THE HOSPITALIST MODEL OF INPATIENT MEDICAL CARE

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At 7 AM, Dr. Morales starts his day at University Medical Center with a briefing from the hospitalist who was on overnight call the night before. After getting a rundown on new admissions, new consults, and some problems that arose overnight, Dr. Morales and three other hospitalists get their new patient assignments and set out on morning rounds. Because today is a teaching rounds day, Dr. Morales is trailed by a group of residents and medical students.

As Dr. Morales approves a hysterectomy patient for discharge, one of the residents asks, "Can this patient be discharged already? I thought hysterectomies required a 3-day stay."

"No, Dr. Burns, not always. Ms. Ritchie has been here for 48 hours and she's been stable for 24. If I keep her another day, her insurance company can refuse to cover it." Dr. Morales enjoyed offering residents useful information about managed care practices that he had become so familiar with during his 2 years as a hospitalist.

Early the same morning, at a primary care office across town, Mrs. Fritz presents to Dr. Cooper with concerns about her persistent cough, shortness of breath, and 3-month history of weight loss. Mrs. Fritz, a 66-year-old woman with a 40 pack-year smoking history, has seen Dr. Cooper sporadically over the past 10 years. On physical examination, the physician notes clubbing of the fingers and dullness to percussion at the left lung base. Fearing the worst, Dr. Cooper refers Mrs. Fritz to the emergency department (ED) at University Medical Center.

The ED physician who evaluates Mrs. Fritz decides to admit her and contacts Dr. Morales to take charge of her inpatient care. A short time later Dr. Morales comes to Mrs. Fritz's room.

"Good morning, Mrs. Fritz. I'm Dr. Morales and I'll be in charge of your care in the hospital. I'll be keeping Dr. Cooper informed of your progress."

"Dr. Cooper has me frightened, sending me to the hospital. Do you think I have cancer? Should my son and daughter be called down here? I don't want them to be frightened for nothing."

"Cancer is a possibility, Mrs. Fritz, and that's what you're here to find out. I'll have the nurses' station get in touch with your family and I'll explain the situation to them. But don't worry—I won't alarm them with a cancer diagnosis unless we have one."

Dr. Morales is a member of a rapidly expanding community of hospital-based physicians whose clinical practice is primarily devoted to the medical care of inpatients. As a specialist in inpatient medicine, Dr. Morales is responsible for providing and coordinating care for a select number of patients admitted to the hospital by physicians practicing in the local community. Throughout a typical day, he will examine, diagnose, order tests, and consult with other physicians and specialists about his patients. He also will serve as the main contact for keeping patients' families and referring physicians updated on their status and for helping patients access ancillary services upon release from the hospital.

This new breed of inpatient physician was first described by Wachter and Goldman in a 1996 *New England Journal of Medicine* article in which the authors introduced the term *hospitalist* to refer to an attending physician who manages the care of inpatients admitted by other, typically primary care, physicians [1]. In this model of care, a primary care physician admits a patient to a designated hospitalist, who manages all aspects of the patient's care while hospitalized and then returns the patient to the admitting physician upon discharge. This model is meant to exclude physicians whose activity is limited to specialty services, such as psychiatry or intensive care. Although such physicians also provide inpatient care, they do not serve as the primary inpatient physician if the patient moves to another acute care service within the hospital. A true hospitalist is a specialist in inpatient care who assumes the role of the attending physician during hospitalization. The patient may be on a teaching service, where house staff

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provide primary coverage, or on a nonteaching service, where primary coverage is by nursing staff, other nonphysician health care providers, or house doctors. A house doctor is defined here as a physician who substitutes for house staff coverage but does not serve as the patient's primary attending physician during hospitalization, as does the hospitalist.

The movement toward the hospitalist model is a recent phenomenon stimulated by a common interest of hospitals and physicians to improve the quality and efficiency of the care they provide as well as a concern for cost containment. With these goals in mind, provider organizations increasingly are replacing their traditional practice of all primary care physicians managing their own hospitalized patients with a voluntary or mandatory system in which patients are referred to the care of a hospitalist.

