COUNCIL ON GRADUATE MEDICAL EDUCATION

Fifteenth Report

Financing Graduate Medical Education in a Changing Health Care Environment

DECEMBER 2000

COUNCIL ON GRADUATE MEDICAL EDUCATION

Fifteenth Report

Financing Graduate Medical Education in a Changing Health Care Environment

December 2000

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Health Resources and Services Administration

Table of Contents

LIST OF TABLES AND FIGURES

The Council on Graduate Medical Education

The Council on Graduate Medical Education (COGME) was authorized by Congress in 1986 to provide an ongoing assessment of physician workforce trends, training issues and financing policies, and to recommend appropriate Federal and private sector efforts to address identified needs. The legislation calls for COGME to advise and make recommendations to the Secretary of the Department of Health and Human Services (DHHS), the Senate Committee on Health, Education, Labor and Pensions, and the House of Representatives Committee on Commerce. The Health Professions Education Partnerships Act of 1998 reauthorized the Council through September 30, 2002.

The legislation specifies 17 members for the Council. Appointed individuals are to include representatives of practicing primary care physicians, national and specialty physician organizations, international medical graduates, medical student and house staff associations, schools of medicine and osteopathy, public and private teaching hospitals, health insurers, business, and labor. Federal representation includes the Assistant Secretary for Health, DHHS; the Administrator of the Health Care Financing Administration, DHHS; and the Chief Medical Director of the Veterans Administration.

Charge to the Council

The charge to COGME is broader than the name would imply. Title VII of the Public Health Service Act, as amended, requires COGME to provide advice and recommendations to the Secretary and Congress on the following issues:

1. The supply and distribution of physicians in the United States.
2. Current and future shortages or excesses of physicians in medical and surgical specialties and subspecialties.
3. Issues relating to international medical school graduates.
4. Appropriate Federal policies with respect to the matters specified in items 1-3, including policies concerning changes in the financing of undergraduate and graduate medical education (GME) programs and changes in the types of medical education training in GME programs.
5. Appropriate efforts to be carried out by hospitals, schools of medicine, schools of osteopathy, and accrediting bodies with respect to the matters specified in items 1-3, including efforts for changes in undergraduate and GME programs.
6. Deficiencies and needs for improvements in data bases concerning the supply and distribution of, and postgraduate training programs for, physicians in the United States and steps that should be taken to eliminate those deficiencies.

In addition, the Council is to encourage entities providing graduate medical education to conduct activities to voluntarily achieve the recommendations of the Council specified in item 5.

COGME Reports

Since its establishment, COGME has submitted the following reports to the DHHS Secretary and Congress:

- First Report of the Council (1988)
- Second Report: The Financial Status of Teaching Hospitals and the Underrepresentation of Minorities in Medicine (1990)
- Scholar in Residence Report: Reform in Medical Education and Medical Education in the Ambulatory Setting (1991)
- Third Report: Improving Access to Health Care Through Physician Workforce Reform: Directions for the 21st Century (1992)
- Fourth Report: Recommendations to Improve Access to Health Care Through Physician Workforce Reform (1994)
- Fifth Report: Women and Medicine (1995)
- Sixth Report: Managed Health Care: Implications for the Physician Workforce and Medical Education (1995)
- Seventh Report: Physician Workforce Funding Recommendations for Department of Health and Human Services' Programs (1995)
- Eighth Report: Patient Care Physician Supply and Requirements: Testing COGME Recommendations (1996)
- Ninth Report: Graduate Medical Education Consortia: Changing the Governance of Graduate Medical Education to Achieve Physician Workforce Objectives (1997)

- Tenth Report: Physician Distribution and Health Care Challenges in Rural and Inner-City Areas (1998)
- Eleventh Report: International Medical Graduates, The Physician Workforce and GME Payment Reform (1998)
- Twelfth Report: Minorities in Medicine (1998)
- Thirteenth Report: Physician Education for a Changing Health Care Environment (1999)
- Fourteenth Report: COGME Physician Workforce Policies: Recent Developments and Remaining Challenges in Meeting National Goals (1999)

COGME Resource Papers

- Process by which International Medical Graduates are Licensed to Practice in the United States (1995)
- Preparing Learners for Practice in a Managed Care Environment (1997)
- International Medical Graduates: Immigration Law and Policy and the U.S. Physician Workforce (1998)
- The Effects of the Balanced Budget Act of 1997 on Graduate Medical Education (2000)
- Update on the Physician Workforce (2000)
- Evaluation of Specialty Physician Workforce Methodologies (2000)

Other COGME Publications

- Council on Graduate Medical Education: What is it? What has it done? Where is it going? (2000)

Members, Council on Graduate Medical Education

Members

Chair

David N. Sundwall, M.D.
President
American Clinical Laboratory Association
Washington, D.C.

Macaran A. Baird, M.D.
Medical Director
Mayo Management Services, Inc.
Rochester, Minnesota

Regina M. Benjamin, M.D., M.B.A.
Family Practice
Spanish Fort, Alabama

F. Marian Bishop, Ph.D., M.S.P.H.
Professor and Chairman Emerita
Department of Family and Preventive Medicine
University of Utah School of Medicine
Salt Lake City, Utah

Jo Ivey Boufford, M.D.
Dean, Robert F. Wagner Graduate School of Public Service, New York University
New York, New York

William Ching
Medical Student
New York University School of Medicine
New York, New York

Ezra C. Davidson, Jr., M.D.
Associate Dean, Primary Care and Professor
Department of Obstetrics and Gynecology
King/Drew Medical Center
Los Angeles, California

Vice Chair

Carl J. Getto, M.D.
Dean and Provost, Southern
Illinois University School of Medicine
Springfield, Illinois

Kylanne Green
Vice President
Inova Health Systems
Fairfax, Virginia

Ann Kempski
Assistant Director Health Policy
American Federation of State, County and Municipal Employees
Washington, D.C.

Lucy Montalvo-Hicks, M.D, M.P.H.
State of California Department of Social Services
San Diego, California

Susan Schooley, M.D.
Chair, Department of Family Practice
Henry Ford Health System
Detroit, Michigan

Donald C. Thomas III, M.D.
Consultant
Northridge, California

Douglas L. Wood, D.O., Ph.D.
President, American Association of Colleges of Osteopathic Medicine
Chevy Chase, Maryland

Designee of the Assistant Secretary for Health

Nicole Lurie, M.D., M.S.P.H.
Principal Deputy Assistant Secretary for Health
U.S. Department of Health and Human Services
Washington, D.C.

Designee of the Health Care Financing Administration

Tzvi M. Hefter
Director, Division of Acute Care
Center for Health Plans and Providers
Health Care Financing Administration
U.S. Department of Health and Human Services
Baltimore, Maryland

Designee of the Department of Veterans Affairs

Gloria Holland, Ph.D.
U.S. Department of Veterans Affairs
Washington, D.C.

Statutory Members

David Satcher, M.D.
Assistant Secretary for Health and Surgeon General
U.S. Department of Health and Human Services
Washington, D.C.

Nancy-Ann Min DeParle
Administrator, Health Care Financing Administration
U.S. Department of Health and Human Services
Baltimore, Maryland

Thomas L. Garthwaite, M.D.
Undersecretary for Health
Veterans Health Administration
U.S. Department of Veterans Affairs
Washington, D.C.

COGME Staff

Carol Bazell, M.D., M.P.H.
Director
Division of Medicine and Dentistry

Stanford M. Bastacky, D.M.D., M.H.S.A.
Acting Executive Secretary
Chief, Policy and Special Projects Branch
Division of Medicine and Dentistry

Jerilyn K. Glass, M.D., M.P.H.
Acting Deputy Executive Secretary

P. Hannah Davis, M.S.
Staff Liaison, Graduate Medical Education Financing and Policy Workgroup

John Rodak, Jr., M.S. (Hyg.), M.S.(H.S.A.)
Staff Liaison, Physician Workforce Workgroup

C. Howard Davis, Ph.D.
Staff Liaison

Richard Diamond, M.D., M.P.A.
Staff Liaison

Jerald M. Katzoff
Staff Liaison

Helen K. Lotsikas, M.A.
Staff Liaison

Anne Patterson
Secretary

Eva M. Stone
Program Analyst and Committee Management Specialist

Velma Proctor
Secretary

COGME Workgroup on Ambulatory Programs and Financing

COGME MEMBERS

Carl J. Getto, M.D., Chair

Macaran A. Baird, M.D.

Kylanne Green

Tzvi M. Hefter

Ann Kempski

Nicole Lurie, M.D., M.S.P.H.

Lucy Montalvo-Hicks, M.D., M.P.H.

Donald C. Thomas III, M.D.

Douglas L. Wood, D.O., Ph.D.

COGME STAFF

P. Hannah Davis, M.S., Staff Lead

Jerald M. Katzoff

Acknowledgements

The Council wishes to acknowledge the efforts of the many people who contributed to the preparation of this report. Barbara Wynn, of RAND Health Corporation assiduously studied and analyzed the complex issues of GME financing and wrote the basis of the report under contract, with assistance from Kimberly Gavin and Jennifer Kawata. Representatives at sites studied for alternative GME financing programs generously contributed their time and openly shared helpful information. Members of an expert panel contributed many helpful insights during an all-day meeting in Washington D.C. and reviewed an early draft of the report. The expert panel members are John Coombs, M.D., Associate Dean, University of Washington School of Medicine; Ronald D. Franks, M.D., Dean of Medicine and Vice President for Health Affairs, East Tennessee University College of Medicine; Larry Greene, M.D., Director, Center for Policy Studies in Family Practice and Primary Care, American Academy of Family Physicians; Tim Henderson, M.S.P.H., Director, Primary Care Resource Center, National Conference of State Legislatures; Denise Holmes, Director, Plan Administration Bureau, Michigan Department of Community Health; Robert J. Mossad, M.D., Professor Emeritus, Montefiore; Gordon T. Moore, M.D., Associate Professor, Harvard Medical School/ Harvard Pilgrim Health Care; and Michael Opipari, D.O., Executive Vice President and Chief Medical Officer, Horizon Health System.

The Council wishes to acknowledge the guidance and leadership of P. Hannah Davis, M.S., who was Project Officer and chief staff liaison for this study, and Jerald M. Katzoff who assisted her in this endeavor. The Council expresses its gratitude to F. Lawrence Clare, M.D., senior advisor, Division of Medicine and Dentistry for his expertise in GME financing. The Council also appreciates the commitment from Carol Bazell, M.D., M.P.H, Director, Division of Medicine and Dentistry, and Stanford M. Bastacky, D.M.D., M.H.S.A., COGME Acting Executive Secretary in bringing this report forward and to fruition.

Preface

The purpose of this report of the Council on Graduate Medical Education (COGME) is to examine current funding mechanisms for graduate medical education and to evaluate alternative Federal financing policies within the context of the Council's recommendation for a stable financing mechanism that would provide adequate support for ambulatory training. COGME's 13th Report, *Physician Education for a Changing Health Care Environment*, explored the educational changes needed to train physicians who are well-equipped to provide high-quality, effective and efficient care and emphasized the need for an appropriate balance of traditional and community-based training experiences. The 14th Report, *COGME Physician Workforce Policies: Recent Developments and Remaining Challenges in Meeting National Goals*, called for a stable all-payer financing mechanism for graduate medical education that would provide adequate support for ambulatory training. The current report builds on the earlier COGME reports and does not revisit the earlier analyses leading to the recommendations for expanded community-based training opportunities and all-payer financing. Rather, the report analyzes alternative financing policies within the context of those recommendations. Readers are referred to the earlier reports for findings and recommendations dealing with medical education curriculum and quality and physician workforce issues.

This report focuses on graduate medical education financing issues. There is a close connection between GME and issues related to undergraduate medical education and nursing and allied health education. While the latter issues are extremely important, they are not within the scope of this report.

COGME considers this report to be a valuable contribution to the discourse on GME financing. While the report's recommendations may be controversial, they provide the foundation for further discussion of these complex issues. Development of these concepts is an iterative process. COGME believes this report is beneficial in stating past positions and new ideas all together in one place, with a thorough explanation of their basis. This is also the only report that documents the results of selected site visits of successful residency programs with community-based training. COGME intends to use this report as a basis for further discussion of GME financing in a national forum of stakeholders that it plans to hold in 2001.

Executive Summary

This report, *Financing Graduate Medical Education in a Changing Health Care Environment,* reviews current funding mechanisms for graduate medical education (GME) and recommends actions that should be taken to respond to the changing health care environment. Care is increasingly provided within the context of managed systems of care that require clinical learning experiences across the continuum of care. The current system of financing GME has inherent limitations and disincentives for expanding training in community-based sites. Stable all-payer financing is needed that will provide adequate support for training in community settings.

OVERVIEW

As used in this report, GME is clinical training in an approved residency program following graduation from schools of medicine, osteopathy, dentistry and podiatry. The training is required for certification in a specialty and is approved by a non-governmental accrediting organization for the specialty. The residency program varies in length depending on the specialty. Most residency programs are sponsored by a hospital, medical school, or educational consortium. There are about 100,000 residents in 8,000 different residency programs. The residents, who are serving a form of apprenticeship, provide patient care under the supervision of a teaching physician. Teaching hospitals serve as the primary training sites for most residency programs. Training occurs in both the inpatient setting and in the ambulatory-clinics of the teaching hospital. In addition, community hospitals and other community-based sites provide training opportunities.

Residency training should be relevant to current daily physician practice and address the care of the individual patient in their cultural and social context. With the growth of managed systems of care and the movement of services to outpatient settings, residency programs have expanded training opportunities in community settings. As used in this report, the term "community settings" describes settings that are representative of the environment in which most residents will eventually practice. Under this definition, the processes of care and educational outcomes are the determining factors in identifying a community setting rather than its location *per se*. A comprehensive range of experiences is necessary in order to provide opportunities to follow the patient across each component of an integrated delivery system. Community-based settings such as health centers and clinics, physician offices, schools and workplaces, nursing homes, hospices and home care, community hospitals, and managed care organizations can offer essential experiences to complement those at academic health centers. For some specialties, community training will occur in hospital-based ambulatory sites since this is where the specialty commonly practices.

The costs of GME are difficult to determine because teaching occurs in tandem with patient care and research. There are direct GME costs, which include the resident's stipend, payments to teaching physicians, program administration costs and other costs directly attributable to educational activities. In addition, there are indirect GME costs. These are higher patient care costs associated with teaching hospitals, such as treating sicker patients, using more diagnostic tests, and longer patient visits or hospital stays. Direct GME costs for a single residency program are typically incurred by multiple entities: the program sponsor, the faculty practice plan affiliated with the sponsoring institution, and the hospitals and ambulatory sites that provide training. Each site's direct costs for GME depend on its negotiations and arrangements with other entities involved in the training program over issues such as which party will assume the costs of the resident's salary and teaching physician compensation.

Patient care revenues provide most of the support for GME. However, Medicare and, in some States, Medicaid, make explicit payments to teaching hospitals for their GME costs. These payments recognize that equipping future physicians with the competencies to provide high quality care is in the public interest. Private payers have also traditionally paid higher amounts to teaching hospitals to support the costs of training residents, and to some extent, the charity care provided by teaching hospitals. In 1998, uncompensated care represented revenue losses of 7.8 percent and 5.4 percent of the total costs of academic health centers and other major teaching hospitals, respectively (MedPAC, 2000b).

Faculty practice plan revenues are another source of support for clinical faculty time spent in academic activities. Faculty practice plan revenues

may also provide direct support to medical school or department funds that are used to support graduate as well as undergraduate medical education. State-support for GME typically occurs through appropriations to State-operated medical schools or residency training grants (about $185 million). In addition, Federal appropriations under the Public Health Service Act support primary care residency programs and other health professional education ($300 million) and children's teaching hospitals ($40 million). Other sources of funding include research grants, endowments, and foundation grants. The Department of Veterans Affairs (DVA) and the Department of Defense (DoD) support about 15 percent of residency positions. Thus, the flow of funds among the participants in GME activities is complex and frequently involves cross-subsidies between medical schools, teaching hospitals, and other training sites.

Competitive pressures associated with the move to managed care (capitated financing arrangements) have eroded the private payer subsidies for teaching and charity care. Medicare and Medicaid payment reductions in the Balanced Budget Act of 1997 (BBA) also added to the financial pressures on teaching institutions. The Council on Graduate Medical Education's (COGME) 13th Report, *Physician Education for a Changing Health Care Environment* (1999a), concluded that the current system of funding GME through teaching hospitals has inherent limitations and disincentives for developing ambulatory clinical training experiences and community-based educational programs. The financial and service needs of teaching hospitals compete with the educational need to expand training opportunities in community settings. The uncertainties and financial pressures inherent in the changing health care environment suggest changes are needed in the way GME is financed. In its 14th Report, *COGME Physician Workforce Policies: Recent Developments and Remaining Challenges in Meeting National Goals* (1999b), COGME called for a stable, all-payer financing mechanism for GME that would provide adequate funding for training in ambulatory settings.

The current report builds on COGME's earlier reports by examining current funding mechanisms for GME and assessing their implications for developing community-based educational programs. It evaluates alternative Federal financing policies within the context of the Council's recommendation for a stable financing mechanism that would provide adequate support for ambulatory training. (Readers are referred to the earlier reports for findings and recommendations dealing with medical education curriculum and physician workforce issues.)

This report recommends the creation of a GME fund that would supplement current Federal funding for GME with funds from third-party payers. Total GME funding would be sufficient to support high-quality and efficient training of an appropriately sized and balanced physician workforce. The recommended fund allocation policies are designed to encourage an appropriate balance between traditional and community training in all hospital-sponsored specialty programs. Payments for direct GME costs would be made to program sponsors who would be held accountable for educational and workforce objectives. Separate payments would be made to clinical training sites to support their higher patient care costs attributable to teaching activities. The report recommends a separate GME account for funding special projects and programs directed at building high-quality community-based training capacity and achieving specific workforce priorities. In addition to the recommendations on GME funding , the report recommends increased support for "safety net " hospitals and community providers that serve a disproportionate share of low-income patients and have high uncompensated care costs. It is important that refinements in the GME allocation methodologies not adversely affect hospitals that provide significant charity care. Any reductions in GME payments to these hospitals should be offset by higher support for uncompensated care until specific funding for such services is provided.

THE CHANGING HEALTH CARE ENVIRONMENT

Recent trends in the health care delivery system have major implications for how GME programs are operated and how they are financed. The most significant financing changes are associated with the growth of managed systems of care and increased competition within health care markets. Teaching hospitals tend to have higher costs that put them at a competitive disadvantage with community hospitals in competing for managed care contracts. In the past, private payers have subsidized the educational and other missions of teaching hospitals through higher payments. Competitive pressures have eroded these subsidies for public missions. The competitive pressures are evidenced in a decline in the private payer payment-to-cost ratio for teaching hospitals from 1.25 in 1989 (ProPAC, 1992) to 1.15 and 1.05, respectively, for academic health centers and other major teaching hospitals by 1998 (MedPAC, 2000b).

Recent changes in Medicare and Medicaid funding for GME have added to the financial pres-

sures on teaching institutions. Medicaid managed care growth has reduced Medicaid revenues and payments for serving a disproportionate share of low income patients that public and other safety net teaching hospitals rely on to support their charity care missions. For major teaching hospitals that serve low-income patients, the reduction in Medicaid revenues has been accompanied by an increase in uncompensated care losses (IOM, 2000). In addition, the Balanced Budget Act of 1997 (BBA) reduced Medicaid payments for hospitals serving a disproportionate share of low-income patients $10.4 billion over five years (CBO, 1997). The BBA provisions affecting the Medicare indirect teaching adjustment and the disproportionate share adjustment were estimated to reduce payments to teaching hospitals $5.6 billion and hospitals serving low income patients by $0.6 billion over five years (CBO, 1997). Other Medicare provisions, such as reductions in the annual updates for inflation and the implementation of prospective payment systems for hospital outpatient services and post-acute care providers will also affect teaching hospital revenues. The Balanced Budget Refinement Act of 1999 (BBRA) restored an estimated $700 million of the Medicare cuts and added $100 million in direct GME payments (CBO, 1999), a relatively modest amount compared to the total BBA cuts.

The issue of whether Medicare's support should continue at its current levels was debated during consideration of the BBA. The debate centered on concerns over the solvency of the Medicare Part A trust fund and the impact of continued Medicare spending cuts in the face of a competitive health care market. The uncertainties of continued reliance on Medicare, Medicaid and private pay revenues to fund GME have reinforced the conclusions held by COGME and others that major changes are needed in the way GME is financed. The Council's 14th Report (1999b) reiterated COGME's long standing recommendation for an all-payer financing system that would spread the costs of preparing a well-qualified physician workforce equitably across all payers. COGME believes there continues to be value in exploring alternative financing policies that would enhance support for training an appropriate number and balance of physicians who are well-equipped to provide high quality, effective and efficient care.

CURRENT FINANCING OF GRADUATE MEDICAL EDUCATION

As noted above, GME is currently funded through a variety of mechanisms. Medicare and, in most States, Medicaid make explicit payments to teaching hospitals for the costs of GME. An understanding of the GME payment policies used by these programs is fundamental to any discussion regarding how all-payer GME funds should be allocated.

