

The evolution of the hospitalist movement in the USA

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ABSTRACT – The hospitalist movement represents a novel paradigm of health care delivery in the USA, its evolution hastened by a variety of financial, clinical, and time pressures. Hospitalists are site-defined specialists who spend the majority of their professional time practising in the hospital, and in this respect are similar to emergency medicine or critical care specialists. Community hospitals were the sites of early growth in hospitalist systems, and academic medical centres quickly followed suit. The field has grown rapidly, and now has its own textbook, professional society, training programme, and research and educational agenda. Published research to date has upheld the promise of the hospitalist model: improving efficiency of care by reducing length of stay and hospital costs without compromising quality or patient satisfaction. Future hospitalist research will aim to elucidate the role of hospitalists in the care of critically ill and surgical patients, identify the competencies that will ultimately define this specialty, and expand our understanding of key inpatient issues, such as prevention of nosocomial infections, end-of-life care, and hospital quality measurement.

KEY WORDS: hospitalists, job satisfaction, medical specialties, organisational models, outcome and process assessment, patient satisfaction

A novel health care paradigm

First coined in 1996, the term ‘hospitalist’ described a new breed of physicians in the USA who focused on the care of medical inpatients¹. Traditional models of health care delivery in the USA place the primary care physician – a general internist, paediatrician, or family physician – as the physician of record for most non-surgical hospitalised patients, receiving assistance from subspecialists as the need arises. In a hospitalist system, primary care physicians transfer the responsibility for hospital care to an inpatient specialist, whose expertise is defined not by an organ system but by site of practice. The hospitalist then refers the patients back to their primary care physician at the time of discharge. Although a generation ago American primary care physicians spent nearly half their time providing hospital care, they now spend an average of 12% of their time in the hospital².

Many influences hastened the evolution of a novel paradigm of health care delivery in the hospital: time constraints on the primary care provider; fewer inpatients for individual primary care physicians; cost pressures on the hospital and medical groups with reduced rates of reimbursement for inpatient services; the heightened acuity of medical inpatients; the accelerated pace of inpatient care; and the evidence that ‘practice-makes-perfect’ in other medical fields¹.

Originally defined as physicians who spend more than 25% of their time caring for inpatients³, the first American hospitalists grew out of a cohort of generalists and specialists already performing the majority of their clinical duties in the hospital. The 1997 survey from the National Association of Inpatient Physicians (NAIP), the hospitalists’ newly established professional society, found that 51% of these early hospitalists were general internists and 38% were internal medicine subspecialists, usually pulmonary or critical care specialists⁴. By the time of the subsequent NAIP survey, as more and more general internists recognised the viability of a career in hospital-based medicine, the generalist fraction had swelled to 74%, while subspecialists fell to 14%⁵. In both surveys, paediatricians and family physicians comprised the remaining fraction.

In just five years, the hospitalist movement has gained widespread acceptance in the USA^{6–8}. In 1999, 65% of internists had hospitalists in their community, and 28% reported using them for inpatient care⁷. Furthermore, since December 2001, 12 of the top 15 US hospitals have had active hospitalist programmes⁹. Since its inception three years ago, NAIP has grown to over 3,000 members and the hospitalist workforce is an estimated 6,000 strong. If projections hold true, hospitalists will ultimately number 19,000 – a size comparable to American cardiologists¹⁰.

Challenges for the inpatient specialist

As with any new specialty, hospitalists have had to surmount several obstacles. Initially, hospitalists had to overcome their Achilles’ heel: the handover of the patient to the inpatient physician with the inherent loss in continuity of care. Hospitals and health care organisations then asked hospitalists to prove their value by demonstrating cost savings and efficiency, without a reduction in quality or patient satisfaction.

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Migrating to academic medical centres, faculty hospitalists have been challenged to define unique research agendas and educational curricula, and justify the creation of a new specialty.

