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Assessing the Impact of Potential Cuts in Medicare Doctor-Training Subsidies

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TABLE OF CONTENTS

Section	Page
Executive Summary.....	3
Introduction.....	5
Section 1: Physician Training in the U.S.....	6
Section 2: Review of Medicare GME Funding.....	7
Section 3: Proposed Changes	11
Section 4: Implications for Teaching Hospitals.....	13
Conclusion.....	20
About the Analyst	20
Endnotes	21

EXECUTIVE SUMMARY

The federal Medicare program provided about \$9.5 billion in graduate medical-education subsidies to the hospital industry in 2010. These funds provide direct and indirect financial support to help offset the costs incurred by hospitals sponsoring residency programs for future doctors. The justification for these subsidies have come under renewed scrutiny in Congress and the Obama administration, where policy makers are increasingly preoccupied with cutting the budget and reducing the federal deficit. The so-called sequestration process that may subject Medicare provider payments to across-the-board cutbacks next year and for the following nine years is leading policy makers to identify specific ways to cut Medicare payments without causing undue harm to the health-care system.

Several deficit-reduction proposals have recommended cuts in these Medicare payments to hospitals. The presidential Simpson-Bowles Commission, for example, put forth a plan in December 2010 to reduce Medicare funding for residency training programs by \$60 billion over a 10-year period. President Barack Obama this year suggested a more modest cut that would still save Medicare a projected \$9.7 billion over nine years. At the same time, many health-care experts say the U.S. is facing an increasing shortage of doctors in the next decade, especially primary-care physicians. The impact of this projected shortage of doctors will be exacerbated by the expected increase in the number of insured Americans resulting from the 2010 health-care overhaul.

This Bloomberg Government Study analyzes the methods Medicare uses to reimburse hospitals that train medical residents and examines the potential effects of various proposals on federal funding of those programs.

The findings include:

- Obama's proposal to reduce by 10 percent the indirect component of Medicare expenditures on graduate medical education probably wouldn't affect the number of resident positions at the nation's teaching hospitals. At the same time, it may accelerate a shift away from primary-care training programs.
- While Medicare has cut the size of its indirect education funding for teaching hospitals several times since 1983, the number of residents trained by those hospitals in 2011 has increased by more than 25 percent since then. During this time, hospitals have shifted resources away from primary-care training programs to specialty and sub-specialty residence programs, despite incentives built in to Medicare's payment formula that are meant to discourage excessive sub-specialization. As a result, only 30 percent of U.S. physicians are primary care doctors today,¹ compared with 50 percent in 1961.²
- If policymakers target hospitals for potential Medicare payment reductions, cuts in graduate medical-education funding may be preferable than other across-the-board funding cuts that have been proposed for the industry. Non-teaching hospitals, which already generate far lower Medicare margins than teaching hospitals, would be spared from these training-related cuts since they don't operate residency programs.

- Legislation in the U.S. Senate to raise a congressionally mandated cap on the number of Medicare-funded residency slots by 15 percent in five years, which would expand Medicare's funding for resident training, has little chance of passage in the current Congress.
- The lack of transparency about how education-labeled funds are spent by teaching hospitals has made it difficult to assess the financial health of these residency-training programs. While some argue that many teaching hospitals lose money on their residency programs, others maintain that Medicare's payments exceed the level of education-related funding that can be justified.

INTRODUCTION

The challenges and demands of the medical profession result in a lengthy education process for would-be doctors in the U.S. After four years of college and another four years of medical school, graduating M.D.'s must then complete a residency program that lasts from three to five years, with a few specialty programs such as neurosurgery requiring up to eight years of residency training.

Whether or not these medical-residency training programs should be underwritten by taxpayers has been debated since the mid-1960s, when the federal Medicare health insurance program for the elderly and disabled was created. Opponents argue that future doctors can look forward to a lofty level of future earnings and note that there are already more qualified applicants to both medical schools and residencies than openings, reducing the need for public subsidies to help fill open slots.³ Given the higher lifetime earnings that doctors-in-training can expect to achieve, some have asked why taxpayers are paying for the final portion of these future physicians' training when similar government assistance isn't available for other industries, where the earnings potential remains well below a doctor's.

Proponents of government support for residency programs say medical education is a public good and the nation benefits from a stable of well-trained physicians, so taxpayers should help bear the cost of their training. Lawmakers have adopted this view for residency programs. While Medicare and other publicly funded programs provide explicitly calculated support for graduate medical-education activities, private health-insurance companies don't. Studies have suggested that the higher payments teaching hospitals have been able to negotiate with private insurers, which aren't specified for education, include an implicit add-on payment to support training activities; evidence in support of this assertion has been difficult to verify.

While support for public funding of resident training remains strong, the degree to which taxpayers should defray the costs that teaching hospitals incur has come under more scrutiny in recent years as Congress and the president have struggled to control the federal deficit. Various proposals have suggested cuts to this funding stream. Adding fuel to this drive is the threat of across-the-board cutbacks to defense and domestic programs, including a portion of Medicare, that will begin in January 2013 and continue for nine more years if Congress and the president can't agree on specific cuts to reach targets mandated by last year's Budget Control Act. Sequestration cuts to Medicare's provider payments are capped at 2 percent, and teaching hospitals aren't exempt from this potential hit. Neither the Office of Management and Budget, which will be responsible for writing the sequestration order, nor the Centers for Medicare and Medicaid Services, which administers Medicare, have detailed how such cuts would be distributed among various providers.

