

Hospitalists—Where They Came from, Who They Are, and What They Do

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In 1996, Robert Wachter and Lee Goldman proposed the word *hospitalist* to describe a physician who primarily dedicates his or her practice to the care of hospitalized patients.¹ There is no clear consensus on a more exact definition of the term, although physicians who spend at least 25% of their time practicing inpatient medicine have often been given the designation.² By this terminology, any physician in a busy traditional outpatient-inpatient practice may be considered a hospitalist. For purposes of this article, however, the term hospitalist will apply to any physician (typically a general internist) who concentrates almost exclusively on the practice of general inpatient medicine.

HISTORY OF THE HOSPITALIST MOVEMENT

Historically, traditional internists or family practitioners are physicians who care for patients in both outpatient and inpatient settings. The practice model typically mandates that these clinicians make hospital rounds early in the morning and again at the end of the day. Not infrequently, physicians are interrupted throughout the day with telephone calls concerning hospitalized patients or admissions from the emergency department. Such interruptions often interfere with the ability to efficiently treat patients in the office.

Whereas many clinicians still enjoy the traditional model of patient care, a growing number of primary care physicians find it increasingly difficult to provide efficient, prompt care simultaneously to patients in the hospital and those in the office because of constraints, such as the preauthorization necessary for insurance companies, excessive paperwork, and frequent interruptions. In addition, with declining monetary reimbursement for both ambulatory and hospital patient care, many clinicians have noted a decline in office productivity when they have to make visits to the hospital for a small number of patients. Moreover, with the rapidly changing therapies and diagnostic technologies necessary for care of hospitalized patients with often complicated disorders, it can be difficult to

remain current with the latest modalities for commonly encountered inpatient problems. Some physicians also may find it difficult to maintain inpatient procedural skills (eg, central venous catheterization, lumbar puncture, endotracheal intubation) if they only perform these procedures infrequently. Partly because of these reasons, the hospitalist movement has increased in popularity in recent years.

The concept of “outpatient physicians” and “inpatient physicians” is not new and has, in fact, typified patient care in Great Britain and Canada for some time.^{1,3} However, when Wachter and Goldman first used the term *hospitalist* to describe an emerging role in the American health care system, the concept was less familiar in the United States. Somewhat prophetically, Wachter and Goldman predicted a rapid increase in the number of hospitalists and a surge in their popularity.¹

In 1999, a national organization exclusively dedicated to this emerging field was formed, known as the National Association of Inpatient Physicians (NAIP).^{2,4,5} The NAIP is currently an affiliate of the American College of Physicians-American Society of Internal Medicine (ACP-ASIM) and hosts a national meeting annually, in the days preceding the national ACP-ASIM meeting. Currently, the NAIP has approximately 1800 members and continues to grow at a rapid pace.⁵ Surveys conducted by the NAIP have identified no fewer than 4500 hospitalists nationally. In fact, most adult general hospitals with a bed capacity of 200 or more have a hospitalist system implemented or are in the process of launching such a program.^{5,6}

WHO ARE HOSPITALISTS?

Based on surveys conducted by the NAIP, the majority of hospitalists are general internists by training, typically

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having completed a 3-year residency in internal medicine. However, a significant minority of hospitalists have subspecialty training, usually in pulmonary and/or critical care medicine. Less commonly, cardiologists, nephrologists, and infectious diseases specialists act as hospitalists. A small percentage of hospitalists are family practitioners.⁶

Demographically, the mean age of a hospitalist is approximately 40 years, and 81% of hospitalists are men. Indeed, most hospitalists are relatively young, with approximately 75% of them having completed their residency training after 1984. **Table 1** contains demographic data relating to hospitalists in the United States. Because hospitalist is a relatively new job description, 82% of physicians in this field have been working as a hospitalist for 5 years or fewer, and about a third entered the field directly from residency training.⁶

MODELS OF HOSPITALIST PRACTICE

There are several different types of models of hospitalist practice. Private practice groups are perhaps the most popular model, as is evident in the increasing number of classified and Internet-based advertisements for employment.⁷ Private practice groups may be composed solely of general internal medicine-trained hospitalists, of a mixture of generalists and subspecialists (typically, pulmonary or critical care), or purely of subspecialists. In this model, primary care physicians often directly refer patients to hospitalists from the emergency department or ambulatory clinic. Alternatively, a hospitalist may admit patients for a large group of primary care providers or for a multispecialty group.

