Trouble in paradise

Tropical, Emergency and Disaster Medicine Conference and Tropical Medicine Summit, Broome, Western Australia, 22–24 May 2009

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Conference delegates workshopped a realistically staged disaster scenario in which they were completely isolated from outside resources

If you have to have a disaster, Broome, on the remote Kimberley coast of Western Australia, seems a good place to be; that is, until you take a closer look at what it would be like at the centre of the action. And this is exactly what delegates did during the inaugural conference on Tropical, Emergency and Disaster Medicine (TED-MED), held in Broome on 22–24 May 2009. The conference was attended by 81 delegates, including 28 general practitioners, eight tropical medicine specialists, six emergency medicine specialists and five disaster medicine specialists, plus representatives of government agencies, rural and remote nurse paramedics, clinical laboratory scientists and environmental health and industry participants. In this conference, we used the scenario of a tropical cyclone to move conference attendees outside their comfort zones and draw them into the reality of health crisis management in regional Australia.

As it happened, Broome turned out to be an excellent location for the TED-MED conference because of a series of recent events, including the explosion of a refugee boat off the north-west coast of Australia and a tourist vehicle rollover on the Mitchell Plateau to the north-east. To add further realism to the program, there was severe wind damage caused by storms hitting Perth the day before visiting speakers flew into Broome, and the nation was on the verge of moving from the "Delay" phase to the "Contain" phase of the response to pandemic (H1N1) 2009 influenza.

There were two triggers for a broad-based conference such as this. One was a renewed emphasis on regional development, particularly in WA's north-west, where the expansion of the Ord River Irrigation Scheme, mining and petrochemical industries, and tourism are expected to drive a threefold to fourfold expansion of the regional population over the next decade. The second trigger was the Government of WA's Royalties for Regions policy, under which some of the revenue generated by the mining and resources industry is returned to regional WA in the form of infrastructure funding, and is expected to add impetus to the population growth in the north of the state. In his opening address, WA Director General of Health Peter Flett emphasised the challenges of providing health care to such a thinly spread population in a tropical environment. He said that there was an urgent need to tackle the declining professional population as the baby boomer generation goes into retirement. David Atkinson, from the Kimberley Aboriginal Medical Service Council, compared his extensive experience in remote Aboriginal communities with indigenous communities in remote Canada. The extremes of hot and cold were explored further by retired remote and rural general surgeon Val Lishman AM, who spoke on his work in northern Australia and as an Australasian Antarctic Expedition doctor. Val's moving snapshot of wilderness medicine in extreme environments was a profound reminder of the importance of resourcefulness and unquenchable optimism in the face of adversity.

At the centre of the conference program was a carefully researched disaster scenario (Cyclone TED). Delegates prepared for an extended problem-solving activity through a series of lectures. Major-General Paul Alexander (Australian Defence Force [ADF] Surgeon General) gave the initial plenary session on ADF health capability, reflecting on the role Defence personnel often play in disaster response. He usefully clarified what the Defence Force can do and under what circumstances they would be tasked to assist. Highlights of subsequent parallel sessions were a vivid description by plastic surgeon Fiona Wood of the management of patients with burns who were injured in the Bali bombing, the challenges to medical evacuation from a combat zone by David Werda (former ADF paramedic during United Nations deployment to Somalia), and tag-team presentations on snakebite and emergency resuscitation by George Jelinek and Steve Dunjey (both from the Emergency Department at Sir Charles Gairdner Hospital). Steve's recent high-profile resuscitation success in outback WA led him to comment that medicine is full of surprises. "You can see unexpected survival in patients under 50 after over 20 minutes' resuscitation." The closing straight was led by a relay team of experts. Juliet Hubbard, speaking for Indigenous communities, advocated much wider training of health professionals in cultural safety, particularly in managing major community crises. Alison McMillan (Department of Human Services, Victoria), speaking on the Victorian bushfire disaster, reminded us how quickly local emergency services can be overwhelmed. She gave delegates a sense of the confusion that arises as responding agencies piece together a picture of a disaster. Finally, Brad Santos, a severe-weather expert from the Bureau of Meteorology, left the storm damage in Perth behind him and showed how cyclones behave, with specific reference to their severity and time course. Having given us a taste of what to expect, he introduced the disaster scenario with a scene-setting severe-weather warning.

