

Origins, Conduct & Recommendations of the National Academies' Report on a National Trauma Care System

**Todd E. Rasmussen, MD, FACS
Colonel USAF MC**

**Director, US Combat Casualty Care Research Program
Fort Detrick, Maryland**

**Harris B Shumacker, Jr. Professor of Surgery
Uniformed Services University - Walter Reed Department of Surgery
Bethesda, Maryland**

Disclaimer

The views expressed in this presentation are those of the presenter and do not reflect official positions of the Army, Air Force or the Department of Defense

Unique Backdrop for Current NASEM Effort



- Longest period of combat operations in US history
- First long period of combat with all-volunteer force

NATO
UNCLASS

Wounded: 53,311

Deaths: 6,891

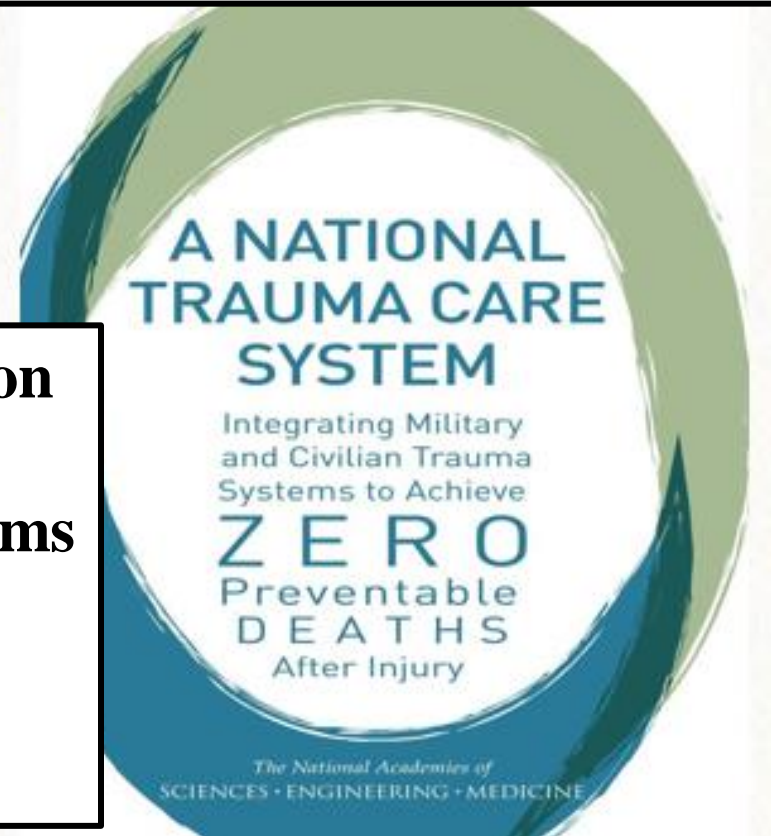
[defense.gov/news/casualty](https://www.defense.gov/news/casualty)

National Academy of Sciences, Engineering & Medicine 2016 report

Free PDF of the report available at:

