

Toward Solving the Critical Care Manpower Crisis

In this issue of *RESPIRATORY CARE*, Hoffman and colleagues¹ describe an alternative model for providing critical care, by “extending” board-certified intensivists with critical care nurse practitioners. This study should be considered cautiously. It describes care of a relatively small number of patients, in only one center, and with only one intensivist-extender. Accordingly, the hypothesis is not proven and, even if valid, the results are not necessarily

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generalizable. Nevertheless, Drs Hoffman, Miller, Zullo, and Donahoe should be commended for investigating potential solutions to the looming critical care manpower shortage.² In an ideal world, we would simply train more young physicians to become intensivists—enough so that there would be an intensivist in every intensive care unit, every hour of the day. Since trainees are not flocking to critical care, for a number of reasons,³ that solution is not forthcoming,⁴ nor may it be necessary. There will be no single solution to this problem:

1. Critical care educators need to better inspire/recruit students and residents who have a penchant for applied physiology.

2. Third-party payers need to remunerate critical care services sufficiently (to allow hospitals to pay intensivists) to make the stress and toil more worthwhile.

3. We need to accept that there will probably never be enough intensivists to staff every hospital intensive care unit 24/7, and, more importantly, that it may not be necessary to achieve excellent outcomes.

This last point is heresy in academic critical care. But if our interest is to serve patients, we must accept that the evidence doesn't prove that an intensivist physically present, every day, all day, is the only way to get there.⁵ Intensivist involvement in the care of critically ill patients clearly improves outcomes.⁶ However, answers to more particular questions, such as the intensivist's exact hours and who actuates the care, are not addressed in the available medical literature.⁵ Accordingly, innovative solutions, including telemedicine (and not necessarily the proprietary kind) and collaboration with critical-care-trained advanced nurse practitioners and/or physician assistants will contribute to the solution. Collaboration with hospitalists who are not board-certified in critical care will almost certainly

provide a piece of the puzzle. The study in this issue of *RESPIRATORY CARE*,¹ while not conclusive, demonstrates the promise of delegating and sharing oversight of care with our talented colleagues. And it is completely consistent with common sense. Most of the studies that have found improved outcomes in critically ill patients cared for by intensivists were performed in teaching hospitals.⁶ Care was actuated by trainees, many of whom are probably less well-versed in critical care than are experienced advanced nurse specialists and physician assistants who practice critical care daily, learning from the intensivist and receiving continuous critical care education/recertification.

Intensivists improve outcomes by several mechanisms:

1. Many lives are probably saved because having a skilled doctor at the bedside frequently or continuously is better than intermittent care provided remotely.

2. Some lives are saved by resuscitation or advanced maneuvers applied at the bedside, in person or remotely by telephone by the intensivist through “extenders” (residents, hospitalists, nurse practitioners, physician assistants).

3. Some lives are saved by educational efforts by the intensivist with bedside nurses and extenders, so that they practice evidence-based techniques in the intensivist's absence.

4. Some lives are saved by protocols, which “extend” the intensivist's teaching/practice, providing automatic evidence-based care and safety nets to protect patients from latent systems errors.

The abundance of evidence in critical care research demonstrates that critical care is a team sport, and the intensivist is the team captain, responsible for ensuring that each member is proficient in some component of the overall toolbox. Respiratory therapists armed with evidence-based protocols enhance weaning outcomes.⁷ Thromboprophylaxis, head-of-bed at $\geq 30^\circ$, ulcer prophylaxis, and daily awakening are achieved universally in my unit because of the professionalism and diligence of bedside nurses. Rescue teams that include nonintensivists (nurses and respiratory therapists) help prevent in-hospital cardiac arrests and attenuate morbidity.⁸ To me it is evident that intensivists themselves aren't responsible for better outcomes. Rather, it is the proximity/availability of intensivists to treat at the bedside *and* their coordination of other professionals and protocols that saves lives. The solution to the manpower crisis is to monopolize and build on this fact—to find ways of using dedicated, bright allied health-

care team members, computers, and protocols to further “extend” intensivists. I congratulate Hoffman and her co-authors for planting this seedling. We need to grow a forest.

Constantine A Manthous MD
Bridgeport Hospital and
Yale University School of Medicine
Bridgeport, Connecticut

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Correspondence: Constantine A Manthous MD, Bridgeport Hospital, 267 Grant Street, Bridgeport CT 06610. E-mail: pcmant@bpthosp.org.