

CHAPTER 4

---

**Graduate medical education  
financing: Focusing on  
educational priorities**

---

# R E C O M M E N D A T I O N S

- 4-1** The Congress should authorize the Secretary to change Medicare’s funding of graduate medical education (GME) to support the workforce skills needed in a delivery system that reduces cost growth while maintaining or improving quality.
- The Secretary should establish the standards for distributing funds after consultation with representatives that include accrediting organizations, training programs, health care organizations, health care purchasers, patients, and consumers.
  - The standards established by the Secretary should, in particular, specify ambitious goals for practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice, including integration of community-based care with hospital care.
  - Performance-based GME funding under the new system should be allocated to an institution sponsoring GME programs only if that institution met the new standards established by the Secretary, and the level of funding would be tied to the institution’s performance on the standards.

The indirect medical education (IME) payments above the empirically justified amount should be removed from the IME adjustment and that sum would be used to fund the new performance-based GME program. To allow time for the development of standards, the new performance-based GME program should begin in three years (October 2013).

COMMISSIONER VOTES: YES 17 • NO 0 • NOT VOTING 0 • ABSENT 0

- 4-2** The Secretary should annually publish a report that shows Medicare medical education payments received by each hospital and each hospital’s associated costs. This report should be publicly accessible and clearly identify each hospital, the direct and indirect medical education payments received, the number of residents and other health professionals that Medicare supports, and Medicare’s share of teaching costs incurred.

COMMISSIONER VOTES: YES 16 • NO 0 • NOT VOTING 1 • ABSENT 0

- 4-3** The Secretary should conduct workforce analysis to determine the number of residency positions needed in the United States in total and by specialty. In addition, analysis should examine and consider the optimal level and mix of other health professionals. This work should be based on the workforce requirements of health care delivery systems that provide high-quality, high-value, and affordable care.

COMMISSIONER VOTES: YES 17 • NO 0 • NOT VOTING 0 • ABSENT 0

- 4-4** The Secretary should report to the Congress on how residency programs affect the financial performance of sponsoring institutions and whether residency programs in all specialties should be supported equally.

COMMISSIONER VOTES: YES 17 • NO 0 • NOT VOTING 0 • ABSENT 0

- 4-5** The Secretary should study strategies for increasing the diversity of our health professional workforce (e.g., increasing the shares from underrepresented rural, lower income, and minority communities) and report on what strategies are most effective to achieve this pipeline goal.

COMMISSIONER VOTES: YES 17 • NO 0 • NOT VOTING 0 • ABSENT 0

# Graduate medical education financing: Focusing on educational priorities

## Chapter summary

Our nation's system of medical education and graduate training produces superbly skilled clinicians while contributing to stunning advances in medical science. Yet, it is not aligned with the delivery system reforms essential for increasing the value of health care in the United States. Research discussed in our June 2009 report, for example, found that internal medicine residency programs had limited focus on skills such as quality measurement and improvement, evidence-based medicine, multidisciplinary teamwork, care coordination across settings, and health information technology. These skills are important for producing the health professionals we need for a high-performance delivery system—one that provides high quality, high value, and efficiently delivered services.

Medicare is the single largest payer of graduate medical education (GME)—\$9.5 billion in 2009—but requires minimal accountability from its recipients for achieving education and training goals. Approximately \$3 billion of Medicare's payments is intended to support Medicare's share of the direct costs of running GME programs. The other \$6.5 billion is intended to support Medicare's share of the indirect clinical costs associated with the presence of GME. Commission analysis has shown that this amount is \$3.5 billion higher than the empirically calculated indirect clinical costs associated with teaching (Medicare Payment Advisory Commission 2010).

## In this chapter

- Commission's summary assessment of the GME system
- Commission recommendations to address gaps in the GME system

This chapter presents the Commissions’ summary assessment of gaps in the current GME system—with particular attention to financing issues—and makes a set of recommendations to address some of the identified concerns. Two principles underlying these recommendations are: the need to decouple Medicare’s GME payments from fee-for-service (FFS) payment systems, and the need to ensure that resources for GME are devoted to meeting educational standards and outcomes that can improve the value of our health care delivery system. We also discuss the importance of understanding workforce requirements for improved health care delivery in the 21st century.

### **Commission’s summary assessment of the GME system**

Despite the tremendous advances that our GME system has brought to modern health care, the Commission finds it is not consistently producing physicians and other health professionals who can become leaders in reforming our delivery system to substantially improve its quality and value. Two specific areas of concern are workforce mix—including trends in specialization and limited socioeconomic diversity—and education and training in skills needed for improving the value of our health care delivery system—including evidence-based medicine, team-based care, care coordination, and shared decision making.

We cannot accomplish delivery system reform without simultaneously ensuring that the providers we need have the skills necessary to integrate care across settings, improve quality, and use resources efficiently. In a recent *New England Journal of Medicine* article, prominent physicians assert that not only do residents need to learn relatively new skills, they need to develop a new perspective on what it means to be a “good doctor”—shifting emphasis, for example, from independent and autonomous practice to more patient-centered, team-based care (Swensen et al. 2010).

Our GME system is influenced not only by how Medicare subsidizes it but also by how Medicare and other insurers pay for health care services. FFS payment systems reward volume without regard to quality and their levels of payment for physician services tend to reward performing procedures over patient evaluation, management, and care coordination. These payment signals likely affect not only physician career choices but also institutional decisions about which residency programs to offer.

### **Commission recommendations to address gaps in the GME system**

First, the Commission recommends increasing accountability for Medicare’s GME payments. We recommend establishing a performance-based incentive program with payments to institutions contingent on reaching desired educational outcomes and standards. Eligible institutions would include teaching hospitals, medical

schools, and other entities that may sponsor residency programs. In determining the criteria for evaluating performance under this program, the Secretary of Health and Human Services would consult with organizations and individuals with the necessary expertise and perspectives—specifically, representatives from organizations such as program accrediting bodies, certifying boards, training programs, health care organizations, health care purchasers, and patient and consumer groups. From these deliberations, the Secretary would develop a GME payment system that fosters greater accountability for Medicare’s GME dollars and rewards education and training that will improve the value of our health care delivery system. Although accrediting standards for residency programs are moving in this direction, the Commission recommends that Medicare institute financial incentives to accelerate these efforts.

Funding for this initiative should come from reducing Medicare’s indirect medical education (IME) payments to eliminate the amount currently paid above empirically justified IME costs. Although some could assert that this amount should not be expended at all, the Commission determined that Medicare should use this amount to fund incentive payments to institutions meeting specified educational standards. Only those institutions meeting these educational standards specified by the Secretary should be eligible for such incentive payments; conceivably, therefore, all, some, or none of this amount could be distributed, depending on performance. Future assessment of the GME payment system might consider making even larger portions of Medicare’s GME payments contingent on performance.

Second, the Commission recommends making information about Medicare’s payments and teaching costs available to the public to foster greater accountability for educational activities within the GME community. To encourage collaboration between educators and institutions on residency program funding decisions, Medicare should make information about GME payments and costs more accessible. Although interpreting reported cost data may require some caveats, the transparency of this payment and cost information will recognize Medicare’s significant investment in residency (and some nursing) training and education.

The final three recommendations in this chapter call for studies to examine specific aspects of health workforce training. Currently, Medicare’s payments for GME generally subsidize the specialty choices of both teaching hospitals (in their program offerings) and residents (in their career choices). The resulting physician mix of specialties is unlikely to ensure that the nation has an efficient supply of health professionals for well-functioning delivery systems, as evidenced by falling shares of physicians practicing primary care after their residencies. The Commission recommends that a rigorous, independent analysis of our health

care workforce be conducted regularly. This analysis should be driven by the requirements of a high-value, affordable health care delivery system. Analyses that simply extrapolate demand projections based on current patterns of care could compromise the nation's chances of fostering high-value health care systems. An improved delivery system will influence the total number of physicians and the mix of professionals needed in our health workforce. Consequently, any decisions about Medicare's funding of new residency positions should await the results of such a study.

Also in question is the optimal level of Medicare GME payments by resident specialty type. Institutional costs and benefits of supporting residency programs are likely to vary significantly by specialty. For example, some specialties may require greater supervision costs, while others may attract higher volumes of more profitable services to the institution. There is little research on these differences. To learn how Medicare could adjust its subsidies for residency programs to make them more economically efficient, a specialty-specific analysis of net institutional costs and benefits would be useful.