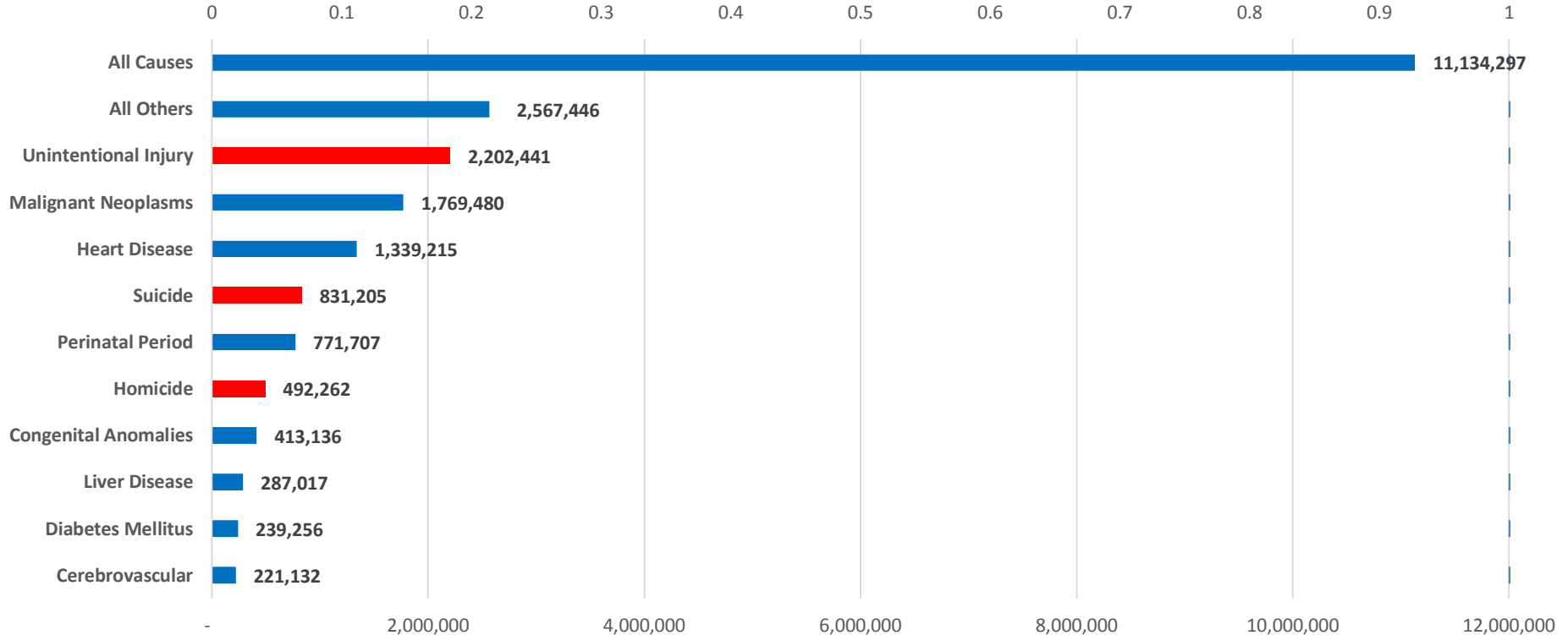
<http://www.nationalacademies.org/hmd/Reports/2016/A-National-Trauma-Care-System-Integrating-Military-and-Civilian-Trauma-Systems.aspx>

- **Blueprint for National Trauma Action Plan building on progress made by military & civilian centers and systems**
- **Potential plank in national health platform; building health infrastructure**



Societal Cost of Trauma & Injury in US

Years Potential Life Lost 2014



Imperative for Care

ORIGINAL ARTICLE

Increasing Trauma Deaths in the United States

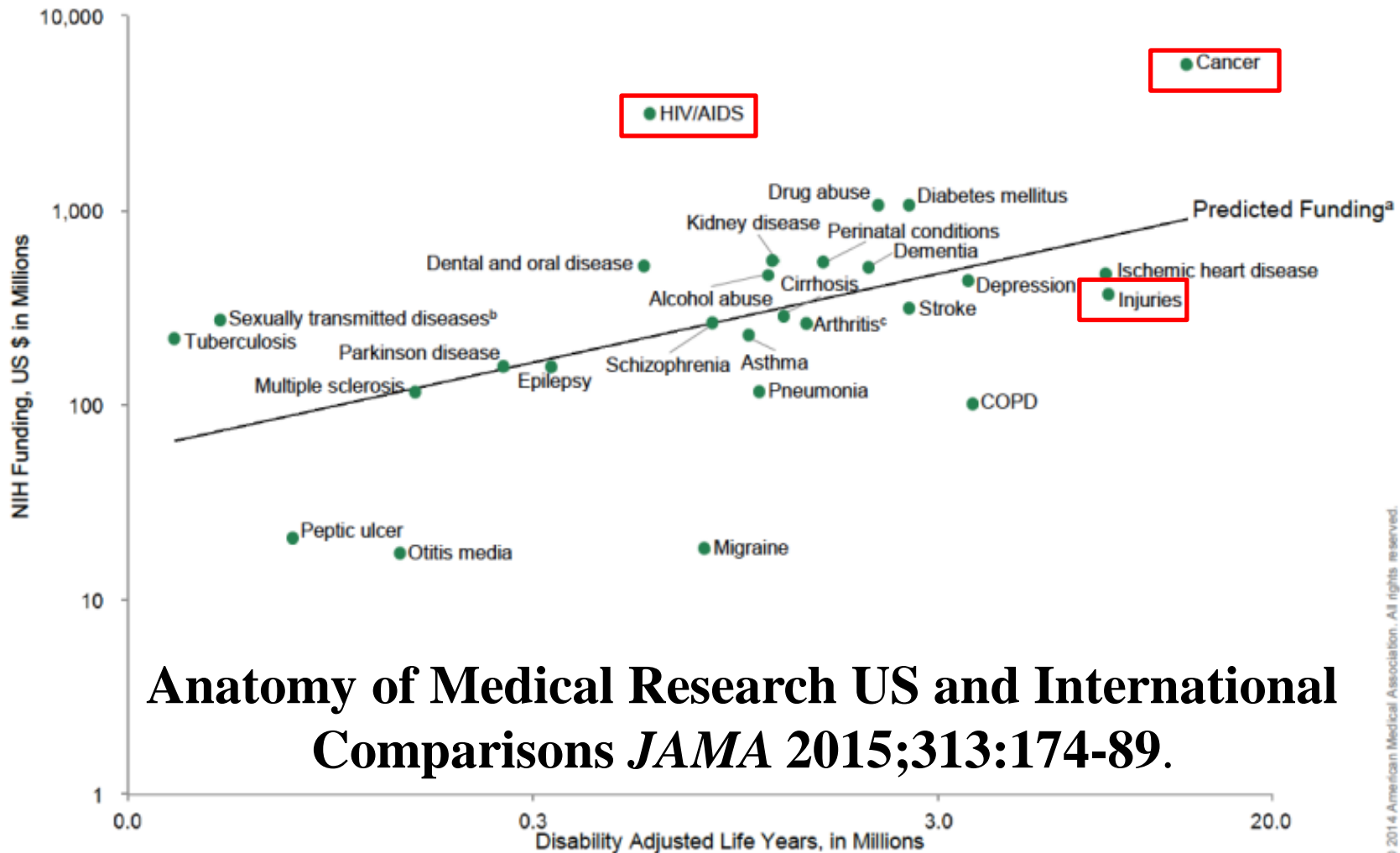
Peter Rhee, MD, MPH, Bellal Joseph, MD, Viraj Pandit, MD, Hassan Aziz, MD, Gary Vercruyse, MD, Narong Kulvatunyou, MD, and Randall S. Friese, MD

