accident Á plusieurs victimes, il est souvent difficile de garder en tête Á la fois les victimes et les moyens dont vous disposez. Le tableau croisé est un formulaire qui permet de diriger et de documenter efficacement une intervention sur un accident Á plusieurs victimes. Le principe du tableau croisé est que vous allez regrouper les informations sur les victimes, comme leur numéro et leur catégorie de triage sur les lignes horizontales de votre tableau (l'axe des X). Les information sur les vecteurs (heure d'appel, heure d'arrivée) seront notées sur les colonnes ( l'axe des y). L'heure de prise en charge de chaque victime par une unité est notée Á l'intersection correspondante. L'heure d'Évacuation vers l'hôpital est notée au bout de chaque colonne et de chaque ligne. Ce formulaire permet de garder une vue d'ensemble des opérations de secours Á victime ainsi que de documenter l'action de chaque Équipe et le devenir de chaque patient. Il est utilisable dû l'arrivée de la première Équipe sur place, puisqu'il suffit d'un stylo et d'une feuille de papier pour le réaliser. Dans notre expérience, une feuille de format A4 européen permet de gérer une intervention pour une dizaine de victime, une feuille de format A5 jusqu'Á une trentaine.

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## (A306) Community Resilience and the Christchurch Earthquake: Best Laid Plans or Practise Made Perfect?

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On February 22, 2011 at 12:51 pm an earthquake measuring 6.3 on the Richter scale struck the city of Christchurch, population 376,700 in the South Island of New Zealand. This followed a 7.3 magnitude earthquake in September 2010, but the shallowness (5km) and proximity of the February earthquake to the central city, resulted in far more devastation, with Modified Mercalli scores reaching ten in some areas and upward ground acceleration exceeding 2.4G. The application of the Coordinated Incident Management System (CIMS) routinely used by New Zealand Civil Defence agencies was swift, innovative and efficient, facilitating rapid deployment of local and international emergency teams and response resources. The effectiveness of this response was partially attributed to lessons learnt from the September earthquake which, with hindsight, was a practise for the more serious February event. The community response was equally remarkable, with standard approaches to measuring preparedness and resilience suggesting that community resilience in Canterbury was high. A number of initiatives by the New Zealand Ministry of Civil Defence and Emergency Management may have fostered some of this resilience,particularly community-based resilience-building projects initiated by the Regional Emergency Management Office on 2009 and 2010, supported by the Ministry of Civil Defence and Emergency Management. In addition, website education resources and media promotion ("Get Ready Get Thru") and a travelling exhibition called "The Pandemic Roadshow" had been particularly well received and remembered by Canterbury residents. However, two key events provided an impetus for the Canterbury community to burnish its resilience. First, the Swine flu (AH1N1) pandemic in 2009 resulted in a greater awareness of public health in emergencies along with a doubling of neighbourhood support groups. Secondly, the September 2010 earthquake resulted in the establishment of the student army of volunteers and improvement of public information management. This presentation will describe the markers of community resilience following the Christchurch earthquake and discuss how such resilience can be fostered in communities where emergency preparedness is not recognised as a priority.

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## (A307) Disaster Task Force's Management Support at Emergency Response Phase in the Merapi Eruption November 2010

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**Background:** Merapi, the most active volcano in the world, erupted on the 26th October 2010 at 17.02, and followed by several eruptions. The biggest eruption was on the 5th of November 2010. Damages were catastrophic: 386 people killed, and more than $400 million lost. A wide area of fertile lands and settlements were destroyed which resulted in more than 200.000 refugees. This disaster had impact to 2 provinces and 6 districts. At the emergency phase, a special task force was established by central government of Indonesia. This paper aims to evaluate the task force and the role of its management support during the acute phase in the disaster.
**Method:** an input and process evaluation of task force work was implemented.
**Results:** The input evaluation shows that the task force members for emergency response came from central, provincial, district government employees, universities and non government organisation members. The financial sources are from public and private funding. The activities process of task force in forms of health response command system, temporary information system, communication and telecommunication system, supporting the volunteer groups, managing the refugees camps, implementing surveillance system, and backed up the local district health officers. There were problems of programs coordination and channelling the budget from national treasury due to the multiple eruptions. Most of these problems were solved by a management support team for the task force.
**Conclusion:** The multiple strikes of Merapi eruption needs better human resources management and financial support. During Merapi eruption, it is proved that a management support for emergency response task force is important. This management support allowed better control and coordination of available resources.

