Reviewer’s report

Title: Airport sentinel surveillance and entry quarantine for dengue infection following fever screening program in Taiwan

Version: 9 Date: 25 August 2011

Reviewer: Lasse Vinner

Reviewer’s report:

Review of Kuan-MM BMC 2011

Summary

The study by Kuan et al. describes airport surveillance of febrile travelers to Taiwan. The aim is clearly stated and the methods appear adequately described; although it is unclear if Dengue cases are in fact confirmed or merely probable cases, according to e.g. CDC definitions.

Unfortunately the data provided (Tables and Figures) contains several discrepancies in comparison with the statements in the text. Please see details below.

The manuscript contains too many inconsistencies and should be thoroughly (!) revised, including language, before re-submission.

Major Compulsory Revisions (which the author must respond to before a decision on publication can be reached)

Language: There are several examples on long sentences including too many statements disfavor clear communication. e.g. "Consolidating on blocking triggering of dengue viral transmission chain directly by urging individual preventing mosquito bites and indirectly by urging household reinforcing integrated vector management to high risk people in dengue endemic and competent hotspots i.e. tropical urban existing Aedes aegypti is critical for curtailing dengue epidemics following the increasing alert of airport sentinel surveillance.". Please revise the language, syntax, commas, and spelling/grammar.

Methods: In some cases an R2-value (<0.3) is used as threshold of significance, in other cases the p(slope) is used. Formally the p(slope) seem be more correct. The authors should clarify this.

Diagnostic real-time PCR procedures are referenced appropriately (should be real-time RT-PCR). The authors seem to implicate that all case were confirmed. Is this the case? Otherwise it should be clarified.

Results: Apparently the numbers in the text does not correspond to the numbers in Table 1. In the text the authors write that: “…(3706-5656/11,121-12,286) of incoming travelers presenting with fever underwent blood sampling for laboratory confirmation of infection and 1.3-29.7% (72-110/3706-5656) were confirmed as
dengue infection, during 2007-2010 “72-110/3706-5656” However in Table 1 the total numbers are 3956-5,654 / 11,118-12,553 and 72-129 / 3956-5,654. This discrepancy should be clarified.

Furthermore in Table 1: The numbers of indigenous cases does NOT add up to the provided total number for the years 2007, 2008 or 2009. The total for 2010 is left out entirely. Without an explanation, one wonders if the other totals in the table are correct.

Figure 1: Whereas the text (page 7) refers to data from 2007 to 2010, the figure shows data from 2003 to 2009. Consequently the text is not cooperated by the figure. The finding that "Overall, 45.7% (95% CI: 36.0-55.4%) of total identified imported dengue cases with apparent symptoms were detected via this airport thermal screening program (Fig. 1)" is not supported by Figure 1.

It is not clear from the Figure 1 legend (or text) what the lines actually represent e.g. “total” and “airport”. Also the results (e.g. 1.86x …) should be in the text, not the legend (r and n values may be okay). To clearly present the data an additional panel (1B) should show the Airport numbers against the total number in and xy-plot for 2007-2010 data with statistics on correlation indicated. Doing so, the data from Table 2, that shows only calculated values for regression lines, could be referred in the text (as now) only, leaving out Table 2 altogether.

The authors should state how they interpret the increasing trend in correlation coefficient. What does it suggest/indicate/show/prove?

The following statement is not supported by Table 1, as this only show data from 2007-2009 (2010): “We analyzed a total of 7,793 diagnosed dengue cases including 15.6% imported cases in Taiwan during 2003–2010 (Table 1)”

It may be due to formatting during submission. But because of the size and resolution of Figure 2A it is not possible to see the dates on the X-axis. In fact, it is not even indicated which panel is in fact Figure 2A.

The following statement about Figure 2B is confusing as it seem to implement data from 2004-2010, whereas Figure 2B only shows data from 2005-2009: “The irregularly of the annual dominant dengue serotype of imported and indigenous cases (Fig. 2B), as well as the diversity of each local outbreak site (8), were characteristic of non-endemic outbreaks during 2004–2010.”

Table 3 adds little if anything to the information provided in the text. It should be left out and maybe substituted with an XY-plot of cumulated number of imported cases (X) versus the cumulated number of indigenous dengue cases (Y), with statistical analysis indicated.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

The statement “This particular cold-climate effect is believed to be responsible for maintaining the non-endemic status of Taiwan” should be referenced.

There are a few example of referring to a range as follows “approximately 31-40%”. This should be corrected or clarified what is meant (e.g.: …ranging between 31 and 40%..).
Discretionary Revisions (which are recommendations for improvement but which the author can choose to ignore)

In Table 1: Instead of abbreviations of names of cities and counties, provide the full names in the table, as they are all quite short.

In Table 1: What is “other” if not N, E, S, or W?

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

**Quality of written English:** Needs some language corrections before being published

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

**Declaration of competing interests:**

I declare that I have no competing interests.