

# The Shortage of Generalist Physicians and Federal Funding of Graduate Medical Education

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**G**raduate Medical Education (GME) payments through the Health Care Financing Administration (HCFA) represent the largest portion of federal funding in direct support of training for health professionals. Whatever the benefits of these funds, they clearly have not served as a positive factor in addressing the emerging shortfall of generalist physicians. Therefore, a variety of options are being discussed for restructuring the incentives associated with HCFA GME funds. Seven principal alternatives that have been proposed to address these problems are the following: modification of hospital GME payments, GME payments to medical schools, GME payments to residency programs, GME transfers through Medicare part B, GME transfers to the Health Resources and Service Administration, GME transfers to states through block grants, and GME payments to academic consortia. Unfortunately, each of these approaches offers substantial disadvantages and faces important opposing constituencies. To address these weaknesses, combined strategies and "all payor" federal mechanisms of GME financing have recently been proposed. These compromise approaches have their own administrative and political liabilities as well. Revisions in current HCFA GME payments may be preferable as a first step, but more comprehensive approaches involving all payor financing with mechanisms that reconnect medical school training with primary care practice will likely be required to ensure efficient and effective reform. Such major shifts in the federal funding of GME will not be quick in coming, however, and will doubtless be characterized by a compromise of policy effectiveness with political feasibility.

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The US government has made a substantial investment in the health care of Americans. This has included payments for medical care, physician services, the funding of biomedical research, and support for the training of health professionals. Some federal support for physician education and training has been provided through the training grant programs of the Health Resources and Services Administration (HRSA), some through funding of resident positions by the Department

of Veterans Affairs; and the bulk through payments for Graduate Medical Education (GME) by the Health Care Financing Administration (HCFA). In addition, academic medical centers derive substantial funding for faculty salaries from funds for patient care and biomedical research.

Despite this sustained investment in physicians' training, many observers have noted the growing disparity between the products of that training and societal needs.<sup>1</sup> The recent debate about health care reform has prompted many observers to note that, in addition to the highest costs per capita, our system is also unique in having the lowest proportion of generalist physicians in the developed world.<sup>2</sup> The cost implications of

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the current and future oversupply of specialists have been suggested by a number of recent studies.<sup>3-7</sup> Thus, it is becoming clear that if health system reform is to provide expanded access to care with constrained cost escalation, the proportion of generalist physicians in practice must be substantially expanded.<sup>7</sup>

Despite increasing evidence of the need for more generalists, the current proportion of generalists may continue to decline.<sup>8</sup> Current projections by the Council on Graduate Medical Education (COGME) indicate that if current trends are not reversed, in the year 2000 only 30% of physicians leaving medical school will enter generalist careers.<sup>9</sup> While the problem of the disappearing generalist is multifactorial, the present mechanisms for financing medical education are believed by many to contribute to an oversupply of specialists.<sup>10,11</sup>

In the past 2 years, multiple professional organizations, including the American Medical Association, American College of Physicians, American Academy of Family Practice, COGME, Physician Payment Review Commission (PPRC), Association of American Medical Colleges, and others have agreed that the ratio of primary care physicians to specialists should be 1:1. This unprecedented consensus provides unique opportunities and challenges. The importance of unanimity with respect to the overall goal is a necessary first step in developing a framework for ensuring that public resources for physician training result in a more effective physician specialty mix for the health needs of the American people. In this report, we review the current mechanisms of federal financing of graduate medical education and discuss the advantages and feasibility of alternatives to increase the proportion of generalist physicians.

