



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

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

*Surgeons in a current war never begin where the surgeons in the previous war left off; they always go through another long learning period.*

Dr (Col) Edward D Churchill<sup>1</sup>

## BACKGROUND

The US military did not go off to the wars in Iraq and Afghanistan with a trauma system in place, but by necessity, an extremely effective system was developed by military surgeons who were trained in the current civilian trauma system, and it was based on the principles developed by the American College of Surgeons Committee on Trauma.<sup>2,3</sup> The resulting Joint Theater Trauma System spans thousands of miles over 3 continents and includes 5 levels of trauma center care, a flying intensive care unit in the form of the Air Force's Critical Care Air Transport Teams, 43 clinical practice guidelines, a detailed trauma data registry, and a weekly worldwide performance improvement conference. This comprehensive system has resulted in the lowest wartime case fatality rate ever recorded, which is particularly remarkable when one considers that the severity of injuries has steadily increased over the course of this 15-year conflict, with the transition from gunshot wounds in Iraq to increasingly effective explosive devices in Afghanistan. However, because the nature of the current conflicts have changed and casualties have thankfully diminished, it is critical that the elements of this trauma system, which has saved so many lives and limbs, are maintained and ready,

especially given the current uncertain state of the world. To that end, the theater trauma system has evolved into the Joint Trauma System Defense Center of Excellence (JTS DCoE). This Center includes the military's requirements-driven trauma research program referred to as the Department of Defense (DoD) Combat Casualty Care Research Program and the DoD's medical education and training institutions at The Uniformed Services University of the Health Sciences in Bethesda, MD and the Military Enlisted Training Center in San Antonio, TX. Sustainment of this learning health system in trauma is particularly relevant given that future combat scenarios may be more isolated and complex and less amenable to what was readily available for trauma care during the last wars.

It is worth noting that calculations based on somewhat limited data from the Joint Trauma System (circa 2005) suggest that the case fatality rate was closer to 20% than to the 9%, where it currently resides (Fig. 1).<sup>4,5</sup> Although the maturation of the military's learning system in trauma has certainly contributed to the improved survival rate, so too did the maturation of deployed surgeons. Data compiled by both civilian and military investigators have demonstrated that at the beginning of the conflicts in Iraq and Afghanistan, the majority of surgeons who were deployed for the first time were within a year or 2 of completion of their surgical residencies, many had not yet been certified by the American Board of Surgery, and most had limited trauma training.<sup>6</sup> Less than half had received any trauma-specific pre-deployment training. With the current focus on minimally invasive surgical procedures during residency and the lack of intensive trauma experience in most military general surgery programs, there is a legitimate concern that the next generation of deployed surgeons will be ill prepared to care for combat casualties or associated victims of mass casualty events.

In addition to caring for those wounded on the battlefield, surgeons in the military must also provide surgical services for the nearly 10 million beneficiaries who are entitled to receive care at military treatment facilities

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From the Department of Surgery, San Francisco General Hospital/University of California, San Francisco, San Francisco, CA (Knudson); the Department of Surgery, Uniformed Services University Bethesda MD (Elster); The Pentagon, Washington, DC (Woodson); and the American College of Surgeons, Chicago IL (Kirk, Turner, Hoyt).

Correspondence address: Mary Margaret Knudson, MD, FACS, San Francisco General Hospital/U. of California, San Francisco, Department of Surgery 3-A, 1001 Potrero Ave, San Francisco, CA 94110. email: [pknudson@sfghsurg.ucsf.edu](mailto:pknudson@sfghsurg.ucsf.edu); [peggy.knudson@ucsf.edu](mailto:peggy.knudson@ucsf.edu)

### Abbreviations and Acronyms

ACS COT	= American College of Surgeons Committee on trauma
DoD	= Department of Defense
JTS DCoE	= Joint Trauma System Defense Center of Excellence
MHSSPACS	= Military Health System Strategic Partnership American College of Surgeons
MTF	= military treatment facilities

(MTF) as part of the DoD Military Health System (MHS). In the private sector, quality of care data are being evaluated, and in some cases (such as with the Centers for Medicare and Medicaid), quality indicators are being linked to reimbursement. In response, many hospitals have enrolled in the American College of Surgeons' National Surgical Quality Improvement Program (NSQIP). The NSQIP program provides participating hospitals with risk-adjusted analyses of their submitted data and allows comparison among hospitals regarding observed-to-expected mortality and morbidity rates after surgery. Also, NSQIP consortiums have been developed that allow participating hospitals to develop best practices by learning from others. To date, only a handful of the MTF are participating in NSQIP, and there has not yet been an opportunity for them to work together to solve common quality issues. This is particularly true of the low-volume MTF.

Injury, despite being the second most expensive public health problem in the United States, does not have a dedicated research institute at the NIH, and there are few non-DoD federal dollars available for injury-related research. As a result, the DoD remains the major funder of trauma research through the Combat Casualty Care Research Program.<sup>7</sup> During inter-war periods, research funds within the DoD that were designated for trauma are in danger of being diverted toward other research topics such as infectious disease, human performance, etc. This is concerning because the military-directed trauma research has provided a high rate of translation of lessons in the form of knowledge and material solutions, which advance both military and civilian trauma care.

In order to address the concerns outlined above, a historic agreement was recently signed between the Military Health System (MHS) and the American College of Surgeons (ACS). The ACS has a long military history, beginning during World War I, when many surgeons left their academic institutions in order to provide care for the wounded overseas. These surgeons included the founders and early officers of the ACS. Similarly, surgical

leaders of the ACS have enjoyed a mutually beneficial partnership with our nation's only military medical school, the Uniformed Services University of Health Sciences in Bethesda. More recently, the ACS, the American Association for the Surgery of Trauma, and the Society of Vascular Surgery have partnered with the United States military to provide funding for the Senior Visiting Surgeon program.<sup>8</sup> This program allowed civilian surgeons to participate together with our military colleagues in operative and critical care of the wounded who were evacuated from the theaters of war in Iraq and Afghanistan and transported to Landstuhl Regional Medical Center in Germany. During a 7-year period, more than 200 civilian trauma and vascular surgeons volunteered their time for this program, as did many orthopaedic surgeons and even some neurosurgeons, fostering mentorship for young military surgeons and assisting in sharing knowledge through scientific presentations and publications.<sup>9</sup> With the newly signed charter, the MHS and the ACS have agreed to work together on a number of issues including education and training, research, quality, and systems-based practice. This strategic partnership has been named the Military Health System Strategic Partnership American College of Surgeons (MHSSPACS). The specific activities of the MHSSPACS are outlined below.

## THE MILITARY HEALTH SYSTEM STRATEGIC PARTNERSHIP AMERICAN COLLEGE OF SURGEONS

### Education, training and sustainment

As noted above, there is currently no standard surgical preparation for the military surgeon who is being deployed. Additionally, most military surgeons are based at military treatment facilities where trauma care is not routinely provided. Using the expertise of experienced military surgeons who have been deployed, and data and guidance from the JTS DCoE, the MHSSPACS is helping to compile the skill-set needed for a surgeon deployed to far-forward operational scenarios. These military subject matter experts are working with the ACS Division of Education in order to build on existing ACS and military coursework to develop didactic materials and procedural-based training tools for this integrated military-specific curriculum. The experienced educators at the ACS will also assist in developing the evaluation criteria needed to judge an individual's performance on both aspects of the curriculum (competency-based evaluation). The ACS Accredited Education Institutes will be used whenever possible for this

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