

# Is There a Geriatrician in the House?

## *Geriatric Care Approaches in Hospitalist Programs*

Heidi Wald, MD<sup>1</sup>  
 Jeanne Huddleston, MD<sup>2</sup>  
 Andrew Kramer, MD<sup>1</sup>

<sup>1</sup> University of Colorado Health Sciences Center, Health Care Policy and Research

<sup>2</sup> Mayo Clinic College of Medicine, Hospital Internal Medicine, Division of General Internal Medicine

The following physicians provided details of innovations: Eugene Chu, Denver Health and Hospital Association; Param Dedhia, Johns Hopkins Bayview Medical Center; John Degaleau, Health Partners; Adrienne Green, University of California at San Francisco; Scott Flanders, University of Michigan; Judy Heyworth, Advocate Health Centers; Melissa Mattison, Beth Israel Deaconess Medical Center; Tom Perille, Colorado Permanente Medical Group; Fadi Ramadan, Kalida Health; Chad Whelan, University of Chicago. Jean Kutner provided comments on a draft of the manuscript.

**BACKGROUND:** The rapid growth of the hospitalist movement presents an opportunity to reconsider paradigms of care for hospitalized older patients.

**METHODS:** To determine the impact of the hospitalist movement on acute care geriatrics, we conducted a cross-sectional survey of the hospitalist community in 2003 and 2004.

**RESULTS:** We identified innovations in geriatric hospital care in only 11 hospitalist programs. These innovations varied widely in complexity, goals, structure, and staffing. The majority targeted patients using age as a criterion and incorporated geriatrics training for nurses or physicians. Several innovations had one or more of the following features: geriatrician-hospitalists or gerontology nurse-practitioners, perioperative management for complex older patients, specialized geriatric services such as skilled nursing units or acute care for elders units, and quality improvement initiatives targeted to the older patient. A case study of the Hospital Internal Medicine group at the Mayo Clinic is presented as an example of a complex innovation highlighting several of these features.

**CONCLUSIONS:** The scarcity of geriatric care approaches among hospitalist groups highlights the need for collaboration between hospitalists and geriatricians, with the goals of rethinking staffing models and organization of care and focusing on quality-improvement activities. In particular, perioperative care and postdischarge care are two clinical areas where innovation in hospital care may particularly benefit older patients. Significant opportunities remain for collaboration, coordination, and research to improve the care of acutely ill older patients at the intersection of geriatric and hospital medicine. *Journal of Hospital Medicine* 2006; 1:29–35. © 2006 Society of Hospital Medicine.

**KEYWORDS:** hospitalists, aged, geriatrics.

Between 1996—with the first appearance of hospitalists in the medical literature—and the present, the hospitalist workforce has grown to nearly 10,000.<sup>1,2</sup> More remarkable is the estimate that the number of hospitalists will double in the next 5 years.<sup>2</sup> The rapid growth of hospital medicine raises significant issues for the care of older patients, who are hospitalized at high rates<sup>3</sup> and suffer numerous complications from hospitalization including functional decline,<sup>4</sup> delirium,<sup>5</sup> and a disproportionate share of adverse events.<sup>6</sup> Conversely, the needs of patients older than 65 years of age, whose hospital stays make up nearly 50% of acute-care bed days, will shape the future of hospital medicine.<sup>3</sup>

To date, the hospital medicine literature has failed to address the particular challenges of treating older patients, focusing primarily on opportunities for reductions in costs and length of stay for hospitalists' Medicare patients (of about \$1000 per admission and 0.5 days, respectively<sup>7,8</sup>) when compared with those cared for

by other physicians. This focus on economic efficiency reflects the early orientation of the hospitalist movement. More recently, leaders of the hospitalist professional organization, the Society of Hospital Medicine (SHM), have increasingly recognized that caring for the older population will require additional knowledge and clinical skills beyond that taught in internal medicine residencies.<sup>9</sup> Beyond educational initiatives, however, hospitalists must reconsider the paradigms of hospital care that make the hospital setting so dangerous for the older patient.

