

Creating the Hospital of the Future: The Implications for Hospital-Focused Physician Practice



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INTRODUCTION

Many medical specialties are adopting a hospital-focused model of practice, and that trend is changing the essence of health care delivery in the inpatient setting. The nature of hospital-based medicine is evolving to include surgical hospitalists, neurological hospitalists, ob-gyn hospitalists, orthopedic hospitalists and others.

To better understand the impact of hospital-focused medicine on the delivery of care, the American Hospital Association's Physician Leadership Forum together with the Society of Hospital Medicine held a half-day session in July 2012. The interactive session looked at the first 15 years of hospital medicine and how it is changing, examined the impact of hospital-based practice on the delivery of care and the bottom line, and discussed how hospital-focused physician practice can lead to better performance and safer hospital care. The session, which is summarized in this paper, was generously sponsored by Apogee Physicians, Delphi Healthcare Partners Inc., and Eagle Hospital Physicians.

Faculty for the program are listed below.

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Hospital Medicine and the Hospitalist

In 1996, as the growth in managed care increased the role for general internists and primary care physicians, the term “hospitalist” was coined by Drs. Robert Wachter and Lee Goldman in a *New England Journal of Medicine* article to describe “a new breed of physicians ... who will be responsible for managing the care of hospitalized patients in the same way that primary care physicians are responsible for managing the care of outpatients.”¹ Drs. Wachter and Goldman argued that inpatient specialists had long been employed in other countries, including Great Britain and Canada, and could improve efficiency by reducing the time physicians spent away from an outpatient practice while allowing the inpatient physician to respond quickly to patient needs in the hospital. “It seems unlikely, however, that high-value care can be delivered in the hospital by physicians who spend only a small fraction of their time in this setting. As hospital stays become shorter and inpatient care becomes more intensive, a greater premium will be placed on the skill, experience, and availability of physicians caring for inpatients.”²

Until the 1990s, hospitals and physicians had not been expected to work together efficiently, but that changed as cost reduction and the increased role for general internists in managed care collided. The hospitalist movement provided a good entry point to broaden the relationship between hospitals and physicians and establish areas of common interest around increasing efficiency and improving quality.

In the early years of the hospitalist movement, there was concern that hospitalists would not prove their worth in cost reductions and strong trepidation about pushback from other physicians who would not want to relinquish their inpatient practice. However, by keeping hospitalist programs voluntary and focusing in areas where managed care was already driving the call for efficiency, these programs began to flourish and show their value. The cost

reductions that they were able to achieve spurred hospital support without which the programs would not have survived, as hospitalists received the same reimbursement as primary care providers for much sicker patients. For hospitals, the return on investment was a lower length of stay and reduced inpatient costs.

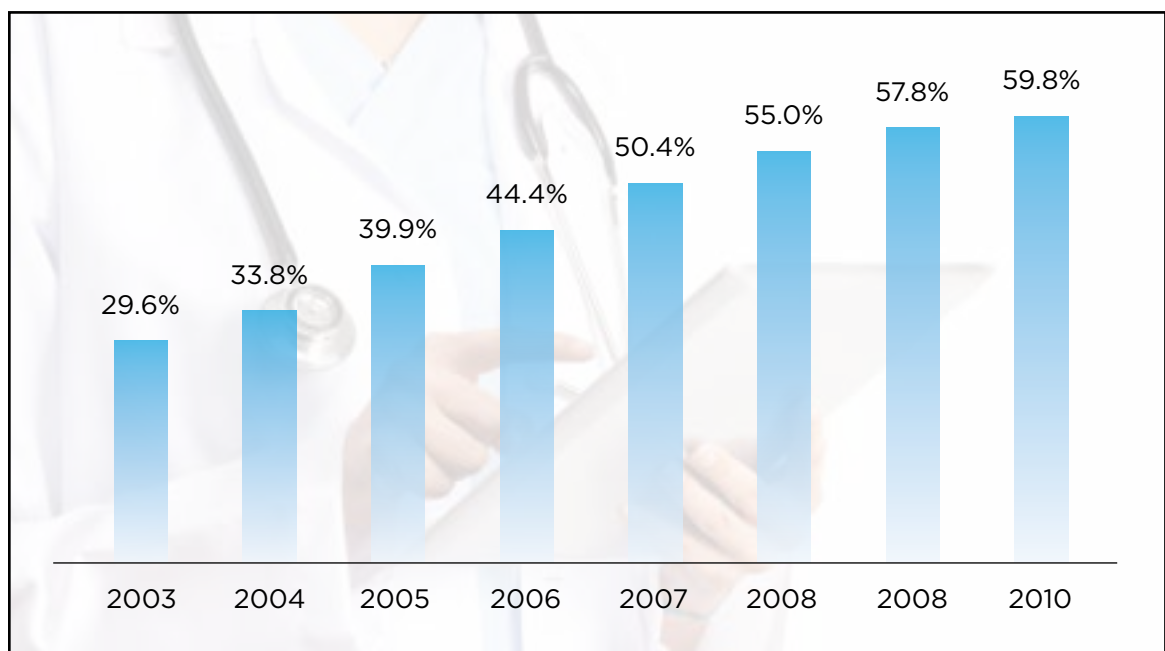
While the hospitalists were initially perceived as a way to create efficiencies, hospitalists realized that they needed a “brand” and to be valued as more than just the efficiency drivers within the hospital. At the same time, the Institute of Medicine (IOM) published its groundbreaking report on the quality of health care, “To Err is Human: Building a Safer Health System,” which served as a catalyst for change in the nation’s health care delivery system. The report ignited a new, in-depth examination of what is safe care and quality care. The

