

## Medicare Reform and Primary Care Concerns for Future Physicians

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**The widening income gap between specialists and primary care physicians (PCPs) has spurred many physician associations to reform the current Resource-Based Relative Value Scale fee schedule and sustainable growth rate expenditure target system. Hoping to better represent primary care, the American Association of Family Physicians formed a task force in 2011 to suggest supplements to the Relative Value Update Committee's procedural code recommendations to the Centers for Medicare and Medicaid Services. In addition, the predicted shortage of PCPs has caused many medical schools to increase class sizes; the scarcity of PCPs has also spurred the founding of new medical schools. Such measures, however, have not been met with more residency program sites or graduate medical education funding. The present article highlights major Medicare reform strategies and explores several issues affecting the field of primary care, including reimbursement, representation, and residency training.**

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President Lyndon B. Johnson signed the Medicare bill into law on July 30, 1965.<sup>1</sup> The program was designed to financially assist Americans older than 65 years with rising health care costs and to help pay for graduate medical education (GME) training positions.<sup>2</sup> In the absence of robust federal regulation of hospital charges, overall hospital spending rates increased by 50% between 1967 and 1970, which ultimately increased health insurance premiums.<sup>1</sup> Although the 1972 amendments to The Social Security Act attempted to control hospital spending by limiting Medicare reimbursement of certain costs, costs escalated again when the Medicare program was extended to people with disabilities in 1973. Between 1970 and 1975, hospital spending rates increased by 123%, and between 1975 and 1980, they increased by another 122%.<sup>3</sup> Congress's response to unregulated health care inflation was passing Medicare's Prospective Payment System in 1982. This payment system revolutionized the fee-for-service model of reimbursement by using Diagnosis Related Groups to pay physicians and hospitals a predetermined rate for a diagnosis, which dramatically shifted the billing power away from hospitals and toward the federal government. Spending continued to increase, however, because of growth in the volume of Medicare claims and the intensity of services offered by physicians, who still have some control in offering higher-cost services and visit codes to increase their Medicare revenue.<sup>4</sup> The first purpose of the present article is to provide readers with a foundation to understand key topics related to Medicare reimbursement and reform. The second

purpose of this article is to review primary care concerns related to relative value unit (RVU) updates, GME, and trends of student career choices in health care.

## The Resource-Based Relative Value Scale: Beginnings

The rollout of Diagnosis Related Groups was not well-received by 2 key entities: physicians and hospitals, neither of which could control the charges of health care services for patients who paid with Medicare.<sup>3</sup> As a compromise, the Physician Payment Review Commission proposed that Congress reform physician payments with a fee schedule based on the relative value of work needed to produce each service. The Commission may have been inspired by a 1979 article by Hsiao<sup>5</sup> published in *Health Care Financing Review* when he was a PhD graduate student at Harvard.<sup>5</sup> In this theoretical article, Hsiao developed relative value scales for medical and surgical services; the work led the Health Care Financing Administration (HCFA) to enlist Hsiao in implementing the article's proposals. Hsiao and his colleagues at the Harvard School of Public Health began working on a national Resource-Based Relative Value Scale (RBRVS) study in 1985; the proposals in part I of their reports to the HCFA in 1988 proved to be highly influential. The Omnibus Budget Reconciliation Act of 1989 enacted a physician payment schedule based on Hsiao's RBRVS system.<sup>6</sup>

Hsiao et al<sup>7</sup> attempted to set a fair value for physician services in each specialty by establishing a nonmonetary RVU for Medicare. The authors defined relative costs by measuring practice costs and the work in medical services across specialties as well as by establishing an RBRVS for evaluation/management services and invasive procedures.<sup>7,8</sup> It was during this process that osteopathic manipulative medicine was studied and assigned procedural codes for Medicare reimbursement.