MEDICARE PAYMENTS

In FY2000, Medicare will pay an estimated $2.7 billion (including $200 million for managed care enrollees) in direct GME payments and $5.1 billion (including about $700 million for managed care enrollees) in indirect payments (HCFA, 2000). Payments are linked to services provided to Medicare beneficiaries. There are three overarching concerns that suggest broader based funding is preferable to relying heavily on Medicare payments for patient care services as the only Federal financing mechanism. These issues are:

- Restricting payments to teaching hospitals for educational costs impedes the development of residency programs in non-hospital ambulatory and managed care settings.
- Linking educational payments to services furnished to Medicare patients concentrates Federal support on providers with high Medicare utilization and offers little support to providers with low Medicare utilization such as children's hospitals and Federally qualified health centers (FQHCs). It provides little support for preventive medicine and other residency programs that do not involve direct patient care services.
- Paying for educational costs through patient care payments *alone* is not an effective mechanism for achieving specific workforce priorities such as improving the specialty and geographic distribution of the physician workforce.

Recent changes in national policy have begun to address these concerns, but COGME believes further changes are in order.

DIRECT GME PAYMENTS

Medicare's payments for direct GME costs are based on the number of residents at the hospital (and ambulatory settings if the hospital assumes substantially all of the training costs), a hospital-specific per resident amount based on 1984 costs updated for inflation, and Medicare's share of hospital inpatient days. Medicare's average per resident payment was $22,350 in FY1997 (HCFA/HCRIS, 1997). Until the BBA, the Medicare law authorized direct GME payments only to hospitals. Beginning January 1, 1998, Medicare may make

direct GME payments to other provider entities. The hospital-specific per resident amounts vary widely based on historical accounting practices and financial arrangements between the program sponsor and the teaching sites. The differences do not appear to be related to factors such as cost of living or the quality of the residency programs (Anderson, 1996). The Balanced Budget Refinement Act of 1999 made a modest change to reduce disparities in the Medicare per resident amounts. The provision raises the minimum payment to 70 percent of a national wage-adjusted per resident amount. The annual inflation updates for per resident amounts that are above 140 percent of the wage-adjusted national average are reduced for FY2001-FY2005.

IME Payments

Medicare pays acute care hospitals for inpatient services based on a prospectively determined rate that takes into account average resources required to treat Medicare beneficiaries in the same diagnosis-related group. Medicare makes an indirect teaching adjustment to the standard rate to pay for additional patient care costs attributable to teaching activity that are not captured as direct GME costs. Although based on the hospital's ratio of residents-to-beds, the adjustment also compensates the hospital for higher patient care costs typically associated with other activities provided in conjunction with GME, i.e., clinical research, specialized care for complex patients, and charity care. However, the level of involvement in the other public missions varies across teaching hospitals and teaching intensity is not a good measure to use to support these other public missions.

IME payments are about $1.5 billion higher than the costs attributable to teaching intensity alone (MedPAC, 2000b). The difference between current IME payment levels and the analytically justified levels represents amounts that could be redirected to support educational activities to increase community-based training capacity or to increase support for uncompensated care. It is important that refinements in the IME payment methodology not adversely affect hospitals that provide charity care. Major teaching hospitals with high uncompensated care costs rely on IME payments to support their charity care. Any refinements in the IME allocation methodology that reduces payments to these hospitals should be offset by higher support for uncompensated care until specific funding for such services is provided.

Limitations on the Number of Residents Recognized by Medicare

The Balanced Budget Act of 1997 limits the number of residents that are counted for Medicare payment purposes to the number working at the hospital during its cost reporting period ending in 1996. The limits are in line with COGME's goal to reduce the number of residents (COGME, 1999b). However, hospital-specific limits impede the ability of program directors to shift residents for educational reasons. The limit is also problematic in population growth areas where expanding residency programs would improve the geographic distribution of physicians. The Balanced Budget Refinement Act of 1999 allows a 30 percent expansion in rural residency programs and recognizes that urban hospitals may operate a rural residency track. Although it is too early to assess its overall impact, the 30 percent tolerance allows for only negligible expansions in relatively small residency programs.

Payments for Residency Training in Non-Hospital Based Settings

The Balanced Budget Act of 1997 made several significant changes in Medicare payment for residency training in ambulatory settings. First, the legislation authorized direct payments to be made to entities other than hospitals. Medicare-participating Federally qualified community health centers, rural health clinics, Medicare+Choice organizations, and other entities designated by Medicare may be paid for direct GME if the provider incurs all or substantially all of the costs of training at the site. It is too early to determine the effect these provisions may have on support for community-based training.

Second, the law allows the hospital to include in their IME resident count (as well as direct GME resident count) the time residents spend in patient care activities at non-hospital settings if the hospital incurs all or substantially all of the training costs at the ambulatory site. Since the time residents spent in non-hospital settings could not be included in the hospital's resident count prior to the BBA, the residents who were training at ambulatory sites in 1996 are not represented in the hospital's resident limit for IME payments. Hospitals that had already developed community-based training sites by 1996 receive no benefit from the change unless there are reductions in other residency programs at the hospital. By contrast, hospitals that developed community-based training sites after the BBA was enacted, could include those residents in their IME count after moving them into community-based settings.

Teaching Physician Services

The direct GME payment is intended to cover the hospital's compensation to teaching physicians for time spent on GME program administration and

general teaching and supervision of residents. In addition, payment may be made under the Medicare physician fee schedule for professional services furnished by the physician or by a resident under the medical direction of the teaching physician. To avoid paying for the same service twice, Medicare rules were revised in 1996 to require that the teaching physician be present during the key portion of a billable service. For evaluation and management services and minor procedures, the teaching physician's presence must be the same as it would be had the teaching physician personally performed the entire visit or procedure. Some teaching institutions believe the policy is inconsistent with the educational goal of encouraging progressively independent decision-making. Additional documentation requirements and heightened attention to compliance has resulted in more time spent on documentation and less time on teaching.

MEDICAID PAYMENTS

Under the Medicaid law, States have considerable flexibility to determine what services will be covered and the payment methodologies that will be used to pay for covered services. Federal matching funds apply to the State's expenditures. States spent about $2.3 billion through Medicaid patient funds in 1998, or approximately 7 percent of Medicaid inpatient hospital expenditures, to support GME (Henderson, 1999). Most Medicaid programs support GME in their payments for inpatient hospital services following Medicare-like methodologies. However, some States have approval from HCFA to link some or all of Medicaid GME payments to specific State workforce objectives. These programs provide funding models that should be considered within the context of GME financing reform. For example:

- Michigan and New York have established separate incentive pools to achieve specific workforce objectives.
- Tennessee and Oklahoma make GME payments to medical schools.
- In Minnesota, advanced nursing, pharmacy, dental and physician assistant training programs as well as medical and dental schools are eligible for medical education payments.
- Utah is seeking a State plan amendment for Medicaid GME funds to flow to a consortium consisting of the State, the single university medical school in the State, hospitals and community-based providers, and private payers. A waiver request is also under development for Medicare funds to flow to the consortium.

RESIDENCY TRAINING IN COMMUNITY-BASED SETTINGS

The growth of managed care has been accompanied by reductions in hospital utilization and a shift of services from inpatient to ambulatory settings (U.S. Congress, 1999). The shift to ambulatory settings makes it increasingly important for residency programs to provide training opportunities in community settings that are representative of the environment in which residents will eventually practice (COGME, 1999a). To practice effectively in the changing health care environment, residents in all specialties need a comprehensive range of experiences that include opportunities to follow the patient across each component of an integrated delivery system. Community-based settings such as health centers and clinics, physician offices, schools and workplaces, nursing homes, hospices and home care, community hospitals, and managed care organizations can offer essential experiences to complement those at academic health centers.

There is general agreement that training experiences in the community are important and should be expanded. However, as evidenced by the lack of specific requirements for community training by the accrediting organizations for most specialties, there is no consensus on what constitutes the appropriate balance between traditional and community-based experiences. For most specialties, training opportunities will be expanded as needed to maintain an adequate patient base for teaching. However, without the impetus from the accrediting organizations to move training into the community settings, financial and other considerations at the hospital as well as the community site may outweigh the educational goal of providing community-based training experiences.

FINANCIAL BARRIERS TO COMMUNITY-BASED TRAINING

There are several financial barriers to expanding community-based training. Ambulatory training tends to be less efficient and more faculty-intensive than inpatient training. In the inpatient setting, faculty can teach students at different educational levels during patient rounds. In the ambulatory setting, patients are available generally only for a short period of time. Space constraints and the focus on clinical productivity limit opportunities for teaching multiple students at the same time (Lave, 1989; Boex, 1997; Philibert, 1999). In addition, physician revenues for ambulatory services tend to be lower than revenues for services furnished in the inpatient setting. Thus, patient care revenues

generated when residents are involved in ambulatory care are generally less than when the care is in inpatient settings. Further, there is a distinction between revenues generated by a hospital-based clinic, which include Medicare (and in many States Medicaid) GME payments, and revenues generated by community clinics. The latter do not receive Medicare payments directly (unless they qualify under the BBA provision) and, in the case of community health centers, have few privately insured patients and high uncompensated costs.

Some studies have tried to measure the effect of teaching on the ambulatory site's productivity and net revenues. These studies are directed at the question of whether there are GME costs in ambulatory settings that are not recovered through patient care revenues. The findings suggest net costs are site-dependent and reflect factors such as the amount of time spent on teaching relative to patient care, patient flow and the efficiency of the practice, payer mix, the physicians' incomes and residents' salaries. The studies support a widespread belief that residency programs "break even." First year residents generate productivity losses. Second year residents generally have no effect on productivity. Net increases in productivity and revenues by the third year of residency training in ambulatory sites offset the first-year losses (Diamond, 1993; Flannagan, 1995; Lave, 1989).

Another potential barrier is the impact resident rotations to community-based settings have on the primary training site and its teaching faculty. Many residents have significant teaching responsibilities for medical students that may make community-based rotations more difficult. It is possible this issue may diminish as medical students increasingly receive training in community settings. Residents also provide coverage for teaching physicians and contribute to the services billed by teaching physicians. Resident replacement costs can be a significant factor in decisions to rotate residents to non-hospital settings. The cost of replacing residents will depend on the relative cost of the staff that are replacing them, their productivity, and their ability to generate revenue.

SITE VISIT FINDINGS

As part of this study, site visits or telephone interviews were conducted with individuals involved with selected residency programs with community-based training sites. The interviews included both programs with long-standing community-based training sites and relatively new programs that are developing collaborative arrangements with managed care organizations or community providers in medically underserved areas. The interviews focused on the funding sources and arrangements used to support ambulatory training. The findings reflect the circumstances of the programs where the interviews were conducted. However, similar themes emerged from the interviews with different sites that are also consistent with other information on GME financing issues.

Key findings from the site visits are that financing arrangements for community-based training vary, reflect local circumstances, and frequently involve other interrelationships as well. An individual program may have arrangements for teaching with hospital-based clinics, hospital-operated and hospital-affiliated physician practices, community health centers, and individual clinician-physicians in private practice. The financing arrangements differ for each site depending on a number of factors, including payer mix and the intensity of the teaching effort. The financing issues for hospital-based clinics are quite different than those for community clinics and physician practices. The variety of arrangements suggests that decisions on how GME funds should be allocated among the various participants in a given program are best made at the local level. A single national policy that allocates funds between hospital and community-based sites using a pre-determined formula does not acknowledge the myriad of existing arrangements for community-based training that could be disrupted.

Most teaching in community-based sites occurs through volunteer faculty. During the interviews, some concern was expressed that clinician-educators in the community are becoming less willing to teach without compensation. Commonly cited reasons are competitive pressures for clinical productivity and the Medicare teaching physician rules. Specific policies may be needed to assure community physicians receive appropriate compensation for their teaching activities.

ALTERNATIVE MODELS FOR GME FINANCING REFORM

The changing health care environment and the uncertainties of continued reliance on Medicare, Medicaid and private pay revenues to fund GME have led COGME and others to conclude significant changes are needed in the way GME is financed. In addition to COGME, advocates of an all-payer fund include the Pew Health Professions Commission, the Commonwealth Fund's Taskforce on Academic Health Centers, and the 1997 Consensus Statement on the Physician Workforce by

associations representing physicians and teaching institutions. Two bills (H.R. 1224 and S.210) were introduced in the 106th Congress that would provide all-payer funding for GME. Underlying the all-payer proposals is an assumption that GME is a public good that merits broad support. An alternative assumption made by the Medicare Payment Advisory Commission is that GME results in enhanced patient care that should be recognized in health care service-related payments to teaching hospitals.

Policy Considerations for GME Funding

GME funding policies should meet the following objectives:

- Provide a stable funding mechanism that is responsive to the community yet consistent with the national workforce objectives;
- Enable health care institutions to compete on price and quality by subsidizing higher costs attributable to educational activities and uncompensated care without supporting inefficiencies;
- Create adequate support and appropriate incentives for developing community-based educational programs;
- Encourage effective and efficient educational models that promote improved ways to meet health care needs;
- Foster mechanisms that will stabilize the total number of physicians while improving the specialty and geographic distribution of the future physician workforce; and,
- Hold recipients of Federal and State funds accountable for producing needed public goods.

Educating physicians in the environment in which they will eventually practice requires expansion of residency training in community settings for most specialties. The BBA eliminated some disincentives for a hospital to rotate residents to non-hospital settings by paying IME for the resident's time in the non-hospital setting. However, the BBA limits on FTE resident counts do not benefit those hospitals that were already training residents in community-based settings. A modification in the law to count the residents who were in non-hospital settings in the 1996 base year would remedy this problem. The remaining disincentives to rotate residents to community-based settings are more difficult to resolve:

- As the recipient of the funds, the hospital is in the stronger bargaining position regarding who should bear the direct costs of training in the ambulatory setting.
- Hospital service demands compete with educational needs to rotate residents to community-based settings.
- The hospital's patient care needs and financial interests rather than physician workforce needs may determine the numbers and specialty mix of residents and residency programs.
- Accountability is difficult to establish because the program sponsor, rather than the hospital has the ultimate responsibility for the conduct of the educational program. In hospital-sponsored programs, this problem arises with respect to resident rotations to other hospitals.

Fundamental issues to consider in evaluating alternative models for distributing all-payer GME funds are:

- Who should receive payments directly from the fund;
- How the funds should be allocated among the receiving entities; and,
- How to establish accountability for the funds.

There are four basic models that potentially could be used to distribute GME funds. The differences between three models are based on which entities would receive payments directly from the fund: health care providers, educational institutions, or GME planning bodies. The fourth model would link payment to specific performance measures. The models are not mutually exclusive and a combination is needed to achieve the policy objectives for the GME fund.

Health Care Provider Model

The health care provider model links payments for clinical training to patient care activities. This is the approach Medicare uses. It treats clinical training costs as patient care costs as opposed to educational costs. It is the most appropriate model for the indirect costs of clinical training since these costs reflect the impact of the teaching activity on the patient care costs of the site where the training takes place. The health care provider model provides no support for training that does not occur in patient care settings. Residency programs in preventive medicine would typically receive little funding through this model.

There are several options regarding which entity should receive direct GME payments for training in community-based settings:

- Consistent with Medicare's current rules, payment could flow to the hospital or the community training site depending on which entity bears substantially all the training costs for the resident's time at the site, i.e. pays the resident's salary and reasonable compensation for teaching.
- An alternative would be for funding to follow the resident to the community site regardless of which entity bears the cost.
- Another option would be to pay *pro rata* amounts to the hospitals and the community-based ambulatory sites participating in the residency program based on their relative shares of GME program costs. One approach would require the affiliated hospitals and community-based training sites to agree on their relative shares of program costs. A variation would be to designate a fixed percentage of the payment to hospitals for training in community settings.

EDUCATION MODEL

The education model treats direct GME costs as an educational cost as opposed to a patient care cost. It should give educational needs more weight in deciding what and where residency training occurs. The model is appropriate for direct GME costs only. Payment would flow to a single entity that would be accountable for how the funds were expended. This could be to a medical school or program sponsor. There is potential to introduce other elements into the allocation formula, such as program quality or meeting specific educational objectives or workforce priorities. Making direct GME payments to medical schools would emphasize most strongly that Federal GME funds are to support education rather than patient care. However, funding through the medical schools for residency programs that are sponsored by community-based hospitals would require a major shift in program accountability and funding. Another alternative, giving vouchers to residents, adds value only if there is a regulatory apparatus to determine the number of positions to be funded and which residents should receive funding.

PLANNING MODEL

Under the planning model, the GME funds would flow through a GME planning and coordinating body. This is an entity whose primary functions would be to assess the health care needs of the community and allocate funds based on local workforce considerations. Funding allocation decisions could support local health care needs more readily than distributions directly to health care providers or program sponsors based on national allocation formulae.

The funds could be distributed to GME consortia or to the States. Payment to consortia could be either a natural outgrowth of paying the program sponsor or could result from deliberate policies to encourage consortia. Experience to date suggests that providing payment only to consortia would be premature. Many States have established commissions or task forces related to GME and physician workforce. Some are permanent groups with the structure and expertise that could become physician workforce planning bodies in their State (COGME, 1999b).

PERFORMANCE MODEL

The performance model would link payment to achieving specific performance measures or objectives. Payment could be formula-driven based on meeting specific educational or workforce objectives. These objectives could be in the area of curriculum content and quality, training opportunities, or workforce objectives. Alternatively, there could be support for specific projects or demonstrations needed to support infrastructure development or workforce goals. Examples of the types of programs that could be funded include the targeted Public Health Service grants for primary care residency programs, support for developing academic-community partnerships to serve medically underserved populations, consortia development, and faculty development programs for clinician-educators in the community.

The performance model is more suitable as a mechanism for making supplemental payments than as a primary payment mechanism. Educational quality measures and workforce priorities are not sufficiently defined to be used to determine all fund allocations. Also, if all funding were predicated on meeting specific performance measures, significant year-to-year fluctuations in funding could occur that would be inconsistent with the need for stable GME funding.

RECOMMENDATIONS FOR GME FINANCING REFORM

COGME's 14th Report called for a stable, all-payer financing mechanism for graduate medical education (GME) that would provide adequate funding for training in ambulatory settings. This report builds on the 14th Report by recommending how the all-payer GME funds should be distrib-

uted. The recommendations are based on COGME's policy goals for GME funding.

RECOMMENDATION 1

CREATE A GME FUND THAT COMBINES FEDERAL FUNDING TO SUPPORT GRADUATE MEDICAL EDUCATION WITH ALL-PAYER FUNDS.

To assure financing policies are consistent across Federal programs and reflect national workforce priorities, the various Federal funding streams for GME that is provided by non-Federal institutions (i.e., excluding DoD and DVA) should be combined into a single fund and supplemented with all-payer funds obtained through a modest surcharge of private insurance premiums. The GME fund would include amounts that would otherwise be paid under current formulae for Medicare for direct GME and indirect payments to teaching hospitals, the Federal portion of Medicaid payments that are implicitly GME payments, and the Children's Hospital GME fund. In addition, the HRSA Title VII grants for GME, e.g., primary care residency training grants, would be included in a set-aside fund for specific workforce goals.

Within the general GME fund, five separate accounts should be established for:

- Medicare direct GME payments;
- non-Medicare direct GME payments;
- Medicare IME payments;
- non-Medicare IME payments; and,
- targeted payments to support specific workforce and educational objectives.

The separate Medicare and non-Medicare accounts are needed as a transitional measure. They would assure full funding on behalf of Medicare patients if contributions from other payers are not sufficient. Also, since the Medicare funds are currently being paid, changes in the allocation of the Medicare funds should be phased-in or offset by additional funding from the non-Medicare accounts. A transition may not be needed for the non-Medicare funds. To the extent they represent new funding streams, funds in the non-Medicare accounts should be allocated consistent with preferred policies from the outset.

While the GME fund would not include funding for residency training in DoD and DVA sponsored programs, the Federal budget for those programs should be consistent with the policy objectives for the GME fund. Residency training in these programs has significant impact on the size and specialty composition of the physician workforce.

a. GME should be broadly supported by all-payers.

Explicit funding for GME should be spread more broadly across all sectors of society. A permanent and stable funding source, such as premium contributions from all health insurance plans, should supplement current Federal funding for GME. In the long run, Medicare and Medicaid's contribution to the GME fund should be proportionate to the percentage of insured population represented by their enrollees.

b. Funding from all sources should be sufficient to support high-quality, efficient training of an appropriately sized physician workforce.

Total aggregate funding should be sufficient to support the efficient training of an appropriately sized physician workforce. Together with payments from other sources (primarily patient care revenues and State funds), GME funding should be adequate to train the number of physicians required to meet current and future national health care needs. Additional funding would not be in the public interest since it could contribute to a continuing surplus of physicians.

In the past, COGME has recommended that the total number of physicians entering first year residency should not exceed the number of U.S. medical school graduates in 1993 plus 10 percent (COGME, 1994). The Council's 14th Report found that a reduction of 3,386 first year positions in 1997-1998 was needed to meet the 110 goal. In view of recent changes in the health care delivery system since its initial recommendations were issued, COGME plans to review the 110 goal and its target of a 50/50 mix of primary care and other specialists.

Most of the increase in the total number of residents in recent years is attributable to an increase in the number of graduates from medical schools outside the United States. Support should be discontinued for new exchange visitors (J-1 visa) residents. As COGME has previously recommended (1997), exchange visitor residents should be funded by alternative sources, such as home country financing or foreign aid.

A conceptual framework should be used to establish an appropriate level of Federal support for funded residency positions. Because GME is a joint product with patient care services, patient care revenues cover some direct GME

costs. Consideration also needs to be given to issues such as maintenance of effort for current State funding through the Medicaid program and grant programs and whether all resident activities required for accreditation in an approved program should be funded. Under Medicare, only resident time spent in patient care activities is supported.

RECOMMENDATION 2

IME ACCOUNTS SHOULD PAY HOSPITALS AND OTHER CLINICAL TRAINING SITES AS APPROPRIATE FOR THE INDIRECT COSTS OF EDUCATIONAL ACTIVITIES.