CONCLUSIONS

The trauma death rate has alarmingly increased since 2000, whereas the cancer and heart disease death rates have decreased. As of 2010, trauma is now the leading cause of death in individuals 46 years and younger. It remains the single, largest cause for years of life lost. The number of trauma deaths is now higher than the number of cancer deaths until age 47—and higher than the number of heart disease deaths until age 49. The changing epidemiology of trauma mortality must be a focus of robust future investigations to make strides in preventing and treating trauma, the greatest increasing killer in our era.

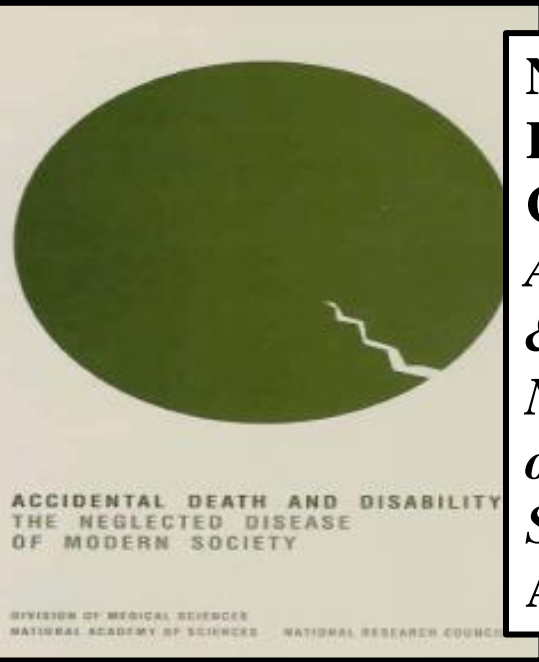
Ann Surg 2014;260(1):13-21

- **Death from trauma & injury increased at a rate higher than that of population growth**

