

injury (2.5%). Evacuees with a pre-existing health condition were more than twice as likely to report sustaining an injury (OR = 2.16, 95% CI 1.70–2.74).

Most evacuees received their post-evacuation medical care in a non-hospital setting (the majority went to their own personal physicians' offices); only 44 individuals in this sample were hospitalized. Nearly 17% of the evacuees reported ongoing, long-term health problems two years after the event, the most common being related to mental health, followed by respiratory diagnoses.

**Conclusions:** These findings reinforce the need to view high-rise building evacuation as a public health concern.

**Keywords:** 11 September 2001; evacuation; health problems; high-rise buildings

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### Anti-Microbial Resistant Gram Negative Bacilli in Water in Banda Aceh: For Rational Antibiotic Use for Traumatic Wounds Caused by Tsunami

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**Introduction:** In January 2005, three researchers from the Japan Disaster Relief (JDR) were engaged in medical activities in Banda Aceh. The team treated 1,891 patients. Of the 367 traumatic injury cases treated by this group, 215 required antibiotic therapy. Subsequently, medical services were taken over and continued by the Japan Self-Defence Medical Team until mid-March 2005. Of the original 215 trauma cases who were initially treated by JDR, 82 received prolonged antibiotic therapy for persistent symptoms, in spite of repeated debridement. Although 20 months had elapsed since the tsunami event, researchers investigated the cause of the persistent symptoms of infection by examining bacteria from the water and soil that were flooded by the Tsunami water.

**Methods:** In August 2006, 49 samples from various water sources (the sea, rivers, sewage, wells, and swamps), in 11 areas that were flooded during the tsunami, were collected and microbiological tests were performed in Banda Aceh. According to an inhabitant of the inundation areas, well water became brackish after the Tsunami and has remained that way since then.

**Results and Discussion:** Of the 49 water samples obtained, *Aeromonas* sp., *Klebsiella* sp., *Vibrio* sp., and *Proteus* sp. were isolated from 24, 14, 16, and six samples, respectively. Regardless of genus, almost all of the isolated Gram negative bacilli were resistant to ampicillin and amoxicillin, while they were sensitive to ciprofloxacin and gentamicin. Based on the results of this study and further analysis of the medical records, the researchers recommend ciprofloxacin (and

other relevant quinolones) and/or gentamicin for the initial antibiotic therapy of traumatic wounds that are exposed to a water-soil mixture, such as occurs with a tsunami or flood, when clinical microbiological tests are not available.

**Keywords:** anti-microbial; Indonesia; tsunami; water; wounds  
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### Local Implementation of International and National Recommendations for Pandemic Flu Preparedness in a Swiss Western State

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The need for worldwide pandemic flu preparedness recently overwhelmed public health authorities who were requested to adapt and operationalize the World Health Organization (WHO) and national guidelines at a sub-national level. Since June 2005, an Expert Group nominated by the Executive Council has brought together health specialists in infectious diseases, public health, emergency and disaster medicine, travel medicine, geriatrics, and hospital management, as well as non-medical partners (i.e., the Head Veterinarian, or the Chief of Disaster Coordination) in a Swiss western state (650,000 inhabitants). This group implemented a strategic plan based on five principles:

1. Early treatment with anti-viral drugs within 6–12 hours after the onset of symptoms;
2. Separation of patients with and without flu symptoms by creating a pandemic channel that avoids usual health facilities;
3. Controlled distribution of healthcare resources;
4. Continuity of urgent care for non-pandemic patients;
5. Real-time epidemiological and crisis follow-up.

Ten thematic working groups involved partners from: (1) public hospitals; (2) private hospitals; (3) rehabilitation centers; (4) nursing homes; (5) social institutions; (6) private practitioners; (7) pharmacies; (8) epidemiological units; (9) the emergency call center; and (10) public health specialists. Special attention focused on pediatric issues. Continuity plans for public and private institutions were treated separately from the health contingency plan. Political support at each phase was pivotal.

This ongoing work has allowed input from a broad range of health and non-health professionals and a consensual development of new and sometimes contradicting priorities, which are closer to scientific and epidemiological views than those recommended by the WHO and national guidelines. It provides new and useful ways of responding in case of a future public health threat.

**Keywords:** guidelines; health; public health; recommendations; World Health Organization  
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