#### MAYO CLINIC HOW THE MILITARY PURSUED A POLICY OF ZERO PREVENTABLE DEATHS AND HOW IT APPLIES TO CIVILIAN CASUALTIES Todd E. Rasmussen, MD

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### **DISCLOSURES**

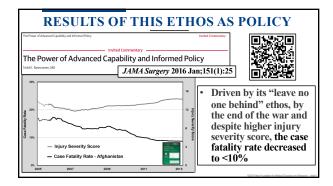
- Patent(s) in REBOA & vascular shunt technologies (stock options as part of licensing or consulting agreements)
- Mayo Clinic receives funding from Humacyte to support conduct of physician-sponsored IND study of the Human Acellular Vessel (HAV) now the Acellular Tissue-Engineered Vessel (ATEV)
- Publishing and editing royalties relating to educational products from Elsevier and Wolters Kluwer – LLW



# ETHOS PURSUED BY MILITARY SURGERY

Death on the battlefield (2001–2011): Implications for the future of combat casualty care

- Brian J. Eastridge, MD, Boherr L. Mahry, MD, Poter Seguin, JMD, Joyce Castroll, MD, Torritt Tope, MD, Paul Urike, MD, Oga Maler, Tamer Zahka, Lingan Celeforders, Todd E. Rumawn, MD, Frank K. Bodier, MD, Rowsell S. Korval, MD, John B. Holcomb, MD, Charles Wade, PBD, Howard Champion, MD, Nimil Lawnick, Leon Morex, MD, and Urane H. Blackbourne, MD J Trauma Acute Care Surg 2012;73(Suppl1):S431-S437 • Study of 4,596 killed in action; 24% were potentially survivable • Extraordinary study using postmortem and clinical expertise to
- understand every single death; "leave no one behind"
- Allowed the military to hone training, MEDEVAC, resuscitation and surgical care to mitigate mortality over time



# NEMO RESIDEO "LEAVE NO ONE BEHIND"



- The process of how military surgery held fast to this "leave no one behind" ethos and reduced case fatality rates provides lessons and allows planning for future military conflicts
- This approach and many of the system-wide lessons learned also resulted in a National Academy of Medicine study which today serves as a blueprint for a civilian national trauma system

# TRANSLATION TO HOMELAND SECURITY

The National Academy of Medicine issued a report on Military's Lessons and Translation to Civilian Sector

- The report outlined the development of the U.S. casualty care system and its research investment to deliver new products and approaches
- Issued after the wars, this report was a culmination of how the military achieved historically low case fatality rates among injured service members
- This report provided a blueprint for a National Trauma System that includes more comprehensive integration between military surgery and civilian medical centers <u>http://www.nationalacademies.org/hmd/Reports/2016/A-National-Trauma-Care-System/Integrating-Military-and-Civilian-Trauma-Systems.asox</u>



TRANSLATION TO HOMELAND SECURITY

A Shared Ethos: The Military Health System Strategic Partnership with the American College of Surgeons

Mary Mangaret Knudson, MD, FACS, CAPT Eric E Elster, MD, FACS, (US Navy), BBIG GEN Jonathan Woodson, MD, FACS, (US Anny), Garrett Kirk, MPH, Patricia Turner, MD, David B Hoyt, MD, FACS

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- The DoD renewed, and for first time formalized a Strategic Partnership between its Military Health System and the American College of Surgeons
- Lines of effort to integrate military surgery into civilian sector to improve its readiness, quality, research and development of new products
- Reconstituted the Excelsior Surgical Society which had been started by Edward Churchill, Michael DeBakey and group of surgeons after WW II

### CONCLUSION

- U.S. military's experience in the long wars in Afghanistan and Iraq was the first to be conducted with an all-volunteer force including physicians and specialty trained vascular surgeons
- Driven by a "leave no one behind" ethos, military reduced casefatality rates to the lowest in the history of war and provided a wealth of experience that translates to the civilian sector
- Policy, legislation and partnerships with American College and civilian centers have strengthened military readiness and supported the nation's ability to respond to accidents, acts of violence and natural disasters (homeland security)