

night shift. A total of 1,431 (5.6%) subjects were tagged as R, 10,634 (41.7%) with Y, and 13,424 (52.7%) were tagged as G. Four hundred seventy-four (1.9%) patients were over-triaged. Two hundred twenty (0.9%) were under-triaged.

Conclusions: The START triage criteria reduce over- and under-triage of patients.

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(A265) Emergency Services In Catastrophic Flooding In Poland (2010 Experience)

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Emergency Services in catastrophic flooding in Poland (2010 experience) Przemyslaw Gula MD PhD, Edyta Szafran Institute for Emergency Medicine Flooding, Natural Disasters, Rescue Operations Between 17th May and 22nd June Poland faced one of the most catastrophic natural disasters in past 100 years history. The overall area of 779300 sq km. has been flooded. The flood affected several large municipalities. Nearly 270.000 people suffered the direct effects of the flood and 31000 were evacuated from their homes, 22 people were killed. Total number of 19000 buildings were destroyed or seriously damaged. Responding services were mainly the Fire and Rescue Service, Police, EMS, Military Units as well as supporting NGO's. The rescue and relief operation focused on evacuation, providing temporary shelter, water supply, establishing medical treatment and vaccination, providing public security. One of the challenges was the threat of evacuation of the hospitals in the affected areas. The total number of 80000 of rescue personnel and 15000 of military was involved in the rescue operation. The medical emergency operation included helicopter and boat evacuation, organization of field medical posts and secondary medical transfers. 43 helicopters and 1.000 vehicles were used. One of the problem was the collapse of the telephone network that affected the 112 Emergency Dispatch System. The out coming conclusions presented the high vulnerability of local medical systems on the effects of flooding. However the logistic support of Fire and Rescue and Military recourses can give quick compensation. The role of HEMS and SAR helicopters in providing evacuation and medical assistance is essential. Special emphasis should be made on providing the coordination of multiservice response and replacing the affected local communication systems. The main conclusion after flooding was the need of stronger integration of civil and military services, procedures, communication systems and compatibility of the equipment.

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(A266) Huma Disaster Relief Medical Mission for Flood-Affected Victims in the Islamic Republic of Pakistan

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A Flood disaster struck the Islamic Republic of Pakistan in July 2010. It affected 3 million people and caused 1,400 deaths.

Humanitarian Medical Assistance (HuMA) is a non-profit organization in Japan. The organization dispatched three personnel to Islamabad on 20 August in order to conduct an initial needs assessment. They discovered that medical assistance and supplies could not reach all of the victims, especially in the North. Their visits to the surrounding regions highlighted the Nowshera district of KPK province, which had not received enough assistance from the government or aid organizations despite the fact that there were thousands of Internally Displaced Persons (IDPs) with health issues such as diarrhea, eye and skin disease, and upper respiratory tract infection (URTI). On 03 September, the HuMA Disaster Relief Mission began with the purpose of providing medical treatment and promoting public health for the flood victims in the Nowshera District. Eleven medical providers and coordinators from HuMA operated field mobile clinics in the district in collaboration with a local counterpart non-governmental organization, Nippa Welfare Association (NWA). This project was supported financially by the grant funding from Japan Platform. Humanitarian Medical Assistance served seven sites in Nowshera Districts as mobile field clinics, and consulted 2,216 patients. Total distribution of disease was: (1) URTI = 18.1%; (2) skin disease = 17.9%; (3) musculoskeletal = 15.2%; and (4) others = 19.7%. The team considered continuous medical consultation in the Nowshera District after 2010. The HuMa medical activities ended at the end of September, and the organization donated multi-vitamin tablets, syrups, FE tablets, and anti-biotic cream in order to assist NWA's continuing assistance for the affected communities. The medical providers also left lists of medicines for local doctors and medical staff. Humanitarian Medical Assistance also provided basic supplies needed to prevent victims from experiencing further sanitation problems.

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(A267) Factors Influencing the Diarrheal Outbreak in the 2010 Pakistan Flood

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Floods are among the most common hazards in the world and can result in a devastating impact on human life and property. The impact of floods on humans can be traced directly to factors such as the location and topography of the area, as well as demographics and characteristics of the existing environment. Pakistan is currently facing the worst humanitarian crisis in history. It is faced with daunting challenges of reviving and reconstructing almost one fourth of the population. Latest government figures indicate that over 14 million people have been affected by the floods. More than 1.5 million cases of diarrheal diseases have been reported so far. Over 235,000 people have been treated at the diarrhea treatment centers set up in the aftermath of the floods. Floods are unique in their nature since every region is characterized by diverse factors. This paper examines closely the diarrheal outbreak in the flood-ravaged provinces of Pakistan. The study looks at the extent of spread of diarrhea across different time periods through a comparative analysis of different provinces affected. There are many direct factors that affect the severity and scale of floods and, in turn, impact human health like contaminated water, cramped living conditions and lack of

sanitation facilities. The paper explores the pre-existing indirect factors responsible for the spread of outbreak in the provinces. These range from geography, socio-economic conditions, demographic features, topography, and community infrastructure. These factors play an extremely pivotal role in determining the nature of response required to control the diarrheal outbreak.