Discontinuity of care

Early opposition centred on the purposeful discontinuity of care that characterises a hospitalist system^{3,11–13}. Fears that the deliberate handover of patients at the time of hospital admission and discharge would lead to disgruntled patients or key information gaps have been largely unsubstantiated however. Survey results indicate that the care patients receive from hospitalists is rated as highly as the care they received from their own primary care physician or from a traditional academic ward attending^{14–17}. We suggest that patients are willing to trade familiarity for the availability of the hospitalist³. Effective hospitalist systems have focused on methods to mitigate the impact of discontinuity at the hospital threshold, by frequently communicating with the primary care physician through phone calls at admission and discharge, faxing of daily progress notes, and encouraging visits or phone calls from the primary care physician to the patient. Although concerns exist, recent surveys suggest that most American primary care physicians now approve of hospitalists^{7,8,18}.

Hospitalist impact on efficiency and quality

While hospitalists have diffused widely throughout the USA, data regarding their effectiveness have been slower to emerge. Published studies have examined the hospitalist influence on hospital mortality, readmission rates, cost and length of stay.

Hospital mortality and readmission rates. Fourteen studies have investigated the impact of hospitalists on mortality rates, and 11 found no change in mortality with hospitalist care^{15–17,19–26}. Two studies found a decrease in hospital mortality rates with hospitalists^{27,28}, and one study reported a 0.5% absolute increase in mortality²⁹. Control groups in these studies ranged from those headed by academic physicians (attended on the wards 1.0 to 2.5 months per year) to community-based and health maintenance organisation (HMO) outpatient internists, paediatricians, or family physicians. The impact of hospitalists on readmission rates has been similar, with seven studies finding no change after adopting a hospitalist system^{15,17,20,22,24,30,31}, two finding a reduction in readmission rates^{16,19}, and one study showing an excess number of readmissions with a hospitalist system²¹.

Cost and length of stay. Proponents of hospitalist systems point to the consistent cost savings and reduction in average length of stay realised under this model. Of 23 published studies, 19 found decreases in both hospital costs (average decrease 13.4%) and lengths of stay (average decrease 16.6%)^{14–17,19–23,26–28,31–37}. Two studies reported reduced length of stay without a decrease in hospital costs^{29,38}, and only two studies found neither cost nor length of stay reductions^{24,25}. In both of these studies, the control group leaders had more

inpatient experience than is typical for US primary care physicians.

In summary, published outcomes studies confirm the early promise of the hospitalist model, demonstrating consistent and pronounced cost savings with no loss in quality.

Hospital medicine as a career: defining the specialty

The definition of the term ‘hospitalist’ has evolved to reflect the expanding role of the inpatient specialist. The National Association of Inpatient Physicians now recognises hospitalists as physicians whose primary professional focus (clinical, teaching, research, or administration) is general inpatient care. This broader definition recognises the growth of the hospitalist movement in academic medical centres, and into novel non-clinical roles (Table 1).

Initially, hospitalists cared primarily for patients on internal medicine and paediatric wards or in intensive care units, and performed medical consultations on non-medical patients. As the field has matured, many hospitalists have moved beyond the consultant role to a new role as physician-of-record for non-medical patients. Although this enables the surgeon to focus on daytime operating room obligations, no published studies have analysed the impact of hospitalists on the care of surgical patients outside the operating room.

Also unclear is the role of the hospitalist in the intensive care unit. In studies documenting improved outcomes and efficiency when intensivists participate in the care of critically ill patients^{39–43}, hospitalists were not represented in the control groups. Since no studies have compared hospitalist-based intensive care (with intensivist consultation) to intensivist-based care, the optimal collaborative model between hospitalists and intensivists remains undecided, although hospitalist care of the critically ill may expand if the projected US shortage of critical care physicians materialises⁴⁴.

Academic medical centres are leading sites of hospitalist research and teaching programs. Hospitalist-led research initiatives so far have included critical inpatient issues such as end-of-life care⁴⁵, hospital quality measurement⁴⁶, patient safety, and prevention of nosocomial infections⁴⁷. With their on-site availability and large number of potential subjects, hospitalists are well positioned to engage in trials of commonly encountered inpatient diseases (eg pneumonia, gastrointestinal bleeding,

Table 1. Clinical and non-clinical hospitalist roles.

