

EDITORIAL

Tactical Combat Casualty Care: Transitioning Battlefield Lessons Learned to Other Austere Environments



The Wilderness Medical Society (WMS) has established a strong tradition over several decades of excellent educational conferences by collaborating with other medical societies and organizations, including the military (Table 1). Collaborative efforts started in the 1990s with the First and the Second World Congresses of Wilderness Medicine and continued through to the Seventh World Congress of Wilderness Medicine in 2016. There are many commonalities between wilderness medicine and battlefield military medicine, such as austere settings, environmental extremes, limited resources and manpower for trauma care, delayed delivery, and the frequent need for medical evacuation.

After 14 years of continuous combat operations, medical departments within US military services have made a number of major advances in casualty care by medics, corpsman, and Air Force pararescuemen (PJs) at the point of injury in the prehospital setting, and by trauma resuscitation surgical teams. The United States and other coalition nations, the United Kingdom, Canada, Australia, Germany, and many others, have developed a superb combat trauma system and achieved unprecedented casualty survival rates. These increases in casualty survival start with effective medical care at the point of injury because most combat fatalities occur before the casualty reaches a medical treatment facility.¹ Many of these advances in trauma care have transitioned into US trauma centers with resulting increases in survival. However, there is a call to accelerate military-to-civilian translation of advances in prehospital trauma care information, training, and equipment to medical providers in other austere environments.^{2,3} These environments include wilderness and mountain medicine, ski patrol, search and rescue, tactical law enforcement, and emergency medical services (EMS) response to terrorist-related mass casualty incidents. This call to action is an effort to implement these medical advances as developed by the Department of Defense's Committee on Tactical Combat Casualty Care (CoTCCC).

The WMS hosted a 2-day preconference (July 30 and 31, 2016), titled Tactical Combat Casualty Care: Transitioning Battlefield Lessons Learned to Other Austere Environments, in conjunction with the Seventh World Congress of Mountain & Wilderness Medicine in Telluride, CO. The audience included an array of civilian and military medical providers: trauma team members, physicians, physician assistants, nurses, paramedics, emergency medical technicians (EMTs), wilderness medicine first responders, EMS rotary evacuation teams, search and rescue personnel, wilderness and EMS medical directors, special weapons and tactic medics/physicians, and conventional and special operation forces military medical department personnel.

The preconference objectives were to 1) explain the historical overview of Tactical Combat Casualty Care (TCCC); 2) describe how the first set of TCCC Guidelines (1996) transitioned into a standing TCCC Committee that was tasked with maintaining, developing, and updating the guidelines with evidence-based research; 3) discuss the evolution of the TCCC Guidelines from 1997 to present; 4) describe the key topic updates to the TCCC Guidelines; 5) explain the ongoing TCCC process improvements and measures of effectiveness; 6) describe the key lessons learned with TCCC Guidelines and how they have transitioned into some key civilian programs; and 7) emphasize how the TCCC Guidelines can be applied in any austere environment. Faculty included military and civilian subject matter experts, clinicians, researchers, and trauma advisers to the CoTCCC, the group responsible for developing and advancing TCCC medical practice guidelines as published in the *Prehospital Trauma Life Support* manual.⁴

This *Wilderness & Environmental Medicine* special edition includes 19 articles based on the lecture presentations delivered during the 2-day preconference. This special edition is dedicated to the late Norman McSwain, MD, trauma surgeon, who was a charter member of the CoTCCC and founding author of the *Prehospital Trauma Life Support* textbook. The first piece is by Dr. Llewellyn, who provided the keynote address. He delivers an overview of the symbiosis

Table 1. Twenty-year summary of TCCC-related activities within WMS-sponsored events

| Year | Event type | Number of events |
|---------------------------|--|------------------|
| 1997 to 2017 ^a | TCCC preconferences | 9 |
| | TCCC lectures | 7 |
| | TCCC workshops | 13 |
| | <i>Wilderness & Environmental Medicine</i> journal articles ^b | 4 |
| | <i>Wilderness Medicine</i> magazine articles | 3 |

TCCC, Tactical Combat Casualty Care; WMS, Wilderness Medical Society.

A full version of this timeline is available (see online Supplemental Material).

^a Does not reflect TCCC activities between 2003 and 2007 due to lack of documentation.

^b Does not include 19 articles in the TCCC Special Edition June 2017.

between operational military medicine, wilderness medicine, and civilian tactical emergency medical support. The second and third articles are by Drs. Butler and Giebner, who provide a historical overview of the development of TCCC and how this first generation of TCCC Guidelines evolved into the CoTCCC as a method to continue to update and advance these trauma guidelines. The next 13 articles cover the evidence-based medicine for the core topics within TCCC trauma management guidelines. The third-to-last article provides a unique overview of how the TCCC Guidelines have evolved into prolonged field care, a topic very applicable to wilderness medicine, and the final 2 articles provide an overview of how the TCCC Guidelines have transitioned into civilian prehospital medicine.

As stated in the editorial of the first TCCC article published in *Wilderness & Environmental Medicine*⁵ and again today, we hope that this 2017 special edition of *Wilderness & Environmental Medicine* will continue to attract a wide audience within the WMS and beyond and will increase the blending of lessons learned between wilderness and battlefield military medicine.

Appendix A. Supplemental Material

The full version of Table 1 can be found online at <http://dx.doi.org/10.1016/j.wem.2017.01.003>.

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Preconference Chair

CAPT (Ret.) Frank K. Butler Jr., MD, FAAO, FUHM
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COL Ian S. Wedmore, MD, FAWM
Co-Chair

References

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