A third workforce goal that deserves concerted attention is to find the most effective strategies for increasing the diversity of our pipeline of health professionals (i.e., increasing the share of professionals from underrepresented racial and ethnic minorities, from lower income families, and from rural hometowns). Research has found that a diverse health care workforce is associated with better care quality and access for disadvantaged populations, greater patient choice and satisfaction, and better educational experience for students in health professions. A number of programs, administered by the Health Resources and Services Administration, are designed to address this goal. While research on several specific programs shows some positive impacts, comprehensive evaluation of these programs' longitudinal effectiveness is not well studied. Therefore, a study that outlines a strategy for achieving specific health care workforce-diversity goals is essential to optimize federal subsidies for this effort. ■

Over the last two years, as the Commission examined ways to improve graduate medical education (GME) financing, it became clear that delivery system reform cannot be accomplished without simultaneously ensuring that the physicians and other health professionals we need have the skills necessary to integrate care across settings, improve quality, and use resources efficiently. Although the nation's GME system produces superbly skilled clinicians and stunning advances in medical science, greater attention is needed to align its educational goals with the nation's delivery system needs. This chapter presents the Commission's assessment of problems in the GME system and offers a set of recommendations. Two principles underlying these recommendations are: the need to decouple Medicare's GME payments from fee-for-service (FFS) payment systems, and the need to ensure that resources for GME are devoted to meeting educational standards and outcomes that can improve the value of our health care delivery system. We also discuss the importance of understanding and meeting health care workforce goals for the 21st century.

---

## **Commission's summary assessment of the GME system**

---

Our nation's system of GME is, in some respects, the best in the world: U.S. teaching hospitals produce thousands of new physicians each year—physicians who are superbly skilled and able to apply cutting-edge technology and techniques to aid severely ill or injured patients. Teaching hospitals often serve as linchpins of their local health care systems, and many contribute to stunning advances in medical science.

The GME system is not, however, consistently producing the physicians and other health professionals needed for a 21st century health care delivery system, one focused on high-quality, high-value, and affordable care. That is not just our assessment but also the assessment of some active participants in GME as well as many health care delivery organizations, insurers, corporate purchasers, and organizations representing patients and consumers (Blumenthal 2002, Council on Graduate Medical Education 2007b, Holmboe et al. 2005, Institute of Medicine 2008, Ludmerer and Johns 2005, Meyers et al. 2007, Mullan 2009, Swensen et al. 2010).

## **Gaps in the current GME system**

We find gaps in the mix of physicians being produced (including their specialty, their geographic distribution, and their socioeconomic diversity) and in the content of their education and training. (In addition, there are distinct, but complementary, problems in the education and training of other health professionals, which are critical as well. However, this chapter focuses principally on the training of physicians, as does Medicare's GME funding.)

### **Physician mix**

The specialty mix of physicians coming through the GME pipeline is not well matched to the needs of an efficient, high-quality, high-value delivery system. As discussed in our June 2009 report, a reformed delivery system that focuses on effective chronic care and keeping patients from needing to be hospitalized will require primary care physicians who can function with other health care professionals and specialists as part of a patient's health care team. These primary care providers are essential to a well-functioning delivery system, yet the mix of specialists and primary care graduates from residency programs has been tilting more toward specialists (American College of Physicians 2006, Colwill et al. 2008). Specifically, the proportion of third-year internal medicine residents becoming generalists is declining because a growing share is choosing to subspecialize or become hospitalists after residency (Bodenheimer 2006).<sup>1</sup>

In addition, there is insufficient socioeconomic diversity among physicians entering the pipeline, and too few are drawn from rural areas and inner cities, which may mean a reduced propensity to practice in these often underserved areas. Studies show that residents tend to select practice locations that are similar to where they grew up and where they trained (Brooks et al. 2002, Phillips et al. 2009). Yet, medical schools and residency programs are concentrated in certain areas of the country and draw students from families with considerably higher incomes than the population at large has (Association of American Medical Colleges 2008). Socioeconomic diversity in the physician workforce is crucial for improving patient access to culturally responsive care. In addition to programs sponsored by the Health Resources and Services Administration (HRSA), efforts to increase physician workforce diversity have been undertaken by private foundations and other organizations such as the Association of American Medical Colleges, but diversity is still insufficient, suggesting that we need to examine the effectiveness of current strategies.



Additionally, prudent workforce strategies need to address other health professionals, such as nurse practitioners and physician assistants, who provide essential patient care and enhance the effectiveness and efficiency of physician time and expertise.

### **Content and outcomes of physician training**

The GME system should embrace a more systematic effort to instill the skills and perspectives needed to accelerate the development of a high-quality, high-value, and efficient delivery system, including (but not limited to) evidence-based medicine, team-based care, care coordination, and shared decision making. A recent article authored by numerous well-regarded physicians asserts that not only do residents need to learn relatively new skills, they also need to develop a new perspective on what it means to be a “good doctor”—shifting emphasis, for example, from independent and autonomous practice, to more patient-centered, team-based care (Swensen et al. 2010).

A reformed delivery system will require health care professionals trained to provide coordinated care across institutional boundaries and trained in the skills required to promote patient safety and quality. Yet, studies show that this kind of training is not routinely provided in residency programs today (Cordasco et al. 2009, Council on Graduate Medical Education 2007a, Council on Graduate Medical Education 2007b, Lucien Leape Institute 2010, Medicare Payment Advisory Commission 2009). These findings suggest that although the Accreditation Council for Graduate Medical Education (ACGME) has begun instituting outcome-based standards for some of these newer skills and competencies, progress on them has been slow. Some of these shortfalls are compounded by a GME system focused too heavily on inpatient care. Although experience in caring for hospital inpatients is an indispensable part of a physician’s education, greater focus on providing ambulatory care for chronically ill patients with complex health care needs is essential for preventing avoidable hospitalizations and improving overall care delivery.

### **Payers’ role in fostering gaps in GME system**

The GME system is not solely responsible for these gaps and problems. Medicare has played a large role in shaping—some would say distorting—the GME system. GME is influenced not only by how Medicare subsidizes it but also by how Medicare pays for health care services. In making decisions about their clinical and training priorities, teaching hospitals likely consider financial signals from Medicare about what types of care are most valued. Those signals

are embedded in the methods used to pay for services and the relative rates paid for different services. For example, Medicare’s FFS payment system rewards volume without regard to quality. At the same time, the physician payment system has tended to reward procedural over cognitive care. While the Congress and CMS have increased payments for some cognitive services, the rewards for high volumes of lucrative procedures cannot help but influence hospitals’ choices of which specialty residency programs to support and the programs’ relative sizes.

Payment levels are also an important influence—although not the only influence—on the specialty preferences of physicians in training. Although lifestyle factors and the nature of the clinical and administrative work affect career choices, residents—many of whom face large debt levels for their education—reasonably look at future earnings prospects when choosing a specialty. Medicare payment rates can influence that choice. The payment methods used by other insurers, which are often based on Medicare’s system, intensify these signals.

### **Medicare’s role in GME reform**

Aside from changes in the way Medicare pays for services, Medicare can modify its GME financing structure to support and accelerate delivery system reforms. Currently, some GME payments are calculated as a percentage add-on to inpatient hospital admissions and others are calculated based on Medicare’s share of patient days; neither of these methods is an effective means for encouraging hospitals to foster ideal educational programs and environments. Thus, where possible, Medicare’s subsidies for GME should be decoupled from its payment for services and instead directed toward educational goals (see the text box for a description of Medicare’s current GME payments in more detail).

Delivery system reform cannot be accomplished without simultaneously ensuring that the physicians and health care professionals we need across this country have the skills necessary to integrate care across settings, improve quality, and use resources efficiently. The Commission considered whether federal subsidies for GME should be removed from Medicare and instead distributed through general revenues. Although a case could be made for this approach—considering that GME is thought by many to be a public good that benefits the nation as a whole—there were concerns with GME funding stability among other issues. On balance, the Commission determined that significant improvements can be accomplished through adjustments to current Medicare payment policies.



## Medicare's payments for graduate medical education

Since its inception, Medicare has provided substantial support for graduate medical education (GME) in the United States. Its primary mechanism for these subsidies is through payments to teaching hospitals to support their higher patient care costs and physician residency programs. Medicare's GME payments for 2009 totaled an estimated \$9.5 billion—averaging more than \$100,000 per resident. These payments are divided into direct and indirect GME payments.

Direct GME (DGME) payments are intended to support the teaching aspects of residency programs, such as resident stipends and benefits, supervisory physician salaries, and administrative overhead expenses. DGME payments are based on a hospital-specific per resident payment amount that was determined in 1984, updated for inflation. This amount is applied to Medicare's share of the hospital's inpatient days (both fee-for-service and Medicare Advantage). Subspecialty fellowship positions are funded at half the amount of core-year residency positions. The total number of residents supported by Medicare is capped per hospital at 1996 levels. Medicare also provides some education funding to hospitals to support direct costs of hospital-based education and training programs for nursing and various allied health professions. Medicare's DGME payments totaled an estimated \$3 billion in 2009.