Society of Hospital Medicine (SHM) saw the IOM report as an opportunity to show their worth and role in the delivery system and take on quality improvement efforts within the hospital. As a new and growing specialty, SHM and national hospitalist leaders helped to grow and create the business case for quality. In addition, provisions included in the *Patient Protection and Affordable Care Act* have increased the pressure on hospitals and health systems to provide efficient and high-quality care, further emphasizing the skills that hospitalists have been honing for the past decade or more.

As a strong clinical voice tied closely to the daily operations of the hospital, other roles began to emerge for hospitalists including leading health care information technology and electronic patient record efforts, managing hospital throughput, and helping to improve transitions of care. Hospitalists also

have been tapped to partner with emergency departments, help co-manage surgical and medical specialty patients, and, with the reduction in resident duty hours, fill some of the gaps at academic and teaching hospitals. In addition, specialty hospitalists are reporting anecdotally a stronger sense of teamwork and a lower threshold for consults among their colleagues since, as hospitalists, they are already on-site, easy to reach, and well known to the hospital staff. Therefore, it is no surprise that hospital medicine is the fastest growing medical specialty in history, with more than 30,000 hospitalists practicing in 70 percent of U.S. hospitals. “Driven by a variety of forces, including increasing pressure to improve quality and safety, limits on house staff duty hours, generally positive outcome data, and increasing support of the model by primary care physicians and specialists, the number of hospitalists has increased substantially.”⁴

Figure 1: Percent of Hospitals Reporting that Hospitalists Provide Care in their Hospital, 2003-2010³



In addition to the expectation of increased efficiency and the focus on quality improvement and patient safety, hospitalists have focused much of their academic research on the study of the hospitalist model and how to improve it. Many studies have examined the effect of hospitalist programs on inpatient care. While the findings of these studies vary somewhat, it is clear that hospitalist programs are associated with shorter lengths of stay and lowered costs. However, not all the findings are positive around quality measures. A study published in 2012 by the *Journal of Hospital Medicine* reported that there was no significant improvement on reported mortality and readmissions measures for acute myocardial infarction, congestive heart failure, and pneumonia as a result of existing hospitalist practices.⁵ Showing mixed results, an article looking at the hospital care of Medicare patients, published in 2011, from the *Annals of Internal Medicine*, showed that although hospitalists reduced length

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of stay by 0.64 days and reduced cost by \$282, these benefits were offset by higher costs after discharge of \$332, and higher medical utilization, indicating that patients cared for by hospitalists were more likely to be readmitted

and to have emergency department visits and were less likely to be discharged home.⁶ Also showing mixed results was a study, published in 2011 in *Medical Care*, which found on one hand that hospitalists were associated with a reduction in length of stay by 0.37 days, as well as higher rates of discharge to inpatient rehabilitation. On

the other hand, the study also found hospitalist care to be associated with higher rates of readmission, though the study did not explore the causative factors of this finding and indicated that more research would be needed to explain the phenomenon.⁷

Switching gears to demonstrate the positive effects hospitalists are having on inpatient care, two studies verified the reduction in length of stay that hospitalists have. Specifically, the *Journal of Hospital Medicine* published a report in 2010 that looked specifically at hospitalists' impact on short-stay or observation units, and found that hospitalists were associated with a significantly reduced length of stay for all patients.⁸ The second article from a 2010 volume of the *Journal of American Geriatrics Society* concluded that hospitalists reduced length of stay overall, with the greatest reduction seen in patients who were older, had more complex, non-surgical health issues and were cared for at community hospitals.⁹

A study from *The New England Journal of Medicine* in 2007 showed similar positive findings, that "For common inpatient diagnoses, the hospitalist model is associated with a small reduction in the length of stay without an adverse effect on rates of death or readmission. Hospitalist care appears to be modestly less expensive than that provided by general internists, but it offers no significant savings as compared with the care provided by family physicians."¹⁰ The authors concluded that the reason hospitalists reduced length of stay without significantly reducing cost was because they were compressing similar or greater amounts of testing and treatment into a shorter period of time.¹¹ Looking at measures of hospitalist performance

published between January 1996 and December 2010, the authors found that hospitalists are indeed efficient providers of inpatient care, reducing average length of stay in 69 percent of comparative cases and lowering total hospital costs in 70 percent.¹² In addition, hospitalists provided comparable clinical quality of care. Based on their findings of the type of studies and research done so far on the field of hospitalist medicine, the authors concluded that “Future research should include an expanded focus on the specific structures of care that differentiate hospitalists from other inpatient physician groups as well as the development of better conceptual and statistical models that identify and measure underlying mechanisms driving provider-outcome associations in quality.”¹³ This review of the literature supports claims that hospitalists are associated with reduced length of stay and reduced hospital costs.

