Developing applications to support injury surveillance in developing countries: Speeding up the data collection process in Sri Lanka

Joakim Johanson Lindquister, Henning Grimeland Koller

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Problem Area

Injuries are an emerging major global public health issue. Without proper intervention, road traffic injuries alone will rise from 9th position in 2004 to the 5th position by 2030. As any other public health issue, surveillance is the first step in public health approach to injury prevention and control. Therefore, public health agencies including World Health Organization (WHO), Centers for Disease Control (CDC), and American Public Health Association (APHA) have emphasized the importance of injury surveillance in injury prevention and control.

WHO has defined injury surveillance as systematic collection of data on the magnitude, scope, characteristics and consequences of injury and/or violence at the local or national level. Injury surveillance produces data that describe the size and characteristics of the injury problem, population at risk, risk factors and the trends. Once armed with such data, health care professionals get the ability to design and apply appropriate interventions and assess the impact of the interventions.

Scope of Master Thesis

DHIS2 is currently being customized for injury surveillance at the National Hospital of Sri Lanka. To do injury surveillance, tools and applications are needed to make the process easier and faster. Creating an innovative and easy to use Android and web application for entering high volume data about injury-cases will help both the hospitals and the field of injury surveillance. The health personnel will spend less time entering data with each case, and the data collected will be more accurate.

Milestones

Milestone 2nd semester: Build working web, and android prototypes.
Milestones 3rd semester: Continue working on prototype and perform field testing in Sri Lanka.
Milestones 4th semester: Write thesis.

Methods

We plan to perform the development with agile techniques, using the Scrum workflow with sprints. When the prototype is done, we plan to perform field testing using action research methods.

Cooperation

The thesis will be a cooperation between Joakim Lindquister and Henning Koller. The implementation will be divided between an Android application and a Web application.

Subjects

- INF5761 - Health management information systems
- INF5571 - Action Research Workshop
- INF5210 - Information infrastructure