Indirect medical education (IME) payments are designed to support the higher costs of patient care associated with teaching, such as residents' "learning by doing," greater use of emerging technologies, and patient severity. Based on a formula, IME payments are

an adjustment—a percentage increase—to Medicare's inpatient payment rates and vary based on hospitals' "teaching intensity" (as measured by the ratio of residents to hospital beds). Therefore, hospitals' IME payments are tied to their Medicare inpatient volume and case mix as well as the size of their residency programs (subject to their resident cap number). Medicare makes separate adjustments for operating and capital payments. Hospitals also receive IME payments from Medicare for Medicare Advantage patients.

Medicare's IME payments totaled an estimated \$6.5 billion in 2009, but repeated Commission analysis finds that only 40 percent to 45 percent of these payments can be analytically justified to cover the higher patient care costs of Medicare inpatients. In essence, the current adjustment is set at more than twice what can be empirically justified, resulting in an estimated \$3.5 billion directed to teaching hospitals with little accountability for their use of these funds.

Federally qualified health centers, rural health clinics, and Medicare Advantage plans that sponsor residency training programs can also receive Medicare DGME payments. In the future, teaching health centers (established in the Patient Protection and Affordable Care Act of 2010 as community-based, ambulatory patient care centers that support primary care residency programs) will receive payments to support direct and indirect costs, but funding will be authorized in a manner similar to that for the Children's Hospital GME program (CHGME) and will not come from Medicare. The Health Services and Resources Administration manages the CHGME program and will manage the teaching health centers program. ■

### Physician mix

The single most important way Medicare can influence the mix of physicians being produced by the GME system is to reform how it pays for services. The Commission discussed the importance of promoting primary care and testing other payment models, such as medical homes, in its June 2008 report. The Congress and CMS have also taken steps toward these goals. If Medicare changes its

signals about what care is valued, the GME system will likely respond.

Given the fiscal challenges confronting the federal government, current federal subsidies for physician and other health professional training should ideally be redesigned, not increased. If there is any increase in the number of residents Medicare supports, it should be founded on a careful analysis of future workforce needs that is driven by the needs of an efficient, high-quality, high-

value system. An extrapolation of workforce needs based on current patterns of care would not just fail to meet the future needs of a high-quality, high-value, efficient delivery system, it could compromise the nation's chances of developing such a system by producing increasing numbers of providers who have a stake in the status quo.

### **Content and outcomes of physician training**

Medicare should move toward a more accountable GME payment system that focuses on improving educational performance among institutions and residency programs. Such reforms likely will result in redistribution of current Medicare GME payments. Accordingly, changing how Medicare subsidizes GME should catalyze improvements in the content of GME instruction and resident experience. Although ACGME's outcome-based standards for residency programs are moving in this direction (as described later in this chapter) the Commission recommends that Medicare institute financial incentives to accelerate these efforts.

Medicare should not unilaterally presume to prescribe curricular content or teaching method. Any criteria for educational content should be the product of deliberation among parties with the necessary expertise and perspective, including accrediting organizations, certifying boards, government advisory bodies, teaching institutions, residency program directors, leading health care delivery systems, insurers, purchasers, and patients. Through ensuring that such deliberations proceed with the necessary speed and focus, Medicare can specify the results it expects from its substantial investment in GME and structure payment incentives that help align the educational process to those outcomes.

### **Role of other federal programs**

Federal programs other than Medicare could also contribute to improving the output of the GME system as well as to the development of other important health professionals. Several HRSA programs are designed to attract individuals—particularly from minority, rural, and low-income communities—to health careers through a variety of incentives, ranging from early education (grade school) programs to loan repayment programs. HRSA programs are also focused on promoting primary care access, particularly in underserved areas, and enhancing the cultural competence of this workforce by funding opportunities for medical students and residents to train in diverse settings and locations. These programs have the potential to improve the mix of health professionals

(through increases in socioeconomic diversity, rural access, and primary care providers) and should be subject to rigorous evaluation and improvement.

Second only to Medicare, Medicaid is another financer of GME. Because many states currently base their GME payments on Medicare's structure, changes in Medicare GME payment policies may also affect Medicaid policies. The Department of Veterans Affairs (VA) is also an active participant in GME, with more than one-third of residents rotating through VA facilities during their training. Research has shown that residents who rotate through the VA system gain delivery system skills, such as competencies in comprehensive health information technologies and multidisciplinary teamwork (Byrne et al. 2010, Congressional Budget Office 2007, Cordasco et al. 2009). Thus, the VA is likely to be an important partner in improving the GME system.

---

## **Commission recommendations to address gaps in the GME system**

---

In consideration of these identified concerns, the Commission makes a set of recommendations to address fundamental weaknesses in Medicare's system of GME subsidies. Two principles inherent in these recommendations are: the need to decouple Medicare's GME payments from FFS payment systems and the need to ensure that resources for GME are devoted to meeting educational standards and outcomes that can improve the value of our health care delivery system. The recommendations include linking GME payments to performance on educational standards and outcomes, increasing the transparency of and accountability for these payments, examining how best to assess health care workforce needs, assessing the impact of residency programs on hospitals' financial performance, and identifying strategies for increasing the diversity of the nation's physician workforce.

### **Link payments to performance to meet education and training goals for delivery system reform**

Financial incentives that link GME payments to performance on educational standards and outcomes—such as resident competencies and adequate faculty support—can be important tools for encouraging more rigorous educational agendas among institutions and residency programs. Particular focus should be on skills

essential for delivery system reform, such as quality measurement and improvement, evidence-based medicine, multidisciplinary teamwork, care coordination across settings, and health information technology. Although accreditation standards are moving in this direction, the Commission recommends that Medicare institute GME financing policies to accelerate these efforts. Funding for performance-based incentives should come from a significant reduction in IME payments.

### **Accelerate the progress of improving GME outcomes**

Currently, Medicare's only method for ensuring accountability for educational standards is its requirement that residents be in accredited residency programs. Most physician residency programs are accredited—by ACGME, the Commission on Osteopathic College Accreditation, or both.<sup>2</sup> These accrediting bodies are private, nonprofit councils that evaluate and accredit residency programs in the United States. In addition to Medicare financing, program accreditation is a requirement for other aspects of GME, including board certification and state licensure. It is rare for programs to lose their accreditation status.<sup>3</sup>

The ACGME recently transitioned to an outcome-based evaluation process for its residency programs. This initiative took an important step forward in defining core competencies not only in medical knowledge and patient care but also in skills that are consistent with those required to support health care delivery reform. These skills include practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice.<sup>4</sup> They are described in further detail in the text box (pp. 112–113).

Many within the medical education community state that ACGME's Outcomes Project and evaluations are moving in the right direction (Chaudhry et al. 2008, Holmboe et al. 2006, Papadakis et al. 2008). However, studies show that progress toward these goals is slow. For example, examining 26 internal medicine residency programs (selected from a nationally representative sampling frame), RAND researchers found that, overall, internal medicine residency programs were not placing attention on formal instruction and experience in skills essential for delivery system reform—such as teamwork, quality measurement, and cost awareness (Cordasco et al. 2009, Medicare Payment Advisory Commission 2009). These researchers noted that overall programs' curricula on these topics fell far short of recommendations from the Institute

of Medicine and other experts. A number of physicians in a recent article stated that a reformed delivery system will require physicians who are trained in relatively new skills that will enable them to provide more patient-centered, team-based care that is coordinated across institutional boundaries (Swensen et al. 2010). Reports from other experts have noted that training in these topics is not routinely provided in residency programs today (Council on Graduate Medical Education 2007a, Council on Graduate Medical Education 2007b, Lucien Leape Institute 2010).

### **Other educational efforts are beginning to address deficits**

Several educators and specialty-based organizations have embarked on comprehensive projects to help medical schools and residency programs improve their teaching methods and curricula. For example, through its "Milestones Project" the American Board of Internal Medicine is aiming to teach educators successful methods for engaging residents in ACGME competencies and measuring their observable progress, but current Medicare payment policies do not provide incentives for these endeavors. Other specialties, such as general surgery, are engaged in similar milestones projects to facilitate outcome-based evaluations. Certifying boards are also influential in residency programs' curriculum development.<sup>5</sup>

An educational goal that is particularly pertinent to Medicare is the growing need for basic geriatric competency among almost all our physicians, as called for by many experts, clinicians, and researchers (Boult et al. 2010, Institute of Medicine 2008, Leipzig et al. 2009). While many specialties require some form of geriatric instruction for ACGME accreditation, and several organizations have collaborated to develop a set of geriatric competencies for all medical students and residents, Medicare's GME financing does not place any requirements on geriatric skills and experience.<sup>6</sup> Encouraging basic knowledge in geriatric care among graduating residents would have important benefits for elderly Medicare beneficiaries.

