

Hospitalists and Intensivists: Partners in Caring for the Critically Ill— The Time Has Come

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A report by the Committee on Manpower for Pulmonary and Critical Care Societies (COMPACCS), published in 2000, predicted that beginning in 2007 a gap between the demand and availability of intensivists in the United States would become apparent and steadily increase to 22% by 2020 and to 35% by 2030. Subsequent reports have reiterated those projections including a report to congress in 2006 by the U.S. Department of Health and Human Services/Health Resources and Services Administration. This “gap” has been called a health system “crisis” by multiple authors. Two important documents have published specific recommendations for how to resolve this crisis: the Framing Options for Critical Care in the United States (FOCCUS) Task Force Report in 2004 and the Prioritizing the Organization and Management of Intensive Care Services in the United States (PrOMIS) Conference Report in 2007. Since the initial COMPACCS report and since these 2 additional reports were published, a new opportunity to take a major step in resolving this crisis has emerged: the growing number of hospitalists providing critical care services at secondary and tertiary care facilities. According to the 2005/2006 Society of Hospital Medicine (SHM) National Survey, that number has increased to 75%. Since the number of intensivists is unlikely to change significantly over the next 25 years, the question is no longer “if” hospitalists should be in the intensive care unit (ICU); rather the question is how to assure quality and improved clinical outcomes through enhanced collaboration between hospital medicine and critical care medicine. *Journal of Hospital Medicine* 2010;5:1–3. © 2010 Society of Hospital Medicine.

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A looming gap in the supply of intensivists prompted the American College of Chest Physicians (ACCP), the American Thoracic Society (ATS), and the Society of Critical Care Medicine (SCCM) to publish a report in 2000 by the Committee on Manpower for Pulmonary and Critical Care Societies (COMPACCS). This study predicted that beginning in 2007 a shortfall would become apparent and steadily increase to 22% by 2020 and to 35% by 2030. Subsequent reports have reiterated those projections, including a report to Congress in 2006 by the U.S. Department of Health and Human Services/Health Resources and Services Administration.^{1–4}

The concern regarding the shortage of intensivists has been increased by the growing evidence that supports improved critical care outcomes—especially decreased intensive care unit (ICU) and hospital mortality—with intensivist staffing of ICUs.^{5,6} Based on this data and on recommendations from the Society of Critical Care Medicine, the Leapfrog Group made onsite, high-intensity ICU staffing with intensivists 1 of their “4 leaps.”⁷ A paper by Pronovost et al.⁸ published in 2001, however, noted that in order for all ICUs in the United States to meet the Leapfrog ICU Physician Staffing (IPS) standard, the number of intensivists would need to increase by a factor of 2.6. Interestingly, a retrospective study published in the *Annals of Internal Medicine* in June of 2008 by Levy et al.⁹ suggested that mortality rates may actually be higher in intensivist-staffed ICUs. An

accompanying editorial raised concerns about limitations of the study design, but endorsed Levy’s recommendation that more carefully designed, prospective studies were needed; (ie, we still are not certain as to optimal physician staffing for the care of patients requiring the sophisticated treatment” available only in an ICU.)¹⁰

The health policy challenge, however, remains clear: while there is basic consensus that care of critically ill patients by intensivists improves outcomes, the reality is that the shortage of intensivists in the United States as predicted by the COMPACCS report will only increase, leading some to refer to this as a healthcare “crisis.” Two major task forces attempted to address this situation, resulting in the publication of the 2004 Framing Options for Critical Care in the United States (FOCCUS) report, *The Critical Care Medicine Crisis: A Call for Federal Action—A White Paper from the Critical Care Professional Societies*; and the 2007 Prioritizing the Organization and Management of Intensive Care Services in the United States (PrOMIS) Conference Report.^{11,12} Both reports made specific recommendations including, for example, development of uniform standards for accreditation of institutional critical care capacity, identification and endorsement of core competencies in critical care, investment in health services research, the use of uniform protocols for ICU care, leverage of information technology to promote standardization and improve efficiency,

and the development of incentives to attract healthcare professionals to critical care medicine.

A Possible Solution: The Role of Hospitalists

Multiple important efforts are already underway to increase the competency of professionals providing critical care services including the Society of Critical Care's Fundamentals in Critical Care Support (FCCS) program. Additionally, physician assistants and nurse practitioners are playing an increasingly important role as members of critical care services. As another component of this collaborative effort, the PrOMIS Report noted the potential impact of hospitalists in addressing this crisis.

As early as 1999, surveys revealed that as many as 35% of hospitalists were providing critical care services.¹³ According to the 2005/2006 Society of Hospital Medicine (SHM) National Survey, that number has increased to 75% with a low of 66% in the eastern United States and a high of 84% in the western United States. In community hospitals, 87% of hospitalists care for patients in the ICU, and 30% provide critical care services in academic medical centers.¹³ While there is some research^{14,15} and many anecdotal reports that suggest hospitalists perform well in the ICU, there is, unfortunately, little data addressing outcomes for patients cared for by hospitalists. The results from a prospective, severity-adjusted study from the Emory University Section of Hospital Medicine and the Division of Pulmonary/Critical Care Medicine examining outcomes for critical care patients cared for by hospitalists with criteria for Pulmonary/Intensivist consults vs. patients cared for by the Pulmonary/Critical Care Medical ICU Service await peer-review publication.

