

(P2-88) To Assess the Effect of Camera Surveillance in Improving Compliance with Handwashing Practices in the ICU SettingD. Agarwal,¹ S. Chauhan²

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Background: Handwashing has been shown to be the most effective means of reducing cross infection in the healthcare environment. However, staff compliance remains low in the real setting.

Methods: A prospective study was carried out over one month period in one cubicle of neurosurgery intensive care unit (ICU). A surveillance camera which was previously installed and functioning was focused on a cubicle of three patients, and recordings of the previous 24 hours were reviewed every day for 15 days. The number of incidents in which handwashing was required but not performed was recorded. An incident was defined as any one of the following: (1) handwashing not performed by healthcare workers; (2) touching different patients without handwashing; (3) using the same gloves for different patients and for different procedures; (4) not performing handwashing after finishing the procedures. Following this 15-day period, all staff were verbally instructed during every shift that they were under surveillance for the next 15 days. Camera recordings of the previous 24 hours were similarly reviewed every day for these 15 days and incidents recorded.

Results: In the first 15-days period, there was a total of 480 incidents when handwashing was not performed. Of the incidents, 83% ($n = 401$) occurred during the night shift, especially during the early morning hours. In the subsequent 15 days when the staff were informed that they were under camera surveillance, the total number of events when handwashing was not done was 140. The difference between the two periods was statistically significant ($p < 0.01$).

Conclusion: Handwashing is practiced poorly in this ICU. As the maximum number of incidents occurred during the night shift, poor motivation may be one of the factors for this behavior. This study shows that camera surveillance plays a major role in changing the staff behavior and may improve compliance for handwashing.

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(P2-89) Investigation, the Association of Cardiac Risk Factors and the Risk of Acute Myocardial Infarction, in ED Patients with Non-Diagnostic ECG

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Objective: To investigate the association of cardiac Risk factors and the risk of Acute myocardial infarction, in ED patients with non-diagnostic ECG. **Methods:**

Results: 474 patients were enrolled, 150 had non diagnostic ECG. In this study HTN with p -value = 0/012 ($> 0/05$), HIP with p -value = 0/0001 ($> 0/001$), FH with p -value = 0/001 ($> 0/01$) was significantly more prevalent in those who ruled in for AMI.

Conclusion: In the past studies in patients with non-diagnostic ECG only hypertension was significantly more prevalent in those who ruled in for AMI and cardiac risk factors have limited clinical value in diagnosing of AMI in ED patients. In this study HLP, HTN, FH was significantly more prevalent in those who ruled in for AMI. An observational study is conducted in an educational hospital in Shahid Beheshti university during a period of two years. In this study, patients with symptoms suggestive of AMI including chest pain, Dyspnea, palpitation, syncope, cerebrovascular accident, nausea, vomiting, vertigo, loss of consciousness were enrolled. Demographic, historical feature and risk factors, such as age, sex, diabetes, hypertension, hyper lipidemia, renal failure, positive family history of CAD, smoking, substance abuse, Alcohol use in the past 24 hours, cocaine use in the past 48 h were recorded. Nondiagnostic ECG including these categories: Normal, non specific, early Repolarization, abnormal without signs of ischemia such as old bundle branch block, LVH, ... A final diagnosis of Acute myocardial infarction was determined by CK - MB and Troponin - 1.

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(P2-90) Modified Delphi Study to Determine Optimal Data Elements for Inclusion in an Emergency Management Database SystemA. Jabar,¹ A. Rüter,¹ L.A. Wallis²

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Topic: Information and communication technology (ICT).

Objectives: ICT are introduced into organizations with the goals of managing resources, increasing efficiency and work productivity and reducing workload. In the context of developing countries, these goals are accentuated given the existing conditions. The aim of this study was to identify hospital institutional capacity indicators to provide recommendations to an emergency management database system operating in the Western Cape province of South Africa as <http://hospitalbedbureau.co.za/>.

Methodology: A two round modified Expert Delphi study was conducted by email. A panel of 16 experts drawn from the fields of emergency medicine, critical care, trauma surgery and disaster medicine were consulted. Participants were initially asked to propose hospital institutional capacity indicators that warranted inclusion in the emergency management database system currently operating in Cape Town, South Africa. In the second round these proposals were collated and scored using a 7 point Likert scale. Areas that did not reach consensus in the Delphi study will be presented as synopsis statements for discussion at the Emergency Medicine Symposium hosted by the department of Accident and Emergency Western Cape.