IME accounts should be created to subsidize higher patient care costs associated with residency training. The funds should be allocated to hospitals and, to the extent it is empirically supported, to other clinical training sites that incur indirect teaching costs, including hospital outpatient clinics and community-based settings. Initially there should be separate accounts for Medicare and non-Medicare patients in order to assure the indirect costs for Medicare patients are fully funded. In the long run, a single account would be appropriate.

a. IME payments should be set at no more than the analytically justified level for teaching activities.

Paying more than the analytically justified amount would subsidize inefficient providers and give teaching institutions a competitive edge over non-teaching institutions. For Medicare inpatient services, MedPAC's (2000b) current estimate is a 3.1 percent adjustment for each 0.1 increment in the resident-to-bed ratio after other refinements are made to the Medicare prospective payment system. Based on this estimate, Medicare IME payments would be $1.5 billion lower than the 5.5 percent adjustment provided by the BBA. The difference could be targeted toward achieving specific workforce and educational goals (see Recommendations 4 and 6) or toward supporting uncompensated care (see Recommendation 8). A transition would be needed to the extent reductions in Medicare IME payments are not offset by increases in non-Medicare IME funding.

b. Research is needed to determine the appropriate IME payment formulae.

Research is needed to refine the Medicare IME adjustment and to determine the appropriate IME teaching adjustment for non-Medicare hospital inpatients. Medicare's adjustment should be based on the higher costs attributable to teaching activities. For non- Medicare patients, the adjustment should be directed at "leveling the playing field" between teaching and non-teaching hospitals. It does not need to cover the full indirect teaching costs if teaching hospitals are able to command a premium for quality or specialized services.

Ideally, the IME payment formula should not reflect higher costs indirectly attributable to other teaching hospital missions, e.g. specialized services, uncompensated care, and research. Subsidies for those public goods should be directed toward the hospitals producing them through separate funding streams. Reducing the adjustment to an analytically justified level for teaching would reduce incentives to train more physicians than necessary. It would also eliminate confusion between funding for the teaching mission and funding to support charity care. Higher costs attributable to serving low-income patients and uncompensated care costs should be recognized through a separate funding mechanism (which would also distribute payments to non-teaching institutions serving low-income patients. See Recommendation 8). Refinements in the IME payment methodology should not reduce the total level of support for hospitals with significant uncompensated care until specific funding for such services is provided. Reductions in the IME payment formula should be accompanied by refinements in the prospective payment system to incorporate better case-mix and severity measurements. An additional adjustment for research-intensive hospitals may also be appropriate.

Additional research is also needed to determine the extent to which there is an indirect teaching effect on costs when resident training takes place in hospital outpatient and non-hospital settings. If empirical research finds there is an indirect teaching effect on the costs of services provided in ambulatory/community settings, the IME account should pay for these services as well as inpatient hospital services.

RECOMMENDATION 3

DIRECT GME ACCOUNTS SHOULD PAY PROGRAM SPONSORS OR THEIR DESIGNEES FOR THE DIRECT COSTS OF GRADUATE MEDICAL EDUCATION.

Direct GME costs are educational costs that should be supported through payments to the sponsoring institution ultimately responsible for the

graduate medical education program. Payment allocation decisions should be made at the local level because the tremendous variety of existing arrangements cannot be accommodated at the national level. By making payments to either the sponsoring institution or its designees, the sponsor can determine the most appropriate recipient of the funds based on local circumstances for a particular program. For example, a sponsoring institution may decide to retain maximum control over the funds and receive them directly, elect to continue historical arrangements having the funds flow through the teaching hospital, or may choose to have a consortium distribute the funds. The same election would not need to apply to each program sponsored by the institution. Regardless of which entity received the funding, the sponsoring institution would be accountable for the funds being expended to support a high quality training program with the appropriate balance of hospital and community-based training experiences.

a. There should be written agreements between the program sponsor and training sites indicating the sponsor is assuming substantially all of the training costs and describing how GME payments will be allocated.

The program sponsor or its designee must assume all or substantially all of the direct costs of operating the residency program as a condition of receiving direct GME payments. Written agreements should be required between the sponsoring institution and clinical training sites to formalize the negotiation process and to increase accountability for the funds. The agreements should detail how the direct GME funds will be allocated between the sponsor and the training site, identify which entity will pay resident salaries and fringe benefits, and specify teaching physician compensation arrangements for supervising residents. The goal is to strengthen the negotiating position of community–based sites without jeopardizing long-standing relationships between academic institutions and community training sites. A sponsoring hospital may have a disincentive to rotate residents to community-based training sites if all direct GME funds automatically follow the resident to a community-based training site through direct payments from the GME fund or a voucher system.

b. Model agreements and information on direct GME costs should be made available to facilitate equitable agreements between the sponsor and the sites.

Local circumstances should determine how direct GME payments are allocated to teaching sites. However, benchmarking information should be provided to facilitate the negotiation process, including:

- breakdown of GME payments into three components based on average direct GME costs: resident salaries and related costs, teaching physician compensation, and an administrative and overhead cost component.
- benchmarks for teaching physician compensation and the added time per teaching session when residents are present in community-based practices on short-term rotations and on an on-going basis; and,
- model agreements between institutional sponsors and community-based sites.

c. Require separate reporting of resident time spent in inpatient hospital, hospital outpatient and community settings.

At present, there is no formal accounting for the time residents spend in each type of training site. Standard definitions should be developed to distinguish hospital outpatient settings from community settings. Community settings should be broadly defined to include both hospital-operated and community-based sites that are representative of the environment in which residents will eventually practice. The determining characteristics are the processes of care rather than proximity to the hospital or provider ownership. Community settings address the care of the individual patient in the context of the population of which the patient is a member. They teach residents to deliver culturally effective care to an ethnically and racially diverse population.

RECOMMENDATION 4

ESTABLISH A NATIONAL AVERAGE PER RESIDENT PAYMENT FOR DIRECT GME COSTS.

The base payment for direct GME costs should vary only for differences in the cost of living across geographic areas. For Medicare payments, there should be a transition from the hospital-specific per resident amounts to the national per resident payment. The length of the transition will depend on additional payments for non-Medicare patients. These can help compensate for any reductions in Medicare payments. At the end of the transition, separate Medicare and non-Medicare accounts would no longer be necessary. Higher payments may be appropriate for training in community-based settings. In addition, there should be an incentive

payment for programs that meet specific workforce or educational objectives.

a. Base total direct GME payments on the net costs of supporting an appropriately sized workforce.

Ultimately, total direct GME funding should be based on the net costs of educating an appropriately sized physician workforce. Establishing a fixed payment per resident should provide incentives for efficiency in the educational process. However, the costs of efficiently delivering high quality GME and the extent to which these costs are offset by patient care revenues has not been determined. As an interim policy, either the average per resident amounts or average GME costs per resident could be assumed to represent the total costs of an efficient program. Total costs based on the FY1997 average per resident amount updated for inflation and the 110 percent target are estimated at $6 billion for FY2000.[1]* A lower funding amount would be appropriate since the per resident amounts do not take into account patient care revenues attributable to GME.

b. Provide higher payments for training in community settings.

When training occurs in a community setting, the sponsoring institution continues to incur some supervisory physician and overhead costs. The community setting incurs some direct GME costs as well (for example, to compensate the community physician for teaching) even if the sponsoring institution continues to pay resident salaries and fringe benefits. As a result, total GME costs may be higher when residents rotate to community-based settings than when they remain in hospital-based settings. A higher payment for training in community-based settings would be appropriate if the net total costs (after taking any additional patient care revenue into account) are higher in the community-based settings. Research is needed to determine whether this is the case. To counter any disincentive that might currently exist for community-based rotations, a temporary policy might be to increase the component of the per resident amount attributable to teaching physician compensation by a fixed percentage, e.g. 25 percent. The higher payment could apply in all community settings even though the rationale for the payment is primarily applicable to settings off the hospital premises. This would provide an incentive for hospitals to turn training in ambulatory clinics into experiences that are more representative of community physician practices.

c. Provide incentive payment for meeting specific workforce and educational objectives.

In addition to the base per resident payment, there should be an incentive payment for meeting specific workforce and educational objectives. Programs that meet one or more of the objectives would be eligible for a bonus on the national average base payment. The incentive payment should be established as a fixed payment rather than a pool so that the benefits do not erode as additional programs meet the objectives and qualify for payment. The bonus payment could be awarded based on:

- Participation in a broad-based consortia of the sponsoring institution(s) for residency programs in an area, hospitals and community providers participating in GME activities, and community representatives. The consortia would have to be designated by the sponsoring institutions to receive all direct GME funds. Bonus payments would be made if the consortia has a formal process to identify the health care needs of the community, engage in workforce planning, and promote community-based training opportunities;
- Number of graduates that provide significant amounts of care to medically underserved populations;
- Percentage of time residents spend providing care to medically underserved populations; and,
- Quality of the residency program.

d. Research is needed to understand variation in direct GME costs by specialty and setting.

Most research regarding residency training costs was conducted at a limited number of sites and before the growth of managed systems of care. A better understanding of differences in the net costs of training across residency programs and training sites is needed to refine the payment allocation methodology. A generic financial model should be used to examine systematically issues such as:

- Whether there are significant differences in the amount of teaching physician involvement between primary care and non-primary care residency programs and between initial residencies and fellowships;

* Numbered footnotes are listed on pages 71-72 in the "Bibliography and Footnotes" section.

- Whether there are significant differences in impact on clinical productivity and net physician practice revenue when teaching occurs in ambulatory settings relative to inpatient settings and between initial residencies and fellowships;
- How direct GME costs are affected by the presence of students in other health professions at the training site and by residents teaching medical students; and,
- Factors that affect the efficiency and quality of the educational process.

RECOMMENDATION 5

CONTINUE THE BALANCED BUDGET ACT OF 1997 LIMITS ON THE NUMBER OF RESIDENTS WITH MODIFICATIONS.

In concept, the Balanced Budget Act of 1997 limits on the residents that will be recognized by Medicare are consistent with the goal of reducing the future physician workforce and should be carried over to eligibility for payments under the GME fund. However, hospital-specific limits are not an appropriate long-term way to deal with physician supply issues. The limits hamper a program director's ability to move residents among hospital programs for educational reasons. In geographic areas with physician shortages, the limits preclude expansions in needed residency programs.

a. Modify the caps to apply to sponsoring institutions rather than hospitals.

The sponsoring institution is to be held accountable for educational outcomes and workforce objectives. Therefore, the limits should apply to the number of residents in the programs sponsored by the institution rather than the hospitals serving as training sites for the program. This will provide the flexibility to move residents between hospitals and other settings. Consortia that meet certain workforce planning objectives should be able to work under an aggregate limit for multiple sponsoring institutions.

Applying the limit to sponsoring institutions is consistent with making direct GME payments to sponsoring institutions. However, it complicates IME payments to individual hospitals. One option would be to apply no limit for IME as long as the sponsoring institutions whose residents are training at the hospital are under their caps. An adjustment would be needed only if the total number of residents in programs at the sponsoring institution(s) exceeded an aggregate cap. The three-year rolling average and the one-year cap on the resident-to-bed ratio should continue to apply. The rolling average provides a form of transition payments to hospitals that reduce the number of residents and slows the recognition of new residents in the IME count.

b. Include residents in non-hospital settings regardless of who paid the resident's salary in the 1996 base year count.

Residents who were working in non-hospital settings were not included in a hospital's 1996 base year count for Medicare IME payments. They were included in the direct GME count only if the hospital incurred substantially all of the training costs. The limit applicable to a sponsoring institution should be adjusted to include all resident time in non-hospital settings regardless of who paid the resident's salary.

c. Allow adjustments in the Balanced Budget Act of 1997 limits to improve the distribution of physician workforce.

Further research is needed to understand the impact of the Balanced Budget Act of 1997 limits and to develop policies that will result in a better geographic balance in the physician workforce while encouraging an overall reduction in the number of physicians. Appropriate indicators of adequate distribution by specialty are needed. As an interim measure, the limits should not apply to rural residency training tracks if their graduates practice predominately in rural areas. In addition, the limits should not apply to primary care residency programs whose graduates practice predominately in those States with low physician-to-population ratios.

RECOMMENDATION 6

ESTABLISH AN ACCOUNT FOR FUNDING SPECIAL PROJECTS AND PROGRAMS DIRECTED AT BUILDING HIGH-QUALITY COMMUNITY-BASED TRAINING CAPACITY OR ACHIEVING SPECIFIC WORKFORCE GOALS.

At least 10 percent of the GME fund should be set aside to support specific projects and programs directed at building high-quality community-based training or achieving specific workforce priorities. The types of projects and programs that should be funded include:

- Primary care residency program grants;
- Faculty development grants to support training of community clinician teachers;

- Information technology infrastructure development to link patient care records at teaching hospitals and community sites within organized systems of care;
- Incentive programs to reward residents that focus their practice on medically underserved populations;
- Transition funds to cover residency replacement costs in hospitals with high uncompensated care patient loads; and,
- Demonstration projects involving development of broad-based consortia.

RECOMMENDATION 7

MODIFY THE MEDICARE RULES RELATED TO TEACHING PHYSICIANS TO EMPHASIZE THE TEACHING PHYSICIAN'S OVERALL RESPONSIBILITY FOR THE MANAGEMENT OF THE PATIENT'S CARE AND TO REDUCE THE IMPORTANCE OF DOCUMENTATION.

The Medicare rules pose two challenges to graduate medical education: 1) the supervision rules make it more difficult for residents to become progressively independent, and 2) the documentation requirements detract from the amount of time available for teaching and resident supervision. There is some evidence that the rules may adversely affect the willingness of community physicians to participate in teaching programs. The rules should be revised to address these concerns.

a. Establish different rules for residents in fellowship programs.

HCFA's rationale for its teaching physician rules rests on: 1) making payment only when there is an identifiable physician service to an individual patient and 2) avoiding duplicate payment for the physician's supervisory time**.** Duplicate payment should not be an issue with residents who are beyond their initial residency period. These residents count as only .5 FTE and resident salaries and fringe benefits comprise only 43 percent of the per resident amount.

The rules on teaching physician supervision should be revised for residents who are beyond their initial residency program to permit Medicare billing if:

- the teaching physician is immediately available;
- reviews with each resident during or immediately after the visit the patient's medical history and care; and,
- documents his or her participation in the review and direction of services.

Accreditation standards for the residency program should be relied upon to determine issues regarding supervision requirements for specific services and resident-to-preceptor ratios.

An alternative would be to allow residents beyond their initial residency period to bill for services furnished in the hospital if an election is made to forego a direct GME payment for the resident's time.

b. Evaluate the impact of the teaching physician rules.

The issue of when physician billing is appropriate for care provided by residents is not limited to the Medicare program. It will remain relevant under an all-payer fund. There is a need to evaluate formally the administrative and teaching burden associated with the current Medicare rules and their impact on the quality of clinical training and patient care. Particular attention should be paid to the effect in hospital ambulatory clinics and community-based settings where there is a low resident-to-preceptor ratio.

c. Develop clear and reasonable documentation requirements.

There is need for additional guidance and common understanding of what constitutes adequate documentation of a teaching physician's participation in the care of patients involving residents. HCFA should work with the academic physician community and the Office of Inspector General to develop reasonable standards that do not compromise high quality clinical education. The standards should provide a reasonable means for documenting the teaching physician's involvement in the care of the patient and assuring appropriate payments without imposing undue administrative burden. They should be tested in a variety of teaching settings and specialty programs before implementation.

RECOMMENDATION 8

PROVIDE ADDITIONAL SUPPORT FOR HOSPITALS AND COMMUNITY-BASED TRAINING SITES THAT SERVE A DISPROPORTIONATE SHARE OF LOW INCOME PATIENTS.

In the absence of national health insurance, "safety net" providers should be provided with additional funding to cover uncompensated care costs.

Major teaching hospitals provide substantial uncompensated care. Faculty practice plans also furnish charity care. Uncompensated care is not an educational cost. However, it affects the training site's ability to provide high quality educational experiences. More importantly, teaching institutions that furnish high amounts of uncompensated care rely on current GME funding to support their charity care. As changes are made in the IME payment methodology, the current level and distribution of DSH payments should be examined to assure the funds are well targeted to subsidize uncompensated care. The subsidies should apply to hospitals for both inpatient and outpatient services and to community-based providers. Without additional support, GME is not sustainable in community-based training sites with a high volume of uncompensated care. These sites cannot generate the patient care revenues needed to support their educational activities.

Introduction

BACKGROUND

The 13th Report of the Council on Graduate Medical Education (COGME), *Physician Education for a Changing Health Care Environment,* emphasized that the comprehensive preparation of all modern physicians requires training experience in both traditional and community settings. Noting that care is increasingly provided in the context of integrated delivery systems, the Council concluded that effective medical practice requires an understanding of the characteristics of the population served and the attributes of the delivery system in which care is provided. COGME recommended that educational programs address the care of the individual in the context of the patient's community and include clinical learning experiences across the continuum of care. Training should include opportunities to participate in a multi-disciplinary team approach to patient care. The Council advocated the development of high quality, community-based clinical teaching opportunities with a faculty incorporating community clinician-teachers.

COGME found that the current system of funding graduate medical education (GME) through teaching hospitals has inherent limitations and disincentives for developing ambulatory clinical training experiences and community-based educational programs. In its 14th Report, *COGME Physician Workforce Policies: Recent Developments and Remaining Challenges in Meeting National Goals,* COGME called for a stable, all-payer financing mechanism for GME that would provide adequate funding for training in ambulatory settings. The Council noted recent developments to support ambulatory training, including actions by residency review committees, medical schools, foundations, States, and changes in Medicare financing policies. However, the Council also expressed concern over whether the changes are adequate to support a sufficient shift to ambulatory settings and suggested that further revisions in financing policies may be necessary.

PURPOSE

The purpose of this report is to create a policy framework and set of recommendations for changes in GME financing policies. The recommended changes are intended to provide appropriate incentives for high quality residency training in both traditional and community settings. As used in this report, the term "community settings" describes settings that are representative of the environment in which residents will eventually practice. Under this definition, the processes of care and educational outcomes are the determining factors in identifying a community setting rather than its location *per se*. Both hospital-based clinics and community-based ambulatory care providers may serve as community training sites.

The report builds on COGME's 13th and 14th Reports by examining current funding mechanisms for GME and assessing their implications for expanding training in community settings. It evaluates alternative Federal financing policies within the context of the Council's recommendation for a stable financing mechanism that would provide adequate support for ambulatory training. Consideration is also given to the implications of the alternative policies on other COGME goals. These goals include:

- Reduce the rate of growth in the supply of U.S. physicians;
- Increase the number of generalists;
- Increase the diversity of the physician workforce;
- Promote a rational system of physician workforce planning; and,
- Preserve safety net providers.

METHODOLOGY

The report's findings and recommendations were developed through analysis and synthesis of information derived from a variety of sources: review of the literature and recent GME reform proposals, primary and secondary data analyses, consultation with an expert panel and interviews. The literature review provided background information on current GME financing policies and issues. Particular attention was given to issues related to training in community-based settings. The review of recent GME proposals provided an inventory of financing policies that have been advanced by others and provided the foundation for developing alternative payment models.

The data analyses were directed at several questions, including the amount and type of ambulatory training that is occurring, the financial status of teaching hospitals, and variations in the level of

GME costs and Medicare support across teaching hospitals. The analyses drew from secondary data sources as well as Medicare cost reports and other data files. The results have relevance to recommendations regarding the appropriate level of public support for GME and allocation of the funds.

On-site and telephone interviews and input from an expert panel were used to determine the basic models used for clinical training experiences in ambulatory settings. The interviews focused on the flow of funds to support GME and the financial arrangements between program sponsors, hospitals and community-based training sites. Attention was given to identifying barriers to community-based training and the characteristics of programs that have substantial community-based training. The interviews were with individuals involved in both programs with long-standing community-based training sites and relatively new programs that are developing collaborative arrangements with managed care organizations or community providers in medically underserved areas. Where possible, the residency program director and individuals at the sponsoring hospital and the community sites were interviewed. The report's findings reflect the circumstances of the programs where the interviews were conducted. However, similar themes emerged from the interviews with different sites that are also consistent with other information on GME financing issues. The analyses of alternate financing mechanisms are a synthesis of the information obtained during the interviews, from the data analyses and literature review, and consultation with the expert panel.

ORGANIZATION OF REPORT

"The Changing Health Care Environment" section, beginning on page 19, provides an overview of changes in the health care environment that have major implications for how GME programs are operated and financed. Concerns over the solvency of the Medicare trust fund, the impact of continued Medicare spending cuts in the face of a competitive health care market, and the weak linkage between Medicare GME funding and physician workforce goals have led COGME and others to support alternative funding mechanisms for GME.

The "Current Financing of Graduate Medical Education" section, beginning on page 23, reviews current GME funding sources. It begins with a detailed analysis of Medicare payments and policies with particular attention to policies that may affect residency training in community-settings. It then summarizes other major sources of GME funding, including Medicaid and other State programs and programs funded under the Public Health Service Act.

The "Residency Training in Community Settings" section, beginning on page 39, contains background information on residency training in community-based settings. Drawing on information gathered from the site visits and the literature review, it begins with information on the amount and type of ambulatory training that is currently taking place and the requirements of the Residency Review Committees that pertain to ambulatory training. A literature review on the barriers to training in community-based training sites follows. The section concludes with the findings from the site visits. The visits highlighted the wide variety of current financial arrangements between teaching hospitals and community-based training sites and the impact of Medicare payment provisions on residency training in ambulatory settings.

