emergency departments. **Results:** There was no common triage system between these units. We also found a discrepancy between the initial triage using the medical index and physiological-anatomical triage performed by ambulance crews and staff at the emergency departments. As an example 50% of all patients triaged as priority one by the ambulance dispatcher centre were down-graded to priority 2–4 by the other units involved.
Discussion and Conclusions: A mutual and standardized system for triage is needed. Although over-triaged by ambulance dispatcher centre may be medically motivated, the difference between priorities should be minimized to a medically accepted level (25–35%).
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(A71) Developing Pediatric Emergency Preparedness Performance Measures

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Background: The most obvious deficiency in the current evaluation of disaster response is the lack of objective, quantifiable measures of performance. This frequently leads to assessments that are highly subjective depending on the evaluator, does not provide those who are planning with targets to achieve, and does not allow for measures that they have improved their preparedness. The goal of this research project is to offer recommendations for government agencies at the federal, regional, and local levels, public health departments, and health care institutions to aid in the development of pediatric emergency management performance measures.
Interventions: The goal was achieved through the application of traditional quality principles to the assessment of emergency management efforts and to the use of innovative analytic methodologies to develop comprehensive approaches to performance measurement in emergency management.
Discussion and Observations: When one discusses performance measures, it is important to remember that these are metrics we use to improve the quality of care. With regard to emergency management, performance measures are used to increase capacity and efficiency. A classic approach to health care performance measures is to discuss them with regard to the domains of structure, process, and outcome. Recently, in addition to these domains, volume has also become an important predictor of clinical outcomes. Although we believe that these domains can be applied to emergency management functions and the development of performance measures for disasters, there are some fundamental differences when compared with their use in development and categorization of traditional health care metrics which have been built in to our modification of these domains to emergency preparedness. This approach, quantitative methodology and consensus development process, when applied, will significantly advance pediatric preparedness. Ultimately, these pediatric specific measures must exist and be used to assess current levels of performance and guide resource allocation and targeted improvement efforts.
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(A72) Video Documentation as a Supplemental Teaching Tool for Multi-Focused Emergency Management Exercises

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Introduction: Emergency management education and large-scale disaster drills help to increase local capacity for dealing with a multitude of hazards. Video recordings of disaster drills offer participants with little exposure to fundamental emergency management principles an introduction to important topics and scenarios. Such resources allow ongoing training and education, thus maximizing the investment required to mount a large-scale exercise.
Methods: During emergency management exercises in Mumbai, India between 2008 and 2010, video recordings of prior exercises were used to augment training for clinicians, administrators and public health practitioners. During the exercises, videos depicting scenario-based disaster drills were produced for use as teaching and evaluation tools focused on pre-hospital care, trauma life support, and hospital operations. Videos are distributed digitally and online, extending the teaching impact of multi-day courses and serving as a benchmark for future exercises.
Results: During the 2010 exercise in Mumbai, approximately eight hours of video footage were recorded by professional producers, and by participants in the evaluation and monitoring track of the course. That footage was added to a library from exercises in Ahmedabad and Mumbai, India, in 2007 and 2008. Video was used as a tool for immediate feedback on participant performance as well as the foundation for ongoing instruction. Videos allowed students to be sensitized to important issues prior to taking part in a drill, and to participate in the post-drill evaluation process.
Conclusion: Video documents of disaster management exercises serve as a valuable addition to an ongoing program of emergency management education and preparedness. Short video pieces increase the effectiveness of a teaching program by providing re-usable, easily accessible, and setting-specific teaching tools.
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(A73) The Importance of Interagency Communications in the Tsunami Disaster Stricken Area in the 2011 East Japan Great Earthquake

