

Appendix 3

Theater Joint Trauma Record

General

Evidence-based medicine has become the goal of all specialties. Unfortunately, because of the realities of Combat Trauma, timely and accurate data collection and interpretation of results are difficult. Quality information on casualties for combatant commanders is essential because it facilitates optimal placement, utilization, and resupply of scarce medical resources, and rapid identification of new trends in wounding and treatment. Accurate, aggregated theater information is necessary to shorten quality improvement cycles in deployed treatment facilities.

Furthermore, these data placed on a website could provide rapid feedback to the sending physicians, allowing individual follow-up on their patients. These concepts are not new: they are routinely employed in the > 1,000 verified trauma centers in the US. Application of these principles to the battlefield, using a limited set of jointly approved data elements is described below. This data collection effort is not designed to be an extra step. The proposed form can be used as the trauma chart (both battle and nonbattle injury) and sent to the next evacuation Level with the casualty.

Situational Awareness

The revolution in warfighting which has digitized the battlefield to display friendly positions, intelligence, and engagements electronically has not been equally applied to the casualty side of the equation. This places demands on medical organizations to provide online and continuously updated status and location information on killed, wounded, ill, and psychologically impaired combatants and noncombatants; which includes both the casualty loss to the unit and the return to duty patient. This

need will only escalate, as medical situational awareness plays an increasing role in the tactical risk assessment process. At a minimum, commanders should be able to assess Killed In Action (KIA, died before reaching medical care/force wounded) and Died Of Wounds (DOW, die after reaching medical care/force wounded) in order to measure risk associated with operations and the capability of the medical force to control mortality.

$$\text{Percentage KIA} = \frac{\text{No. killed before reaching a BAS}}{\text{No. of casualties (killed + admitted)}} \bullet 100$$

$$\text{Percentage DOW} = \frac{\text{No. died after reaching a BAS}}{\text{No. of admitted}} \bullet 100$$

Where admitted is defined as any casualty that stays at a Level II facility or above. These definitions do not include the carded for record category in the denominator.

A breakdown of casualties by type of injury and the major body regions (ie, face, head and neck, chest, abdomen and pelvis, upper and lower extremities, and skin) will enable an analysis of injury patterns that can be utilized to design interventions resulting in a decrease in morbidity and mortality.

Other Uses

Data on types of wounds, their causes, and appropriate procedures have potential value in constructing predictive models for medical force development and placement, logistical delivery systems, and research on improved medical interventions. The history of improvements in medicine and surgery are grounded on the battlefield, and dissemination should not be limited to the isolated innovator with a personal spreadsheet for documentation. Individual providers at individual medical treatment facilities (MTFs) have long recorded clinical data and observations. This Joint Theater Trauma Record effort is an extension of their efforts.

Minimum Essential Data

In addition to recording the standard contents of the postprocedure note (ie, who did what, on whom, why, and a plan), the standard data components of a trauma registry are especially helpful (eg, demographics, circumstance and mechanism of injury, pre-hospital monitoring and care, hospital monitoring and care, outcome, participants, direct assessment against standards). Figure A-1 (see next four pages) is a sample form that can serve as both the trauma chart and the data entry source. These minimum essential elements have been agreed on by the US Army, Air Force and Navy. Data will be collated and placed on a website at the first Level IV facility in the evacuation chain.

Recommended Methods and Technology

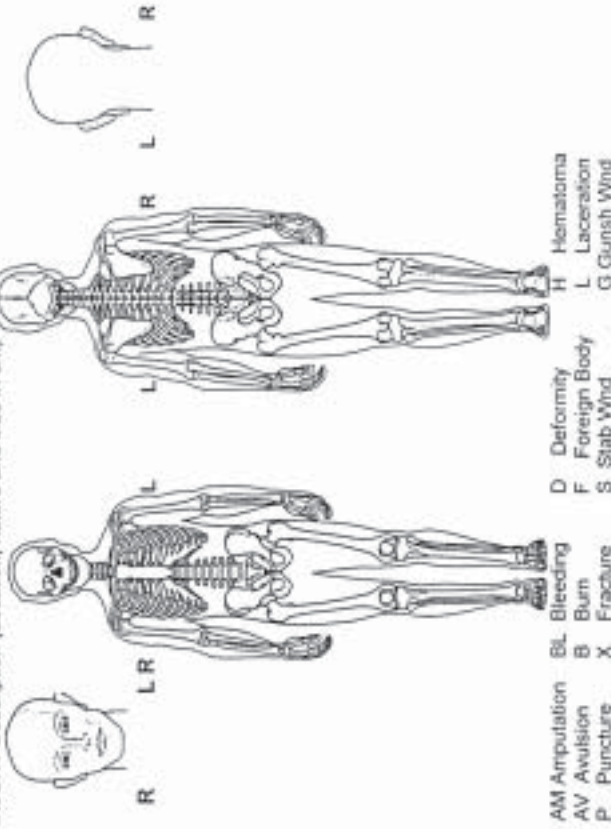
The process to document emergency trauma care can be employed on either the immature or mature battlefield. This would entail utilizing paper or computer-assisted electronic technology, respectively. In the ideal environment, this would be a single step process. Reality is much different. It is important to recognize that documentation should occur at all Levels, while aggregation of data should occur at the first Level that can support such activity. At a minimum, paper documentation should be used for each casualty and the chart should accompany the patient to the rear as evacuation occurs. When electronic records are available, this process will be simplified.

