Reviewer’s report

Title: Interspecies interactions and Influenza A virus risk in small swine farms in Peru

Version: 1 Date: 9 December 2011

Reviewer: Kwonil Jung

Reviewer’s report:

Review of Interspecies Interactions and Influenza A virus risk in small swine farms in Peru by Sarah McCune et al.

In this qualitative study, McCune and colleagues investigated interspecies interactions among human, swine, and avian species in small-scale swine farms located in Peru. Because certain genotypes or subtypes of influenza A are able to transmit among these species through an occasional direct-contact, monitoring of interspecies interactions is very important for public health. In this study, based on the size and raising systems, the swine farms tested likely shared similarities with those in other developing Asian and African countries where H5N1 HPAI infections of humans occurred frequently. Thus, the findings might be extrapolated to estimate interspecies interactions in other similar regions, such as Asia or Africa. As risk factors of interspecies transmission of influenza virus in swine farms of Peru, the authors suggested: 1) high human-swine interactions, 2) unexpected contact of swine with avian species via feeding poultry mortality, 3) suboptimal hygiene and biosecurity practices in swine or poultry farms, requiring the related, solid guidelines or education for farmers. This manuscript is very well-written as supported by excellent discussion and two impressive photos, but with minor corrections or suggestions by this reviewer as follows:

Abstract

1. The result sentences, “In both locations, ~ at both locations”, need to be removed from the Methods section.
2. After the first sentence in Conclusions, this reviewer suggests to input a sentence as follows: “Virological and serological surveillance for influenza viruses will also be required in these human and animal populations”

Background

1. In the 2nd paragraph, the fact that avian influenza viruses are able to transmit and infect a variety of mammals (companion pets or livestock) as the following examples: 1) dogs by avian H3N2, 2) cats by avian H5N1, and 3) pigs by avian H5N2, could be addressed.
2. The 1st sentence of the 3rd paragraph can be revised as follows: “Interspecies transmission can occur by jumping or adaptation of a whole virus to a new host species, or through the process of reassortment~”
Methods
1. In the 2nd paragraph of the Study participants section, please provide the background or some information on each individual composing of the research team, for example, which scientific backgrounds they have (in virology, epidemiology, or veterinary science etc.)?

Discussion
1. In the 1st paragraph, the authors could simply introduce an interesting, similar case in a previous report (Song et al., Emerging Infectious Disease. 2008), addressing that dead poultry fed dogs in South Korea were infected by avian H3N2 influenza virus, and poultry mortality is a significant cause of interspecies transmission of avian H3N2 to dogs.

**Level of interest:** An article of outstanding merit and interest in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.