Committee News

Practice Patterns of Anesthesiologist-Intensivists in the US

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Critical care medicine as an anesthesiology board subspecialty was established in 1986. Interestingly, in the early 1980s, other specialties, including internal medicine and surgery, attempted to create a unified Board of Critical Care Medicine (*Anesthesiology* 2001;95:781-8). This was ultimately unsuccessful due to disagreements on training qualifications, hence the individualized board certifications within disparate fields as we know them today. In the United States, most intensivists are pulmonary critical care specialists; in Europe, more than 50% are anesthesiologists. Despite the subspecialty being in existence for almost 40 years, at the turn of the century, less than 4% of the 25,000 board-certified anesthesiologists in the U.S. were also trained as intensivists (*A A Case Rep* 2016;6:373-9). Among members of the Society of Critical Care Medicine, surgeon-intensivists outnumbered anesthesiologist-intensivists almost 2:1. This may be due to a variety of factors, including workload/burnout rate in the ICU, the dominance of nonanesthesiology intensivists in both academic and private practice settings, reimbursement from operative anesthesia, fellowship burden/lost income, and limited exposure to critical care medicine during residency. Critical care medicine, as a specialty, was hard-hit during the COVID-19 pandemic, resulting in high burnout and job turnover. As patient complexity continues to increase, more anesthesiologists must be trained as intensivists nationwide. As of 2018, there are 261 fellowship training positions across 62 programs. However, many spots each year remain unfilled, presumably due to a lack of interest from potential applicants (asamonitor.pub/49BtCvs).

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To date, few studies have examined the practice patterns of anesthesiology critical care intensivists in the U.S. (*Anesth Analg* 2021;132:761-9; *Anesth Analg* 2023;136:295-307). The potential for practice variations can be diverse, including, but not limited to, academic versus private, amount of research required, ICU type (open/close/semi-open), patient population (cardiac/surgical/medical/neuro/mixed), proportion of ICU versus OR time, ICU size, night-float versus call, presence of physician extenders (NP, PA, etc.), compensation, and time off models, etc. Because of these large variabilities, developing a more detailed and nuanced understanding of the field, in general, is imperative. This can help educate and guide future anesthesiology residents interested in pursuing critical care medicine careers. Furthermore, it may elucidate a reason for the low participation of anesthesiologists in critical care medicine in the U.S. and guide a new set of frameworks to address this issue.

With this goal in mind, we surveyed anesthesiologist-intensivists in the U.S. from the Society of Critical Care Anesthesiologists (SOCCA) membership list. Our survey broadly aimed to elicit the practice patterns of respondents with the expectation that there would be wide variations across a multitude of factors examined.

Anesthesiology-intensivists: Practice variations and challenges

The survey conducted on anesthesiologist-intensivists sheds light on the diverse practice patterns within the field. Respondents were distributed nationwide, with over half working in large hospitals with more than 500 beds. Only a small fraction of anesthesia intensivists surveyed work in smaller hospitals with under 200 beds. Over 90% of respondents work in academic medical centers, showing the relative absence of the anesthesia critical care specialty outside academia.

Half of anesthesia intensivists work in a "semi-open" ICU system, while 30% work in a closed ICU system, where only the ICU team writes orders. Anesthesiologist intensivists work predominantly in surgical and cardiovascular ICUs and least commonly in burn and medical ICUs. Most respondents cover ICUs in multiple locations with varying coverage models.

The average patient census runs at 10-15 patients per intensivist for over half of the respondents, with one-third covering 15-20 patients and a small minority over 20 patients. Interestingly, most respondents indicated a patient census cap in the medical ICUs but not in the surgical ICUs. Half the respondents report covering airways, codes, and rapid responses while assigned to the ICU. One-third report covering tele-ICU services; in 30%, this counts toward their mandatory ICU time. Most anesthesiologist intensivists work with other specialties to cover their respective ICUs, most commonly intensivists with trauma surgery, pulmonary/CCM, and emergency medicine backgrounds.

Weekly coverage models vary: a full week of 24-hour calls, a week of either days or nights, or a few days in a row of either nights or days. Over 60% of respondents

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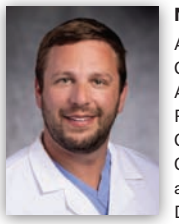

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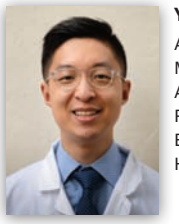

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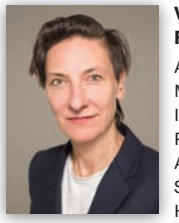

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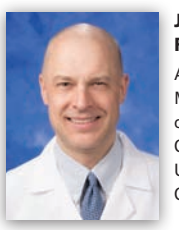

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Letter to the Editor

Suffering Is Suffering Is Suffering

In his December editorial titled "Terrorism Is Terrorism Is Terrorism," Dr. Shafer condemned Hamas for the terrorist attack on Israel on October 7 (*ASA Monitor* 2023;87:8-9). The purpose of the commentary was to use our collective voices as physicians to condemn terrorism and violence, in hopes of adding to the voices for peace.

As physicians, we must not let our shared revulsion of the attacks of October 7 blind us to the ongoing disaster unfolding in Gaza. Immediately after the attack, Israel cut off all food, water, fuel, and medical supplies to Gaza. The ensuing air and ground invasion has rendered the Gaza strip a "graveyard," as stated in a recent New York Times article. Hospitals have turned into war zones, with patients being forced to literally flee the places we work every day as physicians to bring healing to the world. As of this writing, the death count is nearing 22,500, including 9,600 children, almost 58,000 injured, and 26 of 35 hospitals are no longer functioning, while 87 ambulances have been damaged. Additionally, over 100 journalists have also been killed, along with scores of doctors, nurses, and health care workers.