Other models of hospitalist practice include the hospitalist being employed by a hospital or health maintenance organization.⁸ Another practice model of growing popularity is the academic hospitalist.⁹ In this model, the physician is typically employed by an academic medical center and is responsible for supervising house officers involved in the care of hospitalized patients. In this model, the physician usually is only involved with the inpatient service a few months of the year and does not directly care for patients, as in the other models. However, academic hospitalists are usually involved with various types of research, typically outcomes-based research.

DUTIES OF THE HOSPITALIST

In general, the duties of the hospitalist are to provide prompt, efficient, and competent care to hospitalized patients. These patients are often referred to hospitalists by primary care providers, emergency physicians, or subspecialists. In addition, many hospitalists

Table 1. Characteristics of Hospitalists in the United States

Gender

81% male, 19% female

Age (mean)

40 years

Medical specialty

Internal medicine, 89%

General internal medicine, 51%

Subspecialty, 38%

Critical care, 7%

Pulmonary, 3%

Pulmonary/critical care, 7%

Infectious diseases, 3%

Other, 18%

Family practice, 5.5%

Other, 5.5%

Year of residency completion

1995 or later, 20%

1990–1994, 30%

1985–1989, 22%

1980–1984, 15%

Before 1980, 13%

Time employed as a hospitalist

< 1 year, 24%

1–5 years, 58%

> 5 years, 18%

Adapted from Lindenauer PK, Pantilat SZ, Katz PP, Wachter RM. Hospitalists and the practice of inpatient medicine: results of a survey of the National Association of Inpatient Physicians. *Ann Intern Med* 1999;130(4 Pt 2):344.

provide consultative services to patients admitted to orthopaedic, surgical, rehabilitation, and other subspecialty services. The bulk of the hospitalist's workload, however, typically involves acute admissions from the emergency department or an outpatient clinic. Depending on the training of the hospitalist or the availability of subspecialists in the area, some hospitalists provide critical care support to their patients. However, approximately 95% of hospitalists focus their care on the medical ward.⁶ Preoperative consultations are also a growing segment of the hospitalist's duties, often involving orthopaedic patients with hip or other fractures.

An experienced hospitalist can usually manage the majority of general medical problems encountered in the hospital setting. In fact, some authors have predicted that subspecialists may eventually object to the smaller number of consultations requested by hospitalists, compared to primary care physicians, which could lead to a decrease in subspecialists' revenue.⁶

Many hospitalists also perform a variety of general medical procedures frequently used in the care of the hospitalized patient.¹⁰ Common hospitalist procedures include central venous catheterization, endotracheal intubation, lumbar puncture, thoracentesis, paracentesis, arthrocentesis, and arterial puncture. Proficiency in these procedures may decrease the occurrence of iatrogenic complications, as well as the cost of having to consult another physician to perform them.

The hospitalist typically manages most aspects of patient care after admission—not only providing medical care but also organizing subspecialty services, palliative care, and social services, when necessary. Some studies have further shown that the hospitalist model can decrease hospital stay by approximately half a day.⁸ This benefit most likely results from the availability of the hospitalist and the timely orchestration of discharge planners and social workers from the outset of hospitalization.¹¹

Just as importantly, a major duty of the hospitalist is timely, accurate communication with the patient's primary care provider.² Hospitalists often contact the patient's physician by telephone on admission, discharge, or any change in patient status. A written letter or summary at discharge is also an important way of providing information to the primary care physician and ensuring continuity of care.

In some settings, teaching is another duty of the hospitalist.^{9,10} Private practice hospitalists often provide teaching to house officers and medical students in private teaching hospitals. In fact, hospitalist rotations have been shown to increase short-term knowledge of hospital medicine in fourth-year medical students.¹² As noted earlier, the academic hospitalist acts in more of a supervisory role to house officers and students rather than becoming involved in direct patient care.^{1,9,13}

Lastly, clinical research is another growing area of hospitalist practice.⁴ Academic hospitalists conduct the majority of hospitalist research, most of which is outcomes-based. However, various observational and retrospective studies also are performed by hospitalists involved in other practice models, and these studies can provide useful information for patient care in this relatively new field.