- Physician of record for hospitalised non-surgical patients, both inside and outside intensive care unit
- Medical consultant and ‘co-manager’ of non-medical patients
- House officer and medical student inpatient educator
- Emergency department triage physician
- Hospital-to-hospital transfer coordinator
- Liaison role between hospital and primary care physician
- Inpatient researcher, particularly on topics that cut across traditional subspecialty lines
- Quality and patient safety leader

sepsis), of systems issues in hospitals (eg medical errors, palliative care, inpatient–outpatient communication), and of hospital efficiency, cost and quality.

Academic hospitalists are emerging as core teachers of inpatient medicine. At our institution, faculty hospitalists cover about two-thirds of the inpatient ward months each year. Housestaff have rated the teaching of academic hospitalists significantly higher than that of non-hospitalist medical attendants in preliminary reports at our institution (Hauer K, personal communication) and another¹⁶. The impact of hospitalists on medical student education has not been studied to date, although we recently described several potential advantages and disadvantages. Advantages include heightened accessibility of hospitalists to medical students, improved modelling of communication and coordination skills, better teaching of inpatient-oriented topics, and enhanced awareness of the importance of cost effectiveness in the current health care environment. Potential drawbacks to student education in the hospitalist model may result from reduced lengths of hospitalisation, as students have less time to learn the natural history of their patients' illnesses. Also, in systems in which hospitalists do the majority of inpatient care, students have less exposure to subspecialists and to physician-scientists, and may perceive a fragmentation of inpatient versus outpatient medicine⁴⁸.

In its first five years, hospital medicine has fulfilled many criteria of traditional specialties. Hospitalists have created a niche with defined research and teaching agendas, its own professional society, a textbook, and a dedicated residency track and fellowship⁴⁹. Similar to emergency medicine or critical care, hospital medicine is defined by site of practice, rather than by organ, age of patients, or technical proficiency. Although the ultimate clinical and non-clinical roles of hospitalists have yet to be defined, a recent survey of practising hospitalists in the USA will guide the education of future hospitalists. Practising hospitalists identified training gaps in end-of-life care, quality improvement and patient safety, medical economics, care of surgical patients, post-acute care, and communication skills. They felt they were highly, and adequately, trained in clinical and procedural skills respectively⁵⁰. Future curricula must not only fill these voids, but also focus on the inpatient aspects of clinical domains that have traditionally been taught (if at all) within the outpatient curricula (eg pain management, palliative care).

The American hospitalist system and the British model

To date there are no published empirical or analytical studies that compare the burgeoning US hospitalist system with the system for inpatient care in the UK. The British system, like the hospitalist model, has long separated the functions of outpatient primary care (largely provided by general practitioners) and inpatient care (largely provided by hospital-based consultants). In the UK, these consultants are largely subspecialists (eg cardiologists, gastroenterologists) who tend to admit patients with the relevant subspecialty disorder to their firm. Consultants also maintain active hospital-based outpatient practices in their area

Key Points

Hospitalists are site-defined specialists who serve as surrogates for the primary care physician in the hospital

Hospitalist models in the USA have expanded from community hospital to academic medical centres, and the clinical and non-clinical roles of the hospitalists have evolved accordingly

Published data support the value of hospitalists in reducing hospital costs and length of stay without sacrificing quality or patient satisfaction

Key challenges to the hospitalist include overcoming the purposeful discontinuity of care created by the handover of patients at hospital admission and discharge, and identifying the skills and competencies that will define the specialty

of expertise. There is much to be learned by comparing and contrasting the UK and US models of hospital care: the American model emphasising the role of the generalist-coordinator of care and the British model focusing more directly on the organ-based specialty expertise of the consultant.

Conclusions

The hospitalist system is rapidly being adopted as a dominant model of inpatient care in the USA^{6–8}. Similar to emergency medicine or critical care, hospital medicine is a field defined by site (the hospital) rather than by organ, disease or procedural skill. Accordingly, hospitalists serve as surrogates of the primary physician in the hospital, upholding generalist emphases on coordination, integration, and breadth. To date, research has confirmed the promise of this novel system of health care, as hospitalists generate impressive and consistent cost savings without compromising mortality, quality, or patient satisfaction. We look forward to rigorous analysis of future evidence to determine whether the positive impact of hospitalists on quality and teaching can be confirmed, to elucidate the role of hospitalists in the management of critically ill and surgical patients, and to identify the unique set of skills and competencies that will ultimately define this specialty.

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