Medicare pays physicians for services after submitting a claim using 1 or more current procedural termi-

nology (CPT) codes. The CPT code formula (*Figure 1*), which is used to calculate the allowable amount of compensation for a particular service, contains 2 steps: (1) Three RVU values (for total work, practice expense, and professional liability insurance) are multiplied by 3 of their counterparts in Geographic Practice Cost Index values, and (2) The geographically adjusted RVU from the first step is multiplied by a conversion factor. This factor is used to convert RVUs into a dollar payment amount and is updated by the Office of the Actuary of the Centers for Medicare & Medicaid Services (CMS).<sup>9</sup>

The RVU value for total work accounts for 48.3% of the total relative value and involves a physician's time to completion of a given task, technical skill and physical effort, mental effort and judgment, and stress due to potential risks.<sup>10</sup> Total work values are updated annually to account for changes in medical practice. The RVU for practice expense accounts for 47.4% of the total relative value and is the general cost associated with a given practice.<sup>10</sup> This component was initially derived from average Medicare-approved charges from 1991 and a portion of each specialty's revenue attributable to practice expense. The professional liability insurance RVU accounts for approximately 4% of the total relative value and was added in 2000 by the CMS.<sup>10</sup>

The RBRVS fee schedule was originally designed to stabilize differences in office visit fees and procedural costs for both specialists and primary care physicians (PCPs). Assuming budget neutrality and an absence of service volume changes, Hsiao et al<sup>11</sup> believed that fully implementing the fee schedule by January 1992 would increase the Medicare income of family practitioners by more than 30% and decrease the income of most surgical specialties by 10% to 20%. McMahon<sup>8</sup> voiced concerns in 1990 that the Harvard group "surveyed too few cases to cover the range of clinical practice in a specialty, had too little input in the selection of cases that were judged to be the same or equivalent between specialties, and used an unproven extrapolation methodology to assign final values for total work to non-sur-

veyed physician services.”<sup>8</sup> Several confounding variables to Hsiao’s predictions have emerged, such as a disproportionate increase in the volume of diagnostic and imaging procedures compared with the volume of office visits, the over-representation of specialists on the RVS Update Committee (RUC), and private insurer’s overvaluation of procedures vs office visits compared with Medicare.<sup>12</sup> Procedural codes with variable multipliers and modifiers have arguably rewarded specialists at the expense of PCPs, resulting in a still-widening income gap (*Figure 2*). The average PCP may earn \$3.5 million less in salary than a specialist counterpart over the course of his or her career.<sup>13</sup>

Panattoni et al<sup>14</sup> make the case for a hybrid (ie, public-private) RBRVS, which in their view allows for more market competition. The researchers analyzed reimbursement data of 155,290 surgical procedures from 2004 to 2006 in New Zealand, a nation that uses a hybrid RBRVS. They found “significantly greater variations in fees for low volume procedures and lower than predicted fees for high volume procedures, [which] is consistent with the hypothesis that market forces produced significantly lower prices than would exist under an RBRVS.”<sup>14</sup> Panattoni et al<sup>14</sup> concluded that a hybrid RBRVS would allow market forces to bring down the costs of high-volume procedures and therefore drive health care prices down.

Note how competition plays out in the hybrid RBRVS in contrast with the US’s public RBRVS system. Competitive market forces should theoretically decrease the

quantity of services when the price that purchasers are willing to pay also goes down. Reductions in US Medicare fees, however, do not always follow this pattern—reductions seem to cause an increase in volume and variable intensity of services. Some possible causes for this discrepancy in market drivers have been identified in a memorandum from the Health Care Finance Administration<sup>6</sup>: “First, patients often have very little information about the nature of care which they require... Second, patients (including Medicare beneficiaries) directly bear very little of the cost of services furnished, and thus have little incentive to monitor costs... Third, uncertainties in the practice of medicine allow for alternative practice styles within and across areas.”

Analysis of these contrasts is beyond the scope of this paper; however, the particular mix of public and private funds in New Zealand’s hybrid RBRVS system, as well as cultural differences, surely play a substantial role.