Unlike in many tabletop exercises that aim to advertise the capabilities of host agencies, the details of the scenario were not disclosed to participating agencies. Michael Watson (Clinical Microbiologist, Perth), who led the team of scenario writers, said that he wanted a realistic challenge. As it happened, the date of the conference coincided with peak high tides, enabling Michael and his team to design a realistic scenario in which cyclonic winds caused a storm surge and significant flooding. They envisaged power, telecommunications, the airport, and road links being out of action for 48 hours. To the frustration of health administrators, there was no phone-a-friend-in-Perth option. Police, fire and emergency services, ambulance services, the Royal Flying Doctor Service, the Water Corporation, the Department of Housing and the Department for Child Protection (which is responsible for resettling displaced people) had to rely on what was available locally. There was a lot of tension in the room in the early stages of

The Broome Declaration

1. On this day, 24th May 2009, in Broome, Western Australia, we, the participants in the first consultative tropical medicine summit convened under the auspices of the Australasian College of Tropical Medicine, hereby recognise that the following 10 themes are essential to the development of tropical health:

- holistic, one health;*
- collaborative intersectoral partnership;
- primacy of prevention, early intervention;
- cultural safety;†
- subsidiarity;‡
- leadership development;
- proximity of services;
- immediate availability;
- effective communication; and
- strategic urgency.

2. Recognising the current shortfall in health capability in this region as typical of many parts of the tropics, we commit to:

- establishing tropical health development priorities based on the above themes;
- informing health authorities of our conclusions; and
- working toward practical development outcomes within our immediate areas of professional influence.

3. We therefore propose the following specific priorities for north-west Australia:

- developing a remote access tropical medicine training program;
- establishing a regional development centre for all stakeholder groups in the Kimberley and the rest of the north-west; and
- forming a steering group to identify governance and resource support for these outcomes.

* A reference to the concept of health as a state of physical, mental and social wellbeing, rather than an absence of disease, first articulated in the Declaration of Alma-Ata.[1] † Achieved in a health care setting when carers and providers are attuned to the cultural context of the individuals and communities, and are sensitive to culture-specific vulnerability. ‡ The principle of devolving responsibility for decision making to as close as possible to the level of community at which action is taken. ◆

the disaster scenario as participants grappled with conflicting priorities. In the wrap-up session, table after table recounted tales of resources they discovered when they started to reach out to other groups. Some discovered leadership skills they didn't know they had. Others showed a natural talent for critical thinking under pressure. One of the conference highlights was a vivid description by Phil Kuhne (Department for Child Protection) of what it would be like in an overcrowded cyclone shelter, and why there wouldn't be any cyclone parties on his watch. Adding a little realism to the scenario, television crews from two competing channels arrived to interview organisers and speakers just after the scenario started, diverting critical expertise when it was most needed.

Cyclone TED was full-on; a draining experience for all those involved. However, there was little rest for the delegates. While the lessons of the disaster scenario were still fresh in their minds, participants split into three parallel skills-development workshops on practical aspects of disaster response, life support with particular emphasis on failed intubation drills, and deployable molecular diagnostic laboratories. Ronan Murray brought the more esoteric aspects of laboratory diagnostic support down to earth by reminding participants of the potential role of the molecular diagnostics laboratory in assisting with front-line clinical decision making in remote or rural regions.

The Australasian College of Tropical Medicine took the opportunity to consult on the practical needs of health practitioners in tropical Australia, convening a small group to write up the lessons learned and condense them into a regional development framework — as one delegate put it, the "where we are, where we need to be and how we're going to get there" of health care in tropical Australia. This process generated the action statement that was presented at the conclusion of the conference. The document, known as the Broome Declaration (Box), captured the spirit of the meeting and provided a sense of direction. In the final discussion of the conference, converting the Declaration into action was debated. There was uncertainty over where resources could be found for infrastructure development, and some scepticism over anything resembling a centrally driven capital project, but there was considerable enthusiasm for local ownership of the process from local delegates. The TED-MED Conference demonstrated that there are people who work at the hot and dusty end of health care who are willing to provide professional leadership. The Broome Declaration represents a benchmark for health development in tropical and regional Australia. It remains to be seen whether there is a substantive political commitment to support front-line health care professionals in developing health capability for regional Australia.

Competing interests

We are employed by PathWest Laboratory Medicine WA and, as meeting organisers, received assistance with payment of our registration fees within the professional ethics guidelines of the Government of Western Australia. We did not receive any payment from meeting sponsors.

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