

fast facts

Project: Health Emergency and Disaster Information System using Mobile and Virtual Earth Technology

Lead Organization: SynapseHealth

Country: Philippines



situation

According to research groups such as the Center for Research in the Epidemiology of Disasters in Belgium, the Philippines has an extremely high number of natural disasters. Despite being a disaster-prone location, the Philippines has no comprehensive and reliable database of disaster data by which to create pre- and post-disaster policy and to monitor the effectiveness of disaster interventions.

solution

According to the GSM Association (and demonstrated during and after the Haiti earthquake among other disasters), mobile technologies can play a critical role in gathering and dissemination of information in all stages of a disaster. The Health Emergency Disaster Information System (HEDIS) aims to develop a health-centric emergency and disaster information system using SMS and geographic information technology. The project team developed a Java 2 Mobile Edition (J2ME) application that transforms user-entered information into SMS-supported formats, an Internet-based version of the data entry software, a GSM modem gateway for the delivery of SMS messages, and an interface based on Google Maps to display the aggregated data collected via SMS and through the web interface.

This project is expected to benefit the Health Emergency Management Service (HEMS) of the Department of Health (DOH), which manages the health aspect of disaster management. It will aid in the management of health emergencies by allowing access to data for better decision-making and resource allocation. The project will also be able to provide, for the first time, detailed health information on disasters in the Philippines such as type, magnitude, and efficiency of interventions. The data will provide useful information in developing policies and strategies for future disaster intervention.

Given its comprehensive approach, HEDIS was chosen as a key technology and information management infrastructure in two major national health informatics projects in the Philippines: The Department of HEMS's Comprehensive Integrated Information System Plan (CIISP) and the World Health Organization (WHO) Philippines Surveillance in Post Extreme Emergencies and Disasters (SPEED).

The HEMS CIISP project has been built to serve as the blueprint for all technical system development for DOH HEMS and will integrate all HEDIS components into its larger health information management system. This will allow for the identification, description, and documentation of HEMS' information needs and make relevant information available to a wider audience. This will allow the organization to review and document the current information systems capabilities, and allow it to become more efficient, and better able to meet the needs of the public in the event of a disaster.

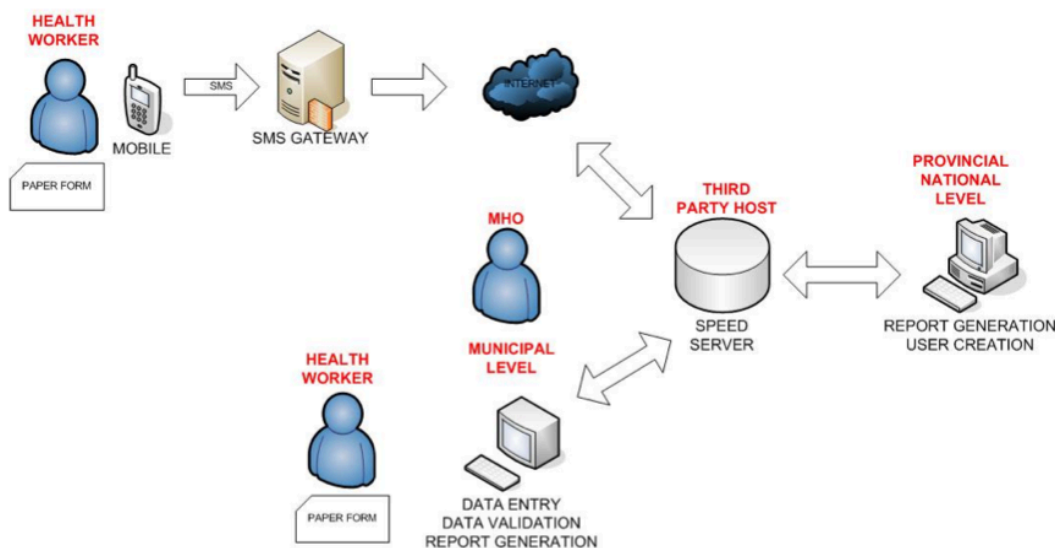
The second project, WHO SPEED, is a collaborative effort with WHO Philippines, which seeks to develop a national health monitoring and disease surveillance system during emergencies for the Department of Health HEMS team. HEDIS was integrated into WHO SPEED development efforts as a means of supporting WHO efforts at tracking the outbreak of diseases following disaster events, and addressing the

spread of these diseases through the dissemination of relevant information about treatment and prevention.

broader impact

Over the course of this project, the team has been able to develop a human resource database for identification of disaster management training recipients in the Philippines in addition to the development of the health tracking and education information system itself. This secondary source of information will allow health trainees to connect with each other, and to specific health experts, in order to improve their skills and find assistance quickly in the event of an emergency.

ISF HEDIS' proven reliability and usefulness to, and integration into, the HEMS CIISP and WHO SPEED projects is predicted to ensure the system will continue to be used, especially in times of disaster.



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