

Sahana Alerting Module for Real-Time Bio-surveillance in India and Sri Lanka: lessons learned

Chamindu Sampath
Nuwan Waidyanatha
Gordon Gow
M. Ganesan
Mifan Careem
Pradeeper Damendra
Mahes Kaluarachchi

LIRNEAsia, Colombo, Sri Lanka.

Contact e-mail address: chamindusampath@gmail.com

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Only the Abstract is available

Abstract

The retroactive nature and latencies in the present day disease surveillance and notification system in India and Sri Lanka do not allow timely detection and mitigation of disease outbreaks. It limits the ability of the health system to effectively mitigate their consequences. The Real Time Bio-surveillance Programme (RTBP) pilot, stemming from the realisation of the system's weaknesses, introduced modern information communication technology to health departments in India, and Sri Lanka. The infrastructure of the RTBP is composed of an interconnected network between healthcare workers via the mHealthSurvey mobile phone application¹, T-Cube Web Interface (TCWI)² and Sahana Alerting Module (SAM)³. The processes involved digitising all clinical health records with the mHealthSurvey, analysing them in near real-time with the TCWI time-series and spatial statistics software, and disseminating detected adverse events through the SAM for immediate response. Common Alerting Protocol (CAP) is an interoperable global content standard for communicating risk information and CAP was adopted as the underlying structure for the Sahana Alerting Module (SAM). A single and multiple output software were developed by the project for the purpose of issuing short and long text messages over SMS, email, and web channel. The Sri Lankan health departments in the pilot areas were quick to adopt and begin routinely using the system, while the Indian counterparts did not see a substantial incentive to engage. This paper discusses the lessons learned, with respect to CAP messaging, from the evaluation exercise carried out in the Bio-surveillance pilot study. 1. Kannan T, Seebha R. Real-Time Bio-surveillance Programme: m-HealthSurvey Software Requirement Specifications [Internet]. 2009 Jan. Available from: http://lirneasia.net/wp-content/uploads/2009/06/srs_mobile_application_rtbp_v20.pdf 2. Ray S, Michalska A, Sabhnani M, Dubrawski A, Baysek M, Chen L, et al. T-Cube Web Interface: A Tool for Immediate Visualization, Interactive Manipulation and Analysis of Large Sets of Multivariate Time Series. AMIA Annual Symposium; 2008; Washington DC. 3. Gow G, Waidyanatha N. Common Alerting Protocol for Sahana Messaging Module: Real-Time Biosurveillance Programme Software Requirement Specifications [Internet]. 2009. Available from: <http://lirneasia.net/wp-content/uploads/2009/05/Sahana-CAP-Msg-Mod-v0.2.pdf>.

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