## Medicare’s Current Expenditure Target: The SGR

The system for expenditure targets began as the Medicare Volume Performance Standard, which was in effect from 1992 through 1997 and was tied to 5-year average adjustments of service volume and intensity. During that period, average annual growth of service use per beneficiary was at a record low level of 1.1%.<sup>15</sup> This trend changed in 1998 when the Balanced Budget Act of 1997

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1. 
$$[(\text{Total Work RVU} \times \text{Total Work GPCI}) + (\text{Practice Expense RVU} \times \text{Practice Expense GPCI}) + (\text{Liability Insurance RVU} \times \text{Liability Insurance GPCI})] = \text{Geographically Adjusted RVU Total}$$
  2. 
$$\text{Geographically Adjusted RVU Total} \times \text{conversion factor} = \text{Allowable Amount}$$
- 

**Figure 1.**

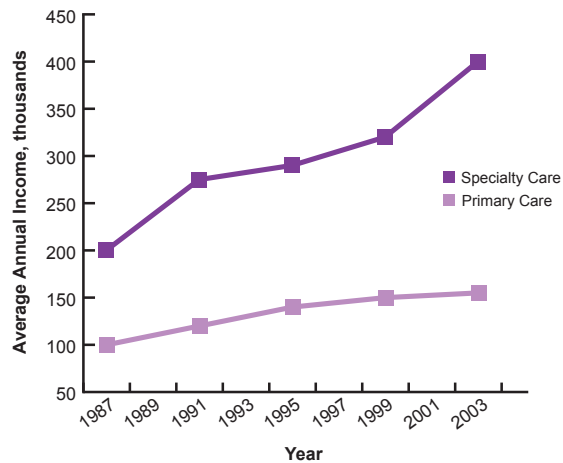
Two steps to calculate the allowable amount of compensation for a service, according to the Centers for Medicare and Medicaid’s current procedural terminology.<sup>9</sup>  
*Abbreviations:* GPCI, geographic practice cost index; RVU, relative value unit.

replaced the Medicare Volume Performance Standard with the Sustainable Growth Rate (SGR).<sup>16</sup> The SGR formula factors in the Gross Domestic Product (GDP) to determine a target rate of volume and intensity.<sup>2</sup> Growth in spending, however, proved to be larger than SGR targets had predicted, which theoretically could have been reconciled by reducing fees to limit future spending. The SGR may have failed as a cost-containment policy as a result of inflationary pressures and Congress' repeated actions to prevent the formulated negative updates from occurring.<sup>15</sup>

The Social Security Administration formulates the SGR with an estimated 10-year average annual percentage change in real GDP per capita and with estimated percentage changes in fees of physician's services, average totals of Medicare beneficiaries, and excess expenditures from changes to laws and regulations.<sup>17</sup> Therefore, SGR's economic parameters vary independently of practice cost. If volume and intensity cause spending to exceed a predefined growth rate, the SGR system can reduce fee updates to help limit expenditures.

The SGR formula was designed with competitive market forces in mind and is set to tighten spending in certain periods, such as in 2002 when a 4.8% fee reduction occurred.<sup>18</sup> Congress revised the way they formulated the SGR in 2003 by using the previous 10-year annual average growth of GDP instead of a single year's real GDP per capita. A series of SGR fixes have also been issued, including the Medicare Improvements for Patients and Providers Act of 2008 (replacing a 10.6% reduction with a 0.5% extension for 2008), the Medicare and Medicaid Extenders Act of 2010 (preventing a 25% reduction to Medicare reimbursement for 2011), and the Middle Class Tax Relief and Job Creation Act of 2012 (delaying a 27.4% reduction in physician Medicare reimbursement for another 10 months starting in February 2012).<sup>15</sup>

Several organizations have suggested reforms for the SGR, agreeing that short-term fixes only make long-term fixes more expensive. The Medicare Payment Advisory Commission sought to repeal the SGR formula and to replace it "with specified updates that would no longer be



