Author's response to reviews

Title: Temporal Trend and Climate Factors of Hemorrhagic Fever with Renal Syndrome Epidemic in Shenyang City, China

Authors:

Xiaodong Liu (liuxd1983@126.com)
Qiyong Liu (liuqiyong@icdc.cn)
Weidong Gu (wgu@uab.edu)
Baofa Jiang (bjiang@sdu.edu.cn)

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Author's response to reviews: see over
Dear Editors and Reviewers,

Thank you for your letter and for the reviewers’ comments concerning our manuscript entitled “Temporal Trend and Climate Factors of Hemorrhagic Fever with Renal Syndrome Epidemic in Shenyang City, China” (ID: 2903271448538366). Those comments are all valuable and very helpful for revising and improving our paper, as well as the important guiding significance to our researches. We have studied comments carefully and have made correction which we hope meet with approval. Revised portion are marked in different colors in the paper, red for deletion, and blue for added content. The main corrections in the paper and the responds to the reviewer’s comments are as follows:

**Response to Editor’s comments:**

1. The text must be revised by a native-English speaker
   
The text has been revised by “International Science Editing”.
2. With regard to ethics, we have added an Ethical review section to the Methods.
3. We have corrected the format of our revised manuscript to conform to the journal style.

**Response to comments of Referee 1:**

1. Vaccination
   
   In Shenyang, the bivalent vaccine is used, which is only for high-risk populations. Vaccination does affect the impact of climate factors on HFRS, and we did hope to take account of vaccination factors in this study. However, due to the difficulty of vaccination data required, this was not possible. In future studies, we will attempt to take vaccination into account.

2. Rodent control
   
   HFRS is a rodent-borne disease. Therefore, rodent control is important for disease control. The major rodent species are *Apodemus agrarius* and *Rattus norvegicus*. The widespread distribution of rodents makes their effective control difficult. We have described it in the study area in the Methods section.

3. Small data
   
   China CDC established the National Notifiable Disease Surveillance System in 2004. HFRS is one of the diseases that is reported in this system, which makes the surveillance data for HFRS more accurate and comprehensive than before. To ensure the quality and consistency
of HFRS data, we selected the period 2004–2009 for our study. This study period is relatively short, which could have made the results less reliable. We will correct this in future studies.

4. Regression model

We conducted a general multiple regression model with only climate factors as independent variables. In comparison, the principal components regression model that we constructed had a stronger explanation for the association between the HFRS epidemics and climate factors.

5. Wrong name

This has been corrected to Qiyong Liu.

**Response to the comments of Referee 2:**

We have corrected spelling errors, red for deletion, and blue for added content in the paper.