### **Particular focus needed to increase experience in nonhospital settings**

Another concern about current residency education and training is its limited residency experience in nonhospital settings, as found in the previously mentioned RAND research. Hospital inpatient experience is a vital component of residency education to gain exposure to

## The Accreditation Council for Graduate Medical Education (ACGME) common program requirements: General competencies

*Approved by the ACGME Board February 13, 2007*

The residency program must integrate the following ACGME competencies into the curriculum:

### **Patient care**

Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

### **Medical knowledge**

Residents must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences as well as the application of this knowledge to patient care.

### **Practice-based learning and improvement**

Residents must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and lifelong learning. Residents are expected to develop skills and habits to be able to meet the following goals:

- identify strengths, deficiencies, and limits in one's knowledge and expertise.

- set learning and improvement goals.
- identify and perform appropriate learning activities.
- systematically analyze practice using quality improvement methods, and implement changes with the goal of practice improvement.
- incorporate formative evaluation feedback into daily practice.
- locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems.
- use information technology to optimize learning.
- participate in the education of patients, families, students, residents, and other health professionals.

### **Interpersonal and communication skills**

Residents must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals. Residents are expected to:

- communicate effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds.

*(continued next page)*

acute, serious illnesses, but it is equally essential for residents to have adequate time and experience outside the hospital in settings such as physician practices, nursing facilities, and nonhospital clinics. Benefits include greater experience with the clinical management of chronic conditions and exposure to the need for good care coordination across settings. Improving residents' comfort level with care in ambulatory settings could increase their desire to practice community-based care, particularly when their experiences in these nonhospital settings are positive. GME payment policies should create

incentives for institutions and residency programs to maintain strong community-based, ambulatory rotations for their residents.<sup>7</sup> Recent legislative changes provide some Medicare payment flexibility to promote clinical nonhospital residency experience as described in the text box (p. 114).

### **Increase accountability through performance-based payments**

To create stronger incentives for providing residents with the education, training, and experiences necessary to



## The Accreditation Council for Graduate Medical Education (ACGME) common program requirements: General competencies (cont.)

- communicate effectively with physicians, other health professionals, and health-related agencies.
- work effectively as a member or leader of a health care team or other professional group.
- act in a consultative role to other physicians and health professionals.
- maintain comprehensive, timely, and legible medical records, if applicable.

### Professionalism

Residents must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

- compassion, integrity, and respect for others;
- responsiveness to patient needs that supersedes self-interest;
- respect for patient privacy and autonomy;
- accountability to patients, society, and the profession; and
- sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation.

### Systems-based practice

Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to:

- work effectively in various health care delivery settings and systems relevant to their clinical specialty.
- coordinate patient care within the health care system relevant to their clinical specialty.
- incorporate considerations of cost awareness and risk–benefit analysis in patient or population-based care as appropriate.
- advocate for quality patient care and optimal patient care systems.
- work in interprofessional teams to enhance patient safety and improve patient care quality.
- participate in identifying system errors and implementing potential systems solutions. ■

*Source: ACGME*

achieve desired educational goals and outcomes, Medicare should create payment incentives based on institutional and program performance. The development of standards for measuring performance in topics essential for delivery system reform should be a collaborative process whereby the Secretary of Health and Human Services consults with representatives from organizations, such as program accrediting bodies, certifying boards, training programs, health care organizations, health care purchasers, and patient and consumer groups.

The standards established by the Secretary should specify ambitious goals for practice-based learning and improvement (including quality measurement), interpersonal and communication skills (including cultural sensitivity), professionalism (including patient-centered care), and systems-based practice (including integration of care across community- and hospital-based settings). Standards should address educational outcomes as well as clinical environments. These standards may vary depending on the types of institutions to which they apply, including hospitals, medical schools, and other entities

## Recent payment changes provide payment flexibility to promote clinical nonhospital residency experience

The Patient Protection and Affordable Care Act of 2010 made three changes to Medicare payment policies to make it easier for residency time in certain nonhospital settings to be eligible for direct graduate medical education (DGME) payments and indirect medical education (IME) payments, starting July 1, 2010. First, supporting institutions (including hospitals that may share in supporting the costs of residents) will no longer need to cover more than the residents' stipends and benefits to qualify for DGME and IME when they rotate outside the hospital. (Previously, hospitals needed to pay the nonhospital sites for their supervision.) Second, for DGME payments, institutions will now be able to count the time residents spend on didactic and scholarly activities outside the hospital provided they are in clinical settings. (Previously, such didactic time could

be counted only if it occurred in the hospital.) Third, for IME payments, hospitals will also now be able to count the time residents spend in non-patient care activities (except research not related to a particular patient) if they take place in the hospital, including provider-based hospital outpatient departments.

Although these provisions relax the nonhospital regulations, teaching hospitals have expressed concern that some administrative barriers will continue to exist. Resident time spent in didactic or scholarly activities in nonhospital settings will continue to be ineligible for IME payments. Time that residents spend in settings that are not primarily devoted to patient care—such as state public health departments, county jails, and medical schools—will continue to be ineligible for Medicare DGME and IME payments. ■

that support residency programs. The topics of interest are also part of ACGME's current program evaluations as discussed earlier (text box, pp. 112–113); therefore, Medicare's assessment of residency programs and institutional performance would build on topics familiar to residency programs, teaching hospitals, and other affiliated institutions.

This new program will increase the accountability of Medicare subsidies for GME. Funding for the program should come from a substantial reduction in current IME payments. Repeated Commission analysis shows that Medicare's current IME payments—paid as add-ons to hospitals' case-based payments—are in excess of empirical costs (by an estimated \$3.5 billion in 2009). Although some could assert that this amount should not be expended at all (and thus remain in the Medicare trust fund), the Commission determined that Medicare should use this amount to fund a new performance-based program.

As described above, this new program would establish payment incentives that reward institutions—including teaching hospitals, medical schools, and other entities that may support residency programs—which meet specified educational standards and outcomes. Only those

institutions meeting these criteria should be eligible for such incentive payments; conceivably, therefore, all, some, or none of this amount could be distributed, based on program and institutional performance. Future assessment of the GME payment system might consider making even larger portions contingent on performance.

By rewarding successful teaching on topics such as quality measurement, teamwork, and cost awareness, Medicare would support efforts to produce a health care workforce with the skills needed for delivery system reform. Accordingly, institutions that offered greater support for educators' teaching time would likely experience better educational outcomes and thus could earn higher payments from Medicare. Additionally, standards for achieving higher payments could include hospitals' protection of faculty teaching time and investment in faculty expertise and development.

To allow adequate time for the development of educational standards and criteria, Medicare's new, more accountable payment approach should begin in three years—October 2013. This implementation date would also give hospitals and other qualified institutions some time to consider ways to improve their medical education programs and alter their operations in line with anticipated IME payment



changes to manage this new system. CMS will require additional resources to assess institutions' performance and eligibility for incentive payments.

#### RECOMMENDATION 4-1

**The Congress should authorize the Secretary to change Medicare's funding of graduate medical education (GME) to support the workforce skills needed in a delivery system that reduces cost growth while maintaining or improving quality.**

- **The Secretary should establish the standards for distributing funds after consultation with representatives that include accrediting organizations, training programs, health care organizations, health care purchasers, patients, and consumers.**
- **The standards established by the Secretary should, in particular, specify ambitious goals for practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice, including integration of community-based care with hospital care.**
- **Performance-based GME funding under the new system should be allocated to an institution sponsoring GME programs only if that institution met the new standards established by the Secretary, and the level of funding would be tied to the institution's performance on the standards.**

**The indirect medical education (IME) payments above the empirically justified amount should be removed from the IME adjustment and that sum would be used to fund the new performance-based GME program. To allow time for the development of standards, the new performance-based GME program should begin in three years (October 2013).**

#### RATIONALE 4-1

Medicare's investment in GME should demand accountability for reaching specified standards and meeting the needs of high-value health systems. This new program would establish payment incentives that reward institutions—including teaching hospitals, medical schools, and other entities that may support residency programs—that meet specified educational goals and outcomes. Only those institutions meeting these specified criteria should be eligible for such incentive payments. Funding for this new program would come from a reduction in Medicare's IME payment—currently estimated to be twice the amount empirically attributable to higher patient care costs associated with a teaching environment.

#### IMPLICATIONS 4-1

##### Spending

- No Medicare program spending increase would occur; there would be some administrative costs.

##### Beneficiary and provider

- There would be no direct impact on beneficiaries.
- Payments to individual teaching hospitals would increase or decrease, depending on their performance.

##### **Improve collaboration between educators and teaching hospitals by increasing the transparency of Medicare payments**

During our examination of GME financing issues, some residency program directors voiced concerns that they have difficulty gaining information about their teaching hospitals' GME revenues because GME payments go directly to hospitals. Consequently, it can be challenging for them to judge whether Medicare's GME payments—as well as other revenues from other payers to support GME activities—are being distributed appropriately and equitably.

