

required to perform triage and emergency care management compared to methods based on traditional procedures and information transmission.

**Conclusions:** Implementation of information and communication technology increases the effectiveness and safety of emergency care during MCI.

**Keywords:** emergency health; emergency management; emergency medical services; information technology; mass-casualty incident; triage

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### (N60) Meeting Reproductive Health Needs during Crises

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**Introduction:** Freedom from violence is a basic human right. Women and girls often are at an increased risk of violence, and may be unable to access assistance. Men may suffer other disadvantages in different situations and for different reasons than women because of their gender role socialization. For example, men's roles as protectors may place a greater responsibility on them for risk-taking during and after a disaster. People caught in crisis situations have crucial reproductive health (RH) needs.

**Methods:** This study sought to: conduct assessment of comprehensive RH; (2) understand the key RH interventions in different phases of an emergency; (3) understand the rationale and components of the Minimum Initial Service Package (MISP); (4) understand how to access resources for the MISP; and (5) understand how to plan for comprehensive RH in a crisis situation.

**Results:** Staff members were trained on the clinical management of rape. Men, active and recently demobilized members of armed/security forces, displaced persons, and refugees are targeted with RH and HIV/AIDS messages. Data on demographics, mortality, morbidity, and health services were collected routinely and were disaggregated and reported by age and sex, and a gender analysis was applied. Formal monitoring and evaluation mechanisms reported the health impact of humanitarian crises on women, girls, boys, and men

**Conclusions:** The right to health is an inclusive right, extending not only to timely and appropriate health care, but also to the underlying determinants of health, such as RH in a crisis situation.

**Keywords:** crisis; emergency health; men; reproductive health; women

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### (N61) Traffic Injuries: Realities and Prospects in the Regional Hospital of Kebili, Tunisia

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**Introduction:** Traffic injuries are a worldwide public health problem because they produce a high number of casualties. The goal of this study is to analyze the epidemiological factors of traffic injuries recorded in the Hôpital régional de

Kebili to identify major injuries observed, and identify which are the prospects.

**Methods:** This is a retrospective study on 520 observations of traffic injuries victims from January 2008 to December 2008.

**Results:** Of 520 injured, 65% of the patients were between 14 and 39 years old, and 45% were between 40 and 65 years old. The sex ratio was M:F = 5.27. More than two-thirds of the patients received at least one medical investigation, 85% were radiological examinations.

The majority of patients received at least one medicine.

After emergency medical care was provided, 58% of patients returned home, 20% of the cases were sent to an outpatient specialist, 15% of those injured were hospitalized, and 5% were transferred to a university hospital. The lesions are dominated by head injury (27% of all injuries). Five of seven deaths that occurred at emergency department were due to cranial trauma.

**Conclusions:** To reduce mortality and morbidity caused by traffic injuries, medical and paramedical training in the field of emergency medicine should be enhanced, and a reliable system of information and data collection must be established. All actors involved in responding to and treating traffic injuries must combine their efforts to develop a strategy for prevention and road safety.

**Keywords:** emergency medical services; injuries; prevention; public health; traffic injuries

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### (N62) Experience of Thoracic Trauma at a Level-1 Trauma Center

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**Introduction:** Thoracic trauma is a sudden and dramatic event. Its incidence is increasing because of a rise in road traffic crashes, especially in the urban setting. Thoracic trauma cases were evaluated and results were compared with the data published in the English literature.

**Methods:** This is a prospective, observational study. The data of all thoracic trauma patients admitted between January 2008 through December 2008 in the JPN Apex Trauma Center at the All India Institute of Medical Sciences in New Delhi were collected.

**Results:** Of 885 surgical admissions, thoracic trauma was present in 214 (24%) patients between the ages of 4 to 93 years. Isolated thoracic trauma was present in 54% of the patients. Blunt injuries accounted for 82% of thoracic trauma, and the most common mode of injury was motor vehicle crash. Unilateral thoracic trauma was present in 78% cases. Hemothorax was the most common presentation. Multiple rib fractures were present in 76%, single rib fracture in 19%, and flail chest in 6%. Extra-thoracic injuries were seen in 46%. Treatment consisted of tube thoracostomy in 184 patients (86%) and thoracotomy in 15 patients (7%). Indications of thoracotomy were lung lacerations with massive hemorrhages in eight (53%), open chest wound closure in two (13%), atrial laceration repair in two (13%), foreign body removal in two (13%), and esophago-pleural fistula in one (7%). Thoracic epidural catheter for

pain relief was placed in 49% of thoracic trauma patients. The mean length of hospital stay was eight days.

