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Shortage of intensive care specialists in the United States: recent insights and proposed solutions

Falta de especialistas em terapia intensiva nos Estados Unidos: percepções recentes e soluções propostas

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Despite well-publicized projections of an impending and actual intensivist workforce crisis in the United States from critical care societies and the federal government for over a decade,^(1,2) there continues to be a nationwide shortage of intensivists. Others, however, contend that workforce models, which base demand projections on intensive care unit (ICU) admission rather than true critical illness, substantially overstate the workforce gap.⁽³⁾ We believe that before arguing about the “real” or “imagined” intensivist shortage, there are several fundamental issues to address. First, it is important to agree on a definition of an intensivist. High quality practice and credible team leadership of critical care medicine (CCM) should require the intensivist to devote 100% effort to critical care. Unfortunately, this comprises a small fraction of US practitioners and is predominantly limited to academic medical centers with Accredited Council for Graduate Medical Education (ACGME)-accredited fellowship programs. Because the vast majority of adult intensivists are actually part-time practitioners based in pulmonary medicine, operating rooms (surgeons/anesthesiologists), or emergency medicine, the bulk of CCM board certificates are allocated to part-time physicians;⁽⁴⁾ thus, the shortage of full-time intensivists is most likely 5-10 times more pronounced. To us, this reflects a failure of national advocacy by the critical care organizations and branding of the CCM specialty. If we hope to improve the impact of CCM, we must first acknowledge this national failure and advocate for more funding and political support for our critical care societies and give credit to intensivists dedicated to full-time clinical and academic CCM practice.

Second, there is lack of national and local planning for the proper number and ratio of ICU and progressive/stepdown care beds.⁽⁵⁾ Kahn and Rubinfeld correctly highlight that the real fraction of critically ill patients in US ICUs may be closer to 40 - 60%,⁽³⁾ with the other patients remaining in the ICUs due to political pressures, failure of throughput and prompt appropriate discharge, or reluctance to discharge patients from ICUs at night. Because nursing ratios usually define the level of care and comprise the majority of fixed costs in these ICUs, a huge cost saving and amelioration of the nursing shortage may be easily achieved by a firm definition of an ICU bed, rather than closing ICU beds.

Third, it is undeniable that properly trained and credentialed advanced practice providers (APPs), such as nurse practitioners (NPs) and physician assistants (PAs), can perform superbly in ICUs,^(6,7) especially if they are dedicated to a specific ICU rather than rotating every few weeks, as has become the practice with residents. Yet, the number and accreditation of APP residencies is embarrassingly low and similarly without national advocacy. As

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GME budgets shrink, this APP manpower pool deserves strong advocacy and support, including academic career tracks for NPs and PAs, which are lacking compared to the more established nursing pathways leading to masters and doctorate degrees.

Fourth, 24/7 coverage by qualified intensivists has been sporadically implemented with mixed reports of impact on outcomes.⁽⁸⁾ Yet ironically, the obvious high ethical ground of having qualified intensivists at the bedsides of the sickest patients in hospitals is not intuitively obvious. Coupling immediate bedside care with the major institutional responsibility for outreach services for rapid response and triage makes sense. Opposition to this concept is equal to removing the cardiac or transplant surgeon from the operating room in the middle of surgery at night.

Fifth, information technology (IT) solutions designed to complement clinical judgment and help maintain the highest evidence-based practice can be effective.⁽⁹⁾ The flood of information from multiple critically ill patients can overwhelm even the best intensivists. In the ICU universe, where technologies and algorithms are refuted by randomized controlled trials (e.g., activated protein C, tight glycemic control, and early goal-directed therapy for septic shock) as fast as they are introduced with near

fanatical fervor in the search for prolonging life at any cost, IT can certainly complement, but not replace, a full-time qualified intensivist. The costs of IT are regrettably clouding its rational use.

Finally, rationing is not a concept that comes easily to the American public.⁽¹⁰⁾ Yet, the fact that > 80% of Americans want to die comfortably without pain or anxiety in their own bed surrounded by family, rather than in an ICU bed, means that we are coming to grips with our mortality. The crippling cost of prolonged, ineffective and harmful critical care is usually not a major consideration, as long as an unlimited supply of critical care is available. Nevertheless, the concept of a more mature and paternalistic intensivist who is an expert in palliative/comfort care and capable of providing both maximal heroic efforts and compassionate care is being realized. However, to hope that part-time intensivists can deliver this care with uniform quality is not realistic.

We agree with other critical care leaders that an updated analysis of the critical care bed supply and demand and the entire CCM workforce in the US⁽³⁾ is certainly warranted if we are to be successful in improving the care of our critically ill patients and decreasing the staggering costs associated with intensive care.

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