

is to describe the ethical dilemmas, the technical and clinical considerations for such an endeavor. Ethical considerations: providing the most care to the most victims is the dictum of disaster medical management. Lowered standards of care are accepted and often the norm. However, in many moderate and even major disasters, the ability exists to save lives that will certainly be lost otherwise, by providing intensive care including mechanical ventilatory support, or may be provided if the managers so determine. Is it then ethical, to allow certain victims to die when such support may be available? What is the cost-benefit ratio of such a decision? Who should receive this limited resource? The young and healthy? The very sick? The salvageable? The post-operative? For how long? Until the international team leaves? Types of ventilator-dependency in disasters: (1) Primary ventilatory failure, normal lungs, prolonged ventilator dependency, e.g. botulinum toxin; (2) Combined ventilatory and hypoxemic failure, short to medium-term ventilator dependency, e.g. Sarin gas intoxication; (3) Primary hypoxemic failure, parenchymal lung injury, prolonged ventilator dependency, e.g. Anthrax, mustard gas, ricin; (4) Perioperative and prophylactic ventilatory support, short term but unpredictable. Ventilator supply versus demand: (1) Insufficient ventilators for first few hours only, then supplies come in; (2) Insufficient ventilators for days, then national or international relief expected; (3) Insufficient ventilators and no expected supplies. Care environment: (1) ICU, minority of casualties; (2) General floors: inexperienced nursing, medical staff; (3) Insufficient monitoring devices; (4) Insufficient numbers and quality of respiratory therapists; (5) Commercial companies normally providing technical support understaffed. Basic requirements from the ventilators: allows spontaneous ventilation, incorporates some alarms (ideally disconnect and minute volume), made by a reputable and stable company (will be there when the disaster strikes), low cost, user friendly, long shelf life, quick activation from storage, low weight and volume, few spares, few or generic disposables, little and simple maintenance, independent of compressed oxygen (i.e. electric, multiple voltages, long-life battery). The system: Mechanical ventilation is a complete patient care unit comprising: Bed and space, Oxygen supply, Vacuum, Cardiorespiratory monitor, Mechanical ventilator, Nursing staff, Medical staff, Expert consultatory staff, Logistic and technical support staff. Potential mechanical ventilators: (1) BVM or bag-valve-tube; (2) Transport-type, pneumatic or electrical ventilators; (3) Intermediate capability pneumatic, electrical or electronic ventilators; (4) Full capability intensive care ventilators; (5) Single patient use ventilators.

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(A178) Evaluating the Feasibility of Verbal Analogue Scale among Emergency Care Providers in Assessment and Management of Acute Pain in Trauma Victims

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Background: Acute pain assessment and management in trauma victims is often overlooked in emergency department (ED).

Visual analogue scale is the preferred scale for assessment and management of pain however, its role in a busy ED is limited. The objective of this study was to evaluate the feasibility of verbal and visual analogue scale among emergency care providers.

Methods: Emergency caregivers were instructed to use both pain scales wherever feasible for assessment, management, and monitoring of pain in 100 non-consecutive alert patients. A separate, pre-tested survey questionnaire addressing the feasibility of each pain scales was surveyed among emergency care providers (emergency physicians, nursing staff). A Likert scale (1 to 5) was assessed for cooperativeness, availability of time for assessment, the format, the peak period feasibility, the monitoring ease and the amount of work load. Binary scale (yes and no) was used to measure the overall utility in assessment and management of pain.

Results: Out of 100 patients enrolled, the verbal analogue score was used in all patients and visual analogue score was used in 30 patients. The average Likert scale score for verbal analogue score questionnaire was 1.7 and the average Likert scale score for visual analogue score questionnaire was 3.9. On the overall utility both scales were found to be useful in all patients.

Conclusions: Both the scales were found to be useful in overall assessment and management of pain. However, there was a favorable trend towards using verbal analogue scale among emergency care providers.

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(A179) A Survey of Rapid Sequence Intubation (RSI) Complications in Immam Hossein Medical Center Carried Out by Emergency Residents

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Introduction: Critically ill patients in emergency department frequently require emergency airway management. This procedure in our ED is carried out by emergency medicine resident with rapid sequence intubation (RSI). This study investigates complications of tracheal intubation carried out in critically ill patients including: (1) hypoxemia and hypotension (2) aspiration and esophageal displacement (3) pneumothorax and right bronchus intubation.

Methods: Data were collected on consecutive intubations carried out by EM residents over a 29 months period. Between 195 patients only 100 patients had including criteria to enter this study. Also we compare the complications and success rate among three level of personnel carrying on the procedure. (first to third year of emergency medicine residency).

Results: 109 consecutive intubations were carried on in 100 patients. Oral translaryngeal intubation was done in all patients. Three intubations required more than 2 attempts and hypoxia occurred in 34 cases. Aspiration was diagnosed by direct vision in 5 cases. Hypotension was found in 5 cases causing death in 3 of them during the intubation or in 30 minutes following the procedure. Esophageal displacement occurred in 10 of the attempts but all were recognized and reintubated. Success rate between three personnel levels are as follow: in first year residency 82% and in second year residency 94% and in third