The Hospitalist Movement 5 Years Later

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FIVE YEARS AGO, WE DESCRIBED A burgeoning model of care in the United States, in which a new breed of physicians, whom we dubbed “hospitalists,” provide inpatient care in place of primary care physicians or academic 1-month-per-year attendings.¹ We cited numerous forces fomenting this change, including cost pressures on hospitals, physician groups, and managed care organizations; the increased acuity of hospitalized patients and the accelerated pace of their hospitalizations; the time pressures on primary care physicians in the office; the decreasing inpatient volumes of most primary physicians; and the evidence that practice makes perfect in other medical fields. We predicted that the hospitalist movement would grow and ultimately become a, if not the, dominant model for inpatient care in the United States. Finally, we argued that judgments regarding the hospitalist model should be informed by data on cost, quality, education, and patient satisfaction.

Our original article generated several negative responses,²⁻⁴ largely focused on the purposeful discontinuity in care introduced by the hospitalist model. Later, concerns were raised when a few managed care organizations attempted to mandate the use of hospitalists.⁵⁻⁷ Several medical societies mounted vigorous opposition to mandatory hospitalists, including the National Association of Inpatient Physicians (NAIP), the hospitalists’ newly established professional society. Since then, attempts to create mandatory programs by managed care organizations have become unusual,⁸ and physicians and their societies have increasingly accepted voluntary hospitalist systems.⁹¹¹

This acceptance is reflected in the remarkable growth in the hospitalist model over the past several years. By 1999, 65% of internists had hospitalists in their community and 28% reported using them for inpatient care.¹⁰ The referral rate was even higher (62%) among primary care physicians in California.¹¹ There are hospitalist programs at many prestigious US hospitals (Box 1). In its first 3 years, NAIP has grown to more than 2300 members. A recent analysis projected an ultimate US hospitalist workforce of about 19000 (up from 5000 presently), which would make it comparable in size to cardiology.¹⁰

Most of the early growth of the hospitalist movement occurred in the absence of data. Published data now illuminate some key successes and challenges for the movement as it enters its next 5 years.

Context   We originally described the hospitalist model of inpatient care in 1996; since then, the model has experienced tremendous growth. This growth has important clinical, financial, educational, and policy implications.

Objectives   To review data regarding the effect of hospitalists on resource use, quality of care, satisfaction, and teaching; and to analyze the impact of hospitalists on the health care system and frame key issues facing the movement.

Data Sources and Study Selection   We searched MEDLINE, BIOSIS, EMBASE, and the Cochrane Library from 1996 to September 2001 for studies comparing hospitalist care with an appropriate control group in terms of resource use, quality, or satisfaction outcomes.

Data Extraction   We extracted information regarding study design, nature of hospitalist and control groups, analytical strategies, and key outcomes.

Data Synthesis   Most studies found that implementation of hospitalist programs was associated with significant reductions in resource use, usually measured as hospital costs (average decrease, 13.4%) or average length of stay (average decrease, 16.6%). The few studies that failed to demonstrate reductions usually used atypical control groups. Although several studies found improved outcomes, such as inpatient mortality and readmission rates, these results were inconsistent. Patient satisfaction was generally preserved, while limited data supported positive effects on teaching. Although concerns about inpatient-outpatient information transfer remain, recent physician surveys indicate general acceptance of the model.

Conclusions   Empirical research supports the premise that hospitalists improve inpatient efficiency without harmful effects on quality or patient satisfaction. Education may be improved. In part catalyzed by these data, the clinical use of hospitalists is growing rapidly, and hospitalists are also assuming prominent roles as teachers, researchers, and quality leaders. The hospitalist field has now achieved many of the attributes of traditional medical specialties and seems destined to continue to grow.

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REVIEW

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Box 1. Twelve of the US “Top 15 Hospitals, 2001” That Have Active Hospitalist Programs1

Barnes-Jewish Hospital
Brigham and Women’s Hospital13
Cleveland Clinic14
Duke University Medical Center
Hospital of the University of Pennsylvania15
Massachusetts General Hospital
Mayo Clinic
Stanford University Hospital
UCLA Medical Center16
University of California, San Francisco Medical Center17
University of Chicago Hospitals18
University of Michigan Medical Center

*As defined by US News & World Report1 as of December 2001 and presented in alphabetical order.

