

materials science and environmental studies to become a concept used enthusiastically by policy makers, practitioners and academics. The concept is attractive as it suggests an ability of something or someone to cope in the face of adversity – to recover and return to normality after confronting an abnormal, alarming and often unexpected threat. It is used alongside security to understand how governments, local authorities, the emergency services and health agencies can best address the threats from natural disasters, health pandemics, malicious attacks on a country's critical infrastructure, and other major disruptive events. The paper discusses the meaning and utility of the concept of resilience. It traces the origins of the term through to its current use in addressing contemporary threats facing individuals, communities, organisations and nations. It identifies and describes a number of characteristics which are common to the concept of resilience in its many contexts and manifestations. In conclusion, the paper supports a review of the language and thinking of emergency and disaster management, and promotes the emerging concept of disaster resilience.

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(A36) What is there to Show for the Last 5 Years?

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A disaster creates disruption and threats to life and society, mental anguish, and leads to feelings of instability around such areas as security and safety. It causes suffering and requires assistance from experts within a structured and tested response framework. After 11 September 2001, the demarcation between disasters caused by natural hazards and terrorism virtually disappeared. The two now get treated concurrently, but there is a danger that anti-terrorism might hijack the agenda, overshadowing important work that must be done in the field of disasters caused by natural hazards. With this in mind, the Health Emergency Management Unit in South Australia was born. The unit was established for preparedness planning around the growing concerns of the potential for an impending pandemic caused by avian influenza. From those shaky beginnings, South Australia now has a dedicated and trained team. The unit provides a 24/7 health responses to planned events and unexpected incidents caused by natural or deliberate forces that may occur in the region. It also participates as part of the National Disaster Deployment Program. Currently, the unit is focused on risk reduction and increasing resilience by implementing a sound, comprehensive approach including all elements of prevention, as well as preparedness, response, and recovery strategies. The unit also provides an extensive education, training, and exercise program to health facilities across South Australia. This paper will describe the ongoing journey of the unit, how it works and interacts with all levels of health service staff and other emergency services, and some of the recent events and incidents in which it has been involved in within Australia and overseas.

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(A37) Characteristics and Evaluation of China's Earthquake Disaster Management Systems

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Background: This presentation summarizes our ongoing hybrid sociological-geological research into China's earthquake disaster management systems. Our methodology is a grounded research approach, based firstly on field observations related to the Wenchuan earthquake, including interviews with survivors and professionals responsible for disaster management; secondly on an extensive review of the English-language disaster management literature. China's earth scientists, frequently in collaboration with international scientists, have created a substantial English-language literature, but the social literature on disasters in China is scant. China's geographic variation is complex, with significant fault lines crisscrossing the nation.

Discussion: Approximately half of the population lives in areas with a high risk of earthquakes. The two most-devastating of these since 1949 were the 1976 point-source Tangshan earthquake with mortality of 242,419, and the 2008 huge-area Wenchuan earthquake with mortality of 69,226. Our research has found that China's earthquake disaster management systems at the local, provincial, and national levels respond rapidly to earthquakes. National mobilization for rescue-relief after the Tangshan earthquake began within six hours, and within two hours for the Wenchuan earthquake. These systems are also characterized by reconstruction planning that functions in parallel to, and melds into, the relief effort streams. China's major infrastructure projects, such as hydro-electric power dams, are designed to resist extreme earthquake; however, rural mountain populations and the historic built-environment have low earthquake resistance, conditions which will endure for a long time.

Conclusions: As a result of the Wenchuan earthquake, China has undertaken ambitious three-dimensional monitoring and response programs. We recommend studies and action to reconnoiter, investigate, and prevent population exposure to geo-hazards, particularly in the Qinghai-Tibet Plateau. In summary, China excels at disaster response but has not yet entered a development era of preventing the population's exposure to earthquake hazards.

