

THE SCOPE

MILITARY MEDICINE, 00, 0/0:1, 2021

COVID-19 Crisis: The Pandemic Highlights the Unique Training and Skills of Military Physicians Afforded by Military-Specific Graduate Medical Education

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ABSTRACT Military physicians trained in military Graduate Medical Education programs are uniquely prepared to lead in austere and chaotic environments based on formal and informal curricula taught in military treatment facilities. The coronavirus disease-2019 pandemic highlighted this reality when military-trained physician leaders were challenged to lead change directly from the front.

As readers will appreciate, 2020 was truly a unique year in the history of our nation and in the Department of Defense's response to the second-ever global pandemic in its storied history. The year began abruptly with the firing of ballistic missiles targeted at United States and Coalition Forces in Iraq by state-sponsored actors in the region. In response, the U.S. Army deployed its Immediate Response Force (IRF) to the U.S. Central Command (CENTCOM) Area of Operations (AOR). As a physician assigned to the IRF, I was called upon to deploy in an expeditious manner. While this came as a surprise, it was an eventuality that all military physicians are trained and prepared for. As fate would have it, our forces spent an uneventful spring awaiting an armed conflict which never materialized.

However, even as the IRF was preparing to depart, a new and deadlier enemy was already making its presence felt; the novel coronavirus (2019-nCoV), commonly referred to as coronavirus disease-2019 (COVID-19). The threat COVID-19 posed to active combat operations became apparent in February 2020. As an army-trained family medicine physician with a master's degree in public health and added certificates of qualification in tropical and travel medicine, I was directed to report to CENTCOM Forward Command Headquarters and

lend my expertise in the looming struggle against COVID-19. At CENTCOM Forward, I was asked to aid in the development of the U.S. Military's COVID-19 response system for the region. My previous army-afforded training in Global Public Health and infectious illnesses was essential in order to carry out this task. Once CENTCOM Forward adopted the policies and procedures for the COVID-19 response framework, I was asked to transition from the theoretical to the practical and lead an Army Central Command COVID-19 Response Force to a local disease "hot spot."

Upon arrival, I was named the Military Treatment Facility (MTF) Officer-in-Charge of the U.S. Air Force's Role 1 facility in the area. This location went on to experience one of the first and largest COVID-19 outbreaks in CENTCOM. Our team, with the assistance of the Division Headquarters and the Command Staff, began working to bring the local epidemic under control. Indeed, the situation had become dire, as the impact of COVID-19 infections forced the local command to curtail all but the most mission-essential functions. Beginning in March 2020, our team implemented stringent COVID-19 mitigation and control strategies. Additionally, we provided advanced medical care to hundreds of patients of all services and affiliations—U.S. Military personnel, Department of the Army contractors, and even non-affiliated U.S. citizens.

A key element in the pre-COVID-19 plan of care for ill service members at this role 1 MTF was to leverage the use of host nation medical facilities. As the pandemic accelerated worldwide, it became clear that this plan was untenable as host nation facilities were rapidly overwhelmed and unable to safely care for U.S. personnel. As a result, our COVID-19 team assumed full responsibility for ill patients, including critical care functions and intensive care unit levels of care. To say this was a challenge is an understatement given the

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The views expressed are solely those of the authors and do not reflect the official policy or position of the U.S. Army Medical Department, the U.S. Army, or the Department of Defense.

doi:<https://doi.org/10.1093/milmed/usab288>

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lack of inpatient facilities, advanced medical equipment, and supplies. The 3,500 soldiers and beneficiaries in the region came to rely greatly on the COVID-19 response force for mission-essential medical care. Thanks to effective isolation and quarantine strategies, the outbreak was successfully halted by the late summer of 2020.

Senior leaders from CENTCOM noted the tremendous impact our team had on the health and safety of service members in the region, including caring for, and ultimately saving, six soldiers who were critically ill with COVID-19. The team oversaw more than 75 air-based medical evacuations of ill patients to higher levels of care from an austere environment with limited medical resources.

Overall, the Army CENTCOM COVID-19 team's mission was a resounding success that resulted in the defeat of a tenacious adversary. However, this raises the question of whether such a success would have been possible in the absence of a physician-leader who had been trained by a military-specific Graduate Medical Education (GME) program?

Military physicians embarking on the lengthy and trying journey that is residency training are not only taught to be expert clinicians, but are also trained as capable company grade officers—adept at the arts of leadership, adaptability, dealing with uncertainty, and managing risk.¹⁻³ Military GME residents also benefit from an additional curriculum based on the unwritten, unofficial values, lessons, and perspectives of their branch of service.⁴ It is this foundational immersion in the organizational and institutional culture of the military which serves as the basis for later success. It is essential for military physicians to not only understand how their branch of service operates, but also to have a working knowledge of how the other branches function. This understanding allows military physicians to efficiently and effectively call on the resources and support of other branches when needed. Additionally, it is well known that military officers receive enhanced training in leadership tactics, techniques, and procedures.^{5,6} This leadership training is further enriched via the military system in both GME and initial postgraduate assignments, where residents and young attending physicians are placed in leadership roles well in advance of timelines typically seen in the civilian sector. This background in leadership and its practical application was an essential element in the successful conversion of an Air Force Role 1 MTF into the impromptu hub for COVID-19 operations for an entire region. Military physician leaders are trained by experienced military faculty to successfully lead change in a manner that is careful, deliberate, and nuanced.

A critical element in the military-specific GME curricula is the addition of what is commonly referred to as the Military Unique Curriculum (MUC)—the elements of medical training that are specific to the military environment.⁷

An aspect of MUC which has been highlighted time and again for its real-world usefulness is the recounting of operational and deployment experiences for analysis by medical residents. Indeed, information on how similar operational barriers and constraints have been overcome by previous teams serve as the stepping stones for how best to address future challenges. Many of the physical limitations related to the provision of critical care in the CENTCOM AOR (such as the use of designated teams to carry out dedicated functions, like intravenous therapy, airway management, and contact tracing) were among some of the ideas adapted from the previous generation of military-trained physician leaders.

Military-specific GME requirements also place added emphasis on areas of medical education which differ from those emphasized by civilian training programs. Specific areas of additional focus include the rendering of critical care in austere environments, as well in the provision of prolonged care in the pre-hospital setting. This training readies military physicians for the hostile and austere environments that await them in conflict zones across the globe. The wide depth and breadth of military medical training prepares military physicians for scenarios and circumstances that may not yet have been conceived. It is this unique mixture of traits and characteristics that military GME imbues in its graduates, and it is for this reason that military GME programs remain the premier choice for training and equipping the next generation of military physician leaders to face the challenges of tomorrow.

FUNDING

None declared.

CONFLICT OF INTEREST STATEMENT

None declared.

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