METHODS

We searched MEDLINE, BIOSIS, EMBASE, and the Cochrane Library from 1996 to September 2001 to identify studies, published in either manuscript or abstract form. When abstracts led to manuscripts reporting the same population of patients, only the manuscript was included. When preliminary results were cited, we contacted authors for updated results. We searched on both title and key words for “hospitalist” or “hospitalists,” and included studies that reported data comparing hospitalists with an appropriate nonhospitalist control group on resource use and/or clinical outcomes. We extracted information regarding study design, nature of hospitalist and control groups, use of risk or other adjustment, and key outcomes. Because of the newness of the literature and the relative dearth of methodologically rigorous studies, a formal statistical analysis (eg, meta-analysis) was not attempted.20

We also aimed to describe and analyze several additional hospitalist-related thematic issues, including training, expanding roles for hospitalists, patient and provider satisfaction, and financing hospitalist programs. We performed focused literature searches in these areas in addition to the systematic review of efficiency and quality.

RESULTS

We found 19 published studies (12 articles, 7 abstracts) regarding the impact of hospitalist programs on financial and clinical outcomes (Table 1).18,21-44 Viewed together, the studies cover all health care delivery settings: teaching and nonteaching hospitals, urban and rural locations, adult and pediatric services, and managed care and nonmanaged care environments. Fifteen of the 19 studies found significant decreases in both hospital costs (average decrease, 13.4%) and lengths of stay (average decrease, 16.6%).18,21,22,23,28-38,40-42,44 Two studies demonstrated decreases in average length of stay but no decreases in hospital costs.25,27 Only 2 of 19 studies found neither cost nor length of stay reduction.20,42 In 1 study, the nonhospitalist had attended an average of 2.5 months in the year before the intervention,39 a very different group than the more typical comparison groups of primary care physicians or academic 1-month-per-year attendings. In the other study,33 the control group was a family practice teaching service in which a rotating group of 4 physicians served as dedicated inpatient attendings 2 weeks out of 8 weeks, thus meeting one of the published definitions of hospitalist.40

Proponents of the hospitalist model postulate that hospitalists improve inpatient care quality, both through practice makes perfect and through their on-site availability throughout the day. Critics have raised concerns that quality might be sacrificed on the altar of efficiency. Thus far, there is little to suggest that hospitalist-generated savings come at the expense of quality (Table 1). Most studies have found no change in quality measures. One study demonstrated a significant decrease in readmission rates,20 while another showed an increase in potentially preventable readmissions.30 One very small observational study (n = 99 hospitalist patients) of heart failure patients showed an increased hospital mortality rate in the hospitalist group (2.0% vs 1.5%).21 However, 2 much larger (averaging 1600 hospitalist patients per study) and more methodologically rigorous studies (1 quasi-randomized, the other adjusted for case-mix) found significant decreases in inpatient and short-term mortality, which grew to approximately a 33% relative reduction in the hospitalist programs’ second year (4.2% vs 6.0% in 1 study, 4.8% vs 7.2% in the other).18,37 These results, while provocative, are insufficient to support an unqualified statement that hospitalists improve quality. In addition to more large and rigorous outcome studies, future studies should use more refined measures of quality, including functional status outcomes and process measures associated with improved outcomes, such as the use of appropriate medications for heart failure, rapid administration of antibiotics in pneumonia, and smoking cessation counseling for patients admitted with asthma.46,47

COMMENT

The published outcomes literature has generally upheld the promise of the hospitalist model, as demonstrated by impressive and consistent cost savings associated with no decrease in quality. Assuming the average US hospitalist cares for 600 inpatients yearly48 and generates a 10% savings over the average medical inpatient cost of $8000, the nation’s 5000 hospitalists would reduce inpatient costs by approximately $2.4 billion per year.

Satisfaction and Experience of Patients and Physicians

A major early concern was that patients accustomed to having their primary physician as their inpatient attending would not accept hospitalists.45 In general, however, surveys of patients who were cared for by hospitalists show high levels of satisfaction, no lower than that of similar patients cared for by their own primary physicians,29,31,32 or by traditional academic

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Table 1. A Summary of Outcome Studies of Hospitalist Programs

