

(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

Management Authority embarked on the task of formulating the guidelines on this sensitive and vital issue. These Guidelines are designed to provide not only technical information, but also dwell on administrative aspects that will support the correct approach in handling dead bodies with the highest possible quality of standards/measures, and functioning in an interdisciplinary manner to ensure positive identification of victims. Management of the dead after disasters is under the ambit of the Incident Response System being incorporated in the National, State and District “all hazard” Disaster Management Plans are intended to achieve the desired aim that no unidentified body should be laid to rest.

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### (A237) Management of the Dead during Mass Casualty Disasters in South Asia: Perspectives of the First Decade of the 21st Century

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The first decade of the 21<sup>st</sup> century will go down in history as an era of major disasters. Disasters have occurred in all corners of the world and ranged from events such as the 11 September attack, the London bombings, the Asian Tsunami, Hurricane Katrina, earthquakes in India, Iran, Pakistan, China, and Haiti, and cyclones and floods in Bangladesh and Myanmar. The unavoidable common factor of all these disasters was the massive number of casualties and deceased witnessed within a short period. The effective intervention of governmental agencies to manage casualties during the immediate aftermath of a disaster often is restricted by many technical and circumstantial factors. However, it was observed during the last decade that during disasters, volunteer members of the affected and surrounding communities form a huge supportive force to meet most urgent tasks, including managing the dead. This was best witnessed in 2004, after the Asian tsunami disaster. The management of the dead during disasters is a multidisciplinary, multi-stage task and a medico-legal emergency that should be commenced during the immediate post-disaster period. Community first responders comprise an easily accessible, readily available task force in the field of managing the dead, especially in the recovery and transportation of dead during disasters. The first attempt to regularize the role of community first responders during disasters was made in 2005 with the post-Asian tsunami experience through a joined effort of many international organizations. Since then, south Asian countries have been more concerned about developing capacity of first responders via community-based disaster management schemes. The services of first responders could be greatly enhanced through training and integrating them into mass casualty management plans in less resourced countries as elaborated in this paper.

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### (A238) Optimizing Medical Response to Large-Scale Disasters: The Ad Hoc Collaborative Healthcare System

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During the authors' recent experience in Haiti during the early aftermath of a major earthquake, it was discovered that more optimal use of field hospitals could be achieved through increased coordination across the deployed medical resources. Moreover, if it were possible to standardize both the capabilities of these resources and their inter-operational guidelines, further improvement in resource utilization could be achieved. Resolving the bottleneck particularly was crucial as the impact on mortality that specialized field hospitals may affect in disasters is observed primarily early on. Confronted with tremendous need in the face of massive devastation, a solution was improvised: For every patient requiring a higher level of care sent by a light hospital, it would have to take a patient being cared for by the authors' in exchange. This arrangement allowed the admission patients who had been screened by other health professionals as requiring an acute intervention that the authors were in a unique position to provide, and ensured that patients would remain under medical care until they were stable enough to be discharged. Additionally, senior medical staff to light hospitals to help identify which patients would most likely benefit from being transferred to the authors' facility. With the other hospital teams' cooperation, surgeons performed needed morbidity and mortality reducing operations on more patients than would have otherwise been possible. Implementing a collaborative health-care system would help achieve more optimal use of all the medical resources available in a disaster. Further optimization could likely be achieved if participating countries and organizations adhered to a standardized classification and coordination system. Both levels of coordination, at the preparatory and deployment stages, would likely lead to decreased mortality, morbidity, and disability among the devastated population.

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### (A239) Programa Hospital Seguro Y Unidad Médica Segura En México

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El programa se estableció en el año 2006 dentro de la Coordinación General de Protección Civil de la Secretaría de Gobernación e incluye un Comité Nacional de Evaluación, Diagnóstico y Certificación integrado por todas las instituciones del Sector Salud Público, Privado y Social Se han acreditado cerca de 700 evaluadores de más de 2,700 que han tomado el curso. Se han realizado más de 1,700 autoevaluaciones y se han evaluado de 205 hospitales. En el marco legal se ha integrado el Programa Hospital Seguro en la Ley General de Protección Civil, se ha incluido en la Norma Oficial Mexicana que tiene relación con instalaciones de salud, se ha logrado el acceso al Fondo de Prevención de Desastres que maneja la Secretaría de Gobernación y se ha establecido que previo a la Certificación de Calidad del Consejo de Salubridad General (que incluye los criterios internacionales de la Joint Commission) sea evaluada como Hospital Seguro. De los hospitales calificados como no seguros ya se han evacuado dos (que serán demolidos) con alternativa de construir nuevos con alto nivel de seguridad. En un gran número de hospitales se han mejorado los sistemas de