Reviewer's report

Title: Improving health information systems during an emergency: lessons and recommendations from an Ebola Treatment Centre in Sierra Leone

Version: 1 Date: 29 Oct 2018

Reviewer: Sylvain DeLisle

Reviewer's report:

The work summarizes efforts to co-develop a paper and an open sourced electronic health record (EHR) at an 80-bed Ebola treatment center in Sierra Leone amid the Ebola epidemic of 2014-2016 in West Africa.

The utility of an EHR has face value, and so are its potential advantages over paper-based system during a public health emergency. Some of the work contrasting the development and practical shortcomings of a paper documentation system to that of a purpose-built EHR has already been published (reference 11). Many meaningful outcomes of EHR implementation remain (e.g. speed/accuracy/completeness of medical care documentation, risk/prognostic model development, efficiency of supply chain/personnel management, data sharing and analyses across levels of care and locations etc). However, none are defined or measured here. As such, the work outlined in the manuscript does not rise to the scientific level.

The steps to develop and evolve software are well known, including the "Agile" development/implementation cycles used here. What is novel is the challenging set of conditions under which this development has now proven feasible. Of particular interest are requirements and implementation issues related to low human/material/power resources and stifling infection control measures (PPE, ETC zoned structure). The manuscript is at its best when it transparently describes practical problems and needed compromises, or when it makes sensible recommendations on how to build a basic EHR that can be rapidly adapted to the specific needs of future outbreaks/emergencies (Table 1).
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
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