Reviewer's report

Title: Fever screening during the influenza (H1N1-2009) pandemic at Narita International Airport, Japan

Version: 2 Date: 20 December 2010

Reviewer: James McCaw

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The author's have conducted a retrospective analysis of border entry thermal screening at Japan's main international airport, as it pertained to the H1N1 influenza pandemic. Their results provide further support for the limited role such entry screening practices are likely to play in reducing the importation of influenza into the country. I considered the assessment of thermal scanners in the "real-world" environment a strength of the paper.

I have no comments on the statistical analysis or interpretation of the results. I have a number minor essential revisions and discretionary revisions, all concerned with expression and communication.

Minor Essential Revisions

1. The phrase "selected and suspected" is used extensively before it is defined and I could not understand its meaning until reading the definition. An alternative expression or full definition needs to be provided at the outset.

2. Background (page 3, lines 23-24, page 4, lines 1-13): With the primary aim of the study to estimate sensitivity, specificity, PPV and NPV, I found the discussion in this part of "Background" to be confusing upon a first reading of the paper. It is not clear what are "expectations and/or assumptions" and what are "results". e.g. The statement on line 23-24 on high sensitivity and specificity and NPV, if mis-interpreted as a result of the paper is both 1) inconsistent with the actual results and 2) inappropriately placed in Background. The authors need to make clear what is the "status quo or rationale for thermal screening" and what are "new findings" or "challenges to that status quo".

3. Discussion (page 15, lines 18-21): I did not understand the logic of the sentence beginning "Whereas the sensitivity...". Please address.

4. Discussion: The discussion is at times repetitious. Please revise to both substantially shorten and help make the key points more accessible.

Discretionary Revisions

1. Abstract (lines 13, 17 & 23) and through the main text: The phrase "sensitivity of fever", without the implied "...for detecting H1N1" was difficult to interpret.
2. Methods (page 5, line 8): Would it be useful to specify that the "portion" is non-random here?

3. Methods (page 5, line 19): By what device was 38.0°C assessed?

4. Methods (page 6, line 11): Only reflecting my spectacular lack of medical knowledge, but I had to look up the definition of "axillary".

5. I was unsure of what a "satellite" (first used on page 7, line 8) was. The alternative phrase "alliance", also unfamiliar to me, was used for what seemed from the main text to be the same thing, but on examination of figure 1 is different. "Terminal", a far more familiar phrase, was also used. Given the salient point here is not appropriate terminology of the sections of the airport, but rather that the location of scanners can be differentiated within the statistical analysis, perhaps the authors could consider some alternative language to aid in comprehension.

6. Methods (page 9, lines 13). "..incorporating a demographic variable...": Which demographic variable?

7. Results: Fever among confirmed cases. Would it be useful to include "(16)" here in the title to remind the reader of the data set. Furthermore, with just 16 events, the author's may wish to consider listing the full data set in a new table. Age and temperatures in particular would be interesting to see.

8. Results (page 12, lines 2 and 6): Are the temperatures in brackets standard deviations? Please state explicitly.

9. Results (page 12, line 15): Consider rephrasing "sex-specificity". Further, can the author's comment on why, when using a cut-off of 37.5, an effect of sex is seen. With this cut-off within the typical temperature range for healthy humans, is this observation to be expected or not based on the physiological differences between (non-fever or only marginal-fever) men and women?

10. Discussion (page 15, lines 17-20) Please reword "not particularly useful"

11. Discussion (page 18, line 17): Consider rewording ".undetected cases were unrecognised". I am not sure what this means.

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

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**
I declare that I have no competing interests