To improve information exchange between residency programs and provider institutions, Medicare could provide more transparent information on Medicare direct GME (DGME) and IME payments and hospital costs. This information, in the form of a short, public report, could prompt deliberations and collaborations among residency programs and hospitals about the distribution of these funds toward educational goals and community workforce needs. In addition, it would provide for greater public transparency in Medicare's role in supporting GME.

Specifically, the public report should include the following information, by institution:

- DGME revenues from Medicare
- IME revenues from Medicare
- number of residents counted by Medicare for direct GME payments
- number of residents counted by Medicare for IME payments
- Medicare's share of GME costs

Medicare could produce this information with little administrative burden, albeit with about a two-year lag. The payment information is already published by CMS on its website, but it is not necessarily in a user-friendly format or easy to find.<sup>8</sup> CMS could start producing these reports relatively quickly with the data it already has available. The institutions listed in these reports should include all those that received Medicare's DGME and IME funds in the reporting year.<sup>9</sup>

In response to a similar concern, New York State, in 2009, started requiring that residency training directors and teaching hospital administrators jointly submit an annual institutional budget for GME activities, reflecting both GME revenues and expenses, to the New York State Commissioner of Health.<sup>10</sup> This reporting is intended to foster greater dialogue between hospitals and their sponsoring institutions' designated academic affairs director to ensure that hospitals are aware of current and expected program needs and incorporate them into hospital budgets and that the academic affairs director is aware of how hospitals use these different sources of GME revenues.

### **Payment data**

Payment data should include all DGME and IME payments that hospitals receive from Medicare, for both fee-for-service and Medicare Advantage. Also, for applicable institutions, this report should include relevant information on Medicare payments that support hospital-based nursing and other health professional training programs (\$300 million in 2009).

### **Resident count data**

The resident count data should be the count of residents used for Medicare DGME and IME payments. As the resident count used for DGME and IME payments can differ, separate DGME and IME resident counts need to be included in the report. Ideally, the report would also include data on the number of other types of health professionals that Medicare supports through its direct medical education payments for nursing and allied health professionals. The hospital cost reports, however, do not provide this level of detail; thus, a reporting mechanism would need to be developed to include such data.

### **Cost data**

To make the cost data commensurate with the payment data, both DGME and IME costs reflecting Medicare's share of these expenses need to be reported. Although

reporting Medicare payments and resident counts is relatively straightforward, some of the cost data are more complicated and would need to be computed. Medicare's report would need to cite issues concerning the accuracy and comparability of DGME cost data across providers (e.g., DGME cost data are not audited, hospitals may account for certain costs differently, and benefits hospitals receive from resident services are not reflected). Further work to refine, validate, and standardize the direct cost data may be necessary. Medicare could calculate and list IME costs as the institution's empirically justified share of Medicare IME revenues, but it would be important to also include caveats that these amounts are estimates that are based on national calculations and not reflective of a hospital's actual, specific indirect costs. Currently, hospitals do not compute hospital-specific IME costs. Although this approach would be an estimate, omitting any Medicare indirect costs from the report could leave the false impression that there are no indirect costs or that indirect costs equal the indirect payment.

### **Other issues**

While this report would include both Medicare GME revenue and institutional cost information, it needs to make clear that these data cannot be used to perform a profit-and-loss analysis of GME activities. As noted above, there are a number of issues with the potential completeness and accuracy of the direct cost data and considerable uncertainty as to a hospital's actual indirect costs. Moreover, the financial benefits of residency training programs to the hospital and its physicians are not captured in these data; thus, any comparison of costs and revenues would provide an incomplete picture. We discuss these net financial impacts in a later section of this chapter related to Recommendation 4-4.

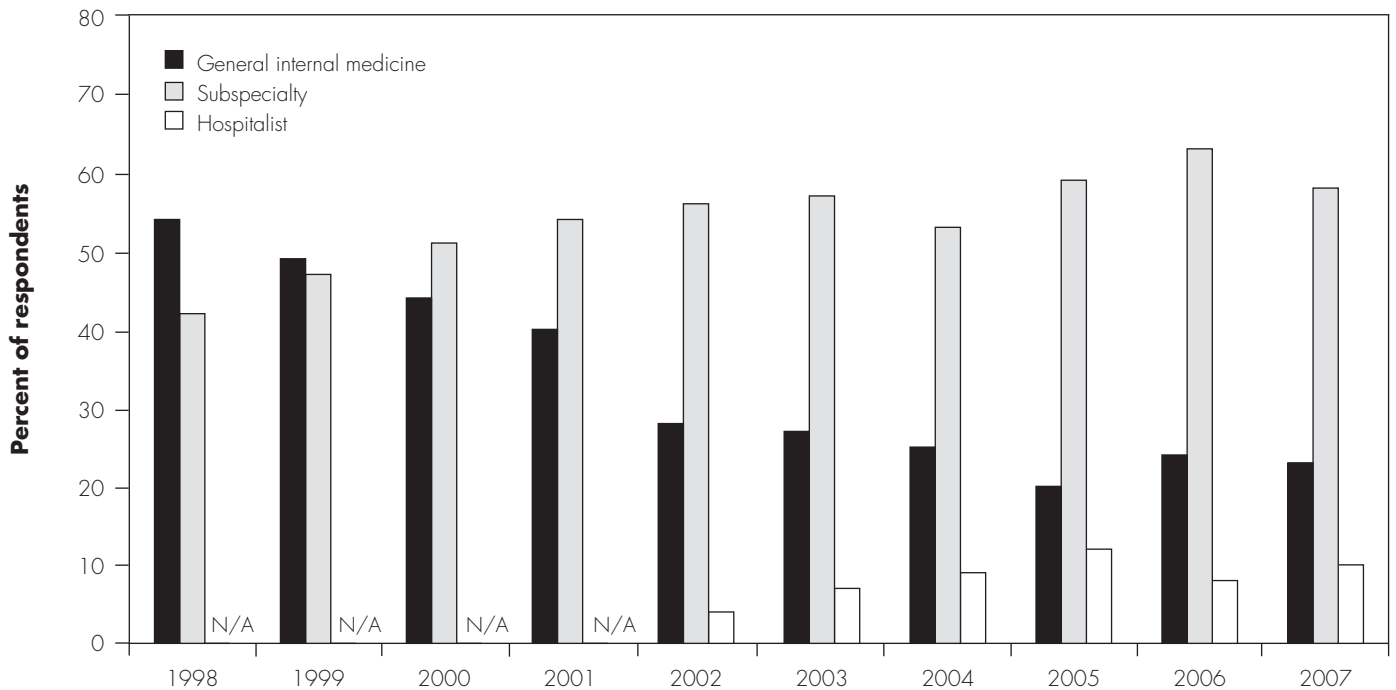
The proposed report would not divide payments and costs by specialty or list residents by specialty because these data are not readily available to Medicare. Nonetheless, residency program costs are likely to vary by specialty, as would their financial benefits to the hospital. Accordingly, some cross-subsidization is likely to occur across programs within an institution. Residency programs and hospitals would likely discuss this issue in their budgetary collaborations.

## **RECOMMENDATION 4-2**

**The Secretary should annually publish a report that shows Medicare medical education payments received by each hospital and each hospital's associated costs. This report should be publicly accessible and clearly**

**FIGURE 4-1**

**Proportions of third-year internal medical residents becoming subspecialists or hospitalists are growing**



Note: N/A (not available).

Source: Bodenheimer, T. 2006. Primary care—Will it survive? *The New England Journal of Medicine* 355:861–864. Copyright © 2006 Massachusetts Medical Society. All rights reserved. Updated to include years 2006 and 2007, supplied by Thomas Bodenheimer, who obtained the relevant data from The American College of Physicians.

**identify each hospital, the direct and indirect medical education payments received, the number of residents and other health professionals that Medicare supports, and Medicare’s share of teaching costs incurred.**

**RATIONALE 4-2**

Publication of this information is intended to prompt an informed dialogue between residency programs and hospitals on the resources that are required to support high-quality educational experiences for residents and fellows. It would also provide for greater public transparency on Medicare’s role in supporting GME.

**IMPLICATIONS 4-2**

**Spending**

- No program spending increase would occur; there would be small administrative costs.

**Beneficiary and provider**

- There would be no direct impact on beneficiaries.
- There would be no direct impact on providers.

**Determine health workforce needs for a reformed delivery system**

Medicare’s payments for GME generally subsidize the specialty choices of both teaching hospitals (in their program offerings) and residents (in their career choices). As discussed earlier, these choices are strongly influenced by the payment rates of the services these specialties provide. The resulting physician mix of specialties is unlikely to ensure that the nation has an efficient supply of health professionals for well-functioning delivery systems. For example, the share of third-year internal medicine residents choosing to practice primary care (rather than subspecialize or become hospitalists) has fallen from roughly 55 percent to 25 percent over the last decade (Figure 4-1).<sup>11</sup> Considering

the significant financial investment that Medicare and other federal programs make in GME, a commitment to rigorous, independent workforce analysis is imperative to inform the most efficient use of these public funds. Such analysis should be conducted regularly to account for evolving clinical and health system factors.

