Author’s response to reviews

Title: Acute effects of fine particulate matter (PM2.5) on hospital admissions for cardiovascular disease in Beijing, China: A time-series study

Authors:

Endwoke Amsalu (indexmar@outlook.com)
Tianqi Wang (tiangw@163.com)
Haibin Li (15910681644@126.com)
Yue Liu (495479040@qq.com)
Anxin Wang (anxin0907@163.com)
Xiangtong Liu (lixiangtong@163.com)
Lixin Tao (13426176692@163.com)
Yanxia Luo (lyx100@ccmu.edu.cn)
Feng Zhang (zhangfeng@ccmu.edu.cn)
Xinghua Yang (xinghuay@263.net)
Xia Li (lixia_new@163.com)
Wei Wang (wei.wang@ecu.edu.au)
Xiuhua Guo (statguo@ccmu.edu.cn)

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Dear Editor and Reviewers:

We appreciate for giving the chance to revise our manuscript entitled "Acute effects of fine particulate matter (PM2.5) on hospital admissions for cardiovascular disease in Beijing, China: A Time-series study" (ENHE-D-18-00355R1) as to consider it for potential publication. We thank you very much for your consideration. First of all, we would like to appreciate editors and reviewer’s thoughtful comments. In addressing their comments, we have been led a much-improved version of the manuscript. We have made a substantial effort to address all of the
comments from the reviews. We presented summary of changes we made in the revision 2 as follows;

Reviewer #1: I appreciate the effort of the authors to respond to my requests in the previous round of review. The authors addressed some concerns but some others not. In particular, the analysis by period highlighted a clear decreasing effects in the last two years for all causes considered. The authors stated "Moreover, the effect estimate did not change much when analysis is done by period, and most of the effects were insignificant" even if the estimates decreased sharply in all cases. It need to be changed. Moreover, the shape of the exposure response functions seem to be different while single lag estimates displayed higher effects at lag 2 and lag 3 in the last two years compared to the previous. This point is crucial and demonstrated what I reported in my first comment in the previous review.

The authors provided some possible explanations to this phenomenon that could be added in the Discussion to justify the effects observed in the Supplemental analysis. I suggest to insert the analysis by year in the main text and discussed it exhaustively.

Response: We appreciate the reviewer’s thoughtful suggestion on regard to improve our manuscript. We have corrected the statement “Moreover, the effect estimate did not change much when analysis is done by period, and most of the effects were insignificant” (line 169-177, page 8). Based on the reviewer suggestion, we have also inserted the analysis by year (Table 4) in the main text. We have also justified the analysis by year result phenomena in the Discussion section (Line 228-243, page 11).