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(A268) Lessons Learned: Western Australia's Health Sector Resilience during a Severe Storm

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The impacts of disasters on the community are not necessarily determined by the scale of a disaster, but are influenced significantly by the preparedness of the community, including the health community. Resilience is a dynamic quality within a community that is developed and strengthened over time. Evidence of the Western Australian (WA) health system resilience was demonstrated on 22 March 2010 when two severe weather fronts crossed the Perth metropolitan area and severely impacted a significant number of hospitals, the State pathology service, radiological services in tertiary and secondary hospitals, as well as aged care, mental health and other key health facilities. This storm has resulted in more than 120,000 claims and the total estimated cost is expected to exceed 1 billion Australian dollars, making it the most costly disaster due to natural hazards in WA history. Damage to these facilities included: (1) flooding, ceiling collapse, and broken windows in intensive care units, emergency departments, and operating theatres; (2) loss of radiological services; (3) sewerage inflow into wards, resulting in evacuation of mental health inpatients; (4) infrastructure damage to aged care facilities requiring relocation of residents; and (5) extensive loss of electricity and communications throughout Perth, which impacted on home oxygen therapy clients. A public health response also was required due to sewerage overflow into Perth's main river systems. This presentation will provide an overview of the event, lessons learned and how these lessons learned will be used to further enhance the health community's resilience.

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(A269) Lightning Injuries: A Case Series

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Background: Singapore, albeit a small country, has one of the highest lightning activities in the world. However, injuries related to this spectacular weather phenomenon are under-reported and rarely a subject of study. Most reported cases dealt with lightning-caused fatalities but lightning-caused accidents are not always fatal. Actual reported international data showed that about 80% of lightning victims survived, with or without after effects. This study reviewed the cases of lightning-related injuries who presented to Tan Tock Seng Hospital, Emergency department.

Methods: This is a case series of 5 patients. All 5 patients presented to Tan Tock Seng Hospital, Emergency Department after a thunderstorm. All were undergoing military training when the incident happened. The circumstances surrounding their injury and their presentation and symptomatology were reviewed.

Results: In our study, three possible mechanisms of injury were identified through a side flash which occurred when the lightning hit the tree and traveled partly down that tree before a portion jumped to the nearby victims; through the concussive effect of the shock waves produced by the lightning; and through step voltage mechanism wherein the lightning after hitting the tree traveled into the ground where victims were standing. Two patients were diagnosed with rhabdomyolysis, one suffered from sensory-neural hearing loss, and one patient had a mild conjunctivitis as a result of tissue inflammation. Other symptoms included retrograde amnesia, parasthesia, tinnitus, and a single episode of seizure which resolved spontaneously. All our patients survived the ordeal and were discharged well back to their pre-morbid states.

Conclusion: This paper supports existing evidence that lightning-caused accidents are not always fatal and that victims may survive with no or little side effects given proper medical treatment.

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(A270) Medical Reserve Corps, American Red Cross, and a University: Lessons Learned from their Partnership during the Ice Storm

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The winter of 2009 brought the worst disaster caused by a natural hazard in the history of the state of Arkansas. An ice storm spanned the entire northern half of the state, leaving thousands without electricity, heat, transportation, health care, and in some cases, shelter, food, and water. In one county alone, > 13,000 power poles were destroyed. The infrastructure was severely damaged. In the University's arena, a shelter was opened by the Red Cross in partnership with the Medical Reserve Corps (MRC) to accept special needs victims and provide urgent primary care for shelter residents. The majority of patients presenting to the MRC had more than two illnesses. Examples included diabetes, renal disease requiring dialysis, hypertensive crisis, injuries from the storm, MRSA, respiratory syncytial virus, and mental illness ranging from depression to schizophrenia. Because the Red Cross did not consider ice storms as a reasonable cause for medication/medication supplies, these items were not replaced; this had health consequences of under-managed illness. Oxygen converters were preferred over oxygen tanks; however, the arena was on a generator and not all plug-ins had electricity. An ambulance company loaned the MRC a glucometer so blood glucose levels could be monitored. Those with mental illness required significant time from MRC providers. Largely, the MRC was nurse-managed with physicians or nurse practitioners available for sick call twice a day. Relationships became strained when the state placed a hold on the arena to secure it for a regional shelter. This put the university's financial stability in peril due to breach of contract with vendors scheduled to use the