The "GME Reform Proposals" section, beginning on page 49, summarizes recent proposals for GME reform, including proposals for an all-payer fund.

The "Alternative Models for GME Funding" section, beginning on page 53, follows with an analysis of alternative models for allocating GME funds. The discussion addresses the fundamental issues: who should receive payments directly from the fund; how should funds be allocated among the receiving entities; and, how to establish accountability among the recipients for the funds.

The "Recommendations for GME Financing Reform" section, beginning on page 59, contains recommendations for GME financing reform within the context of a stable, broad-based financing mechanism. The recommendations address the level and sources of funding and issues related to allocation of the funds.

The Changing Health Care Environment

Recent trends in the health care delivery system have major implications for how GME programs are operated and how they are financed. These trends affect the settings in which patient care is delivered and in which residency training should occur. They also have import for the continued reliance on patient care revenues as the main source of funding for GME. This section provides an overview of the uncertainties and financial pressures inherent in the changing health care environment that suggest stable broad-based funding through an all-payer fund is needed to support GME.

The most significant changes in the health care delivery system are associated with the growth of managed systems of care and increased competition within health care markets. Managed care growth has been rapid. In 1990, 71 percent of individuals covered under employer group health plans were enrolled in a conventional fee-for-service plan. By 1998, only 14 percent were enrolled in conventional fee-for-service and 86 percent were in some form of managed care: traditional health maintenance organizations (30 percent), HMO point of service plans (22 percent), and preferred provider organizations (34 percent) (U.S. Congress, 1999). Over the same period, Medicare enrollment in managed care plans grew from 3.3 to 15.4 percent (U.S. Congress, 1999) while 54 percent of the Medicaid population was enrolled in managed care by 1998 (HCFA, 1998). Since 1998, Medicare managed care enrollment has declined (HCFA, 2000).

Managed care activities such as rate negotiation, selective contracting, and utilization management affect patient care revenues generated by academic health centers and other providers involved in GME. The impact on specific institutions is affected by the managed care penetration rate in the health care market, the presence of other teaching hospitals, and the nature of the contractual arrangements with the health plan. Currently, health plans commonly offer multiple products involving diverse contracting arrangements with a broad provider network. HMO contracts are commonly with hospital systems and physician networks that manage utilization and may assume financial risk. HMO point-of-service products expand consumer choice by allowing coverage of non-network services. Preferred provider organization products typically involve contracts with individual physicians on a discounted fee-for-service basis with limited utilization management (Lake, 2000; Robinson, 1999).

Faculty practice plan revenues that traditionally support GME have been affected by the Medicare physician fee schedule as well as competitive pressures associated with the move to managed care. The 1998 Medical Group Management Association and Association of American Medical Colleges' Faculty Salary Survey found overall inflation-adjusted growth in clinical faculty salaries over the preceding five years was essentially flat. Consistent with the impact of the Medicare fee schedule, there was greater downward pressure on faculty salaries in the procedurally oriented departments relative to faculty in departments with a high concentration of generalists (AAMC, 1999a). At the same time, medical school departments have become increasingly dependent on faculty practice plans. The survey indicated patient care revenues provided 60 percent of all medical school departmental revenue in 1997 (AAMC, 1999b).

Reductions in hospital inpatient utilization and a shift of services from inpatient to ambulatory settings have accompanied the growth of managed systems of care. Between 1990 and 1998, hospital inpatient days declined 15 percent while outpatient visits increased 50 percent (U.S. Congress, 1999). Efforts to increase operating efficiencies and improve negotiating power with managed care plans has led to hospital consolidations into regional and national systems (Levit et al., 2000) and expansion of hospital-owned or affiliated physician practices (Retchin, 2000). The competitive pressures are evidenced in a decline in the average hospital payment-to-cost ratio for services covered by private payers from 1.27 in 1990 to 1.14 in 1998 (MedPAC, 2000b). In many areas, health care markets are continuing to evolve change as unsuccessful hospital mergers are dissolved and unprofitable hospital-owned physician practices are sold, frequently at a loss.

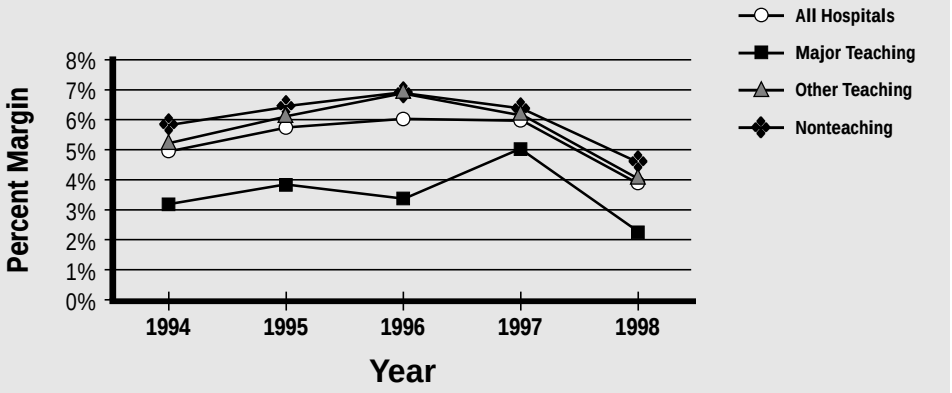
Teaching hospitals tend to have higher costs that put them at a competitive disadvantage with community hospitals in competing for managed care contracts for non-specialized care.[2] Private payers subsidize the educational and other missions of teaching hospitals through higher payments. However, competitive pressures are eroding the subsidies for public missions. The private payer payment-to-cost ratio for teaching hospitals was 1.25 in 1989 (ProPAC, 1992). By 1998, it had fallen to 1.15 and

1.05, respectively, for academic health centers and other major teaching hospitals (MedPAC, 2000b). In addition, Medicaid managed care growth has reduced the Medicaid revenues and payments for serving a disproportionate share of low income patients (DSH) that public and other safety net teaching hospitals rely on to support their charity care missions. For safety net hospitals, Medicaid revenue losses have been accompanied by an increase in uncompensated care (IOM, 2000). In 1998, uncompensated care represented losses of 7.8 percent and 5.4 percent of the total costs of academic health centers and other major teaching hospitals, respectively (MedPAC, 2000b).

Hospital margins are a common measure of financial performance.[3] Teaching hospitals tend to have lower total margins than non-teaching hospitals (see Figure 1). In 1998, major and minor teaching hospitals had average margins of 2.3 and 4.1 percent, respectively, relative to an average 4.6 percent margin for non-teaching hospitals. However, Medicare margins are higher for teaching hospitals than non-teaching hospitals (see Figure 2). The higher Medicare margins are largely attributable to Medicare's support for the public missions of teaching hospitals through GME and DSH payments. In 1998, academic medical centers and other major teaching hospitals had Medicare inpatients margins of 24.6 and 26.2 percent, respectively, relative to average Medicare inpatient margins of 13.8 percent for other teaching hospitals and 9.3 percent for non-teaching hospitals. The issue of whether Medicare's support should continue at its current levels was debated during consideration of the BBA. The debate centered on concerns over the solvency of the Medicare Part A trust fund and the impact of continued Medicare spending cuts in the face of a competitive health care market.

FIGURE 1

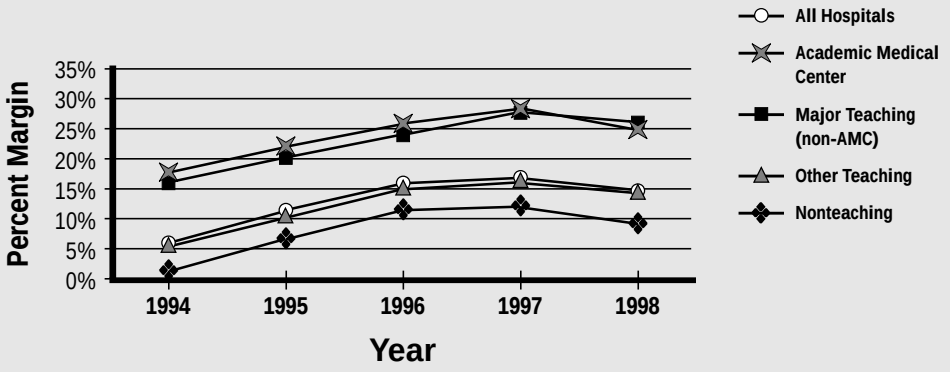
Hospital Total Margin by Teaching Status 1994-1998



Source: MEDPAC, 2000a.

FIGURE 2

Hospital Medicare Inpatient Margin (Excluding Graduate Medical Education) by Hospital Group, 1994-1998



Source: MEDPAC, 2000a.

Medicaid and Medicare payment reductions in the BBA (Public Law 105-33) have added to the financial pressures on health care providers. Hospitals serving a disproportionate share of low-income (DSH) patients are most affected by the Medicaid reductions. Medicaid payments to these hospitals were reduced $10.4 billion over five years. Medicare provisions in the BBA that affect all hospitals were estimated to reduce payments by $33.6 billion over five years. In addition, Medicare payments to hospitals for indirect medical education costs and for serving a disproportionate share of low-income patients were reduced over five years by $5.6 billion and $0.5 billion, respectively. The legislation also carved out an estimated $4 billion in implicit GME payments to Medicare + Choice organizations that will be paid directly to teaching hospitals for GME (CBO, 1997). Other BBA provisions, such as implementation of prospective payment systems for hospital outpatient services, home health services, and skilled nursing facility services, will also affect hospital revenues.[4] The Balanced Budget Refinement Act of 1999 (BBRA) restored an estimated $700 million of the teaching and disproportionate share cuts and added $100 million in direct GME payments (CBO, 1999), a relatively modest amount when compared to the total BBA cuts.

The BBA contained provisions intended to align Medicare payments for GME more closely with workforce policy. These provisions included:

- A hospital-specific cap on the number of residents that will be recognized for Medicare payment and use of a rolling average to determine resident counts;
- Modification to the indirect medical education adjustment paid to hospitals when the hospital bears substantially all training costs to recognize resident time in non-hospital settings;
- Authority to pay certain non-hospital entities (Federally qualified health centers, rural health clinics, and Medicare +Choice organizations) for direct costs of GME if they incur substantially all training costs;
- Transition payments to hospitals electing to participate in a voluntary resident reduction plan; and,
- Authority for GME consortia demonstration.

In addition, the BBRA included a provision to reduce the variation in the per resident amounts used to determine Medicare payments for direct GME costs. Even with these changes, however, the linkage between Medicare payments for patient care services and workforce priorities remains weak.

The uncertainties of continued reliance on Medicare, Medicaid and private pay revenues to fund GME have led COGME and others to conclude major changes are needed in the way GME is financed. The Council's 14th Report (1999b) reiterated its long standing recommendation for the development of an all-payer financing system that would spread the costs of preparing a well-qualified physician workforce equitably across all payers. An all-payer fund would also afford an opportunity to strengthen the relationship between GME funding and physician workforce priorities. Ideally, it would provide stable, broad-based funding to support the training of an appropriate number and specialty mix of physicians who are well-equipped to provide high quality, effective and efficient care.

Current Financing of Graduate Medical Education

OVERVIEW

There are both direct and indirect costs associated with operating residency training programs. Direct costs include resident salaries and fringe benefits, teaching physician compensation, program administration costs, and allocated institutional overhead costs. These costs are typically incurred by program sponsors and/or participating training sites. Indirect costs are the higher patient care costs incurred by clinical teaching sites that are attributable to their educational activities. Total costs for GME are difficult to estimate because of the joint production of patient care, education and research. A Lewin Group study estimated the higher costs of education-related activities at teaching hospitals to be $18.1 billion in 1997 (Commonwealth, 1997). The estimate does not include costs assumed by medical schools, faculty practice plans, and community-based sites or the imputed value of teaching by volunteer faculty.

Most GME financing occurs through patient care revenues. Medicare and, in most States, Medicaid make explicit payments to teaching hospitals for the costs of GME. Other payers implicitly support GME through higher payments for patient care. In addition, faculty practice plan revenues are another source of support for clinical faculty time spent in academic activities. Plan revenues may also provide direct support to medical school or department funds that are used to support graduate as well as undergraduate medical education. State-support for GME typically occurs through appropriations to State-operated medical schools or residency training grants. In addition, Federal appropriations under Title VII and VIII of the Public Health Service Act support primary care residency programs and other health professional education. According to AAMC estimates, the major funding sources in FY1995 for direct GME costs incurred by non-Federal hospitals were Medicare (34%), Medicaid and private payers (57%), and other sources such as State and local government appropriations, philanthropy, and revenues from faculty practice plans (9%) (Fishman, 1996). The flow of funds among the participants in GME activities is complex and frequently involves cross-subsidies between medical schools, teaching hospitals, and other training sites.

TABLE 1

Medicare GME Payments to Hospitals

($ BILLIONS)

	IME PAYMENTS	*DIRECT GME PAYMENTS*
1990	2.91	1.76
1991	3.21	1.89
1992	3.67	2.36
1993	4.09	2.55
1994	4.50	2.61
1995	5.10	2.74
1996	5.55	2.86
1997	5.16	2.43
1998	4.99	2.10

Source: U.S. Congress (1999). Payments include GME amounts implicit in managed care capitation rates.

MEDICARE PAYMENTS

The Medicare program recognizes the higher costs associated with teaching activities through explicit payments for GME. In FY2000, Medicare will pay an estimated $2.7 billion (including $200 million for managed care enrollees) in direct GME payments and $5.1 billion (including about $700 million for managed care enrollees) for IME (HCFA/OACT, 2000). Medicare's payments for earlier years' GME costs are shown in Table 1. Total payments increased 48 percent between 1990 and 1998 (U.S. Congress, 1999).

Medicare has supported GME as a public good since its inception in 1966. Although the payment methodologies have changed over the years, Medicare's support has always been linked to the provision of patient care services to Medicare beneficiaries. The committee report accompanying the original Medicare law indicated that the costs of medical education should be borne by the community. However, until the community assumed the costs, the report specified Medicare would share in the costs because educational activities contribute to quality of care within the institution. The report further noted that the intent was to support activities traditionally carried on by providers and that Medicare would not share in increased costs resulting from a redistribution of costs from educational institutions to providers (U.S. Congress, 1965).

The subsections that follow provide a general overview of current Medicare payments associated with GME. Specific issues are noted for each funding stream that have implications for reforming Federal GME financing policies. There are also three overarching concerns that suggest broader-based funding is preferable to relying heavily on Medicare payments for patient care services as the only Federal funding mechanism. They will be discussed more fully in the context of an evaluation of potential changes in GME financing mechanisms. These issues are:

- Restricting payments to teaching hospitals for educational costs impedes the development of residency programs in non-hospital ambulatory and managed care settings.
- Linking educational payments to services furnished to Medicare patients concentrates Federal support on providers with high Medicare utilization. It offers little support to providers with low Medicare utilization such as children's hospitals and Federally qualified health centers (FQHCs).
- Paying for educational costs through patient care payments alone is not an effective mechanism for achieving specific workforce priorities such as improving the specialty and geographic distribution of the physician workforce.

Recent changes in national policy have begun to address these concerns, but COGME believes further changes are in order.

DIRECT GME PAYMENTS TO HOSPITALS

Medicare's direct GME payments are intended to cover the program's share of expenses that are directly attributable to GME: the resident salaries, teaching physician compensation for supervising residents, and associated overhead costs. Payment is based on the number of residents at the hospital (and ambulatory settings if the hospital assumes substantially all of the training costs), a hospital-specific per resident amount based on 1984 costs updated for inflation, and Medicare's share of hospital inpatient days. Until the BBA, the Medicare law authorized direct GME payments only to hospitals. Beginning January 1, 1998, Medicare may make direct GME payments to other provider entities. Policy issues concerning Medicare's direct GME payments to hospitals are discussed below. Medicare GME financing issues related to community-based training are treated later in this section as a separate discussion.

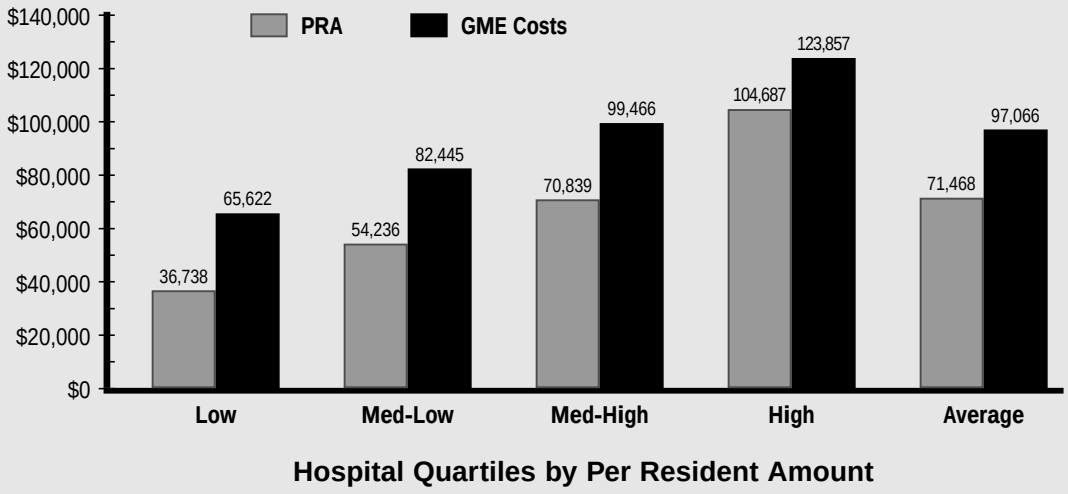
PAYMENTS REFLECT HISTORIC COSTS

Medicare's total payments for direct GME costs for 1990-1998 are shown in Table 1. Payments are a function of the hospital's per resident amount, the number of residents, and the ratio of Medicare inpatient days to total inpatient days.[5] A hospital's per resident amount is based on its 1984 GME costs. It has been adjusted for inflation annually based on the rate of increase in the Consumer Price Index for Urban Consumers (CPI-U).[6] On average, Medicare pays about 30 percent of the per resident amount. Actual increases in Medicare direct GME payments exceeded the increase in the CPI-U until 1997. Payments started to decline in 1997 with reductions in resident counts and increases in Medicare managed care enrollments.

Direct GME costs per resident have increased more rapidly than the per resident amounts. Figure 3 compares the per resident amounts applicable to cost reporting periods beginning in Federal fiscal year (FY) 1997 to direct GME costs per resident incurred by hospitals for the same period. Hospitals have been divided into quartiles based on their per resident amounts. Direct GME costs

FIGURE 3

Comparison of FY1997 Per Resident Amounts and GME Costs



Source: FY1997 HCRIS cost reports.

per resident were 36 percent higher than the average per resident amount. The rate of increase for hospitals with low per resident amounts has been higher relative to hospitals with high per resident amounts. As a result, hospitals with low per resident amounts received 56 percent of Medicare's share of their FY1997 GME costs while hospitals with a high per resident amount received 85 percent of Medicare's share.

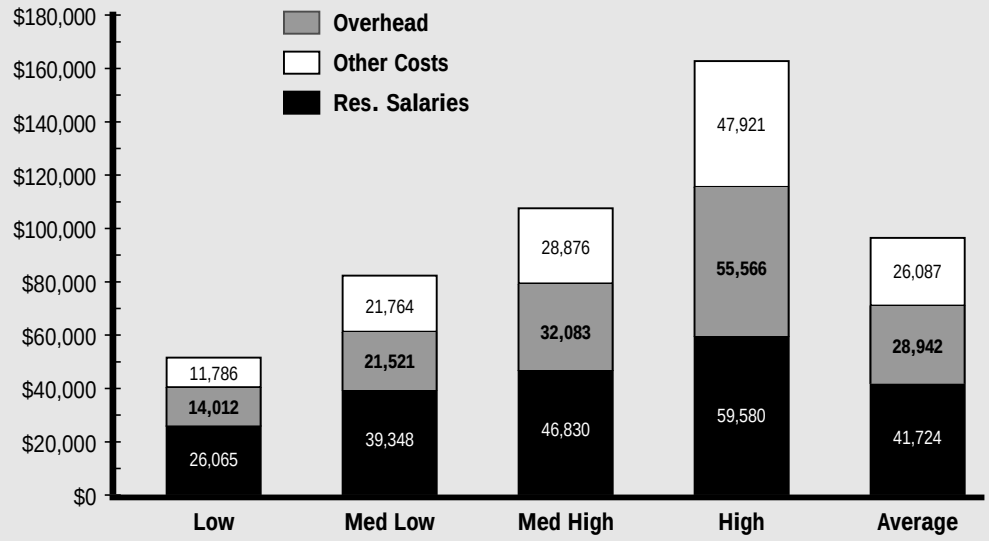
There is Wide Variation in per Resident Amounts

The hospital-specific per resident amounts vary widely based on historical accounting practices and financial arrangements between program sponsors and teaching sites in 1984. The resident-weighted mean of the high per resident amount group is 2.8 times the resident-weighted mean of the low per resident amount group. Even within the same geographic area, the variation can be substantial. Earlier studies have found that the per resident amounts do not vary systematically by factors such as cost of living, mix of program specialties, or quality (Anderson, 1996).

Analysis of cost reports beginning in FY1997 indicates the differences in resident salary levels account for a relatively small amount of the variation in direct GME costs. Figure 4 compares the components of direct GME costs by per resident cost groups.[7] The analysis includes 787 hospitals that reported having ten or more residents. Most cost variation is attributable to differences in the other direct program costs (including teaching physician compensation) and in allocated overhead costs. The components for other direct costs and allocated overhead costs per resident in the high cost group are about four times those costs in the low cost group.

