

Free Papers—Theme 12: Tsunami-1

Activities of Japanese Disaster Relief Teams Against the Tsunami Disaster in the Indian Ocean

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On 26 December 2004, an earthquake measuring 9.0 on the Richter scale triggered a devastating tsunami that caused an estimated 225,000 deaths in eight countries (India, Indonesia, Malaysia, Maldives, Seychelles, Somalia, Sri Lanka, and Thailand). The Japan Disaster Relief (JDR) Medical Teams provided primary care services in four of these countries (Indonesia, Maldives, Sri Lanka, and Thailand) from 30 December–21 January. The four teams included 95 health personnel (24 doctors, 44 nurses, 6 pharmacists, and 21 medical assistants), supported by logistics, communication, and transportation staff. There were 15 doctors for surgery (emergency physicians), two for internal medicine, three for pediatrics, and four for public health. In Indonesia, an outpatient clinic was used in Banda Aceh from 01–21 January, and treated 2,758 patients. Another team of the JDR was the first to arrive among international medical aid agencies in Sri Lanka on 30 December. Until 15 January, 2,251 patients were examined in a camp for displaced people in Kalmunai in Ampara Province. In Thailand, another team treated 1,050 patients in clinics in a school and a camp for displaced people in Takuapa district in Phang-nga Province from 31 December–09 January. The JDR team in The Maldives provided medical services at the Muli Regional Hospital in the Meeme Atoll during 01–05 January, and treated 229 patients.

A total of 6,288 patients were treated, of which 10% were children <5 years old, and 12% were children aged 5–14 years. Among all patients treated in the four JDR medical team clinics, 1,263 (23%) were diagnosed with respiratory illness, of which most were acute upper respiratory infections. There were a few cases of pneumonia. A total of 1,203 (22%) had some kind of trauma, though most had minor injuries such as simple soft-tissue injuries or lacerations with suppuration. These problems were less severe than were those from the tsunami in Papua New Guinea in July 1998, of which almost 75% of the patients treated by the JDR medical team were fracture cases, particularly femoral, tibia, and fibular fractures. A total of 322 (6%) complained of psychological problems such as sleep disturbances, intense tiredness, and strong anxiety. The importance of psychosocial/ mental health assistance was reaffirmed. The number of patients suffering from diarrhea was unexpectedly low (2%), despite the presence of risk factors such as poor sanitary facilities and the lack of clean water. Additionally, there were no major outbreaks of other infectious diseases detected. In comparison with post-flood diarrhea observed during flooding in Mozambique, where 13% of patients had diarrhea, the number of diarrhea cases in the Asian context were low. There was neither confirmed nor suspected cases of measles, shigella, or cholera.

Primary care services in four different countries were provided simultaneously during the first month following the area-wide devastation from the tsunami. When comparing JDR experiences in similar disaster contexts in different parts of the world, the disease patterns were found to differ in the various contexts even when assessed at the same point in time (post-event).

Keywords: diarrhea; disaster; disease; earthquake; Japan Disaster Relief (JDR); primary care; respiratory; staff; trends; tsunami
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“Operation Southeast Asia Tsunami Assist”: An Australian Medical Relief Team in the Maldives

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When the tremors and subsequent tsunami struck the Maldives on 26 December 2004, most Australians were enjoying their public holidays. Traveling at speeds of up to 800 kilometers per hour, the 1–4 meter high tsunamis hit across the Maldivian atolls between 09:00 and 09:30 hours in the morning. When the waves receded, 82 people were dead, 26 were missing, and >1,300 had moderate to severe injuries. Nearly 5% of the population was left homeless.

At the request of the Government of the Maldives, the Australian Government response was to send in a public health and primary care-focused, 16-person medical team, which arrived on 30 December 2004. The team was very different from the Australian team sent to Aceh. The Maldives government effectively had managed the 200 serious and 1,100 moderately injured patients in the regional health centers and the central Indira Gandhi Memorial Hospital in Malé prior to the team's arrival. The main concern was the ongoing provision of health services as they grappled with the effects of damaged health infrastructure and possible subsequent epidemics and food and water shortages in the affected atolls.

After forming three sub-teams, the Australian team deployed to the Gaafu Alifu, Thaa, and Raa atolls to the south and north of Malé and visited nearly 30 of the badly affected islands.

This presentation will outline the Australian role in providing support to the local Ministry of Health staff to assess the damage, personal and infrastructure; providing primary care and pharmaceuticals where there were none; performing disease outbreak surveillance, and working with the Government and islanders to address the resultant public health issues. Public health issues included everything from the disposal of dead fish and solid waste, to destruction and contamination of fresh water supplies, food shortages from destroyed food crops and stores, and the psychological trauma of communities that had lost everything. These assessments allowed the local Ministry of Health to carry out the strategic planning required and to provide the targeted health response to those most in need.