Hospital medicine is still developing, and more research is necessary in order to evaluate its full impact on inpatient care as the model is refined and improved.

The expectation in the health care delivery system and among the specialty is that hospitalists will help improve the efficiency of the hospital and increase continuity of care. Hospital medicine also is being called upon to help integrate the clinical and administrative functioning of the hospital. Hospitalists provide a unique perspective and opportunity to improve not only efficiency and quality within the hospital, but also to lead and integrate the care delivery team. To do this, hospitalist programs need to teach students how to lead and manage change, integrate teams, manage throughput and understand health information technology data needs.



Pearls and Pitfalls in Building the Hospitalist Practice

The number of hospitalists is growing as organizations look to solve coverage issues, though hospitalists are not the only answer. Numerous models, from pay for call coverage, to telemedicine and the use of *locums tenens* physicians all are intermediate ways to address coverage. However, once involved in the care delivery in a hospital, many hospitalist programs are helping to improve quality metrics, improve coding, and are getting involved in electronic patient record adoption and improvement of the health information system. One value of a hospitalist program can be found in reaching a more efficient and integrated delivery system. Some of the efficiencies of a hospitalist program come from the standardization of treatment management. Standardization can improve quality and reduce medical legal risk. The joining of physicians and hospitals also allows for the possibility of negotiating with third-party payers and potentially negotiating with malpractice insurance providers. Quantifying the improvements in quality and efficiency from standardization as well as quantifying the savings from negotiations in pay and insurance will both be hard to achieve, but the improvements are highly likely.¹⁴

Hospitalists are not the panacea. Much can depend on the clinical and inter-professional communication skills of the physicians hired. In addition, practical experience has shown that one size/model does not fit all when it comes to creating a hospitalist practice. What works best for a medical hospitalist practice does not necessarily apply to a surgical hospitalist practice. Hospitals must recognize that different specialties have different needs and be sure the organization understands the best practices for each specialty group. For many surgical specialties, for example, starting with a mid- to late-career surgeon serves as a strong foundation for a new practice, but for other specialties, a young trainee is a reasonable place to start.

In forming a hospitalist practice, there are many decisions to consider, from creating a

new program, or using an existing vendor, to contracting with the established specialty group within the community. There are numerous considerations related to compensation, where there is little data available today about how to balance salary elements between fixed compensation, production and performance rates. In addition, serious consideration must be devoted to determining the practice infrastructure and the ground rules required to maintain harmony between the hospitalists and community physicians in the same specialty. One important area of consensus that needs to be reached during creation of a hospitalist program is the key clinical approaches that affect patient care. For example, in a program for ob-gyn hospitalists, consensus should be reached for approaches such as indications for induction, management of pre-eclampsia, type of tubal sterilization to

be used, etc. Standardization also is important to assist with quality improvement reviews, risk management, facilitation of communication, and the avoidance of errors.¹⁵ Key to a successful hospitalist practice is hospital financial support in addition to professional fees, which should be rendered cost effective by the savings a successful hospitalist program can bring through efficiency, quality improvement and coverage solutions.

...hospitalists need to be part of the hospital team throughout the creation process.

One major drawback of hospital medicine is the potential to disrupt the continuity of care between inpatient and outpatient care, as well as the potential for inpatient discontinuity due to shift-based or block-

based scheduling models that result in multiple hand-offs of care. These hand-offs are vulnerable to communication failures, excess resource use, and prolonged length of stay. A study at Johns Hopkins Bayview Medical Center in Baltimore looked at the effects of a quality improvement initiative by a hospitalist group that focused on improving continuity of care and reducing hand-offs. This model, called Combining Incentives and Continuity Leading to Efficiency (CICLE), showed promising results and may be helpful for others to examine in the formation of a new hospitalist program. The CICLE model sought to improve continuity of care by “attempting to pair each patient with a single attending physician for the duration of the hospitalization. A secondary objective [was] to provide physicians with an incentive to discharge patients at the appropriate time with high-quality discharge planning.”¹⁶

The mean length of stay on general medical wards is four days, so the CICLE model used this as the foundation for its staffing model. A study of the effects of the CICLE model found that after adjusting for length of stay, the CICLE model increased the chance of a patient having a single hospitalist for the entire hospitalization. Mean length of stay also decreased by 7.5 percent with the CICLE model. CICLE achieved its goals of improving continuity of care and reducing length of stay without substantial increase to readmission rates. “In the era of value-driven health care, the CICLE staffing model is a viable option for hospitalist groups that are truly committed to quality patient care, and we encourage policy makers and hospital leaders to support hospitalist groups in further exploring and considering implementation of the CICLE model.”¹⁷

To be successful, hospitalists need to be part of the hospital team throughout the creation process. Hospitalists, unlike independent physicians, are an integral part of the management and running of the hospital and need to be closely linked with the administration of the hospital and practice as a team with the other clinicians in the hospital. From monitoring the daily census to ensuring that sufficient support is available for the hospitalist practice, creating a hospitalist program requires careful thought and proper management and a strong leader who can partner with the administration.¹⁸

