Session 3

Chair: Mauricio Lynn

SAFE: Satellite Communication for Health Early Warning

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The risk of epidemics and emerging or re-emerging diseases such as avian flu, tuberculosis, as well as malaria and other vector-borne diseases, is rising. These risks can be contained with prevention, early warning, and prompt management. Despite progress in information technology, communication remains a bottleneck for health early warning and response systems. Satellite Communication for Health Early Warning (SAFE) is a component-based system for health early warning that employs satellite and wireless networks, geographic information systems, integration technology, and data mining to promptly identify and respond to disease outbreaks or epidemics.

The added value of the SAFE approach will be demonstrated in the context of readiness exercises conducted throughout Europe. In a post-disaster health management scenario, a mobile health emergency coordination center is established and integrated into public health services for health monitoring. The role of SAFE in post-disaster health management will be assessed in an earthquake-readiness exercise, in which the outbreak of a typhoid fever epidemic will be simulated. Other envisaged scenarios relate to tuberculoses and influenza.

Satellite communication services including low and high bandwidth access to the Internet, cooperative working, and geolocalization in SAFE will be validated for all phases of managing a biological crisis including prevention, early warning, and response. Healthcare systems and civil protection are expected to benefit from promptly restoring access to information and communication.

Advanced communication and data mining techniques in SAFE offer new tools to the "Epidemic Intelligence" and contribute to advanced preparedness and prompt response by removing communication barriers, promoting collaboration, and reducing the isolation of affected areas.

Keywords: coordination; epidemics; infection; prevention; risk; Satellite Communication for Health Early Warning (SAFE); warning
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Information Network System for Nuclear Disasters in Japan

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Medical management of radiation injuries requires special knowledge and resources, and can be difficult for ordinary emergency medical systems to manage. In order to utilize medical resources effectively, the national government of Japan has developed a radiation emergency medical network, which involves a wide range of organizations and specialists in. When a nuclear disaster occurs, it is imperative that these organizations and specialists are provided accurate information as quickly as possible.

To facilitate this, an information network system was developed using the existing telecommunication system and the Internet. With this system, relevant information can be disseminated at once. The system comprises ordinary fax machines that have the F-code function, a computer server, and Internet. After the original message containing the relevant information is faxed, it is automatically delivered by the F-code function to all the pre-registered organizations and individuals. At the same time, the fax message is digitalized as an image file and disseminated via the Internet to mobile phones and computer servers. Also, the message can be viewed on a Website.

This system was used and evaluated during the national nuclear disaster drill in September and the prefecture drill in November 2006. The relevant information was delivered smoothly without any delay to all the organizations and individuals who participated in the drills. Although some modifications are required, this system should function as an effective method for disseminating information during a nuclear disaster.

Keywords: information network system; Japan; medical management; nuclear disaster; radiation injuries
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The Interface of Regional Coordination within Louisiana Hospitals during Hurricanes Katrina and Rita

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In 2002, the National Hospital Bioterrorism Preparedness Program, Health Resources and Services Administration (HRSA) Grant program initiated funding for hospitals to improve their overall bioterrorism response capabilities. Under this program, and given the natural disaster risks in the Gulf Coast area, the Louisiana HRSA efforts emphasized an all-hazards planning approach. Since the inception of the grant, the regional coordination emergency response infrastructure had been activated for five state-declared emergencies, including Hurricanes Katrina and Rita.