for women is 813 per 100,000 person-years and men is 1002 per 100,000 person-years. In Figure 2, incidence for women is ~500 per 100,000 person-years and men is ~700 per 100,000 person-years.

Minor comments.

There are grammatical errors throughout. This will need to be edited by a copyeditor to remove them all as there are too many to list here. For example:

Background, second sentence. Remove "which" after "CVD risk factor that is changeable,"

Background, second paragraph. Should be "eliminated" and a common after "prehypertension".
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.

Yes

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.

I am able to assess the statistics

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

Needs some language corrections before being published

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