Reviewer’s report

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

Version: 1 Date: 9 December 2011

Reviewer: Javier J Guitian

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The manuscript presents findings that are novel and relevant for the control of influenza infection and to some extent also for other animal diseases / zoonoses. The methods are sound and well described, results clearly presented and conclusions justified. I have however a series of specific points to be considered which are listed below and more general point.

Major compulsory revisions: none

Minor essential revisions: 1, 2, 5, 6, 8, 9, 14, 16

Discretionary revisions: 3, 4, 7, 10, 11, 12, 13, 15, 17

1) The more general comment I want to make relates to the structure of the information provided. In the results and discussion section it is not always clear whether specific information provided is relevant for poultry to swine transmission, poultry to humans transmission, swine to humans transmission or humans to swine. It would greatly help the readers if a framework clarifying the different transmission pathways being studied in this paper was presented in the methods section and this framework was then used to present the results and to discuss them. Some practices may be relevant to one of the above interspecies transmission routes and not to others, by introducing a certain structure in the methods that is later used in results and discussion the findings will be more useful for the readers.

2) Abstract: the methods section includes some results – the focus should be on the methods, which, even if they are qualitative should be described (observers, timing and method of observations etc.)

3) Background: “areas where industrialized farming is infrequent” why not simply saying areas where small scale intensive production is frequent (and important for local livelihoods)

4) Methods: Study Participants. The first paragraph (“Because this… no longer emerged”). Should be expanded and clarified: the authors explain the rationale for the lack of consideration of a pre-defined sample size; they should also justify / explain to the readers purposive selection (as opposed to probabilistic) – I am not questioning the appropriateness of purposive selection, I am just asking for this to be made clearer to the readers.
5) In relation to the same issue (selection of participants), were the criteria used in Chancay and Tumbes comparable? Did the fact that the work in Tumbes was integrated within ongoing research activities result in different selection criteria? Please make this clear to the readers.

6) Methods: Data collection activities: Direct observation: who were the interviewers? It is said that “the researches” but more information is needed: how many researchers? Always the same team? If not, was there some type of harmonization phase of the process? – the discussion suggests that there was an element of standardization of the process, please explain this stage of the research in the methods.

7) To facilitate the readers’ understanding of the work and maximize transparency I suggest the interview guides are made available either electronically as supplementary material or available upon request to the authors (this is just a suggestion).

8) Methods: Data Analysis: this section should be slightly expanded so that it is clearer to the readers which associations have been tested. No need to list specific 2-way associations but at least they should be broadly indicated.

9) Methods: what constitutes an “interaction” has to be precisely defined in the methods, so that authors know exactly how to interpret table 2.

10) Results: Hygiene practices: boots “are considered to be protective against disease transmission”, please clarify, transmission from ? to? . Protective if they are disinfected etc. I guess.

11) Discussion: the authors highlight sample size as a limitation of this, but this somehow contradicts what is stated in the methods – that size was determined by saturation i.e. no additional useful data being obtained. I am personally not that worried about sample size in this study…

12) Discussion: are there any data on influenza infection in pigs in Peru available? If so please refer to this in the discussion.

13) Discussion: study findings may also be relevant to transmission of other diseases, please refer to this, if possible giving some examples of relevant poultry / swine diseases / zoonoses prevalent in Peru.

14) Table 1: add column totals

15) Table 2: the indication of P<0.05, P<0.001… underneath the table is not necessary.

16) Table 2: The test by which each P value was obtained (Chi squared vs. Fisher’s exact) should be indicated (you can delete P<0.05, P<0.01 and instead use the symbols to indicate * Chi-squared, ** Fisher’s exact).

17) Table 3: same comment as for Table 2 re. indication underneath table of
p<0.001

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

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