<table>
<thead>
<tr>
<th>Source, y</th>
<th>Site</th>
<th>Comparison Group</th>
<th>Outcome</th>
<th>Costs and ALOS</th>
<th>Patient Satisfaction</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whitmer et al, 1998</td>
<td>Moffitt-Long Hospital, University of California, San Francisco</td>
<td>Traditional 1-month/year ward attendings (both historical and concurrent controls)</td>
<td>No change in mortality, readmissions, or functional status; trend toward improved housestaff satisfaction</td>
<td>Hospital costs, 10% lower; ALOS, 12% shorter</td>
<td>No difference</td>
<td>Intervention multifactorial (hospitalists also had mandate to improve value, saw patients earlier); results adjusted for case-mix; quasi-random patient allocation</td>
</tr>
<tr>
<td>Diamond et al, 1998</td>
<td>Western Penn Hospital, Pittsburgh</td>
<td>PCPs (historical controls)</td>
<td>54% decrease in readmissions; no change in mortality</td>
<td>Hospital costs, 12% lower; ALOS, 17% shorter</td>
<td>Not reported</td>
<td>No case-mix adjustment</td>
</tr>
<tr>
<td>Kroger and Grant, 1998</td>
<td>West Suburban Medical Center, Oak Park, Ill</td>
<td>Congestive heart failure patients aged &gt;65 years; control was &quot;usual care&quot; (concurrent controls)</td>
<td>Hospital mortality lower in control group (2.0% vs 1.5%, unadjusted)</td>
<td>Hospital charges, 4% lower (nonsignificant); ALOS, 26% shorter</td>
<td>Not reported</td>
<td>Costs/ALOS controlled for age, race, sex, and Charlson Comorbidity Index; no manuscript published, though abstract 2000; 2000; 2000</td>
</tr>
<tr>
<td>Sten et al, 1998</td>
<td>Rhode Island Hospital, Providence</td>
<td>Pneumonia admissions only; control was community physicians with (HS and without housestaff [no HS])</td>
<td>No change in mortality, readmissions, or intensive care unit transfers</td>
<td>Hospital costs, 5% (HS) and 29% (no HS) lower; ALOS, 16% (HS) and 21% (no HS) shorter</td>
<td>Not reported</td>
<td>Results adjusted for case-mix (Pneumonia Severity Index)</td>
</tr>
<tr>
<td>Craig et al, 1999</td>
<td>16 Kaiser Permanente Hospitals of Northern California</td>
<td>PCPs (historical controls)</td>
<td>Not reported</td>
<td>Hospital costs, 13% higher in hospitalist facilities in 1996 and 5% higher in 1997; ALOS, 11% lower in hospitalist facilities over entire study period†</td>
<td>Preliminary study with no follow-up reported; before/after analyses over 3.5 years of rolling implementation across all sites—unable to account for possible secular trends over time; considerable variations across sites; no case-mix adjustment</td>
<td></td>
</tr>
<tr>
<td>Freese, 1999</td>
<td>Park Nicollet Medical Center, Minneapolis, Minn</td>
<td>PCPs (historical controls)</td>
<td>Clinical outcomes not reported; less physician turnover noted; 17% fewer subspecialty consultations; 89% of PCPs said new system &quot;better or much better&quot; than old</td>
<td>Hospital charges, 25% lower for 12 most expensive diagnoses; ALOS, 0.64-day decrease</td>
<td>No change in inpatient satisfaction; &quot;some confusion&quot; about who was the inpatient physician; outpatients perceived improved quality, waiting time, and scheduling†</td>
<td>Primarily a descriptive study; data originally collected for internal consumption; no case-mix adjustment</td>
</tr>
<tr>
<td>Rifkin et al, 1999 and Pihun et al, 2001</td>
<td>Long Island Jewish Medical Center, New Hyde Park, NY</td>
<td>Pneumonia admissions only; control was community-based PCPs (concurrent controls)</td>
<td>Not reported</td>
<td>Hospital costs, 15% lower; ALOS, 17% shorter</td>
<td>Control vs hospitalist patients similar on clinical and demographic characteristics; results were adjusted for age</td>
<td></td>
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<tr>
<td>Davis et al, 2000</td>
<td>North Mississippi Medical Center, Tupelo</td>
<td>Internists who continued to care for their own hospitalized patients (concurrent controls)</td>
<td>No change in mortality, readmissions</td>
<td>Hospital costs, 12% lower; ALOS, 25% shorter</td>
<td>No difference</td>
<td>Results consistent across 10 most common diagnosis related groups; most pronounced for sickest patients; differences remained after case-mix and other adjustment</td>
</tr>
<tr>
<td>Haupert et al, 2000</td>
<td>Brigham and Women's Hospital, Boston, Mass</td>
<td>Internists caring for their own hospitalized patients (historical controls)</td>
<td>No change in mortality; trend toward lower readmission rate; resident satisfaction higher; PCP satisfaction high (90% would recommend program)</td>
<td>Hospital costs, 6% lower; ALOS, 13% shorter</td>
<td>Not reported</td>
<td>&quot;Hospitalists&quot; were rounders, spending 6 weeks per year providing hospital care; results unchanged after multivariate analysis</td>
</tr>
<tr>
<td>Bellet and Whitley, 2000</td>
<td>Children's Hospital, Cincinnati, Ohio</td>
<td>Pediatricians who were either part-time inpatient attendings of PCPs (historical controls)</td>
<td>No change in mortality, but increased readmission rate; excess of 5 (8 vs 3) &quot;potentially preventable readmissions on hospitalist service&quot;</td>
<td>Hospital charges, 9% lower; ALOS, 11% shorter</td>
<td>Not reported</td>
<td>Not case-mix adjusted</td>
</tr>
<tr>
<td>Landrigan et al, 2000; Shvartsava et al, 2000; and Shvartsava et al, 2001</td>
<td>Boston Children's Hospital, Mass</td>
<td>Pediatricians in staff-model HMO (both retrospective and concurrent controls)</td>
<td>No change in inpatient mortality or readmissions</td>
<td>Hospital costs, 16% lower; ALOS, 12% shorter</td>
<td>Not reported</td>
<td>Adjusted for case-mix, demographics; follow-up study showed significant savings in 4 of 6 common diagnosis related groups; greatest savings in bed-days and pharmaceuticals</td>
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ward attendings. We have postulated that patients may be willing to trade off the familiarity of their regular physician for the availability of the hospitalist. Initial resistance to the hospitalist movement among physicians often focused on the unavoidable discontinuity in care created by the model and the potential loss of information across the hospital threshold. Effective hospitalist programs have created mechanisms to mitigate the impact of this discontinuity, including calling primary care physicians on admission and discharge, faxes daily progress notes, and encouraging primary care physicians to visit or call their hospitalized patients. Though some concerns about information transfer linger, 2 recent surveys suggest that most physicians now accept the hospitalist model. In a national telephone survey of 400 internists, 51% (204) thought hospitalists might provide better care and 46% (184) thought patients might get more cost-effective care. Although 73% were concerned about the impact of hospitalists on continuity, physicians with hospitalists in their community were more approving. In a survey of 524 California primary care physicians, physicians perceived hospitalists as increasing (41%) or not changing (44%) the overall quality of care and most (55%) thought that hospitalists increase inpatient efficiency. In both surveys, primary care physicians stated their belief that patients generally preferred to be cared for in the hospital by their regular physician. Surveys of both generalists and specialists at Park Nicollet showed high levels of physician satisfaction several years after the implementation of a hospitalist program. Although concerns remain about potential burnout, surveys of NAIP members conducted in 1997 and 2000