Workforce studies are multifaceted, requiring not only creating projections of how many physicians, nurses, physician assistants, and others will be needed many years in the future but also what education and training the workforce will require. Some studies have projected there will be unmet demand unless the supply of physicians is greatly increased (Dill and Salsberg 2008); others have found current total numbers may be in the right range but specialty mix and geographic distribution issues may need adjustments (Mullan 2009); and still others find that efficient, high-quality systems can have lower physician-to-population ratios (Goodman 2004). The Bureau of Health Professions within HRSA periodically reports on health care workforce supply and demand issues, including physicians, nursing, and public health care workers, but these reports are not regularly updated.

The Commission strongly recommends that an analysis of our 21st century health care workforce needs be driven by the requirements of a high-value, affordable health care delivery system. In calculating benchmarks for physicians and specialty mix, this study should take into account successful examples of high-performing, integrated delivery systems (McCarthy and Mueller 2009).

Analyses that simply extrapolate demand projections based on current patterns of care could compromise the nation's chances of fostering a high-value health care system by producing increasing numbers of physicians who have a stake in the status quo. Alternatively, an improved delivery system will influence the total number of physicians needed in the workforce as well as the mix of professionals (e.g., the mix of primary care physicians, specialists, advanced practice nurses, and physician assistants).

Several existing workforce models assume the market is roughly in equilibrium in the base year. This assumption implies inefficiencies in current utilization and delivery patterns would transfer into the future (Bureau of Health Professions 2008). Even departures from the baseline in the models tend to assume only modest changes in the delivery system. A study is needed to assess how major improvements in the delivery system would affect the demand for physicians. If Medicare is unsustainable

without delivery system reform, as the Commission maintains, a health care workforce that is consonant with a reformed delivery system is essential.

Recognizing the need for systematic health care workforce analysis, the Congress enacted several workforce and primary care provisions in the Patient Protection and Affordable Care Act of 2010 (PPACA) as described in a text box at the end of this chapter (p. 121). For example, the act establishes a National Health Workforce Commission tasked with examining workforce issues and charges HRSA's National Center for Health Care Workforce Analysis with data collection, analysis, and other reporting activities. The act also establishes state and regional centers for health workforce analysis to work in conjunction with this HRSA center. To carry out the workforce analyses that we recommend in this chapter, the Secretary could potentially collaborate with this new workforce commission and HRSA's workforce centers.

#### RECOMMENDATION 4-3

**The Secretary should conduct workforce analysis to determine the number of residency positions needed in the United States in total and by specialty. In addition, analysis should examine and consider the optimal level and mix of other health professionals. This work should be based on the workforce requirements of health care delivery systems that provide high-quality, high-value, and affordable care.**

#### RATIONALE 4-3

Considering the investment that Medicare and other federal programs make in GME subsidies, a commitment to rigorous, independent workforce analysis is imperative to inform the most efficient use of these funds. Any change in the number of residents Medicare supports should be founded on an analysis of the health care workforce needs of a high-quality, high-value health care delivery system. Such an analysis should consider optimal care integration among physicians and other health professionals.

#### IMPLICATIONS 4-3

##### Spending

- No program spending increase would occur; there would be some administrative costs.

##### Beneficiary and provider

- There would be no direct impact on beneficiaries.
- There would be no direct impact on providers.



## Examine the net impact of residency program costs and benefits on hospitals' financial performance

Medicare's GME payment policies do not specifically consider the costs and benefits (together the net cost) of residency training programs or whether the net cost of training differs by specialty. IME payments, for instance, count all residents the same regardless of their experience. Although some broad-based payment differentials are built into the DGME payment rates—payments for primary care residents are slightly higher than for residents in other core specialties, and payments for subspecialty residents are set at half the rate for other residents—these payment differentials were the result of policy considerations and were not based on actual cost differences. The costs and benefits of sponsoring residency programs, however, are likely to vary significantly by specialty—potentially making certain specialty programs financially more attractive to an institution than others. Understanding how the net cost of training varies by specialty may help the Medicare program target its limited resources to support GME more effectively. Such an analysis would consider not only the net cost of training but also other factors, such as educational outcomes (see Recommendation 4-1) and the workforce needs of the health care system (see Recommendation 4-3). Determining the net costs of a given specialty residency training program will be challenging, as it is made up of a complex mix of educational expenses and potentially forgone revenues on the cost side and potentially increased patient care revenues and other effects on the benefit side. To date, there has been limited research on this issue.

### Costs of supporting residency programs

Although residents' stipends are similar across specialties, the cost of supervising residents varies by specialty. For instance, not only do faculty salaries vary by specialty, but the opportunity cost of supervision (forgoing greater clinical productivity) also varies, depending on reimbursement levels for the hospitals' different service lines. Program administrative costs may also be higher for certain types of residencies in which training needs to be coordinated across multiple sites, supervision requirements are more intensive, or space needs are greater. Supervision costs are likely highest for first-year residents and fall as residents become more experienced. Indirect costs also may decline with increases in residents' experience, as more experienced residents likely have greater throughput (i.e., patient care productivity), order fewer unnecessary tests, and require less supervision.

### Benefits of supporting residency programs

In addition to qualifying for higher payment rates, hospitals benefit from supporting residency programs in other ways—several of which vary by specialty. As part of their clinical education, residents provide services that otherwise would need to be provided by other health care professionals—often at higher wages (Rich et al. 2002). To the extent that certain types of services are more profitable for hospitals than others, residency programs in some specialties would offer more positive financial benefits than others. Additionally, in principle, more experienced residents should be able to perform services with greater independence and less supervision—resulting in a lower cost and greater benefit to the facility.

Another factor that may make some residency programs more attractive to teaching hospitals than others is their ability to draw in leaders in specialty fields that will enhance the prestige of the hospital and potentially lead to higher market share, patient volume, and revenues in select hospital departments. The value of resident services may also differ across settings, with hospital inpatient and outpatient departments potentially providing the highest return, as the services provided are generally reimbursed at higher rates. Given that a number of teaching hospitals train more residents than Medicare supports, some residency programs, particularly in subspecialties, may be financially self-sustaining. The Commission's analysis of Medicare data show, for instance, that hospitals that have exceeded the capped number of residents that Medicare subsidizes tend to have more subspecialty residents than those that are under the cap.<sup>12</sup> Also, the number and share of residents in subspecialties have grown (Salsberg et al. 2008).

In principle, Medicare's payments to institutions for resident education and training could reflect not only differences in performance but also differences in the net costs of supporting residency programs. While determining costs and benefits by specialty is complex, such research is needed to inform efficient distribution of Medicare GME funding.

## RECOMMENDATION 4-4

**The Secretary should report to the Congress on how residency programs affect the financial performance of sponsoring institutions and whether residency programs in all specialties should be supported equally.**

## RATIONALE 4-4

The net impact that residency programs have on their hospitals' financial performance is likely to vary by

specialty. Some residency programs may improve hospitals' financial performance (because of the ability to garner higher market share and be associated with higher revenue-producing services), while other residency programs may not. Although determining costs and benefits is a complex task, a better understanding of these financial impacts could inform a more efficient distribution of GME dollars among residency programs.

## IMPLICATIONS 4 - 4

### Spending

- No program spending increase would occur; there would be some administrative costs.

### Beneficiary and provider

- There would be no direct impact on beneficiaries.
- There would be no direct impact on providers.

### Increase diversity among future physicians

Our June 2009 report discussed the underrepresentation of medical school students and residents from minority, lower income, and rural communities. Multiple research studies show that a diverse health care workforce is associated with better access to and quality of care for disadvantaged populations, greater patient choice and satisfaction, and better educational experience for students in health professions (Cooper et al. 2003, Health Resources and Services Administration 2006, Institute of Medicine 2004, Komaromy et al. 1996, Mertz and Grumbach 2001, Moy and Bartman 1995). Factors that increase the likelihood of students choosing careers in primary care and caring for underserved populations include being from a rural hometown and being an ethnic or racial minority (Brooks et al. 2002, Phillips et al. 2009).

Medicare's GME system is not able to address pipeline goals for increasing the economic, racial, or geographic diversity of the nation's physicians and other health professionals because Medicare's GME payments are focused on graduate-level physician training—much too late to influence individuals in their career choices. Interest in pursuing and preparing for careers in health professions (and specialty choices among those health professions) occurs along a continuum of stages in peoples' lives.

