

VIEWPOINT

Combating the Peacetime Effect in Military Medicine

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The drawdown of combat operations in Syria and a new peace agreement in Afghanistan compel consideration of how military medicine should function during this time of lower combat intensity. Coming home evokes a sense of relief in those who bear the burden of war. However, as highlighted in the lay press and medical literature, return to a period of relative peace also has the insidious effect of eroding the skills needed to manage the first casualties of the next war.^{1,2} We have coined this phenomenon *the peacetime effect*.

Evidence of the peacetime effect abounds. Michael DeBakey and Edward Churchill, both consultants to the US Army surgeon general in World War II, cited examples dating back to the 1700s.³ More recently, a former vice chief of staff of the army opined, "We are going to repeat the same mistakes we have made before...you have just got to pray your son or daughter is not the first casualty of the next war."^{4(p1-13)} Once fighting ends, wartime surgeons and medical specialists disperse, casualty care systems dismantle, military-specific publications in the medical literature significantly decline, and the focus on injury-related education and training wanes.³ During these times, Military Health System (MHS) leaders prioritize the mission of wellness among active duty members and other beneficiaries over combat-relevant training.⁵ Then, when the military mobilizes for the next war, the MHS is ill equipped for combat and its members are unprepared to manage casualties.

Review of our nation's combat mortality data confirms the peacetime effect. Over the past century, the observed mortality at the beginning of our 4 large-scale wars was greater than the expected mortality based on outcomes during the previous war. Operation Enduring Freedom in Afghanistan was no exception to this pattern. Although the number of casualties early in the war was small, mortality in 4 of the first 12 months was higher than the global average in Vietnam. Fortunately, as in prior wars, mortality declined over time as the military's trauma system adapted.⁴

Fighting the Peacetime Effect

An Integrated Military-Civilian Trauma System

How can we avoid the peacetime effect? A 2016 report by the National Academies of Sciences, Engineering, and Medicine⁴ provides a road map to maintain the military's edge in casualty care while benefiting civilians injured unintentionally and in shootings and natural disasters. Military trauma teams and the global Joint Trauma System established by the US Department of Defense (DoD) should forge partnerships with civilian trauma centers and systems.⁶ Select MHS hospitals should seek trauma center designation by participating in their regional trauma system, including providing care for civilian patients. Several MHS hospitals, such as

Brooke Army Medical Center in San Antonio, Texas, have taken this approach, which provides combat-relevant experience to the trauma team while benefiting the civilian community. In a complementary fashion, partnering civilian centers, such as the University of Pennsylvania in Philadelphia and the Ryder Trauma Center in Miami, Florida, help maintain combat readiness by hosting military physicians, nurses, and technicians who can hone their clinical skills within a trauma center environment (Table). These partnerships face complex challenges,^{4,6} and addressing these collaboratively with civilian stakeholders is a top priority of the MHS.

Additionally, a robust investment in trauma research will galvanize efforts to combat the peacetime effect and also advance civilian medicine. Currently, the DoD funds the bulk of injury research in the United States for both the military and civilian sectors.⁴ Therefore, if DoD research funding dwindles, funding for trauma will suffer unless other sources step in to fill this gap. We believe a trauma institute should be established within the National Institutes of Health to better match injury research funding to the burden of disease in our society. Simultaneously, the military must resist the impulse to scale back its investment in trauma research during periods of relative peace to eliminate gaps in military-specific trauma care.

Medical Education, Training, and Professional Development

Recruiting and retaining high-quality, military-prepared physicians also stands as a countermeasure against the peacetime effect. Central to this effort, the Uniformed Services University (USU) serves as the nation's leadership academy for military medicine and the academic hub for the MHS. Students enrolled in the USU are active-duty US Army, US Navy, US Air Force, or US Public Health Service officers who complete leadership training and operational tours during their medical education. Although smaller in number than physicians recruited through the Health Professions Scholarship Program, USU graduates gravitate toward military-relevant surgical specialties and have know-how and longer service commitments that enable them to serve as the bedrock of our prepared and professional MHS in times of conflict and peace.