Despite the lack of outcome data regarding adult hospitalists, it is clear that by default they are already providing a significant proportion of critical care services across the healthcare system, including in tertiary care centers. The two primary models of care include: (1) hospitalists serving as the primary provider without critical care consultant services and (2) comanagement of patients where intensivists and hospitalists collaborate. These collaborative models involve hospitalists actively co-managing critical care patients along with intensivists or hospitalists managing "less" critically ill patients with intensivist consultation when indicated. In hospitals lacking intensivists, hospitalists often manage critically ill patients either with intensivist phone consultation, or with the intent to stabilize and transfer. Electronic ICUs are another expanding model of care that provide intensivist support to hospitalists and other primary care providers—decreasing ICU length of stay and severity-adjusted ICU mortality.¹⁶ There are now 40 electronic ICU programs in the United States, and that number continues to grow.

In 2003, there were approximately 10,000 hospitalists in the United States,¹⁷ and recent data from an American Hospital Association survey indicates that the number has grown to about 28,000 in 2009. Recent research also documents that hospitalists are soon likely to care for the majority of elderly hospitalized patients in America.¹⁸ Aware that

the number of intensivists is unlikely to change significantly over the next 25 years the question is no longer "if" hospitalists should be in the ICU; rather, the question is how to assure quality and improved clinical outcomes through enhanced collaboration between Hospital Medicine and Critical Care Medicine.

Recommendations

There are 3 steps that should be taken urgently to meet this challenge:

1. Per the recommendation of the FOCCUS Report and the PrOMIS Conference Report, uniform protocols for intensive care treatment—many of which already exist but are not used consistently—should be identified and implemented across all ICUs regardless of the level or certification of the provider.
2. Also per the PrOMIS Report, a process for certification of physicians providing critical care services should be established by the appropriate governing bodies, including the Society for Critical Care Medicine, the Society of Hospital Medicine, and the American Thoracic Society, among others. While the PrOMIS Report called for "cross-training of hospital-based providers to provide intensive care services in lower 'tier' hospitals," a more realistic recommendation given current involvement of hospitalists in the provision of critical care services in secondary and tertiary centers is a competency-assurance process that includes hospitalists practicing at all levels. This would *not* be equivalent to board certification, but would be based on a rigorous, comprehensive education and skills training process leading to recognition that would distinguish the recipient as having competencies beyond those obtained in internal medicine residency training. Models for certification could include 4-month onsite training or a distance learning curriculum with regular blocks of onsite training. Another strategy might be for appropriate governing bodies to establish basic criteria for competency that would then be provided by individual institutions. Emory University, for example, has developed a pilot program incorporating significant components from the European Society for Critical Care Medicine's Syllabus for Competency Based Training in Intensive Care Medicine in Europe.¹⁹ Other institutions are also exploring the creation of certification/competency programs. Minimally, and prior to any decision about establishing formal criteria, institutions could identify designated hospitalists within groups who have particular interest and ability in the critical care setting. These providers, based on models already in place at sites across the United States, could, as an example, be required to spend a minimum of 50% of their clinical time in the ICU and to complete 10 to 20 hours of critical care continuing medical education (CME) per year. One strategy to address this issue and develop clear consensus and guidelines would be to convene the often discussed PrOMIS II working group.

3. Per both the FOCCUS Report and the PrOMIS Report as well as a number of other publications,¹⁹ health services research in ICU care should be identified, funded, and implemented. A major focus of this effort should be the evaluation of clinical outcomes for ICU patients cared for by hospitalists. This research is needed for at least 2 reasons:

- As noted, there is little research that has assessed hospitalists' impact on outcomes of ICU patients. Hospitalists are already caring for patients in ICUs across the United States and given the research that has identified the outcomes benefit provided by intensivists, it is important to know objectively if hospitalists have similar levels of performance.
- An increasing number of hospitals and healthcare systems are now committed to achieving the Leapfrog IPS standard—a challenge for many because of the difficulty with recruiting intensivists. If new research reveals that hospitalists with board certification in Internal Medicine, and more specifically with additional competency training in critical care, also improve outcomes in the ICU then it may be possible for Leapfrog to revise the criteria for meeting the IPS standard.

Summary

As discussed in a number of publications,²⁰ including an article from the Mayo Clinic in the April 2009 edition of *Chest* entitled, "Physicians Staffing Models and Patient Safety in the ICU,"²¹ along with an accompanying editorial, "Should Intensive Care Medicine Itself Be on the Critical List,"²² creative and realistic solutions are urgently needed to address the crisis in critical care in the U.S. Collaborative efforts between Critical Care Medicine and Hospital Medicine to meet this challenge benefit all involved:

- Intensivists will continue to direct tertiary care units and/or co-manage patients in tertiary and secondary care centers with Hospitalists.
- Hospitalists will benefit by having the opportunity to secure critical care competency training and by having their appropriate role in the ICU defined.
- All secondary and tertiary care institutions will have a realistic opportunity to meet Leapfrog IPS criteria and therefore benefit from the potential decreased length of stay (LOS), decreased mortality, and improved quality.
- Patients benefit by receiving uniform, evidence-based, protocol-driven care.

There is now a need and an opportunity for ACCP, SCCM, ATS, and the American Association of Critical Care Nurses (ACCN), to expand the important work they have already begun through the Critical Care Workforce Partnership. The Partnership should join with the SHM to take the lead in supporting and promoting this collaborative relationship between intensivists and hospitalists: aware that in the final analysis, it is the patients we serve who will benefit the most.

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