HCFA recently began to collect compensation data on teaching physicians in connection with refinements to the hospital wage index. These data afford a more direct measure of differences in teaching physician compensation. The reported amounts should reflect wage-related payments to teaching physicians who are either employed or under contract to provide teaching or administrative services related to the hospital's GME programs. The analysis used data for teaching hospitals with ten or more residents and at least $10,000 in GME costs. Not all teaching hospitals reported their teaching salaries. After removing statistical outliers, 352 hospitals reporting teaching compensation remained in the analysis. Table 2 compares teaching physician compensation per resident to the average GME cost per resident for those hospitals. The average teaching physician compensation per resident is $24,695. The average for hospitals in the low per resident GME cost quartile is $11,459 while the average for hospitals in the high cost quartile is $42,983. The difference is largely attributable to the number of compensated teaching physician hours per resident: 178 in the low cost group compared to 614 in the high cost quartile. Standardizing for differences in the cost of living across geographic areas does not significantly change the results.

FIGURE 4
Components of FY1997 GME Cost Per Resident



Source: FY1997 HCRIS cost reports.

One might expect teaching physician compensation per resident to be higher in hospitals that sponsor relatively few residents since administrative costs associated with operating residency programs are spread over fewer residents. Table 2 compares teaching physician compensation amounts across hospitals grouped by total number of residents. The per resident average teaching physician compensation and hours decline as the size of the residency program increases. However, they are fairly comparable across hospitals with fewer than 200 residents.[8]

The question of whether primary care residency programs have higher teaching physician costs is closely related to the issue of whether there should be specialty-differentials in

the per resident amounts. Primary care specialties are more dependent on hospital support because their revenues for physician services typically provide less faculty support relative to those generated by non-primary care specialties (IOM, 1989). Also, primary care residency programs are often the only programs offered by minor teaching hospitals. As a result, overhead is spread over fewer residents. This suggests that teaching compensation per resident might be higher in primary care residency programs relative to other programs. Table 2 compares the teaching physician compensation costs per resident in hospitals with only primary care/OB-GYN residency programs to those costs in hospitals that train residents in other residency programs. Hospitals offering other programs are grouped based on the proportion of residents that are in residency programs other than primary care/OB-GYN. There is no consistent pattern across hospitals.

The BBRA made a modest change in the Medicare payment methodology to reduce disparities in per resident amounts. The provision raises the minimum payment to 70 percent of a national wage-adjusted average per resident amount. The per resident amounts for hospitals that are above 140 percent of the wage-adjusted national average are frozen for FY2001-FY2002 and limited to inflation increases of CPI-U minus 2 percentage points for FY2003 through FY2005. HCFA estimates 27.3 percent of teaching hospitals will benefit from the 70 percent floor and receive $33.2 million in additional payments during FY2001. The agency estimates 14.6 percent will be affected by the ceiling and will receive $16 million less in GME payments (DHHS, 2000b).[9]

PAYMENTS DEPEND ON MEDICARE PATIENT LOAD

Medicare's share of a hospital's aggregate payment amount (the product of the per resident amounts and number of FTE residents) is based on its ratio of Medicare inpatient days to total days. On average, Medicare's share is approximately 30 percent of the aggregate payment amount. There are no substantial differences in the average Medicare share across the payment groups. However, individual hospitals can have significantly different Medicare shares. In particular, hospitals with low Medicare utilization levels, such as children's hospitals and certain hospitals with high charity care caseloads receive little Medicare support. The distribution of Medicare per resident payments (Medicare's share of the per resident amount) is shown in Figure 5. The average resident-weighted Medicare payment was $22,350 in FY1997.

PAYMENTS DO NOT REFLECT SPECIALTY DIFFERENCES IN RESIDENCY PROGRAM COSTS

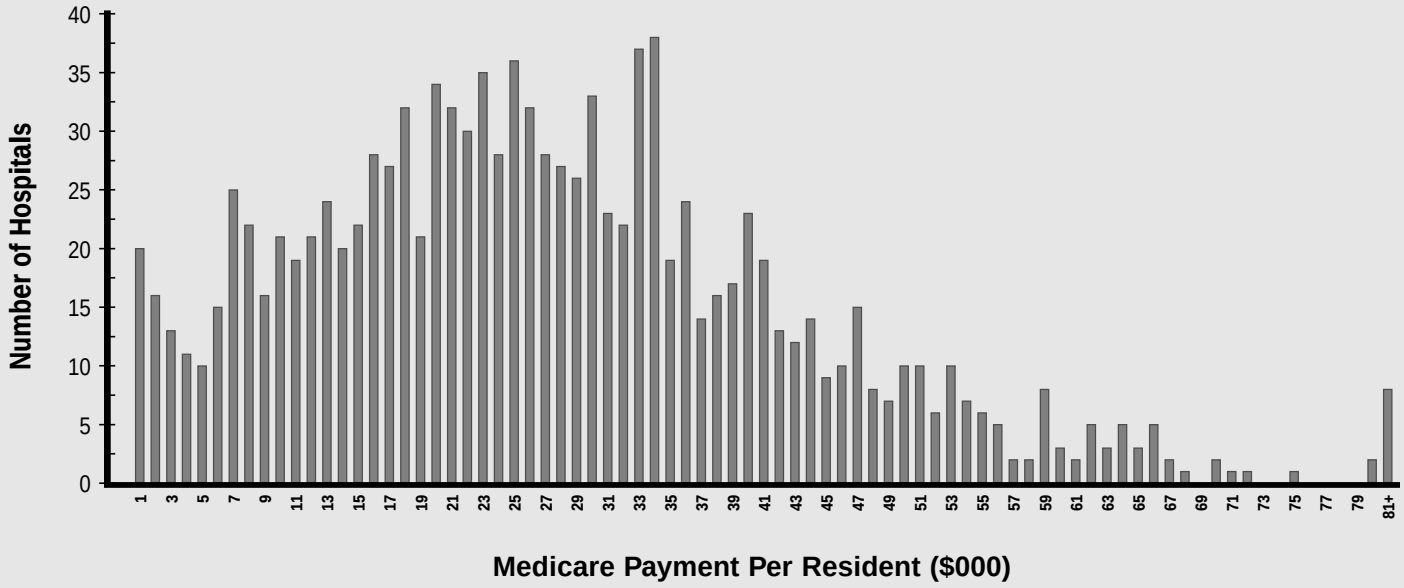
There are two hospital-specific per resident amounts under Medicare. One amount applies to residency programs in primary

TABLE 2
Hospital Per Resident Teaching Physician Costs, FY1997

		Number of Hospitals	Total Number of Residents	Average Teaching Physician Compensation	Average Teaching Physician Hours	Average Hourly Rate
HOSPITAL GROUPING	**Total**	352	34,133	$24,695	364	$68
GME COST QUARTILE	**Low**	58	7,425	$11,459	178	$64
	Med Low	92	10,814	$19,524	284	$69
	Med High	102	9,093	$27,972	423	$66
	High	100	6,801	$42,983	614	$70
NUMBER OF RESIDENTS PER HOSPITAL	**<=50**	173	4,464	$31,013	488	$64
	<=100	65	4,582	$30,210	435	$69
	<=200	62	8,593	$28,390	409	$69
	<=300	31	7,589	$23,057	339	$68
	<=400	11	3,640	$18,373	288	$64
	>400	10	5,265	$15,238	210	$73
PROPORTION OF RESIDENTS IN PRIMARY CARE	**100%**	73	1,942	$31,832	534	$60
	76-99%	76	3,547	$32,108	434	$74
	51-75%	102	10,564	$29,243	416	$70
	26-50%	77	16,900	$19,124	292	$65
	0-25%	24	1,180	$29,729	425	$70

Source: FY2001 Hospital Wage Index Survey (HCFA website). FY 1997 HCRIS cost reports used to establish groupings. Based on 352 hospitals, with at least 10 residents and $10,000 in GME aggregate approved amounts, reporting teaching physician compensation.

FIGURE 5
Distribution of FY1997 Medicare Per Resident Payments



Source: FY1997 HCRIS cost reports.

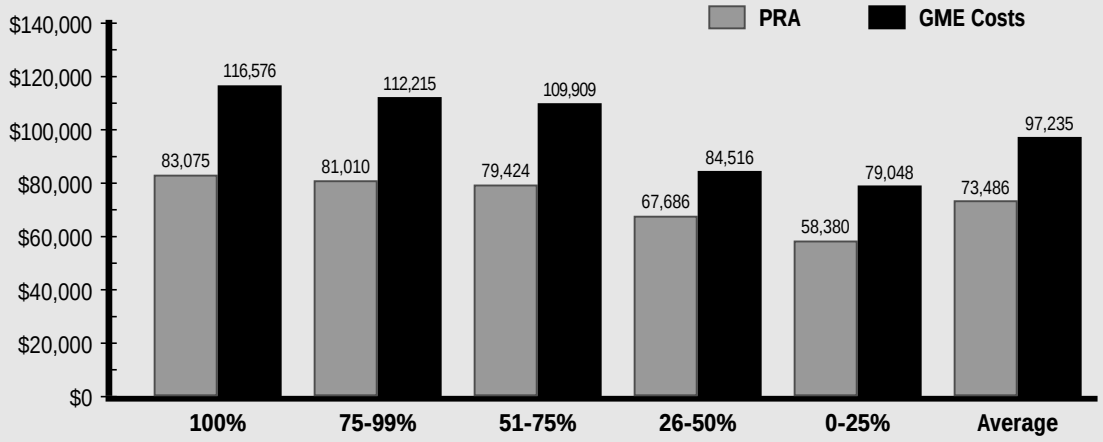
care (family medicine, general internal medicine, general pediatrics, osteopathic general practice), preventive medicine, geriatric medicine and obstetrics-gynecology. The other per resident amount applies to all other residency programs. The average per resident amount for primary care and OB/GYN programs is 5.6 percent higher than the per resident amounts for other programs at a particular teaching hospital. The difference stems from a two-year freeze imposed by the Omnibus Budget Reconciliation Act of 1993 on the inflation updates in per resident amounts for all programs other than primary care and OB-GYN. The difference does not reflect actual variations in direct GME costs between primary care and other residency programs.[10]

In teaching hospitals with multiple residency programs, primary care residency programs are sometimes subsidized by other residency programs that generate relatively higher clinical revenues. However, based on the FY1997 cost reports, 393 hospitals with 6,124 residents only participate in primary care residency training and have no cross-subsidization potential. This could become an issue if hospital-specific per resident amounts are replaced by a national average per resident amount. If GME costs are higher in programs with substantial community-based training needs and little opportunity for cross-subsidization, adequate support for these programs may require per resident payment amounts by specialty or groups of specialties. Figure 6 compares the per resident amounts and the FY1997 direct GME costs in hospitals based on the proportion of their residents that are in primary care and OB-GYN residency programs. Hospitals with a higher percentage of their residents in primary care and OB-GYN training programs appear to have higher per resident amounts and costs than hospitals with a relatively smaller proportion of primary care and OB-GYN residents. There is a marked difference between hospitals with more than 50 percent primary care and OB-GYN residents and those with less than 50 percent primary care and OB-GYN residents.[11]

In determining appropriate levels of Federal support, specialty differences in direct GME costs are less important than the impact of teaching on the training sites net costs (total costs minus patient care revenues). Faculty supervising residents in subspecialty programs tend to have higher clinical revenues although the differences are lessening as a result of the Medicare physician fee schedule. The Medicare rules count residents who are beyond their initial residency period as 0.5 FTE for purposes of determining direct GME payments. The initial residency period is defined as the minimum number of years needed for initial board certification. It is based on the first residency program a resident enters and is not modified or extended if a resident switches to another residency program. Approximately 12 percent of first-year residency programs are filled by residents with prior U.S. residency training (COGME, 1999b). Further research is needed to understand whether the 0.5 FTE weighting reasonably approximates specialty

FIGURE 6

GME Costs and Per Resident Amounts by Proportion of Primary Care Residents, 1997



Source: FY1997 HCRIS cost reports.

differences in net program costs. The BBRA requires the Medicare Payment Advisory Commission to make recommendations in its May 2001 report regarding the appropriateness of using the initial residency period distinction in determining direct GME payment.

INDIRECT MEDICAL EDUCATION PAYMENTS TO HOSPITALS

Medicare pays acute care hospitals for inpatient services based on a prospectively determined rate that takes into account average resources required to treat Medicare beneficiaries in the same diagnosis-related group. An indirect teaching adjustment is added to the standard rate to pay for additional patient care costs attributable to teaching activity that are not captured as direct GME costs. Although based on the hospital's ratio of residents-to-beds, the adjustment also compensates the hospital for higher patient care costs typically associated with other activities provided in conjunction with GME, i.e., clinical research, specialized care for complex patients, and charity care. Payments exceed the empirically justified level based on teaching intensity alone.

Medicare costs per case have grown more slowly than increases in IME payments. Changes in cost per case reflect changes in practice patterns such as a decline in the average length of stay in addition to price inflation and case mix changes (which also affect IME payments per case). The differential growth rates are largely accountable for the high average Medicare margins for teaching hospitals shown in Figure 2.

The remainder of this subsection explores several policy issues involving IME payments that have import for GME financing reform.

INTENDED PURPOSE OF THE IME ADJUSTMENT

The IME adjustment was established at the outset of the Medicare prospective payment system to account for the higher inpatient costs per discharge incurred by teaching hospitals. The committee reports accompanying the legislation noted that the adjustment was being provided "as a proxy to account for a number of factors which may legitimately increase costs in teaching hospitals." The conferees expressed concern about the ability of the prospective payment system to account fully for factors such as severity of illness and additional costs associated with teaching residents (U.S. Congress, 1983). Fearing that teaching hospitals might be adversely affected, the initial IME adjustment was double its empirically derived amount.

Medicare IME payments were intended to compensate teaching hospitals for their higher costs. While the formula is based on the ratio of residents-to-beds, the payments are an important source of support for other public missions such as charity care and research. It is on these grounds that reductions in the IME adjustment to the empirically justified amount are generally opposed. However, the level of involvement in the other public missions varies across teaching hospitals and teaching intensity is not a good measure to use to support other public missions.

Teaching hospitals as a group furnish a disproportionate share of charity care. However, not all teaching hospitals furnish substantial care to low income patients nor are all hospitals that serve low-income patients teaching hospitals. Table 3 shows the distribution of hospitals and residents by teaching intensity and percentage of low-income patients.[12] Among hospitals with a low-income patient percentage more than 35 percent, 229 are teaching hospitals and 661 are non-teaching. This represents 26 percent of all teaching hospitals and

TABLE 3
Distribution of Hospitals by Teaching Intensity and Low-Income Patients

Ratio of Residents to Beds	Low Income Patient Percent				
	0 - 15	16 - 25	26 - 35	> 35	Total
	Number of Hospitals				
All Teaching	382	292	160	299	1133
<.10	232	158	74	94	558
.11 - .25	103	80	38	56	277
.26 - .45	38	31	18	65	152
>.45	9	23	30	84	146
Non Teaching	1715	936	571	661	3883
ALL	2097	1228	731	960	5016

Source: PPS Proposed FY2001 Impact File. Low-income patients defined as percentage of Medicare patients who are entitled to SSI plus percentage of all patients who are non-Medicare patients entitled to Medicaid.

17 percent of non-teaching hospitals. However, one-third of all teaching hospitals, including 337 major teaching institutions, have a low-income patient percentage of less than 15 percent. This suggests that support for hospitals serving low-income patients should be addressed through targeted payments for serving a disproportionate share of low-income patients (DSH) and other subsidies rather than the IME adjustment. At the same time, it is important that refinements in the IME payment methodology not adversely affect hospitals that provide significant charity care. Reductions in IME payments to these hospitals should be offset by higher support for uncompensated care until specific funding for such services is provided.

Similarly, not all teaching hospitals are engaged in substantial research. Even among the 125 academic health centers, research funding is concentrated on a few institutions. In 1996, 50 percent of all NIH funds were awarded to 19 academic health centers (Commonwealth, 1999). Further analysis is needed to understand whether research-intensive teaching hospitals have higher costs relative to the non-research intensive teaching hospitals after controlling for teaching intensity. This analysis has import for GME financing reform. If there is a research effect on costs, the issues will be whether the effect should be recognized in GME funding and whether differential payments should flow to research-intensive institutions. In this regard, Medicare's policy has been that research costs above usual patient care costs should not be reimbursed.

Empirically Derived Level is Lower

The IME adjustment is a function of the hospital's teaching intensity, Medicare discharges, case mix index and wage index. Teaching intensity is measured by the ratio of the hospital's residents-to-beds in the payment formula for operating costs. In FY2000, the adjustment will increase a teaching hospital's payments about 6.5 percent for each .10 increment in its ratio of residents-to-beds. A hospital with a resident-to-bed ratio of .25 would receive a 14 percent add-on to its prospective payment rate for operating costs. The per case dollar value of the adjustment will be higher for hospitals located in relatively high wage areas and for hospitals which treat a relatively high proportion of resource-intensive patients. The estimated average IME adjustment per resident in FY2000 is $48,300. The BBRA reduces the adjustment to 6.25 percent for each .10 increment in the hospital's resident-to-bed ratio in FY2001, and to 5.5 percent in FY2002 and thereafter.[13] Additional IME payments are made for capital-related costs and for Medicare managed care enrollees.

IME payments in excess of the analytically supported level have been counter-productive to physician workforce goals. The excess represents "profit" that provides an incentive to hospitals to increase the number of residents and, until the BBA, rotate residents primarily to hospital-based clinical training sites. As discussed below, the BBA moderated these incentives by establishing a cap on the number of residents and allowing IME payments under certain conditions when residents rotate to non-hospital settings.

Estimates of the teaching effect on Medicare inpatient operating costs vary and are influenced by the way the regression formula is specified.[14] The Prospective Payment Assessment Commission estimated the teaching adjustment at 4.1 percent in 1997 (ProPAC, 1997). The Congressional Budget Office (2000) estimates the Medicare program would save $5.8 billion over five years if the adjustment were reduced to this level. More recent MedPAC (2000b) analyses estimate the adjustment at 3.1 percent after other refinements are made to the payment system. The 3.1 percent adjustment would result in a $1.5 billion reduction in annual IME payments compared to payments based on the 5.5 percent adjustment provided in the BBRA for FY2002.

The difference between current IME payment levels and the analytically justified levels represents amounts that could be redirected. One potential use would be to support educational activities that would increase community-based training capacity. Another would be to improve charity care support by making targeted payments to those institutions that actually provide substantial amounts of charity care.

Ambulatory Residents Are Included in the IME Count

The initial regulations implementing the prospective payment system included only residents assigned to the inpatient portion of the hospital in the IME payment formula. The formula was subsequently revised to include all residents working in either the inpatient or outpatient portions of the acute care hospital. More recently, the BBA permitted residents working outside the hospital to be included in the count provided the hospital incurs substantially all costs of the residency training program. (Implementation of this provision is discussed later in this subsection in the context of Medicare policies for non-hospital training sites). The more inclusive resident count protects against disincentives to rotate residents outside the inpatient area of the hospital. However, it is not as good a technical measure of the effect of teaching on inpatient costs per case. An alternative would be to restrict the count to residents in the hospital inpatient area and to provide IME or incentive payments to train residents in outpatient hospital and community-based settings.[15]

Direct Payments to Hospitals for Managed Care Enrollees

Until the BBA, teaching hospitals lost Medicare support for GME when Medicare beneficiaries enrolled in a managed care plan. The capitation rates paid to managed care plans for Medicare enrollees were based on fee-for-service payments and included an implicit amount for GME; however, managed care plans were not required to pass the funds on to teaching hospitals. Nationally, about 3.2 percent of the average capitated payment amount represented implicit GME payments (U.S. Congress, 1999). In areas with high managed care penetration, the revenue loss could be significant.[16]

The BBA recognizes teaching hospitals are at a competitive disadvantage relative to non-teaching hospitals for managed care contracts and may not be able to command the premium necessary to support their educational missions. The legislation provides for a carve-out of the GME amounts implicit in payments to Medicare + Choice plans and direct payments to teaching hospitals for GME costs attributable to Medicare + Choice enrollees. The provision is being phased-in over five years and is estimated to result in $4.0 billion in additional payments to teaching hospitals over that period (CBO, 1997). Payment is based on the amount of direct GME and IME payments that would have been paid to the hospital if the beneficiary had been enrolled in traditional Medicare fee-for-service.[17] Thus, payment is linked to Medicare managed care discharges at the teaching hospital. If the teaching hospital's share of Medicare managed care enrollees is low relative to its share of fee-for-service enrollees, total Medicare support will still be less than what the hospital would have received if the beneficiaries had remained in fee-for-service. A higher proportion of inpatient care is provided to managed care enrollees at non-teaching hospitals and on an outpatient basis. One implication is that more funds may be carved out of the capitated payments than are paid to teaching hospitals on behalf of Medicare+Choice enrollees.

COGME's 14th Report (1999b) recommended that a portion of the GME carve-out should be distributed based on performance consistent with national physician workforce goals. The amount could be based on the difference between the carve-out from the Medicare+Choice rates and the amounts paid to teaching hospitals.[18] The encounter data being collected from managed care plans provides an opportunity to evaluate the relative proportions of managed care and fee-for-service beneficiaries receiving inpatient care at teaching hospitals.

The BBA did not provide a similar pass-though for payments made to hospitals for serving a disproportionate share of low-income patients. About 2.1 percent of the capitated payment to Medicare+Choice organizations in FY1995 represented implicit DSH payments (U.S. Congress, 1999).