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## (A308) Come Hell and Cold, High Water…

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It is extremely rare in disaster mental health annals to have consistent psychosocial interventions pre-disaster. For the third year in a row, the Red River Valley of the United States and Canada

has experienced catastrophic flooding, on the heels of almost two decades of yearly major flooding. This paper describes the community and individual psychosocial responses to the current Red River flood, based on resiliency paradigms and the backdrop of successful mitigation of serial disasters. In addition, the author will present examples of real-time networking with colleagues around the world who are responding to natural disasters.
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### (A-309) Flood Disaster Averted: Red River Resilience

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Flood Disaster Averted: Red River Resilience It is estimated that floods make up 40% of all natural disasters and that the majority of natural disaster deaths are attributable to these events. The vast majority of literature on mental health and disaster revolves around response and recovery after the event. Mitigation of flooding can have a tremendous impact on health, including the prevention of common physical ailments including diarrhea, hepatitis, typhoid, tetanus, malnutrition, dermatologic conditions, orthopedic injuries, etc… It can also reduce mental health difficulties including stress, anxiety, depression, PTSD and other disorders. Psychosocial reactions to trauma are recognized to be among the most long-term and debilitating outcomes of disasters. This presentation describes a community's successful efforts to prevent a major flood disaster in the midst of a changing risk landscape. The authors focus on factors contributing to the resilience of a community in the upper Midwest of the United States in responding to the threat of a catastrophic natural disaster. In addition, the presentation includes the building blocks for successful integration of mental health presence through all phases of disaster: mitigation, preparedness, response and recovery. Andrew J. McLean, MD Medical Director, Department of Human Services, State of North Dakota. 2624 9th Ave. SW, Fargo, ND 58103 ajmclean@nd.gov, amclean@medicine.nodak.edu James M. Shultz, MS PhD· Director, Center for Disaster & Extreme Event Preparedness (DEEP Center) University of Miami Miller School of Medicine· Clinical Research Building 1120 NW 14 St.· Miami, FL 33160, USA and Partner, High-Alert International· Orlando, FL, USA 305-219-9011 jamesmichaelshultz@gmail.com. jshultz1@med.miami.edu. jshultz@high-alert.com.
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### (A310) Academic Training for Paramedics - A Unique University Based Model

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**Introduction:** The paramedic profession is relatively new, dating to the 1970's. In Israel, it was introduced in 1980 and paralleled the introduction of advanced life support units (ALS) to Israel's national emergency medical services (EMS), Magen David Adom (MDA).The curriculum and assigned roles were adopted with minor changes from Anglo-American systems. Initially, paramedics were assigned alongside physicians, but in recent years a growing percentage of units operate without an on-board physician. Despite the increasing complexity of required tasks and the move toward paramedic-led crews, paramedic training has changed little. Most are trained through a non-academic, certificate granting tracts. In 1998, a fully academic bachelor's degree program was launched at the Ben-Gurion University (BGU).
**Methods:** The programs aims, curriculum, and experience are described, based on past and current curriculum and on interviews with past and current staff and students.
**Results:** The BGU program is a three year program that grants its graduates both a University BA and professional paramedic certification. The program is housed as a university department within the Faculty of Health Sciences. First year courses center on basic sciences. The second year centers on classroom and simulation-based learning of the clinical topics. The third is devoted mostly to clinical clerkships, in hospital wards in the first semester and on MDA ALS units in the second. To date, the program boasts more than 300 graduates, many attaining higher academic degrees in healthcare sciences and many who work in Israel's national EMS.
**Discussion:** The BGU academic paramedic training program is the only such program in Israel and one of a few worldwide. Questions regarding the increasing responsibility and task complexity require a move from certificate training to University degree granting learning and the possible contribution of such
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### (A312) Evaluation of a Continuing Education Intervention to Improve Management of Mass-Casualty Incidents

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**Introduction:** Emergency medical services (EMS) personnel must continuously educate themselves on mass-casualty management. Emergency medical services personnel in Israel are provided with continuing education programs aimed at maintaining knowledge and skills to manage different types of mass-casualty incidents (MCIs). There are 11 Magen David Adom (MDA) regions that have different incidences and experience with MCIs.
**Objective:** The purpose of this study was to evaluate the effectiveness of an intervention for the management of conventional and mega MCIs.
**Methods:** A 17-item, multiple choice question pre-test (n = 640) and post-test ($n$ = 536) were administered after a brief continuing education intervention based on lectures and discussion in all 11 EMS regions. The MCI and mega MCI scores were combined to provide an overall MCI score. An independent t-test and ANOVA were used to examine for differences by age, seniority, role, and area of employment of EMS personnel. ($p$ = 0.05)
**Results:** Reliability of the pre- and post-tests was 0.70. The overall mean score and standard deviation for the pre- and post-test was 64.31% Â ± 14.2% and 75.0% Â ± 14.0%) respectively ($p$ = 0.000). Distribution of scores on the pre- and post-tests were: 80%, 11.8% pre-test, 42.7% post-test. No significant differences were found in pre-/post-test scores by area. Older personnel