The number of hospitalists practicing in the United States has increased dramatically in the past few years. For example, although the National Association of Inpatient Physicians (NAIP) included just 12 members when it was founded in 1996 [2], paid membership within this organization totalled 2300 as of December 2001, up 500 from the total of 1800 just 3 months earlier. At this rate of growth, the NAIP likely represents the fastest-growing medical professional organization in the United States [2]. The NAIP estimates that between 5000 and 6000 physicians were practicing as hospitalists at the end of 2001 [Lisa Freeman, National Association of Inpatient Physicians, personal communication].

Little published data exist regarding the personal and work-related characteristics of hospitalists, but some insight can be drawn from recent surveys. A 1999 survey of 820 NAIP members revealed that most trained in general internal medicine, with pulmonary or critical care medicine the next most frequently cited specialty, and a variety of other specialties and subspecialties (eg, general pediatrics, family medicine, internal medicine and pediatric subspecialties) identified by the remainder of the group [3]. Most respondents were men who were early in their career and younger in age than the average physician. Finally, the NAIP survey respondents reported generally high levels of job satisfaction and autonomy, low levels of a sense of burnout, and a long-term commitment to remaining in practice as a hospitalist [3].

For those seeking a career as a hospitalist, it is important to understand the specifics of the position being offered. For those who do not pursue this career track, it is useful to understand how patient care is affected when a hospitalist is involved. In this paper, the authors seek to provide a basic understanding of the hospitalist role in patient care, including the typical duties of a hospitalist, specific skills required of the position, how hospitalists are employed, and how hospitalists impact health care quality, cost, and delivery. This paper is limited to a discussion of physicians who provide hospitalist care on adult medical services.

What Do Hospitalists Do?

During his physical examination of Mrs. Fritz, Dr. Morales notes pulmonary findings consistent with a large left pleural effusion as well as clubbing of the fingers. He orders a chest radiograph and, while awaiting the results, turns his attention to his other duties, including his 12 other patients.

Because this is a teaching rounds day (1 of 3 per week), Dr. Morales engages in bedside teaching during rounds. Most of his patients are already on the medicine ward and need new orders and review of test results. Others need discharge planning, counseling, or referral. A few are new admissions, like Mrs. Fritz. One newly admitted patient is an emaciated man with a suspected diagnosis of cancer. The patient was just transferred from the ED to the nursing unit and is awaiting a thoracentesis. After morning rounds, Dr. Morales leads a teaching session with residents and students in the conference room. Afterward, he makes follow-up calls to recently discharged patients and provides information to the patients' referring physicians.

The chest films for Mrs. Fritz return in the afternoon and reveal a large left pleural effusion with a mediastinal shift. Dr. Morales makes a diagnosis of probable malignant pleural effusion. When he returns to Mrs. Fritz's room to discuss these findings, her family is with her. Dr. Morales explains the need for further studies, obtains Mrs. Fritz's consent for a therapeutic thoracentesis, and arranges for the procedure to be performed the same day.

An hour later thoracentesis is performed, and two liters of fluid are aspirated and sent for cytology, protein, glucose, lactate dehydrogenase (LDH), amylase, and Gram stain and culture. Blood is sent for routine chemistries, calcium, LDH, and a liver panel. Sputum also is sent for cytology. A computed tomography (CT) scan of the chest is obtained, which Dr. Morales reviews with the radiologist. The CT shows a 4 cm x 6 cm mass in the upper left lobe. Dr. Morales obtains a pulmonary consult and, after discussing Mrs. Fritz's CT scan with the pulmonologist, arranges for bronchoscopy to be performed the following morning.

Before making afternoon rounds, Dr. Morales calls Dr. Cooper to inform him of the findings to date on Mrs. Fritz. During rounds, he meets again with Mrs. Fritz and her family to discuss her latest test results. He informs

them that the chances of malignancy are high and tells them that a biopsy is needed to confirm the diagnosis. He explains that the bronchoscopy he has arranged should provide this necessary information.

On the morning of her second hospital day, Mrs. Fritz undergoes bronchoscopy, which reveals an endobronchial lesion. Brushings and a biopsy are obtained, and preliminary cytology findings are consistent with squamous cell malignancy. Dr. Morales informs Mrs. Fritz and her family of the cancer diagnosis and counsels them on treatment options. In view of her apparent stage IV malignancy, the option of palliative therapy is selected. A social service coordinator is consulted and hospice services are offered to Mrs. Fritz. An oncology consult is obtained and arrangements are made for outpatient radiotherapy. Dr. Morales calls Dr. Cooper to propose the plan for management and Dr. Cooper agrees. Mrs. Fritz will see Dr. Cooper in his office in 1 week. Dr. Morales schedules outpatient radiotherapy and arranges for Mrs. Fritz to be discharged later that day. Upon discharge, Dr. Morales prepares a brief written summary that is faxed to Dr. Cooper's office.