Results: Round 1 comprised 237 statements. Consensus was defined a priori to be $> 80\%$. A total of 52 of 237 statements had reached consensus upon completion of the Delphi study. This represented 21.9% of the total number of statements. Of these 20 reached consensus at $> 90\%$ and 32 reached consensus at $> 80\%$.

Conclusion: The use of a Delphi study achieved consensus in aspects of hospital institutional capacity that can be translated into practical recommendations for implementation by the local

emergency management database system. Additionally, areas of non-consensus have been identified where further work is required.

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(P2-91) EMS Trauma Triage: Does the Red-Blue Criteria Enable Overtriage?

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Introduction: With the current need for effective trauma center utilization, understanding how current trauma triage criteria may promote overtriage will enable both field and hospital teams to provide the most appropriate patient care. It is hypothesized that current Southwest Texas trauma criteria promote overtriage by prehospital emergency medical services (EMS) of patients in favor of a Level 1 trauma facility when compared to physician assessment and Injury Severity Score (ISS).

Methods: This prospective, observational study at a Southwest Texas military Level 1 trauma center compared adult trauma patients' prehospital status noted by EMS personnel with the triage criteria documented by the treating emergency physician. The patients were divided into four groups: Prehospital Criteria Met or Not Met; Arrival Criteria Met or Not Met. Each patient's ISS and mechanism of injury were also collected and compared to initial assessment for predictive value. Descriptive statistics were used.

Results: The study enrolled 278 adult trauma patients. EMS reported Level 1 trauma status similar to physician assessment (60.1% vs. 59.7%, respectively). The rates patients met Level 1 trauma status corresponded with trauma severity when compared to the ISS. Assessment between EMS and physicians for ISSs were similar among the four groups. Comparisons using multivariate analysis of the four groups found similar ISSs, except for the Prehospital Criteria Met/Arrival Criteria Not Met group. Seventy-five percent of these patients were assigned an ISS in the Minor (ISS < 9) category ($p = 0.013$).

Conclusion: Trauma triage criteria assessment skills were similar between EMS personnel and emergency physicians except for identifying minor trauma patients. While the criteria generally led to overtriage, EMS crews appear to overtriage minor trauma patients at a much higher rate.

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(P2-92) Hueh Emergency Medicine Triage: Lessons in Crowd Control

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Background: On 12 January 2010 Port-au-Prince, Haiti was struck by a 7.0 Mw earthquake that devastated the city and destroyed much of the Haiti University and Educational

Hospital. In the following weeks, a tent hospital was erected at the site and hundreds of patients were seen daily by expatriate healthcare volunteers. The high volumes of patients, disorganized hospital grounds, and high levels of stress among patients led to issues of crowd control.

Discussion: To improve security a new triage system was designed and implemented based on current emergency medicine models. This design addressed patient flow, triage, environmental conditions, and differentiation of emergency services. The results of this system were a streamlined triage system as well as improved safety.

Conclusions: During the chaos following the Haiti earthquake, a triage design was implemented at the HUEH that led to improved Emergency Department patient flow and hospital safety.

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(P2-93) Triage During a Mass Casualty Incident: The 2009 Turkish Airlines Crash in Amsterdam

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Introduction: Triage is an important aspect of the management of mass-casualty incidents (MCIs). This study evaluates triage after the Turkish Airlines aircraft crash near Amsterdam in 2009. What were the results of triage? What were the injuries of priority 3, and of "walking" casualties? Did the mechanism of trauma have a factor in this mass-casualty triage? How does this affect spinal immobilization rate during transport?

Methods: A retrospective analysis of investigational reports, ambulance forms, and medical charts of survivors of the crash was performed. Outcomes included triage classification, type of injury, Abbreviated Injury Scale (AIS) score, Injury Severity Scale (ISS) score, need for emergency intervention according to the "Baxt criteria", and spinal immobilization during transport.

Results: There was minimal documentation of prehospital triage. According to the in-hospital triage, 28% of patients were priority 1, 10% had an ISS score ≥ 16 , and 3% met the Baxt criteria for emergency intervention. Forty percent were priority 3, 72% had an ISS score ≤ 8 , and 63% were discharged from the emergency department. Approximately 83% were over-triaged, and the critical mortality rate was 0%. Nine percent of priority 3 casualties, and 17% of "walking" casualties had serious injuries. Twenty-five percent of all casualties were transported with spinal immobilization; 22% of patients with diagnosed spinal injury were not transported with spinal immobilization.

Conclusions: After the Turkish Airlines crash, documentation of triage was minimal. According to the Baxt criteria, there was a great amount of over-triage. Possible injuries sustained by plane crash survivors that seem minimally harmed (P3) must