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Triage: An Important Part of The Response to Major Incidents

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The response given to a major incident/disaster depends on many factors such as coordination and command, communication, management and performance on scene, at hospital and at the time of evacuation and transport. To have a successful response all these links must work together. Although the most common weak links in this chain of reaction varies among different countries, the major short-comings are reported to be the lack of communication and training. Thus, to optimise the response, a common language to communicate and to describe the patients' status must be defined and the order by which patients should be transported and treated must be trained.

Triage as the Mutual Language

Derived from the French word "TRIER", triage means to sort into priority and was originally used to describe the sorting of agricultural products (Winslow 1982). However, its practice is historically linked to the military and closely associated to military medicine. Baron Dominique-Jean Larrey (chief surgeon of Napoleon Bonaparte, 18th century), John Wilson (British naval surgeon, 1846) and Jonathan Letterman (US Army, Civil war, 1862-1864) are some of the people who have used triage. Triage was also used during the First and Second World War by different protocols to sort out different categories of injured soldiers. However, today in modern military conflicts triaging is a matter of deciding who should be evacuated to definitive care first, with the dead being evacuated last. It should be performed by a triage officer who assesses each patient's medical needs and based on an established system or plan (usually an algorithm or a set of criteria to determine a specific treatment or treatment priority for each patient) (Iserso and Maskop 2007). During the sixties the military triage system was adapted for civilian use and in 1964 the first systemic description of civilian ED's use of triage was published by Weinerman (Weinerman et al. 1966). Nowadays triage is used in different places both in and out of hospitals e.g. ED triage, Inpatient triage, Incident (multi-casualty) triage, Military (battlefield) triage and at last Disaster (mass casualty) triage (Iserson and Maskop 2007).

Triage Methodology and Systems

Basically, triage can be performed either based on anatomical or physiological data or a combination of these. Decisions made anatomically is influenced by observed injuries and has the disadvantages of requiring fully exposed patients, considerable experience (inter-operator variability) and it fails to detect cavity haemorrhages in >40 percent of cases if used alone, which per se results is over- or under-triaging and an increased overall mortality. Physiological triage (primary or secondary) uses physiological parameters and is said to be more reliable (not validated). Primary triage is used in the field for evacuation and transport to definitive care by using physiological parameters such as motor response, respiratory and circulatory parameters (e.g. START, Triage Sieve, Care Flight, Sacco triage). The secondary validate a system that can cover all the phases of prehospital and hospital care. Such a system must be easily accessible and user-friendly to all parties who take care of patients. This order in which patients receive care at the hospital or in the setting of delayed transportation, at the scene (e.g. SAVE-triage and Triage Sort). A two-part physiological triage system has gained popularity (Ryan 200 Jenkins et al. 2008). Historically two different systems were used by NATO; P or Priority and T or Treatment/Triage (Ryan 2008). Today, there are different systems for prehospital triage and triage on arrival at ED Problems physiological triage is used in conjunction with the primary triage and establishes the validate a system that can cover all the phases of prehospital and hospital care. Such a system must be easily accessible and user-friendly to all parties who take care of patients. This order in which patients receive care at the hospital or in the setting of delayed transportation, at the scene (e.g. SAVE-triage and Triage Sort). A two-part physiological triage system has gained popularity (Ryan 2008; Jenkins et al. 2008). Historically two different systems were used by NATO; P or Priority and T or Treatment/Triage (Ryan 2008). Today, there are different systems for prehospital triage and triage on arrival at ED

Problems

Patient's status can change rapidly overtime. Casualities are also triaged at different times following the incident. A number of different triage systems to capture this dynamic process have evolved. However this has created some difficulties in communications within the healthcare services. Another problem is the fact that many systems used are validated only for trauma patients and it has been questioned whether these can be used also for other patient categories(Robertson-Steel 2006).validate a system that can cover all the phases of prehospital and hospital care. Such a system must be easily accessible and user-friendly to all parties who take care of patients.

Future Challenges

The challenge for the future is to develop and validate a system that can cover all the phases of prehospital and hospital care. Such a system must be easily accessible and user-friendly to all parties who take care of patients. This validate a system that can cover all the phases of prehospital and hospital care. Such a system must be easily accessible and user-friendly to all parties who take care of patients. This will benefit the patients, but also result in a more cost effective use of available resources (Robertson-Steel 2006). Triage protocols must be analysed regarding patient outcome following major incidents. Actual incidents are not easily studied in real time but can be simulated. A simulation model has to fulfil certain criteria to be an instrument for testing methodology and skills. The input data have to be correct and complete and the consumption of time for every measure has to be accurate. The consumption of resources for every validate a system that can cover all the phases of prehospital and hospital care. Such a system must be easily accessible and user-friendly to all parties who take care of patients. This measure has to be accurate and the outcome with regard to mortality and complications has to be accurately predicted. Simulation models fulfilling these criteria are also very suitable for training and validation of educational methods. A recently introduced course in disaster medicine, "MRMI (Medical Response to Major Incidents)", which has been developed in collaboration between the Section for Disaster & Military Surgery in validate a system that can cover all the phases of prehospital and hospital care. Such a system must be easily accessible and user-friendly to all parties who take care of patients. This ESTES (European Society for Trauma & Emergency Surgery), the Croatian Society for Emergency Medicine & Surgery and the Prehospital and Disaster Medicine Centre, Gothenburg, Sweden, can be used for both scientific validation of different triage methods and teaching the best way to manage a major incident (MacSim; Lennquist et al. 2009; Lennquist et al. 2010). In this course patient cards originated from actual major incidents (MacSim) with accurate input and output data are used to test both clinical and organisational ability of units involved in management of a major incident (Figure 1-2).

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