

Saving the Military Surgeon: Maintaining Critical Clinical Skills in a Changing Military and Medical Environment



COL Mary J Edwards, MD, FACS, MC, US Army, COL Kurt D Edwards, MD, FACS, MC, US Army, COL Christopher White, MD, FACS, MC, US Army, CAPT Craig Shepps, MD, FACS, MC, US Navy, COL Stacy Shackelford, MD, FACS, MC, US Air Force

The completion of Operation Iraqi Freedom and Operation Enduring Freedom has allowed a dramatic and long awaited fall in the number of US combat casualties.¹ This has prompted dialogue concerning sustainment of clinical improvements made in combat casualty care over the past 15 years. Both military and civilian literature are rife with lessons learned from the past decade of large-scale ground occupations, which cannot be forgotten.²⁻⁶ Even as these discussions occur, the nature of military conflicts has evolved, and the role of surgical support in these conflicts has similarly transformed. In spite of troop drawdown and a reduction of combat missions, deployment of Army surgeons has not decreased, but is increasing rapidly as smaller and more mobile surgical elements become the norm in operational medicine.⁷ There is now a clear expectation that surgical capability be maintained within 60 minutes of injury in most deployed locations, no matter how basic this capability may be.⁸ In the Army, the well-supplied and staffed theater support hospitals have transitioned to the remote and austere Golden Hour Off Site Surgical Teams (GHOST) of 4 to 5 personnel with minimal supplies to staff a single operating table for resuscitative surgery, and limited holding capability

for no more than a few hours. Juxtaposed with this transformation in combat care is an unrelenting march toward sub-specialization and technology-driven surgical care in the United States.

In the United States, surgical care is highly dependent on minimally invasive technology, advanced imaging, multidisciplinary subspecialty involvement, and ancillary support. Surgeon case volumes are increasingly heralded as surrogates for quality, and there is a powerful movement afoot to limit complex surgical cases to “centers of excellence.”⁹⁻¹⁹ Exactly which cases qualify as “complex” remains a moving target; reports cite outcome benefits of even having routine procedures such as appendectomies done at high volume centers.²⁰ As such, military surgeons today are pulled in 2 directions of clinical capability. They are expected to be jacks-of-all-trades and function in an increasingly austere environment, and then to return to the military medical treatment facilities (MTFs) and compete with civilian surgical care elsewhere in the community.

The effect of this inherent conflict on maintenance of clinical skills for military general surgeons is significant. Provision of excellent surgical care to our beneficiaries, both on and off the battlefield, is our highest priority, and a clear and comprehensive set of training and skills sustainment goals to achieve that end is needed. In this article, we propose an educational paradigm for sustainment of surgical skills for military surgeons. This paradigm involves a 3-level approach: level 1 is core surgical competence: the basic credentials, training, and skills, usually obtained through graduate medical education and in-garrison surgical care, which form the foundation for readiness skills. Level 2 is basic and advanced medical combat readiness skills. These consist of basic essential medical skills required for all military medical personnel deploying to a war zone, and advanced surgical readiness skills that allow members of surgical teams to deploy and optimally perform in their assigned role. Level 3 is mission-specific medical readiness skills: skills required to perform a specific deployed surgical mission.

Disclosure Information: Nothing to disclose.

The views and opinions expressed herein represent those of the authors and not those of San Antonio Military Medical Center, The Joint Trauma System, Naval Medical Center Portsmouth, the United States Army, Air Force or Navy, the Department of Defense, and the United States Government. The data in this manuscript regarding Army general surgeon operative volume were presented at the Excelsior Surgery Society meeting at the American College of Surgeons 101st Annual Clinical Congress, Chicago, IL, October 2015.

Received February 10, 2016; Revised March 10, 2016; Accepted March 11, 2016.

From the Department of Surgery, San Antonio Military Medical Center (MJ Edwards, KD Edwards, White) and the Department of Defense Joint Trauma System, US Army Institute of Surgical Research (Shackelford), San Antonio, TX; and the Department of Surgery, Naval Medical Center, Portsmouth, VA (Shepps).