Meanwhile, the expected surge in the number of insured Americans resulting from the 2010 health-care overhaul has led most experts to project a shortage of doctors in the U.S. Democrats in the U.S. Senate have introduced legislation to expand the government's funding of medical residency programs.

SECTION 1: PHYSICIAN TRAINING IN THE U.S.

The education requirements for becoming a licensed physician in the U.S. conclude with a formal program of graduate medical education, more commonly known as residency training, in a particular field of medicine. The majority of these residency programs are conducted at teaching hospitals across the country. Many of these institutions are located in urban areas and are affiliated with universities, such as New York-Presbyterian Hospital, which is affiliated with the medical schools of Cornell University and Columbia University, and the Shands Healthcare System, affiliated with the University of Florida.

Early in their final year of medical school, students complete an application process to enter a competitive program for available residency slots known as "the Match." After an interview process, students submit a ranked list of their desired programs to the nonprofit National Residency Matching Program (NRMP). At the same time, the residency programs rank their preferred candidates and submit that list to the same national matching program. They are then combined by the NRMP, which comes up with a list of program-student matches. The results are released on the third Thursday of every March ("Match Day"), and both students and residency programs are contractually obligated to adhere to the Match results. In 2010, a total of 37,556 applicants from both U.S. and international medical schools competed for 25,520 residency openings through the matching process.⁴

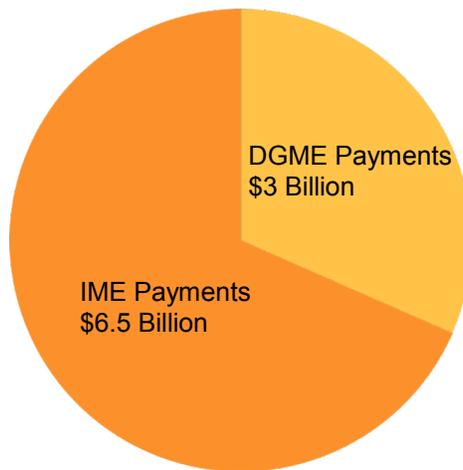
While students are responsible for financing their undergraduate and medical school degrees, they receive salaries during their post-graduate residency training periods in exchange for 80-hour work weeks. Since its inception in 1965, Medicare has provided substantial funds to support resident training, stating at the time that "educational activities enhance the quality of care in an institution, and it is intended...that a part of the net cost of such activities (including stipends of trainees, as well as compensation of teachers and other costs) should be borne to an appropriate extent by the hospital insurance program."⁵

The nation's residency programs are overseen by the not-for-profit Accreditation Council for Graduate Medical Education (ACGME), which was established in 1981. Member organizations of the council, all of which appoint multiple members to its board, are the American Medical Association, the Association of American Medical Colleges, the American Hospital Association, the American Board of Medical Specialties, and the Council of Medical Specialty Societies.⁶ Residency programs aren't governed centrally by ACGME, but instead by its 28 distinct "residency review committees" (RRCs) that control the number of available positions in each specialty throughout the country.⁷

SECTION 2: REVIEW OF MEDICARE GME FUNDING

The Medicare program provided about \$9.5 billion in 2010⁸ to support teaching hospitals that train medical residents, compared with \$7.8 billion in inflation-adjusted dollars spent in the program spent 20 years earlier.⁹ The \$9.5 billion includes \$3 billion in direct graduate medical education (DGME) payments that support Medicare's share of the direct costs of resident training, and \$6.5 billion in so-called indirect medical education (IME) payments.

Figure 1: Breakdown of 2010 Graduate Medical Education Payments by Medicare



Source: Association of American Medical Colleges.

Other publicly funded programs providing smaller amounts of graduate medical education funding include Medicaid, the joint state and federal health program for the poor, the Defense Department, the Veterans Administration, and a program for pediatric residents operated by the Health Resources and Services Administration.

Medicare's education-labeled funds don't flow directly to the residents being supported or to the individual residency programs' administrators. Instead, the funds are included with Medicare's lump-sum payments into the sponsoring hospital's general account. Federal law doesn't require hospitals to document how the GME funds are spent. Directors of residency programs are left to negotiate funding needs for their individual programs with the hospital.

Direct Graduate Medical Education (DGME) Payments

The direct payment for a teaching hospital is based on a formula that encompasses Medicare's percentage of total inpatient days at a hospital, the total number of residents being trained at the hospital, and a "per-resident amount" (PRA).¹⁰

$$\text{DGME Funding} = \text{Number of Residents} * \text{PRA} * \text{Medicare Share of Inpatient Days}$$

The per-resident amount is intended to cover Medicare's share of the direct costs associated with training residents and reflects more than the average annual salary of about \$50,000 paid to these doctors-in-training.¹¹ For Medicare's purposes, the PRA amount is based simply on a hospital's self-reported per-resident costs in 1984, indexed for inflation. The national Medicare per-resident amount averaged just over \$93,000 in 2010.¹²

