The NEW Intensivists

ALLAN H SHOEMAKE/TAXI/D. HURST/ALAMY

Hospitalists are increasingly filling manpower gaps in ICUs. But do they belong there?

By Gretchen Henkel

As critical care workforce shortages continue, and as Medicare enrollment swells—a number slated to increase an estimated 50% by 2030—hospitalists are increasingly filling in the gaps in their institutions' intensive care units.[1-2] In SHM's 2005-06 survey, "The Authoritative Source on the State of the Hospital Medicine Movement," for example, 75% of participants reported caring for patients in the ICU.[3]

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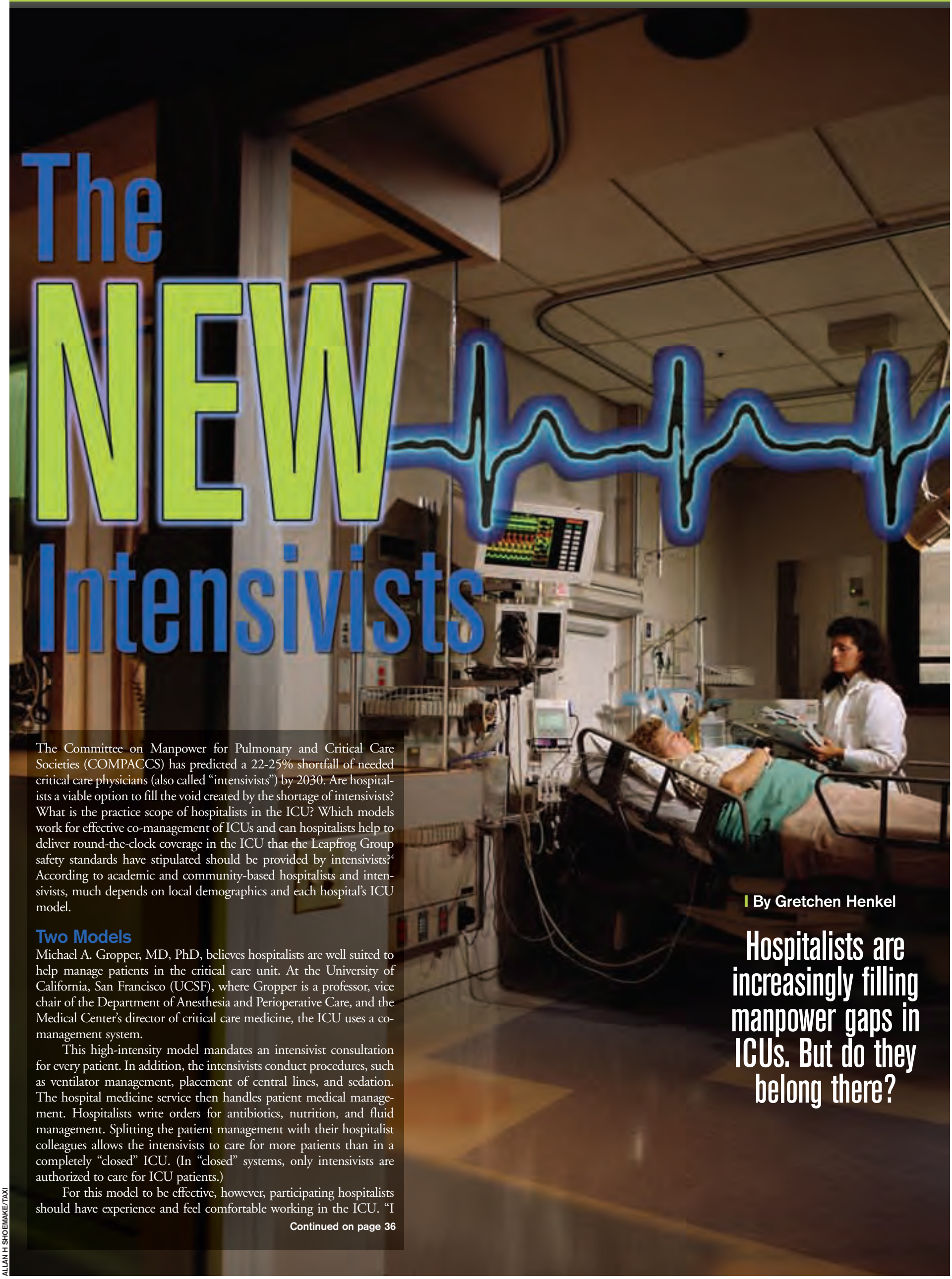

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Hospitalists are increasingly filling manpower gaps in ICUs. But do they belong there?

The Committee on Manpower for Pulmonary and Critical Care Societies (COMPACCS) has predicted a 22-25% shortfall of needed critical care physicians (also called "intensivists") by 2030. Are hospitalists a viable option to fill the void created by the shortage of intensivists? What is the practice scope of hospitalists in the ICU? Which models work for effective co-management of ICUs and can hospitalists help to deliver round-the-clock coverage in the ICU that the Leapfrog Group safety standards have stipulated should be provided by intensivists?[4] According to academic and community-based hospitalists and intensivists, much depends on local demographics and each hospital's ICU model.

