Reviewer’s report

Title: Developing Open Source, Self-Contained Disease Surveillance Software Applications for Use in Resource-limited Settings

Version: 2 Date: 20 June 2012

Reviewer: Clark Freifeld

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Important Suggested Revisions.

The paper represents an important contribution to the field of disease surveillance, particularly in addressing the issue of reduced coverage and limited tools available in resource-poor settings. Further, the fact that the authors have carried out successful live field deployment in itself shows that the approach is valuable.

1. However, the paper presents relatively limited results to date. The main result is from the pilot of EDE in Philippines, stating that “within a month of implementation of fever case data collection, 30% of the local health clinics were using SMS texting to send daily fever case reports to the city health office.” Reduction of reporting lag from 2 weeks to 1 day is an important and impressive result. (a) What was the uptake beyond the 1-month period? (b) Was there any potential to expand beyond the pilot, in terms of capturing more syndromes, or increasing integration with PIDS? (c) Was there any known impact on public health decision-making, or population morbidity or mortality? Is there any data from the pilot that you can show in the paper? (d) Was there sufficient local IT expertise to maintain and troubleshoot the system, or at least potential for training?

2. Another important aspect of the study is the process of soliciting input from potential users and then how the authors worked to create and adapt systems to meet their stated needs. The process of gathering input, across several countries, is alluded to in the Background section (p. 6). Then, presumably results from this work as well as the pilot experience are presented in the Discussion section as a numbered list (p. 18). (a) It would be worthwhile to me as a reader to understand more about this process: how interviews were conducted, specific points made by users, experiences from the pilot deployment, etc to support the list on p. 18. (b) While I fully believe the 6 numbered points, as it stands they’re not supported by evidence in the paper.

3. Lastly, even preliminary results or experiences from deployment of the OE system would be interesting to include. The paper says that it was only recently deployed in 2011. (a) Any insights from the initial deployment experience? (b) What country was it deployed in?

4. (a) What are future directions for the software projects, in terms of new
features, user interface improvements, etc.? (b) Any key lessons learned from the deployments that have re-oriented the team’s focus?

5. From Table 1, it appears that Open ESSENCE has all the features of Enterprise ESSENCE. Is there any plan to simply convert all internet-enabled ESSENCE sites to Open ESSENCE? If not, why not?

**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.