New Kids on the Block — the Rise of the “ists”

To address many of the same problems that spawned the general hospitalist movement, including coverage, efficiency, and easing the burden on private practice, specialty hospitalist practices are increasing at a rapid rate. John Maa, MD, FACS, assistant professor Department of Surgery; assistant chair, Surgery Quality Improvement Program; director Surgical Hospitalist Program, University of California at San Francisco (UCSF), sees the rapid growth in specialty hospitalist programs as a good thing for both hospital medicine and patient care. “This represents a transformation of the way an academic medical center is structured. We’ve traditionally prioritized research ahead of patient care, but this model is inverting that. It is patient-centered, making them the priority, and answers the question, ‘How can we reconfigure what we have to take better care of patients?’ And that’s why I think we’ll succeed.”¹⁹ In addition to these system issues, specialty hospitalists also are seeing the influence of the choice of individual physicians who prefer a hospital-based practice or an outpatient practice. With the model of the general hospitalist well established and gaining support across the health care system, specialty hospitalists are choosing to focus on a hospital-based practice. In addition, with the reduction in the number of specialists willing to provide on-call coverage, hospitals are seeing the advantage of supporting a smaller number of focused specialty hospitalists rather than paying for on-call coverage over a larger medical staff for less frequent coverage.²⁰

Like their internal medicine colleagues before them, specialty hospitalists are facing some of the same obstacles including turf battles and trust issues with their outpatient colleagues. Specialty hospitalist practices also require support from the hospital, as professional fees are usually not enough to fund a specialty hospitalist practice. Specialty hospitalist practices face the same need as the general hospitalist programs to show their return-on-investment to their sponsoring hospital. In addition to specialists reorganizing their practices into the hospitalist model, the role of the general internal

medicine hospitalist has continued to expand to include co-management and consultation across the hospital. It is the hope that the expansion of the hospital-based practices will serve to increase collaboration and teamwork among the clinicians in the hospital.²¹

There is limited data at this point as to the effect of specialty hospitalist practices on outcomes, but as with medical hospitalists, patients report similar levels of satisfaction with hospital care provided by hospitalists or primary care physicians. An early study

shows 20-minute response times for acute care surgical hospitalists to emergency department consultations and high satisfaction among the emergency department staff, while anecdotal reports suggest reductions in malpractice costs due to ob-gyn hospitalist programs.²²

Four specialty hospitalist groups are profiled below, ob-gyn hospitalists, orthopedic hospitalists, neurohospitalists, and acute care surgical hospitalists. These specialties range from 150 practitioners to more than 1,500 and are changing the way medicine is practiced in hospitals across the country. Anecdotally, these specialists are seeing greater teamwork and willingness to call in specialty hospitalists for consultation. Specialty hospitalists, much like their general hospitalist colleagues, are in many ways focused on making the overall health care system work better and creating greater consistency in practice.

As hospitals consider the need for specialty hospitalist practices, Dr. Wachter proposes four criteria:²³

- 1) Is the number of inpatients who require the services of that specialty (either for consults or principal care) large enough to justify having at least one doctor in the house during daytime?
- 2) Is there a premium on urgent availability? When this specialist is needed, is it via a stat page, as opposed to “anytime this afternoon would be fine?”
- 3) Are most of the specialists stuck in the office or the OR for many hours at a time, making it difficult to get away when called acutely (see #2)?
- 4) Has the field become sub-sub specialized, such that many covering physicians are now uncomfortable managing

common acute inpatient problems (i.e., the headache neurologist asked to handle an acute stroke; the ENT doctor who spends her days seeing otitis and swollen tonsils now being asked to manage an airway emergency)?

Ob-Gyn Hospitalists

Ob-gyn hospitalists, also known as laborists, have followed the trend of the specialty hospitalist, growing from 15 programs in 2006 to nearly 170 today with somewhere between 1,000 and 1,500 ob-gyn hospitalists practicing around the country. Ob-gyn hospitalists also have a dedicated society with resources available at www.obgynhospitalist.com. Like their general hospitalist colleagues, ob-gyn hospitalists play an important role in improving outcomes, safety, quality and efficiency while providing a solution to ob-gyn on-call needs and coverage for emergent cases. It should be noted that ob-gyn hospitalists are not just involved with labor, but provide a full range of obstetric and gynecological services, including emergent gynecological surgery. While each program is unique, in general, the ob-gyn hospitalist usually practices full-time in an urban hospital with over 1,000 births per year and is employed either by the hospital or a medical staffing group. They tend to work between seven and nine 24-hour shifts a month with salaries ranging from \$200,000 – \$250,000 per year. Most tend to be at least six years post-residency with strong leadership skills as they often lead their care teams.