Optimizing graduate medical education of military physicians in war-relevant areas represents another measure to combat the peacetime effect. Military Health System hospitals with residency training programs already performing at a high level should be bolstered with more high-acuity and high-complexity patients to ensure graduates are combat ready.⁷ Conversely, civilian programs that host military trainees would do well to complement their clinical volume with a military curriculum for residents in these programs to improve combat readiness and to promote military mindfulness in general.

Table. Examples of Military-Civilian Partnerships

Civilian partner	US service/ specialty	Partnership details
Hospital partner		
R Adams Cowley Shock Trauma Center at the University of Maryland, Baltimore	Air Force	C-STARS-Baltimore; active since 2001
University of Cincinnati Medical Center, Cincinnati, Ohio	Air Force	C-STARS-Cincinnati; active since 2001
Saint Louis University Hospital and Washington University, St Louis, Missouri	Air Force	C-STARS-St Louis; active since 2002
UAB Hospital, Birmingham, Alabama	Air Force	SOST-SOCCKET; active since 2010
University Medical Center, Las Vegas, Nevada	Air Force	SMART Team; active since 2015
Ryder Trauma Center, Jackson Memorial Hospital, Miami, Florida	Army	Army Trauma Training Center; active since 2001
Cooper University Hospital, Camden, New Jersey	Army	AMCT3, Operation SMART; active since 2019
Oregon Health Science University, Portland	Army	AMCT3, Operation SMART; active since 2019
LAC + USC Medical Center, Los Angeles, California	Navy	Navy Trauma Training Center; active since 2002
University of Pennsylvania, Philadelphia	Navy	Navy Trauma Training Strategic Partnership; in development since 2019
Ben Taub Hospital, Houston, Texas	Tri-Service ^a	Joint Trauma Training Center; inactive
Organizational partner		
Society of Critical Care Medicine	Critical care	Military committee
Association of Military Surgeons of the United States	Military medicine	Military medical society emphasizing leadership skills and strategic planning
Congress of Neurological Surgeons	Neurosurgery	Complimentary membership, meeting registration, meeting housing, and educational modules
Orthopaedic Trauma Association, Society of Military Orthopaedic Surgeons, and American Orthopaedic Society for Sports Medicine	Orthopaedics	Extremity War Injuries Symposium
American College of Surgeons	Surgery	Senior Visiting Surgeon Program (2006-2013); ACS-MHS Partnership, Excelsior Surgical Society; discounted membership
Society of American Gastrointestinal and Endoscopic Surgeons	Surgery	Military Working Group (Society of Military Surgeons); military surgical symposium
American Association for the Surgery of Trauma	Trauma	Senior Visiting Surgeon Program (2006-2013); military committee, premeeting military symposium, and discounted meeting registration
Eastern Association for the Surgery of Trauma	Trauma	Repository of relevant articles on website, military committee, and discounted meeting registration
Society for Vascular Surgery	Vascular	Senior Visiting Surgeon Program (2007-2013)
Abbreviations: ACS-MHS, American College of Surgeons–Military Health System; AMCT3, Army Medical Department Military Civilian Trauma Team Training; C-STARS, Center for Sustainment of Trauma and Readiness Skills; LAC, Los Angeles County; SMART, Strategic Medical Asset Readiness Training; SMART, Sustained Medical and Readiness Trained; SOST-SOCCKET, Special Ops		Surgical Team-Special Ops Critical Care Evacuation Team; UAB, University of Alabama Birmingham; USC, University of Southern California. ^a Open to Army, Navy, and Air Force.

Professional societies can also help combat the peacetime effect. The American College of Surgeons has led the way by deliberately partnering with the MHS.² This strategic partnership has spawned the Clinical Readiness Program, which has taken significant steps toward implementing the measures outlined herein. Other medical societies have rendered support by hosting military-themed sessions during meetings, offering military members complimentary access to journals during deployments, and sponsoring civilian surgeons to serve as mentors in combat care settings (Table). Such efforts should continue and even expand going forward.

Conclusions

Once again, lapsing into historic complacent patterns while combat activities are low will prove costly, especially if the United States faces a near-peer adversary as a future wartime foe. But the peacetime effect can be defeated through DoD partnerships that continue to provide trauma experience within military teams and sustain national investment in trauma research, and by recruiting and retaining high-caliber, military-ready medical professionals. If we succeed in this mission, we will start with and maintain exceptional survival rates when war comes again.

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