Hospitals taking full advantage of the system in 1984 to maximize the amounts they reported for resident-training activities continue to benefit to this day. Meanwhile, hospitals that didn't do so well in 1984 are still suffering the consequences. A quick glance at the most recent available data from the Robert Graham Center, a Washington, D.C.-based research firm funded by the American Academy of Family Physicians, confirms the wide range of payments for identical training programs that this policy produces, even within the same regions of the country. For example, the primary care PRA in 2007 for Self Regional Healthcare in rural Greenwood, South Carolina, was \$110,937. That same 2007 figure for a primary care resident at Trident Medical Center in Charleston was \$73,184.¹³

In 1995, Medicare's direct payment to the nation's hospitals ranged from \$10,000 to \$240,000 per resident.¹⁴ Congress passed legislation in 2000 to reduce the large degree of variability in the amount of DGME payments among hospitals across the country. The Congressional Budget Office subsequently noted that although "variations in payment per resident have been reduced since 2001, considerable differences remain."¹⁵ Medicare's practice of determining PRA amounts by simply updating 1984 data to account for inflation doesn't factor increases in costs associated with training residents, such as malpractice insurance premiums in some states that can exceed \$100,000 per resident in some neurosurgery or OB/GYN programs.¹⁶

Here's an example of how the DGME formula produces a specific hospital payment: A teaching hospital with 100 full-time equivalent residents, an updated per-resident amount of \$100,000, and a 45-percent ratio of Medicare inpatient days to total days would receive DGME funding of \$4.5 million that year to help defray the costs of resident salaries and other direct costs associated with their education and training. In calculating the number of residents to be used in this formula, only those residents enrolled in their "initial residency period" count as 1.0 full-time equivalents. Once a resident moves beyond this initial three-to-five year period to pursue training in either a subspecialty or a second specialty, he or she counts only as a 0.5 full-time equivalent for Medicare funding purposes.¹⁷ Hospitals also receive nominally higher PRA-based payments for primary care residents than their non-primary care counterparts, following congressional action in the mid-1990s to freeze inflation updates for non-primary care positions.¹⁸

Indirect Medical Education (IME) Payments

The indirect payment is calculated as a percentage "add-on" payment on top of the hospital's base diagnosis-related group (DRG) rates for all patient-care activities. The IME payment was first established in 1983, in conjunction with the Reagan administration's move to an inpatient hospital prospective payment system for Medicare. The Health Care Financing Administration, precursor to the Centers for Medicare and Medicaid Services, initially proposed adding 5.795 percent to each base DRG payment for every 10 percent

increase in a hospital's residents-to-beds ratio, and Congress doubled that amount to 11.59 percent in the wake of a Congressional Budget Office report suggesting that the originally proposed add-on rate would be insufficient for nearly three-quarters of all teaching hospitals.¹⁹ Over the years, Congress has gradually reduced the add-on rate from 11.59 percent to 5.5 percent.

The IME payment formula is below.²⁰ Note that "r" equals the hospital's ratio of residents-to-beds, while the multiplier reflects the percentage increase in payments that a hospital receives for every 10 percent increase in its residents-to-beds ratio. Congress is responsible for making changes to the nation's multiplier, which is currently 1.35. (A multiplier of 1.35 in this formula equates to the targeted 5.5 percent add-on rate.) The teaching coefficient of 0.405 is meant to reflect the link between teaching activities and total costs incurred.²¹

$$\text{IME Add-On Percentage} = \text{Multiplier} * ((1 + r)^{.405} - 1) * 100$$

For example, consider the extra payment a 700-bed teaching hospital with 100 residents would receive for treating a patient undergoing a coronary bypass, which has a base DRG payment of \$41,201.²²

$$\text{IME Add-On Percentage} = \text{Multiplier} * ((1 + r)^{.405} - 1) * 100$$

$$\text{IME Add-On Percentage} = 1.35 * ((1 + 100/700)^{.405} - 1) * 100$$

$$\text{IME Add-On Percentage} = 7.5\%$$

$$\text{Additional Payment for Coronary Bypass} = \text{Base DRG} * \text{IME Add-On Percentage}$$

$$\text{Additional Payment for Coronary Bypass} = \$41,201 * 7.5\%$$

$$\text{Additional Payment for Coronary Bypass} = \$3,091$$

If that same 700-bed hospital were training only 50 residents instead of 100, its add-on percentage for all its DRG payments would be a considerably smaller, at 3.83 percent, and its additional per-case payment for this particular procedure would be just \$1,576, even if the hospital treated the same number of coronary bypass patients. The IME formula isn't influenced by the amount a hospital spends on resident education or how well it prepares residents to enter the medical profession. The payments are instead designed to support the additional patient-care costs associated with being a teaching hospital. Dr. Darrell Kirch, head of the Association of American Medical Colleges, stated that while "they share the 'education' label, IME payments are intended to support the costs of patient care."²³

The formula dictates that a teaching hospital's add-on payment rises as its ratio of medical residents to beds rises. Not surprisingly, the number of residents being trained throughout the U.S. surged after the IME implementation, growing by more than 26 percent to 104,612 in the 1995-96 academic year,²⁴ from 82,791 in the 1988-89 academic year, as hospitals looked to cash in.²⁵