**Figure 2.**

Approximate average annual income of physicians by healthcare field illustrating a widening income gap between specialty care and primary care. Specialty care is represented by orthopedic surgery and radiology. Primary care is represented by family medicine and general medicine.<sup>13</sup>

based on expenditure-control formula."<sup>19</sup> The American Medical Association (AMA) recommendations expand on this idea, proposing that Medicare should replace the SGR with the Medicare Economic Index, which is a measure of annual increases in cost of medical practices and arguably offers more fair updated rates of reimbursement than the SGR.<sup>20</sup> The American Osteopathic Association (AOA) also supports the Advisory Commission's goal of repealing the SGR through 3 phases in the next decade while using Overseas Contingency Operations funds to offset the cost of repeal.<sup>21</sup> Phase 1, "Stability," removes the SGR from the equation for updating annual payments and conversion factors by December 2018. Phase 2, "Innovation and Trial of New Payment Models," encourages Congress to develop and test new delivery and payment models, such as "the patient-centered medical home, accountable care organizations, beneficiary assignment to primary care practices, and bundled payments, among others" from 2013 to 2018. Phase 3, "Implementation of New Payment Models," begins January 2019 and transitions payments from the fee-

for-service model to the model(s) designated by phase 2 testing, exempting practices that qualify using an alternatively successful fee-for-service model.

## The RUC's Primary Care Dilemma With the CMS

In preparation for a new RBRVS system to be implemented by Medicare in January 1992, physicians and affiliates of the AMA held their first Specialty Society RUC meeting in November 1991.<sup>6</sup> The AMA established the RUC to offer the health care provider's perspective on relative values of service to the CMS by suggesting updates in the RVU for any given CPT code to the HCFA. In July 1992, the RUC voiced some of its first concerns by submitting 253 new and revised CPT codes to the HCFA. The RUC's first Five-Year Review of the RBRVS was held January 1997, which impacted RVU changes to around 400 codes after the HCFA accepted 95% of the RUC's recommendations.<sup>6</sup>

Until 2012, the RUC's roster had 29 seats, with only 3 held by groups that directly represent PCPs: the American Academy of Family Physicians (AAFP), the American Academy of Pediatricians, and the American Congress of Obstetrics and Gynecology. In a broader sense, PCPs were also indirectly represented by large organizations such as the AMA, the AOA, and the American College of Physicians. Although some commentators have questioned the RUC's efficacy, the RUC remains the chief advocating body of PCPs to the CMS.

The RUC explains that efforts to improve primary care reimbursement have been "over-shadowed by a flawed [SGR] formula, reluctance by [the CMS] to adopt several recommendations, and distortions created by private payers in their implementation of the RBRVS."<sup>22</sup> The RUC, which was criticized for its low primary care representation and undervaluation of cognitive services,<sup>23</sup> responded with letters in 2007, 2009, and 2010 that addressed the criticism, clarified the RUC's vision of its role, and suggested how other organizations could collaborate to help encourage the CMS to adopt more of the RUC's primary care recommendations.

The CMS has historically accepted a majority of the RUC's overall RVU update recommendations. In 1995, 2000, 2005, and 2010, the CMS ratified RUC recommendations with acceptance rates of 96%, 98%, 97%, and 75%, respectively.<sup>10</sup> The substantially lower percentage in 2010 is possibly explained by Tavenner and Sebelius,<sup>9</sup> who reported that in 2007 the CMS was developing a unique survey, known as the Physician Practice Expense Information Survey, for determining resource-based practice expense RVUs that would be transitioned into effect by 2010. This survey included physician and nonphysician practitioners, had more than 3000 respondents from more than 50 specialty and health care professional groups, and it is noted by the CMS to be "the most comprehensive source of practice expense survey information available to date."<sup>9</sup>

In June 2011, the AAFP announced they will be funding a task force to investigate methods for valuing services provided by PCPs. The AAFP also suggested RUC reforms in PCP representation in a letter to RUC chair Barbara Levy. These reforms included removing 3 rotating seats held by specialty groups, adding 4 primary care seats plus 1 seat for geriatric medicine, and creating 3 nonphysician seats for consumers, employer advocates for health systems, and health plans. The AAFP also pushed for improved voter transparency to highlight those responsible for supporting primary care and to put greater public pressure on each medical organization's representative with an RUC seat. A deadline for responding to the AAFP proposals was set for March 1, 2012.<sup>24</sup>