Two Models

Michael A. Gropper, MD, PhD, believes hospitalists are well suited to help manage patients in the critical care unit. At the University of California, San Francisco (UCSF), where Gropper is a professor, vice chair of the Department of Anesthesia and Perioperative Care, and the Medical Center's director of critical care medicine, the ICU uses a co-management system.

This high-intensity model mandates an intensivist consultation for every patient. In addition, the intensivists conduct procedures, such as ventilator management, placement of central lines, and sedation. The hospital medicine service then handles patient medical management. Hospitalists write orders for antibiotics, nutrition, and fluid management. Splitting the patient management with their hospitalist colleagues allows the intensivists to care for more patients than in a completely "closed" ICU. (In "closed" systems, only intensivists are authorized to care for ICU patients.)

For this model to be effective, however, participating hospitalists should have experience and feel comfortable working in the ICU. "I

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don't think you would want to pluck the average hospitalist and throw him into the ICU," cautions Dr. Gropper. "But a hospitalist who started to consistently spend some time in the ICU would be very good. In collaboration with an intensivist, I think it's a model that allows high-quality patient care."

Inpatient Physician Associates, a privately owned hospital medicine group in Lincoln, Neb., headed by Brian Bossard, MD, found a slightly different way to collaborate with a group of intensivists to deliver high-quality care at the city's two community hospitals, BryanLGH Medical Center and St. Elizabeth Regional Medical Center. Dr. Bossard and Bill Johnson, MD, a pulmonologist certified in intensive care, and director of the ICU at both hospitals, crafted an open ICU model. Although intensivists conduct multidisciplinary rounds at Bryan and St. Elizabeth, consults are not mandatory. Hospitalists provide 24/7 coverage, often placing central lines and doing other procedures. Intensivists are available for consultations and more complicated critical care procedures, such as chest tube placement, Swan-Ganz catheters, and difficult ventilator management.

This system evolved out of necessity; the hospitalist program predated the intensivist program at BryanLGH. "When I started the group, we needed docs who were comfortable in the ICU," explains Dr. Bossard. With the open ICU model, that requirement still applies today.

When recruiting new hospitalists, Dr. Bossard looks for those who function well in the ICU environment, understand evidence-based practice, and have an aptitude for learning procedures. He also seeks out doctors comfortable with cognitive critical care.

The system seems to work.

"There are many patients who are admitted and discharged from the ICU who don't require an intensivist's care," Dr. Bossard says. Hospitalists in his group cooperatively manage most patients, with intensivist consultation.

"We have a very good collaborative approach here," says Dr. Johnson, adding that it's difficult to have a closed ICU at a community hospital because of intensivist shortages and resistance from primary care physicians who want access to their patients. The key to the success of the program in Lincoln is that all physicians know their limits. "We don't force ICU consults upon anybody," Dr. Johnson says. "But I think the hospitalists do recognize when it benefits them to have the intensivist involved."

The proof is in the proverbial pudding. Since the co-managed ICU program began in 2006 in Lincoln, the ICU mortality rate has dropped 50%, and there have been no ventilator-acquired pneumonias or central line-related infections for two years.

Ideals Versus Reality

The Leapfrog Group identified around-the-clock coverage of surgical and medical intensive care units by intensivists as one of its three safety standards.[5] "In an ideal world," says Bradley A. Sharpe, MD, associate division chief in the Division of Hospital Medicine at UCSF, "every critically ill patient would be seen, managed, or co-managed by a critical care specialist."

David A. Hoffmann, DO, agrees certain standards in the ICU should exist, but says community hospitals will never be able to reproduce the academic model. "They don't have the labor from residencies," says Dr. Hoffman, medical director of Hospitalists of Franklin County, an HM group at Chambersburg Hospital, a community hospital in Chambersburg, Pa.

He says his hospitalists fill a crucial gap that intensivists can't: "We're the only doctors who are here in the hospital 24 hours a day—besides the ER doctors."

Dr. Hoffman believes it's more important to focus on outcomes than to adhere to strict Leapfrog standards. His HM group, comprised of half family medicine-trained, half internal medicine-trained hospitalists, emphasizes teamwork, evidence-based protocols, and bonuses tied to quality outcomes and patient satisfaction.

In many smaller community hospitals, HM groups must do what works to simply provide coverage. Richard Rohr, MD, vice president for medical affairs at Cortland Regional Medical Center in Cortland, N.Y, who also works as a hospitalist, says, "The people who are here around the clock are the hospitalists, so they also do the ICU management." Last summer an intensivist who joined his hospitalist team provided ICU coverage five days a week.

Dr. Rohr believes hospitalists must acquire skills in mechanical ventilation and placement of central lines, and have high-level knowledge of infectious disease. For most ICU patients, however, this type of care is "basically internal medicine pushed to extremes," he says.

