

most comprehensiveness characteristics to prioritizing intoxicated patients.

**Discussion:** Resources necessary for evidence-based performance to support nursing decisions in triaging intoxicated patients needs fundamentally to be developed. It's necessary to develop National Triage Scale to approach intoxicated patients effectively.

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### (A261) Evolution of Triage Services in the Emergency Department Aga Khan University Hospital- Karachi

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The history of triage started from the French battle field. In-hospital ED triage started in early 1960's from Baltimore. It is now an essential component of modern ED. Triage is not only to sort out patients as per their criticality, but it also serves the purpose of streamlining the patients so that the patient receives right treatment at the right time in the appropriate area. It helps to manage the ED overcrowding by better flow of patients. AKUH-ER experience of triage dates back to the year 2000, when triage was conducted by physicians and there used to be a manual documentation of patient's particulars such as complaints, vitals and BP. With the expansion of AKU-ED in 2008 responsibility of triage shifted to nursing services. Triage policy was drafted and implemented and for guidance and uniformity of care, triage protocols were developed. Another important development is replacement of register with triage data entry software. This help us to monitor some indicators like number of patients triaged, the time between triaging and actual bed assignment, triage categorization, length of stay, dispositions and return visits. The available information now helps us to make decisions based on evidence and also paves the way for future direction.

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### (A262) Use of Portable Ultrasound in Triage in Field Settings

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Speed and accuracy are major considerations in triage in emergency field settings. Traditional physical examination techniques often are limited in detecting the true nature and full extent of internal visceral injuries, for which delayed recognition and treatment may lead to catastrophic results. Ultrasound has a well-established role in the rapid initial assessment of intra-abdominal pathologies, including trauma, and contemporary portable ultrasound machines are available for use in the field. This presentation will introduce the basic principles of diagnostic ultrasound and its use in emergency settings. Common clinical applications and pathologies and potential limitations and pitfalls also will be discussed with image illustrations.

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### (A263) Electronic Triage System

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Most emergency medical response systems rely on paper triage tags and clipboards to share information during mass-causality incidents (MCIs). However, this procedure has proven labor-intensive, time-consuming, and susceptible to human error. Previous research about electronic triage depend on a small movable device, which can be costly. Therefore, an electronic triage system was developed to facilitate effective patient care during an emergency. In this paper, the design, development, and deployment of an electronic triage system for use by rescuers responding to MCIs and disasters will be discussed. The electronic triage software runs on a small, embedded system with limited memory and computational power that efficiently saves patient records. The software system is easy, user-friendly, can be used with any computer, laptop, or iPhone, and it is applicable in all hospitals. This system includes three interfaces: (1) electronic triage tags depending on the Simple Triage And Rapid Treatment (START) triage protocol; (2) the Sort Triage interface; and (3) the Evacuation interface, which includes hospital information such as the Hospital Treatment Capacity (HTC) and the Hospital Surgical Capacity (HSC). It also includes doctors information and hospitals and doctors can be alerted via e-mail. The system also has a database records file for patients that can be saved then immediately sent to hospitals and rescue centers. The electronic triage system will lay the foundation for reliable and continuously updated network coverage during a MCI. It also will help technologists develop future emergency response systems.

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### (A264) Does the Implementation of Start Triage Criteria in the Emergency Department Reduce Over- and under-Triage of Patients?

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**Background:** Appropriate triage shortens the delay in definitive care. this study examined whether the implementation of START triage criteria in emergency departments (ED) reduces over- and under-triage of patients. The purpose of this study was to examine the impact of START triage criteria on over and under-triage subjects.

**Methods:** The study was performed between 01 January to 15 September 2008. All patients presenting to the ED were recruited. A triage nurse tagged the patients with a red, yellow, and or green wristband, as per START triage protocol. Over-triage was defined as patients who were re-triaged from red (R) to yellow (Y) or Y to green (G) within 30 minutes of arrival. Under-triage was defined as patients re-triaged from Y to R or G to Y within 30 minutes of arrival.

**Results:** Of 25,928 patients, triage was performed for 25,468 (98.2%) subjects. A total of 8,303 were triaged during the morning shift, 6,994 during the evening shift, and 9,978 during the

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 17<sup>th</sup> May and 22<sup>nd</sup> 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