The compromise that the AMA ultimately chose was met with both criticism and praise. In February 2012, the AMA announced that 2 seats—1 for the American Geriatrics Society and 1 for an actively practicing primary care physician—would be added in an effort to improve primary care's presence in the RUC. Each of the current 31 RUC seats has an equivalent alternate seat, and the RUC also has an Advisory Committee of approximately 100 members appointed by specialty societies. Regarding voter transparency, Levy<sup>24</sup> stated that—although she considers the RUC's processes to be transparent—

the RUC will nonetheless begin to record votes and publish some total vote counts on the AMA website.<sup>24</sup>

In March 2012, the AAFP expressed disappointment over the RUC's minimal reforms in PCP representation and announced the AAFP would continue to provide input to the RUC but would also submit data directly to the CMS on a regular basis.<sup>24</sup> The AAFP primary care task force is composed of 1 CMS observer and 21 health policy makers, academic researchers, consumers, and physicians. That same month, the AAFP task force submitted its first recommendations to the CMS, which included 6 new codes for evaluation/management services and improved payment options on the basis of first contact, continuity, comprehensiveness, and coordination-of-care precepts.<sup>25</sup>

In light of the AAFP's suggestions for codes and request for separate reimbursement for non-face-to-face encounters, Tavenner and Sebelius,<sup>9</sup> writing on behalf of the CMS, insisted that the current total work calculation is sufficient because it already includes consideration for non-face-to-face encounters. Tavenner and Sebelius<sup>9</sup> cite the 99213 code as bundling care coordination, communication, and other necessary care management for post-service. They acknowledge, however, that these broad codes may not cover some comprehensive services for coordinating care, "such as those who are returning to a community setting following discharge from a hospital or [SNF]."<sup>29</sup> Therefore, the CMS has proposed creating a new Healthcare Common Procedure Coding System G-code. G-codes are used to supplement claims while measuring the quality of services provided, and the proposed updates to the code, although still in development, will be designed to regulate improved care coordination services while improving the quality of care and decreasing costs.

Another related concern of primary care advocacy includes financial contributions to association Political Action Committees (PACs). For the past 3 election cycles, the American Association of Orthopaedic Surgeons PAC has maintained its status as the best-funded of all US medical societies. The chair of the PAC stated that "[orthopedic surgeons] have no chance of achieving

[their] health policy advocacy agenda without a seat at the table among members of Congress, and to have that seat requires a robust PAC."<sup>26</sup> Data listing all PAC donations during the 2011-2012 election cycle reveal that the medical association PACs who gave over \$1 million, in descending order, are: American Academy of Orthopaedic Surgeons, American College of Radiology, American Society of Anesthesiologists, and American College of Emergency Physicians.<sup>27</sup>

## Primary Care Shortages and Educational Concerns

With almost all of the baby boomer generation now older than 50 years, the demand for preventive medicine and PCPs has risen considerably. The overall demand for internists and family physicians is projected to increase by 28% in 2025, whereas the supply of PCPs may only increase by 2% to 7%, resulting in a need for 35,000 to 44,000 generalists to close the gap.<sup>28</sup> After the SGR extension of 2008, an AMA survey<sup>20</sup> reported that 60% of responding physicians would have declined some new Medicare patients if the cut had not been postponed. The Medical Group Management Association<sup>20</sup> stated that 24% of successful practices were already limiting their acceptance of new Medicare patients.

Weida et al<sup>29</sup> reported that specialties like orthopedics and radiology made more money in 2008 than 1998 (adjusted to 2008 dollars) and also grew their number of first-year residency positions during that time; on the other hand, some primary care specialties (eg, pediatrics, family medicine) made less money in 2008 than 1998 (adjusted to 2008 dollars) and their number of first-year residency positions fell.<sup>29</sup> The income that physicians make, both for themselves and for hospitals, determine which residency programs can remain funded. A relationship between physician income and growth in residency positions suggests that hospitals and medical students desire residency programs that promise greater financial reward.