**Conclusions:** A majority of thoracic trauma patients can be managed non-operatively by simple emergency room procedures such as tube thoracostomy. A high index of clinical suspicion is required to diagnose thoracic trauma in poly-trauma patients.

**Keywords:** poly-trauma; thoracic epidural; thoracic trauma; traffic crashes; tube thoracostomy

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### (N63) Emergency: A Ward with Potential Independency

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**Introduction:** The emergency ward always has been financially dependent on the government. A lack of income has arisen due to the high cost of emergency services. As a result, emergency beds have been considered as non-approved and overcharged beds by human resources and financial aspects.

**Methods:** The aim of this study is to collect information on emergency ward income and human resource management in order to calculate income.

Financial analysis was mapped based on process mapping, documentation procedure, and documents collected before being submitted to insurance parties.

**Results:** The following problems must be solved: (1) poor documentation in medical and nursery sections; (2) poor collection of para-clinics; (3) poor coding of services; (4) poor supervision in patients' release; (5) inadequacy in registration of consumables; (6) lack of obedience in special insurance regulations; (7) insurance extraction; and (8) errors in sending the document within a specified time.

Defects in the official staff were observed in the analyses. These weak points have been resolved by 30 hours of training, adding three new staff positions, designing emergency services registration forms, and more intra-ward coordination between the discharge, accounting, and insurance sections.

The most noticeable changes have been a 325% surge in emergency income, more admissions, and qualitative and quantitative growth of services.

**Conclusions:** Due to high workload and poor management, the emergency ward is not receiving 60% of its clinical charges, which hopefully can be solved by some manipulations. If the moneymaking potentials of emergency ward are improved, there might be a possibility of undertaking quality management plans, which are expected to result in more financial benefits.

**Keywords:** coding; emergency management; emergency wards; financial; human resources

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### (N64) Firearm Injury, A Clinical Profile Study

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**Introduction:** Due to modernization and rising civilian violence, there has been an increase in firearm injuries. Approximately 2.4% deaths per 100,000 are recorded in the US. It is a modern day epidemic with a mortality of 35–50%.  
**Objective:** To study the clinical profile of firearm injuries presenting to the emergency department of the JPN Apex Trauma Center, All India Institute of Medical Sciences New Delhi, India.

**Methods:** Patients presenting to the emergency department with a history of firearm injuries were recruited for the study. The clinical details were recorded in a specifically designed performa.

**Results:** A total of 25,928 patients presented to the emergency department, including 42 cases of firearm injuries. Of the patients, 90% were brought by relatives and 10% by police. Thirty-three (78.58%) cases were due to homicide, six (14.28%) were suicidal, and three (7.14%) accidental. The age range was 5–68 years with a male:female ratio of 3.2:1. The number of patients between the ages of 0–15 years was 2 (4.8%), 15–60 years was 39 (92.9%); and >60 years was 1 (2.4%). The number of patients with neurotrauma was 19 (45.2%), seven had spinal injuries (16.7%), six experienced abdominal injuries (14.2%), three had injuries to the extremities (7.1%), five had chest injuries (11.9%), and two experienced polytrauma (4.8%). Exit wounds were present in 12 (28.6%) cases.

**Conclusions:** Young males (64.3%) had a higher incidence of firearm injuries. Homicidal cases were the most common. Pediatric patients and accidental injuries were not rare. Neurotrauma was the predominant mode of presentation.

**Keywords:** clinical profile; emergency health; firearms; homicidal; neurotrauma

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### (N65) Violent Patients in the Prehospital Setting

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**Introduction:** Emergency medical services (EMS) providers may be exposed to violent behavior.

**Objectives:** To determine the prevalence of violence against EMS providers in the prehospital setting and factors associated with such violence, and to identify the methods used to manage violent patients.

**Methods:** Consecutive medical calls to the Falck Rescue System in Slovakia were analyzed prospectively in the period of 15 July to 31 December 2008. Following each call, prehospital personnel recorded information about any episodes of violence.

**Results:** There were 48,228 calls available for analysis. Overall, some sort of violence occurred in 0.42% of EMS interventions. Of this reported violence, 88.2% was directed against staff, while 11.8% was directed against the patient or relatives. Therefore, the incidence of violence directed against prehospital care personnel was 0.37% (179/48,228). Patients accounted for most of this violent behavior (76.8%). The type of violence varied, with 45.8%