



Training for Impact in Global Critical Care

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Anesthesiologists have long been known as the guardians of patient safety in surgery, and our role extends far beyond the OR. Our expertise and influence are utilized in diverse areas within and beyond our own hospital walls, and we are playing a vital role in expanding critical care abilities worldwide. Critical care historically was associated with management of the sickest patients within the confines of a well-equipped, technologically advanced intensive care unit (ICU). However, this perception fails to capture the true, more inclusive, nature of critical care, as even in well-resourced settings, a large proportion of critically ill patients receive care outside of ICUs (*Eur J Med Res* 2023;28:322). A more holistic definition recognizes critical care as a spectrum of medical care that encompasses the management of critically ill patients

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across the entire health care landscape, regardless of whether they are treated in emergency departments, recovery rooms, high-dependency wards, or even at home (*BMJ Open* 2022;12:e060972). This definition recognizes that any setting where the most severely ill patients receive care is part of the critical care continuum.

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and consensus-building and has even discouraged providers from recognizing potential contributions to this field (*Crit Care* 2012;16:218; *Lancet* 2010;376:1339-46). Embracing a more inclusive definition that recognizes critical care's multifaceted nature and its role in diverse settings lays the foundation for more impactful initiatives. (*Lancet* 2010;376:1339-46). Here we will discuss our perspective on what it takes to be successful in global critical care and how it can be a part of any anesthesiologist's career.

Over the past decade, there has been increased interest in global health, specifically anesthesia and critical care, among trainees in U.S. residency programs (*BMC Med Educ* 2017;17:215). As trainees engage in more global critical care opportunities, it is imperative to reflect on the impact of our initiatives. To do this, a common definition of success and impact is necessary. Metrics for global critical care success must focus on any resultant improvement in patient outcomes. Patient outcomes and systematic changes that influence them should be context-specific and locally agreed upon (*Ann Glob Health* 2019;85:3; *Curr Opin Crit Care* 2018;24:421-7). Interventions that work in high-income countries may be ineffective or even harmful in low- and middle-income countries, a fact that underscores the importance of adapting clinical guidelines and practices to a region's specific context (*Curr Opin Crit Care* 2018;24:421-7). From a wider perspective, as trainees cognizant of global health's

colonialist history, it is imperative to ensure that our learning is neither unilateral nor exploitative (*J Surg Res* 2020;252:272-80). This involves holding ourselves accountable for sustained commitment, transcending brief quests for adventure, and ensuring sustainability of our contributions that extend beyond our immediate presence. Through the implementation of a quality-improvement framework for global critical care initiatives and approaching new contexts with cultural humility, we can consistently address the question: Are our efforts contributing to positive patient outcomes?

To prepare trainees for impactful global health and critical care work, anesthesiology programs must equip them with a range of essential skills and knowledge applicable to any health care environment, while also focusing on three key areas: understanding the context, developing critical skills, and navigating ethical dilemmas:

- **Understanding the context:** This includes recognizing health disparities, appreciating cultural differences, and understanding how socioeconomic factors impact outcomes (*Anesth Analg* 2022;134:242-52; *Curr Anesthesiol Rep* 2023;13:99-107).
- **Developing critical skills:** Trainees need essential clinical skills for managing critical patients in resource-limited settings, including infection control, tropical medicine, emergency response, and early recognition of critical illness (*Curr Anesthesiol Rep* 2023;13:99-107).
- **Navigating ethical dilemmas:** Global health and critical care often involve

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complex ethical considerations like distributive justice. Trainees must be equipped to recognize and respond as conscientiously as possible in challenging situations (*Curr Anesthesiol Rep* 2023;13:99-107).

There is often a chasm between most trainees' familiar settings and the realities of resource-limited environments. Limited exposure to diverse health care systems, unfamiliar disease landscapes, and lack of practical experience in resource-constrained situations can leave trainees unprepared for the unique challenges of this field (*Curr Anesthesiol Rep* 2023;13:99-107). To bridge this gap, training programs can increase exposure by incorporating into their curriculums immersive learning opportunities like international rotations, high-fidelity simulations, global context case-based discussions, academic journals and conferences, and collaborations with established global health organizations (*Anesth Analg* 2022;134:242-52; *Curr Anesthesiol Rep* 2023;13:99-107). By actively addressing these gaps, we can prepare future health care leaders to make a significant impact in global critical care initiatives and empower them to incorporate outreach

health into their careers (*Ann Glob Health* 2022;88:61; *Lancet* 2009;373:1993-5; *Glob Health* 2020;10:010313).

Careers in global critical care within anesthesiology are present with a range of opportunities tailored to accommodate various time commitments and career stages. Involvement can take many forms, including partnering with international institutions for trainee exchanges, skill-sharing programs, infrastructure development, and needs-based research (*Glob Health* 2020;10:010313). While consistent travel can play a significant role, participation extends beyond physical presence. Anesthesiologists unable to travel can host foreign learners, invite guest speakers virtually or in person, and engage in virtual research and teaching collaborations. Providers who desire to participate but are unable to be directly involved can play an invaluable role by voicing support and advocating for funding (*Anesth Analg* 2022;134:242-52; *Curr Anesthesiol Rep* 2023;13:99-107; *Ann Glob Health* 2022;88:61; *Lancet* 2009;373:1993-5; *Glob Health* 2020;10:010313). For any provider aspiring to contribute to global critical care, with a little creativity there are limitless pathways to incorporate this meaningful field into your practice.

Transitioning from our conventional role in the OR, anesthesiologists have emerged as pivotal contributors in the growth of global critical care. Understanding that critical care transcends the confines of well-equipped ICUs not only broadens our awareness of the worldwide prevalence of critical illnesses but also motivates health care providers to acknowledge potential roles in this expanding field. Engaging in impactful initiatives requires a thoughtful approach centering around patient care, placing cultural considerations, systemic challenges, and sustainability at the core of every endeavor. By cultivating lasting relationships, building capacity, and embracing diverse collaborative opportunities, anesthesiologists can leave an enduring mark on global critical care and extend our role as health care guardians onto the world stage. ■

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