Limitations on the Number of Residents Recognized by Medicare

The BBA made several changes in how residents are counted for Medicare payment purposes. The count is now based on a three-year rolling average. The number of allopathic and osteopathic residents that can be counted is limited to the number reported in the hospital's cost reporting period ending in 1996. (The limit does not apply to dental or podiatric residents). The changes were intended to temper growth in the number of residents by limiting the number Medicare will pay for. For programs that are reducing their size, the rolling-average provides transition payments to support residency replacement costs.

Medicare's limit on resident counts is consistent with COGME's goal to reduce the number of residents. However, hospital-specific limits impede the ability of program directors to shift residents for educational reasons. The receiving hospital may not be able to absorb the residents under its count. The rules allow the limit to be applied on an aggregate basis to affiliated hospitals. While this provides some flexibility, it relies on cooperation among the parties and adds considerable administrative complexity to the rules. The limit is particularly problematic in population growth areas where expanding residency programs would improve the geographic distribution of physicians. The BBA allows an exception for rural hospitals that establish new residency training programs. However, it does not allow expansion of existing rural programs or an exception for rural tracks sponsored by urban hospitals. The BBRA made some revisions in the law to allow a 30 percent expansion in rural residency programs and to recognize that urban hospitals may operate a rural residency track. The provisions are an improvement over the BBA limits. However, if the rural hospital's resident count is relatively small, the 30 percent tolerance allows for only minimal expansions in residency programs. For example, a rural hospital with an established family medicine program with nine residents (three per year) would only be allowed to add one resident position for each year. Rural hospitals that are affiliated with urban teaching hospitals often have even smaller base year counts that would preclude any significant increase in the absolute number of residents.

Payments for Residency Training in Non-Hospital Based Settings

Prior to the Balanced Budget Act of 1997, the time a resident spent in hospital outpatient departments counted in the IME adjustment for inpatient hospital services. The time spent in non-hospital settings did not count. For direct GME payments, the time a resident spent in patient care activities in non-hospital settings counted if the hospital had a written agreement with the site and incurred all or substantially all of the costs of the training. Regulatory policies assumed the hospital incurred substantially all training costs if it paid the resident's salary and fringe benefits. The teaching physician rules apply if the resident in the non-hospital setting is counted by the hospital for direct GME payments. However, if the hospital does not include the resident in its direct GME count, a resident who is fully licensed to practice medicine may bill for services under Part B in a non-hospital setting. In this case, the teaching physician may not bill under Part B for services furnished by the resident under the physician's supervision.

Medicare pays certain ambulatory care providers on a reasonable cost basis. Subject to reimbursement limits, Medicare shares in any indirect teaching costs incurred by these providers. Since payment is based on each provider's costs rather than a fixed rate, an explicit payment for indirect teaching costs is generally not needed. However, the reimbursement limits are not adjusted for teaching activities. As a result, full sharing in GME costs does not occur in situations where a provider's costs exceed its reimbursement limits (e.g. an urban Federally qualified health center with costs in excess of its year 2000 per visit limit of $96.02). Prior to the BBA, providers paid on a reasonable cost basis included hospitals for most outpatient services, skilled nursing facilities, home health agencies, Federally qualified community health centers and rural health centers. The BBA established prospective payment systems for hospital outpatient services, home health services, and services provided by skilled nursing facilities. These are settings where residency training should take place in order to follow patients across the full continuum of care. As the payment methodologies change, care must be taken to ensure against erosion in existing support for residency training in these settings. Additional study is needed to determine whether there is an indirect teaching cost that should be recognized through an adjustment to the reimbursement limit or prospective payment for ambulatory care providers. The evidence to date does not substantiate the need for an IME adjustment. For example, in implementing the hospital outpatient PPS, HCFA found teaching did not have a significant effect on hospital outpatient costs (DHHS, 2000a). Other studies of residency training programs in ambulatory settings support a widely held belief that over the course of a three-year residency program, residents have little impact on net costs (Diamond, 1993; Lave, 1989).

The BBA made several significant changes in Medicare payment for residency training in ambulatory settings. First, the legislation authorized direct payments to entities other than hospitals. Medicare-participating Federally qualified community health centers, rural health clinics, Medicare+Choice organizations, and other entities designated by the Secretary may be paid for direct GME if the provider incurs all or substantially all of the costs of training at the site. (Implementing regulations did not expand the list of eligible entities.) Second, the law allows hospitals to include in their IME resident count (as well as direct GME resident count) the time residents spend in patient care

activities at non-hospital settings if the hospital incurs all or substantially all of the training costs at the ambulatory site. In determining which entity incurs substantially all of the training costs, implementing regulations look to which entity pays the resident's salary and fringe benefits and teaching physician compensation while the resident is at the non-hospital site. The rules provide that the following criteria must be met before the hospital may receive payment:

- There must be a written agreement between the hospital and the ambulatory site.
- The parties must agree that the hospital bears the costs for the resident's salary and fringe benefits and that the teaching physician compensation is reasonable.
- The resident must be engaged in patient care activities as part of an approved residency program.

If the hospital bears substantially all of the costs, any GME costs incurred by the ambulatory site are not allowable costs for Medicare payment purposes. On the other hand, if the ambulatory site incurs substantially all of the costs, Medicare pays its share of the GME costs incurred by the site. Direct GME costs are not subject to the productivity standards and per visit limits applicable to Federally qualified health centers and rural health clinics. Payment to Medicare+Choice organizations is based on the percentage of plan enrollees who are Medicare beneficiaries and is limited to the resident's salary and reasonable teaching physician compensation.

Payment will be made to either the hospital or the ambulatory site, but not both. In most cases, it is advantageous for payment to flow to the hospital:

- The hospital usually has higher Medicare utilization than the ambulatory site.
- The hospital would receive both direct GME and IME if it bears substantially all of the costs. The ambulatory site would receive direct GME in addition to payment for direct patient care costs or the capitated payment rate. Generally, the hospital's payments would be substantially more than the ambulatory provider's payments.

However, there is a complicated interaction between the BBA payments to ambulatory sites and the limitations on the number of residents that can be included in a hospital's resident count. If the hospital exceeds its 1996 resident limits, it may be advantageous for an ambulatory site entitled to direct GME payments (i.e., FQHC, RHC or Medicare+Choice program) to assume the residency training costs and be paid based on Medicare's share of the costs. If the hospital does not include the residents in its count and the residents are fully licensed, another option would be for the residents to bill for their patient care services under Part B.

For IME payments, the time residents spent in non-hospital settings could not be included in a hospital's resident count prior to the BBA. The residents who were training in non-hospital settings in 1996 are not represented in the hospital's resident limit for IME payments. With the BBA limits, these residents cannot be included in the hospital's IME count unless there are offsetting reductions in other residency programs at the hospital. In essence, the BBA removes the disincentive for new shifts in residents from hospital to community-based training sites. However, hospitals that had already developed community-based training sites by 1996 are disadvantaged. They receive no benefit from the change unless there are reductions in other residency programs at the hospital. The provisions disproportionately impact family medicine residency programs. An estimated 250-350 residents training in non-hospital settings in 1996 were not included in hospitals' IME count. Forty percent of family medicine programs are the sole residency program in the hospital and cannot benefit from downsizing in other programs at the hospital (Davis, 2000).

TEACHING PHYSICIAN SERVICES

The direct GME payment is intended to cover the hospital's compensation to teaching physicians for time spent on GME program administration and teaching and supervision of residents. Specifically, the per resident amounts include an average payment for teaching physician supervision of residents based on 1984 GME costs. In addition, payment may be made under the Medicare physician fee schedule for professional services furnished by the physician or by a resident under the medical direction of the teaching physician. Medicare rules govern when a teaching physician can appropriately bill Medicare when a resident is involved in the care of his or her patient. The rules are intended to avoid paying for the same service twice. They limit Part B payments to situations involving a teaching physician's direct, identifiable service to an individual patient. The teaching physician rules have been clarified and revised since the per resident amounts were initially determined. As a result, there may be inconsistencies between teaching physician compensation amounts included in the per resident amounts and what would be considered teaching physician activities payable through the per resident amounts under current rules.

Presence During the Key Portion of the Visit

For many years, HCFA's payment criteria for professional billings were based on an attending physician concept. The attending physician criteria included: reviewing the patient's history and physical examination and personally examining the patient within a reasonable period of admission; confirming or revising the diagnosis; determining the course of treatment to be followed; ensuring that any supervision needed by the interns and residents is furnished; and making frequent reviews of the patient's progress throughout the period of care (BHI, 1969).

The insurance carriers that process Medicare claims inconsistently applied standards regarding whether the attending physician needed to be physically present when a billable service was provided and the documentation required to substantiate the billing requirements were met (Rabb, 1997). Effective July 1996, the attending physician concept was replaced by a requirement that a teaching physician be present to perform or observe the resident perform the "key portion" of each billable service. For evaluation and management services and minor procedures, the teaching physician must be present for all portions as if the teaching physician had personally performed the entire visit or procedure. In the case of surgery or a complex or dangerous procedure, the teaching physician must be present during all critical portions of the procedure and must be immediately available to furnish services during the entire procedure or service. For psychiatric services, the physical presence requirement may be met by observation of the service by use of a one-way mirror, video equipment, or similar device (HCFA, 1997).

The rules provide a limited exception to the physician presence rule in hospital outpatient departments or other ambulatory settings that receive direct GME payments and provide coordinated comprehensive care not limited to a body system. Generally, the exception applies to primary care teaching clinics that provide coordinated comprehensive care. The exception applies only to residents with more than six months training in an approved residency program that furnish evaluation and management services of low to mid-level complexity. The teaching physician must be immediately available and:

- Direct the care of no more than four residents at a time;
- Have no other responsibilities (including supervision of other personnel);
- Review with each resident during or immediately after each visit the patient's medical history and care; and,
- Document his or her participation in the review and direction of the services.

The purpose of the teaching physician rules is to prevent duplicate payments by the Medicare program and to assure Part B payments are made only when a teaching physician provides a personal identifiable service to an individual patient. Residents act more independently as they progress through the training program. The need for supervision is more extensive early in the residency program and is less toward the end. The Medicare rules for Part B billing require the teaching physician to be present during the portion of the evaluation and management visit that determines the level of the service billed regardless of the program year (PGY). This creates incentives for an inefficient and inappropriate teaching model. It does not recognize that the teaching physician's needed level of involvement decreases as the resident's proficiency increases.

Documentation Requirements

For evaluation and management services, a teaching physician must personally document his/her presence and participation in the key components that demonstrate the appropriate level of service (e.g., participation in history, examination, and medical decision-making). Medicare instructions note that if the resident previously obtained and documented key elements of the service, the teaching physician need not repeat the documentation in detail. Instead, the teaching physician's documentation may be brief summary comments that confirm or revise the key elements of the service. The combined teaching physician-resident entries must be adequate to substantiate the level of service required by the patient and billed to Medicare.

In 1996, the Department of Health and Human Services' Office of the Inspector General (OIG) initiated the Physicians at Teaching Hospitals nationwide review for compliance with rules governing teaching physicians and the level of the services being billed. The review standards and method of conducting the audits have been controversial. A General Accounting Office (GAO) review of the OIG audits concluded that the OIG's review standards and audit methodology were reasonable; however, the GAO suggested that a risk-based approach focusing on the most problem-prone institutions would be a more efficient use of resources (GAO, 1998). Heightened attention to compliance with billing requirements and concerns over potential

OIG audits under the False Claims Act has led many teaching institutions to adopt more extensive documentation requirements than those required by the Health Care Financing Administration, thereby decreasing faculty time for teaching.

MEDICAID SUPPORT FOR GME

Under the Medicaid law, States have considerable flexibility to determine what services will be covered in addition to basic required services and the payment methodologies that will be used to pay for covered services. Federal matching funds apply to the State's expenditures. Nearly all States and the District of Columbia support GME under the Medicaid program. Using the results of an AAMC-sponsored survey, the National Conference of State Legislatures estimates States spent about $2.3 billion through Medicaid patient funds in 1998, or approximately 7 percent of Medicaid inpatient hospital expenditures, to support GME (Henderson, 1999). Appendix A summarizes the State-level survey findings. Explicit GME payments are identified separately from amounts for GME that are implicit in payments to managed care plans. The managed care plans have discretion regarding whether to pass these amounts on to teaching hospitals through higher payments. Specific findings were:

- Forty-three States and the District of Columbia make GME payments under their fee-for-service programs. Of these, 23 make both direct GME and IME payments.
- Thirty-three States and the District of Columbia include GME funds in their Medicaid managed care capitated payments. Of these, 16 carve-out the GME payments and make explicit payments to teaching hospitals or other teaching programs.
- Among those that do not support GME through Medicaid, only Illinois and Puerto Rico have a large number of residents. One of the remaining States (South Dakota) has a medical school; three States (Alaska, Idaho, and Montana) that do not have medical schools have agreements with the University of Washington for undergraduate education and one or more affiliated family medicine graduate training programs.

Most Medicaid programs support GME in their payments for inpatient hospital services following Medicare-like methodologies. However, some States have or are in the process of obtaining approval from HCFA to link some or all of Medicaid GME payments to specific State workforce objectives. For example:

- Michigan and New York have established separate incentive pools to achieve specific workforce objectives.
- Tennessee and Oklahoma make GME payments to medical schools.
- In Minnesota, advanced nursing, pharmacy, dental and physician assistant training programs as well as medical and dental schools are eligible for medical education payments from the State. The State is seeking approval to include the Medicaid managed care carve-out amounts in the education fund.
- Utah is developing a consortium consisting of the State, the single university medical school in the State, hospitals and community-based providers, and private payers. The State is seeking a waiver from HCFA to have Medicare and Medicaid GME funds flow to the consortia instead of the teaching hospitals.

Tennessee's funding for GME was approved as part of the TennCare waiver process. Other States with innovative GME funding have used the State plan amendment process to obtain HCFA approval. State plans must be consistent with the Medicaid laws and regulations. In contrast to the Medicare law, the Medicaid GME provisions are not very detailed. As a result, States have considerably more flexibility than the Medicare program to institute changes in GME funding. In addition, many States have established commissions or task forces related to GME and physician workforce. Features of selected State programs that are directed at meeting specific workforce or GME objectives are summarized below.

MICHIGAN

Since 1997, Medicaid GME-related payments, including managed care carve out amounts, have formed three pools. For the State's FY2000, the pools are funded as follows: 1) a $164.5 million historic cost pool that pays teaching hospitals at 1995 levels; 2) a $20 million primary care pool that pays hospitals based on the number of primary care residents and its indigent patient load; and, 3) a $3.5 million innovations pool that that awards competitive grants to GME consortia involving a hospital, a university, and a managed care organization. Hospitals that receive funding must account for how funds are being used to support the policy goals and priorities of the Medicaid program. Initial proposed performance measures are the percentage of graduates practicing in the State and the

percentage participating in Medicaid (Salsberg, 1997; Holmes, 2000).

MINNESOTA

Minnesota established the Medical Education and Research Cost (MERC) Fund in 1997 to support clinical training costs. The fund is supported with general-fund tax revenue and the State's tobacco settlement. The 1999 fund was comprised of $10 million in State appropriated funds and $10.6 million in Federal matching funds. A State plan amendment to allow a Medicaid managed care GME carve-out amount ($12 million) is pending HCFA approval. The fund is intended to "level the playing field" for teaching hospitals and other providers. Support is for the unrecovered costs of clinical training for medical students and residents, dental students and residents, pharmacists, chiropractors, advanced practice nurses and physician assistants. Funds are allocated based on the number of FTE trainees and the average cost for each eligible program. Institutional sponsors apply for funds on behalf of their programs. The funds flow through the sponsors to protect the integrity of the teaching programs and to obtain complete information about the programs. Sponsors are required to self-report program costs and to pass funds through to the sites where the clinical training occurs. Funding is a uniform percentage of each institution's program costs (7 percent in 1999 compared to estimated unrecovered costs of 15 percent). Medical residency programs received 86 percent of the funds. The payment was $10,661 per resident compared to an estimated cost of $156,631 per resident Accountability is currently limited to program costs and numbers of trainees. Consideration is being given to other measures, such as percentage of graduates who practice in-State (MDH, 2000; Blewett and Weslowski, 2000).

NEW YORK STATE

New York's GME Reform Incentive Pool is focused on reducing the number of physician trainees in the State, increasing the number of primary care physicians, and increasing residency training in ambulatory settings. In 1999, the $54 million pool was distributed to 72 hospitals. Hospitals with non-primary care residency programs had to meet minimum qualifying criteria of a 2 percent reduction in specialty residency positions before competing for the funds. Distribution is based on performance in meeting State workforce goals. These include: downsizing residency programs, increasing the percentage of underrepresented minorities, increasing the percentage of residents training in underserved areas, maintaining quality training with continuity of care experiences, and increasing the number of ambulatory training sites. The priority of increasing the percentage of primary care residents was dropped as duplicative of the upweighting formula used to distribute the majority of GME funds. Funding is set at $31 million in 2000 (NYSDOH, 2000; Calman, 2000; Cunningham, 2000).[19]

TENNESSEE

When TennCare (the State's Medicaid managed care program) was initially implemented in 1995, all GME funding was eliminated. Funding was restored in 1996 with an agreement to flow funds through the four medical schools after a transition period. The agreement was to base funding on the number of filled residency positions and to provide financial incentives to encourage primary care training and residency placements in medically underserved areas. Over a 5-year transition, $48 million in GME funding to teaching hospitals was replaced by funding to medical schools, with 100 percent of the funds flowing to medical schools beginning in 2000. In addition, funds are allocated to support primary care stipends for residents who agree to practice in an underserved area for at least one year. By 2000, 50 percent of the aggregate residency positions sponsored by the medical schools are to be in primary care specialties (Franks, 1999). The primary care target spawned a cooperative effort among the State's academic health centers to meet the 50 percent target jointly instead of individually (Meyer and Blumenthal, 1999). Each medical school has its own target and will receive reduced funding if it fails to meet its target. (Salsberg, 1997; Henderson, 2000) There is no cap on the number of residency positions but the fixed funding amounts serve to discourage resident expansions (Meyer and Blumenthal, 1999). Annual reporting is required concerning the proportion of residency positions that are in primary care and the proportion of patients treated by residents that are in TennCare or medically uninsured.

To date, TennCare's GME funding policies have made the State's academic health centers more accountable and responsive to local community health needs and priorities (Meyer and Blumenthal, 1999). It is too early to assess whether paying the medical schools is having a significant effect on workforce goals. The greatest impact may be felt by East Tennessee State University which, as a community-based medical school, did not previously have access to Medicaid GME funds. The increased funding allowed the medical school to pay community physicians for teaching (Franks, 1999).

UTAH

Utah passed legislation in 1997 establishing an all-payer GME financing system that would include private payers/purchasers and, pending HCFA approval, Medicare and Medicaid GME funds. A Council on Medical Education is charged with determining the number and type of training positions that will be supported and how the funds will be allocated. The nine-member Council has representatives from the public, health insurance industry and institutional sponsors of medical education. Fund distributions are to be balanced geographically and by training settings, encourage multidisciplinary training, and provide stable funding for accredited programs. Direct GME funds will flow to the sponsoring institutions based on the Council's assessment of heath care needs (Utah, 2000; Salsberg, 1997).

HEALTH RESOURCES AND SERVICES ADMINISTRATION PROGRAMS

NATIONAL HEALTH SERVICE CORPS

Title III of the Public Health Service Act authorizes the National Health Service Corps through the end of FY2000. The NHSC mission is to increase access to primary health care services in health professional shortage areas (HPSAs) through site development and the preparation, recruitment, and retention of community-responsive, culturally competent primary care physicians and other health professionals. The FY1999 appropriation was for $75 million in scholarship/loan repayment and $37 million in field support. There are four basic programs to assist with the cost of health professions training:

- Participants in the NHSC scholarship program have a minimum two-year commitment and must provide one year of service to the NHSC for each year of participation in the scholarship program.
- Participants in the NHSC loan repayment program may repay the qualified educational loans if they choose to provide primary care services in a priority-designated HPSA for a minimum of two years.
- Thirty-five States participate in the Federal-State Loan Repayment partnership to obtain services of health professionals by matching their repayment of educational loans.
- The Federal-State-Community Scholarship Program supports students in primary care health professions who are committed to returning to their underserved communities. The Federal share is 40 percent.

The Student/Resident Experiences and Rotations in Community Health (SEARCH) program is a NHSC partnership with States to support community-based training experiences. Other than the SEARCH program, the NHSC has had little direct involvement in developing academic health center-community linkages that would expand community-based training sites for residency programs. One limiting factor is the authorizing language for the NHSC, which limits the creditable time of NHSC scholars and repayers to time spent in the provision of primary care services. Time spent in other activities, such as clinical preceptorships, does not count under current law for repayment purposes. Periodic reauthorization for the NHSC provides an opportunity to assess whether there are additional ways the NHSC program could facilitate residency training in underserved areas.

TITLE VII

Titles VII and VIII of the Public Health Service Act are designed to expand the supply of primary health care providers, improve the geographic distribution of health professionals, and increase access to primary health care services in both urban and rural underserved areas. Title VII programs include support for educating physicians and other health professionals while Title VIII programs support nursing education.

Several Title VII programs have been significant sources of support to medical schools and teaching hospitals in developing community-based training capacity. Primary care training grants provide support for planning, developing and operating residency programs in general internal medicine and general pediatrics, family medicine, and preventive medicine programs. Title VII funds also support geriatric education centers and geriatric training fellowships for physicians and other health professionals.

In addition, Title VII grants support the creation of area health education centers (AHECs) and health education and training centers. The mission of the AHEC program is to improve the supply and distribution of health care professionals through community/academic educational partnerships that eventually will become self- or State-supported. Strategies to accomplish the mission include forming linkages between educational resources and health care delivery systems in underserved communities and creating collaborative community-based

education for primary care residents, health professionals, and students.