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(A39) Civil-Military Collaboration in Trauma Training

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In the present Swedish military medical organisation all medical personnel, including surgeons, have to be recruited from civilian hospitals. Even if there are many civilian surgeons well qualified to perform trauma surgery, the injury patterns seen in e.g. Afghanistan are quite different compared to what is generally seen in trauma patients arriving to the ED at a civilian hospital. In order to upgrade the major trauma skills of the civilian

surgeons recruited to and trained for participating in international missions, the (extended) military version of the Definitive Surgical Trauma Care (DSTC) Course has been implemented. DSTC is given with the intention not to duplicate ATLS, nor to provide an in depth course in surgery, but rather to teach those techniques particularly applicable to the patient who requires surgery and intensive care for major trauma, in a setting where such care is not commonly practised or even necessarily available. The course, made up by a mix of lectures, case discussions and skill stations has been given at the Swedish Armed Forces Centre for Defence Medicine in Gothenburg since 2007. It has gradually evolved to incorporate also anaesthesiologists and nursing staff into an integrated team. The faculty during these courses has been made up by a mix of international and Swedish instructors. Course candidates have primarily been military health staff, but vacant slots have been offered clinicians working in civilian hospitals in the western part of Sweden. During the last course in September 2010 17/20 (85%) of the physicians and 13/17 (76%) of the nurses rated the course as very beneficial or indispensable. The Swedish Armed Forces Centre for Defence Medicine will continue to run the military version of the DSTC course. Due to a certain over-capacity, course participation can be offered the civilian health care system.

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(A40) Military and Civilians in Australian Disaster Medical Assistance Teams

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The Australian Government first started to deploy civilian medical teams internationally in the aftermath of the 2004 Tsunami to Banda Aceh, the Maldives, and Sri Lanka. Historically, Australia had relied upon the Australian Defence Force (ADF) to provide overseas medical assistance, but, in this instance, the volunteers deployed were civilian staff, predominantly from tertiary hospital environments. Civilian Australian Medical Assistance Teams (AUSMATs), particularly in Banda Aceh, interacted closely with the ADF after the tsunami and have had a close liaison with the ADF in subsequent disasters, particularly where ADF assistance was required for aeromedical evacuation of patients. This has included assistance after the 2005 Bali bombing, the 2009 Ashmore Reef explosion, the 2009 Samoa tsunami, and the 2010 Pakistan floods. In the latter, Australia deployed a joint military-civilian medical taskforce to provide care to the affected people in Kot Addu in central Pakistan. Having had extensive experience in both military and civilian disaster responses, the authors in this presentation will look at the lessons that can be shared between civilian and military teams in the Australian context. The military brings particular proficiency in command and control, information gathering, security, communications, general logistics, aeromedical evacuation and living in the field. The civilian AUSMATs bring specialized medical expertise, experience in operating in small teams in a range of disaster conditions, health logistics, surveillance, and public health measures in a disaster setting. Learning how to blend these skill sets will

be critical in ensuring effective and collaborative international deployments in the future.

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(A41) Perceptions of Military Medical Disaster Training

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Background: To be effective, disaster preparedness training should continually meet the needs of the trainees. Most military medical personnel undergo training focused on practicing in austere environments with little support. However, while located at their home station, disaster response is conducted in a different manner due to staffing and available resources. This survey attempts to identify areas of the military medical disaster response staff are most concerned with in order to better formulate future training for home station as well as contingency operations, ultimately increasing confidence and effectiveness.

Methods: An online survey service was utilized to anonymously poll 106 military medical personnel assigned to a joint Level 1 trauma center in Iraq using 38 forced Likert-scale questions. The training issue of most concern for both arenas is the patient surge. Military-civilian collaboration was a key point regarding the home station setting and supplies/equipment for the deployed setting.

Results: Eighty-nine percent of responders rated disaster training as moderate to very important. However, there was a low perception of disaster exercises conducted in the manner of a real-world event. This was attributed to unrealistic participation and training methods. Computer-based training (CBT) was identified as an ineffective method of training; hands-on instruction clearly identified as the preferred method. Participants rated considerable confidence in Level C personal protective equipment, and the majority surveyed would report for duty despite exposure risk.

Conclusion: Current training methods may not optimally produce disaster response effectiveness. Management of the patient surge was a repeating training concern for both home and deployed settings. Future training efforts should focus on military-civilian collaboration for the home station, and management of the patient surge for both arenas.

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(A42) Development of Slovene Military Medical Unit

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Discussion: During the past 12 years we have been developing our military medical unit through collaboration between the public health system and military system. We found that one system could not work separate without another. Experts from public health system are incorporated into the military structure which provides efficient technical support and logistics. Through such a system we can cooperate in international projects.

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