

and illnesses caused by disasters are preventable health risks. Though Disaster Management is the responsibility of every organization and institution, the Health Sector has a key role to play, as it is the lead sector. Hence, health personnel play a very important role in reducing disaster risks. This paper briefly examines the role and responsibilities of Medical and Health personnel and provides an overview of Emergency medical preparedness for reducing disaster risks. The concept of Disaster Medicine in dealing with the public health management of Disasters and Emergency Medical Preparedness, including the Prevention, Response, Relief and Rescue operations of Health Management while addressing various issues like casualty area management and Hospital Management etc through various strategies and actions will also be discussed. The Impact of Disasters on Health and how they can be best managed to reduce the number of mortalities and morbidities resulting from Disasters will be examined. The need for ensuring Community Participation in Health Management and prevention of health risk through Immunization and vaccination, proper food & nutrition, maintenance of hygienic and sanitation, adequate system of garbage disposal, Vector control and Research and Epidemiological studies will also be discussed. Prof. Bhaskara Rao, Mulam, Specialist, Policy, Planning and Related Issues, SAARC Disaster Management Centre (SDMC), New Delhi

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(A231) Deficiencies in the Preparedness of Emergency Medical Services Providers for Terrorist Incidents Involving Children

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Introduction: Recent studies have discussed major deficiencies in the preparedness of emergency medical services (EMS) providers to effectively respond to disasters, terrorism and other public health emergencies. Lack of funding, lack of national uniformity of systems and oversight, and lack of necessary education and training have all been cited as reasons for the inadequate emergency medical preparedness in the United States.

Methods: A nationally representative sample of over 285,000 emergency medical technicians (EMTs) and Paramedics in the United States was surveyed to assess whether they had received training in pediatric considerations for blast and radiological incidents, as part of their initial provider education or in continuing medical education (CME) within the previous 24 months. Providers were also surveyed on their level of comfort in responding to and potentially treating pediatric victims of these events. Independent variables were entered into a multivariate model and those identified as statistically significant predictors of comfort were further analyzed.

Results: Very few variables in our model caused a statistically significant increase in comfort with events involving children in this sample. Pediatric considerations for blast or radiological events represented the lowest levels of comfort in all respondents. Greater than 70% of respondents reported no training as part of their initial provider education in considerations for pediatrics following blast events. Over 80% of respondents reported

no training in considerations for pediatrics following events associated with radiation or radioactivity. 88% of respondents stated they were not comfortable with responding to or treating pediatric victims of a radiological incident.

Conclusions: Our study validates our a priori hypothesis and several previous studies that suggest deficiencies in preparedness as they relate to special populations – specifically pediatrics. Increased education for EMS providers on the considerations of special populations during disasters and acts of terrorism, especially pediatrics, is essential in order to reduce pediatric-related morbidity and mortality following a disaster, act of terrorism or public health emergency.

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(A232) Volcanic Eruptions: Health Consequences and Preventive Health Measures — An Overview

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The 2010 eruptions in Iceland, and on Mount Merapi in Indonesia, caused enormous disruption and opened a new chapter in the history of volcanic eruptions, emerging hazards, and disaster crisis management. A volcanic eruption can be devastating for the local wildlife as well as for the human population. Volcanic eruptions represent a different kind of hazard compared with floods, hurricanes, and earthquakes. Their onset also may be sudden, but they differ in that the danger does not necessarily decline rapidly with time, and actually may increase because of the unpredictability of the eruptive behavior and desire of a willing population to believe that the danger has passed and they can resume normal living. Volcanoes and their eruptions can result in a wide range of health impacts and kill people in a remarkably large number of ways. At least 500 million people worldwide live within potential exposure range of volcanic activity and possible eruption. The range of adverse health effects is quite broad and extensive. This presentation will provide an overview of the main causes of death and injury caused by a volcanic eruptions and the preventive health measures and public health interventions to be adopted during a volcanic eruption. Information on the causes of death and injury in eruptions is sparse, but the available literature is summarized in this report for the benefit of volcanologists and emergency planners. Healthcare workers and physicians responding to the volcanic events might find themselves involved in scenarios as varied as disaster planning, epidemiological surveillance, treating the injured, or advising on the health hazards associated with long range transport of volcanic emissions. Medical treatment only has a small role during severe volcanic eruptions. The preventive measures are paramount if injuries and loss of life are to be reduced.