A number of HRSA programs are designed to recruit individuals—particularly from minority, rural, and low-income communities—into health careers. These programs (namely, those authorized by the Public Health

Service Act, such as the National Health Service Corps (NHSC) and other programs under Title VII and Title VIII) include a variety of incentives, ranging from early education (grade school) programs to loan repayment programs. HRSA programs are also focused on promoting primary care access, particularly in underserved areas, and enhancing the cultural competence of this workforce by funding opportunities for medical students and residents to train in diverse settings and locations. These programs reach to a broader workforce than just physicians—including nurses, dentists, and other clinicians who focus on primary care. Recently, the PPACA reauthorized these HRSA programs and increased funding for several of them.

While the goals of these programs are on target with increasing the number and diversity of the nation's primary care workforce, and studies on selected HRSA programs find positive impacts, empirical research that comprehensively evaluates the longitudinal effectiveness of these programs is limited (Government Accountability Office 2006, Phillips et al. 2009, Rittenhouse et al. 2008). A more systematic approach for assessing impact across all programs is essential for determining the best way to invest resources to improve workforce diversity.

The Secretary should, therefore, complete a study that outlines a strategy for achieving specific goals related to workforce diversity in the nation's pipeline of health professionals. Potentially, this study could be conducted in collaboration with the new workforce Commission and HRSA workforce centers (mentioned earlier in this chapter) established by the PPACA. This study could also consider strategies that include partnerships with other federal departments, such as the Department of Education and the Department of Labor. Other important considerations in this study should be the need for both immediate and ongoing assessment of the effectiveness of HRSA's Title VII and Title VIII programs and to make available increased funding for the NHSC programs. Also, as recently recommended by the Advisory Committee on Training in Primary Care Medicine and Dentistry, HRSA should create a central data repository to collect and track information on HRSA program grantees (Advisory Committee on Training in Primary Care Medicine and Dentistry 2010).

Ultimately federal dollars that subsidize the nation's health care workforce should foster an optimal mix of clinicians—from different specialties, racial and



## Summary of health workforce and primary care provisions in the Patient Protection and Affordable Care Act of 2010

- Establishes a National Health Workforce Commission, which would report and make recommendations to the Congress and the Administration on the current state and projected needs of the U.S. health care workforce (Section 5101).
- Creates a competitive grant program for states to develop workforce planning strategies (Section 5102).
- Charges Health Resources and Services Administration's National Center for Health Care Workforce Analysis with data collection, analysis, and reporting on workforce programs and establishes state and regional centers for health workforce analysis (Section 5103).
- Reauthorizes and increases funding for several Public Health Service Act programs including Title VII and Title VIII, makes available increased funding for the National Health Service Corps, and establishes scholarship and loan repayment programs for a range of health care and public health professionals (Sections 5201 to 5207, and Sections 5308 to 5313).
- Establishes a primary care extension program through the Agency for Healthcare Research and Quality to educate primary care providers about preventive medicine, health promotion, chronic disease management, mental health service, and evidence-based therapies (Section 5405).
- Authorizes grants to geriatric education centers to support training for clinical faculty and family caregivers in geriatrics, chronic care management, and long-term care (Section 5305).
- Authorizes development grants and payments to support teaching health centers as community-based, ambulatory patient care centers eligible for sponsoring physician residency programs in primary care (Section 5508).
- Directs the Secretary to redistribute 65 percent of currently unused residency slots and directs 75 percent of those slots for training primary care and general surgery and to states with the lowest resident physician-to-patient ratios, to states with the highest ratio of the population living in a health professional shortage area relative to the general population, and to states with rural hospitals (Section 5503).
- Modifies rules governing indirect medical education to promote resident training in ambulatory settings and in didactic and scholarly activities (Sections 5504 and 5505).
- Directs the Secretary to establish a demonstration program for hospitals to increase graduate nurse education training under Medicare (Section 5509).
- Provides a 10 percent payment bonus to primary care practitioners and general surgeons (pertains only to general surgeons in health professional shortage areas) for services provided under Medicare; makes Medicaid's payments for primary care services match Medicare's (Section 5501).
- Creates Center for Medicare and Medicaid Innovation to research, develop, test, and expand innovative payment and delivery service models, including the medical home (Section 3021). ■

ethnic backgrounds, rural and urban communities, and income levels—to achieve good access to a 21st century health care delivery system in all areas of the country. Determining the best strategy for reaching this objective should be a high priority to inform future spending decisions.

### RECOMMENDATION 4 - 5

**The Secretary should study strategies for increasing the diversity of our health professional workforce (e.g., increasing the shares from underrepresented rural, lower income, and minority communities) and report on what strategies are most effective to achieve this pipeline goal.**

## RATIONALE 4-5

Research has found that a diverse health care workforce is associated with better access to and quality of care for disadvantaged populations, greater patient choice and satisfaction, and better educational experience for students in health professions. Currently, Medicare's GME system is not designed to influence progress toward the goal of greater diversity among health professionals. A number of HRSA programs are designed to address relevant objectives under this goal, and research on specific programs shows some positive impacts, but comprehensive evaluation of these programs' longitudinal effectiveness is not well studied. An analysis that outlines a strategy for

achieving specific health care workforce diversity goals and objectives is essential to optimize federal subsidies for this effort.

## IMPLICATIONS 4-5

### Spending

- No program spending increase would occur; there would be some administrative costs.

### Beneficiary and provider

- There would be no direct impact on beneficiaries.
- There would be no direct impact on providers. ■

## Endnotes

---

- 1 Although the Government Accountability Office found that the number of physician residents in primary care programs increased 6 percent over the last decade, research by Bodenheimer and colleagues suggests that an increasing share of these residents sought further subspecialty training or became hospitalists (Bodenheimer 2006, Government Accountability Office 2008). The number of family medicine residents increased by 3 percent for 2010 but decreased by the same percentage in 2009 (National Resident Matching Program 2010). This specialty has lower rates of subspecialization than internal medicine.
- 2 Medicare also recognizes—for purposes of GME and IME funding—residency programs accredited by the American Dental Association and the Council on Podiatric Medical Education. ACGME also evaluates and accredits residency programs’ institutional sponsors (mainly teaching hospitals) from an educational perspective.
- 3 Specifically, ACGME reports that for the 2008–2009 academic year, 1 percent of residency programs had a “withdrawal of accreditation” status and fewer than 1 percent had a “probationary accreditation status.” A more frequent action that ACGME takes when programs are not performing at high enough levels is to shorten the time between program evaluations.
- 4 ACGME began to implement these outcome-based standards in 2001 and required full integration of them in residency programs beginning in 2006.
- 5 ACGME-endorsed milestone projects are currently moving forward in internal medicine, pediatrics, general surgery, urology, ophthalmology, family medicine, and transitional year programs. Internal medicine, pediatrics, and general surgery have already defined milestones and are currently looking at ways to operationalize milestones in practice. Subspecialty societies like the American College of Cardiology and the American Gastroenterological Association are also developing milestones.
- 6 With support from private foundations, the Association of American Medical Colleges, the American Medical Association, the Council of Medical Specialty Societies, and the American Geriatrics Society have launched a competency-based education and training initiative to ensure that all medical students and residents achieve basic competence in the care of older adults. The competencies, initially for graduating medical students, include measurable tasks associated with evidence-based geriatric care and patient safety. They fall into four main categories, those that: (1) are critical to patient safety and quality of care (medication management, self-care capacity, falls, balance and gait disorders, and hospital care for elders); (2) address the prevalence and underrecognition of cognitive impairment; (3) address the complexity of diagnosis (atypical presentation of disease); and (4) address prioritizing care based on patient preference and function.
- 7 Some have raised concerns, however, that promoting more nonhospital residency experience is less relevant for Medicare GME policies because the share of Medicare patients in many of these settings is smaller.
- 8 See [http://www.cms.hhs.gov/CostReports/02\\_HospitalCostReport.asp#TopOfPage](http://www.cms.hhs.gov/CostReports/02_HospitalCostReport.asp#TopOfPage).
- 9 In the future, the report could also include federally qualified health centers, rural health clinics, teaching health centers (established in the Patient Protection and Affordable Care Act of 2010), and other places that receive Medicare or other federal support to cover direct and indirect costs of residency training programs. Data for such training sites, however, would need to come from sources other than the Medicare cost reports.
- 10 The initial idea for a joint budget came from the New York Council on Graduate Medical Education, which recommended that these budgets should be generated by individual residency program directors for the hospital leadership team. With one year of reporting completed, the comparability of expense data across providers has proven somewhat problematic as not all GME expenses, such as those made for malpractice and simulation laboratories, are accounted for in the same way across institutions.
- 11 Although the Government Accountability Office found that the number of physician residents in primary care programs increased 6 percent over the last decade, Figure 4-1 suggests that many of these residents sought further subspecialty training or became hospitalists (Government Accountability Office 2008). The number of family medicine residents increased by 3 percent for 2010 but decreased by the same percentage in 2009 (National Resident Matching Program 2010). This specialty has lower rates of subspecialization than internal medicine.
- 12 Medicare caps the number of residents a hospital can count for direct and indirect GME payments at 1996 levels. There are also certain subspecialties that do not have ACGME accreditation that train fellows, but hospitals receive no direct GME or IME payments for these residents (e.g., gynecologic oncology, reproductive endocrinology and infertility), providing further evidence that some residency programs may be self-sustaining.