Patient Care

The bulk of a typical hospitalist's workday is devoted to the care of, on average, 12 to 15 patients [4,5]. New admissions and sick patients (eg, those on monitored beds, step-down units, or the intensive care unit [ICU]) usually are seen first, with all patients seen repeatedly throughout the day as necessary to provide optimal and cost-effective care. Patients referred for admission from the ED during the day are evaluated when possible in the ED, so as to initiate management plans as soon as possible. New consultations are evaluated the same day. In some hospitalist programs, the hospitalist may make decisions on whether patients in the ED require admission; in other programs, this decision is made by the ED attending, often after discussion with the patient's primary physician. In a few hospitals, the hospitalist also serves as an attending in the adult medical ICU [6].

The hospitalist is responsible for managing the care of all assigned patients, including reviewing all clinical data pertinent to the patients, making decisions regarding necessary procedures and treatments, and facilitating access to post-acute care providers (eg, home health, skilled nursing, specialized rehabilitation). A significant amount of time is taken up in discussions with consultants on clinical management, social service issues, rehabilitation transfers, and discharge planning. Daily discussions also are held with the patient and family, and all pertinent care issues and decisions are discussed with the referring physician. When a patient is discharged, a same-day brief discharge summary and medication list are faxed to the office of the referring physician to facilitate follow-up by the patient's primary care provider. Outstanding test results on discharged patients are sent to the primary care physician's office as soon as they are received.

In most programs, hospitalists provide coverage similar to primary care physicians in that they are available during regular working hours, with an on-call coverage arrangement for evenings and nights and in-house hospitalist coverage during the day on weekends and holidays. Less commonly, in-house hospitalist coverage is provided 24 hours a day, 7 days a week [3]. This level of coverage requires a much larger group of hospitalists and is, therefore, more costly [6].

Other Activities

The NAIP defines a hospitalist's activities as including not only patient care but also teaching, research, and leadership related to hospital medicine [7]. In the 1999 survey of NAIP members, however, two-thirds of hospitalists reported spending 90% to 100% of their work time on patient care alone [3]. Nonetheless, resident and medical student teaching is commonly felt to be a desirable experience for the hospitalist and is of benefit to the learners [8]. On teaching services, there is daily discussion with students and residents about individual patients. Most hospitalists also participate in hospital quality improvement and error reduction activities and often have a lead role in development and implementation of inpatient clinical guidelines [9]. Hospitalists have increased availability on the inpatient service and are the champions of process improvement and the use of clinical pathways [8].

Because hospitalists' work varies by employment setting and geographic location, it is not clear what exactly a full-time hospitalist does or should be expected to do. The NAIP currently is conducting a survey to help define productivity and compensation benchmarks for hospitalists [10]. The survey, mailed in January 2002 to all NAIP members and other hospitalists the NAIP could identify, will attempt to gather accurate data on as many hospitalists as possible. According to the NAIP's President, Ron Angus, "The results of this survey will likely be an important step in determining the compensation, manpower, and workload for many hospitalists for years to come" [10].

How are Hospitalists Employed?

Hospitalists may practice in a variety of settings, including solo or group practices, staff-model health maintenance organizations (HMOs), and university-based

practices [6,9]. The most frequent employers are hospitals and large group practices (**Table 1**), which typically employ hospitalists as salaried physicians. At present, roughly 12% of all hospitalists are self-employed, but this number is increasing [3].

The role played by the hospitalist in patient care may vary according to the type of market and practice. Wachter [6] describes four stages of hospital care: stage I, where patients may be cared for in the hospital by their primary care physician; stage II, where inpatient care may be rotated among members of a medical group; stage III, where a primary care physician may elect to hand off care to a hospitalist; or stage IV, where hospitalist care may be mandatory. The stages represent an ascending scale of managed care penetration and possibly a descending scale of cost. The stages also represent a scale of more to less control over the care of inpatients by primary care physicians. A stage I or II arrangement may offer the physician more opportunity for autonomous decision-making, but office hours may be hectic due to the need to care for patients in the hospital. Assigning care to a hospitalist may interrupt the continuity of care but eliminates problems of efficiency and time constraints. Stage III or IV arrangements are associated with highly or entirely capitated markets and may therefore represent a way of ensuring that a patient receives quality and cost-effective care [6].