The Amount Private Payers Provide to Support Residency Training Is Unclear

Medicare medical-education formulas are transparent and easily calculated. The extent to which private insurers fund a portion of resident-training activities is less clear. Medicare's DGME formula dictates that the federal program pay a percentage of total per-residency amounts that's based on the percentage of the hospital's patients insured by Medicare, but there's no requirement that private insurers do the same. A 2006 study by the nonprofit RAND Corporation used survey data to conclude that private payers implicitly provide about 43 percent of a teaching hospital's total education-related costs.²⁶ This assessment shouldn't be considered reliable. While many major teaching hospitals have sufficient market power that enables them to negotiate higher rates with private insurers than they receive from Medicare, at least one study has concluded that "it is almost impossible to calculate such a number [the additional amount private insurers pay specifically for GME support] because the portion of these higher prices that defrays the costs of advanced training is neither separately negotiated nor specifically identified."²⁷

Physician Surplus Forecast Two Decades Ago; Officials Now Predict a Shortage

In the midst of the increase in resident-training activities, the Council on Graduate Medical Education in 1991 predicted that the U.S. would face a surplus of 80,000 physicians by the year 2000.²⁸ In response to this prediction and in recognition of the incentives built into the IME formula, the Balanced Budget Act of 1997 contained several provisions to stem the growth of resident positions. Among the changes, the law capped the number of Medicare-funded resident slots at each hospital's 1996 levels (allowing for a three-year rolling average) and also capped the annual allowable residents-to-beds ratio at the level of the preceding year.²⁹

The AAMC now predicts a shortage of 62,900 physicians in the U.S. by 2015, growing to 130,600 by 2025.³⁰ Despite this shift in predictions, the 1997 cap on residency slots based on the expectation of a surplus remains. A small and vocal group of researchers, most notably a team at Dartmouth University led by Dr. David Goodman, contend that a national shortage doesn't exist. Goodman suggests that any shortages are regional and notes that most newly minted doctors settle in areas where physician supply is already high. He wrote that "it makes little sense to waste additional public dollars to perpetuate doctors' preferences to live in affluent places."³¹

SECTION 3: PROPOSED CHANGES

Proposed Cuts to GME Funding as Part of Recent Deficit-Reduction Proposals

Efforts to curtail the growth in Medicare spending have included proposals to reduce the program's funding levels for graduate medical education. The Budget Control Act's sequestration process, if triggered, mandates a 2 percent annual cut in Medicare payments to providers, beginning Jan. 1, 2013.³² The Congressional Budget Office projects that a 2 percent cut in Medicare payments to providers in 2013, for example, would equate to about \$11 billion in across-the-board cuts to Medicare accounts that the law didn't exempt from sequestration.³³ With that in mind, the following is a review of four prominent recommendations regarding GME funding put forth within the past two years that would represent more targeted spending cuts:

In June 2010, the independent **Medicare Payment Advisory Commission (MedPAC)** detailed a series of recommendations to Congress to better align incentives within the Medicare program. One of its formal recommendations involved converting a portion of the indirect medical education payment into a performance-based, incentive pool of funds for the teaching hospitals. The commission's analysis suggested that the IME add-on percentage that can be empirically justified for teaching hospitals is 2.2 percent, rather than the 5.5 percent that Medicare currently pays.³⁴ Correcting that difference would generate about \$3.5 billion in savings that the commission would use to establish an incentive pool. MedPAC recommended that the Health and Human Services secretary then establish an incentive-based program "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."³⁵ Institutions meeting these as-yet-undefined educational standards would receive additional, unspecified funds above their 2.2 percent IME add-on payment. There are no guarantees that all or even most of the incentive pool of funds would be distributed to the sponsors of residency programs. Money left undistributed would flow back into the Medicare trust fund.

In December 2010, the president's bipartisan **National Commission on Fiscal Responsibility and Reform (the Simpson-Bowles commission)** called for a cut in GME funding as part of its proposal to reduce the federal deficit by \$4 trillion over a decade. Simpson-Bowles suggested that the government keep all the savings associated with MedPAC's proposal to reduce the IME add-on rate from 5.5 percent to 2.2 percent, rather than return it to teaching hospitals from an incentive pool. Simpson-Bowles also recommended capping direct GME payments at 120 percent of the national average salary paid to medical residents in 2010--that average salary ranged between \$45,000 and \$50,000. This particular suggestion would be felt most by teaching hospitals in higher cost-of-living areas such as New York and Boston, which train a large number of residents and pay salaries above the national average. (The commission's membership included no one from New York or Massachusetts.) The commission estimated that its recommendations would produce \$60 billion in savings over 10 years.³⁶

The **Congressional Budget Office** introduced a radical structural proposal in March 2011 that would produce even greater estimated savings than Simpson-Bowles. The CBO option would eliminate the separate direct and indirect payments and instead lump all federal spending into a block grant program for sponsoring hospitals. The CBO suggested funding the program with a pool of money that includes the same amount as in the direct payments, indirect payments paid at an add-on rate of 2.2 percent (compared to current rate of 5.5 percent), plus about \$500 million that represents the federal share of Medicaid's annual graduate medical-education payments. This funding would be adjusted annually for inflation, and payments would be disbursed based on a hospital's number of residents and the percentage of total inpatient days that are represented by Medicare and Medicaid patients. The budget office estimated that this program would generate savings of \$69 billion from 2012 to 2021.³⁷

This year, **President Obama's** proposed budget for fiscal year 2013 included a 10 percent cut in the IME add-on rate, from 5.5 percent to 4.95 percent, beginning in 2014. The White House estimated that this reduction would save \$9.7 billion over a nine-year period.³⁸ In addition, Obama requested reduced funding for a pediatrician GME program, administered by the Health Resources and Services Administration within the Department of Health and Human Services, to \$88 million in fiscal 2013 from \$265 million this year.³⁹ The proposed reduction reflects an elimination of the indirect component of pediatric residency-training costs while leaving the direct component unchanged.