The dearth of primary care residency positions uniquely affects osteopathic medical students because

osteopathic manipulative medicine is predominantly performed in primary care settings. The medical profession in the United States has become more specialized, with osteopathic medical courses now frequently taught by specialists who do not use osteopathic manipulative medicine.<sup>30</sup> Over the past few decades, osteopathic medical graduates have also chosen specialty residencies over primary care residencies; moreover, 60% of osteopathic medical students are entering allopathic postdoctoral training programs.<sup>31</sup> Several osteopathic hospitals have had difficulty filling residency spots and have either closed or integrated with allopathic hospital systems. In 2010, Phillips et al<sup>13</sup> wrote that “with low starting salaries and declining median compensation, primary care specialties lost residency positions, while hospitals offered more residency positions to ‘lifestyle specialties’ with high and growing median salaries.”

American Academy of Physician Assistants data from 1997 to 2006 revealed that fewer physician assistants (PAs) are working for PCPs. Because they enable specialists to perform more procedures in less time, specialist-oriented PAs are often better compensated than PCP-oriented PAs. As reported by Morgan and Hooker,<sup>32</sup> in surgical subspecialties, the ratio of physician to PAs was a dense 3:1, whereas for family/general medicine it was 6:1 and for general internal medicine it was 20:1. From 1997 to 2006, the population of PAs increased by 262% in internal medicine subspecialties and 186% in surgical subspecialties, contrasted with only 61% for general internal medicine and 39% for family/general medicine.<sup>32</sup> The presence of PAs in primary care increased in the mid-1990s but then fell to 41% of total practicing PAs in 2005.<sup>32</sup> In 2007, 24.9% of PAs practiced in family/general medicine 21.9% in surgical subspecialties, 10.3% in internal medicine subspecialties, and 2.4% in general pediatrics.<sup>32</sup> The authors<sup>32</sup> conclude that “if there is a societal interest in encouraging PAs to practice in primary care, new economic or educational policies may be required.”

In 2011, Schwartz et al<sup>28</sup> analyzed 2 national surveys of 1244 and 1177 senior medical students in their senior years from 1990 and 2007, respectively; the results re-

vealed that the number of primary care enrollments had decreased by 24%. Moreover, the number of students choosing internal medicine residencies had decreased by 54%, and the number of internal medicine residents choosing to practice general internal medicine after residency had decreased by 34%.<sup>28</sup> Analyzing the reasons why students are choosing specialty care over primary care is beyond the scope of the present article, but many authors have attributed this shift to multiple factors, including gender, race and ethnicity, rural or urban backgrounds, attitudes and values,<sup>12</sup> and student debt reaching a specific magnitude.<sup>33</sup> The Department of Health and Human Services addressed the debt concern by offering a Title VII subsidized loan financial incentive, such as the Primary Care Loan, for newly accredited physicians who agree to either work for 10 years in primary care or work in primary care until the loan is repaid in full.<sup>34</sup>

Offering some relief to future PCPs, the Patient Protection and Affordable Care Act (ACA)<sup>35</sup> which was signed into law March 2010, implemented the Primary Care Incentive Payment Program. The program gives primary care physicians an additional 10% of the Medicare-paid amount for primary care services beginning in 2011 and ending in 2015.<sup>36</sup> In 2012, the program permitted Medicare to pay an additional \$664 million to primary care health professionals, including physicians, nurse practitioners, and physician assistants in both rural and urban areas.<sup>37</sup> Furthermore, a provision of the ACA describes how Medicaid services provided by PCPs would be paid at Medicare rates for at least 2 years. Whereas this provision was scheduled to go into effect January 2013, the provision is currently delayed due to challenges of coordinating the CMS with each state’s Medicaid office. The CMS emphasizes that qualifying physicians will be paid retroactively to January 2013 once each state’s Medicaid office assesses their eligibility.<sup>38</sup>