PROS AND CONS OF THE HOSPITALIST MODEL

As with any new and unfamiliar undertaking, there are potential concerns about the role of hospitalists in our health care system. Nevertheless, hospitalists can have several beneficial effects on patient care. First of all, hospitalists are usually available on short notice and are often able to assess acutely ill patients and intervene in their care very rapidly. Hospitalists can also potentially shorten a patient's time in the emergency department by being available throughout the day to expedite admission.³ In contrast, the offices of primary care physicians may be distant from the hospital, making it difficult for them to assess patients quickly in the emergency department. Another benefit of hospitalist care is the availability of physicians to frequently assess ill patients throughout the day and to follow up on laboratory and radiologic data more expediently. Frequent follow-up can lead to more prompt and efficient institution of therapy, which could potentially decrease the number of adverse outcomes and the length of stay.¹⁰

As noted earlier, an efficient, experienced hospitalist often becomes very comfortable caring for a variety of acute medical conditions. As such, the need for subspecialty consultation may decrease in some cases, leading to lower hospital costs and allowing more focused care. Of course, experienced hospitalists should realize the limitations of their expertise and obtain timely subspecialty consultation when necessary. Hospitalists often are very familiar with consultants from a variety of surgical and medical specialties and also may know which consultants to avoid in certain situations, thus directly benefitting patient care.

Perhaps the strongest argument to be made in favor of the hospitalist system is the old adage "practice makes perfect."⁶ Physicians who spend practically their entire clinical experience directly caring for hospitalized patients become more versatile and comfortable in the hospital setting.³ For example, a full-time general internist practicing as a hospitalist in a busy practice may have daily responsibility for 15 to 20 patients who have various disorders. Not surprisingly, the hospitalist will likely care for more patients with conditions such as pneumonia, sepsis, heart failure, stroke, and diabetic complications than would an ambulatory medicine-focused physician, who may see only a handful of hospitalized patients within a given week. By frequently caring for patients with acute medical illnesses, the hospitalist often becomes more comfortable caring for significantly ill patients and treating complications that are unique to a hospitalized patient population (eg, venous thromboembolism, refeeding syndrome, aspiration, nosocomial infections), as well as performing certain procedures

(eg, central venous catheterization, endotracheal intubation).¹⁰

On the other hand, primary care physicians, by dedicating their time to an ambulatory practice, can develop extraordinary outpatient skills, most notably in preventive health services, which can vastly benefit patients. The hospitalist system, as noted earlier, can increase efficiency of office-based physicians by eliminating the need to interrupt them with telephone calls about hospitalized patients and hospital admissions during office hours.²

Another benefit of the hospitalist system that has been reported in some studies (and was mentioned previously) is a decreased length of hospital stay for patients admitted to a hospitalist service. This decrease has not been shown to adversely affect patient outcomes and has been shown to decrease hospital costs.⁸ In addition, timely discharge also may reduce the rate of iatrogenic complications or nosocomial infections in patients at risk, although this outcome needs future study.

The discipline of hospitalist medicine also has opened up new areas of research, typically outcomes-based studies that assess various aspects of acute hospital care, such as cost containment, length of stay, overall cost of hospitalization, and quality of care provided by hospitalists.⁴ In addition, clinically based research that is not of interest to subspecialists may be potential areas of research conducted by hospitalists. As noted previously, most hospitalist research is conducted by academic hospitalists at university medical centers; because house officers provide direct patient care, faculty can focus more intently on research.

Despite these potential advantages of the hospitalist system, many have voiced concern about establishment of such a system. Some physicians fear that some hospitals may adopt a “closed system,” only allowing hospitalists to admit patients and thereby excluding primary care physicians from inpatient practice.⁴ Only time will tell whether larger hospitals will develop a closed system, although the concern is certainly valid. Therefore, a voluntary hospitalist system would benefit all parties by avoiding understandable hard feelings and providing a healthy environment of accountability and competition.

Another proposed disadvantage of the hospitalist system is the possibility of primary care providers losing their inpatient skills. However, this loss is counterbalanced by the improvement of ambulatory skills necessary for optimal patient care.² Indeed, it is very difficult for physicians to stay current with the vast amount of literature pertaining to ambulatory as well as hospitalized patients. Hence, by concentrating on ambulatory

issues, primary care physicians can stay current with the latest advances in that field.

