



## Service Priorities and Programmes Electronic Presentations

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### **Enhance Major Trauma Information accessibility and sharing in resuscitation room of Accident & Emergency Department**

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#### **Introduction**

Shared information is crucial to improve communication and speed up the critical decision making of major trauma team. The Emergency Trauma Information System (ETIS) was setup for improving the efficiency and effectiveness of major trauma team by facilitating the accessibility of information.

#### **Objectives**

- 1.Improving information accessibility to the Major Trauma team.
- 2.Enhance team situation awareness.
- 3.Reduce interruptions.
- 4.Speed up team decision making.
- 5.Digitalize documentation.

#### **Methodology**

- 1.Digitalize patients' information.
- 2.Auto digital record of call and arrival time of Major Trauma team members according to computer time.
- 3.Display the updated information e.g. vital signs on a wall-mounted TV.
- 4.Synchronize with Clinical Management System (CMS) and display all X-rays and CT scan images on another wall-mounted TV .
- 5.Save all information into a server for debriefings, analysis and peer review.
- 6.A survey of doctors and nurses six months after implementation to assess the stability and effectiveness.

#### **Result**

The overall system performance was found to be stable after six months.

16 ED physicians and 11 nurses participated the evaluation survey. The mean scores of doctors and nurses about satisfaction on an eight-points Likert-scale were 6.25(SD

1.73) and 4.36 (SD1.57) respectively with a statistical significant difference between the two parties( $P<0.01$ ). The mean scores for “facilitate decision-making”, “shared situation awareness” and “information sharing” were 5.3(SD2.18), 5.63(SD1.93) and 5.48(SD1.83) respectively.

Organization of information for data entry ( $r=0.723$ ,  $P<0.05$ ), prompts for input ( $r=0.78$ ,  $P<0.05$ ), error messages ( $0.778$ ,  $P<0.01$ ), learned to use quickly ( $r=0.764$ ,  $P<0.01$ ), easy to learn to use ( $0.762$ ,  $P<0.01$ ), quickly became skillful( $r=0.735$ ,  $P<0.005$ ) and easily reading characters on screen ( $r=0.714$ ,  $P<0.01$ ) were highly correlated with overall satisfaction for nurses. On the other hand, physicians found system reliability ( $r=0.722$ ,  $P<0.05$ ) was the major concern to support the domain of situation awareness.

In conclusion, both doctors and nurses satisfied with the system and emergency physicians had an higher rating than nurses in all aspects about the system.