Advantages and Disadvantages of Shared Responsibility

Under a co-managed ICU model, hospitalists can offer benefits beyond their direct time on the unit, says Hugo Quinny Cheng, MD, associate clinical professor in the Division of Hospital Medicine at the University of California at San Francisco. Dr. Cheng says his colleagues can provide more continuous care to patients because they rotate less frequently than do intensivists. In addition, hospitalists may have a broader view of hospital-wide systems and often can maximize ancillary services, such as physical therapy or nutrition, when it's most appropriate for the patient, Dr. Sharpe adds.

One possible downside to a co-managed ICU, however, is confusion about responsibility. "In a critical care setting, ambiguity can lead to bad outcomes," says Dr. Sharpe. To avoid this, make all ICU policies and procedures collaborative and involve all providers, including ancillary staff, in the process. "The clearer those guidelines and boundaries are, the easier it is for everyone," he emphasizes.

For the most part, offering ICU rotations is a useful recruiting, hiring, and retention tool.

INTENSIVISTS AND PATIENT MORTALITY: ANOTHER LOOK

A study from Levy, et al. that was published in the June 3 issue of the *Annals of Internal Medicine* showed patients managed by critical care physicians had a higher risk of mortality than those not managed by intensivists.[1] These results surprised many in the critical care and hospital medicine communities:

Intensivist Dr. Gropper: "It may be that the statistical model used was comparing two different types of hospitals—not just ICUs, and thus it may have compared 'apples to oranges.' However, I like to have an open mind and shouldn't just dismiss the idea [that ICUs run by intensivists can be harmful]. Essentially every other study, including the major meta-analysis by Pronovost et al., has shown that intensivists help—so I don't think we should jump on this bandwagon too fast!"[2]

Hospitalist Dr. Sharpe: "Maybe only patients with a certain degree of illness need an intensivist. If they're not that ill, a hospitalist may actually be better trained to figure out how intensive the care should be. Overall, this study should not, however, change staffing. I think the smartest studies going ahead will look at a breakdown by degree of illness and length of ICU stay."

Hospitalist Dr. Bossard: "I do severity-adjusted data review, and I know that the way our software adjusts for severity may not allow us to compare like to like. My perspective is that intensivists do a good job, and we're not convinced that the study adequately compensated for severity adjustment."

Hospitalist Dr. Axon: "This is one of those studies we're going to talk a lot about because it's counter to all the research that has come before. It parallels what has happened in hospital medicine, where early studies showed improvements or efficiencies in length of stay and cost per case over non-hospitalists, and later studies have not. The working definition of critical care management differs from hospital to hospital, so you may not be making direct comparisons."

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"Many hospitalists enjoy critical care and enjoy the opportunity to take care of very ill patients as part of their day-to-day practice, as long as they're not in over their heads," Dr. Sharpe says.

Preparation for the Future

Physicians have differing ideas about how intensivist-hospitalist relations will look in the future and what role hospitalists should play in the ICU. R. Neal Axon, MD, assistant professor in the departments of internal medicine and pediatrics at the Medical University of South Carolina in Charleston and a Team Hospitalist member, has worked in both academic and community settings. In the former, a pulmonary critical care specialist with a team of fellows, residents, and students ran the high-intensity ICU. In a local hospital where he worked as an attending, "there was no critical care team, per se. The hospitalists were the critical care team," he says. "The difference in the care setting was pretty dramatic."

Dr. Axon believes it might be a better long-term solution (in light of continuing critical care workforce shortages) to pursue formation of a fellowship program that combines advanced training in hospital medicine and critical care medicine.

Robert M. Wachter, MD, professor and chief of the Division of Hospital Medicine, associate chairman of the Department of Medicine, and Lynne and Marc Benioff Endowed Chair in Hospital Medicine at the University of California at San Francisco, and author of the "Wachter's World" blog (www.the-hospitalist.org) says it's a matter of whether hospitalists have enough intensive care training to work in the ICU.

"My own bias is that they're probably close enough that they don't need an extra year of training, but they're not quite there," he says.

As a result, UCSF's HM division developed these strategies to augment hospitalists' ICU skills:

- A hospitalist mini-college: a small group, hands-on experience, with one full day in the ICU, added to its annual CME course in October (www.ucsfcme.com/2009/MDM09P01A.pdf); and
- The creation of a critical care/hospital medicine fellowship that will launch in 2009.

By improving their ICU skills, hospitalists can form collaborative partnerships with their intensivist colleagues—both on the unit and in the critical care committees. This team approach can help their hospitals achieve the attributes of successful intensive care units.

"We have to acknowledge there's no magic in being a hospitalist or a critical care specialist," Dr. Axon says. "Individual decisions for individual patients, and the ways in which we all work together to systematize care, are the real differences that affect outcomes." TH

Gretchen Henkel is a freelance writer based in California and a frequent contributor to The Hospitalist.

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4. Mello MM, Studdert DM, and Brennan TA. The Leapfrog Standards: Ready to jump from marketplace to courtroom? *Health Aff* 2003;22(2):46-59.
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