### CURRENT GME FUNDING THROUGH HCFA

Health Care Financing Administration GME payments through the

Medicare program represent the largest portion of federal funding in direct support of training for health professionals. For example, by 1986, hospital income from Medicare supported 26% of the salaries of internal medicine residents, the Department of Veterans Affairs and Armed Forces funding supported 16%, state and local government funding supported 10%, and less than 5% of income came from federal or private foundation teaching grants.<sup>12</sup>

Graduate Medical Education payments by Medicare are provided through two separate mechanisms: direct medical education (DME) payments (\$1.5 billion in 1991) and an indirect medical education adjustment of reimbursements for hospital care (\$3.3 billion in 1991).<sup>13</sup> In calculating the direct costs of graduate medical education, hospitals may include residents' stipends, salaries of supervising faculty members, and other operating expenses, such as administrative costs and institutional overhead. These reimbursements are based on hospital-specific costs per resident for 1984 or 1985 (adjusted for inflation). Such per-resident cost is multiplied by the number of full-time equivalent house staff. These per-resident costs are reimbursed at only 50% of the full-time equivalent after the fifth year of residency or more than 1 year after the number of years required for board certification (whichever is less). This total package of reimbursement for DME costs is proportionate to the share of patients admitted to the hospital whose care is paid for by Medicare.

The indirect medical education (IME) payments through Medicare are more straightforward in terms of mechanism but more controversial in terms of what is being compensated. Under the IME adjustment, hospitals receive a percentage adjustment to their total diagnosis related group (DRG) payments based on the ratio of interns and residents to hospital beds. This payment is ostensibly to compensate for the "higher costs of care" of teaching hospitals, but the

source of this higher cost remains a subject of debate. Some rationales include unmeasured institutional costs of teaching (eg, additional support staff), inefficiency owing to care by inexperienced physicians (eg, increased testing, longer hospital stays), and adverse case mix and patient severity of illness (not adequately measured with DRGs). The last item has been attributed to various causes ranging from adverse selection of lower income patients (also compensated through the disproportionate share adjustment) to adverse selection of patients requiring care with the newest technology. Although teaching hospital status may be a controversial measure of severity of illness or of the tertiary care market, nonetheless, the IME payment has been an important source of revenue for teaching hospitals. Indeed, it is often argued to be critical to the financial viability of these institutions.<sup>14</sup>

**W**HATEVER the benefits of these mechanisms in the funding to graduate medical education, they clearly have not served as a positive factor in addressing the emerging shortfall of generalist physicians. Although these payments may be adequate to ensure the financial viability of family medicine residencies in some community hospitals,<sup>15</sup> the inpatient care orientation of this funding rewards hospitals for developing or expanding residency programs focused mainly on inpatient services (particularly those programs that require only 5 years or less of postgraduate training).

Because of this inpatient orientation of HCFA GME funding, changes were considered during the late 1980s to support medical education in ambulatory care.<sup>12,16</sup> With the current recognition of an emerging shortage of generalist physicians, focus has shifted to the impact of federal funding on physician supply.<sup>16-18</sup> In the

present political and economic climate of the United States, new federal funds to address the problems of generalist physician supply are unlikely to be forthcoming. Therefore, attention is being focused on restructuring current modes of financing health professional training. Since HCFA GME payments represent the dominant federal funding process relevant to physician training, it is not surprising that this represents a prominent focus for debate. A variety of options are being discussed for restructuring the incentives associated with HCFA GME funds. In the following discussion, we will review the seven principal alternatives that have been proposed and describe potential solutions to the administrative and political problems associated with changes in HCFA GME payments.

#### **MODIFIED HOSPITAL GME PAYMENTS**

A number of methods are being considered for modifying the current hospital-directed process for HCFA GME funding, both direct and indirect. These include differential weights for generalist resident positions, limited years of postgraduate support, faculty support for the training of generalist physicians, modifications to support ambulatory education, limited GME funding to institutions with "excessive" numbers of specialty residents, and other incentives to emphasize primary care. The advantages of retaining the current HCFA GME payment mechanism in a modified form are several. This approach is less disruptive than more radical changes, both administratively (HCFA already has a mechanism for paying hospitals) and politically (since teaching hospitals and medical schools have become accustomed to this approach). Administrative changes in the distribution of hospital-directed GME payments can also be made predictable and budget neutral (particularly important given the current political efforts to control the federal deficit).

The disadvantages of retaining

even a modified version of the current GME payment system remain substantial. It will be difficult to hold teaching hospitals accountable for changes in the supply of primary care physicians. Hospitals have little direct involvement with the training of medical students and thereby limited effect on the proportion of medical students entering primary care residencies.

