

Military Soft Skills Applicable to the ICU

Julio A. Chalela, MD¹

Patrick, Britell, MD²

OBJECTIVES: To describe how soft skills acquired during military service can be applied to the practice of critical care medicine.

DATA SOURCES: A systematic search was performed in PubMed.

STUDY SELECTION: We selected all studies that addressed soft skills in medicine.

DATA EXTRACTION: Information present in published articles was analyzed by the authors and incorporated in the article if relevant to the practice of critical care medicine.

DATA SYNTHESIS: Integrative review of 15 articles combined with the authors' clinical experience practicing military medicine in country and overseas while also practicing academic intensive care medicine.

CONCLUSIONS: Soft skills used in the military have potential applications to modern intensive care medicine. Teaching soft skills in parallel with the technical aspects of intensive care medicine should be an integral part of critical care fellowships.

KEY WORDS: intensive care; soft skills; military skills

War has been linked to medicine for centuries. Civil war surgeons, William Hammond and Silas Weir Mitchel, made pivotal contributions to neurology, and Guillain and Barre discovered Guillain-Barre syndrome while serving in the French army (1, 2). The contributions of military medicine to civilian practice are well recognized, but the value of soft skills acquired during military service are not.

Unlike hard skills (i.e., the technical elements of a job), soft skills are related to how we work and are not profession-specific (3). They are personal attributes that complement hard skills and enhance performance. In medicine, they contribute to what we commonly call “art of medicine” and, as such, are difficult to measure. Hereby we describe some soft skill lessons learned during military service and discuss potential critical care medicine (CCM) applications.

LESSON 1: BE HUMBLE AND LISTEN

As a battalion surgeon in Afghanistan, I evaluated an Afghan soldier with limb weakness after a bout of febrile diarrhea. The history was sparse, as the local medics only spoke Pashto. Walking into the aid station, the diagnosis was already stamped in my brain—diarrhea followed by weakness was Guillain-Barre. My examination revealed mild, asymmetric leg weakness with areflexia. I gave the Afghan medics an unwanted dissertation on Guillain-Barre, pointing out the classic presentation, and ordered transfer to a local hospital for intravenous immunoglobulin infusions. They tried to question my diagnosis, but I would not listen. Puzzled, they did it, after all, I was a senior Army officer and an experienced neurointensivist.

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KEY POINTS

Question: To determine if soft skills acquired during military service have any application to critical care medicine.

Findings: Skills acquired during military service have unique applications to critical care medicine and can enhance its practice. There are some striking parallels between practicing intensive care and military service.

Meanings: Soft skills are not traditionally emphasized as a key component of critical care training but clearly play an important role in medicine as they do in other professions.

Weeks later, I met an Afghan physician from the receiving hospital. After exchanging customary pleasantries, I inquired about the patient. He did not recall a Guillain-Barre patient, but asked if I was referring to the confirmed case of polio we transferred. There I was, a seasoned academic neurologist, and a senior military officer missing a diagnosis that was obvious to all. I ignored the towering signs of polio—asymmetrical weakness, fever, Afghanistan polio prevalence, and the medics' bewilderment.

This lesson underscores the importance of listening to everyone. Even those with less training may offer valuable clinical insight. CCM is provided by a multidisciplinary team whose members have diverse training. Listen to the ICU "locals." The staff who are on the unit all day will have valuable knowledge of the immediate situation because of patient proximity.

Preconceived notions cement easily into our diagnostic bias; allow others to challenge them. Availability bias and anchoring bias are two common contributors of diagnostic error (4). Availability attracts us to the first diagnosis that comes to mind; anchoring leads us to stick to it (4). Failing to listen and drawing quick conclusions can be perilous practices.

LESSON 2: TRUST YOUR INSTINCTS

I was caring for a traumatic brain injury patient during a helicopter medical evacuation; he had been injured by an improvised explosive device. At altitude, devoid of my usual diagnostic equipment and supplies, I felt helpless.