Trauma Record DISCHARGE SUMMARY			
MEDICATIONS:	LABS:	XRAYs:	PMH: Allergies:
REGION	DIAGNOSIS, PROCEDURES and COMPLICATIONS		
Face			
Head & Neck (incl C-spine)			
Chest (incl T-spine)			
Abdomen (incl L-spine)			
Pelvis			

UPPER /LOWER Extremities				
Skin				
DISPOSITION	<input type="checkbox"/> EVAC to _____ <input type="checkbox"/> RTD <input type="checkbox"/> DECEASED (see below)	Evacuation Priority	<input type="checkbox"/> ROUTINE <input type="checkbox"/> PRIORITY <input type="checkbox"/> URGENT	
DTG:				
Damage Control Procedures?	Y / N	Hypothermic (< 34°C)?	Y / N	Coagulopathy? Y / N
Cause of Death at _____				
ANATOMIC:				
<input type="checkbox"/> Airway <input type="checkbox"/> Head <input type="checkbox"/> Neck <input type="checkbox"/> Chest <input type="checkbox"/> Abdomen <input type="checkbox"/> Pelvis <input type="checkbox"/> Extremity (Upper/Lower) <input type="checkbox"/> Other				
PHYSIOLOGIC:				
<input type="checkbox"/> Breathing <input type="checkbox"/> CNS <input type="checkbox"/> Hemorrhage <input type="checkbox"/> Total Body Disruption <input type="checkbox"/> Sepsis <input type="checkbox"/> Multi-organ failure				
COMMENTS:				(printedName)
				SURGEON:

Trauma Record			
For use of this form, see DoD Memo Subject: Trauma Record, dtd 1 APR 04, the proponent agency is OTSG			
AUTHORITY: AR 40-66 PURPOSE: To provide a standard means of documenting all trauma care at echelons 1-3 ROUTINE USES: The "Blanket Routine Uses" set forth at the beginning of the Army compilation of systems of records notice apply. DISCLOSURE: This is protected health information. HIPAA laws apply		CASUALTY NAME: FIRST LAST CASUALTY SSN: _____	
MTF DESIGNATION: TYPE Arrive Date-Time Group (DTG): _____		Rank _____ Gender <input type="checkbox"/> Male <input type="checkbox"/> Female Unit _____ Date of Birth _____	
ARRIVAL METHOD: <input type="checkbox"/> Non-MED GND <input type="checkbox"/> WALKED <input type="checkbox"/> SHIP EVAC <input type="checkbox"/> CARRIED <input type="checkbox"/> GND AMB <input type="checkbox"/> Non-MED AIR <input type="checkbox"/> AIR AMB <input type="checkbox"/> OTHER _____		Nation <input type="checkbox"/> US <input type="checkbox"/> Host Nation <input type="checkbox"/> Enemy() <input type="checkbox"/> Coalition()	
Wounded By: <input type="checkbox"/> US/COALITION(Nation) _____ <input type="checkbox"/> ENEMY _____ <input type="checkbox"/> NonENEMY _____ <input type="checkbox"/> CIVILIAN (Nation) _____ <input type="checkbox"/> TRAINING _____ <input type="checkbox"/> SELF ACCIDENT _____ <input type="checkbox"/> SELF NON-ACCIDENT _____ <input type="checkbox"/> SPORTS-RECREATION _____ <input type="checkbox"/> OTHER: _____		Service <input type="checkbox"/> Civilian <input type="checkbox"/> NGO () <input type="checkbox"/> Combatant <input type="checkbox"/> USMC <input type="checkbox"/> Other _____ <input type="checkbox"/> Contractor <input type="checkbox"/> USAF _____ <input type="checkbox"/> USA _____	
Wound DTG: _____		PROTECTION: <input type="checkbox"/> UNK HELMET _____ FLAK VEST _____ CERAMIC PLATE _____ EYE PROTECTION _____ OTHER: _____	
Mechanism of Injury: <input type="checkbox"/> KNIFE / EDGE <input type="checkbox"/> GSW/BULLET <input type="checkbox"/> BLAST <input type="checkbox"/> BLUNT TRAUMA <input type="checkbox"/> CRASH(a/c, veh, pos) <input type="checkbox"/> SINGLE FRAGMENT <input type="checkbox"/> Chem/Rad/Nud <input type="checkbox"/> MULTI FRAGMENT <input type="checkbox"/> BURN (thermal, flash) <input type="checkbox"/> COLD		TRIAGE CATEGORY: <input type="checkbox"/> IMMEDIATE <input type="checkbox"/> MINIMAL <input type="checkbox"/> DELAYED <input type="checkbox"/> EXPECTANT GLASCOW COMA SCALE (circle one) 3 8 12 15 UNC STUPOR LETHARGY ALERT	
Mechanism of Injury: <input type="checkbox"/> CRUSH <input type="checkbox"/> BITE / STING <input type="checkbox"/> FALL <input type="checkbox"/> OTHER _____ <input type="checkbox"/> SMOKE Inhalation _____ <input type="checkbox"/> HEAT _____ <input type="checkbox"/> COLD _____		TIME Pulse _____ Temp _____ B/P _____ Resp _____ SpO ₂ _____	

INJURY Description (Location, nature and size in cm)



TX & PROCEDURES:	
SEDATED	
CHEM	
PARALYZED	
INTUBATED	
CRIC	
NEEDLE	
DECOMP	
Chest Tube	L R air/blood
IO line	
COLLOID	ml
CRYSTALLOID	LRNS/HTS ml
TOURNIQUET	Time on Time off
Collar / C-spine	
Back board	
HEMOSTATIC	
DEVICE	
OXYGEN	Liters/min.
RBC	Units
FFP	Units
CRYO	Units
Pits	Packs
Fresh Whole Bld	Units
rFVlla	mcg/kg
EXT Fix /splnt	Extremity

OR Start	Vent On	ICU in
Stop	Off	Out
PROVIDER:	SPECIALTY:	

