

urgency in five-minute intervals from the start of the incident was analyzed.

Results: There were 34 MCIs in 2002, 15 in 2003, and two in 2004. More MCIs (24%) occurred on Wednesdays, and more MCIs occurred during the 05:30–08:59 (18%), 12:00–14:59 (20%), and 17:00–19:59 (24%) time slots. More MCIs occurred in the Jerusalem (24%) area, followed by Tel Aviv (16%). Twenty-six percent of the MCIs resulted from explosions in open areas, 22% in buses, 20% from shootings, and 28% from explosions in semi-closed and closed areas. The mean dispatch time of the first ambulance after notification was 48 seconds. An average of 14.25 ambulances were dispatched in the first five minutes, followed by eight, three, and three in the five-minute slots following. An ANOVA indicated a significant difference in dispatch times by towns/cities ($p = 0.05$). The average arrival of the first ambulance was 6.4 minutes, and evacuation of the first urgent casualty was 13.6 minutes, the last evacuation was 26.5 minutes after arrival. More urgent casualties (45%) compared to 20% non-urgent were evacuated in first 15 minutes; the majority of non-urgent victims (79%) were evacuated after 16 minutes. The mean number of dispatched ambulances ranged from 37.9 to 26 in urban versus rural areas, respectively. The number of ambulances actually used for evacuation in urban and rural areas was 55% and 44%, respectively.

Conclusions: Information analyzed from AAR is useful for improving Standard Operating Procedures and structuring continuing education interventions for MCIs.

Prehosp Disaster Med 2011;26(Suppl. 1):s137–s138
doi:10.1017/S1049023X11004523

(P2-9) Patient Allocation to Hospitals During Mass-Casualty Incidents

K. Ruetiger,¹ W. Lenz²

1. FB 40.70 - Brandschutz, Rettungsdienst Und Katastrophenschutz, Bad Homburg, Germany
2. Gefahrenabwehrzentrum, Gelnhausen, Germany

Due to the limited resources of specialized hospital departments, the allocation of patients to different hospitals according to the severity of their condition is an extraordinarily complex and time-critical problem. The emergency capacity was determined for all medical centers ($n = 135$) in the State of Hessen, for patients of the various hospitalization triage categories (red, yellow, green), for normal working hours, for weekends and nights, including logistic specifications of a potential helicopter landing. This data was entered into a state register. Using the data from the “acute-care-register”, a Ticket System was developed that allows the operations management to assign patients according to the severity of their condition, urgency and necessary specialization (e.g., neurosurgery, ophthalmology, pediatrics) to a hospital without exceeding the admission and/or treatment capacity of the hospital/facility. During a non-critical period, the order of allocations depending on the distance of the clinic to the site of the emergency is planned in advance so that no further modifications are necessary during the acute intervention phase of an emergency response. Additional notification of hospital capacities for severe casualties provided during the emergency response can be easily and immediately supplemented. Due to the relatively low frequency of such emergency responses, a cost-effective concept

that is easily adaptable to the respective fields of application has been discovered. The system is a sticker set customized for the respective rescue teams. The sets will be carried permanently in the rescue equipment by the organization manager of the rescue service team. The equipment is not dependent on electronic components. The cost per sticker set is approximately US\$50. Keeping track of the patient allocations is assured.

Prehosp Disaster Med 2011;26(Suppl. 1):s138
doi:10.1017/S1049023X11004535

(P2-10) Emergency Medical Services Workers' Willingness to Work during Pandemic Influenza

I. Klein,¹ R. Balicer,² L. Aharonson-Daniel,³ E. Jaffe²

1. International, Tel Aviv, Israel
2. Tel Aviv, Israel
3. Prepared Research Center, Tel Aviv, Israel

Background: Emergency medicine services (EMS) will play a key role in any response to a flu epidemic. In order to devise an effective preparedness plan for coping with pandemic, it is necessary to comprehend the factors affecting the willingness of EMS workers to respond during an outbreak.

Aims: This study aims to: (1) examine the willingness of the workers of Israeli EMS (Magen David Adom (MDA)) to come to work during a pandemic flu; and (2) identify the factors that will increase the willingness of workers to come to work and the obstacles that will keep them from working during a flu pandemic.

Methods: Between November 2009 and January 2010, a representative sample of MDA workers in Israel were given questionnaires asking about their knowledge and attitudes in regard to pandemic flu, and concerning factors that may influence their willingness to come to work. Data analysis included descriptive statistics, central and dispersion measures, analyzes of variance, and an exploratory factor analysis.

Results: The study population included 365 people (290 men and 75 women), with 84% aged 20–49 years. Of the respondents, 92% expressed willingness to come to work during a flu pandemic, even if they were asked and not obligated to report to work. An increase in willingness to come to work was found to be associated with the significance of the role of the workers, the guidance that they receive from the organization, their trust in the system, their knowledge, and their feeling of being protected.

Conclusion: Workers' perception of the significance of their role and their trust in the system were found to be central factors in determining workers willingness to come to work during a time of an emergency.

Prehosp Disaster Med 2011;26(Suppl. 1):s138
doi:10.1017/S1049023X11004547

(P2-11) Teletransmission of 12-Lead ECG in Warsaw Ambulance Service — Analysis of the First Months of the Operation

G. Michalak, D. Zajac, S. Pilip

Medical Emergency Department, Warsaw, Poland

Background: Since September 2009, the Warsaw Ambulance Service (WAS) has enabled 23 ambulances to carry out a 12-lead

electrocardiograph (ECG) transmission to the specialist in the ECG transmission center, and in return received an interpretation of sent data along with guidelines concerning further treatment and transportation. This would allow patients with myocardial infarction (MI) eligible for PCI to be transported directly to the catheterization laboratory. The aim of this study was to present the results of the first four months of operation of the ECG transmission system in WAS, and assess the frequency of its use and the amount of MI it covered. Furthermore this study, attended to the main issues that might have had a negative impact on the surveyed system.