Furthermore, teaching hospitals have limited power to encourage recruitment into generalist residencies and even less to ensure retention in general medical practice. Individual hospital efforts to decrease specialty positions and increase primary care positions may not result in an overall increase in the number of students in primary care careers. Furthermore, preferential weights for generalist positions may not meaningfully affect the decisions of administrators. In some academic medical centers, change in GME weights may have only modest effects on total HCFA GME payments.<sup>13</sup> In many settings, the other benefits of having subspecialty trainees (eg, enhanced clinical productivity, contributions to teaching or research) may provide a financial rationale for continuation of these positions.

#### **GME PAYMENTS TO MEDICAL SCHOOLS**

An alternate approach would be to change HCFA GME payments from a hospital focus to a medical school focus.<sup>18</sup> Payments could be for training programs, departments, generalist faculty positions, primary care resident positions, support for primary care-oriented student curricula, and establishment of ambulatory sites of training. The first advantage to this approach is administrative ease; HCFA would have to pay only 126 medical schools approved by the Liaison Committee on Medical Education and 16 colleges of osteopathic medicine approved by the American Osteopathic Association. Second, graduates of medical schools can be tracked for entry into

primary care residencies and, ultimately, into generalist practice. Incentives, therefore, could be based on objective criteria. Third, there is increasing evidence that medical school curricula influence entry into primary care residencies.<sup>19</sup> Thus, in view of the educational mission of the medical school, it may be more appropriate to reward them for the product of their educational program (in this case, generalist physicians). Finally, as with the current approach to HCFA payments, it is possible to predict and control the costs of this program.

The disadvantages of funding graduate medical education through medical schools would be considerable. University hospitals will argue that the original rationale for reimbursement was the cost of graduate medical education (both direct and indirect) and that funds are required to provide base support to teaching hospitals. Without this support, hospital administrators may argue that patients receiving Medicare may have reduced access to academic medical centers. In addition, many generalist residency programs (especially in family practice) are based at community hospitals with little or no medical school affiliation. Program directors and hospital administrators at these institutions will be justifiably skeptical regarding how their needs will be met by medical school deans newly in control of substantial federal funding for graduate medical education. Thus, there is likely to be substantial opposition to this proposal from community teaching hospitals as well as from academic medical centers.

#### **GME PAYMENTS TO RESIDENCY PROGRAMS**

With this approach, training programs of the desired type would be directly supported by HCFA through faculty positions, resident positions, and other administrative cost supports. An advantage of this approach is that the funds go directly

to those responsible for training the physicians. As a result, program directors could shift resources to support generalist training in ambulatory and other nonhospital sites. The success of the programs and appropriate use of the funds can be linked closely to the intended product of the funding while budget neutrality is maintained.

**T**HE DISADVANTAGES to this approach are substantial, however. The direct funding of more residency training programs may have little or no effect on the pool of students selecting primary care residencies and thereby have little effect on physician supply. Furthermore, this approach increases the types and numbers of organizations that might receive funding, thus complicating the administrative process. In addition, the program director's accountability for primary care physician supply will be limited since the current training program can only be loosely tied to historical recruitment or retention of students for primary care careers. Finally, this approach would place program directors located in academic medical centers in a different, but complicated, relationship with department chairs, deans, hospital directors, and others. Thus, the political resistance to such changes could be considerable.

### **GME TRANSFERS THROUGH MEDICARE PART B**

Examples of this approach include primary care preceptor billing for teaching or resident billing for supervised primary care activities. A principal advantage of this approach is that it directly supports an ambulatory site for resident education and can encourage teaching by generalist role models.

There are substantial disadvantages as well. The cost of such a program would be unpredictable and budget neutrality could be difficult to

maintain. Administration of such a program would be complex, with each resident or faculty preceptor an entity for whom payments must be rendered. Documenting standards of eligibility for payment could be complicated. Such administrative complexity could increase the risk of fraudulent activities, and oversight would add additional costs to this approach.