The rapid deployment of the medical team was not without its challenges. This presentation will examine the lessons learned from this deployment, particularly in the

areas of health intelligence, command and control, team selection, medical equipment, communications, appropriateness of role, and logistics. These were the first recent major deployments for Australian civilian disaster medical relief teams and will form the basis for Australian deployments in the future.

Keywords: Australia; epidemics; injuries; lessons learned; Maldives; medical team; relief; tsunami

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Israeli Field Clinic Sent to Sri Lanka—A Provisional Alternative to the Local Medical System of the Community of Balapitiya

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As soon as the dimensions of the tsunami disaster were understood, Magen David Adom (MDA) sent a medical delegation to assist the people in the stricken area. The MDA prepared a small medical delegation, called a “field clinic” (similar to the Red Cross Medical Emergency Response Unit) consisting of four doctors, three paramedics, one nurse, and one medic. The delegation planned to be independent regarding its treatment abilities, the variety of professions and skills of the physicians, and the administrative and logistical needs of its staff. The Israeli National Council for Volunteering decided one week post-tsunami to send a delegation to Sri Lanka: MDAs medical field clinic and a logistical delegation that would handle the preparation and supply of food. Two days after arrival in Sri Lanka, both components of the Israeli delegation were stationed in Balapitiya, a village of >10,000 inhabitants, many of whom had been affected by the tsunami. The victims of the tsunami were lodged in six temples. A mobile team of two doctors and one paramedic was developed to provide medical care within the temples; while the other members of the team functioned within the main clinic. The mobile clinic examined and treated 80–100 patients per day, while the main clinic examined up to 200 patients per day. The two clinics together treated a total of 2,300 patients during eight days of activity.

Ten percent of the patients visiting MDA's clinics had injuries related to the tsunami, such as contaminated wounds, contusions, bruises, and body pain. A total of 30% suffered from acute diseases, such as respiratory tract infections, asthma patients needing inhalations, and children with fevers and coughs. The MDA teams examined the remaining 60% presenting with chronic diseases, and most were referred to the health system of Sri Lanka (at their request) for further treatment.

Lessons learned: A foreign medical team must be coordinated, and fulfill the needs of the local medical community. Lessons learned included:

1. The Israeli medical team was invited and approved by the Director General of Health services of Sri Lanka;
2. The delay of two days in finding where to station the medical teams occurred because local coordinators were not from the medical community;
3. The medical activities of the team in Balapitiya were coordinated and authorized (in writing) by the medical officer of this region; and

4. The decision of when to leave Balapitiya, to whom to donate the transported medical equipment, and which medications to leave was made on the basis of mutual understanding with the local medical officer and the Ministry of Health of Sri Lanka.

Conclusion: The medical delegation of the MDA achieved the goal for which it was dispatched to Sri Lanka, i.e., to provide an alternative professional medical system until the local medical system had returned to be able to provide adequate medical functions to the community of Balapitiya.

Keywords: Balapitiya; diseases; lessons learned; Magen David Adom (MDA); medical system; relief; Sri Lanka; tsunami

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Support Factors of the Healthcare Teams in Affected Areas of Thailand during the Disaster Medical Response—Lessons from the 26 December 2004 Tsunami

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Introduction: On 26 December 2004 at 09:00 hours, an earthquake with a magnitude of 9.0 (Richter scale) struck the area off the western coast of northern Sumatra, triggering massive tidal waves (tsunami). The tsunami waves flooded coastal areas in countries around the Indian Ocean rim, including Thailand, causing a huge number of fatalities and injuries as well as destruction of infrastructure. In Thailand on 25 January 2005, 5,388 fatal cases were confirmed, 3,120 people were reported missing, and 8,457 people were wounded. The Thai health system faced the task of dealing with the large number of victims. The individual and collective coping mechanisms, which emerged under those dramatic circumstances, will be presented.

Objective: To evaluate the function and coping methods of healthcare providers and administrators in Thailand in the wake of the tsunami disaster.

Methods: The IDF Home Front Command Medical Department sent a research team to study the response of the Thai medical system to the disaster. The research team included three physicians and one behavioral psychologist experienced in hospital preparedness for disaster and emergency medicine. The delegation arrived in Thailand one month after the precipitating event. The team met with Thai healthcare officials, including the General Director of the Ministry of Health and three Provincial Directors (in the areas affected by the tsunami). The team also met with the head of the Thai Air Force and visited six public hospitals and four community clinics involved in the care of the victims. Data were collected primarily through the conduct of personal and group interviews. Additional data were gathered from open and closed questionnaires. Analysts of health teams' support factors used concepts from models dealing with coping with stress, resilience, and self-efficacy.

Results and Conclusions: Leadership is crucial to rank-and-file functioning. Differences were found in the way different teams within the Thai health system grasped the