Travel Medicine and Infectious Disease (2009) 7, 305–311

available at www.sciencedirect.com

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Pre- and post-deployment health support provided to Australian Disaster Medical Assistance Team members: Results of a national survey

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Received 23 February 2009; accepted 2 March 2009
Available online 11 April 2009

KEYWORDS
Disaster;
Medical assistance;
Australia;
South East Asia;
Travel medicine;
Health;
Psychology;
Disaster medical assistance teams

Summary *Background:* Calls for disaster medical assistance teams (DMATs) are likely to continue in response to international disasters. As part of a national survey, the present study was designed to evaluate Australian DMAT experience in relation to pre- and post-deployment health care.
Methods: Data was collected via an anonymous mailed survey distributed via State and Territory representatives on the Australian Health Protection Committee, who identified team members associated with Australian DMAT deployments from the 2004 South East Asian Tsunami disaster.
Results: The response rate for this survey was estimated to be around 50% (59/118). Most of the personnel had deployed to the tsunami affected areas. The DMAT members were quite experienced with 53% of personnel in the 45–55 years age group (31/59). Seventy-six percent of the respondents were male (44/58). Only 42% (25/59) received a medical check prior to departure and only 15% (9/59) received a psychological assessment prior to deployment. Most respondents indicated that both medical and psychological screening of personnel would be desirable. Most DMAT personnel received some vaccinations (83%, 49/59) before departure and most felt that they were adequately immunised. While nearly all DMAT members participated in formal debriefing post-deployment (93%, 55/59), far less received psychological debriefing (44%, 26/59), or a medical examination upon return (10%, 6/59). Three respondents reported experiencing physical ill health resulting in time off work following their return.

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1477-8939/$ - see front matter
doi:10.1016/j.tmaid.2009.03.001

While only one reportedly experienced any adjustment problems post-deployment that needed time off work, 32% (19/59) found it somewhat difficult to return to work. There were multiple agencies involved in the post-deployment debriefing (formal and psychological) and medical examination process including Emergency Management Australia (EMA), Australian Government, State/Territory Health Departments, District Health services and others.
Conclusions: This study of Australian DMAT members suggests that more emphasis should be placed on health of personnel prior to deployment with pre-deployment medical examinations and psychological assessment. Following the return home, and in addition to mission and psychological debriefing, there should be a post-deployment medical examination and ongoing support and follow-up of DMAT members. More research is needed to examine deployment health support issues.

Introduction

Disasters are increasing in frequency.[1] In the past 50 years, more than 10,000 disasters have been reported affecting 12 billion people and resulting in 12 million deaths.[1,2] Disasters are more likely to occur in developing countries.[2,3] where their effects may also be more pronounced. Even within developed countries, disasters occur and some authors argue that most hospitals would be unable to cope with anything more than a small number of seriously injured patients without outside assistance,[4] although, as highlighted by the 2009 Victorian bush fires, this capacity to cope is probably higher than these 2005 estimates due to improved disaster and surge capacity planning.[5,6] Despite the level of preparedness of any country, some large scale disasters will make it likely that there will be calls for disaster medical assistance and humanitarian aid following such disasters, [7–9] which will require the timely mobilisation of national and international resources.

On 26 December 2004, the South East Asian tsunami hit countries around the Indian Ocean rim, particularly around its earthquake-associated epicentre off Indonesia. The full impact of the tsunami is still being assessed years after the natural disaster, which is thought to have killed more than 150,000 people and affected millions.[10] The tsunami was a landmark event in the history of Australian disaster management. This was the first time an organised civilian based team was deployed internationally from Australia representing the Australian government. This had previously been the primary responsibility of the Australian Defence Force (ADF). However, Australian civilians had previously deployed as individuals through Non Government Organisations (NGO), such as the International Red Cross or Medicines Sans Frontieres (MSF). Following the tsunami, seven civilian teams Alpha to Golf were deployed under Australian Assistance Plan (AUSASSISTPLAN).[11] Table 1 summarises the disaster medical assistance teams (DMATs) that responded to the South East Asian tsunami. The teams came from multiple different states, were deployed to a number of different countries and filled a variety of roles based on both needs and timeline of response. Further teams were also subsequently deployed following the Yogyakarta earthquake in Java, Indonesia in 2006.

The agencies responsible for the organisation of DMATs remain accountable for the welfare, health and safety of DMAT members, whether employees, contract workers or volunteers. Therefore it is essential that staff deployed to provide disaster assistance have adequate health support pre- and post-deployment, whether this is through government or non-government organisations. This is necessary for their personal health protection, to minimise any additional burden to the affected community, and maximise the effectiveness of the response.

Much of the literature concerning DMATs, including the Australian DMAT experience,[11–18] consists of individual team reports, which are often anecdotal. The lack of standards for DMATs has also made in-depth evaluation difficult for both an external reviewer and team members. Hence, there have been few studies examining DMAT deployments and few dedicated studies of DMAT members in Australia. The present survey was part of a national program evaluating the Australian DMAT experience and examining potential models for future use in Australia. The survey was undertaken in order to target the existing Australian DMAT experience base and explore and identify issues raised by these groups. The experience base primarily includes those individuals actually deployed 'on the ground', and this aspect of the survey explores their health support experiences pre- and post-deployment.

Methods

All team members associated with Australian DMAT deployments from the 2004 Asian Tsunami disaster were surveyed via their State and Territory jurisdictions. Our study protocol was reviewed and approved by the James Cook University Human Research Ethics Committee in 2006 (Approval No. H2464). The support of the Commonwealth Australian Health Protection Committee (AHPC) was also sought and given for the survey. Representatives of the AHPC, through their State and Territory jurisdictions, identified 118 DMAT personnel from Teams Alpha to Golf and mailed out questionnaires on our behalf to preserve anonymity. No follow-ups were able to be undertaken.

Data was collected by means of a self-reporting questionnaire, which included an information sheet. The questionnaire was piloted and validated by use of a sample of senior medical staff with disaster deployment experience. The questionnaire was completed anonymously. A reply paid envelope was included for convenience; however, other options for return were given, including facsimile. There were no penalties or rewards for participation, and