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Introduction: In the 2011 East Japan Great Earthquake over 200 DMAT immediately headed to the disaster stricken area.
Progress: Land lines and all mobile telephones had interrupted service. Radio communication could only be used at a short

distance in one area. Satellite phones were the only means of communication, but since there were limited number of devices, power shortages. DMAT used a management browser called EMIS (Emergency Medical Information System) to exchange information and coordinate activity, but the internet itself did not work. Without communication equipment, the victims could not send or receive information and even DMAT had trouble understanding the situation. There was rumor of many victims in a wide range of isolated evacuation shelters that were left behind. The land was flooded, vehicles were carried away, the town was buried under debris and mud, and fires occurred one after another. The wounded and sick could not access hospitals immediately. Because of the blackout, the suspension of the water supply, and prospect of restoring heating were not in sight, an immediate confirmation of medical needs and triage of the sick and wounded were required. Therefore, as the disaster front headquarters, the fire department, police department, self-defense force, Japan Red Cross medical care relief squad, the city, the prefecture, and the public health center, many organizations in collaboration held meetings every day at 5:30 and 18:30 aiming to gather information and establish strong collaboration. Four teams from the Japan Red Cross medical care squad and 4 teams from the Ground Self-Defense force were dispatched in replacement of the insufficient DMAT to manage the disaster front. They restored roads and headed to isolated shelters and hospitals. With the cooperation of the Air Self-Defense Force, DMAT was sent by helicopter to an isolated peninsula.

Result: We use helicopters, ambulances, and Self-Defense Force vehicles to transport as many patients to hospitals in other regions, because there was no place to return home. In one of the isolated hospitals, they had to use candlelight in a room temperature below zero, they were unable to use the aspirator, and four patients were already deceased. The remaining 38 inpatients were transported out of the disaster area and preventable death could be prevented.

Consideration: Because the local staff suffered damage from the earthquake, all organizations consisted of groups dispatched from other regions. With a communications network not functioning in the disaster stricken area, it is necessary to exchange information and share the best plans. Taking this into perspective, having two disaster relief measures meetings in one day was very effective.

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(A74) Analysis of Health Risk Perception and Behavior Changes during Elevated Temperatures for an Urban Chinese Population

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Background: Limited research has been conducted to understand the relationship between heat wave warnings with public awareness and behavioral changes in the Asian population. The Hong Kong Observatory introduced the "very hot weather warning" in 2000 to alert the public of heatstroke and sunburn in Hong Kong. However, the population's behavioral responses to these weather alerts is unclear. Moreover, the relationship between perceived health risks and behavioral changes has not been examined. The goal of this study is to examine the health risk perceptions and behavioral changes following public heat wave warnings in Hong Kong.

Methods: A cross-sectional, population-based, telephone survey, using the last-birthday method was conducted within two weeks following a heat wave warning in 2009. A heat warning and a health study instrument, based on Intergovernmental Panel on Climate Change (IPCC) guidelines and related literature was developed and validated. Descriptive and multivariate logistic regression analyses were conducted.

Results: The questionnaire was completed by 1,123 individuals whose socio-demographic characteristics were comparable to 2009 Hong Kong population census data. Of respondents, 83.6% were aware of the heat wave weather warning. Multivariate logistic regression of socio-demographic factors indicated that being female, those in middle age groups, and those with higher educational attainment was significantly associated with heat wave warning awareness. Among those aware of the public warning, the majority were unconcerned about potential adverse health effects, < 40% were aware of the community heat-related preparedness plans, and < 50% changed their behavior to mitigate the potential adverse health impacts of hot weather.

Conclusion: This is the first study to examine climate change and health behavioral responses in an urban Chinese population. Future research direction should further investigate correlations between awareness and health protective actions, as well as the drivers for health behavioral changes that mitigate the impact of climate change.

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(A75) Emergency Department Patient Presentations during the 2009 Heatwave in Adelaide

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Background: Recordings of heatwaves date back to the early 1900s and usually are associated with high mortality. In Australia, heatwaves have been the major cause of natural hazard-related deaths. Heatwaves usually do not carry the global media coverage associated with other disasters, and frequently, are referred to as silent disasters. The main impact of heatwaves is on health and human life.

Objectives: Preliminary results are presented for the 2009 heatwave, investigating the emergency department patient presentations from three public hospitals in Adelaide, a city in the central southern area of Australia.

Methods: Demographic and syndromic data were obtained from emergency department records. Ethics permission was obtained prior to data collection. Heatwave conditions occurred from 26 January–07 February 2009. Two non-heatwave periods were day-matched approximately two weeks before and after the heatwave. Data were analyzed by age groups, gender, and ICD codes for chronic conditions.