In markets where HMOs have attempted to mandate hospitalist use, there has been considerable backlash from practicing physicians and medical organizations, as mandatory systems are regarded as limiting both physician and patient autonomy [11–14]. The authors are aware of several large practices in their area that have chosen to add a hospitalist rather than another office-based practitioner when it was time to increase the size of the group. In private practices such as these, the hospitalist typically participates in sharing revenue with the group on the same basis as the other members [15,16]. The group gains by increased efficiency of practice and the absence of interruptions during office hours to care for hospitalized patients.

Table 1. Reported Job-Related Characteristics of Practicing Hospitalists, $n = 820$

Characteristic	% of Hospitalists
Type of employer	
Hospital	35.7
Medical group	30.5
Managed care organization	10.9
Self-employed	11.6
Practice management organization	4.4
Other	6.9
Structure of weekly work schedule	
Shifts with limited or no call	27.6
Daily rounding with off hours covered by hospitalist group	57.9
Daily rounding with off hours covered by PCPs	14.5
Primary compensation type	
Salary only	49.4
Salary plus incentive	33.8
Fee-for-service	10.0
Capitation	0.8
Other	6.1
Percentage of total compensation linked to financial incentive	
0	73.0
1–25	23.6
26–50	2.6
> 50	0.8
Number of monthly new admissions and consultations	
0–30	14.2
31–60	44.9
> 60	40.9
Time on call (hours/week)	
0	25.3
1–20	25.6
21–50	29.5
> 50	19.6

PCPs = primary care physicians. (Adapted with permission from Hoff TH, Whitcomb WF, Williams K, et al. Characteristics and work experiences of hospitalists in the United States. Arch Intern Med 2001;161:854.)

Compensation

In 1999, the average annual compensation of hospitalists was approximately $141,000 [3]. In most settings, independent of practice type, hospitalists usually do not collect enough from patient care billings to earn full compensation. The limited number of patients they cover, 24-hour coverage patterns, and the presence of significant numbers of capitated patients in the inpatient practice may limit hospitalists' earnings [16]. Thus, employers of hospitalists (ie, hospitals, insurers, physician practices) usually subsidize salaries beyond collections for hospitalist billings. These subsidies are justified by the benefits derived by these organizations from the hospitalist practice.

Those programs that provide in-house hospitalist coverage 24 hours a day, 7 days a week require substantial subsidies from the hospitalist employer, as only one bill can be submitted per day, even when patients are seen more than once each day. This added cost is usually justified only when the hospitalist team is participating in a full-risk capitation contract, is also covering the ED and/or ICU, or is serving as both the hospitalist and a house doctor. Those seeking hospitalist employment should be cautious about positions that are in fact house doctor positions, in which the physician substitutes for a house officer or physician assistant, not for the attending physician.

What Expertise is Required of Hospitalists?

The knowledge base required of hospitalists is defined by the needs and expectations of patients, referring physicians, and insurers. Patients and their families seek the highest quality of care and desire clear communication with the treating physician; referring physicians require good communication and respect; and insurers and hospitals want efficient, high quality care and adherence to guidelines.

Suggested Skills and Competencies

During a 1997 national policy conference on the hospitalist movement, one invited speaker declared that although hospitalists could claim no unique knowledge or skill, residency education could be readily tailored to provide specialized training in specific competencies (eg, procedural skills, resource management, quality improvement techniques) and subject areas (eg, nutrition, rehabilitation, palliative care) relevant to hospital medicine [17]. Certainly, it is essential that hospitalists possess a high level of clinical knowledge and skill in the care of inpatients (ie, care of patients with common inpatient diagnoses or undergoing common medical procedures) as well as knowledge of when to refer. In addition, the authors' experience suggests that hospitalists require skill in the use of clinical guidelines and case management, the ability to work collaboratively with nursing and other hospital staff (eg, case managers, utilization review personnel, discharge planners), skill in discharge planning, and—for those who practice on teaching services—the ability to teach and work effectively with residents and medical students.