As suggested earlier, some subspecialists may approach the hospitalist model with trepidation out of fear of fewer consultations requested by experienced hospitalists.¹ Experienced hospitalists often treat many common syndromes (eg, congestive heart failure, chronic obstructive pulmonary disease, various bacterial infections) traditionally considered to be the realm of various subspecialties. However, this decreased need for consultation may not only lower health care costs but also aid the specialist in becoming more efficient in his or her subspecialty by avoiding excessive consultation. In any case, subspecialty consultation is often necessary in the ill adult patient, and a prudent hospitalist will obtain assistance from a subspecialist whenever necessary.

Some opponents of the hospitalist model voice concern about the potential for poor communication between hospitalists and primary care physicians, a concept termed the *information voltage drop*.² However, as long as appropriate telephone calls are made and letters and discharge summaries are promptly sent to primary care physicians, this eventuality can (and should) be avoided.

An interruption in the relationship between a patient and his or her ambulatory physician when a hospitalist takes over the patient's care is another potential problem.⁷ Now that a “stranger” is caring for the patient, the fear is that there may be a loss of medical information, because the patient may be hesitant to fully confide in or trust the hospitalist. To the contrary, however, studies have shown that most patients are satisfied with the care provided by hospitalists and are willing to sacrifice familiarity with their physician for the hospitalist's availability and expertise in the care of acutely ill patients.² In addition, in the author's experience, patients rarely object to being cared for by an unfamiliar physician if they believe they are listened to and given expedient, competent care. Overall, the hospitalist system seems to have more pros than cons, not only for the involved physicians but also for the patient.

FUTURE ISSUES IN HOSPITALIST CARE

The hospitalist movement in American health care is enjoying immense popularity and continues to grow at a rapid pace. Currently, the majority of hospitalists are general internists, with board certification in internal medicine. Issues regarding separate board certification or a certificate of added qualification in hospital medicine have been raised and certainly are valid. After all, 3 relatively new specialties—emergency medicine, critical care

medicine, and family practice—all originated from trends in medical practice that filled a specific niche⁴; subsequently, all of these disciplines became areas of board certification and currently enjoy security as specialties.

One could argue strongly that hospitalists deserve the opportunity for additional board certification beyond internal medicine, especially because the discipline of hospital medicine meets many of the criteria required by the American Board of Internal Medicine for subspecialty certification: (1) the subspecialty must have a unique body of knowledge, (2) the subspecialty must be clinically applicable and sufficient to support a distinct form of practice, (3) the subspecialty must generate new information and areas of research, (4) the subspecialty must require a training period of at least 12 months, and (5) the subspecialty must have both ample trainees and potential training programs.⁴ The hospitalist model fits well into each of these criteria. For example, the body of knowledge required to practice hospital medicine is very broad and quite different than that of primary care medicine. The subspecialty of hospital medicine is clearly clinically applicable, and there is little doubt about its ability to support a distinct form of practice. In addition, hospital medicine has opened up new avenues for generating research on hospitalized adults and outcomes. A training period of an additional 12 months seems reasonable and may appeal to house officers wishing to advance their knowledge and technical skills. Whether the field of hospital medicine will eventually enjoy the status of board certification, however, remains to be seen.

Another future issue in hospitalist care involves the real threat of burnout.¹⁰ Hospitalists, especially those in private practice, frequently spend long hours in the hospital and care for significantly ill patients with multiple medical problems, both of which activities can be physically draining. On-call and nighttime responsibilities also play a role in physician fatigue. Moreover, in addition to the intense mental stimulation hospital medicine demands, the additional issues of discharge planning, pressure from insurance companies and health maintenance organizations, and declining reimbursement all contribute to potential burnout. Ways to avoid burnout include sharing call responsibilities, instituting shift work, and working several days on fol-

lowed by several days off duty. The academic hospitalist model may decrease burnout as well, because the physician functions as a supervisor with largely predictable hours because of housestaff availability for direct around-the-clock patient care.

In conclusion, this is a unique time for hospitalists, in light of the rapid increase in the popularity of their discipline and the growing number of employment opportunities. It seems that Wachter and Goldman may have been right¹ and that hospitalists are here to stay. **HP**

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