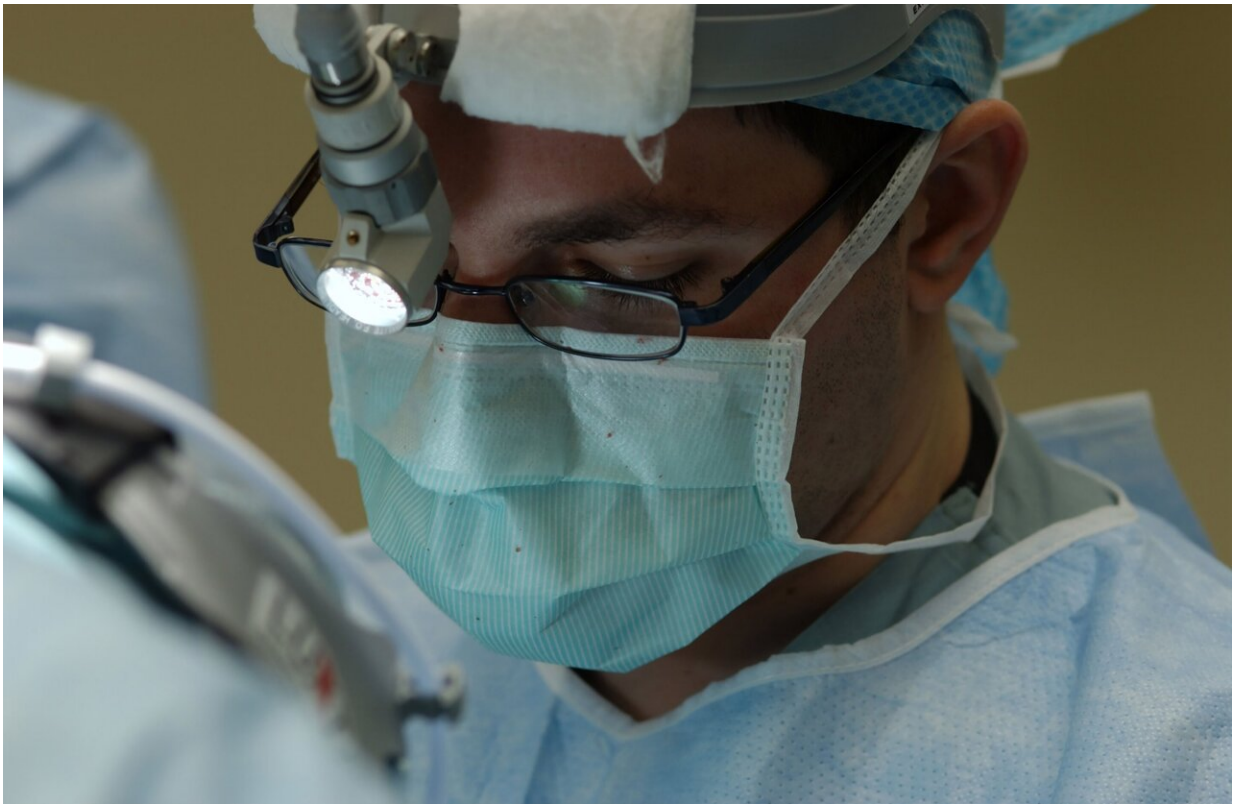


Study captures, quantifies decline in military surgeon readiness

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Military surgeons may be getting less training and experience with the high-risk procedures they need to maintain clinical readiness and provide care in military medical treatment facilities (MTFs) and deployed settings. Concerns about a decline in military surgeon readiness have

waxed in recent years, but until recently, it has been challenging to quantify the decline. A new study uses the recently created Knowledge, Skills and Abilities (KSA) metric to quantify deficits in clinical readiness. The study, led by investigators from Brigham and Women's Hospital in collaboration with military surgeons from Walter Reed National Military Medical Center, found that the number of surgical procedures contributing to KSAs has decreased by approximately 25 percent at military hospitals from 2015 to 2019, creating a potential gap that may require the need to address substantial changes. Results are published in *JAMA Surgery*.

"Over time, the military health system has been shifting care for its soldiers and their families away from big military treatment facilities, allowing them to receive care from civilian hospitals. But this has had an unintended consequence," said senior author Joel Weissman, Ph.D., of the Center for Surgery and Public Health at the Brigham. "Our study has found that by 2019, only 10 percent of general surgeons had enough experience under their belts to be considered ready for combat clinical care."

"The operative volumes available to [military surgeons](#) at military hospitals have been historically low, but they have continued to decline in recent years, especially as volume has shifted to civilian hospitals," said lead author Michael Dalton, MD, MPH, a former fellow at the Brigham's Center for Surgery and Public Health. "Our study is the first to specifically quantify the lost readiness value of those procedures to military surgeons."

MTFs are intended not only to provide health care for service members but also to ensure that military medical professionals receive the surgical experience they need to be ready to provide care. But military surgeons have operative volumes far lower than their civilian counterparts. And surgical volumes at MTFs have been declining as service members and

their dependents seek care at civilian hospitals. To quantify this decline and its potential impact on surgical readiness, the military surgical community developed KSA metrics. In partnership with the American College of Surgeons, military surgeons evaluated general surgery procedures—including procedures such as hepatectomy, pancreatectomy, kidney transplants and more—and assigned each a KSA value to represent the importance and relevance of the procedure to the skill sets required for a deployed military surgeon.

The team analyzed the workload of general surgery performed across the U.S. Military Health System and calculated KSA values to compare metrics from 2015 to 2019. They found that the proportion of military [general surgeons](#) meeting the KSA readiness threshold declined from 16.7 percent in 2015 to 10.1 percent in 2019.

"It is essential that we have a method to measure the individual clinical readiness of our critical wartime skill specialties," said co-author retired Navy Capt. Eric Elster, MD, DACS, FRCSEng (Hon.), dean of the School of Medicine and Professor of Surgery at the Uniformed Services University of the Health Sciences. "This article validates that we now have this KSA Metric and that a plan is in place to implement its use to ensure we are providing this [readiness](#) across the Military Health System.

The authors note that their study is limited to the data coded in the Military Health System Management Analysis and Reporting Tool Data. Future studies that capture civilian general surgeon workload may help provide additional context. The authors also acknowledge the complexity of addressing the decline in surgical volume and patient flow.

"This study can be seen as beginning a process for the military health system to use its own measurement tools to closely monitor the preparedness of its surgeons," said Weissman. "Due to decreased surgical volume, in the event of another military conflict, military

surgeons may not be as ready for combat-related injuries as they should be. Ensuring that military surgeons have the experience they need may help everyone feel safer."

More information: Analysis of Surgical Volume in Military Medical Treatment Facilities and Clinical Combat Readiness of US Military Surgeons, *JAMA Surgery* (2021). [DOI: 10.1001/jamasurg.2021.5331](https://doi.org/10.1001/jamasurg.2021.5331) , [jamanetwork.com/journals/jama/ ... 1/jamasurg.2021.5331](https://jamanetwork.com/journals/jama/.../1/jamasurg.2021.5331)

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