In 2006, the Association of American Medical Colleges (AAMC) requested that US allopathic medical schools increase enrollment to 30% over 2002 levels by 2016.<sup>39</sup> In requesting this increase, the AAMC’s goal was

to counterbalance projected physician shortage numbers by suggesting increases to both class sizes and the number of medical schools. From 2002 to 2009, enrollment increased by 9.7% in allopathic medical schools and by 60.8% in osteopathic medical schools.<sup>40</sup> The projected 2012 first-year class size for allopathic medical schools was 19,909, which closely matches the actual first-year 2012 MD class size of 19,517 (a 1.5% increase from 2011).<sup>40</sup> The total first-year 2012 class size at osteopathic medical schools was 5,804 (a 2.9% increase from 2011).<sup>40</sup> Per results from the 2008-2009 Liaison Committee on Medical Education Annual Medical School Questionnaire, the increased class size has created difficulties for inpatient clinical placements at core rotations. Even if medical schools increase enrollment, the future physician shortage will not be reversed unless more GME training positions are created. The creation of the desired 15,000 positions is projected to cost approximately \$15 billion over 10 years, and Congress has yet to pass legislation increasing Medicare funding for this effort.<sup>41</sup> Therefore, in 2010 the AAMC suggested that the AMA “continue to advocate for funding...to increase the number of [GME] positions” and “develop strategies to address the current and potential shortages in clinical training sites for medical students.”<sup>39</sup>

As envisioned in 1965, Medicare was to accept part of the cost of GME until society found another way to manage such educational costs.<sup>42</sup> Since its inception, however, Medicare has provided the majority of GME funding: approximately \$3 billion per year of direct GME “to hospitals that cover medical education expenses related to the care of Medicare patients” and approximately \$6.5 billion per year with indirect medical education “for the added patient-care costs associated with training.”<sup>42</sup> Financial pressure on GME has increased because of several factors, including unaltered teaching cost estimates since 1983, lack of direct physician educator control over Direct GME funding, and a Direct GME cap that the Balanced Budget Act of 1997 introduced. In 1994 and 1995, Medicare offered a 6% inflation-adjusted update to Direct GME for primary care residency positions, including specialties such as general

**Table 1.**  
Change in Proportion of Total Residents and Fellows per Specialty in 2007 and 2010 From Programs Affiliated With the Accreditation Council for Graduate Medical Education, %<sup>44,45</sup>

Specialty	DO			MD		
	2007	2010	Change	2007	2010	Change
Family Medicine	14	17	+3	45	44	-1
Pediatrics	7	9	+2	69	66	-3
Internal Medicine	6	7	-1	49	48	-1
General Surgery	3	3	0	78	79	+1
Anesthesiology	10	8	-2	76	79	+3
Radiology	4	4	0	89	88	-1
Physical Medicine and Rehabilitation	26	26	0	57	55	-2

**Table 2.**  
Growth in ACGME Resident Applicants by Specialty, %<sup>a</sup>

Specialty	DO	MD	IMG
Pediatrics	38	8	81
Family Medicine	23	23	150
Physical Medicine and Rehabilitation	17	14	351
Internal Medicine	16	4	104
General Surgery	3	4	141
Anesthesiology	2	-1	223
Radiology	-8	-7	225

<sup>a</sup> Data are from Electronic Residency Application Service.<sup>46,47</sup>

**Abbreviations:** ACGME, Accreditation Council for Graduate Medical Education; IMG, international medical graduate residents.

internal medicine, preventive medicine, general pediatrics, osteopathic general practice, family medicine, and obstetrics-gynecology.<sup>2</sup> Although Medicare supports teaching hospitals with billions of dollars annually—Medicaid provides \$2 billion and the Department of Defense and Veterans Administration provide additional support—teaching hospitals remain financially challenged. Furthermore, Rich et al<sup>2</sup> echoed the concerns of



**Table 3.**  
**The 5 Most Popular Specialties for Residency Applicants, by Specialty (No.)**

Rank	DO	MD	IMG
1	Internal medicine (1256)	Internal medicine (7656)	Internal medicine (14,103)
2	Family medicine (889)	Transition year (3294)	Family medicine (10,815)
3	Emergency medicine (576)	General surgery (2702)	Pediatrics (4927)
4	Transition year (522)	Pediatrics (2308)	General surgery (4646)
5	Pediatrics (459)	Family medicine (2291)	Psychiatry (3952)

<sup>a</sup> Data from the Electronic Residency Application Service.<sup>46</sup>

**Abbreviations:** DO, osteopathic physician; IMG, international medical graduate; MD, allopathic physician.

many physicians and attributed the economic strains on GME to challenges such as “rapid changes in medical technology, decreased reimbursements for clinical services, increasing uncompensated care, increasing wage costs, and reductions in federal GME payments.”