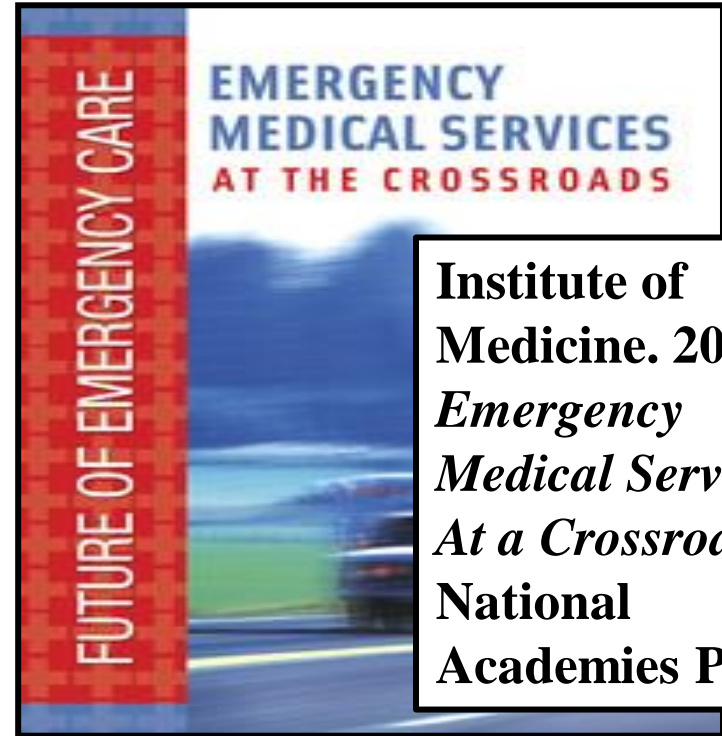


Anatomy of Medical Research US and International Comparisons *JAMA* 2015;313:174-89.

Four Decades of Reports (1966-2006)



National Research Council. 1966.
Accidental Death & Disability: The Neglected Disease of Modern Society. National Academies Press.



Institute of Medicine. 2006.
Emergency Medical Services: At a Crossroads. National Academies Press.

Consistent Recommendations:

Trauma care has suffered from lack of recognition as major health problem; thus, so has federal support for systems and research

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[defense.gov/news/casualty](https://www.defense.gov/news/casualty)

Origins of 2016 National Academies' Report

Gulf War and Health, Volume 9
Long-Term Effects of Blast Exposures

Committee on Gulf War and Health: Long-Term Effects of Blast Exposures

Board on the Health of Select Populations

INSTITUTE OF MEDICINE
OF THE NATIONAL ACADEMIES

February 2014



- **2013/2014 report Commissioned by Department of Veterans Affairs**
- **Incomplete portrayal of the impact of war-related trauma & its implications**

Origins of 2016 National Academies' Report

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Missed the mark

February 2014

INSTITUTE OF MEDICINE
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Advising the Nation. Improving Health.

2014 IOM Report Missed the Mark

CURRENT OPINION

A perspective on the 2014 Institute of Medicine report
on the long-term effects of blast exposures

Todd E. Rasmussen, MD, Eric A. Elster, MD, Terry M. Rauch, PhD,
and Kelley A. Brix, MD

J Trauma Acute Care Surg 2014;77(3 Suppl 2):S237-S239

- **Used inconsistent terminology relating to blast injury**
- **Insistence on examining only “high-level, published evidence” which neglected real-time experience**

2014 IOM Report Missed the Mark

A perspective on the 2014 Institute of Medicine report on the long-term effects of blast exposures

Todd E. Rasmussen, MD, Eric A. Elster, MD, Terry M. Rauch, PhD,
and Kelley A. Brix, MD

Oddly, the document made only two recommendations for military medical research: (1) development of blast sensors and (2) a screening test to be conducted on young men and women at the time of their enlistment. It would have been better had the report made no recommendations for DoD research. While these topics are fascinating, war-tested military providers and scientists agree that the DoD's research agenda must be much broader or more inclusive.

J Trauma Acute Care Surg 2014

A New Report was Commissioned



**Military Trauma Care's Learning Health System and its Translation to the
Civilian Sector**

Board on Health Sciences Policy
Board on the Health of Select Populations

- **Initiated in 2014
through DoD
Combat Casualty
Care Research
Program**

- **American College of Surgeons**
- **American College of Emergency Physicians**
- **National Academy of EMS Physicians (NAEMSP)**
- **National Association of Emergency Medical Technicians**
- **Department of Transportation's NHTSA**
- **Department of Homeland Security's Office of Health Affairs**
- **Trauma Center Association of America**

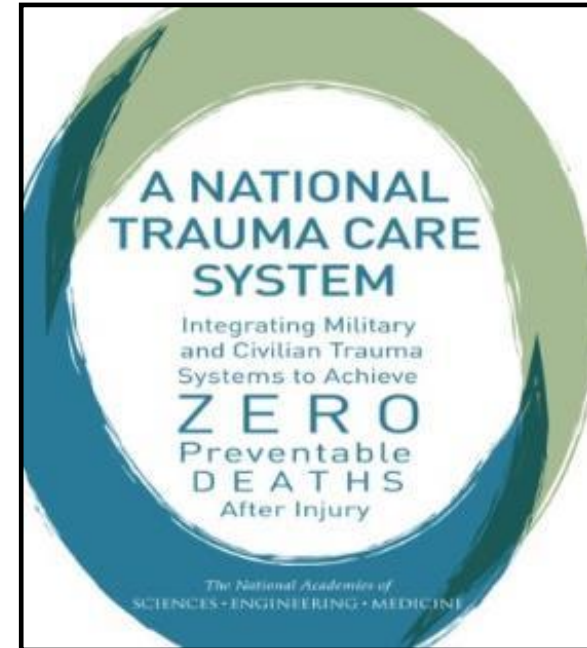
Timeline & Result

**May
2015**

Public Forums & Internal Deliberations

**June
2016**

- **Part I – Introduction & Framework**
- **Part II - Assessments**
- **Part III - 11 Recommendations**
- **Appendices including 5 case studies**



2016 NASEM Report Conclusions



Perspective

Wartime Lessons — Shaping a National Trauma Action Plan

Todd E. Rasmussen, M.D., and Arthur L. Kellermann, M.D., M.P.H.

