A NATIONAL TRAUMA CARE SYSTEM
Integrating Military and Civilian Trauma Care Systems to Achieve Zero Preventable Deaths After Injury
Implications for EMS
Douglas F. Kupas, MD, EMT-P, FAEMS
Geisinger Health System, Danville, PA
@paemsmd

OMG
Study Sponsors

- American College of Emergency Physicians
- American College of Surgeons
- National Association of Emergency Medical Technicians
- National Association of EMS Physicians
- Trauma Center Association of America
- U.S. Department of Defense's U.S. Army Medical Research and Materiel Command
- U.S. Department of Homeland Security's Office of Health Affairs
- U.S. Department of Transportation's National Highway Traffic Safety Administration

Committee on Military Trauma Care's Learning Health System and Its Translation to the Civilian Sector

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Charge to the Committee (abridged)

- Identify and describe the key components of a learning health system necessary to optimize care of individuals who have sustained traumatic injuries in military and civilian settings.

- Consider strategies necessary to more effectively translate, sustain, and build upon elements of knowledge and practice from the military's learning health system into the civilian health sector and lessons learned from the civilian sector into the military sector.
The Urgency
- Military: Iraq and Afghanistan – Nearly 1,000 (15%) potentially survivable injuries.
- Civilian: in 2014 - as many as 30,000 (20%) potentially preventable.
- Active shooter and MCIs.

Traumatic injury accounts for nearly half of all deaths for Americans under 46 years of age and cost the nation $670B in 2013.

Context

- The Urgency
  - Military: Iraq and Afghanistan – Nearly 1,000 (15%) potentially survivable injuries.
  - Civilian: in 2014 - as many as 30,000 (20%) potentially preventable.
  - Active shooter and MCIs.

Components of a continuously learning trauma care system:
- Digital capture of the patient care experience
- Coordinated PI and research generating EBM best practices
- Timely dissemination of knowledge
- Leadership-instilled culture of learning
- ? Focused Empiricism

Patient centeredness is the core of a learning trauma care system.
War vs Interwar
Experience gained is rapidly lost

The Vision: A National Trauma Care System
Ensure continuous improvement of trauma care best practices in military and civilian sectors.

"Where you are injured should not determine if you live or die."

Findings and Recommendations

The Aim (Rec 1) 11 Recommendations

The Role of Leadership
- National-Level Leadership (Rec 2)
- Military Leadership (Rec 3)
- Civilian Sector Leadership (Rec 4)

An Integrated Military–Civilian Framework for Learning to Advance Trauma Care
- Improving the Collection and Use of Data (Recs 5 and 9)
- A Collaborative Research Infrastructure in a Supportive Regulatory Environment (Recs 7 and 8)
- Systems and Incentives for Improving Prehospital Trauma Care Quality (Rec 10)
- Developing Expertise (Recs 6 and 11)
Without an aim, there is no system (Deming).

Recommendation 1: The White House should set a national aim of achieving zero preventable deaths after injury and minimizing trauma-related disability.

- The 75th Ranger Regiment demonstrated that achieving zero preventable deaths is an achievable goal when leadership takes ownership of trauma care and data is used for continuous reflection and improvement.
- Elsewhere – variations in practice with suboptimal outcomes for injured patients

Recommendation 2: The White House should lead the integration of military and civilian trauma care to establish a national trauma care system. This initiative would include assigning a locus of accountability and responsibility that would ensure the development of common best practices, data standards, research, and workflow across the continuum of trauma care.
Military Leadership

Findings:
– No overarching authority for medical readiness to deliver combat casualty care.
– Responsibility, authority, and accountability for battlefield care are diffused across central and service-specific medical leadership, as well as line leadership.
  • CENTCOM v. AFRICOM
– An inconsistent level of understanding by senior medical and line leadership of the value of a learning trauma care system impedes continuous learning and improvement.

Civilian Sector Leadership

Findings:
– Patchwork of systems for trauma care in which mortality varies twofold between the best and worst trauma centers in the nation.
– There is no federal civilian health lead for trauma care (including prehospital, in-hospital, and post-acute care) to support a learning health system for trauma care.

Organizing and Demonstrating Effectiveness

Bidirectional exchange occurs at all levels, diffusing across entire system
Evidence-based interventions
An Integrated Military – Civilian Framework for Learning to Advance Trauma Care

- Dissemination of EBGs?
- Commercial tourniquets required on every ambulance?
- IFAC – Military, LEO, EMS?

Statewide ALS Protocols
Mandatory/Model
Findings:
- The collection and integration of trauma data across the care continuum is incomplete in both the military and civilian sectors.
- Data sharing is impeded by political, operational, technical, regulatory, and security-related barriers.
- Performance transparency is lacking. Providers lack real-time access to their performance data.
- No process exists for benchmarking trauma system performance across the entire continuum of care within and between the military and civilian sectors.
- Military participation in QI is minimal; only a single military hospital participates in an ACS TQIP.

Recommendation 5: The Secretary of HHS and the Secretary of Defense, should work jointly to ensure that military and civilian trauma systems collect and share common data spanning the entire continuum of care.
- DoD and the VA accountable for linking of patient data
- ACS, NHTSA, and NASEMSO should work jointly to enable patient-level linkages across the NEMSIS National EMS Database and the National Trauma Data Bank.

Recommendation 9: All military and civilian trauma systems should participate in a structured trauma quality improvement process.
- e.g. JTS
Recommendation 10: Congress, in consultation with HHS, should identify, evaluate, and implement mechanisms that ensure the inclusion of prehospital care (e.g., emergency medical services) as a seamless component of health care delivery rather than merely a transport mechanism.

Systems and Incentives for Improving Prehospital Trauma Care Quality

Recommendation 10: (continued)
Possible mechanisms that might be considered include:
- Amendment of the Social Security Act such that EMS is identified as a provider type.
- Modification of CMS’s ambulance fee schedule to better link the quality of prehospital care to reimbursement and health care delivery reform efforts.
- Establishing responsibility, authority, and resources within HHS to ensure that prehospital care is an integral component of health care delivery.
Developing Expertise: Ensuring an Expert Workforce

Military trauma teams permanently assigned to a large number of academic civilian trauma centers: high volume and high quality

NATIONAL TRAUMA CARE SYSTEM

Civilian Trauma System

Military Trauma System

Shared aims, infrastructure, system design, data, best practices, and personnel

Free PDF of the report available at: nationalacademies.org/TraumaCare

Additional materials available on the Academies website
- 4-page report in brief
- Recommendation list
- Infographic
- Slide set

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Thank you!