Reviewer's report

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

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Reviewer: Rebecca Katz

Reviewer's report:

This paper describes the development of two open source electronic biosurveillance systems for use in resource-limited settings and deployment of these systems. The paper is useful and contributes to the literature by describing the usefulness of these systems as well as the detailed description of each system.

What is lacking from the paper, however, is how these systems fit into, or compare/contrast with the other syndromic surveillance systems being designed for resource-poor environments. The paper would be stronger with a description in the introduction of the other systems being developed and deployed for the same purpose, and a discussion of how the ESSENCE systems differentiate themselves.

Some specific comments:

- The IHRs were not revised because emerging public health threats often originate in resource-limited countries. And IHR (2005) call for more than just increased reporting capabilities. Authors should revise these statements to more accurately reflect the purpose of the regulations.

- In the background, the authors argue that because of the rapidity of the spread of emerging public health threats, early detection of disease is important. The authors should further explain that early detection leads to early response. As is said- surveillance without response is just documentation of misery!

- On the IHRs, the correct term is that the regulations entered into force in 2007, and there are now 195 Member States, which HAD until summer 2012 to be in compliance or ask for an extension. Also, odd to quote the significant harm to humans, and not just refer to a public health emergency of international concern.

- Not sure 2009 H1N1 is the best example of emergence of a disease threat in a resource-limited area, given early detection in the US.

- Please be explicit that authors worked with local military, as opposed to US military, in resource-limited countries.

- Assume partner nations are ok being referenced in this paper? (page 6)

- Page 7- Authors say that data was ‘computerized’. Is this the best word?
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.

Declaration of competing interests:

I declare that I have no competing interests