Senate Bill Calls for an Increase in the Cap on Medicare-Funded Resident Positions

While the majority of proposals call for reductions in Medicare's GME spending, efforts to lift the cap on residency slots and expand Medicare GME spending have also been suggested as a means of addressing the forecasted shortage of physicians. Senator Bill Nelson, a Democrat from Florida, introduced a bill in September 2011 (S.1627) that would increase the number of Medicare-funded residency slots by 3,000 a year from 2013 through 2017.⁴⁰ This proposal is consistent with the Council on Graduate Medical Education's recommendation to increase federally funded residency positions by 15 percent.⁴¹

While the 2010 health-care overhaul didn't alter the cap on the total number of Medicare-funded residency slots, it called for a redistribution of unfilled residency positions that have remained open for three years, with a goal of directing those unused slots to primary care or general surgery positions.⁴²

SECTION 4: IMPLICATIONS FOR TEACHING HOSPITALS

Attempt to Raise the Cap on Medicare-Funded Residency Slots Is Likely to Stall

Legislation to raise the cap on the number of Medicare-funded resident positions was introduced in September 2011 and has the support of key Democrats in the Senate — co-sponsors include Harry Reid of Nevada and Charles Schumer of New York. Even so, the bill has little support among Republicans and is unlikely to get past the GOP-controlled House of Representatives. Democrats introduced similar pieces of legislation in 2009 and 2007. Both bills died in the Senate.

Teaching Hospitals and the Academic Medical Community Oppose GME Funding Cuts

The sequestration threat of a 2 percent, across-the-board cut in Medicare provider payments may force Congress to refocus its attention on the program's role in supporting the post-graduate training of the nation's future doctors. The potential for a small GME funding cut seems plausible in light of the number of nonpartisan and bipartisan proposals to reduce this funding, as well as the lack of financial transparency that makes it hard for hospitals to justify claims that they can't absorb any cuts.

The hospital and medical college organizations have protested that any cuts would pose great harm to the health of teaching hospitals. The Association of American Medical Colleges paid the consulting firm Tripp Umbach to conduct a study assessing the economic impact of the Simpson-Bowles recommendation. Tripp Umbach used a multiplier-based methodology to conclude that reducing the IME add-on percentage from 5.5 percent to 2.2 percent would lead to a total economic loss of \$10.9 billion for the U.S. economy, including the elimination of more than 72,000 jobs and \$653 million in tax revenue.⁴³ Tripp Umbach has been paid to conduct hundreds of similar studies on behalf of universities and other organizations, and its determinations of overall economic impact for various institutions^{44,45,46,47} have not been immune to criticism.⁴⁸

On the issue of residency programs, AAMC President Dr. Darrell Kirch responded to Obama's call for a 10 percent reduction in the IME add-on rate by stating that such a cut "would mean that up to 10,000 fewer physicians will be trained every year when the nation already faces a shortage of over 90,000 doctors in the next 10 years." Kirch said teaching hospitals, while representing just 6 percent of all U.S. hospitals, provide 21 percent of the hospital care for the Medicare population.⁴⁹

In August 2011, the Accreditation Council for Graduate Medical Education sent out a survey to 680 designated institutional officials at hospitals sponsoring accredited residency programs. The survey told responders how important it was "that the ACGME understands the potential impact of funding changes on the GME infrastructure of the United States" and asked these officials how they would respond to potential cuts to Medicare GME funding of 33 percent or 50 percent. The officials chose from a predetermined set of responses, and the questions didn't specify whether the hypothetical cuts were targeted

toward DGME or IME payments, or a mix of both.⁵⁰ Of the 306 officials who responded, 68 percent said they would "slightly" or "significantly" reduce the number of core residency positions in response to a 33 percent reduction in funding, while 60 percent would reduce the number of subspecialty fellowship positions.⁵¹

Of All the Proposals, Obama's Recommendation Seems Most Likely to Gain Traction

Given those comments, along with the hospital cuts already mandated in the 2010 health-care overhaul and the consensus forecast of a looming shortage of doctors, a smaller reduction along the lines of Obama's proposed 10 percent cut in the opaque IME funding, while leaving the DGME formula alone, seems the most likely to gain immediate support. (The president's separate suggestion to eliminate the indirect component of funding for pediatrician residency programs may face stiffer opposition.) The Democrat-controlled Senate is unlikely to support the more drastic Simpson-Bowles or CBO proposals, despite MedPAC's assertion that Medicare is reimbursing teaching hospitals for educational activities at levels far above is the level justified by available evidence.

While the separate MedPAC recommendation to convert a portion of Medicare funding into a pool of incentive funds has support among some constituencies, such a fundamental change to the payment structure seems unlikely to pass a divided Congress during an election year.