Ob-gyn hospitalists face many of the same challenges as their generalist colleagues overcoming skepticism and mistrust from private physicians. Though ob-gyn hospitalists are there to augment the relationship

between patients and their private practice physicians, it is possible that some patients may resist the idea of working with an ob-gyn hospitalist because of their desire to continue with the physician with whom they have already built a foundation of trust during pregnancy. Ob-gyn hospitalists also face challenges with follow-up care for unassigned patients admitted through the emergency department, ensuring adequate back-up plans are in place for busy times, and some ambiguity among the nursing staff about whom to call. Some object to the ob-gyn hospitalist model because of concerns that ob-gyns with outpatient practices will lose some of their clinical obstetrical skills. Others point out that hospitals with a small volume of obstetrical cases cannot afford to establish or maintain an ob-gyn hospitalist program. Ob-gyn hospitalist practices also require hospital support in order to thrive and much like general hospitalist practice, provide cost reductions and quality improvement as part of their service to the hospital in which they practice.

Though there are several challenges facing ob-gyn hospitalist models, there also are several ways in which the hospitalist specialty appeals to many stakeholders, including ob-gyns with outpatient practices, nurses, hospitals, patients, and the ob-gyn hospitalists themselves. For ob-gyns practicing in the outpatient setting, the hospitalist model frees them from having to leave their office and scheduled patients to attend to a patient in labor at the hospital. It also reduces their on-call responsibilities and contributes to work-life balance. Ob-gyn hospitalists benefit from set work schedules, fewer work hours than ob-gyns with outpatient practices, no on-call responsibilities, no office to manage, competitive compensation, paid benefits and guaranteed time off.



Nurses and other hospital staff benefit from always having a doctor available to see patients in labor and delivery as well as providing a ready source to answer questions or handle emergent issues. Hospitals and patients both benefit from quality and safety improvements.

Although there is scant quantitative data available yet on the safety improvements brought by ob-gyn hospitalist programs, anecdotal evidence shows improvement and data collection is underway for empirical studies of the improvements hospitalist programs have brought to obstetrics and gynecology. Early data show evidence of quality and safety improvements through the use of ob-gyn hospitalists. For patients who present at the hospital with symptoms unrelated to their pregnancy, such as influenza or gastroenteritis, the ob-gyn hospitalist provides the opportunity for the physician attending to these symptoms to consult with an ob-gyn. Previously, these women may have had to wait for several hours to see a physician, depending on her symptoms and the availability of her private ob-gyn, who would be attending to patients in the office. The revenue generated by the facility fee of having the ob-gyn hospitalist see these patients also helps fund the hospitalist program. The availability of an ob-gyn hospitalist also “has made deliveries by family practitioners much safer: the hospitalist hovers outside the room, immediately available should the

family doc perceive early signs of trouble.”²⁴ Because ob-gyn hospitalists are always available, they provide a significant decrease in unattended deliveries, which reach as high as 10 percent in some hospitals. ob-gyn hospitalists, by the nature of their hospital-based practice, are more experienced in treating complex cases, which can result in a reduction in complications in high-risk or emergency situations.

Ob-gyn hospitalists also offer standardized processes which reduce variation and as a result can reduce medical errors.

The availability and expertise of ob-gyn

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hospitalists with non-routine deliveries means they are less likely to order Cesarean sections which saves money and increases the satisfaction levels for mothers. Ob-gyn hospitalists also help improve safety by eliminating the

need for private practice physicians to work long hours in order to meet the needs of their patients who may go into labor in the middle of the night, or after a long daytime shift. Studies have shown working longer than 18 hours can impair the judgment and reaction times of a physician.²⁵ In these cases, the ob-gyn hospitalist, working a predictable hospital shift, can fill in for the private practice physician in order to offer safer patient care. These hospitalists are not bothered by attending to a woman’s labor for hours, but then stepping aside if the patient’s private ob-gyn comes to “catch the baby (along with the professional fees for a delivery) ... [since] these hospital-funded obstetricians – whose salaries don’t depend

on their delivery volumes – see themselves as being there to serve, not only women but also the obstetricians and family physicians in their community.”²⁶ For all of these reasons, ob-gyn hospitalists have made possible safer care for women and can serve to lower malpractice risk.²⁷ In fact, some hospitals have reduced the amount of money held in reserve for ob-gyn malpractice claims by as much as \$1 million or more after just one year of establishing an ob-gyn hospitalist program, in addition to significantly reduced annual malpractice premiums.²⁸

Neurohospitalists

Another area of growth among the specialty hospitalists is neurology, where advances in care have helped to drive the need for neurologists to be at hand for the treatment of emergent conditions. Neurohospitalists should be distinguished from neurointensivists, who focus solely on neurological patients in the intensive care unit. Also distinct are stroke neurologists whose sub-specialty interest is specifically for those with vascular diseases. In contrast, neurohospitalists treat patients with a wide variety of neurological concerns throughout all units of the hospital, whether that be the emergency department, intensive care, ward floors, or on consultations. Vascular neurology in particular lends itself to the hospitalist model, with a strong emphasis on hospital-based practice and the need to be available on short notice. New treatments for stroke have created the need for neurologists to be on hand as soon as possible. David Likosky, MD, SFHM, hospitalist and stroke program director at Evergreen Health in Seattle, points out that, “it used to be that neurologists didn’t have to get out of bed at night for most strokes. But with

innovations in stroke treatments, that's all changed ... it really helped to give birth to the neurohospitalist movement.”²⁹ Meeting the needs for this short notice was becoming increasingly difficult for neurologists who also were managing busy outpatient practices and subsequently dealing with burnout, facing decreasing reimbursement compared to their outpatient practice and increased litigation risks and malpractice premiums.