Given the aging population and the predicted growth of hospital medicine, it is essential to develop an understanding of the impact of hospitalists on the care of older patients and to encourage clinical innovation at the intersection of hospital medicine and geriatrics. Consequently, this article 1) identifies and summarizes geriatric care approaches in hospitalist programs, 2) presents a case study of geriatric hospital care by a hospitalist group, and 3) highlights opportunities for innovation and further research.

## METHODS

### Sample

We conducted a cross-sectional survey of the hospitalist community via two mailings to SHM Listservs in September 2003 and September 2004. To encourage responses, the e-mails used terms such as “innovating,” “developing,” “providing hospitalist services,” and “caring” for the “geriatric patient” or “Medicare population.” Respondents to the e-mail solicitations (n = 14), leaders of SHM and academic hospitalist groups (n = 14), and leaders of the American Geriatrics Society specializing in acute care (n = 3) were queried about additional contacts who might know about programs utilizing geriatric care approaches. Each of these contacts was subsequently solicited and queried.<sup>10</sup> Thirteen of the respondents described the current use by their hospitalist groups of one or more geriatric care approaches that represented a departure from usual care. We subsequently refer to these approaches as innovations. The 13 respondents completed in-depth telephone interviews with one of the authors (H.W.). All respondents were recontacted in the spring of 2005 to update their responses. Two of the 13 programs were eliminated from the analysis after the interviews were completed. The first of these programs was identified in 2003 but had been discontinued by 2004. The sec-

**TABLE 1**  
Summary of Geriatric Care Innovations of Hospitalist Groups

Site	A	B	C	D	E	F	G	H	I	J	K
<b>Focus</b>											
Medical care	x			x			x	x			
Postdischarge care	x										x
Perioperative care		x	x			x					
Geriatric assessment	x						x	x			
Quality improvement	x				x				x	x	
<b>Staffing</b>											
Generalist-hospitalist	x	x	x			x			x		x
Geriatrician-hospitalist	x			x			x	x		x	x
Advanced-practice nurse	x			x	x						x
<b>Patient targeting</b>											
By age	x	x	x	x	x	x	x	x		x	
By diagnosis	x	x	x	x		x			x		
By location	x				x		x	x		x	x
<b>Organization</b>											
Unit	x				x		x	x		x	x
Service	x	x	x	x		x			x		
Interdisciplinary rounds	x		x		x		x	x			x
Geriatrics training	x				x	x		x	x	x	x

ond program was eliminated because the innovation was not implemented.

### Data Collection

We developed a data collection tool to gather descriptive information from respondents regarding characteristics of the hospitalist group, the clinical program, the primary hospital, and the innovation (focus, target patients, organization, staffing, training, rounding, other). In addition, respondents were queried about motivations for the innovation; successes, opportunities, and future plans; and failures and barriers to implementation.

### Analysis

First, we summarized the characteristics of the 11 innovations (Table 1). Second, geriatric care approaches were identified from the innovations on the basis of their objectives and the types of responses we encountered most frequently. The approaches were not mutually exclusive. For instance, a program providing postdischarge care at a skilled nursing facility (SNF) might also use a geriatrician-hospitalist staffing model.

## RESULTS

In 2003 the annual survey of the American Hospital Association identified 1415 hospitalist groups in the United States (Joe Miller, SHM senior vice-presi-

dent, personal communication). Remarkably, our query identified only 11 hospitalist groups with clinical innovations aimed at the older population. These innovations ranged from single individuals involved in targeted quality-improvement projects to highly developed programs addressing an array of clinical needs for the hospitalized older patient. These 11 programs are summarized in Table 1 and described below.

### **Focus**

Hospitalists' programs targeted to the older patient were designed to meet various needs arising from an episode of hospital care. These included innovations designed around their core clinical activities in providing acute medical care (four innovations), as well as innovations targeted to postdischarge care at SNFs (two innovations), perioperative care in consultative or comanagement models (four innovations), comprehensive geriatric assessment (three innovations), and clinical quality improvement such as audit tools (four innovations).

### **Staffing**

Four innovations employed physicians without specific geriatrics training (generalist-hospitalists), four innovations employed 1–6 fellowship-trained geriatricians (geriatrician-hospitalists), and two programs employed both geriatricians and generalist hospitalists. Four innovations employed advanced-practice nurses, both with and without gerontology training.