### **GME TRANSFERS TO HRSA**

Through the Bureau of Health Professions in HRSA, the funds formerly directed to hospitals could be used to support residency programs, faculty development, student rotations, ambulatory care training sites, loan repayments, and other programs oriented toward preparing generalist physicians. The advantages of this approach are that HRSA already has established policies and procedures for supporting primary care training, faculty development, and loan repayment.

The disadvantages include the fact that the current grant process and requirements of HRSA program funding are greater than those related to HCFA GME transfer payments to academic medical centers. What teaching hospitals can do with the GME money they receive is quite flexible under HCFA regulations. Thus, introducing programmatic innovations, such as recruitment of residents, diversion of funds to faculty development, or support of medical student programs in primary care, might be more complicated (at least under current HRSA procedures). Furthermore, given the large HCFA GME expenditures relative to the current Bureau of Health Professions budget, a dramatically expanded administrative infrastructure would have to be established over a relatively short time frame to accommodate this approach. Finally, developing and implementing such a proposal might be politically complex, potentially placing HRSA in an adversarial relationship with the leadership of academic medical centers and teaching hospitals.

### **GME TRANSFERS TO STATES THROUGH BLOCK GRANTS**

In this approach, HCFA would establish a state block grant program for GME funds. States could use these funds in a variety of ways to increase the production of primary care physicians. A modest version of this approach is under way in New York State. A more dramatic and comprehensive strategy was recently proposed in the Kentucky General Assembly<sup>20</sup> but, not surprisingly, remains entangled in an ongoing debate on state health care reform.

The advantages of such an approach are several. First, HCFA is accustomed to administering such programs through its Medicaid experience. Second, this approach could allow the development of regionally specific approaches to the problem of generalist physician supply. Third, this approach could distribute funds to populations based on regional need rather than based on the local density of medical schools, residency programs, or teaching hospitals. Finally, this proposal can be administrated with predictable and controllable cost.

The disadvantages of this approach are not trivial, however. First, the efficiency, and even efficacy, of the diverse state programs in producing generalist physicians would be unpredictable. Second, the administrative costs of the effort would likely be increased, since both federal and state bureaucracies would be involved in disbursing funds to the end users (whether the users were medical students, residents, generalist physicians, program directors, or deans). Third, this approach might have unpredictable and undesirable effects on the relationship of privately funded medical schools to the training of generalist physicians. Finally, this process could become highly politicized, not only at the federal level but also at the regional and state level, further reducing the overall effectiveness of this solution.



## GME PAYMENTS TO ACADEMIC CONSORTIA

A more complex approach would be to use GME payments to refocus the efforts of medical schools on problems of physician supply through the development of generalist training consortia.<sup>21</sup> Teaching hospitals offer the residency positions that are the last step in training prior to practice. Currently, students are free to apply to any accredited program in the country. Thus, there is a lack of both curricular and geographic continuity from the point of view of the overall medical education process. By creating consortia of medical schools and teaching hospitals with clear economic and educational incentives to produce generalist physicians, this problem of educational discontinuity can be overcome. Furthermore, since much of medical education is moving out of the hospital setting, consortia can be expanded to include entities other than medical schools and teaching hospitals, such as health maintenance organizations, nursing homes, ambulatory care sites, and community health centers. Thus, generalist training consortia would support a program of GME rather than a site of training.

With this approach, the federal government could take advantage of its enormous past investment in academic medicine. Presently, the medical school defines the student curriculum and clinical experiences that mold future generalists (or specialists). Furthermore, medical schools already administer student loan programs and residency loan deferral processes; these mechanisms could therefore be easily adjusted to encourage an increase in generalist supply. Additional advantages of the consortium approach include simplification of HCFA's fiscal relationship to GME (relating to only the 141 medical and osteopathic schools) through a budget-neutral funding mechanism. Furthermore, objective criteria for consortium performance can easily be established and monitored.

The political advantages to this approach include the likely support of state governments and private medical schools. Furthermore, administrators of academic medical centers and community teaching hospitals are likely to see this approach as preferable to alternatives (such as block grants to states or transfers through Medicare Part B or HRSA), which would direct funds to entities with which they have limited relationships.