Neurohospitalist practices are relatively new and vary widely with about half being paid specifically for non-clinical work including directorships, hospital quality and

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safety work, and coverage. An early study from 2008 found annual income ranged between \$150,000 and \$450,000, with most falling between \$200,000 and \$250,000. Call responsibilities

varied, from as little as eight hours up to two weeks, and averaged around seven consecutive days. The study also found neurohospitalists saw a median number of 10 patients per day, though including consults, this number increased to 14 patients per day.³⁰

Like most specialty hospitalists, neurohospitalists represent a relatively new field, so there is little conclusive data regarding the quality and safety effects neurohospitalists have had thus far. The focus of neurohospitalists, like hospitalists, does include quality metrics, issues surrounding patient safety, length of stay management and the reduction of readmissions.³¹ The first study to uncover quantitative evidence of the specialty's impact came from four neurohospitalists

at the Mayo Clinic in Jacksonville, Florida. The study reviewed all acute ischemic stroke patients at a community hospital over a three-year period and found that neurohospitalists reduced patients' length of stay after an ischemic stroke by more than a day and a half compared to standard care given by community neurologists.³² One possibility for the difference in length of stay may be the difference in delivery of tissue plasminogen activator (tPA). In the case of the neurohospitalists, 38 out of an eligible 39 patients received tPA, whereas only one patient of the comparison community-based neurology group received tPA. The difference in length of stay is significant for hospitals because they receive a lump sum payment based on patient diagnosis, not on patient length of stay. The neurohospitalists not only reduced the length of stay, but “even while significantly cutting the median length of stay, the neurohospitalists earned a 93 percent achievement score on the 11 quality indicators for stroke care set by The Joint Commission, compared to 80 percent for community neurologists.”³³ These results seem to indicate the positive significance of the immediate availability of neurohospitalists as compared to neurologists based in outpatient practices. More recently, a study on the effect of neurohospitalist services at an academic medical center showed the neurohospitalist program led to a reduction in length of stay and associated costs and contributed to improvement in medical student satisfaction without adverse effect on quality or patient satisfaction.³⁴ Additionally, another recent study concluded that neurohospitalists led to an improvement in “door to needle times” with significantly higher rates of tPA use within 60 minutes for neurohospitalists versus non-neurohospitalists.³⁵



Orthopedic Hospitalists

Orthopedic hospitalists are among the newest (and smallest) specialty hospitalist groups with only a few practices in existence today. Given the shortage in orthopedic emergency care and the growing need for emergency coverage and trauma specialty, it is one that is sure to grow quickly. Several factors create the demand for orthopedic hospitalists, including fewer orthopedists available for emergency department coverage, increases in the uninsured and under-insured patients in the emergency department and concerns around the liability impact of trauma care. In addition, orthopedics has become extremely sub-specialized, leaving fewer orthopedic generalists who are interested in trauma cases.

While orthopedic hospitalists face the same trust building issues as their general hospitalist colleagues, the orthopedic hospitalist model confronts some different challenges. In general, the orthopedic hospitalists are inpatient specialists who perform no elective surgeries and handle emergency cases and inpatient consultations as needed. As orthopedists dedicated to handling trauma cases, orthopedic hospitalists improve quality, timeliness, and patient

flow for the hospital and provide increased consistency in trauma care. Orthopedic hospitalists differ from other hospitalists in their need for follow-up clinics to handle post-operative care for patients without an orthopedist before sending the patient back to their primary care physician. Some organizations have limited surgical hospitalists to hospital follow up visits to avoid creating friction between traditional orthopedists and the orthopedic hospitalists.

Orthopedic hospitalists, again like their other specialty hospitalist colleagues, are afforded the freedom from practice burdens and most rate the ability to “focus on patient care” as a key satisfaction measure. They also enjoy being able to work as part of a larger team, allowing for others to share the work load.

Surgical Hospitalists

The numbers of acute care surgery hospitalists began to rise as increasing workloads, coverage issues and liability rates started to erode the surgical coverage at many hospitals. With more than 1,500 acute care surgical hospitalists across the country, it is another specialty hospitalist program that is addressing the issues of coverage, efficiency and quality improvement while facing the challenges of bridging trust with private practice surgeons and showing their value to the hospitals that support their program. The acute care surgical hospitalist handles emergency department call needs, provides consistency across emergent surgical care, and reduces wait times for evaluation and surgery. As with orthopedic hospitalists, acute care surgical hospitalists also face the additional challenge of the need for a follow-up clinic before returning patients to a primary care physician while avoiding competing with private practice surgeons.

The model used for surgical hospitalists varies from program to program. The Surgical Hospitalist Program at UCSF, established in 2005, started with surgeons taking call for seven days in a row. This model was unsustainable for surgeons, who now take call for three or four days. Another successful variation is to have one surgeon on the daytime shifts, with others rotating for the night and weekends shifts.³⁶ In most programs, however, surgical hospitalists work 24-hour shifts, and never two days in a row, with eight to 10 shifts per month.³⁷ In a rural setting, the surgical hospitalist model might not be practical because those practices may only have one or two surgeons in total. Instead, Dr. Maa suggests a different approach involving telemedicine, telesurgery, and emergency rooms equipped with video monitors so that a surgeon can provide input remotely to an on-site physician.