<table>
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<tr>
<th>Table 1. A Summary of Outcome Studies of Hospitalist Programs (cont)*</th>
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<tr>
<td><strong>Source, y</strong></td>
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<tr>
<td>Auerbach et al,17, 2002</td>
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<td>Hackner et al,16, 2001</td>
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<td>Kearns et al,39, 2001</td>
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<td>Maggioni et al,41, 2001</td>
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<td>Palmer et al,41, 1999 and 2001</td>
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<td>Tringe and Lambert,42, 2001</td>
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<td>Molnari and Short,18, 2001</td>
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<tr>
<td>Meltzer et al,18, 2001</td>
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</tbody>
</table>

*Results cited are those associated with the hospitalist group. All cited statistics are statistically significant except when stated otherwise. Mortality indicates inpatient mortality, unless otherwise specified; readmissions, short-term readmission rate, generally either 10 or 30 days; ALOS, average length of stay; PCP, primary care physician; and HMO, health maintenance organization. ^No statistical analysis presented in the manuscript. †Personal communication also cited.
Training for Hospitalist Careers

Until recently, there were no specific training programs for hospitalists. Thus, hospitalists have developed from diverse training backgrounds. The 1997 NAIP survey indicated that 90% of hospitalists were internists: 30% general internists and 40% medical subspecialists. Of this latter group, half were pulmonologists and/or critical care specialists. The 1999 survey found that the generalist fraction had grown to 75%, while subspecialists fell to 15%. Our impression is that early programs often took advantage of the onsite presence of pulmonary physicians, intensivists, and other subspecialists. The recent data indicate that the maturing field is attracting more general internists who view it as a long-term career option. In both surveys, about 3% to 5% of hospitalists were family physicians and another 5% to 7% were pediatricians.

There are now several early training programs for hospitalists, including a residency track and fellowship program at the University of California, San Francisco. In developing training modules for hospitalists, researchers have been guided by a survey in which practicing hospitalists rated areas of importance to their practice and sufficiency of their training (TABLE 2). Interestsingly, hospitalists thought that clinical skills (ie, managing heart failure, inserting central lines, interpreting electrocardiograms) were very important and had been well taught during residency. Conversely, they cited major educational deficits in their training regarding communication skills, end-of-life care, quality improvement and patient safety, medical economics, care of surgical patients, and postacute care. These topics are likely to form the core of future hospitalist curricula for both trainees and practicing physicians. Although graduating residents raised concerns about underpreparedness in some of the same areas, such as in nursing home care and quality improvement, in a recent national survey, other educational deficits cited by hospitalists (eg, palliative care) were not raised to the same extent by these graduating residents. Moreover, the illustrative cases and settings used to train future hospitalists would undoubtedly be different than those used to educate outpatient generalists, even within the same general content area, such as pain management or patient safety.

Hospitalists’ Expanding Roles

Initially, hospitalists engaged primarily in traditional hospital internal medicine or pediatric practice, caring for medical inpatients and performing medical consultations on nonmedical patients. The data showing improvements in efficiency with at worst statistics (and possibly improvements) in outcomes and satisfaction relate to these traditional functions. Like a drug that is approved for specific indications but finds broader use in practice, hospitalists are being employed in a number of off-label functions, including emergency department triage and managing hospital-to-hospital transfers.

An area of controversy is the role of hospitalists in the intensive care unit. Approximately 80% of hospitalists care for their own patients in intensive care units, frequently or always calling on intensivists as consultants. Although the literature demonstrates improved outcomes and efficiency when intensivists participate in the care of critically ill patients, the comparison groups in these studies were either nonhospitalist ward attendings or community-based primary care physicians. There are no data comparing hospitalist-based intensive care (with intensivist consultation) to intensivist-based care. Further research is needed to determine the optimal models for intensive care when both hospitalists and intensivists are available. Collaborative hospitalist-intensivist models will become increasingly important if the projected national shortage of critical care physicians materializes.

Finally, in many systems hospitalists are moving beyond the traditional role of medical consultant to a new role as physician-of-record for nonmedical inpatients with medical comorbidities. Just as with the primary care physician whose office obligations make inpatient management and discharge planning difficult during daylight hours, the surgeon is similarly obligated in the operating room. In the 1997 NAIP...
search.69 The greatest effects are on education and research.

The impact of hospitalists on academia

Most early hospitalist groups formed in community hospitals. Over the past 5 years, many academic medical centers have adopted hospitalist models for inpatient care and teaching. Beyond the legitimacy that this expansion into academia affords the movement,68 the 2 greatest effects are on education and research.69 Academic hospitalists are emerging as core teachers of inpatient medicine. For example, at the University of California, San Francisco, 15 faculty hospitalists now staff about two thirds of ward-attending months and all medical consult months. Preliminary evidence indicates that resident teaching evaluations of hospitalists are significantly higher than those of our highly selected nonhospitalist 1-month-per-year ward attendings (K. Hauer, MD, written communication, December 2001), an effect seen elsewhere as well.32

The impact on medical student education has not been empirically studied; we recently described several potential advantages and disadvantages of hospitalists in student education.70

The development of hospitalist groups in academic medical centers may have its most far-reaching effects in defining new research agendas,69 No longer limiting their research to the impact of the hospitalist model itself, academic hospitalists are now applying the tools of health services and outcomes research, ethics, and clinical epidemiology to critical inpatient issues, such as preventing nosocomial infections,71 end-of-life care,72 and hospital quality measurement.66 Over time, hospitalists are likely to become increasingly engaged in patient-centered research, clinical trials, and genetic epidemiology (Box 2), taking advantage of their onsite availability and large numbers of potential subjects.

The original definition of a hospitalist as a physician who spends more than 25% of his/her time caring for inpatients, referring them back to their primary care physician at discharge.94 The NAIP later defined hospitalists as physicians whose primary professional focus is hospital medicine who serve as ward attendings for several months each year but whose primary professional focus is hospital medicine.74,75

Financial, political, and organizational issues

Primary care physicians’ willingness to forgo management of their hospitalized patients has been facilitated by the relatively low professional fee compensation for nonprocedural inpatient care. One analysis showed that the average primary care physician would realize a yearly net gain of about $40000 by foregoing hospital care, simply by replacing wasted commute time with increased ambulatory productivity.73

Unfortunately, these low reimbursements, coupled with the performance of few procedures and the poor payer mix of most general hospital practices, also mean that few hospitalist programs can support themselves on professional fee revenues alone.74,75 Moreover, the effective hospitalist, who may see an inpatient twice a day and talk to the family, primary care physician, radiologist, case manager, and 2 consultants in order to expedite a hospitalization, is reimbursed only for a single inpatient encounter. As a result, the average hospitalist has a shortfall (salary minus collections) of 10% to 50%, depending on the clinical work-
load, teaching obligations, payer mix, and reimbursement rates.14-76

Medical groups, managed care organizations, or, most commonly, hospitals often find it attractive to support hospitalist programs. If hospitalists improve quality, shorten lengths of stay, and decrease costs while satisfying patients and other providers, the return on these organizations’ investments in hospitalist programs is highly favorable. Over time, it will be critical that professional fee reimbursement rates be adjusted so that a sustainable hospitalist workload creates sufficient income to support a full salary.

Hospital Medicine as a New Specialty

The hospitalist movement mirrors the health care trend toward ever-increasing specialization. However, hospitalists are fundamentally generalist physicians who provide and coordinate inpatient care, often aided by myriad subspecialists. How can a generalist be a specialist?

Specialties in medicine are traditionally defined by organ (eg, cardiology), disease (oncology), population (pediatrics), or procedure/technology (surgery or radiology). The hospitalist, on the other hand, is a “site-defined generalist specialist” (similar to emergency medicine physicians or critical care specialists), caring for patients with a wide array of organ derangements, illnesses, and ages within a specific location.15 Accordingly, the hospitalist should not be seen as a retreat from generalism and its emphasis on coordination and integration16-77 but rather as an affirmation of these values and as a surrogate for the primary care physician in the hospital. The competing pressures resulting from the distance between office and hospital as well as the requirement of around-the-clock availability make the hospital-based generalist a logical evolution.

Hospital medicine has already satisfied many of the requirements of a specialty. A large and enthusiastic group of practitioners identify themselves not according to their training background but as hospitalists. The NAIP is almost certainly the fastest growing physician society in the United States. The field hosts several successful meetings each year and has its own clinical textbook.78

To establish themselves as members of a recognized medical specialty, hospitalists must identify a core skill set or body of knowledge and obtain the approval of credentialing organizations. Advocates of specialty status for hospitalists should be encouraged by the history of 2 other site-defined inpatient specialties: emergency medicine and critical care medicine. Like these relatively young fields, it seems probable that hospitalists will ultimately define a unique set of skills and competencies that will distinguish their field. The identification of practice-training mismatches (Table 2) represents an important first step.

Credentialing organizations deliver the final stamp of approval on new specialties by creating a board certification or added qualification. Most new fields quickly agitate for such status, their motivation both practical and visceral. However, for unique reasons, few hospitalists are pressing this point. Many physicians—hospitalists and nonhospitalists—worry that if a credentialing body (such as the American Boards of Internal Medicine or Pediatrics) created a hospital medicine credential, health maintenance organizations might require that physicians possess this credential to care for inpatients. This would be unacceptable to many primary care physicians, who would be excluded from the hospital despite their desire and competence to continue practicing there. For this reason, we expect neither NAIP nor the relevant boards to promote separate credentials in the near future. Nevertheless, as evolutionary forces lead to specialized training, some formal specialty designation may emerge.79

CONCLUSION

In summary, the hospitalist model is growing rapidly and appears to have achieved its minimum goal of improving efficiency without adverse effects on quality, teaching, or patient satisfaction. Ongoing larger studies should help determine whether preliminary data suggesting an improvement in some of these outcomes, such as quality and teaching, can be confirmed. The dominant questions no longer relate to whether the hospitalist model is here to stay—even skeptics concede that it is—but rather, the myriad organizational, financial, ethical, educational, and clinical issues that arise with a major change in the organization of US hospital care. We hope that these issues will continue to be settled on the basis of rigorous analysis of the evidence.

REFERENCES