The disadvantages to this intriguing approach are both substantial and technically complex.<sup>13</sup> For example, to ensure that this redirected federal funding of graduate medical education would support the required number of generalist residency positions, consortia would be required to demonstrate the capacity to produce a target number of generalist physicians. Thus, to be eligible for this federal support, most academic medical centers would need to establish an effective collaboration with community-based generalist residency programs. The nature of this consortium would likely vary, but in most cases program directors of generalist residencies could become administrators of a substantial portion of funds directed to the consortium.

The drafting of the regulations needed to encourage the development of effective generalist training consortia will not be a trivial issue. This first requires an application and review process to judge the adequacy of consortium proposals. It also requires a mechanism for supporting adequate numbers of unaffiliated generalist residency programs (in the prospect that many medical centers may initially fail to develop adequate consortium proposals). Finally, the development of these generalist training consortia would not by themselves be sufficient. Strictly enforced targets would be required regarding student entry into generalist residency programs and generalist resident entry into practice. The setting of production tar-

gets for generalist physicians by consortia would be a critical issue for this initiative to succeed. Without such downstream guarantees or penalties, however, medical schools may underfund efforts to accomplish the "out year" production targets.

An important technical complication (that affects all seven of these alternatives) is the role of IME vs DME payments from HCFA. An argument can be made for applying only the smaller pool of DME payments to the development of these alternatives. The consortium alternative highlights some of the problems of this approach. Teaching hospitals that did not participate in consortia would still receive IME payments (which are a larger source of funds than are DME payments) and thereby continue to receive the subsidy for higher cost of care attributed to teaching hospitals.

While this approach may have some short-term political advantages, it could substantially reduce the long-term effectiveness of efforts to increase the training of generalists. For example, with fewer dollars on the table, many academic medical centers, as well as financially strong, independent community teaching hospitals, may be reluctant to join consortia. Indeed, the medical schools will legitimately need to use some of these redirected HCFA DME funds for medical student training as well as for loan deferral or forgiveness programs. Thus, the total pool left over for the funding of residency training may have shrunk to the point that community hospital residency programs could be seriously underfunded. Accordingly, only the most desperate community hospitals might be willing to participate in consortia. Including all HCFA GME funds, indirect as well as direct, is thus much more likely to provide the resources needed to focus the creative energies of the medical schools and community teaching institutions on collaborative efforts and to adequately support the innovations they undertake.

## MULTIPLE TARGET STRATEGIES FOR GME

Since each strategy for redirecting HCFA GME funds has meaningful administrative and political disadvantages, combined strategies targeting two or more components of the training continuum have emerged. The COGME recommendations represent one important example of such proposals.<sup>9</sup> Among these recommendations are that Medicare direct and indirect GME payments should be limited to residency training for initial certification or for 5 years (whichever is less). Increased DME payments would be allocated to family practice residency programs and to internal medicine and pediatrics programs that "develop an agreed upon curriculum that specifically prepares graduates for primary care practice."<sup>9</sup> Furthermore, incentive salaries would be made available to residents in family practice, internal medicine, and pediatrics who sign a contract indicating their intent to finish a primary care residency and enter generalist practice (with a year-by-year payback for subsequent subspecialization). To enhance the expansion of ambulatory/outpatient graduate medical education, COGME recommends that GME programs based in community settings should be eligible for Medicare direct and indirect GME reimbursement.

While this proposal emphasizes modifications of the current hospital-based DME and IME payments, enhanced funds are specifically earmarked for generalist training programs. Furthermore, salary incentives are specifically directed to residents in primary care training. By limiting the total number of US residency positions funded, this proposal would tend to push students into primary slots. At the same time, training programs and residency positions are financially enhanced. Thus, this recommendation combines a number of the advantages of the single strategies of modifying hospital GME payments and GME payments to residency programs.