Analysis Suggests that Obama's Proposal Wouldn't Reduce Overall Number of Residents

Fears of significant reductions in the nation's overall stable of residency positions as a response to modest cuts in indirect medical-education funding may be overblown. Based on a historical review and an analysis of Medicare's payment formulas, this study concludes that a potential 10 percent cut to the IME add-on rate, with no impact on the DGME rate, may receive serious consideration from lawmakers and wouldn't have a severe impact on the number of available residency slots. While the overall number of residency slots may not change, a cut in funding may encourage hospitals to accelerate an existing trend of shifting resources away from primary care programs and towards specialty and subspecialty programs.

First, the Medicare Payment Commission's March 2011 report to Congress calculated that the Medicare margin for major teaching hospitals was -0.6 percent in 2009, the most recent year available for study. While negative, this compares favorably to the 2009 Medicare margin for non-teaching hospitals of -7.9 percent. Hospitals that don't support resident-training programs fare worse under Medicare than those teaching hospitals that sponsor those programs. This discrepancy may lend support for a cut in GME funding, to the extent that policy makers consider reimbursement cuts to hospitals, since such targeted reductions wouldn't cut funding for the non-teaching hospitals that already generate lower Medicare margins than teaching institutions.

Table 1: Medicare Margins by Hospital Type

Type	2005	2006	2007	2008	2009
Major Teaching	4.00%	2.30%	0.20%	-1.70%	-0.60%
Other Teaching	-3.60%	-5.20%	-6.90%	-7.40%	-5.20%
Non-teaching	-6.60%	-8.20%	-9.10%	-10.00%	-7.90%

Source: Medicare Payment Commission.⁵²

Teaching hospitals typically treat a relatively higher percentage of lower-margin Medicaid patients, but accounting for that factor, the margins for major teaching hospitals are trending at or even above their non-teaching peers.⁵³

Consider a hypothetical example in which Congress cuts federal IME funding (reflected by a reduction in the multiplier from 1.35 to 1.25), and the teaching hospital subsequently responds by reducing the number of residency positions it funds by 10 percent. The table below shows that a teaching hospital that responds to a decrease in the IME add-on rate by reducing its number of residents, in an attempt to cut costs, exacerbates its problems by further reducing its Medicare revenues for all its patient-care activities.

Table 2: IME Calculation for a 700-Bed Hospital That Trains 100 Residents

$$\text{If } (r = \text{residents}/\text{beds}) \text{ then add-on \%} = \text{multiplier} * ((1+r)^{0.405} - 1) * 100$$

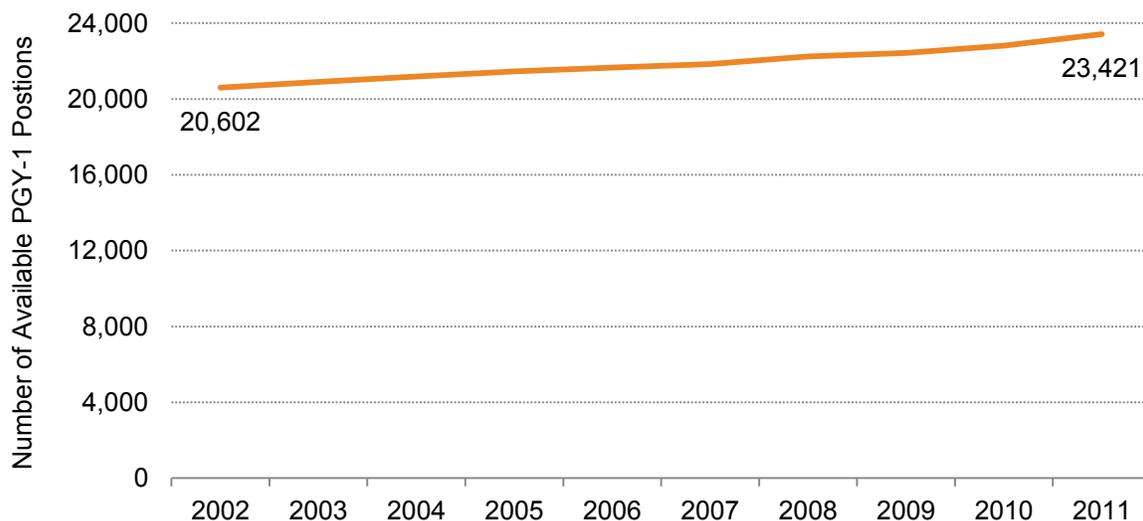
	Base	Congress Reduces the Multiplier	Hospital Reduces Residents in Response to Cut
Multiplier	1.35	1.25	1.25
Beds	700	700	700
Residents	100	100	90
Add-On Percentage:	7.50%	6.95%	6.28%
Additional Payment	\$3,090.84	\$2,861.89	\$2,585.64
(\$41,201 diagnosis-related group)	—	—	—

Using the example of the additional payment for a single coronary bypass case, a decision from Congress to decrease the multiplier from 1.35 to 1.25 would reduce the hospital's hypothetical add-on payment for treating this single patient to \$2,862 from \$3,091, or by \$229. If the hospital responds to this cut by reducing its overall staff of residents to 90 from 100, instead of implementing other cost-cutting measures that aren't related to this formula, its Medicare revenue for such a case would then fall by an additional \$276 to \$2,586. If anything, the misaligned financial incentives embedded in Medicare's IME payment formula encourage hospitals to respond to a rate cut by increasing, not decreasing, their overall number of residents.

