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En route Care: Advancing Trauma Care through Handoffs (E-CATCH) AN INTERIM ANALYSIS OF PREHOSPITAL DOCUMENTATION PRIOR TO INITIATION OF THE MIST REPORT

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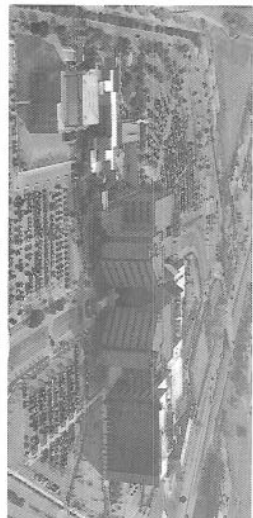


Background

Hospital care is influenced by pre-hospital care and EMS patient handoff communication; however, handoff communication is often lacking. There is a need for definitive evidence regarding the effectiveness of handoff communication. We strived to characterize the care of patients transported by EMS to a single, military level 1 trauma center (SAMMC) and evaluate documentation as it impacts overall care.

Objective

To describe the population of trauma patients transported to SAMMC via EMS in the year 2015, and to determine the incidence with which the elements of the MIST report were communicated to trauma department staff.



Methods

- Data was abstracted from the medical records of patients transported by EMS and treated in the SAMMC Emergency Department.
- Data included the EMS run form, call-in report, SAMMC Trauma Record, and procedures done in the first 24 hours of care.
- Over 2000 data entry fields were collected for our study database.
- This is an interim, descriptive analysis of an ongoing study.

Results

Table 1: Percent Documentation per Prehospital Element

18 Prehospital Elements associated with outcomes	From Scene count (%)
Mechanism of injury	365 (83)
Intrusion	4 (1)
Extraction time	5 (1)
Estimated crash speed	20 (5)
Death of an occupant in the same compartment	394 (100)
Anatomic location of injury	375 (85)
Blood loss in the field (quantity)	0 (100)
BP	351 (82)
GCS Score	341 (87)
Patient Age	392 (89)
End tidal CO ₂ value	8 (2)
Pulse rate	360 (81)
Respiratory Rate	289 (73)
Oxygen saturation	337 (86)
All treatments	
Medications, IV/IO, fluids	3 (1)
Prehospital intubation	7 (61.8)
Median Number of Elements Documented per Record	8.0 (7.0-8.3)

Figure 1: Percent Documentation per MIST component

M	I	S	T
Mechanism	Injuries	Vital Signs	Treatment
100%	95%	77%	100%

Figure 2: Procedures Performed within 24-hrs from Injury

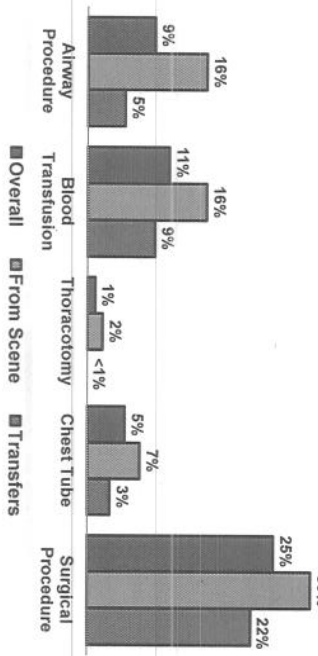


Figure 3: Mechanism of Injury

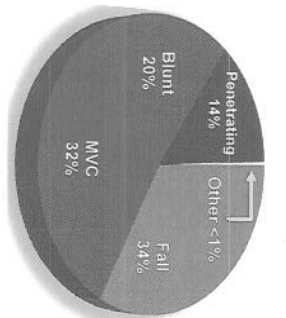
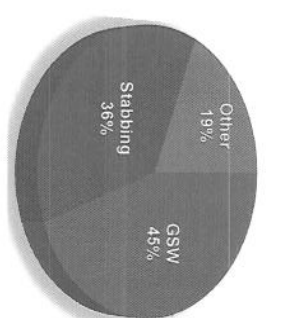


Figure 4: Penetrating Injuries



- 1000 Records
- 70% Male; median age of 48 years
- Half of POIs required at least one LSI such as (but not limited to) blood transfusions (n=63) and CPR (n=16) within 24 hours of injury
- 24-hr mortality rate for POI was 5%
- POI records contained documentation of a median of 8 [7.0-8.3] prehospital MIST elements

Limitations

- Data was collected retrospectively
- Subjectivity despite trained abstractors
- Data missing or unavailable

Conclusions

In this study, there was limited documentation reflective of care provided prior to arrival to the SAMMC ED. EMS documentation was available for less than a third of POI patients. Missing documentation was associated with the performance of LSIs and death within 24 hours of injury.

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This study was conducted under a protocol reviewed and approved by the Willford Hall Ambulatory Surgical Center Institutional Review Board and in accordance with the approved protocol. The opinions or assertions contained herein are the private views of the author and are not to be construed as official or as reflecting the views of the Department of the Army, the Department of the Air Force, or Department of Defense.