### **Patients**

Nine of the 11 innovations targeted patients by age (older than 65, 70, or 75 years). Of the two innovations that did not target patients by age, one focused on improving the quality of care for all patients on a medical ward by focusing on geriatric issues (Site I), and a second was concerned with postdischarge care for all patients discharged to affiliated SNFs (Site K). In addition to targeting by age, six innovations targeted patients on the basis of diagnosis, four of which focused on surgical diagnosis. Finally, patient selection by location occurred in six of the innovations, as described in the next section.

### **Organization**

Six of the innovations were organized to operate within a clinical service (such as a medical or sur-

gical team). In contrast to the service-based innovations, six clinical innovations for older patients operated in geographic units including acute care for elders (ACE) units (n = 2), SNFs (n = 2), a medical nursing unit (n = 1), and an emergency department (ED; n = 1). Of the two ACE units, one (Site G) existed prior to the establishment of the hospitalist group. In this instance, a geriatrician-hospitalist appointed jointly by the hospitalist group and the Division of Geriatrics staffed ACE unit patients of select private physicians and unassigned patients. The second ACE unit (Site H), established with the formation of the hospitalist group, was staffed by two hospitalists among eight physicians in a private geriatrics group. Regarding SNFs, one hospitalist group for a large health care organization (Site K) rounded at contract SNFs at which group members held medical directorships; another hospitalist program took over rounding at an SNF owned by its health system (Site A).

### **Rounding**

Six of the innovations incorporated interdisciplinary rounds, including all three innovations with medical care as their focus. Four of the six innovations with interdisciplinary rounds were based in ACE units or SNFs. One of these six innovations (Site C), a perioperative initiative, incorporated twice-weekly multidisciplinary rounds attended by an attending surgeon, surgical residents, and a hospitalist—in addition to the nurses, case managers, and therapists.

### **Training**

Seven of the 11 innovations involved geriatrics training. Four of the training innovations targeted nursing staff, four targeted hospitalist physicians, and one targeted both nurses and physicians. Most institutions developed their own curricula. Three hospitalist groups, however, modified preexisting curricula, struggling to adapt them to the needs of hospital-based staff. Two innovations (Sites A and K) used a clinical mentoring model in which generalist-hospitalists learned geriatrics principles while working side by side with geriatrician-hospitalists.

### **Case Study**

We selected the most comprehensive program for further description. This case illustrates the power of integrating geriatric and hospital medicine paradigms.

*Hospital Internal Medicine, Mayo Clinic, Rochester, MN (Site A)*

The Mayo Clinic established the Hospital Internal Medicine Group (HIM) in 1998 in response to changing resident workload regulations. The practice initially focused on perioperative medical care for a busy orthopedic trauma surgery (OTS) service. In 2000, noting the average age of the elective orthopedic population was 81, the leadership of HIM made a strategic decision to recruit physicians with geriatrics training. By 2005, 6 of the 22 physicians the group employed were geriatricians.

In mid-2005 the group's members covered eight services in 1- to 2-week block rotations. Three of the services are uniquely focused on the older patient: the Geriatric Medicine Service (GeM), the OTS, and the SNF. On the GeM, a geriatrician-hospitalist works alongside a generalist-hospitalist to for care medical patients triaged to the service based on age (older than 75) and frailty. Although the GeM is based on a medical nursing unit, the unit is neither configured nor staffed like an ACE unit, and up to 20% of the GeM's patients overflow to other units. In addition to providing acute care, the GeM employs standardized documentation to facilitate universal comprehensive geriatric assessment. On the OTS, HIM hospitalists care for post-operative patients in a comanagement model, descriptions of which have been published elsewhere.<sup>11,12</sup> As a reflection of its orientation toward the older surgical patient, every OTS patient is assessed for delirium with the confusion assessment method instrument.<sup>13</sup> Finally, the 30-bed SNF service (on which 75% of admissions are postoperative for subacute rehabilitation) is supervised by a HIM physician and a nurse-practitioner.

Additional activities of HIM physicians are clinical quality improvement including participation in the creation of inpatient care pathways, revision of the hospital's discharge processes, ongoing review of adverse events, and use of standardized tools for intrahospital transfers. In addition, the HIM group prioritizes geriatrics education for its physicians and hospital medicine fellows. In turn, geriatrics fellows rotate through the GeM, SNF, and OTS services.

## **DISCUSSION**

Although SHM increasingly recognizes the challenges inherent in caring for older patients, few hospitalists are adapting their care for this vulner-

able population. We identified only 11 innovations in geriatric care despite there being more than 1000 hospitalist groups. This apparent paucity of innovation in geriatrics might be explained by the relatively recent introduction of hospital medicine. As no hospitalist program is more than 10 years old, most programs are still focused on building core clinical activities or on other competing demands. In addition to time, funding may limit the typical program's ability to innovate without directly increasing revenue. Although the geriatrics literature supports that specialized inpatient care for older patients can result in increased physical functioning and quality of life at no additional cost, it may be that geriatricians have yet to make this case effectively to the hospitalist community.<sup>14,15</sup>

The findings of this study were limited by our survey methodology. Specifically, our sample was limited to professional contacts and those using SHM listservs. In addition, some innovative hospitalists may not consider their programs to be "geriatric" programs and so may not have responded to our queries. Therefore, the reported innovations are not representative of geriatric care among all hospitalist groups, and we are unable to provide a comprehensive picture of geriatric care in hospitalist programs. In addition, we cannot comment on the effectiveness of the care approaches at participating institutions. For example, interdisciplinary care is an important tenet of geriatric medicine. Although six of our programs reported interdisciplinary rounds, it is unclear if these rounds are models of effective collaborative practice. Nonetheless, the information obtained from the structured interviews allowed the identification of several instructive themes discussed below.

### **Opportunities**

The growth of the hospitalist movement provides an opportunity to reconsider clinical paradigms for the hospitalized older population. Hospitalists bring clinical skills in treating acute illness, preventing hospital complications, and providing perioperative care.<sup>16,17</sup> As leaders in institutional quality, safety, and utilization initiatives, hospitalists are often given protected time for such endeavors.<sup>18,19</sup> In so doing, the incentives of hospitalists are aligned with those of hospital administrators. This orientation makes hospitalists open to innovation in clinical care improvement.

The opportunity for hospitalists to bring fresh approaches to acute care geriatrics need not hap-

pen in a vacuum. More than 30 years of geriatrics research has provided a framework, literature, and expertise to inform hospitalist groups. The common goal of clinical excellence for the hospitalized older patient should motivate cooperation, collaborative approaches, and a joint clinical research agenda. From our inquiry to hospitalist groups, it appears that this sort of interaction occurs infrequently. The innovations identified and the case study described highlight several ways in which the geriatric medicine and hospital medicine experiences inform one another. These include approaches to staffing, organization, and quality improvement, as well as to clinical areas amenable to innovation.

## **Approaches**

### ***Staffing and Organization***

The employment of geriatrics-trained clinicians by hospitalist programs is one approach to supporting generalist-hospitalists and inclining group culture toward clinical geriatric concerns. Programs that purposefully hired geriatricians and gerontology nurse-practitioners used them to staff geriatrics services including ACE units, SNFs and, in the case of HIM, a GeM service that was a modification of a medical service. In addition, two programs relied on geriatrician-hospitalists to serve as clinical mentors to generalist-hospitalists.

In particular, the use of geriatrics-trained staff on specialized services such as ACE units is encouraging, as specialized geriatric units remain an underutilized care model,<sup>20</sup> despite compelling evidence of their effectiveness in improving physical functioning and reducing nursing home admissions.<sup>14</sup> Although the factors undermining the success of ACE units in the past may also pose challenges for hospitalists, hospitalist groups may be better positioned to maintain the interest and financial commitment of hospital administrators. The HIM's GeM Service is also of interest, given the need to disseminate best practices in geriatrics throughout the hospital. The benefits to older patients of such a service, however, have not been demonstrated. Likewise, comprehensive geriatric assessment and geriatric consultation in the inpatient setting are reported to have had mixed results in the absence of targeting individuals at highest risk for adverse outcomes.<sup>21</sup>

### ***Patient Safety and Quality Improvement***

Hospital medicine has rapidly integrated principles of quality improvement and patient safety, having grown up contemporaneously with the patient safety movement. Several of the hospitalist programs we identified spearheaded quality improvement efforts directed at the particular needs of older patients such as delirium prevention, provision of immunizations, and removal of indwelling Foley catheters.

These efforts can be seen in the context of the many hospitalist programs focusing on standardizing care, understanding iatrogenesis, adopting safe technologies, and generally moving hospital culture forward.<sup>22</sup> In choosing to embrace patient safety practices such as medication reconciliation (endorsed by the Institute for Healthcare Improvement),<sup>23</sup> hospitalists may confer disproportionate benefits to older patients, who frequently require multiple medications and are at high risk for adverse drug events.<sup>6</sup> As the efficacy of many of these interventions is poorly understood, hospitalist and geriatricians (whose work on the "hazards" of hospitalization anticipated the patient safety movement by many years<sup>24</sup>) may find a shared clinical research agenda with patient safety as its focus.

## **Areas of Clinical Opportunity**

### ***Perioperative Care***

Commentators have noted hospitalists' growing participation in perioperative care,<sup>17</sup> much of which concerns the older orthopedic surgery patient.<sup>12</sup> Through their embedding in surgical wards, hospitalists may become actual or de facto members of surgical teams with a significant impact on team culture and care delivery. For example, hospitalists at one program implemented a perioperative beta-blocker protocol for older orthopedic surgery patients, leading to a marked decrease in postoperative cardiac events (Site B).

Although many hospitalist programs participate in similar initiatives, it is likely that additional attention to the needs of older patients will augment the effectiveness of their interventions. For instance, structured geriatrics consultation can reduce the incidence of postoperative delirium among hip fracture patients by 46% (NNT = 5.6).<sup>25</sup> Increased attention to postoperative pain control and early mobilization, among others, may affect the functional recovery of the older surgical patient.<sup>26,27</sup>

### *Postdischarge care and care transitions*

The hallmark of the hospitalist model—the handoff of care from a primary care provider to an inpatient provider—is commonly considered the major limitation of the hospitalist model because of the risk of lost clinical information.<sup>1</sup> Because older patients are particularly susceptible to postdischarge adverse events, their care transitions may require specialized attention.<sup>28</sup> Two of the innovations we identified (Sites A and K) have extended care of older patients into the postacute setting by integrating SNF care into their programs as a way to streamline discharge processes, decrease miscommunication, and underscore the limitations of postacute care.

A growing body of evidence supports the role of discharge strategies in improving care transitions. In one study, postdischarge follow-up with a hospital physician rather than a community physician resulted in a reduction of the combined end point of 30-day mortality and nonelective readmission.<sup>29</sup> In a randomized trial, postdischarge phone calls by a pharmacist reduced the number of ED visits within 30 days of discharge.<sup>30</sup> In another trial, older patients receiving a multifactorial intervention aimed at providing the skills for active participation in care transitions resulted in a reduced number of readmissions within 30 days.<sup>31</sup> Understanding and implementing these activities may be crucial to both the care of older patients and the success of the hospitalist enterprise.

### **Barriers**

Part of the challenge of treating older patients in hospitals is that the paradigms of geriatrics and hospital medicine differ substantially.<sup>32</sup> Notably, geriatric medicine goals of maximizing function and quality of life may conflict with traditional medical goals of diagnosis and cure. This dichotomy is amplified in the hospital setting because hospitals are organized to maximize the physician's ability to stabilize, diagnose, cure, and discharge.<sup>33</sup>

By design, the hospitalist model introduces additional challenges into the hospital paradigm that affect the older patient, such as the discontinuities addressed above. Additional factors that hospitalists identified as barriers to the effective care of older patients include: 1) poor communication skills, 2) ineffective interdisciplinary collaboration, 3) limited geriatrics knowledge base, and 4) insufficient support for care coordination.<sup>34</sup> Despite

these recognized challenges, our query to hospitalist groups identified few that had made clinical excellence in geriatrics a focus of their activities.