History shows that, since the introduction of the indirect component of Medicare funding, the teaching-hospital industry hasn't responded to IME add-on cuts by shrinking the overall size of the nation's residency pool. The add-on percentage has fallen in spurts over the past few decades, to 5.5 percent from 11.59 percent initially in the mid-1980s. While some individual programs have downsized and even closed in response to this reduction in funding, others have popped up or expanded to replace them. The overall number of residency positions sponsored by U.S. teaching hospitals climbed to more than 110,000 in 2010⁵⁴ from 81,410 in 1987.⁵⁵

Setting aside subspecialty fellowships for residents who are beyond their initial training period, a look at the number of first-year residency positions reveals an upward trend. As illustrated in the chart below, the number of first-year U.S. residency openings available through "the Match" for new medical school graduates has increased in each of the past 10 years, despite the increasing budgetary pressures facing sponsoring hospitals and the existing cap on the quantity of Medicare-funded residency positions. Specialties that experienced increases of at least 10 percent in the number of first-year resident openings from 2007 to 2011 were anesthesiology, emergency medicine, neurology and vascular/thoracic surgery.⁵⁶

Figure 2: Number of "Post-Graduate Year One" (PGY-1) Residency Openings, 2002-2011



Source: National Resident Matching Program.⁵⁷

While the 1997 law capped total Medicare-funded slots, it doesn't prevent hospitals from self-funding additional slots, and it doesn't govern the mix of primary care and specialist residency programs that hospitals can operate. In its June 2010 report to Congress recommending that education payments be disconnected from payment for patient-care services, MedPAC noted that graduate medical education in the U.S. "is influenced not only by how Medicare subsidizes it but also by how Medicare and other insurers pay for health care services. FFS [fee-for-service] payment systems reward volume without regard to quality....These payment signals likely affect not only physician career choices but also institutional decisions about which residency programs to offer."⁵⁸

MedPAC commented that "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."⁵⁹ MedPac also wrote: "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. 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."⁶⁰ As evidence that such a shift towards specialty-training programs is happening, the number of internal medicine residency programs has declined by 9 percent during the past 15 years to 384 from 421,⁶¹ and the "share of third-year internal-medicine residents choosing to practice primary care (rather than sub-specialize or become hospitalists) has fallen to 25 percent from roughly 55 percent in the past decade."⁶²

A Previous Government Attempt to Pay Hospitals Not to Train Residents Failed

In at least one instance, teaching hospitals found that they benefited financially from residency programs even more than when the government paid them *not* to train future doctors. In 1997, the Health Care Financing Administration conducted a demonstration project in which it agreed to pay New York's teaching hospitals \$400 million to reduce the number of residents they trained by 20-25 percent. The plan was the idea of New York's powerful hospital association, with the support of both New York senators, Democrat Daniel Patrick Moynihan and Republican Alfonse D'Amato. At the time it was announced, executives in other states were concerned that the government was playing favorites by giving New York such a perceived sweetheart deal. The president of a major teaching hospital in Tampa, Florida, for example, "admitted to envy and some resentment that hospitals in other parts of the country were not involved. 'This is a real coup for New York teaching hospitals,' he said. 'How can we get in on it?'"⁶³

Just two years later, more than half of the 49 participating hospitals in New York had dropped out of the program. As explained by the head of Albany's Center for Health Workforce Studies, the "financial benefits to teaching hospitals are still so great that there's an incentive to train more physicians, whether they are needed in the long run or not."⁶⁴ The IME add-on rate was 7.7 percent at the time of this demonstration project. While the project took place more than a decade ago at a higher payment rate, this example provides some insight into the relative financial benefits hospitals accrue by operating residency programs, which hospital administrators didn't grasp.

Could Hospitals Use Replacements for Resident Labor or Just Reduce Resident Salaries?

Suggestions are controversial that hospitals could achieve similar or even better financial results for their operating activities by foregoing certain resident training programs and replacing that labor component with full-time physicians, physician assistants or even nurse practitioners. Residents work 80-hour weeks for their salaries, which average around \$50,000. Nurse practitioners, on the other hand, typically work much shorter work weeks for an average annual salary of more than \$92,000.⁶⁵ Teaching hospitals looking to replace resident labor also face losing a portion of the Medicare IME payment because of the reduced number of residents. A 1995 workforce study published in *Health Affairs* concluded that "three midlevel practitioners would be needed to replace each resident."⁶⁶ On the other hand, the difference in salaries can be offset to varying degrees by the elimination of resident training expenses that aren't necessary for already-licensed professionals; while supervising physicians can bill Medicare for work performed by residents in some circumstances,⁶⁷ replacement professionals would be unburdened from any training activities.

