Reviewer's report

Title: High proportion of rural residents and multi-exposure history in human cases of avian influenza A (H7N9) virus in Zhejiang Province, China

Version: 3
Date: 27 February 2014

Reviewer: Wei Tang

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Comments

This paper made a data analysis on 46 cases of H7N9 infection in Zhejiang Province, and the epidemiologic and clinical information of these cases were provided, however, the following issues should be reconsidered.

1. About epidemiologic and clinical characteristics of H7N9 infection, many papers have been published during the past year, although “the number of patients in Zhejiang Province is the largest in China”, the amount of new insights into or new connections between previously reported data is low in this paper.

2. The data of case is a little old. Till May 2013, 46 cases of H7N9 infection have been reported according to the National Health and Family Planning Commission of China (http://www.moh.gov.cn/mohwsyjbgs/dfdt/201304/7bc42d8cc6a84da999436c31b3ab3262.shtml). Currently, there are more cases have been reported according to the Health Department of Zhejiang province (http://www.zjwst.gov.cn/col/col362/index.html), especially in January and February, 2014. Although the authors have mentioned that “five cases of influenza A (H7N9) infection were confirmed in Zhejiang Province since October 15”, but the data analysis in the paper still focus on 46 cases. So the analysis on up to date information will be better.

3. The authors try to provide a new viewpoint that “the proportion of rural residents in H7N9 cases from Zhejiang Province was 34.79% (16/46) which was significantly higher than that of other provinces”, but there are no detailed data that in other provinces were provided in this paper, and the authors cannot give a well explanation about this difference. It is just described in the paper - “more than 1/3 of cases occurred in rural areas in our study. The reason behind this may be the acceleration of the integration of urban and rural areas in Zhejiang Province…..Another reason may be that poultry in rural areas had been infected with the novel H7N9 virus via birds. However, we can’t explain whether cases in rural areas acquired their infections from live poultry markets or poultry bred in their home.”

4. About the conclusion of “Control measures are needed not only in urban areas but also in rural areas reduce human H7N9 infection risk”, the reasons of and the
detailed measures that should be implemented in rural areas cannot be provided in the paper.

5. In this paper, weather data in Hangzhou city and Huzhou city were also provided, but the relationship between analyzed data and the conclusion of “Human H7N9 infections may re-emerge as temperature drops” cannot be well explained.

6. About the proportion of rural residents in H7N9 cases from Zhejiang Province, it was described as “34.78%” in Abstract in page 2, but it was “34.79%” in page 8.