Reviewer's report

Title: Changing Risk Awareness and Personal Protection Measures for Lowly to Highly Pathogenic Avian Influenza in Live-Poultry Markets in Taiwan, 2007 to 2012

Version: 3 Date: 15 July 2014

Reviewer: Abrar Chughtai

Reviewer's report:

This is an article whose findings are important to those with closely related research interests. The study design is good and very useful data is collected. However, there are many limitations in the statistical analyses and manuscript writing.

1. The authors did not address the research questions properly. The research question no 1 (page 7, line 3) was “to investigate the risk awareness, attitude, and self-protection measures among workers in LPMs versus community residents.....”. Authors did not analyse the outcome between LPMs and community residents.

2. Statistical analysis is the main issue. Authors mentioned that (page 10, line 23) “KAP measures were converted from ordinal to binary variables for better analyses”. In most survey questions there were 3 to 5 responses and it is not suitable to collapse them into binary categories for Chi square and Regression analysis. Chi square and Regression may not be appropriate statistical test for this sort of data. I think non-parametric test should be considered.

3. Results section may need to improve and focus on comparison between LPMs vs. community residents and before HPAI H5N2 vs. after HPAI H5N1. In results sections related to the Risk awareness, attitude and preventive measures after the outbreaks of HPAI H5N2 (page 14, line 21-23) authors quoted, “The evaluation of risk awareness in these two groups after the outbreaks of HPAI H5N2 revealed that LPMWs had significantly better knowledge of these AI outbreaks than CRs [87.7% (64/73) vs. 78.3% (119/152), p=0.03] (Table 4)”, whereas this information is incomplete in table 4.

4. Furthermore, introductions section is not relevant to the risk awareness and personal protection measures and most discussion is around the H5N2 and H7N9. There is no need to give OR in the introduction section (page 5, line 7).

5. In table 2 and 6, mean and 95% CI are mention, and ORs are mentioned on top. What is mean? Outcome variable and OR is not clear.

Major Compulsory Revisions

1. Statistical methods are not appropriate. There is need to re-do statistical analysis. Non-parametric test should be considered.

2. The analysis should be in line with the research question, i.e. comparing LPMs
and community residents.

Minor Essential Revisions

1. Clearly mention what are the outcome measures in the analysis.
2. Modify literature review and discuss risk awareness and personal protection measures.
3. Please mention clearly whether participants of survey 2 were different from participants of survey 1.
4. Why there was low recruitment in survey 2?

Discretionary Revisions

1. Try to reduce the word count in the methods section
2. Appendix 3 can be used as one of main table.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests.