Training future hospitalists

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THE HOSPITALIST MOVEMENT

The recent emergence of hospitalists has dramatically changed inpatient care in the United States. Hospitalists are physicians based in hospitals who accept patients from primary care physicians upon hospital admission and care for them until they are discharged back to their primary physicians.[1] The newly formed National Association of Inpatient Physicians estimates that there are 3,000 hospitalists in America, a number projected to increase to about 19,000 over the next few years.[2]

Because of their greater experience with hospital care and their availability throughout the day, hospitalists may improve the quality and efficiency of hospital care.[3] Emerging research generally supports this statement. Implementation of a hospitalist model in Pennsylvania that was based in the community was associated with a 14% reduction in hospital charges and a 54% decrease in readmissions.[4] The reorganization of an academic medical service at the University of California, San Francisco, to one employing hospitalists for most inpatient care reduced lengths of stay without compromising clinical outcomes or the satisfaction of patients and house staff.[5] When a multispecialty group based in the community converted to a hospitalist model, it not only improved hospital efficiency but also enhanced outpatient satisfaction, presumably because ambulatory care physicians were more readily available to their clinic patients.[6]

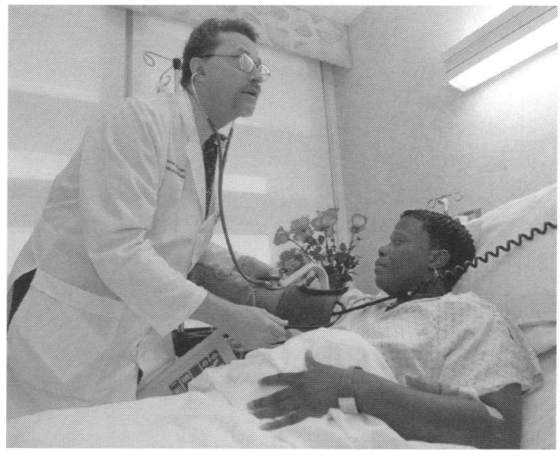
PAST INNOVATIONS IN TRAINING IN INTERNAL MEDICINE

In the 1970s and 1980s, the imbalance between generalists and specialists, skyrocketing costs, and inadequate access to care prompted a reexamination of traditional training methods.[7,8] This led to the setting up of primary care residency programs and tracks to train internists for ambulatory care-based practice. Such programs have produced innovations in ambulatory care and preventive medicine curricula and trained internists who are more likely than their categorical colleagues to practice in primary care settings.[9,10]

Traditional categorical internal medicine programs, challenged to train physicians who may pursue diverse careers in medical subspecialties, biomedical research, or even primary care, have changed less dramatically. The demand for acute care generalists in the growing hospitalist field provides an opportunity for focused curricular innovation in categorical internal medicine residencies, whose graduates comprise the majority of practicing hospitalists. A recent survey of 372 hospitalist physicians showed that 89% were internists, 51% were general internists, and 38% were subspecialists. The rest (11%) trained mainly in family medicine or pediatrics,[11] two additional fields in which these training issues are being raised.

Summary points

- The rapid growth in hospitalists presents residents in internal medicine with a new career option as hospital-based generalist physicians
- As well as being clinically competent in inpatient care, hospitalists should understand managed care, health care delivery systems, quality improvement, practice guidelines, subacute care, and end-of-life care
- Within the categorical internal medicine residency at the University of California, San Francisco, we have developed a hospital medicine residency program that includes exposure to hospitalist practices and continuity of care
- Residents also carry out independent research or quality improvement projects, participate in a didactic curriculum, and complete a group project of developing a hypothetical hospitalist system



AP/Alan Diaz

Hospitalist practice is now more than just a career choice

TRAINING ISSUES FOR HOSPITALISTS

Although most practicing hospitalists are internists, categorical internal medicine residency programs do not require specialized training in the range of issues that hospitalists frequently address. In a survey of the members of the National Association of Inpatient Physicians,[12] practicing hospitalists rated their inpatient training during residency as adequate, but felt that they would have benefited from more formal training in the role of outpatient care

providers and the range of care feasible in the outpatient setting; care in nonacute settings, including skilled nursing facilities and hospice; communication skills; end-of-life care; the business of health care and managed care; and quality improvement and the development of practice guidelines.

A MODEL HOSPITALIST TRAINING PROGRAM

At the University of California, San Francisco, we have developed a hospital medicine track within the categorical internal medicine residency. Our goal is to integrate hospitalist topics into the existing residency curriculum. The core components of the program include an elective in hospital medicine, an independent research or clinical project, mentoring by hospitalist faculty, and inpatient-focused journal clubs. Approximately 10% to 15% of categorical medicine residents elected to participate in the program's first 2 years.

The centerpiece of the hospital medicine track is the elective in hospital medicine in the second and third years of residency (Figure 1). A didactic curriculum emphasizes the knowledge and skills a hospitalist should possess. Residents learn of the financial and organizational impetus for the hospitalist movement. Additional content areas span managed care, communication skills, and business issues for hospitalists. Because hospitalists often play important roles in caring for patients on non-internal medicine services,[11] either as consultants or physicians of record, clinical issues in medical consultation are highlighted. Using the approach of a case-based learning of systems, residents carry out a group project of developing a strategy for the design and implementation of a hypothetical new hospitalist program (Table 1).[13] Leadership skills are developed through seminars focusing on clinical team meetings, the activities of hospital committees, and the design of hospitalist systems.

Residents accompany hospitalists in local inpatient practices. They visit patients and work with multidisciplinary providers at skilled nursing facilities, nursing homes, and during home visits, gaining an appreciation of the capabilities and limitations of these sites of care and of the integral role hospitalists play on the care team (Figure 2).

To develop the analytic and quantitative skills for clinical research, residents can take courses in outcomes research and epidemiology. Most work with a faculty mentor on a research or quality improvement project relevant to inpatient medicine.

Hospitalist elective schedule for residents

	Monday	Tuesday	Wednesday	Thursday	Friday
AM	**1 Seminar:** •Physician workforce issues	**2 Group project†**	**3 Seminar:** •Physician organizations •Public health systems	**4 Independent study**	**5 Seminar:** •Quality improvement •Practice guideline development
PM	Acute care: shadow hospitalist at academic hospital	Observe patient at hospice/ home visit	Shadow hospitalist at academic affiliated community hospital	Continuity patients*	Resident continuity clinic
AM	**8 Seminar:** •Communication with patients and families	**9 Group project†**	**10 Seminar:** •Communicating with healthcare providers	**11 Seminar:** •Physician reimbursement •Implementing a hospitalist system	**12 Seminar:** •Medical malpractice •Billing fraud
PM	Shadow hospitalist at community teaching hospital	Observe patient at hospice/ home visit	Acute care: shadow hospitalist at private hospital	Continuity patients*	Resident continuity clinic
AM	**15 Seminar:** •Palliative care: symptom management •Home IV care	**16 Group project†**	**17 Seminar:** •Medical consultation •Multidisciplinary care	**18 Visiting professor**	**19 Seminar:** •Information systems •Evidence-based medicine
PM	Acute care: shadow hospitalist at community teaching hospital	Observe patient at hospice/ home visit	Shadow hospitalist at public SNF	Continuity patients*	Resident continuity clinic
AM	**22 Seminar:** •DNR* discussions •Assessment of functional status	**23 Group project†**	**24 Seminar:** •Outcomes research	**25 Seminar:** •Dealing with grief •Cross-cultural medicine	**26 Seminar:** •Ethics of end-of-life care •Negotiating a job contract
PM	Acute care: shadow hospitalist at community teaching hospital	Follow patient at hospice/ home visit	Attend multidisciplinary care conference at SNF	Continuity patients*	Resident continuity clinic
AM	**29 Seminar:** •Evaluating patient satisfaction •Evaluating and changing physician behavior	**30 Group project†**	**31 Group project†** Presentation*		
PM			Party		

*Continuity patients = follow patient after discharge from acute care hospital to SNF/hospice/rehabilitation/home.
†Group project = small group meeting for project development.
SNF = skilled nursing facility; HMO = health maintenance organization; IV = intravenous; DNR = do not resuscitate.

Figure 1 A model hospitalist elective month for second-year residents.

Table 1

A case study to enhance business and organizational skills for hospitalists

Problem
You are the medical director of a physician group at a nonteaching hospital in the community. Your hospital has an average daily census of 80 medical patients. Patients are admitted to the hospital by their primary care physicians; each physician has an average of 2 patients in the hospital a day. A few have their office next door to the hospital, but many commute from 10–30 min. About 20% of patients who are admitted have no primary care physicians—their care is provided by a rotating pool of the entire medical staff.

Your hospital competes with a nearby teaching hospital that has house staff to admit patients overnight. Some of your primary care physicians tend to shunt their nighttime admissions to that hospital because of the house-staff coverage. Your board and hospital's chief executive officer have asked you about the potential merits of a hospitalist model of care for your group.

Task
Draft a business plan that considers the following issues:

Business strategy
Describe the services the hospitalists will provide
How is a hospitalist model better than the existing system?
What are the potential disadvantages of a hospitalist model? What are your plans for mitigrating these potential disadvantages?

Organizational strategy
How many hospitalists do you need? support staff? allied health professionals (nurse practitioners, physician assistants)?
Who will employ the hospitalists?
How will the hospitalists be paid?

