Author's response to reviews

Title: Assessing the role of contact tracing in a suspected H7N2 influenza A outbreak in humans in Wales

Authors:

Ken TD Eames (Ken.Eames@lshtm.ac.uk)
Cerian Webb (crw1005@cam.ac.uk)
Kathrin Thomas (Kathrin.Thomas@nphs.wales.nhs.uk)
Josie Smith (Josie.Smith@nphs.wales.nhs.uk)
Roland Salmon (Roland.Salmon@nphs.wales.nhs.uk)
Mark Temple (Mark.Temple@nphs.wales.nhs.uk)

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Author's response to reviews: see over
Dear Sir/Madam,

Please find enclosed a second revised version of our manuscript “Assessing the role of contact tracing in a suspected H7N2 influenza A outbreak in humans in Wales” for consideration for publication in BMC Infectious Diseases.

Following the comments provided by the associate editor, we have substantially shortened the conclusion section (details below).

We believe that we have satisfactorily answered the associate editor’s query, and we submit this manuscript in hope of a favourable response.

Yours faithfully,

Ken Eames.

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**Detailed response to comments (comments in normal text, our response in italics).**

Reviewer 1's report : Minor essential revisions

The authors have addressed my comments and made changes that improve the presentation in the paper. The only extra clarification that the paper needs relates to Figure 3. The authors should specify how the idealised plots in Figure 3 are produced. I assume this only involves using some general rule by which individuals that have been contact traced are assigned a contact tracing time that is earlier than the actual date when contact tracing has happened. The authors should specify how this was done.

We believe that this information is already clearly contained in the manuscript. However, we have made minor changes to the legend of Figure 3 to assist the reader.

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Additional comments from the Associate Editor:
The authors followed the reviewers suggestion. However the conclusion section is still big. The manuscript can be accept after the revision of the conclusion section.

We have abbreviated the conclusion as follows:

**Amended conclusion:**

Any avian influenza virus (whether of high or low pathogenicity in birds) could be a plausible trigger for a major human pandemic if it can spread from bird to human, spread effectively from person to person, and if it becomes highly pathogenic in humans. This was the rationale for the major public health contact tracing response described here. The same precautionary response would be required in similar situations in future. The outbreak thus provides a natural experiment for interventions that have been envisaged in pandemic planning for the early stages of pandemic influenza [1]. Contact tracing is a powerful intervention [3,15] that will always have a role as a means of gathering information about an epidemic but may not be able to control infection. Contact tracing can only be carried out effectively with well-organised personnel, good data management, and sufficient expertise in the field to make rapid decisions.

**Original conclusion:**

The incident described here illustrates the contact tracing and treatment requirements when seeking to control and contain a suspected novel influenza virus in the human population. Any avian influenza virus (whether of high or low pathogenicity in birds) could be a plausible trigger for a devastating human pandemic if it is able to spread from bird to human, to spread effectively from person to person, and to become highly pathogenic in humans. This was the rationale for the major public health response that was launched in response to this outbreak, regardless of the fact that H7N2 infection was eventually not laboratory-confirmed in most cases. The same response would be required in similar situations in future as a precaution. The outbreak thus provides a natural experiment for interventions that have been envisaged in pandemic planning for the early stages of pandemic influenza [1]. In the defensive arsenal against infectious disease outbreaks, contact tracing is a powerful weapon [3,15]. Contact tracing will always have a role as a means of gathering information about an epidemic but, with high levels of susceptibility and potentially rapid transmission, as may occur with a novel pandemic strain, may not be able to control infection. Contact tracing can only be carried out effectively with well-organised personnel, good data management, and sufficient expertise in the field to make rapid decisions.

The amended conclusion is under 150 words long and we trust that the shortening of this section meets the associate editor’s requirements. As advised in the email from the editorial team, in the submitted manuscript we have enabled the “Track changes” option to allow a straightforward comparison between the two versions.