One critical skill that cannot be overemphasized is the ability to communicate efficiently and effectively with patients, families, referring physicians, and other hospital staff members [18,19]. In working with admitting physicians, the hospitalist must obtain essential information about patients at the time of admission and transmit needed information to all those who will provide posthospitalization care. A structured systems approach is usually required [6,18]. In addition to the rapid preparation and transfer of written materials, this typically includes telephone calls by the hospitalist to the physician or physicians caring for the patient outside the hospital. During a hospitalization, the hospitalist must interact with patients, family members, and many other providers and specialists. Most often, he has not met his assigned patients or their family members, nor been involved in their care prior to admission to the hospital. Thus, the hospitalist must be able to explain his role and provide confidence in the care he is providing to a sick patient who is no longer under the care of a familiar primary physician [19]. He also must be able to effectively communicate the nature of the illness and postdischarge plans to the patient and family members. Wachter [6] has proposed that the hospitalist model can stimulate a new focus on the importance of effective communication between physicians and patients, family members, and other providers, resulting in improved clinical communication.

Clinical Training

Currently, there is no subspecialty training program for hospitalists that has been accredited by the Accreditation Council for Graduate Medical Education (ACGME), nor are there guidelines for the development of such a program. Also, no mechanism exists for formal board certification. As previously noted, a recent survey found that most currently practicing hospitalists trained in general internal medicine or in pulmonary or critical care medicine [3]. A national survey of hospitalists revealed that most of those who trained as categorical internal medicine residents felt they had acquired effective inpatient management skills in most internal medicine subspecialty areas, including pulmonary and critical care, by the time of graduation [20]. However, survey respondents noted major deficiencies in certain areas of training, including geriatrics, perioperative consultation, and communication with referring physicians. They also noted that their training did not emphasize medical ethics, end of life care, or coordination of care [20].

Trainees completing fellowships in pulmonary or critical care medicine often have even greater inpatient medical knowledge and skills in their specialty areas than do general internists and, therefore, in this single sense may be better prepared to be hospitalists. However, these are not clinical areas sited as training needs by hospitalists [20]. The other essential skills needed by hospitalists (ie, effective communication, use of clinical guidelines, case management, medical ethics, end

of life care, discharge planning) may not necessarily have been acquired during residency or fellowship training and may need to be strengthened [20].

Fellowship training opportunities. Although there has been speculation that certification and delineated training requirements will be developed in the future, these developments will likely not occur within the next few years [17,21]. Nevertheless, at least seven fellowship programs for hospitalist training currently exist, with plans for more to be created in the near future [22]. For those seeking a career as a hospitalist, careful consideration is warranted in selecting a training program. Most importantly, one should question how much time is allotted for and specific instruction is provided in the essential skill areas delineated here. In the authors' opinion, one should avoid programs in which the trainee functions in the role of a house doctor (ie, as a substitute for medical residents on a nonteaching service in a teaching hospital), as this is not a useful educational experience to train for a career as a hospitalist. Rather, one should seek a fellowship program that emphasizes high-level inpatient skills and focuses on having the trainee function as the attending physician. It also should offer the trainee experience serving in the role of the attending on a teaching service, where the trainee can participate in teaching and directing the activities of students and residents. Finally, the program should include specific training in the other essential skills of hospitalists (ie, effective communication, use of guidelines, case management, medical ethics, end of life care, discharge planning) as well as teaching and research training for those seeking a career as an academic hospitalist [17,20,22].

Residency training opportunities. Several internal medicine residency programs offer a third year track for specialized education in the unique skills needed by hospitalists [16,22]. Another alternative to a fellowship is a chief medical residency supplemented with specific education and experience in the development and use of clinical guidelines, case management, discharge planning, and communication skills. This type of specialized training can provide excellent preparation for a hospitalist career. The internal medicine residency program at the Western Pennsylvania Hospital offers such an optional track for its chief medical residents.

What are the Impacts of the Hospitalist Movement?

The hospitalist model of inpatient care has been considered one of the most promising service innovations in health care delivery in the United States, with the potential to improve quality of care and patient and family satisfaction while reducing length of stay and cost of inpatient care [23]. This belief in the possibility to improve the outcomes of inpatient care has spurred the growth of the hospitalist movement, even while many hospitalists currently do not generate sufficient income to cover their salaries. However, the hospitalist model has received its share of criticism, particularly regarding its potential to cause discontinuity of care, to erode the physician-patient relationship, and—from the point of view of the primary physician—to decrease autonomy, professional identity, and acute care skills [14,24–26]. Clearly, the continued growth of the hospitalist movement has important implications for both the larger health care system and individual physicians in practice.

