



Pre-Hospital Care Arrival Notification in Major Trauma Patients: Improving the Emergency Medicine Trauma Team Activation and the Zero Point Trauma Survey

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Background

In Malaysia, 24 out of 100,000 people die annually due to trauma, making it one of the highest in South East Asia as well as putting trauma as the 5th cause of all-cause of mortality in Malaysia. [S.J MY, 2019]] Therefore, trauma systems are in place to reduce the morbidity and mortality of trauma as well as to improve the community health. Pre hospital trauma care has direct effect on patients' survival [Guyette, 2021].

Therefore, this article aims to investigate of incorporating Pre hospital Announcement, Revised Trauma Score, Tier 1 and Tier 2 Trauma Alert systems together with ground zero assessment in pre hospital settings by the Pre-Hospital team to improve patients access to care, allowing for timely lif e-saving intervention which would directly improve patients outcome [Mitra, 2019].The article was done f rom the attendance at the Emergency Department Hospital Selayang, Damage Control Resuscitation Suites (DCS) and the aforementioned systems were systems were recently established.

Methodology

All patients presenting with Major Trauma (using the Revised Trauma Score) f rom February 4th till May 30th, 2023, were included in this article.

The damage control resuscitation suite for trauma patients set up and used as the data collection point. The data collected within the period to show case load since inception. A total of 76 patients were triaged to Damage Control Resuscitation Suites during the period and their registration has been logged. The data then collected in spreadsheets and then analysed.

The study is looking at the numbers of the trauma cases that were triaged to Damage Control Resuscitation Suite with Pre-Hospital Announcement made, and the numbers the Trauma Alert Tier 1 and Trauma Alert Tier 2 has been activated.

Results

During the time of study f rom February 4th till May 30th, a total of 75 patients presented to the damage control resuscitation suite, brought by Pre-Hospital Care team. Ground zero assessments were made by the team and Pre-Hospital Announcement were made prior to their arrival.

Upon arrival, assessments were made in the damage control resuscitation suite, and Trauma Alert was activated - Tier 1 and Tier 2.

Out of 75 patients, 66 patients (88%) had Pre Hospital Announcement made. Out of the 66 patients, 60 patients (91%) had Trauma Alert Tier 1 activated.

Out of 66 patients, 20 patients (30%) had tier 2 activation which shows the pre-arrival notifications are important as it can even benefit the patient in going for invasive treatment as other teams including but not limited to General Surgery, Orthopaedics & Traumatology and Anaesthesiology & ICU are activated.

Out of the 20 patients, 5 patients (25%) of them were sent to Operating Theatre from Emergency Department and 7 patients (35%) were sent to critical care settings from the DCS.

Discussion & Conclusion

Pre arrival notification is very important as it prepares the ED to receive the patient (Duason *et al.*, 2021). 91% tier 1 activated shows the zero point survey is done by the ED upon receiving a major trauma pt. 30% even had a tier 2 activation that shows the pre arrival notifications are important as it can even benefit the patient in going for a invasive treatment as even surgery Ortho and anaesthesia are involved -hospital notifications in major trauma patients play a big role in the readiness of Emergency Department to receive trauma patients and prepare for the best care of the patient. Not only it helps increase access to timely trauma critical care and prepare patients for invasive treatments, it also can decide the disposition of the patients (Remick *et al.*, 2019).

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