## References

---

- Advisory Committee on Training in Primary Care Medicine and Dentistry. 2010. *Eighth annual report to the Secretary of the U.S. Department of Health and Human Services and to the U.S. Congress: The redesign of primary care with implications for training*. Washington, DC: ACTPCMD.
- American College of Physicians. 2006. *The impending collapse of primary care medicine and its implications for the state of the nation's health care*. Washington, DC: ACP. January. [http://www.acponline.org/advocacy/events/state\\_of\\_healthcare/statehc06\\_1.pdf](http://www.acponline.org/advocacy/events/state_of_healthcare/statehc06_1.pdf).
- Association of American Medical Colleges. 2008. *Diversity of U.S. medical students by parental income*. Analysis in brief, vol. 8, no. 1. Washington, DC: AAMC.
- Blumenthal, D. 2002. *Training tomorrow's doctors: The medical education mission of academic health centers*. New York: Commonwealth Fund.
- Bodenheimer, T. 2006. Primary care—Will it survive? *New England Journal of Medicine* 355, no. 9 (August 31): 861–864.
- Boult, C., S. R. Counsell, R. M. Leipzig, et al. 2010. Preparing primary care physicians to meet the geriatric imperative. *Health Affairs*. In press.
- Brooks, R. G., M. Walsh, R. E. Mardon, et al. 2002. The roles of nature and nurture in the recruitment and retention of primary care physicians in rural areas: A review of the literature. *Academic Medicine* 77, no. 8 (August): 790–798.
- Bureau of Health Professions, Health Resources and Services Administration, Department of Health and Human Services. 2008. *The physician workforce: Projections and research into current issues affecting supply and demand*. Rockville, MD: Bureau of Health Professions.
- Byrne, C., L. Mercincavage, E. Pan, et al. 2010. The value from investments in health information technology at the U.S. Department of Veterans Affairs. *Health Affairs* 29, no. 4: 629–638.
- Chaudhry, S. I., E. Holmboe, and B. W. Beasley. 2008. The state of evaluation in internal medicine residency. *Journal of General Internal Medicine* 23, no. 7 (July): 1010–1015.
- Colwill, J. M., J. M. Cultice, and R. L. Kruse. 2008. Will generalist physician supply meet demands of an increasing and aging population? *Health Affairs* 27, no. 3 (May–June): w232–241.
- Congressional Budget Office. 2007. *The health care system for veterans: An interim report*. Washington, DC: CBO.
- Cooper, L. A., D. L. Roter, R. L. Johnson, et al. 2003. Patient-centered communication, ratings of care, and concordance of patient and physician race. *Annals of Internal Medicine* 139, no. 11 (December 2): 907–915.
- Cordasco, K. M., M. Horta, N. Lurie, et al. 2009. *How are residency programs preparing our 21st century internists? A review of internal medicine residency programs' teaching on selected topics*. Contractor report prepared for MedPAC. Santa Monica, CA: RAND Corporation.
- Council on Graduate Medical Education. 2007a. *COGME 18th report: New paradigms for physician training for improving access to health care*. Washington, DC: COGME. September.
- Council on Graduate Medical Education. 2007b. *COGME 19th report: Enhancing flexibility in graduate medical education*. Washington, DC: COGME.
- Dill, M. J., and E. S. Salsberg. 2008. *The complexities of physician supply and demand: Projections through 2025*. Washington, DC: Association of American Medical Colleges.
- Goodman, D. C. 2004. Do we need more physicians? *Health Affairs Web Exclusives* (January–June): W4-67–69.
- Government Accountability Office. 2006. *Health professions education programs: Action still needed to measure impact*. GAO-06-55. Washington, DC: GAO.
- Government Accountability Office. 2008. *Primary care professionals: Recent supply trends, projections, and valuation of services*. GAO-08-472T. Washington, DC: GAO.
- Health Resources and Services Administration, Department of Health and Human Services. 2006. *The rationale for diversity in the health professions: A review of the evidence*. Rockville, MD: HRSA. October. <ftp://ftp.hrsa.gov/bhpr/workforce/diversity.pdf>.
- Holmboe, E. S., J. L. Bowen, M. Green, et al. 2005. Reforming internal medicine residency training. A report from the Society of General Internal Medicine's task force for residency reform. *Journal of General Internal Medicine* 20, no. 12 (December): 1165–1172.
- Holmboe, E. S., W. Rodak, G. Mills, et al. 2006. Outcomes-based evaluation in resident education: Creating systems and structured portfolios. *American Journal of Medicine* 119, no. 8 (August): 708–714.

- Institute of Medicine. 2004. *In the nation's compelling interest: Ensuring diversity in the health care workforce*. Washington, DC: National Academy Press.
- Institute of Medicine. 2008. *Retooling for an aging America: Building the health care workforce*. Washington, DC: National Academy Press.
- Komaromy, M., K. Grumbach, M. Drake, et al. 1996. The role of black and Hispanic physicians in providing health care for underserved populations. *New England Journal of Medicine* 334, no. 20 (May 16): 1305–1310.
- Leipzig, R. M., L. Granville, D. Simpson, et al. 2009. Keeping granny safe on July 1: A consensus on minimum geriatrics competencies for graduating medical students. *Academic Medicine* 84, no. 5 (May): 604–610.
- Lucien Leape Institute, National Patient Safety Foundation. 2010. *Unmet needs: Teaching physicians to provide safe patient care*. Boston, MA: National Patient Safety Foundation.
- Ludmerer, K. M., and M. M. Johns. 2005. Reforming graduate medical education. *Journal of the American Medical Association* 294, no. 9 (September 7): 1083–1087.
- McCarthy, D., and K. Mueller. 2009. *Organizing for higher performance: Case studies of organized delivery systems. Series overview, findings, and methods*. New York: Commonwealth Fund.
- Medicare Payment Advisory Commission. 2000. *Report to the Congress: Medicare payment policy*. Washington, DC: MedPAC.
- Medicare Payment Advisory Commission. 2009. *Report to the Congress: Improving incentives in the Medicare program*. Washington, DC: MedPAC.
- Medicare Payment Advisory Commission. 2010. *Report to the Congress: Medicare payment policy*. Washington, DC: MedPAC.
- Mertz, E. A., and K. Grumbach. 2001. Identifying communities with low dentist supply in California. *Journal of Public Health Dentistry* 61, no. 3 (Summer): 172–177.
- Meyers, F. J., S. E. Weinberger, J. P. Fitzgibbons, et al. 2007. Redesigning residency training in internal medicine: The consensus report of the Alliance for Academic Internal Medicine Education Redesign Task Force. *Academic Medicine* 82, no. 12 (December): 1211–1219.
- Moy, E., and B. A. Bartman. 1995. Physician race and care of minority and medically indigent patients. *Journal of the American Medical Association* 273, no. 19 (May 17): 1515–1520.
- Mullan, F. 2009. Workforce issues in health care reform: Assessing the present and preparing for the future. Testimony before the Senate Finance Committee. March 12.
- National Resident Matching Program. 2010. Advance data tables: 2010 main residency match.
- Papadakis, M. A., G. K. Arnold, L. L. Blank, et al. 2008. Performance during internal medicine residency training and subsequent disciplinary action by state licensing boards. *Annals of Internal Medicine* 148, no. 11 (June 3): 869–876.
- Phillips, R. L., M. S. Dadoo, S. Petterson, et al. 2009. Specialty and geographic distribution of the physician workforce: What influences medical student and resident choices? Prepared with support from the Josiah Macy, Jr., Foundation. Washington, DC: The Robert Graham Center.
- Rich, E. C., M. Liebow, M. Srinivasan, et al. 2002. Medicare financing of graduate medical education. *Journal of General Internal Medicine* 17, no. 4 (April): 283–292.
- Rittenhouse, D. R., G. E. Fryer, Jr., R. L. Phillips, Jr., et al. 2008. Impact of Title VII training programs on community health center staffing and national health service corps participation. *Annals of Family Medicine* 6, no. 5 (September–October): 397–405.
- Salsberg, E., P. H. Rockey, K. L. Rivers, et al. 2008. US residency training before and after the 1997 Balanced Budget Act. *Journal of the American Medical Association* 300, no. 10 (September 10): 1174–1180.
- Swensen, S. J., G. S. Meyer, E. C. Nelson, et al. 2010. Cottage industry to postindustrial care—the revolution in health care delivery. *New England Journal of Medicine* 362, no. 5 (February 4): e12.