Strategies for obtaining buy-in
What groups are likely to raise concerns about this new model of care?
How will you convince them of the merits of this system?

Operations strategy
Design a communications system linking hospitalists and primary care providers
Design a coverage system for hospitalists

Accreditation for internal medicine residents, including those in a hospital medicine program, requires them to spend time in a continuity clinic and a minimum of 33% of their time in ambulatory care (Accreditation Council for Graduate Medical Education: www.acgme.org). Even without these requirements, we would maintain the ambulatory care experience for residents in the program. A successful hospitalist career depends on a strong understanding of what can realistically be accomplished in the outpatient setting. Moreover, a significant minority of the nation's hospitalists[11] and all of the faculty hospitalists in the University of California, San Francisco,[14] continue a limited ambulatory care practice.

HOSPITAL MEDICINE: A NEW SPECIALTY?

A new training model raises questions about the specialty status of that field.[15] Hospitalists are acute care generalists defined by the site at which they work. They are qualified to manage medical inpatients and provide consultative services for patients on non-internal medicine services. Hospital medicine shares many attributes with the specialties of emergency medicine and critical care medicine, both of which have successful training programs, separate certification, and full specialty status.

Kelley has argued that any discrete new specialty should also be represented by the existence of departments, divisions, and professional societies with distinct research agendas.[15] Over the past 3 years, clinical hospitalist groups have formed at dozens of academic medical centers, including programs at the Brigham and Women's

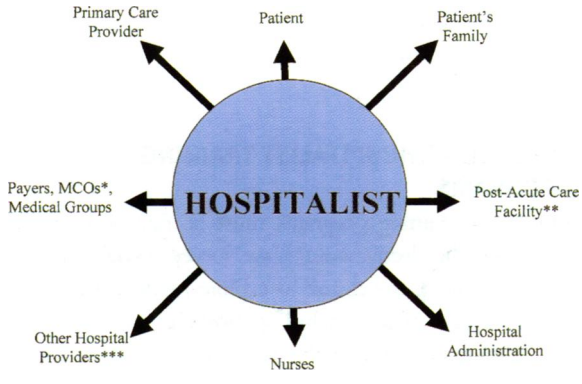


Figure 2 The many faces of hospitalists. Training programs will need to explore each interface to develop future hospitalists' skills.

Hospital, Boston, Mass[16]; University of Pennsylvania School of Medicine, Philadelphia; Emory University School of Medicine, Atlanta, Ga; University of Chicago Pritzker School of Medicine; the Cleveland Clinic, Cleveland, Ohio; and the Mayo Clinic, Rochester, Minn. Areas of expertise for academic hospitalists might include the evaluation and measurement of hospital quality, medical consultation, and the development and implementation of guidelines.

CHALLENGES AND LIMITATIONS

A major obstacle for training programs in hospital medicine is establishing an identity distinct from traditional programs. Opponents of the use of hospitalists argue that fragmentation within internal medicine will lead to outpatient internal medicine becoming indistinguishable from family medicine.[17] We believe that the trend toward outpatient management of increasingly complex disease will secure the niche of outpatient general internists in the care of chronically ill adults.[18]

A central concern raised about hospitalists is the loss of continuity of care. Hospitalist training programs must train hospitalists to communicate effectively with primary care providers. This may improve the situation in many academic centers, in which teaching attending physicians usually serve only one month per year and spend the rest of their time in laboratories or specialized practices. Such physicians, who are not hospitalists,[3] replace primary care providers when patients are admitted to a hospital but may lack the skills and motivation to communicate effectively with primary care providers.

Finally, funding for these innovative curricular changes will be hampered by service requirements and funding restrictions. Research and didactic rotations in which residents do not assume direct patient care may be difficult to support with Medicare training dollars. This obstacle can be overcome through independent grants for training programs. Alternatively, money saved by hospitalists who improve the efficiency of inpatient care can be used to support the academic mission of hospitalist groups, including the costs of training.[4,5,19]

EVALUATING HOSPITALIST TRAINING PROGRAMS

Hospitalist training programs must be rigorously evaluated. For our elective course, we survey residents before and after taking the course to explore resident interest in various career paths, including hospital medicine. We ask participants to rate the importance to their future practice of subjects related to hospital medicine, including research design, medical consultation, medical administration, the continuum of care, communication skills, and ethics. We also evaluate perceived preparedness in these areas. Our goal is to determine how the elective affects the residents' self-assessed knowledge and attitudes by comparing responses before with those after taking the elective.

Preliminary results from the first group show that most are interested in careers as hospitalists and that the group's overall self-assessment of preparedness in most subject areas improved after taking the elective.

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