Funding for Title VII residency training programs was relatively flat during the period FY1990-1998 and did not keep pace with inflation. The range for family medicine grants over the period was $38-49 million; the average annual appropriation was $44 million compared to an annual appropriation of $40 million during the 1980s. Funding for general internal medicine/pediatric training has been constant at about $17 million annually since 1980 (HRSA, 2000).

The Health Professions Education Partnerships Act of 1998 (P.L. 105-392) made significant changes in the administration of Title VII funds that are consistent with COGME goals. The reauthorization clustered the separate training grant programs for general internal medicine and pediatrics, family medicine, and physician assistants into a single grant program that also includes general and pediatric dentistry. The aggregate funding level was set at $80 million for FY1999. Floors were established for the level of funding for each component. Priority funding is to be given to residency programs 1) with a high percentage of graduates that enter and remain in primary care, or 2) train individuals from disadvantaged backgrounds (including racial and ethnic minorities underrepresented in primary care practice). In addition, special consideration is to be given to programs that prepare residents to care for underserved populations and other high risk groups such as the elderly, individuals with HIV/AIDS, substance abuse, homeless, and victims of domestic violence. Grantees must establish and meet specific performance goals for workforce objectives. As in past years, the President's budget request for FY2000 does not include a Title VII appropriation.

The legislation also established a separate program to foster interdisciplinary, community-based linkages through support to develop and operate training programs involving two or more disciplines, model demonstration programs, faculty development, trainee stipends and technical assistance. The AHEC authorization now requires each center receiving funds specifically to designate a remote geographic area or medically underserved population to be served by the center. The center must:

- Assist in the planning and development of training programs to meet the health personnel of the area;
- Arrange and support rotations for primary care residents in a center-operated or affiliated program with at least four first-year positions;
- Conduct and participate in interdisciplinary training; and,
- Have an advisory board with at least 75 percent of the members being health service providers and consumers from the area served by the center.

The Title VII funding structure provides a framework for targeting Federal outlays consistent with physician workforce and education goals. However, the level of support is less than one percent of total Federal funding for workforce.

CHILDREN'S TEACHING HOSPITAL FUND

Public Law 106-129 amended the Public Health Service Act to establish a new program to support GME activities of freestanding children's teaching hospitals. The fund was established through a bipartisan effort in recognition that children's teaching hospitals have low Medicare utilization rates and do not receive the same level of Federal support for GME as other teaching hospitals. The provision authorizes payments in FY2000 and FY2001 for both direct GME and IME associated with approved GME programs. The payment methodologies follow the general framework of the Medicare methodologies. Direct GME payments are based on a wage-adjusted national average per resident amount and the number of residents at each institution using Medicare rules for counting residents. The IME adjustment is to take into account case mix and the number of residents. Unlike Medicare GME payments, however, funding is not an entitlement but requires annual appropriations. The FY2000 appropriation is $40 million, which translates into slightly less than $12,000 per resident. By contrast, Medicare's GME payments per resident is about $73,200.[20]

The payment methodologies for the children's teaching fund are established in the authorizing legislation. Payment is not explicitly linked with physician workforce objectives. However, the Government Performance Results Act requires that performance measures be established for the program. This will provide an opportunity to assess how each facility performs on specific workforce-related indicators. The proposed measures are: maintaining the number of residents, increasing the proportion of training in rural and underserved areas, and monitoring the hospitals' financial status and the proportion of Medicaid and uncompensated care patients. Data collected for this program could serve as a template for information that could be gathered from all residency programs. Such information would increase accountability of program sponsors to meet educational and workforce objectives.

OTHER DIRECT FUNDING SOURCES

DEPARTMENT OF VETERANS AFFAIRS

Eleven Veterans Affairs Medical Centers (VAMCs) sponsor or are the primary clinical site for residency programs and 97 others are participating institutions in GME programs (JAMA, 1999). The DVA funds 8,900 residency positions, or about 10 percent of all residency positions. About 32,000 residents annually receive some training at the DVA. The DVA has made substantial efforts over the past decade to shift care to ambulatory settings and to focus on primary care access supported by specialized care for chronically ill and seriously ill patients. Residency training has been aligned with the new health care delivery system by moving more training into ambulatory settings that use interprofessional teams and away from traditional hospital settings (DVA, 1997).

DEPARTMENT OF DEFENSE

Thirty-two Department of Defense facilities sponsor or are the primary clinical training sites for residency programs and five others are participating institutions (JAMA, 1999). DoD funds about 3,000 residency positions annually.

STATE AND LOCAL APPROPRIATIONS

In addition to Medicaid funding, States support GME through funding to State-operated medical schools, training grants for family medicine residencies, and workforce policy and planning activities that frequently are coordinated with HRSA funding. For example, Maryland provides about $1 million to support two AHECs, has a loan re-payment program for primary care physicians who agree to serve in medically underserved areas for at least two years, and provides incentives to educational institutions training health professionals in short supply, including family physicians (Salsberg, 1997). States spend an estimated $185 million to support family medicine residency programs (Henderson, 2000).

FOUNDATION SUPPORT FOR COMMUNITY-BASED GRADUATE MEDICAL EDUCATION

PARTNERSHIPS FOR QUALITY EDUCATION (PQE)

The Partnerships for Quality Education (PQE) supports the work of primary care residency programs working in partnership with managed care organizations. During Phase I, (1996-1999) Pew Charitable Trusts awarded $8.3 million in grants to 66 programs.. Six partnerships received sizable grants to develop new models of educational collaboration between academic programs and managed care organizations. The remaining grantees received $10,000 awards.

The Robert Wood Johnson Foundation is funding the second phase of the PQE projects. $8.9 million in grants have been given to 28 residency programs and 25 nurse practitioner programs to develop new curricula, teaching strategies and sites (PQE, 2000).

COMMUNITY PARTNERSHIPS IN GRADUATE MEDICAL AND NURSING EDUCATION

Ending in 2000, W.K. Kellogg Foundation's Community Partnerships in Graduate Medical and Nursing Education initiative emphasized community-based multi-disciplinary health care that meets the needs of a vulnerable population. Critical design features of the six projects funded through this initiative were: the governing board is a partnership of health professionals and community representatives, funds flow through the community partner, and there is at least 1:1 matching from university or State sources (Kellogg, 1999).

Residency Training in Community Settings

The growth of managed systems of care and the shift of service delivery to ambulatory settings make it increasingly important for residency programs to provide training opportunities in community settings. As used in this report, the term "community settings" describes settings that are representative of the environment in which residents will eventually practice. Under this definition, the processes of care and educational outcomes are the determining factors in identifying a community setting rather than its location *per se*. Training should be relevant to current daily physician practice and address the care of the individual patient in the context of the population of which the patient is a member.

This section focuses on the financial arrangements and issues associated with residency training in community settings. It begins with overviews of how much training is currently being done in ambulatory/community-based settings and the relevant accreditation requirements. A discussion of potential financial barriers to expanding training opportunities in the community follows. The discussion is based on a literature review. The section concludes with a summary from the site visits and interviews conducted with individuals involved with selected residency programs.

TABLE 4
Ambulatory/Community-Based Rotations for Program Year 1 Residents

	Average Percent of Training by Setting		
	Hospital Outpatient Clinic	***Non-Hospital Ambulatory Care***	***Managed Care Setting***
SPECIALTIES			
Family Practice	20.5	15.7	12.5
Geriatric Medicine (FP)	34.7	13.3	23.1
Internal Medicine	22.6	11.0	10.6
Internal Medicine Subspecialties:			
CardioVascular (IM)	18.4	5.6	11.5
Gastroenterology (IM)	28.2	10.9	15.4
Geriatric Medicine (IM)	30.2	15.3	5.5
Hematology (IM)	37.3	7.5	3.5
Nephrology (IM)	28.3	8.8	11.4
Oncology	40.7	6.0	8.8
Rheumatology	48.3	4.1	5.2
Pediatrics	39.9	11.7	15.4
Dermatology	65.6	11.2	16.4
Emergency Medicine	16.8	2.8	7.7
Neurology	26.9	2.8	7.3
Obstetrics and Gynecology	33.1	11.8	16.7
Ophthalmology	74.7	8.7	8.9
Otolaryngology	48.3	4.1	5.2
Psychiatry	12.4	3.9	9.2
Physical Medicine and Rehabilitation	23.8	4.7	6.2
General Surgery	20.0	6.5	7.8
Urology	34.2	7.4	12.0

Source: AMA FREIDA, 2000 (categories are not mutually exclusive).

CURRENT TRAINING IN AMBULATORY/COMMUNITY SETTINGS

COGME's 13th Report (COGME, 1999a) identified the following core curricular domains that physicians need to practice effectively in the changing health care environment:

- Health systems financing and delivery
- Evidence-based medicine
- Ethics and the management of dual responsibilities and conflicts of interest
- Patient-physician communication
- Leadership, teamwork and organizational change
- Quality measurement and improvement
- Systems-based care
- Medical informatics
- Teaching managed care

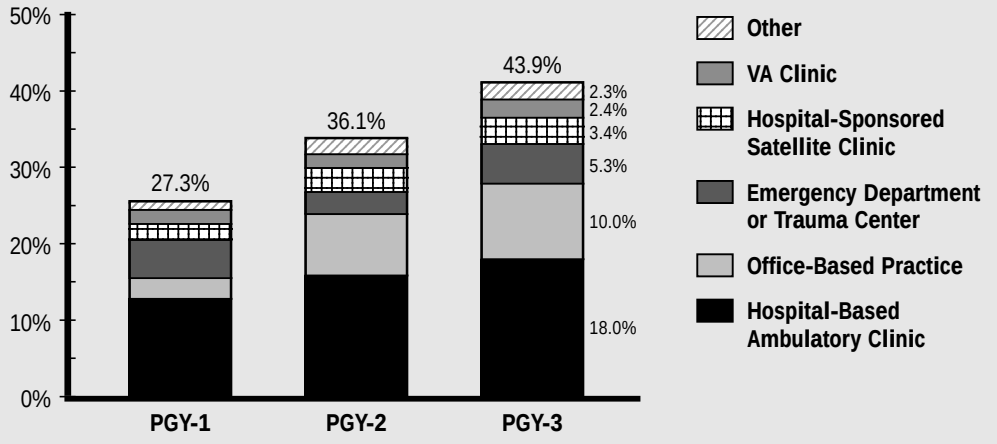
Competency in these domains requires learning experiences that are not typically available in the hospital outpatient departments of academic health centers. A comprehensive range of experiences is

needed that includes opportunities to follow the patient across each component of an integrated delivery system. Community-based settings such as health centers and clinics, physician offices, schools and workplaces, nursing homes, hospices and home care, community hospitals, and managed care organizations can offer essential experiences to complement those at academic health centers. For some specialties, community training will occur in hospital-based ambulatory sites since this is where the specialty commonly practices.

Table 4 is based on aggregated data from the annual survey of GME program directors as reported on the American Medical Association's on-line Fellowship and Residency Electronic Interactive Database (FREIDA) system. The survey asked the program directors to estimate the amount of time spent in the first program year in hospital outpatient clinics, non-hospital ambulatory sites, and managed care settings. The categories are not mutually exclusive. For example, time spent in an outpatient clinic could also be time spent in a managed care setting. As expected, residents in primary care residency programs generally spend more time in non-hospital clinics than do residents in other programs. In addition, residents in obstetrics and gynecology and in dermatology spent on average more than 10 percent of their first year in non-hospital ambulatory care.

FIGURE 7

Proportion of Clinical Experience in Ambulatory Settings for Categorical Internal Medicine Residency Programs

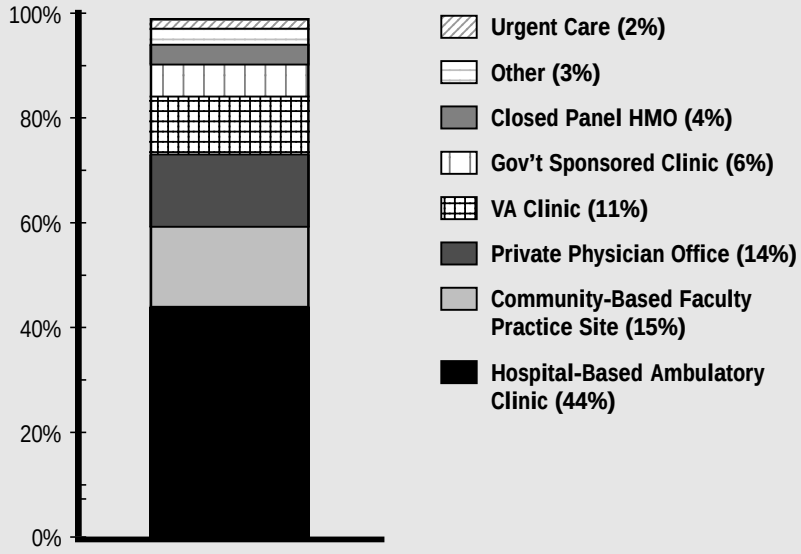


Source: ABIM, 1998a.

More detailed information on internal medicine residency programs is available from the Internal Medicine Residency Training Survey, 1997-1998. Figure 7 indicates the percentage of time spent in ambulatory care increases throughout the residency program. Overall, the survey showed that 37 percent of clinical training experiences over the three years are spent in ambulatory settings. This represents a significant increase over the past decade. A 1986-1987 survey of internal medicine departments of academic health centers found that 14 percent of residency training occurred in ambulatory settings (Levinsky, 1998). However, the majority of time is spent in hospital outpatient or emergency departments and may not provide the essential learning opportunities for effective medical practice. Sites for continuity experiences in the internal medicine residency programs are shown in Figure 8. The most common continuity sites were the hospital-based ambulatory clinic (44 percent). The next two most common sites, community-based faculty practices (15 percent) and private physician offices (14 percent) were chosen far less often.

FIGURE 8

Internal Medicine Ambulatory Care Sites Used for Continuity Experiences



Source: ABIM, 1998b.

ACCREDITATION REQUIREMENTS

The Accreditation Council for Graduate Medical Education (ACGME) is a non-governmental body that develops general accreditation standards for all medical residency programs. Within the ACGME, there is a Residency Review Committee

(RRC) for each specialty that consists of representatives appointed by the American Medical Association, the appropriate specialty board, and in most cases, the professional college or other professional association within the specialty. Subject to the ACGME's approval, each RRC establishes specific accreditation standards for its specialty. The RRCs also review the residency training programs to assess whether each substantially complies with accreditation requirements. Generally, physicians are eligible for board certification by a member of the American Board of Medical Specialties (ABMS) only if they have been trained in an ACGME-accredited program. Also, Medicare support for allopathic medical residency training programs is limited to programs accredited by the ACGME or certified by the ABMS.

Since accreditation is critical for maintaining residency programs, RRCs have tremendous potential to influence the development of ambulatory and community-based training opportunities. However, with the exception of family medicine, the RRCs have established at most relatively general requirements for community training. The primary care specialties, the internal medicine sub-specialties, obstetrics and gynecology, neurology, and psychiatry have minimum training requirements for an ambulatory continuity experience. Other specialties do not require an ambulatory continuity experience. Except for family medicine, the requirements do not distinguish between hospital-based or community-based continuity clinic experiences. It is not clear the extent to which the hospital-based continuity clinics provide a community setting comparable to the environment in which the residents will eventually practice. Both hospital-based and community-based continuity clinics provide the opportunity to follow a panel of patients longitudinally over the course of the residency. However, the typical half day per week schedule means that the resident is frequently not at the clinic when a patient has an acute condition that requires immediate treatment. Appendix B summarizes current accreditation requirements for the primary care specialties and selected other specialties with a significant proportion of private practice outside the hospital setting.

Generally, specialties that do not require continuity experience do at least have provisions for ambulatory training. However, among these specialties, only physical and rehabilitation medicine establishes minimum requirements. For some, such as surgical specialties, a specific outpatient requirement may be unnecessary in that training will automatically follow the shift of services to ambulatory settings in order to maintain the requisite patient workload.

Beginning July 1999, all internships and residency programs accredited by the American Osteopathic Association must occur in Osteopathic Postdoctoral Training Institutions (OPTIs). OPTIs are training consortia comprised of one or more colleges of osteopathic medicine and one or more osteopathic hospitals. The OPTI structure is intended to enhance the quality and efficiency of the educational programs and to promote partnerships and collaboration among academic medicine, hospitals, and community based health care facilities in order to provide broader clinical training opportunities (AOA, 2000).

There is general agreement that training experiences in the community are important and should be expanded. However, as evidenced by the lack of specific RRC requirements for community training, there is no consensus on what constitutes the appropriate balance between traditional and community-based experiences for most specialties. For most, training opportunities will be expanded as needed to maintain an adequate patient base for teaching. However, without the RRC impetus to move training into the community settings, financial and other considerations at the hospital as well as the community site may outweigh the educational goal of providing training experiences in settings that are representative of the environment in which residents will eventually practice.

POTENTIAL FINANCIAL BARRIERS TO TRAINING IN AMBULATORY SETTINGS

Quality experiences in ambulatory settings require a strong and interested faculty, a patient base that is clinically diverse, and a site that integrates training and trainees into the daily operation of the practice (Boex, 1997; COGME, 1999a). A major barrier to expanding community-based training is the lack of an academic reward structure for community teaching physicians (COGME, 1999a). Other financial barriers to training in community-settings that are commonly cited in GME literature are discussed below.

IMPACT ON NET EDUCATIONAL COSTS

Ambulatory training tends to be less efficient and more faculty-intensive than inpatient training. In the inpatient setting, faculty can teach students at different educational levels during patient rounds. In the ambulatory setting, patients are available generally only for a short period of time. Space constraints and the focus on clinical productivity limit opportunities for teaching multiple students at the same time (Lave, 1989; Boex, 1997; Philibert, 1999).

In addition, physician revenues for ambulatory services tend to be lower than revenues for services furnished in the inpatient setting. Thus, patient care revenues generated when residents are involved in ambulatory care are generally less than when the care is in inpatient settings. Further, there is a distinction between revenues generated by a hospital-based clinic, which include Medicare (and in many States Medicaid) GME payments, and revenues generated by community clinics. The latter do not receive Medicare payments directly (unless they qualify under the BBA provision) and, in the case of community health centers, have few privately insured patients and high uncompensated costs.

Impact on Ambulatory Care Providers

A critical issue in expanding ambulatory training is the impact residency training programs have on the costs and clinical productivity of the ambulatory provider. Studies in this area are fairly dated and have had mixed results. One reason is the costs are different across the variety of settings in which ambulatory training takes place (Lave, 1989) and often involve medical and other health professions students as well as residents. Another reason is the different approaches studies have taken to measuring the effects the presence of residents has on costs.

- Some studies take an incremental accounting cost approach or time and motion approach to determine the additional costs when residents (or residents and medical students) are present compared to non-teaching sites or non-teaching physicians at teaching sites (Jones, 1997; Ricer, 1998; Kosecoff, 1987).
- Others measure the opportunity costs of having residents. That is, the forgone clinical revenue for the time preceptors spend in teaching that could have been spent generating patient revenues (Gamble and Lee, 1991; Ricer, 1997; Flanagan, 1995).
- The "replacement cost" approach measures costs that the provider would incur to replace the services of the resident (Delbanco and Calkins, 1988; Gavett and Mushlin, 1986).

Some studies have tried to measure the effect of teaching on the ambulatory site's productivity and net revenues (Diamond, 1993; Lave, 1989). These studies are most closely directed at the question of whether there are unrecovered GME costs in ambulatory settings. The findings suggest net costs are site-dependent and reflect factors such as the amount of time spent on teaching relative to patient care, patient flow and the efficiency of the practice, payer mix, the physicians' incomes and residents' salaries (Lave, 1989). The studies support a widespread belief that residency programs "break even." First year residents generate productivity losses. Second year residents generally have no effect on productivity. Net increases in productivity and revenues by the third year of residency training in ambulatory sites offset the first-year losses (Diamond, 1993; Flanagan, 1995; Lave, 1989). When residents are in the inpatient setting, they assist the teaching physicians and reduce the time spent by faculty members in caring for patients. This time saving does not appear to carry over to ambulatory settings where spending time with the resident going over the case allows the teaching physician less time to spend on patient care (Boex, 1997).

In addition to potential cost impacts, teaching can affect the ability of the ambulatory site to attract patients in a competitive market. Patient scheduling in continuity clinics can be problematic because residents are not always at the site. Waiting times are frequently longer and visits take longer as well, sometimes leading to patient preferences that residents not be involved in their care.

Impact on the Sponsoring Hospital and Faculty

Medical schools and faculty benefit from the presence of residents. Many residents have significant teaching responsibilities for medical students that may make community-based rotations more difficult. It is possible this issue may diminish as medical students increasingly receive training in community settings. Residents also provide coverage for teaching physicians and contribute to the services billed by teaching physicians. Resident replacement costs can be a significant factor in decisions to rotate residents to non-hospital settings. The cost of replacing residents will depend on the relative cost of the staff who are replacing them, their productivity, and their ability to generate revenue.

Residents in community-based settings can provide subspecialty referrals and referrals to the teaching hospital. Most studies do not provide credit for these referrals when evaluating the cost of rotating residents outside the hospital (Stern, 1977; Lave, 1989).

SITE VISIT FINDINGS

As part of this study, site visits or telephone interviews were conducted with individuals involved with selected residency programs with community-based training sites. Both programs with

long-standing community-based training sites and relatively new programs that are developing collaborative arrangements with managed care organizations or community providers in medically underserved areas were included. Geographic diversity was a selection criteria coupled with some emphasis on selecting sites located in States with innovative GME funding. The sites that were involved in the interviews are listed in Appendix C.