Even with its prioritization of geriatric medicine, the well-developed HIM model faces challenges. In particular, the feasibility of the geriatrician-hospitalist is limited by the many geriatricians who, because of the scarcity of those who are fellowship trained, may be unprepared to care for acutely ill older patients, as their training has not focused on the hospital setting.<sup>35,36</sup> In addition, the surgical comanagement model depends on a unique collaboration with surgical colleagues. Finally, the ability of the HIM group to incorporate geriatrics paradigms into the hospital setting depends on extensive support from the hospital in the form of resources and a shared vision that is unlikely to be found at most institutions.

### **CONCLUSIONS**

The rapid growth of the hospitalist movement will significantly affect clinical care in American hospitals. As most hospital patients are older, the impact on acute care geriatrics cannot be overlooked. In our study, we identified only a small number of hospitalist groups that have made geriatric medicine a priority. These programs prioritize geriatric medicine through the employment of geriatrics-trained staff, adaptation of geriatric care models such as ACE units, and commitment to clinical quality improvement and patient safety. They also focus on common clinical challenges for older patients, including postoperative and postdischarge care. Although much can be learned from these examples, programs at other institutions will need to be individualized to meet the specific needs of each hospital and community. The common goal of clinical excellence shared by hospitalists and geriatricians should motivate cooperation, collaborative approaches, and a joint clinical research agenda at all levels, as the current paradigm of hospital care remains inadequate to meet the needs of the acutely ill older patient.

Address for correspondence and reprint requests: Heidi Wald, MD, 111D, 1055 Clermont Street, Denver, CO 80220; Fax: (303) 393-5128; E-mail: heidi.wald@uchsc.edu

Received 1 September 2005; revision received 27 October 2005; accepted 18 November 2005.