Turning to another possibility, could teaching hospitals respond to Medicare funding cuts by keeping the same number of residents while decreasing some of their salaries? As a reminder, the amount of Medicare's education payment to a teaching hospital would not be affected if hospitals employed the same number of residents but reduced their salaries; the DGME formula is based on the current number of residents and the hospitals' 1984 cost data, while the IME formula considers the number of residents they employ and ignores the residents' actual compensation. These salaries vary regionally, but, within a single institution, they are usually the same for all residents, meaning that future doctors training to become specialists are paid similar salaries during their initial residency period as residents looking to become general internists. This is economically inefficient, as some specialists can expect lifetime wealth accumulation that is \$2.7 million higher than their primary care counterparts.⁶⁸

There is an axiom that students who perform well in medical school should look to follow the "ROAD" to happiness — radiology, ophthalmology, anesthesiology, and dermatology — as these fields are perceived to offer higher salaries and better work-life balance.⁶⁹

A professor at the University of Pennsylvania's Wharton School concluded that residents in certain sought-after specialties would be willing to forego any salary as a resident and even pay hospitals tuition, in light of their strong future earnings potential.⁷⁰ This makes conceptual sense as a way for hospitals to respond to Medicare funding cuts. Medical schools have responded to recent forecasts of future physician shortages by enrolling more and more students who will eventually compete for residency positions.⁷¹ However, the perceived doctor shortage isn't a result of a lack of medical school graduates; it's due to too few residency slots. The Medicare-funded cap on residency slots for medical school graduates remains in effect, limiting the corresponding growth of new residency slots. This increasing supply of medical school graduates for residency positions suggests that a reduction in salaries paid to residents pursuing a specialty track, as a means of dealing with potential cuts in funding, would still allow hospitals to fill their slots and prevent further erosion of their IME funding. Such a policy would also increase incentives for medical school graduates to consider pursuing a primary care career, addressing the

component of the expected physician shortage that is most severe. As a practical matter, however, unless ACGME bylaws requiring teaching hospitals "to provide all residents with appropriate financial support and benefits"⁷² are amended, such ideas are unlikely to be implemented.

GME Cuts Might Intensify Efforts to Increase Other Sources of Revenue

Hospitals could also respond to a cut in Medicare funding by intensifying efforts to boost other sources of revenue, including investment income, philanthropic donations, and renegotiated rates with private insurers. Hospitals separately negotiate payment rates with the various private insurers, such as United Healthcare, Aetna, and the network of Blue Cross and Blue Shield plans, while fixed Medicare payment formulas are dictated by the federal government. As mentioned, many teaching hospitals already receive higher payments from private insurers than they do from Medicare for performing the same procedures. Hospitals with a sufficient market presence or some other form of negotiating leverage may respond to reductions in Medicare GME funding by looking to boost the implicit amount that the private insurers pay for medical education.

While insurance companies may protest against any suggestion that they increase payments to providers, their financial performance since the passage of the health-care overhaul has exceeded expectations,⁷³ leaving them in excellent financial health. Political pressure may mount for them to explicitly pay "their fair share" at a time when the taxpayer-funded public insurance program has been forced to cut payments as a result of federal budget pressures.

GME Cuts Would Boost Demand for Firms Providing Cap-Management Strategies

In looking at potential derivative business impacts resulting from Obama's proposal, reductions in Medicare GME funding could boost the demand for management and software firms that specialize in helping teaching hospitals maximize their GME funding and manage their mix of residency programs under the Medicare-mandated cap. Companies in this field include privately held Germane Solutions⁷⁴ of Dayton, Ohio, and Minneapolis-based Advanced Informatics.⁷⁵

CONCLUSION

In the absence of deficit reduction, Congress would be less likely to consider any near-term cuts to graduate medical education funding in front of a predicted shortage of physicians and in the wake of a host of other proposed cuts to industry funding. Lawmakers no longer have the luxury of merely considering if they should reduce Medicare spending; instead, they are grappling with which specific groups of health-care providers will be subject to cuts to arrive at prescribed overall reductions.

MedPAC's conclusion that Medicare is overpaying teaching hospitals for justifiable educational expenses, along with a lack of transparency regarding how hospitals spend money labeled for residency training, increases the possibility that a portion of any hospital-related cuts to providers will come in the form of reductions in GME funding.

The more drastic GME cost-cutting measures suggested by the likes of the Simpson-Bowles commission or the Congressional Budget Office seem unlikely to gain traction in the Democratic Senate, and the hospital industry can point to a series of other cuts it's facing. The 2010 health-care overhaul called for the hospital industry to accept \$155 billion in cuts over a 10-year period, representing about 1 percent of projected U.S. spending on hospital services during that time.⁷⁶ Additional hospital reimbursement reductions were contained in Obama's 2013 budget request as well as in the bill extending the payroll tax cut for the remainder of 2012.⁷⁷ In lieu of these proposed reductions, the targeted nature of a GME cut may appeal to some who wish to avoid across-the-board reductions. Such a cut would spare hospitals that don't train residents, which already deal with lower Medicare margins than their residency-sponsoring peers.

As a result, the White House's more modest proposal to reduce the IME add-on rate from 5.5 percent to 4.95 percent may merit serious consideration from policy makers. If Congress adopts Obama's recommendation to reduce Medicare's indirect medical education payments, while leaving direct education payments untouched, hospital officials will likely respond by cutting some services, identifying alternative sources of funding, renegotiating rates with private insurers, or shifting their mix of residency programs away from primary care to maintain more profitable types of programs. Historical evidence and an analysis of incentives in the IME formula suggest that while some individual resident programs may continue to be downsized or scuttled in response to a 10 percent cut, the nation's overall number of residency slots will remain largely unchanged.

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