The Primary Care Workforce Act

of 1993 (proposed by Senator Rockefeller and Representative Waxman) contains several elements of the COGME proposal (eg, limitations of total residency positions, establishment of workforce commission) and retains the present DME and IME funding mechanisms through HCFA. Also like the COGME proposal, it bases funding of positions on the character of the specific training program. In contrast, however, the Rockefeller/Waxman proposal would encourage primary care by gradual withdrawal of funds from subspecialty training positions and programs that were not in compliance with national workforce standards.

**A**NOTHER example of a combined strategy has been introduced by Senator Kassebaum as the Primary Care Act of 1993. This provides increased DME weights for primary care training programs and substantially reduced DME funds for subspecialty programs that are not affiliated with academic training consortia. These various current legislative initiatives include combinations of adjusted hospital payments for IME and DME with funding directed to residency programs or academic consortia.

### BEYOND HCFA GME

All of the above proposals involve redirecting the \$1.5 billion of DME funds presently allocated through HCFA, and sometimes contributing part or all of the \$3.3 billion of IME funds. These funds make up less than one third of the resources nationally directed to the support of graduate medical education, however. As discussed previously, unless control is established over the other sources of funds supporting GME, federal efforts at physician workforce reform may prove ineffective.

Thus, more comprehensive proposals for the federal funding of gradu-

ate medical education have recently been proposed. Perhaps the most detailed and wide sweeping is that of the PPRC.

All payors should contribute a percentage of their payments for medical care to a national pool. This pool would be used to support the direct costs of graduate medical education for residency positions approved as part of a process in which policymakers, the medical profession, and other interested parties participate. Congress should set a limit on the total number of residents to be funded from the pool. The number of first year residents should not exceed the number of graduates of US medical schools plus 10%. Decisions about the number of residency positions per specialty should be made by a federal body created for this purpose. Decisions about which slots will be approved for funding from the public pool should be made on the basis of educational quality by the bodies that accredit graduate training. Payments for the direct costs of graduate medical education could be made to the teaching hospital, the medical school, a consortium consisting of a medical school and several teaching hospitals, or the residency program itself . . .<sup>13</sup>

While the Rockefeller/Waxman proposal has many elements in common with the PPRC recommendations, the all-payor strategy of the latter provides substantially greater control over GME and workforce reform (and accordingly, greater political obstacles). Thus, policy effectiveness is not surprisingly in conflict with political feasibility.

These examples of the technical issues involved illustrate the hard work yet to be done for effective reform of federal funding for graduate medical education. The development of any new legislation must recognize that the leadership of academic medical centers has not been responsive to the societal need for more generalist physicians. Legislators must also recognize, however, that medical school deans and medical center chancellors necessarily respond to the financial value (as signaled by federal and private sources) of new initiatives.

During the past 15 years, there have been increasing federal funds (through Medicare part A and part B, HCFA GME funds, National Institutes of Health grants, and the De-

*over the short term the most efficient approach will be the combination strategy outlined in the COGME recommendations*

partment of Veterans Affairs) as well as substantial private investment (through the health insurance, pharmaceutical and biotechnology industries) to support specialized care and biomedical research. These shifts have created an enormous relative defunding of generalism and have drained considerable energy from the existing mechanisms to train generalist physicians. Substantial shifts in these financial incentives will, therefore, be needed to reinvigorate the generalist training infrastructure already in existence in academic medical centers and in community teaching hospitals.

Among the various proposed mechanisms to adjust HCFA GME payments discussed above, we believe that over the short term the most efficient approach will be the combination strategy outlined in the COGME recommendations. Over the longer term, we favor the redirection of federal funds for graduate medical education through a mechanism that would resolve the current disconnection between medical school training and postgraduate medical education. Proposals that have the potential to address this problem in-

clude academic consortia, state block grants, and expanded HRSA funding.

While we find the consortium approach intriguing, the administrative and legislative complexities to be resolved are daunting. All-payor financing will likely also be essential to ensure effective and efficient results from these reforms. The PPRC recommendations are

at present the most comprehensive mechanism proposed to accomplish reconnection between medical school training and primary care practice through all-payor financing. These concepts and mechanisms will doubtless reappear in various forms (eg, Rockefeller/Waxman) during the emerging debate on physician workforce reform.

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