## REFERENCES

1. Wachter RM, Goldman L. The emerging role of hospitalists in the American health care system. *N Engl J Med.* 1996;335:514–517.
2. Society of Hospital Medicine. Growth of hospital medicine nationwide. Available at URL: [http://www.hospitalmedicine.org/Content/NavigationMenu/Media/GrowthofHospital-MedicineNationwide/Growth\\_of\\_Hospital\\_M.htm](http://www.hospitalmedicine.org/Content/NavigationMenu/Media/GrowthofHospital-MedicineNationwide/Growth_of_Hospital_M.htm) [accessed January 20, 2005].
3. DeFrancis CJ, Hall MJ. 2002 National Hospital Discharge Survey. Advance data from Vital And Health Statistics. No. 342. Hyattsville (MD): National Center for Health Statistics, 2002.
4. Sager MA, Franke T, Inouye SK, et al. Functional outcomes of acute medical illness and hospitalization in older persons. *Arch Intern Med.* 1996;156:645–652.
5. Inouye SK, Schlesinger MJ, Lyndon TJ. Delirium: a symptom of how hospital care is failing older persons and a window to improve the quality of hospital care. *Am J Med.* 1999;106:565–573.
6. Thomas EJ, Brennan TA. Incidence and types of preventable adverse events in elderly patients: population based review of medical records. *BMJ.* 2000;320:741–744.
7. Diamond HS, Goldberg E, Janovsky JE. The effect of full-time faculty hospitalists on the efficiency of care at a community teaching hospital. *Ann Intern Med.* 1998;129:197–203.
8. Hackner D, Tu G, Braunstein GD, Ault M, Weingarten S, Mohsenifar Z. The value of a hospitalist service: efficient care for the aging population? *Chest.* 2001;119:580–589.
9. Budnitz T. Improving care for older adults: SHM educational initiatives. *Hospitalist.* 2004;8(Suppl):45–47.
10. Patton MQ. Qualitative evaluation and research methods. 2nd ed. Thousand Oaks (CA): Sage Publications, 1990:176.
11. Phy MP, Vanness DJ, Melton J, et al. Effects of a hospitalist model on elderly patients with hip fracture. *Arch Intern Med.* 2005;165:796–801.
12. Huddleston JM, Long KH, Naessens JM, et al. Medical and surgical comanagement after elective hip and knee arthroplasty: a randomized, controlled trial. *Ann Intern Med.* 2004;141:28–38.
13. Inouye SK, vanDyck CH, Alessi CA, et al. Clarifying confusion: the confusion assessment method. A new method for the detection of delirium. *Ann Intern Med.* 1990;113:941–948.
14. Agostini JV, Baker DI, Bogardus ST Jr. Geriatric evaluation and management units for hospitalized patients. In: Making healthcare safer: a critical analysis of Patient Safety Practices Evidence Report/Technology Assessment No. 43. 2001. AHRQ Publication No. 01-E058.
15. Cohen HJ, Feussner JR, Weinberger M, et al. A controlled trial of inpatient and outpatient geriatric evaluation and management. *N Engl J Med.* 2002;346:905–912.
16. Wachter RM, Goldman L. The hospitalist movement five years later. *JAMA.* 2002;287:487–494.
17. Merli GJ. The hospitalist joins the surgical team. *Ann Intern Med.* 2004;141:67–69.
18. Wachter RM. The end of the beginning: patient safety five years after ‘To Err Is Human.’ *Health Aff.* 2004; 23S2:W534–W545.
19. Miller JA. How hospitalists add value. *Hospitalist.* 2005; 9(Suppl 1):6–7.
20. Jayadevappa R, Bloom BS, Raziano DB, et al. Dissemination and characteristics of acute care of elders (ACE) units in the United States. *Int J Technol Assess Health Care.* 2003;19:220–227.
21. Agostini JV, Baker DI, Inouye SK, et al. Multidisciplinary geriatric consultation services, Chap. 29. Evidence Report/Technology Assessment No. 43. 2001. AHRQ Publication No. 01-E058.
22. Greensway D. Hospitalists spearhead a wide range of patient safety improvement projects. *Hospitalist.* 2004; 8(Suppl.):33–35.
23. Institute for Healthcare Improvement. 100k Lives campaign. 10-20-2005.
24. Creditor MC. Hazards of hospitalization of the elderly. *Ann Intern Med.* 1993;118:219–223.
25. Marcantonio ER, Flacker JM, Wright RJ, et al. Reducing delirium after hip fracture: a randomized trial. *J Am Geriatr Soc.* 2001;49:516–522.
26. Morrison RS, Magaziner J, McLaughlin MA, et al. The impact of postoperative pain on outcomes following hip fracture. *Pain.* 2003;103:303–311.
27. Penrod JD, Boockvar KS, Litke A, et al. Physical therapy and mobility 2 and 6 months after hip fracture. *J Am Geriatr Soc.* 2004;52:1114–1120.
28. Coleman EA. Falling through the cracks: challenges and opportunities for improving transitional care for persons with continuous complex needs. *J Am Geriatr Soc.* 2003;51:549–555.
29. van Walraven C, Mamdani M, Fang J, et al. Continuity of care and patient outcomes after hospital discharge. *J Gen Intern Med.* 2004;19:624–631.
30. Dudas V, Bookwalter T, Kerr KM, et al. The impact of follow-up telephone calls to patients after hospitalization. *Dis Mon.* 2002;48:239–248.
31. Coleman EA, Parry C, Min SJ, et al. The care transitions intervention: results from a randomized controlled trial. Society of Hospital Medicine Annual Meeting, Chicago, IL, 2005.
32. Phillips-Harris C. Case management: high intensity care for frail patients with complex needs. *Geriatrics.* 1998;53:62–68.
33. Rosenberg CE. The care of strangers: the rise of America’s hospital system. New York: Basic Books, 1987.
34. Lyons WL, Auerbach AD, Landefeld S. Hospitalists’ role in caring for older Americans: Executive Summary. 2002. San Francisco, prepared for the John Hartford Foundation.
35. Geriatric medicine training and practice in the United States at the beginning of the 21st century. New York: Association of Directors of Geriatric Academic Programs, 2002.
36. AGS Education Committee. Guidelines for fellowship training in geriatrics. 1998;46:1473–1477.