Surgical hospitalists address the gap in coverage created by the Accreditation Council for Graduate Medical Education mandate to restrict the resident workweek to 80 hours. Dr. Maa says the mandate “annihilated” the old model which was very dependent on the work of residents.³⁸ Surgical hospitalist programs can offer a new way to address on-call coverage for emergency departments. “Surgical practices often approach the medical center leadership to negotiate a stipend, then contribute salary support so that a new surgeon can be recruited to join the practice. This physician – usually a younger surgeon – then is hired in the role of surgicalist so that timely patient care and surgeon availability can be ensured.”³⁹ In this way, practices and hospitals can work together to meet the needs of patients. Initial results of surgical hospitalist programs show similar promise

as other specialty hospitalist programs. The UCSF surgical hospitalist program found that in the first two years of its program, “response times for surgical consultations averaged less than 20 minutes; the average wait for patients with acute appendicitis to undergo surgery was cut in half; and the number of billable consults rose by almost 200%.”⁴⁰

In another example, at Thomas Memorial Hospital in South Charleston, West Virginia, a surgicalist program saved the general surgery program from falling apart. In 2004, four of eight general surgeons had left because of frustrations over liability rates and unmanageable workloads, and two of the remaining opted out of taking call. After implementing a surgicalist program, the hospital was able to limit the staff surgeons’ call and allow them to target more private, elective surgeries. This paid off for Thomas Memorial, which more than covered the cost of the surgicalist program and made a profit of \$1.6 million in the first year of the program. Not only was the program profitable, but after hearing how the program reduced the call burden for the other surgeons, Thomas Memorial gained back one of the surgeons who had left and signed on a new surgeon as well. Through careful analysis of the barriers and needs of the surgical program, Thomas Memorial created a program that met the needs of the surgeons while providing more efficient care to the community.

Other Specialty Hospitalists

While four specialty hospitalists have been featured in this paper, many other specialty hospitalists, or as Dr. Wachter has termed them, “hyphenated hospitalists,” have begun to establish themselves. As pointed out in a 2010 article from *The Hospitalist*,

“many of these programs first begin in the academic setting, where resident work-hour limits necessitate faculty coverage, but community hospitals increasingly are turning

“The hospitalist movement ... fills a need for the acute-care setting and manages a different set of problems than is seen in ambulatory clinics.”

ing to specialist hospitalists to address patient-safety and treatment-innovation issues.”⁴¹ The list of specialty hospitalists is becoming long and continues to grow.

There are intensivists, pediatrics hospitalists, proceduralists, oncology hospitalists, palliative care hospitalists, dermatology hospitalists, otolaryngologist

hospitalists, psychiatric hospitalists, and family medicine hospitalists.

One pediatric hospitalist program at Floating Hospital for Children at Tufts Medical Center in Boston has created a unique approach with outreach programs at four community hospitals, staffed by pediatric hospitalists from Floating. Dan Hale, MD, FAAP, pediatric hospitalist and director of one of Floating’s pediatric hospitalist outreach locations at Lawrence (MA) General Hospital, believes this approach allows Floating to provide quality care for pediatric patients in their communities. He stresses the significance of pediatric medicine as a family affair that can become difficult if a family has to drive a long distance to reach care for their child.⁴² The field of pediatric hospital medicine has shown promise, with programs improving throughput, increasing efficiency, and increasing patient satisfaction, especially when inpatient and

emergency care are combined within the same program.⁴³ Additionally, a study from the *Journal of Hospital Medicine* found five studies showing a reduction in length of stay between six and 14 percent for patients seen by pediatric hospitalists versus the traditional pediatric model.⁴⁴

Also worth mentioning is the very new hyphenated hospitalist program for otolaryngology. Known as ENT hospitalists or oto-hospitalists, this new group has sprung up, as Dr. Wachter says, because the needs of otolaryngology are similar to those that allowed internal medicine hospitalists to flourish. “The forces are the same: sick patients, highly specialized providers who may not be comfortable with all the issues that arise in the hospital, and the need to focus on system improvement.”⁴⁵ The field of oto-hospitalist may attract physicians as the current cohort of otolaryngologists age and younger physicians desire a better work-life balance. Working solely with inpatients also will allow these physicians the freedom to decide if they want to focus on surgical procedures or nonsurgical services. Additionally, the oto-hospitalist model could offer the opportunity for more revenue from consultations, which currently may be unbilled. Matthew Russell, MD, assistant professor and ENT hospitalist at UCSF sees one challenge for the field being the perception that oto-hospitalists are “glorified residents,” simply providing second opinions to other specialties and not performing surgeries.⁴⁶ In reality, Dr. Russell’s tasks include rounding and consultations on different wards of the hospital, assisting with complex airway issues, working on quality improvement initiatives and performing surgeries. “The hospitalist movement, in general, fills a need for the acute-care setting and manages a

different set of problems than is seen in the ambulatory clinics. That same basic issue is found in otolaryngology. I think it's an area that is perhaps under-appreciated."⁴⁷