Correspondence address: COL Mary J Edwards, MD, FACS, MC, US Army, Department of Surgery, San Antonio Military Medical Center, 3551 Roger Brooke Dr, San Antonio TX 78234. email: mary.j.edwards@us.army.mil

LEVEL 1 TRAINING (CORE SURGICAL COMPETENCE)

Challenges

Core surgical competence is the foundation on which all deployment skills are built. It requires ongoing, active surgical practice involving complex operative cases and critical care. At the stateside MTFs, the military relies on local credentialing committees to ensure the clinical proficiency of their surgeons, and sets the bar for retraining needs after periods of clinical inactivity on a case-by-case basis. Board certification or eligibility is not required in the military, and in general, there is no minimum case volume expected for ongoing credentialing.²¹ Ongoing professional proficiency evaluations are largely subjective, and objective measures of proficiency are frequently based on reviews of outpatient encounters and ambulatory procedures. With the goal of moving toward becoming high reliability organizations, all MTFs in the Department of Defense are currently using or are implementing the National Surgical Quality Improvement Project (NSQIP) through the American College of Surgeons; however, tracking individual providers' surgical outcomes in a meaningful way is hampered by lack of operative volume. The low clinical volumes at the MTFs are exacerbated by frequent and increasingly long deployments²² with little to no clinical activity, as well as military professional development courses and administrative assignments, which are necessary for promotion, but require further absence from surgical practice.

Given the large number of deployments the military requires of its surgeons, it is not feasible to limit deployments to trauma/critical care surgeons, which make up only about 15% of the Army's general surgery force, and a similar proportion in the Navy and Air Force. Expanding the complement of trauma/critical care surgeons in the military is currently limited by the number of military trauma centers and established military civilian training platforms where they can maintain clinical proficiency. The military has only 3 American College of Surgeons-verified trauma centers: 1 level 1 trauma center located at San Antonio Military Medical Center in San Antonio, TX, 1 level 2 trauma center at Walter Reed National Naval Medical Center, in Bethesda, MD, and 1 level 3 center in Landstuhl, Germany.²³ All general surgeons and general surgery subspecialists are expected to maintain trauma skills and to deploy, in spite of the fact that such skills are not used in day-to-day practice by most of these surgeons. Although much has been discussed and published regarding mandating military surgeons to work in civilian trauma centers for extended periods of time,^{3,24-27} this would only worsen the level

1 skills sustainment problem of a deployable force of general surgeons, minimally invasive surgeons, colorectal surgeons, surgical oncologists, and pediatric surgeons, by adding another additional training requirement, which is likely to be largely nonoperative.

In June 2015, the consultant to the Army Surgeon General requested operative case logs from all Army general surgeons who deployed from June 2014 to June 2015.²⁸ Fifty active duty surgeons out of 54 who were deployed responded. More than 60% of deployed surgeons reported performing less than 1 operative case a month during their deployment, with the busiest surgeons performing 2 operative cases a week. Many surgical teams were positioned in areas in which casualties were not expected but because evacuation times potentially exceeded 60 minutes. Fortunately, these teams were rarely called on to provide surgical care, but as a result, during a typical 4.5-month deployment, the surgeons assigned were clinically inactive. As the deployment tempo for Army general surgeons continues to increase, the average active duty Army general surgeon, once out of training, can now expect to spend 30% to 40% of their career deployed, and largely equate these deployments to periods of clinical inactivity. Given the shift in the national security strategy, it is expected that combat operations in the future will largely be similar, and the likelihood of a large ground operation in the near future is low.⁷ Consequently, the current situation in Afghanistan, where surgical teams of 5 to 10 people are widely deployed in order to provide operational risk mitigation, is likely to become more common.

The Army consultant conducted a similar review of self-reported operative logs from the stateside military treatment facilities. Of the 120 Army general surgeons in active clinical practice in June 2015, 50% responded with detailed case logs.²⁸ Operative cases were then categorized and are displayed in Figure 1. As a comparison, operative volumes from self-reported operative logs of all surgeons seeking recertification through the American Board of Surgery are also provided (Fig. 1).²⁹ On average, responding Army surgeons performed 131 cases per year, which is more than 1 standard deviation below the mean of their civilian counterparts. In addition, the categories of major abdominal, alimentary tract, head and neck, and thoracic cases revealed similarly wide discrepancies from their civilian counterparts, with Army general surgeons, on average, performing only a handful of these procedures a year (Fig. 2).^{28,29} Although categorization between these 2 datasets was not completely consistent, and the 50% response rate is subject to significant reporting bias, the trends are concerning. Given the low operative volumes,

Download English Version:

<https://daneshyari.com/en/article/4290604>

Download Persian Version:

<https://daneshyari.com/article/4290604>

[Daneshyari.com](https://daneshyari.com)