The automated blood pressure cuff had failed (common at high altitude) and noise and vibration impeded taking it manually. Pupillary examination was not allowed due to tactical risks of flashlight use. He did not respond when I thundered into his ear "tsenga yee?" ("How are you?" in Pashto) impeding a cursory neuro-examination. He drifted to sleep, and I was left to wonder. Was this the ketamine effect? Blast injury effect? Aphasia? Deafness from tympanic rupture? I noticed vigorous respirations and touched his hand and felt a gentle grip. My gut instinct told me he was going to be alright.

Upon landing, our interpreter rushed us into the aid station and assisted with the examination. The soldier said that he was exhausted from patrolling for 72 hours. His vital signs and neurologic examination were normal. Fatigue and ketamine explained his somnolence!

We use both intuitive and analytical processes to evaluate patients (5). The intuitive system recognizes patterns (somnolence after blast injury indicates traumatic brain injury) and employs mental shortcuts (heuristics) to diagnose. The more elaborate and time-consuming analytical system requires data collection, analysis, and knowledge of pathophysiology and epidemiology. Generally, the systems operate in parallel and, depending on the situation, one prevails (5). The intuitive system is often regarded as less sophisticated, but we should remember that intuition is not the enemy of evidence-based medicine. In fact, it can be superior to analytical medicine, particularly in determining prognosis (5).

Deployed military medicine often relies on instinct, because diagnostic tools are unavailable. Practicing medicine in austere-environments teaches us to be comfortable with limited data, erroneous information, evolving diagnoses, and providing care without black-and-white answers (6). Battlefield medicine and CCM both require "trusting our gut." In fact, normalizing uncertainty, in order to become comfortable with the unknown, and learning to tolerate risk are central tenets of the newly proposed critical care philosophy called, "zentesivism" (7).

LESSON 3: MAINTAIN OVERSTRENGTH AND ENSURE REST AND RECOVERY

Military operational tempo is unpredictable and can be physically and mentally exhausting. The military

handles this by ensuring that personnel have adequate work/rest cycles and by adopting an overstrength approach. The U.S. Army specifically promotes the Performance Triad to prevent burnout—good quality and quantity of sleep, frequent exercise, and good nutrition. The overstrength approach involves intentionally having excess staff to handle potential work surges. I wrote this article while deployed close to the Ukrainian border under the looming threat of Russian invasion. We were clearly overstaffed, but faced with an uncertain future, the mission required the ability to quickly scale up. Wartime missions are often described as long periods of tedium interrupted by frantic cataclysms of mayhem. Similarly, in CCM, “slow-days” can be suddenly interrupted by an unexpected intubation or a code. Intensivists got a taste of wartime medicine when the COVID-19 epidemic imposed a faster operational tempo and forced nonpulmonologists to assume care of pulmonary patients.

The literature is replete with examples of this principle. Recently the Association of Anaesthetists of Great Britain & Ireland introduced guidelines to mitigate fatigue including scheduled naps during work shifts (8). Studies demonstrate that reducing intensivist rotations from 14 to 7 days or allowing weekends off during work blocks reduces burnout (9). Wellness initiatives in U.S. neurosurgery residencies have improved camaraderie, teamwork, sleep quality, academic productivity, learning capacity, and patient care (10). Resilience training for nurses focusing on self-care, mindfulness, and expressive writing reduces post-traumatic stress disorder (11). Like awarding medals for military valor, providing positive feedback on patients with good outcomes and recognizing accomplishments mitigates staff burnout.

In the ICU, the patient census can change quickly and dramatically. Meanwhile, manpower can be impacted by staff shortages, resident hours, maternity leave, and personal illnesses. A 2014 statement from the American College of Chest Physicians suggested that ICUs should be able to rapidly increase capacity by 200% in response to disasters and pandemics (12). As in the military, adopting a CCM culture that fosters physical and mental health and prioritizes an overstrength approach to patient care could help prevent burnout. The economic implications of such approach are however unclear.

LESSON 4: BEARING MATTERS

Military bearing describes how soldiers carry themselves and conduct their activities. It includes work ethic, personal grooming, appearance, physical fitness, courteousness, professionalism, and self-discipline. Military bearing affects leadership skills, communication style, and social interactions. Obviously, technical expertise must match military bearing.