In 2006, the AAMC requested that medical schools increase their student enrollment to alleviate projected physician shortages.<sup>39</sup> The subsequent uptick in student enrollment, however, has not been met with comparable increases in first-year residency positions. Further, the Accreditation Council for Graduate Medical Education (ACGME) has undertaken reforms in residency and fellowship accreditation, which may also limit enrollment of international medical graduates and osteopathic graduates.<sup>39</sup> Talks have begun between the accrediting bodies of both allopathic and osteopathic residencies for consideration of a merger as soon as July 2015.

One innovative strategy to raise the number of GME slots is to shorten the number of years that physicians train, an alternative currently being tested by the American Association of Colleges of Osteopathic Medicine.<sup>40</sup> Another short-term strategy to address shortages in clinical training sites is to add a barrier to entry into residency and fellowship programs. The ACGME proposed Common Program Requirements, effective July 2011, to address alleged concerns regarding resident credentialing. The requirements limited many international

medical graduate residents from entering ACGME residencies and fellowships by requiring either additional ACGME residency year(s) or simply barring entrance due to potentially exceeding the program’s maximum 5 years for 100% Direct GME funding. The proposed requirements may also limit future graduates of osteopathic medical schools who wish to enter ACGME residencies and fellowships, thus conflicting with the previous 40 years of cooperation between AOA and ACGME residencies. The AOA recently submitted a formal response calling on the ACGME to rescind the proposed requirements.<sup>43</sup>

The AAMC data for ACGME–affiliated programs from 2007 to 2010 reveal an increase in the presence of osteopathic physicians in family medicine, pediatrics, and internal medicine relative to a decrease in the presence of allopathic physicians in the same areas (*Table 1*).<sup>44,45</sup> The Electronic Residency Application Service data from 2009 to 2011 bolsters the case that ACGME primary care residencies are growing at a faster rate than specialty care residencies, but that the current number of residents and fellows are still predominantly in specialty care. Furthermore, the number of applications received from international medical graduates are increasing at a much greater rate than that of osteopathic and allopathic residency applicants (*Table 2*).<sup>46,47</sup> The total number of resident applicants, represented by the top 5 residencies by ap-

plicant type, is balanced, on the whole, between primary care and specialty care (Table 3).<sup>47</sup>

The match rates in the 2013 National Residency Match Program have increased for 4 consecutive years. Nearly 3000 family medicine positions were filled, with a fill rate of 96% in 2013 compared with 94.5% in 2012. The 2013 total for US medical student seniors matching family medicine is 1374, which is the highest since the year 2002, and the total number of family medicine residency positions are greater than 3000, which is the first time since the year 2001. Several factors confound the success of comparing yearly match rates, however, including an increase in the number of total US medical graduates, changes to the methods for counting students, and increases in the number of available slots.<sup>48</sup> With regards to the 2013 AOA match, family medicine match rates increased by 11% over 2012 and remained the AOA's largest matched specialty with 472 positions filled in 2013 compared with 433 positions filled in 2012.<sup>49</sup>

## Conclusion

The past few decades for the primary care profession have been plagued by generally unfavorable Medicare reform and projected PCP shortages. However, persistent political advocacy, financial support from programs like Title VII Grants and the National Health Service Corps, and recent implementation of the ACA may have played a role in the increasing trend of primary care residency match rates. Other causes for high primary care match rates might include a steadily growing number of graduating medical students, increases in family medicine residency positions, and changes to the National Resident Matching Program's methods for counting students. Whereas more students seem to be choosing primary care, questions remain about how we will manage the primary care shortages.

Further federal policy support, increased lobbying dollars, and careful attention to the history of health care reform might maintain primary care's momentum. Although the present article has limited its discussion to Medicare reform and related primary care and educa-

tional concerns, future discussions of health care policy reform should address the ballooning practice costs for physicians, health care charges for patients, and educational debt of future physicians.

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