



The Asian tsunami – the first days of the Australian response

In the Indian Ocean in the early hours of the morning of 26 December 2004, an earthquake measuring 9 on the Richter Scale lifted a 1200km stretch of the earth's plate up by 20m. This caused a massive movement of water which hit the Sumatran coast, 250kms away, in less than 1 hour.

Sequentially, it swallowed islands and coastlines, overall affecting 13 countries, including Indonesia, India, Malaysia, the Maldives, the Seychelles, Sri Lanka and Thailand. Its destructive pathway reached as far as Somalia, Africa. By the evening of 27 December, the death toll was reported to be expected to be as high as 7,000. Two weeks later, the estimate was over 220,000 and approximately 2 million homeless. The response to this disaster required a rapid, international co-coordinated effort.

Dr Moira McKinnon

Senior Medical Adviser
Biosecurity and Disease Control
Australian Department of Health & Ageing
Canberra, ACT
E-mail: Moira.McKinnon@health.gov.au

Like other developed nations, Australia had been increasing its capability in disaster response since the September 11 2001 attacks on the USA and the anthrax bioterrorism which followed. Prior to this time, the Australian Department of Health and Ageing (DoHA) had a peripheral role in assisting Emergency Management Australia (EMA) in developing training and advising on appropriate resources and standards for disaster response. The constitutional responsibility for front line emergency response to disasters rests with

individual State and Territory governments. State and Territory health authorities have health disaster plans in place to respond to mass casualty situations.

The anthrax hoaxes which spread far and wide in Australia demanded a stronger national role, as did the 2002 Bali bombing and the response to the SARS epidemic. The sure but steadily increasing threat of pandemic influenza also requires strong national leadership and guidance; the national coordination, communication and planning role has therefore increased exponentially.

Australia must have a capacity to respond and to provide national leadership and assist States and Territories should a disaster overwhelm the capacity of an individual jurisdiction to respond. Australia also needs to have the capacity



Scene of devastation – this boat was washed 5km inland (photo Edie Lederman).



to respond to an international event, not only because it may involve Australians but because of the humanitarian requirement for optimum global response.

By the time of the Asian tsunami, the DoHA had in place a well equipped national incident room (NIR) with a permanent staff of nine and a roster for on call after hours. The NIR is a purpose-built area responsible for the gathering of information, analysis and interpretation of this information in a health context, communication of information and coordination of actions across jurisdictions, nationally and internationally. The NIR had just trained two volunteer 'surge' teams to be able to operate the room on a 24 hour basis in an emergency.

On the eve of 26 December, senior health officials discussed what DoHA's role might be in the tsunami. It was thought to be possibly an advisory role to AusAID or EMA. The Department of Foreign Affairs and Trade (DFAT) convened a taskforce, the Interdepartmental Emergency Taskforce, which, chaired by DFAT, met on the morning of the 27th. Key central authorities were represented; Department of Prime Minister and Cabinet, Defence, Family and Children's Services, Centrelink, AusAID, The Australian Federal Police, EMA and Health.

The main issues were the Australian dead, injured and missing – how to assess and repatriate, and how to provide assistance to the tsunami affected areas in the most rapid and effective way possible.

It was clear that the most difficult area to access and to get information on would be Indonesia. The affected province in Sumatra, Aceh, had been undergoing military insurgency for many years. This, and the recent experiences in Timor, meant that, although the Australian military was poised to help with significant resources, this needed to be offered and carried out with careful and detailed negotiations.

DoHA was asked by the taskforce to assemble civilian medical teams to go

to Indonesia and other tsunami affected areas whilst these negotiations were being finalised and while the strategy of longer term aid could be determined. AusAID was additionally tasked with country assessment and assisting DoHA and Family and Children's Services in harnessing the swelling Australian response.

The DoHA activated the NIR and called in the surge teams. Following the first taskforce meeting, the Australian Health Disaster Management and Policy Committee (AHDMP) was convened. The AHDMP, chaired by the Mary Murnane, the Deputy Secretary of DoHA, consists of chief health officers from each State and Territory, the Chief Medical Officer (Professor John Horvath), Department of Defence, EMA and individual experts in disaster response.

The primary role of AHDMP during the first week following the tsunami was to determine and coordinate the teams and to provide advice on composition and equipment.

The taskforce met twice daily during the first week; the AHDMP teleconferenced twice daily. Thereafter, both groups convened on a daily basis until the third week. Family and Children's Services, and representatives from DoHA and AusAID, also met daily. DFAT provided a hotline for those concerned for missing relatives; DoHA, FACS and Centrelink set up a hotline to cover both general tsunami enquiries and volunteer offers.

While the first multi-tasked team was being drawn together, a team of three, pulled at only 3 hours' notice from Canberra Hospital, was sent to Thailand to assess the Australian injured and any need for evacuation. The team left on the afternoon of the 28th and sent a preliminary report within 24 hours that no special evacuation was required for injured Australians.