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(A233) Preparedness For A Mega Mass-Casualty Event (MMCE)

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A Mega Mass-Casualty Event (MMCE) is a unique and exceptional event, that results in a very large number of casualties

(500–5000) needing emergency care in the prehospital and hospital settings. This type of event usually goes beyond the capabilities of a certain region and requires reinforcement of resources from adjacent and remote regions. Due to its exceptional nature, a MMCE dictates a different organization of all emergency services and agencies involved. As a result of the recent experience, and in order to adequately prepare for such future events, a novel MMCE doctrine was developed by a committee of diverse emergency professionals. This doctrine was transferred to guidelines referring to MMCE recognition and the following series of actions that need to be taken at all levels. It holds organizational, operational, and clinical aspects, as well as command and control elements. In November 2009, a large-scale drill of 1,000 mock casualties was performed in order to validate and evaluate the MMCE plan. This drill emphasized the need for the involvement of all pertinent emergency services and agencies, and their optimal collaboration and coordination, subjected to regional and national headquarters' command and control. In addition, the need for dedicated educational programs and on-going training was recognized. It was accepted that adequate planning is obligatory for better outcomes in the future.

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(A234) Disasters as an Opportunity to Train and Prepare for Future Disasters

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Asian tsunami in 2004 had a tremendous impact on the health system of Sri Lanka leaving many healthcare institutions damaged in the coastal provinces and destabilizing the healthcare delivery network. Immediately after the tsunami, health authorities in Sri Lanka realized, health workers should be prepared well if they are to face any future disasters successfully. In this background, the Ministry of Health set its agenda to train all levels of health cadres on disaster preparedness and mitigation whenever there are opportunities. Ministry of Health established the Tsunami Rehabilitation Unit (TRU), later renamed as Disaster Preparedness and Response Unit (DPRU) and mandated it to prepare the health sector for future disasters. During a disaster, well trained health cadre is an asset to any health manager facing the burden of the emergency at the ground level. Trained health personnel on disaster management become a human resource multiplier to fill the gaps of scarce skilled health staff in the field operations. We reviewed the Ministry of Health reports, plans, meeting minutes, reports of training institutions, routine reporting from Ministry of Health departments and reports from health sector partners to compile and then analyze to construct this case study. We provide an overview of how DPRU coordinated and used the opportunities following Tsunami 2004 and then during the humanitarian crisis at the end of 30 years of armed conflict in 2009 to train the health staff. This case study also describes how DPRU networked with government and non governmental organizations to train the different categories of government health staff.

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(A235) Australian Medical Assistance Teams in Australia

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Western Australia (WA) was one of the first states in Australia to deploy medical team members to the tsunami-stricken regions of the Maldives and Banda Aceh in 2004. This early experience led the WA Department of Health to develop and pilot these teams locally and to progress a national model for their future development, which could be implemented further by other Australian jurisdictions. Further experience with these teams in Yogyakarta after the 2006 Java earthquake, Karratha after Tropical Cyclone George in 2007, Ashmore Reef after the 2009 boat explosion, Samoa after the 2009 tsunami, and during the Pakistan floods in 2010 have signaled both the utility of the Australian Medical Assistance Teams (AUSMATs) and the commitment by the Australian Commonwealth and State Governments to utilize these teams in both domestic and international settings. This presentation will examine the implementation of the AUSMAT model in Australia over the last five years, the modifications to the original model to suit the unique geographical and resource challenges faced by Australian teams, both within and outside Australia, and the lessons learned from recent team deployments. The challenges of delivering health care over vast, sparsely populated distances, and the inherent and increasing natural and industrial disaster threats in the Asia-Pacific region, have contributed to the modification of the model to ensure that the AUSMATs are flexible, modular, and capable of responding to a variety of major incidents. The national model continues to evolve to ensure that well prepared, equipped and trained civilian AUSMATs remain able to effectively deploy to a mass casualty situation in Australia's area of interest.

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(A236) National Guidelines on the Management of the Dead after Disasters

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Despite technological advancements, India is vulnerable to disasters. Disasters of any etiology have the common denominator of a large number of deaths in a short span of time. Thus, the Administration is saddled with the indomitable task of retrieving and recovering dead bodies, then identifying them to enable the handing over of the remains to their next-of-kin. Initial media focus is often based on the myth that dead bodies cause epidemics. Therefore, bodies often are placed in mass burials or mass cremations universally, without being identified and without preserving the individuality of the deceased. This culminates into social, psychological, emotional, economic, and legal repercussions (financial compensation, property rights, inheritance, and issues of remarriage) regarding the legacy of the deceased, thereby exacerbating the damage caused by disasters. With the paradigm shift from the erstwhile response-centric approach after the enactment of the Disaster Management Act in 2005, to the holistic management of disasters, the National Disaster