Cost of Care

Hospitalists consistently have been shown to reduce the length of stay and cost of inpatient care [27–32] (**Table 2**). The explanations for these benefits are complex and have been inadequately studied. Hospitalists are available in the hospital throughout the normal working day and, therefore, can see patients as often as is necessary to provide timely care. Because caring for hospitalized patients is their primary activity, hospitalists are likely to develop a higher level of skill in inpatient care and may be more aware of clinical guidelines, standards, and best practice recommendations of professional clinical organizations. These skills could lead to greater efficiency and, secondarily, to shorter lengths of stay and lower costs of care. Furthermore, where hospitalists are making the admission decisions in the ED, admissions are decreased, resulting in further savings for insurers [28].

Quality of Care

Thus far, few studies have provided data on quality of care by hospitalists and the data, therefore, are limited. Hospitalists have been found to decrease 14- and 30-day readmission rates [27]. In teaching hospitals, hospitalists may offer significant advantages as teachers over the usual rotating attending physicians [33,34]. Their greater expertise and interest in inpatient care along with their increased availability throughout the day allow for improved supervision by attendings with expert knowledge of inpatient care. Some limited data support the concept of improved adherence to standards of care by hospitalists and, thus, reduced clinical practice variation and improved clinical outcomes. Unfortunately, most studies published to date were not designed to have the power to detect differences in clinical outcomes, and much more data are needed. While most authors suggest quality of care is at least maintained and, possibly, improved, primary care physicians might achieve similar quality of care if their

Table 2. Impact of Hospitalists

Source	Length of Stay	Cost of Care	Patient Satisfaction	Quality of Care
Diamond et al [27]	Decreased	Decreased	ID	ID (fewer readmissions)
Wachter et al [28]	Decreased	Decreased	No change	No change
Craig et al [29]	Decreased	Increased	ID	Increased consultation
Freese [30]	Decreased	Decreased	Improved	Improved
Davis et al [31]	Decreased	Decreased	No change	No change
Hackner et al [32]	Decreased	Decreased	ID	No change

ID = inadequate data to draw a conclusion.

practices were aided by the use of computer-based reminder systems, physician-based order entry systems, and easier-to-use and more systematically structured applications of clinical guidelines [35].

Patient and Primary Care Provider Satisfaction

Improved patient satisfaction potentially can result from the greater availability of the hospitalist compared with the usual primary care physician who spends most of the workday in an office-based practice. The hospitalist is more likely to be present during family visiting hours and, thus, is better able to answer questions and provide needed information [28]. Our own unpublished data showed that patients were generally more satisfied with the time they spent with a physician when hospitalists provided care; however, overall patient satisfaction was not significantly different from the comparison group. These findings are consistent with those of Wachter et al [28] and Hackner et al [32]. More data are needed on patient satisfaction with the use of hospitalists and the factors that influence patient satisfaction.

One factor that appears to influence patient satisfaction is contact with one's primary physician during hospitalization as well as good communication between one's primary provider and the hospitalist [19]. Similarly, referring physicians want better contact with their patients through effective communication with hospitalists. In a large survey of California-based primary care physicians who refer patients to hospitalists, only 56% reported being at least somewhat satisfied with their communication with hospitalists [18]. The survey respondents overwhelmingly reported that they want timely communication of all important information about their patients at admission and at discharge, and they prefer the contact to be by telephone [18].

Continuity of Care

Perhaps the most important concern about the growth of the hospitalist movement is the loss of continuity of care that occurs when an established relationship between a primary care physician and a patient is interrupted during hospitalization, as happens when a hospitalist substitutes for the primary physician [14,25,26]. This loss of continuity may be disruptive for both patients and their families as well as for the primary care physician. Close collaboration between the primary care physician and hospitalist and excellent communication skills on the part of the hospitalist are the only means to mitigate this disadvantage.

Impact on Physicians

Little is known about how primary care physicians and hospitalists themselves are adjusting to this new paradigm for inpatient care. However, continued growth and spread of the hospitalist movement will no doubt provide opportunities for studying this important question.