The team assisted in the repatriation of 15 patients and provided assistance to disaster victim identification teams. These teams, a section of the Australian Federal

police, had to work in extremely physically difficult and emotionally draining circumstances. They were considered by all involved to have excellent technique and high working standards. This led to the Australian teams having a key role in the overall international victim identification effort.

Apart from the Thailand assessment team, all medical teams going into the tsunami affected areas were required to be self sufficient in every respect. Each individual had to have their own water, food, bedding as well as medical equipment. The New South Wales Counter-Disaster Unit and the EMA worked closely with DoHA to task the initial teams.

The first two teams, ALPHA and BRAVO, consisting of 28 personnel, departed Australia on 29 December for Banda Aceh. It was a multi-jurisdictional, multi-disciplinary team – NSW (17), WA (7), QLD (3), Vic (1) – consisting of orthopaedic and general surgeons, anaesthetists, emergency primary care and public health physicians, as well as operating room nurses, emergency nurses and, very importantly, logisticians. This combined team carried out over 90 major operations, including patients brought in by USA helicopters.

Team CHARLIE, 16 personnel with acute, primary care and public health capacity, was sent to the Maldives and assessed 28 islands, providing minor operative and primary care aid. Team DELTA, consisting of five people – a logistician, two infectious disease physicians and two general practitioners with public health background – joined a rapid assessment team in Sri Lanka.

Team ECHO replaced ALPHA and BRAVO in Banda Aceh. ECHO-2, a team of three, was given the task of task providing primarily microbiology laboratory support to ECHO. ECHO-2 established the only microbiology laboratory facilities in Banda Aceh at a time of rising concern of possible outbreaks of infectious disease (see Winter *et al.* this issue). Team ECHO was replaced by FOXTROT. These teams



had a primary care and public health focus.

The last team provided by DoHA in concert with EMA was team GOLF which departed Banda Aceh on 11 February. AusAID then took the lead role and the teams were replaced with longer term personnel from aid agencies, in keeping with the change to the medium term recovery and reconstruction process.

The Australian military, by the second week in January, was providing significant resources into the area in environmental work and clearing as well as medical assistance. Although they worked closely with the medical teams, their tasking, by agreement between the governments, was through Indonesian response teams. The civilian teams continued to need to be self sufficient and innovative in accessing their own needs.

Overall, eight teams of 124 civilians were sent into the tsunami affected areas. These personnel responded rapidly, worked closely with local authorities and were effective and gained a high level of respect from the locals and other workers in the area.

Information from the ground was difficult to access in the first 3 weeks following the tsunami. United Nations and the World Health Organization (WHO) had people in place by the end of the first week. Communication was reportedly difficult to assimilate on the ground, let alone in offices far away. Concern was heightening in regard to public health in the affected areas. The Australian army put provision of water and then sanitation as their top priorities.

This dedication to task was undoubtedly one of the key reasons that the expected public health consequences following such events did not happen. The teams, however, reported cases of tetanus. This was of concern, not only because of the disease itself, but because it likely reflected poor immunisation levels for other vaccine preventable diseases. Australia was able to provide 50,000 doses of gamma globulin to the field.



Hope for the future – a village man pointing to the site for his new home (photo Geoff Hogg).

A public health subgroup was put together by AHDMP, consisting of infectious disease experts and members from the Communicable Disease Network of Australia (CDNA). This group was tasked with analysing and providing advice on public health issues to EMA, who had taken the lead in tasking, briefing and organising the teams. When one case of measles raised concern, the WHO on the ground were able to respond quickly, providing mass vaccinations.

Concerns about vector control and possible increase in malaria and dengue were raised. There was conflicting information on who was doing what. Defence and AusAID and DoHA communicated on a daily basis, trying to put information together; as much was gleaned from informal networks and connections as was from formal channels. Informal information carried with it the need to double check and provide supporting information.

By mid February, the Australian government had pledged over A\$1 billion in aid to Indonesia. AusAID had in place contracts with experienced aid organisations and individuals to begin

the mid-term aid and commence the planning for long-term rebuilding.

Over 6,500 Australians volunteered to work in the tsunami affected areas. Very few of those people were taken up. It was necessary not only to want to do the work and be skilled in a certain area, but also to be able to be self sustainable, to be innovative to be able to work in a team, have experience in such events and, ideally, to be able to speak the language.

The Asian tsunami disaster tested the Australian capacity to respond to an overseas incident. The multi-national response was complex and, in Australia, required a multi-departmental and multi-jurisdictional coordination.

In the debriefs, it was agreed that Australia had provided a timely and effective response. Areas to learn from were the communication and coordination on the ground, between teams and between authorities, and the coordination of gathering information and determining task at all levels. The lessons are being taken on board and acted upon, for there is no doubt that natural or intentional disasters will continue to test Australia's capacity for response in the future.