The first attempts at refining bedside manners are illustrated in ancient Greek articles (13). The appropriate attire, care of the hair and beard, tone of voice for addressing patients, and even the posture to use when entering the room were described. More recently, William Osler with his noblesse oblige attitude exemplified kindness, compassion, and informality as key elements of physician bearing (13).

While the ICU is not a fashion runway, personal appearance does matter to patients and families. Physician appearance can affect patients' feelings of trust and confidence; patients tend to respond more positively to surgeons wearing a white coat with scrubs and to family physicians and dermatologists wearing business attire and a white coat (14). Clean, formal attire, like a sharp military uniform, signals that we took time to prepare for work, paid attention to detail, and are disciplined. Good physician bearing shows patients that you respect them.

As with military bearing, physician bearing carries beyond our outer appearance to our communication styles. For example, sitting down when talking to patients signals that they have our time and full attention. A smile and an appropriately timed joke signal that we are calm and not overwhelmed by the situation. A tear when breaking bad news, a hug to a suffering relative, or holding the hand of a comatose patient tells patients and families that we do not place science above empathy and compassion. Our physician bearing should project to our coworkers a passion for CCM, loyalty, agility, resilience, and vulnerability.

Practicing CCM, with its complex labyrinth of technology and information, we can easily lose sight of the human side of medicine. Recently the term zentesivism was introduced to describe a holistic approach to intensive care (7). The zentesivist (intensivist practicing zentesivism) appears calm and serene, portrays honesty and humility, encourages dialogue, and is a soothing bedside presence (7). Akin to a military

commander who calmly leads troops during war, the zentensivist leads with expertise and serenity.

LESSON 5: REFLECT ON AND LEARN FROM BOTH FAILURES AND SUCCESSES

The military uses After Action Reviews (AARs) to assess the performance of all tasks, even minor ones. The AAR seeks to improve future performance by providing a platform for candidly evaluating what happened, what worked well, and what merits improvement. Everyone participates—privates and colonels have equal say. AARs foster a positive environment and are not designed to criticize or place blame. Feedback occurs without lecturing, critiquing, or embarrassing participants. Soldiers determine what was supposed to happen, what actually happened, and how the task could be done differently.

In the fast-paced CCM environment where complex decisions are often made without the luxury of time, patients are vulnerable to errors. Traditionally, mortality is reviewed in morbidity and mortality meetings (“MMs”) and serious events are reviewed using root cause analysis. This means that minor errors and error-free procedures are not reviewed. From an AAR perspective, this is a lost opportunity. For example, a central line placed on first attempt, free of pneumothorax, and adequately positioned does not undergo further scrutiny. However, with an AAR approach, clinicians could ask themselves other questions. Was the procedure painful? Can the pain be alleviated? What did it cost, and could there be savings? Unlike MM discussions, an AAR approach allows learning in the “thick of it”—in groups while doing rounds or as individuals. Applying an AAR mentality in CCM encourages candid introspection about patient care and allows clinicians to learn from their success as well as their mistakes and to seek continuous improvement.

CONCLUSIONS

Military service provides some valuable lessons applicable to CCM. There are some striking parallels between CCM and military service. Teaching soft skills in CCM should be an integral part of current academic programs; the increasing technological advances and

sophistication of life-supporting measures demand and increase emphasis on soft skills to avoid dehumanizing the field. There is ample evidence from surgical studies that incorporating soft skills training into residency and fellowship training can reduce preventable errors (15, 16). Furthermore, the European Society of Thoracic has identified a gap in the knowledge of nontechnical skills among thoracic surgeons (15, 16). We believe it is imperative that clinicians develop soft skills in an interdependent manner with technical skills.

1 Department of Neurosurgery, Medical University of South Carolina, Charleston, SC.

2 Department of Anesthesiology, Medical University of South Carolina, Charleston, SC.

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For information regarding this article, E-mail: chalela@musc.edu

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