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MEDICAL EDUCATION

Can Physician Training and Fiscal Responsibility Coexist?

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United States health care costs rose from $253 billion in 1980 to $714 billion in 1990 and $2.5 trillion, or 17.6 percent of the nation's gross domestic product (GDP), in 2009 [1, 2]. Projections for 2020 indicate that national health care spending will reach $4.6 trillion and account for 19.8 percent of the nation's GDP [3]. One target for cost-curbing measures is inpatient care. In 2008, Medicare payments for hospital inpatient care totaled $129.1 billion [4]. Accordingly, one of the initiatives of the Patient Protection and Affordable Care Act that President Obama signed in March 2010, was to reduce the number of rehospitalizations of Medicare patients. (Until recently Medicare covered all costs associated with rehospitalizations if they occurred within 24 hours of the patient's discharge from a hospital. Studies highlighting the prevalence and costliness of rehospitalizations of Medicare patients [5] argued for the implementation of new Medicare policy. Variation in rates of rehospitalization by hospital and geographic area further supported this policy [4].) If most medical education takes place in hospitals, what impact will a concentrated effort to reduce the cost of inpatient hospital care have on the training of the next generations of clinicians?

Since the mid-twentieth century, scholars have argued that the ever-growing mountain of biomedical knowledge [6] would prevent finances from jeopardizing the quality of medical training and education. However, exogenous interference may be inevitable because academic medical centers have three organizational purposes; they are (1) centers of care giving, (2) businesses that must make a profit or at least break even, and (3) the bedrocks of medical education.

Cost-cutting initiatives are likely to create further tension between the academic center hospital's function as a place for education and as a business. Current health care policies already encourage hospitals to prevent high costs due to excessive resource utilization (such as unnecessary consults and testing) [7]. But education inevitably requires greater use of resources because trainees must practice the skills of their specialty (e.g., differential diagnosis). The learning curve frequently results in additional medical workups, extra use of equipment and materials, and, occasionally, delays in care and discharge. At the same time, policies, such as Medicare's refusal to reimburse care in some cases of rehospitalization, also encourage additional medical work [4]. To avoid unreimbursed Medicare readmissions, physicians may run extra tests, call additional consultants, and extend patients' stays in the hospital—driving up health care costs.

Tensions between teaching and making money may also be exacerbated from the academic side. All academic medical institutions must adhere to the rules established by the Accreditation Council for Graduate Medical Education (ACGME) [8]. In recent years, the ACGME has modified the requirements for residency training, including setting limits on the number of hours residents are allowed to work. The latest restriction, instated in July 2011, declared that interns (first-year residents) could work a maximum of 16 hours a day. Hospitals have struggled to adopt the changes to residency training without compromising care quality and efficiency [9]. ACGME requirements, however, must be adhered to at least on paper [9], or the center will risk losing its accreditation or dropping in ranking and prestige. Accordingly, these requirements must be met even when they directly interfere with what is financially most lucrative for the hospital. Work-hour limitations inevitably result in numerous problems, ranging from overworked senior residents to delays of treatment due to frequent patient hand-offs (when an intern or resident must take a mandated break from work) and extended lengths of stay in the hospital.

How have academic hospitals reacted to resident labor limits? One solution adopted by academic medical institutions to decrease health care costs without compromising medical care or training has been the shift toward the use of hospitalists. Hospitalists, a term coined by Dr. Robert Wachter and Dr. Lee Goldman in 1996, emerged as a specialty group and have taken an integral role in medical training in the United States. The Society of Hospital Medicine (SHM) defines hospital medicine as "a medical specialty dedicated to the delivery of comprehensive medical care to hospitalized patients" [10]. The hope was that, by working in a single setting, hospitalists would become more accustomed to managing the conditions of hospitalized patients and, in the process, improve the quality of care. They would also be more attuned to the complexities of hospital care delivery than those who spent less time in the hospital, resulting in more efficient care and decreased health care costs [11].

Academic medical centers embraced this hospitalist model of care. The nature of hospitalist work allows physicians not only to spend more time with hospitalized patients but also to dedicate more time to teaching interns and residents. Studies show that interns and residents rate hospitalists highly, indicating the positive impact they have had on teaching services. Furthermore, many hospitals credit the hospitalist model with reduced health care costs and lengths of stay, increased efficiency, and similar or improved quality of care outcomes [12-14].

Another approach to reducing the tension between training and finances has been to focus a portion of residency training on learning how to manage patient discharge. Long stays in the hospital, which have been associated with rising health care costs, have been targeted as a preventable problem. Hospitals have responded by hiring discharge planners, who try not only to expedite discharge but to prevent readmission by working to ensure that rehabilitation and outpatient care are well

established [15]. Discharge planners are a valuable resource for trainees because they educate young physicians in how to reduce extended lengths of stay in the hospital.

Rapidly rising health care costs have generated nationwide concern; legislative changes and transformations in both health care delivery and training have been adopted in hopes of curbing these costs. Some observers remain concerned about the unintended consequences of the shift towards hospitalist medicine in academic medical centers, especially now that the nation is facing a shortage of primary care physicians. For exmaple, because medical residency takes place primarily in inpatient care settings, young physicians are less well equipped to understand the barriers to care and financial issues that emerge in outpatient settings. The divide between inpatient and outpatient care becomes more entrenched, and transferring patients from one care setting to the next may become increasingly difficult. Such inefficiencies cause patients to receive care in the hospital that could easily be performed in the outpatient setting, resulting in extended lengths of stay, increased resource utilization, and rising health care costs. One solution may be to follow the ACGME's recommendations for more outpatient training sites. With greater emphasis placed on outpatient care during training, residents may be better equipped to recognize when care should be delivered in the outpatient setting and to expedite transitions of care.

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8. This council oversees residency training across accredited hospitals in the United States and Canada, establishing a set of national requirements that all training programs must adhere to. This standardization of medical training can be traced back to the publication of the 1910 Flexner Report, which sought to eradicate variation in U.S. medical education. It was a bulletin that called for the closure of underperforming medical schools and the establishment of an accreditation system that would signify "good" schools. Starr P. *The Social Transformation of American Medicine*. New York: Basic Books; 1982.
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