Some will blame Hamas for the humanitarian disaster, noting it was a predictable response, as evidenced by previous Israeli incursions. Some will blame Israel for the humanitarian disaster, noting the 16-year blockade on Gaza and the oppressive occupation for the past 75 years that has left Palestinians desperate.

At this point, it doesn't matter. There is plenty of blame to go around to all parties, and assigning blame will not end the suffering of the children, women, and men of Gaza. It won't bring the desperately needed medical supplies into Gaza. And it won't stop the bloodshed.

Dr. Shafer recommends that we use our voices as physicians to advocate for a more compassionate, just, and peaceful world. I wholeheartedly agree. I pray that can be the case for all, including the downtrodden and poor of the earth. I echo his thoughts to do what little we can to aid those in need, especially as the need is exceedingly dire. I have been to Gaza and the West Bank on medical missions in the past with the Palestine Children's Relief Fund, and I feel they are a worthy charity with a proven record of aiding the children of Palestine (pcrf.net).

I will add one concern about Dr. Shafer's comments. In quoting Golda Meir, did he mean to imply that Palestinians don't value their children or are willing to sacrifice these innocent lives due to their hate for Israelis? I hope not, because such a statement devalues the lives of Palestinians, who love and value their children as much as all people do.

Samir Abdo, MD
Naperville, Illinois

Author's Reply:

I appreciate the thoughtful response of Dr. Abdo. The suffering of those in Gaza is unimaginable. As he writes, condemning terrorism does not mean turning a blind eye toward the plight of the Palestinians. Quite the opposite! The terrorism of October 7, and the subsequent suffering of those in Gaza as Israel seeks to destroy Hamas, both speak to the overwhelming need of both Israelis and Palestinians to find a pathway toward mutual security, mutual respect, and lasting peace. Neither the terrorist attacks nor the Israeli response provides a pathway to peaceful coexistence based on mutual respect.

I appreciate Dr. Abdo pointing out that my use of the quote from Golda Meir might be interpreted as suggesting that Palestinians don't love their children. I apologize if my words conveyed that. The Palestinians surely love their children as much as anyone. My comment was intended to condemn hate, which has driven both the terrorist attacks on Israel and Israeli indifference to the suffering among Palestinians. ■

Steven L. Shafer, MD, FASA
ASA Monitor Editor-in-Chief

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work in ICUs at night with an in-house attending coverage model. The next most common model was home-call with residents, fellows, or advanced practice providers (APPs), although this model often varied from unit to unit. Over 40% of respondents report a pay differential for day and night shifts.

Compensation and work-life balance

Compensation structures for anesthesia intensivists demonstrated a wide range of models, with over 60% reporting no higher salary than their general anesthesiology counterparts. Factors contributing to compensation differentials included fellowship training, call burden, and institution-specific practices. The availability of compensatory time off following ICU shifts exhibited considerable variability. Twenty percent of respondents get a full week of nonclinical time after a set of ICU shifts, 30% get one to two days off, and over 20% get no nonclinical time after a set of ICU shifts. Most respondents reported no professional responsibilities during their compensatory time off, while over one-third still had administrative duties. What constitutes 1 FTE in critical care varied between institutions, and no discernible pattern can be reported.

Trainees and the role of advanced practice providers

Even at predominantly academic institutions, over 70% of respondents report having physician trainees and APPs in the ICU, with a small minority having APPs only. Half the respondents indicate that the role of the APP is identical to that of the physician trainee in the ICU. Only one-third of the respondents indicate that APPs can perform invasive procedures, including endotracheal intubations, independently.

Discussion

Our survey complements a recently published SOCCA survey (*Anesth Analg* 2023;136:295-307). Both surveys found that anesthesiologist intensivists work in various critical care unit types, ICU coverage models vary considerably, and respondents are most likely part of in-house 24-hour/7-day coverage. Our survey gives further insight into the variety of compensatory nonclinical days provided after ICU coverage, the responsibilities during the post-ICU time, and the stark variability in workload reflected by the patient census.

Anesthesia-trained critical care physicians exhibit adaptability across various clinical settings, serving as a versatile hospital resource. Recent surveys have highlighted concerns for practicing intensivists. In a 2021 survey by ASA and the Society for Education in Anesthesia, factors impacting satisfaction were identified, including burnout, work-life balance, and respect issues (*Anesth Analg* 2021;132:761-9).

Following a 2000 report predicting a shortage of critical care physicians, efforts have been made to mitigate this challenge with varying success (*JAMA* 2000;284:2762-70). The staffing and organizational approaches to ICUs, particularly overnight, remain unclear. In cardiac surgery ICUs, literature is mixed regarding whether 24-hour/7-day in-house intensivist coverage improves outcomes (*Crit Care Med* 2017;45:993-1000; *Crit Care Med* 2017;45:1472-80). The debate on the impact of 24/7 in -house coverage on outcomes continues, suggesting additional factors affecting staffing decisions.

Our findings underscore the need for further exploration of critical care anesthesia practice. Future research should investigate finer details such as compensation factors, temporal ICU coverage trends, and specific clinical practice patterns. These insights will be invaluable for making informed decisions regarding staffing, clinical organization, and compensation structures. Anesthesiologists specialized in critical care medicine are well-equipped to provide adaptable critical care coverage across various ICUs. As patient complexity grows, addressing the challenges anesthesiologist intensivists face becomes increasingly important to ensure the delivery of high-quality critical care services. ■