Methods: Since September 2009, each attempt of transmission was described by a number of factors by the staff attending to ECG transmission center. Documentation created from September to December 2009 was subjected to a thorough analysis.

Results: From September to December 2009, there was a total of 1,650 attempts of transmission, 292 (18%) of them were unsuccessful. Of 1,358 successfully transmitted ECGs, 39 (3%) suggested a ST-Segment Elevation Myocardial Infarction (STEMI) and 149 (11%) suggested a Non-ST-Elevation Myocardial Infarction (NSTEMI). The number of attempted ECG transmission carried out by individual ambulance teams per intervention was significantly different ($p < 0.001$) and showed a relation with a place of stationing. The proportion of unsuccessful attempts was significantly different for individual ambulance teams ($p < 0.001$) and was higher for ambulance teams with lower amount of attempts ($p < 0.0001$).

Conclusions: Prehospital 12-Lead ECGs help to reduce emergency medical services-to-Balloon times. It often was used as a support in case of patients without symptoms typical for MI. Motivation and personal opinion of individual ambulance teams about the system affected frequency of its use. More frequent use of the system by ambulance teams resulted in a lower percentage of unsuccessful attempts of ECG transmission.

Prehosp Disaster Med 2011;26(Suppl. 1):s138–s139
doi:10.1017/S1049023X11004559

(P2-12) Emergency Medical Procedures Provided by Paramedics in Prehospital Sudden Cardiac Arrest – Analysis of the Example of District Siedlce (Poland)

S. Pilip,¹ D. Celiński,² R. Wiśniewski,² A. Binkowska,¹ G. Michalak¹

1. Medical Emergency Department, Warsaw, Poland

2. Siedlce, Poland

Introduction: The organization of the medical emergency system in Poland has been revised substantially since 2007. Rescuers were able to perform certain life-saving procedures and to administrate some drugs without doctor's order.

Aim: The efficiency of advanced life support (ALS) performed by emergency medical service with paramedics (without doctor) was assessed for cases of cardiac arrest (CA) in prehospital conditions. It was correlated with quantity of basic life support (BLS) procedures undertaken by casual witnesses and with the knowledge of automated external defibrillation (AED) in people without medical training.

Method: Forty-eight cases of CA were analyzed, which took place in District Siedlce in the first three quarters of 2009. Data were

collected retrospectively, from medical reports. Advanced life support procedures adhering to the guidelines of the European Resuscitation Council were investigated in terms of pharmacological and electrotherapy. Additionally, the study of the knowledge of AED was conducted through a survey, in which 103 randomly selected persons without medical training took part.

Results: Adrenaline and amiodarone were given by paramedics correctly in 94% of patients. Defibrillation was performed in all patients with documented ventricular fibrillation or pulseless ventricular tachycardia valid values of energy. Cardiopulmonary resuscitation was successful in 33% of the cases. At the scene of the accident BLS was performed before the arrival of ambulance in only 7% of cases. Of the respondents, 41% (non-medical) could use the AED safely, but only 13% of them knew the guidelines for using defibrillators.

Conclusions: Paramedics were properly implementing ALS procedures for prehospital CA. The percent of effective cardiopulmonary resuscitations may improve the early implementation of BLS, including the use of AED. It is necessary to educate people without medical training in this field.

Prehosp Disaster Med 2011;26(Suppl. 1):s139
doi:10.1017/S1049023X11004560

(P2-13) Pitfalls for Upper Limb Injuries in Emergency

S. Abrassart, P. Hoffmeyer

Orthopédie, Geneva, Switzerland

Sternoclavicular dislocation usually requires a Computed Tomography (CT) scan and surgery. This injury is rare because costoclavicular ligaments are strong. They appear in motorcycle accidents and sports collisions. Compression of the neurovascular structures or trachea involving the vital prognosis is not rare. Practitioners must be aware of symptoms such as dysphagia, dyspnea, hoarseness, or neurologic disorders. On the printing of thoracic standards, the medial clavicle appears misplaced superiorly in previous dislocations and posterior inferior dislocations. Fracture of the scapula (less than 1% of all fractures) rarely requires surgery, but should not be ignored because they signal a very high-energy trauma. The posterior shoulder dislocation is 2–4% of all delayed dislocations. Diagnosis is most often attributed to inadequate x-ray photographs. The main causes of this dislocation are epilepsy and electrocution. Radiography in front and profile observed a duplication of the humeral head. Joint space is not completely in view, and the CT scan can confirm the diagnosis if there is any doubt. Fracture of the clavicle is common in young patients. Fractures with lesions of the clavicular vessels and nerves are common. Practitioners also must be wary of intermediate fragments, which can puncture skin. Pneumothorax should always be excluded by a complete chest auscultation. The stump of the shoulder must be minimized in young patients, or an active patient operative indication can have negative functional and aesthetic consequences. Neurovascular examination must be complete, and circumflex nerve damage should not be confused with injury of the rotator cuff. These two injuries reduce abduction. The elbow is complex and a number of lesions could be missed, including: (1) the tip of the coronoid process; (2) epitrochlea and epicondyle; (3) radial head fractures; or (4) pullout capitulum.

Prehosp Disaster Med 2011;26(Suppl. 1):s139
doi:10.1017/S1049023X11004572