Among their other hyphenated hospitalists, UCSF also has a dermatology hospitalist group, focused on providing consistent coverage for the hospital. Though dermatology hospitalists do not admit patients, their availability is a valuable tool for providing consultation for patients with complex medical issues who also need dermatological treatment, as well as being able to immediately initiate proper treatment for hospital-acquired skin conditions. As Lindy P. Fox, MD, assistant professor of clinical dermatology and director of the hospital consultation service at UCSF sums up, "We provide continuity of care for patients who are frequently hospitalized; we keep up with the medical literature; we are comfortable with and know the nuances of hospital operations; and we provide education to residents, house staff, and colleagues."⁴⁸

Though not yet developed into its own hyphenated hospitalist program, some hospitalists are beginning to focus their practice on geriatric care. Heidi Wald, MD, MSPH, FHM has examined hospitalist impact on geriatric care. She notes that with the median age of the hospital population increasing, there are not enough geriatricians to cover every geriatric patient. She and other hospitalists have begun to focus on the care of this population. Many institutions, such as Mount Sinai Hospital in New York City and the University of California, Los Angeles offer mini-fellowship courses on geriatrics for those who are unable to complete a full 12-month fellowship in geriatrics. SHM also offers many sessions

on geriatrics as part of their continuing medical education offerings. As Dr. Wald says, "These efforts to 'geriatricize' hospitalists are a great and necessary approach to addressing the care needs of the aging population. There will never be enough geriatricians, so hospitalists are important partners in this work."⁴⁹

Also growing in importance are psychiatric hospitalists. One program at Methodist Healthcare System in San Antonio, Texas, became necessary in 2003 after psychiatrists with outpatient clinics gave up their inpatient practice after increases in emergency department (ED) call and uninsured patients. The programs goals were to increase ED call coverage, reduce the burden on other medical staff of the uninsured, maintain managed care provider quotas, as well as provide a way for psychiatrists without admitting privileges to hand off inpatient care.⁵⁰ A second program at BryanLGH Health System in Lincoln, Nebraska has increased the efficiency of patient screenings and the timeliness of psychiatric consults as well as provided assistance to medical hospitalists and reduced length of stay for psychiatric inpatients. David Gonzalez, MD, director of the psychiatric hospitalist group at Methodist Healthcare points out that "the law requires that patients must be evaluated by a clinician within an hour of being held. Having a psychiatric hospitalist on site makes that much easier."⁵¹

Where the Rubber Meets the Road: ROI and Improvement

“The [hospitalist] field has become the fastest growing specialty in medical history because of the evidence that this model improves efficiency, quality, and education. While hospitalists began by doing tasks that others didn’t want to do (caring for uninsured patients, night coverage), their scope quickly expanded into other activities.”⁵²

Case Example

At Hoag Presbyterian in Orange County, California, approximately 50 hospitalists, including nearly 20 specialists, provide between 70 and 80 percent of the care within the hospital. Over the past decade, Dr. Richard Afable, president and CEO, has overseen a shift from a medical staff of 1,200 to about 100 hospitalists who provide the majority of care within the hospital, leading to more consistent and safer care. With a large investment from the hospital, they have been able to secure increased access, lower length of stay, and reduce the cost of care provided. In addition to the clinical improvements, hospitalists at Hoag have been involved in case review to ensure accurate coding and in the committee work of the hospital, helping to improve the entire delivery system. In addition to managing care within the hospital, a specialty care unit, staffed by hospitalists and in partnership with physicians, the hospital, and insurers, sees patients for post-discharge follow-up appointments for those patients at highest risk of readmission.

At Hoag, there is a strong feeling that managing the health of the population will be the care delivery of the future, and Hoag’s hospitalists are poised to play a leading role.

The Hospitalist Crystal Ball

While hospitalists have shown their impact in reducing length of stay and improving the system of care through their 15 years of existence, it is still a rapidly growing field with few accepted standards or training requirements. The American Board of Internal Medicine includes a focused practice designation for hospitalists, but as the growth of specialty hospitalists continues, there will be a need for all of the specialty boards to consider whether there are certification requirements attached to a hospital-based practice. As the hospitalist field continues to grow, there is a need to establish some criteria and consistency around the training and education in hospitalist medicine. SHM has defined and published the *Core Competencies for Hospital Medicine* and the other specialties will need to do the same. Some programs have begun to develop and there are several fellowships available, but more education and advanced training in quality improvement, system design, hospital management, and leadership development might be in order as hospitalists continue to expand their roles in improving health care delivery.

As the health care delivery system moves closer to population health management, will multi-specialty hospitalist groups develop to manage inpatient care? Might they provide a way to bridge the silos of the various “ists” and create a multi-specialty in-house staff? A multi-specialty group of hospitalists might provide a solution to efficient, coordinated, and standardized care across specialties and

seamless transitions for patients. As general hospitalists continue to expand their scope to handle bedside procedures and critical care, they also are expanding to cover transitions in care from the inpatient side back to the community. Hospitalists will continue to evolve as hospitals adapt to the changes in health care delivery.

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