Skills and professional identity. The development of specialties that fragment medicine has an impact on the skills of both the specialist and the primary care physician. For the primary care physician who no longer attends at the hospital, the loss of inpatient skills may be a significant issue [14]. The physician also may lose the prestige associated with being part of the active hospital staff as well as the continuing education that occurs through interaction with colleagues and—in teaching hospitals—with students and residents. Similarly, the hospitalist as a specialist in inpatient medicine loses outpatient skills over time and, should she in the future wish to practice ambulatory medicine, may have a lower level of skill and a lesser acceptability to insurers. Accordingly, many hospitalists continue to maintain a limited outpatient practice to maintain outpatient skills [8,16].

Job satisfaction. It is too soon to draw conclusions about the job satisfaction of both hospitalists and the primary care physicians who use them. The limited surveys and reports of primary care physicians who use

hospitalists do suggest, however, that these physicians are beginning to perceive positive effects on their practices [5,36]. In one survey of California-based physicians who use hospitalists, 53% of respondents believed hospitalists decreased their workload, and 50% believed hospitalists increased their practice satisfaction [36]. The use of hospitalists frees the busy primary care practitioner from travel time to and from the hospital and from unscheduled calls interrupting office hours. The loss of inpatient revenue may be compensated for by the ability to care for a larger number of patients and, thus, generate more revenue in the office [5]. The reduction in nighttime and weekend calls and, in at least some arrangements, the relief from weekend and holiday hospital rounds may improve the quality of life for the primary care physician.

Conversely, given the short length of contact with a given patient, hospitalists could find that the satisfaction that comes from caring for a patient until an illness is resolved is lost. Also, weekend and nighttime calls are frequent and may be a burden. In those programs that provide 24 hours a day, 7 days a week coverage, shift work can be difficult and demanding. The typical workload for hospitalists is a mean inpatient census of 13; this number usually does not exceed 16 [4]. When the number of patients is much greater, efficiency drops. Despite these potential drawbacks, the great majority of current hospitalists report they are satisfied or highly satisfied with their present positions, and most expect to continue to be a hospitalist after 3 years [2,9].

Conclusion

The hospitalist movement has created demands for specialists in inpatient medicine, paving a new career path for many current and future clinical trainees. With the recent rapid growth of the field, hospitalist positions represent a significant portion of the job market, particularly for primary care graduates. This is likely to remain true for many years, given the size of the potential future workforce [4]. The future growth of the field will depend on the outcomes of studies that provide better data regarding the benefits and liabilities of hospitalist care and on the development of new or alternative payment methods.

Those considering a career as a hospitalist should seek to acquire skills not only in patient care but also in collaborative care, communication, discharge planning, and those skills that contribute to quality of care, error reduction, and patient satisfaction. Unfortunately, the educational approaches that will best achieve these outcomes are not yet determined. As educational needs are better delineated, one can speculate that guidelines for postresidency training of hospitalists will be developed, which ultimately will lead to a requirement for advanced training, certification of training programs, and certification of trainees. However, there are no formal plans to develop such a process, although major organizations (eg, the American Board of Internal Medicine, the ACGME) are weighing these issues.

Physicians interested in working as hospitalists also should be aware that the options for employment may be evolving. The growth of private practice hospitalist groups, while still accounting for only about 12% of the hospitalist workforce, is notable [3]. If data on the benefits of using hospitalists become stronger, growth of hospitalist group practices may accelerate if insurers choose to contract directly with such groups to provide their inpatient care. Other new types of payment arrangements, including fee-for-service payment for hospitalists providing inpatient care for managed care patients, also may develop [23].

Although it is impossible to say whether the advantages of using hospitalists clearly outweigh the additive costs and other disadvantages of turning over patient care, the financial benefit to hospitals and insurers of reduced lengths of stay and costs of care has been firmly established. On the other hand, there are too little data at present to determine where, in what ways, and to what extent (if any) hospitalists provide improved quality of care. Additional studies are needed in this area. Similarly, most of the limited data available suggest that there is a mix of both favorable and unfavorable impacts on patient and physician satisfaction. The authors would like to believe that hospitalists can play an important role in error reduction in hospitals. More data to support or refute this concept are needed. It may be that in appropriately structured systems, the same outcomes can be achieved by primary care physicians.

In summary, the hospitalist movement has been one of the most important conceptual developments in clinical care delivery of the last decade. The likely continued growth of the field will have major impacts on inpatient medical care, the practice of primary care medicine, and the career paths of many who choose medical training.

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