N ENGL J MED 375;17 NEJM.ORG OCTOBER 27, 2016

- As important as *what* the military's learning health system in trauma care produced is *how* it produced it...
- Timely report for US which is grappling with impact of trauma & injury (i.e. accidents, mass shooting, and natural disasters)

How To Get There?

CURRENT OPINION

A national trauma care system: From call to action

Todd E. Rasmussen, MD, *Bethesda, Maryland*

J Trauma Acute Care Surgery 2016;81(5):813-15

- Aim of “zero preventable deaths” similar to other national goals to spur progress in challenging conditions (i.e. “moonshot” to end cancer, “countdown to cure” for HIV & CARB initiative)...
- Need unity of effort – among and between *professional organizations* and *federal and state governmental entities*...

How to Get There?

- **Need policy to make National Trauma Action Plan a national priority (write new or amend existing policy)**
 - **e.g. in the form of Executive Order or Action...**
- **NASEM report recommendation #1 identifies White House (EOP) as focal point**
 - **National & domestic implications & thus relevant to *Domestic Policy & National Security Councils***
- **Legislative component also needed & initial step is 2017 NDAA (<https://www.congress.gov/bill/114th-congress/house-bill/4909/text#toc-HD860BD0F34804DE8A44749ADB946A5E2>)**

How to Get There?



NATIONAL DEFENSE
AUTHORIZATION ACT

December 23rd, 2016 President signs 2017 NDAA

- **Title VII-Healthcare Provisions, Subtitle A – Reform of TRICARE & Military Health System**
 - **Sec 706 Establish high performance mil-civ systems**
 - **Sec 707 Joint Trauma System**
 - **Sec 708 Trauma Education & Training Directorate to assure clinical readiness (establish civilian partnerships)**

How to Get There?

- **National Trauma Action Plan would accommodate roles of federal & state governments by having priority and common fundamentals & *governance and framework* set at federal level & allowing states implement specifics**
- **Setting a National Trauma Action Plan as a priority allows for creation of common fundamentals, directs federal departments & creates incentives for states**
- **...but implementing and specifics left to the states' and regions' existing trauma centers & systems**

Common Fundamentals of National Trauma Action Plan

- 1. National Trauma System (build on existing & or establish new state systems infrastructure..)**
 - Trauma & injury data *collection & linkage* across spectrum of care (pre-hospital and facility-based)**
 - Participation in region or statewide performance improvement processes (data to *outcomes measures*)**
 - Recognition of common or best practice guidelines**
 - Recognize & promote of common training/ qualifications guidelines for various providers**

Common Fundamentals of National Trauma Action Plan

- 2. National Trauma Research Agenda (rebalance of priority, *funding & direction*)**
 - Rebalance non-DoD federal sources of funding (i.e. NIH) to accommodate trauma & injury institute**
 - Emphasis trauma & injury research as enduring DoD priority (i.e. recognized as core DoD priority)**
 - Create accommodating regulatory environment acknowledging trauma-relevant endpoints in evaluation and approval of drugs & devices**

Common Fundamentals of National Trauma Action Plan

- 3. *Mil-Civ Trauma Workforce (training & readiness)***
 - Build on existing & establish new partnerships for military providers to maintain proficiency & readiness in civilian centers and systems**
 - Promote common standards for agreements**
 - Promote common modes of credentialing to allow military providers to be active in civilian centers**
 - Improve modes of reimbursement such that civilian centers are open to integrating military providers**

Summary

- **2016 National Academies' report is the 7th over past 50 years but the 1st commissioned by DoD at the end of a long period of combat**
- **Aim of “zero preventable deaths” provides proven & compelling rallying cry for the country (i.e. akin to cancer moonshot...)**
- **A National Trauma Action Plan - to include a national trauma system, research agenda & office of military integration - stands to save tens of thousands of lives annually in the US (domestic resilience), improve military readiness & national security.**
- **Implementation will require policy *and* legislation that incentivize and enable implementation at the state level**