The interviews focused on the funding sources and arrangements used to support ambulatory training. Of necessity, most of the information gathered on community-based training concerned primary care residency programs. With a few notable exceptions, ambulatory training in other specialties is typically hospital-based and organized by department. Where possible, the views of individuals with educational and financial responsibilities were obtained from the perspective of the sponsoring institution as well as the community provider. The goal was to identify both features that have facilitated community-based training and barriers to expanding community-based training sites that should be considered in evaluating alternative GME financing policies. The report's findings reflect the circumstances of the programs where the interviews were conducted. However, similar themes emerged from the interviews with different sites that are also consistent with other information on GME financing issues.

The key findings from the site visits are discussed below.

SITE VISIT FINDING 1 – *THERE IS A WIDE RANGE OF COMMUNITY SETTINGS FOR RESIDENCY TRAINING OPPORTUNITIES.*

An individual program may have arrangements for teaching with hospital-based continuity clinics, hospital-owned and hospital-affiliated physician practices, community health centers, and individual clinician-educators in private practice. The characteristics of the most common sites are described below.

HOSPITAL-BASED CLINICS

The most prevalent model for community-based training is the teaching hospital clinic that provides continuing and comprehensive care to a panel of patients. Residents are assigned a panel of patients that they follow throughout their residency. The continuity clinic may be based at a hospital that is part of an academic health center, a local public hospital, or a community hospital. Populations served by hospital-based continuity clinics tend to be sicker and poorer than patients treated in community-based private practices. Payer mix ranges from largely private paying to largely indigent with Medicaid or no insurance coverage. Payer mix has significant impact on whether the faculty practice plan income is able to provide most or all physician salary support for the clinic. Teaching faculty typically receive base compensation with incentive payments based on clinical productivity. Teaching is required as part of the contractual arrangement but is not necessarily taken into account in establishing productivity levels for incentive compensation. There may also be physicians under contract that are engaged in patient care only and do not teach. Resident salaries are paid by the hospital.

Community hospital clinics also serve as residency training sites for either continuity clinics or block rotations. There is typically a small core faculty that is salaried by the community hospital. The majority of the teaching is by community attending physicians who receive little or no compensation from the hospital. The community hospital assumes the costs for resident salaries and fringe benefits and may pay an overhead amount to the sponsoring hospital as well.

COMMUNITY HEALTH CENTERS

Until the growth of integrated delivery systems, most non-hospital residency training occurred in freestanding community health centers or other clinics serving indigent patients. The sites are used to fulfill continuity clinic requirements as well as for block rotations. Physicians at these sites are salaried by the center. Typically, there has been no explicit compensation either from the site or the hospital to the physician for any additional time required to teach residents. Arrangements vary regarding whether the hospital or the site pays the resident's salary.

HOSPITAL-OWNED PHYSICIAN PRACTICES

While some teaching institutions have had a long tradition of operating clinics in the community, most hospital-owned community clinics opened in response to market pressures during the 1990's. Teaching institutions purchased or established community-based practices to maintain their market position in the community. The driving force was the desire to establish a physician network for referrals and to compete more effectively for managed care contracts. However, these hospital-owned community practices also afford expanded

opportunities for quality community-based training when the physicians practicing in those sites are committed to being clinician teachers. When the site is used for teaching, a typical arrangement is for the preceptor to hold a clinical faculty appointment only. Teaching may or may not be required as part of the contractual arrangement. Generally, it is not taken into account in establishing productivity levels for incentive compensation. Resident salaries are paid by the teaching institution.

HOSPITAL-AFFILIATED PHYSICIAN PRACTICES

As part of a strategy to develop a network to compete for managed care contracts, teaching hospitals also affiliated with physician private practices. Those that serve as teaching sites largely rely on volunteer faculty. These are community physicians with clinical faculty appointments who do not receive monetary compensation for their teaching. They may be rewarded through "in kind" benefits such as access to university facilities, faculty development activities, and recognition functions. Arrangements vary regarding whether the teaching institution (hospital or medical school) or the physician practice pays the resident's salary. These sites are more commonly used for block rotations than for continuity experiences. Frequently, the resident works one-on-one with a preceptor.

MANAGED CARE ORGANIZATIONS

Some residency programs have had long-standing relationships with group or staff model HMOs. Typically, the teaching physicians are salaried by the HMO and hold clinical faculty appointments at the medical school in university-affiliated programs. Arrangements vary regarding whether the site or the medical school/ teaching hospital pays the resident's salary.

Residency training also occurs in physician practices that are members of independent practice associations and preferred provider organizations. The amount of training in these settings (which could include hospital-based as well as community-based sites) is more difficult to establish. The agreements are with the physicians rather than the managed care organization. With increased managed care penetration, it is likely significant amounts of community-based training takes place in settings that have one or more managed care contracts.

OTHER SETTINGS

Indian Health Service clinics and Department of Veterans Affairs (DVA) clinics also serve as residency training sites for both continuity and block rotations. The DVA, with its emphasis on ambulatory care, is a significant sponsor of ambulatory training. There is also a wide-variety of other settings that typically serve as a training site for short-term rotations. These include other health care providers such as nursing homes and hospices, school and employer-based programs, public health agencies, administrative offices of managed care organizations, etc.

SITE VISIT FINDING 2 – *THE FINANCING ARRANGEMENTS FOR AMBULATORY TRAINING SITES VARY, REFLECT LOCAL CIRCUMSTANCES, AND FREQUENTLY INVOLVE OTHER INTERRELATIONSHIPS AS WELL.*

The financing arrangements differ across sites depending on a number of factors, including:

- **Payer mix and sources of support for the teaching site** – The sponsoring institution is more likely to provide support to the training site if it has high uncompensated care costs. Sites with adequate third-party support are more likely to absorb the teaching costs.
- **Intensity of the teaching effort** – The sponsoring institution is more likely to provide support if the community site is engaged in teaching on an on-going basis for several residents than if the site intermittently teaches residents on short-term rotations (e.g. one month a year).
- **Opportunity costs and disruption** – The sponsoring institution is more likely to compensate the community provider if the teaching activity poses significant scheduling challenges for the community provider than if the residents can be integrated into the practice fairly easily. Resident-pairing (matching residents with complementary schedules) and other strategies to maintain a constant number of residents at the site increases productivity and reduces the need for support.
- **Other financial arrangements with the site** – Other arrangements with the site may affect arrangements for GME. For example, the site may be compensated as a clinical training site for undergraduate medical students. The site may have other relationships with the hospital as part of its physician referral network.

The variety of arrangements suggests that decisions on how GME funds should be allocated are best made at the local level. A single national policy that allocates funds between hospital and community-based sites using a pre-determined formula

does not acknowledge the myriad of existing arrangements for community-based training that could be disrupted. After examining this issue extensively, the New York State Council on Graduate Medical Education (NYSCOGME) reached a similar conclusion. That Council decided that strengthening the HCFA requirements for a written agreement between the hospital and the training site was more appropriate than paying the site directly for GME (Calman, 2000; Cunningham, 2000).

SITE VISIT FINDING 3 – *THERE IS SOME EVIDENCE THAT HCFA'S REVISED DEFINITION OF "ALL OR SUBSTANTIALLY ALL OF THE COSTS" OF NON-HOSPITAL TRAINING IS AFFECTING FINANCIAL ARRANGEMENTS WITH COMMUNITY TRAINING SITES.*

At several sites, financial support was being provided for the first time to a community-based site or was being increased. These involved longstanding academic-community partnerships with a few community health centers and a managed care organization. HCFA's revised rules governing the written agreement between the hospital and the community site as well as general fairness were cited as reasons for the change.[21] No situations where arrangements with physicians in private practice have been affected were identified.

It is too soon to assess whether HCFA's rules have had a significant impact on the financial arrangements between hospitals and community sites. It is not clear whether community sites have sufficient understanding of the rules and the potential for negotiating appropriate financial arrangements with the hospital. Additional education and provision of benchmark data on physician compensation could facilitate the process.

SITE VISIT FINDING 4 – *RESIDENTS ARE NORMALLY PAID BY THE SPONSOR INSTITUTION. THE SALARY AND FRINGE BENEFIT COSTS ARE TYPICALLY REIMBURSED BY THE HOSPITAL THAT RECEIVES GME FUNDING.*

Typically, the sponsoring institution pays the resident's salary and fringe benefits costs. It is reimbursed by a hospital to which the resident rotates for either inpatient or ambulatory training. The hospital claims the resident for Medicare GME payments based on the time the resident spends at the hospital. At two sites involving residents in university-based programs rotating to rural hospitals, the rural hospital does not claim the residents for direct GME payments. In one, the hospital still pays the resident's salary. In the other, the medical school picks up 50 percent of the resident's salary and the remainder is paid by a physician group affiliated with the rural hospital.

Arrangements for rotations to non-hospital community sites are more varied. When Medicare funding is involved, the hospital generally assumes the resident's salary costs. When no Medicare GME funding is involved, the hospital and community-site may share the costs or the site may pay the hospital for the resident. A single program may have multiple arrangements that are site-specific.

SITE VISIT FINDING 5 – *MONETARY COMPENSATION FOR TEACHING PHYSICIANS IN COMMUNITY SETTINGS IS UNCOMMON. THERE IS SOME EVIDENCE THAT ARRANGEMENTS ARE CHANGING IN TEACHING-INTENSIVE SITES.*

Within hospital-based ambulatory clinics, academic faculty are expected to serve as clinical preceptors. The amount of teaching, however, is often not specified in the contract and may differ among the faculty in the department. A few departments have developed ways to take additional clinical teaching responsibilities into account in setting productivity levels for incentive compensation. However, most appear to rely on faculty to assume additional teaching sessions without supplemental compensation. Several sites mentioned that they were exploring how to give appropriate recognition to faculty with a disproportionate share of clinical teaching responsibilities.

Monetary compensation explicitly for teaching in community-based sites rarely occurs, even among hospital-owned sites with employed physicians. When employed physicians are involved, the residency program directors believe they have more control over teaching quality even if there are no specific financial rewards for teaching. Several program directors expressed concern that they have less control over the quality of the teaching experience with volunteer community physicians. They believed it was easier to establish accountability when monetary rewards, even token amounts, are paid to community physicians.

SITE VISIT FINDING 6 – *THERE IS CONCERN THAT CLINICIAN-EDUCATORS IN THE COMMUNITY ARE BECOMING LESS WILLING TO TEACH WITHOUT COMPENSATION.*

There is already a scarcity of highly qualified clinician-educators who are willing to teach without compensation, particularly in communities with multiple medical schools competing for clinical training sites for both medical students and

residents. A common strategy has been to incorporate teaching into community-based practices that are under the direct control of the sponsoring institution. This arrangement provides more control over the selection of clinician-educators, accountability for the quality of the training experience, and stability among the faculty.

Several program directors expressed concern over current difficulties in placing residents in community-based sites with volunteer faculty. Even those who are currently experiencing few problems questioned whether they would be able to find highly qualified clinicians who will be willing to teach without compensation in the future. Frequently cited reasons for concern were the competitive pressures for clinical productivity and the Medicare teaching physician rules. At the same time, the program sponsors did not believe they had the financial resources to pay community clinician-educators.

SITE VISIT FINDING 7 – *GRANT FUNDS HAVE BEEN A KEY FACTOR IN DEVELOPING TRAINING OPPORTUNITIES IN COMMUNITY-BASED SETTINGS.*

HRSA primary care residency training grants, State funds such as California's Song Brown Fund, and foundation grants were consistently reported as important "seed money" to start the dialogue with community-based sites and to provide the funds for curriculum and faculty development. For sites involving academic partnerships with community providers serving indigent populations, on-going grant support has been particularly important. Uncompensated care makes it difficult for these sites to become self-sustainable.

SITE VISIT FINDING 8 – *MEDICARE'S TEACHING PHYSICIAN RULES HAVE HAD MIXED IMPACT. THERE IS CONSIDERABLE CONCERN THAT THEY ARE INTERFERING WITH HIGH QUALITY GRADUATE MEDICAL EDUCATION.*

Medicare's teaching physician rules have had a mixed impact on residency training sites in community settings. Some sites have been unaffected by the rules. These include managed care sites and non-hospital sites where the resident's time is not claimed for direct GME payments and the resident bills under Part B. There has also been minimal impact in clinics with low Medicare utilization, provided the Medicaid program has not adopted the Medicare rules.

The impact in other community settings is influenced by a number of factors. These include: the ratio of residents-to-preceptors; whether the rules were adopted by the State Medicaid agency; whether the site applies the rules to all patients; the site's teaching physician supervision levels before the rules were implemented; whether the primary care exception applies; and, how the documentation requirements are interpreted. Several sites expressed little concern over the rules. A few indicated that they thought the rules have improved the quality of teaching supervision and foster better continuity of care if the patient needs care later when the resident is not available. Other sites had serious concerns about adverse effects on their teaching programs. Key points that were made include the following:

- The requirements for Part B billing for evaluation and management services are counter to the educational goal of progressively independent action by the resident.
- The requirements also endanger teaching in non-hospital settings. These frequently involve one-on-one resident to preceptor relationships. If the preceptor has to be present for the key portion of all evaluation and management visits, the preceptor cannot see patients at the same time. Productivity is greatly reduced and may preclude teaching at the site.
- The supervision requirements for the primary care exception exceed the requirements of the accrediting organizations. The rules have required an increase in the number of teaching physicians per session and have reduced productivity by precluding the supervisory physician from seeing other patients.
- Lack of clarity on the documentation requirements and desire to avoid any errors that might lead to problems under the False Claims Act have resulted in unnecessarily conservative billing practices, overly burdensome documentation procedures, and reluctance of community physicians to teach residents.

SITE VISIT FINDING 9 – *THE BALANCED BUDGET ACT OF 1997 LIMITS ON FTE RESIDENT COUNTS ARE AFFECTING FLEXIBILITY TO MOVE RESIDENTS AMONG HOSPITALS AND TO EXPAND NEEDED PROGRAMS.*

The Balanced Budget Act of 1997 limits on resident counts has had unintended consequences for several GME programs. One issue revolves around residents who were training in ambulatory sites in 1996 and are not included in the hospital's count. Several sites raised the equity issue of not

rewarding programs that had already taken action to expand ambulatory training capacity.

In several situations, hospitals are still working to resolve issues of who "owned" residents who were training in ambulatory settings in 1996. Hospitals at their BBA limit do not want to assume the costs for residents that cannot generate IME payments. The hospitals are reluctant to serve as a training site unless they receive direct GME and IME payments for the time the resident spends at the hospital. This makes it difficult to move residents for educational purposes.

Finally, the issue of the long-term appropriateness of an across-the-board limit on growth in residency programs in light of geographic imbalances in physician supply was raised.

SITE VISIT FINDING 10 – *TRAINING IS BEING EXPANDED IN AMBULATORY SETTINGS WITHOUT IMPACTING NEGATIVELY ON RESIDENT COVERAGE ON INPATIENT SERVICES.*

Several factors seem to have combined to facilitate the expanding ambulatory training capacity without adversely impacting on resident coverage on inpatient services. Following is a summary of what was reported during the interviews:

- The RRC requirements have been influential is creating a common understanding that residency training in ambulatory settings must increase. They have shifted the dialogue from whether the shift in training should occur to how it can occur.
- Most sites have experienced reductions in inpatient census that reduces the amount of coverage needed on inpatient services.
- Hospital mergers and consolidations have facilitated the shift to outpatient training.
- Several programs have found hospitalists can be a cost-effective replacement for residents. Fee-for-service billings and productivity savings from efficient care management by hospitalists can offset their higher salary costs and shorter hours.

This issue was framed within the context of resident replacement costs for shifting training from hospital inpatient services to ambulatory services. Most shifts have been from inpatient to hospital-based clinics. It appears a shift to community-based training sites where the hospital assumes the salary costs but does not receive the benefit of the resident's services remains an issue. The issue of replacing the resident's services includes both the resident's patient care services and the resident's time spent teaching and supervising medical students. Also, the issue may be different for public teaching hospitals and other hospitals with high uncompensated care caseloads where hospitalists cannot generate sufficient revenue to offset their compensation.

GME Reform Proposals

The changing health care environment and the uncertainties of continued reliance on Medicare, Medicaid and private pay revenues to fund GME have led COGME and others to conclude major changes are needed in the way GME is financed. Major features of recent proposals for alternative GME financing mechanisms are highlighted below. Underlying the all-payer proposals is an assumption that GME is a public good that merits broad support. An alternative assumption made by the Medicare Payment Advisory Commission is that GME results in enhanced patient care that should be recognized in health care service-related payments.

ALL-PAYER PROPOSALS

Concerned that the competitive marketplace will not provide adequate support for GME, COGME's 14th Report (1999b) recommends the development of an all-payer financing system that would spread the costs of preparing a well-qualified physician workforce across all payers. In making its recommendation, COGME noted that it would be important to build in mechanisms for public accountability to assure the all-payer funds supported workforce needs and were adequate for ambulatory training. In addition to COGME, other advocates of an all-payer fund include the PEW Health Professions Commission, the Commonwealth Fund's Taskforce on Academic Health Centers, and the 1997 Consensus Statement on the Physician Workforce by associations representing physicians and teaching institutions. The specificity and details of the recommendations made by these advocates of all-payer funding vary. Two bills (H.R. 1224 and S.210) were introduced in the 106th Congress that would provide all-payer funding for GME. Key elements of the all-payer proposals are summarized below.

PEW Health Professions Commission

The PEW Commission (1998) recommends an all-payer financing mechanism exclusively dedicated to supporting entities involved in the clinical education of physicians, advanced practice nurses, and physician assistants. (Funding for other public goods, i.e. research, highly specialized and charity care would come from other funding mechanisms.) All entities providing clinical education, including consortia and children's hospitals, would be eligible for payment.

Total funded positions would not exceed 110 percent of the number of U.S. medical school graduates in 1997 and the BBA limits on FTE resident counts would continue to apply at the institutional level.

- There would be a uniform per resident amount for direct GME costs that would vary only for external reasons such as geographic differences in the cost of living. To ensure an adequate supply of generalist physicians, payment would be made only for residents in their initial residency period and only to institutions that continue to offer at least the number of generalist positions they offered in 1997.
- Eligibility for IME payments would be consistent with those for direct GME payments. IME payments would be distributed among teaching hospitals, affiliated academic institutions, and non-hospital training sites. To reduce disincentives for decreasing the number of residents, a significant portion of IME payments to teaching hospitals would be based on historical IME revenues (rather than the current resident-to-bed ratio).

To replace residents furnishing care to underserved populations, the Commission would expand the National Health Service Corps' loan repayment program and allow specialists to participate where needed.

Commonwealth Fund

The Commonwealth Fund's Taskforce on Academic Health Centers (1997) recommends leveling the competitive playing field for academic health centers and other teaching hospitals by establishing explicit mission-related all-payer financing for their social missions. The taskforce recommends that educational support be lowered commensurate with decreasing the number of new physician trainees to 110 percent of the graduates of U.S. medical schools.

- Payments for direct GME costs would be made on a per resident basis.
- Payments for IME and other indirect costs of social missions would be linked to patient care.

The Taskforce recommends that payment be site-neutral so that education and other academic health center missions occur in the most appropriate location. Demonstration projects are recommended as a way to evaluate new institutional arrangements that may accelerate the transition of programs into ambulatory and community-based settings.

Consensus Statement on the Physician Workforce

Associations representing major stakeholders in GME issued a consensus statement in 1997 on GME financing and workforce issues (AACOM et al, 1997). The recommendations on physician supply issues include:

- Limit Federal funding of residency positions to the number sufficient to allow graduates of U.S. medical schools to enroll in an approved residency program.
- Provide Federal funding to expand training opportunities in medically underserved communities. Provide incentives to encourage students to become generalist physicians and practice in underserved areas.
- Provide transition funding for hospitals that lose residents.

The statement supported an all-payer fund for *direct* GME costs only. Funds would flow to entities that incur the costs of GME, whether they be hospital-based or not, or to consortia that have been designated to receive funds on behalf of the entities that incur the costs. The statement also called for a national workforce advisory body to monitor and periodically assess the size and specialty composition of the physician workforce.

All-Payer Graduate Medical Education Act

The All-Payer Graduate Medical Education Act (H.R. 1224, 106th Congress, 1st Session)[22] would supplement current Medicare payments to teaching hospitals with additional payments for patients covered by non-governmental payers.

- Hospitals would be required to provide an assurance that at least 20 percent of the funds would be used to compensate teaching physicians.
- Payment for direct GME costs would be based on a national wage-adjusted per resident amount (resident salaries and fringe benefits only) and the percentage of hospital revenue (inpatient and outpatient) attributable to patients with non-governmental third party coverage.
- IME payments would be based on the amounts that would have been payable had the patients been entitled to Medicare.
- If necessary, pro-rata reductions would be made in payments so that total payments do not exceed the amounts in the all-payer fund.

Conforming changes would be made in Medicare to require the assurance for teaching physician compensation and to base Medicare's share of GME payments on the percentage of hospital revenues (rather than percentage of inpatient days) attributable to Medicare beneficiaries. There are no special provisions pertaining to training in community-based settings. The Secretary is required to study the appropriate level of documentation that should be required as a condition of payment for Part B teaching physician services. The BBA limits on FTE resident counts would apply and the Secretary would be required to develop a plan to reduce the number of residents beginning July 2005 to 110 percent of the graduates from U.S. medical schools. The Secretary would be required to monitor the distribution of specialties to assure there is an adequate number of primary care physicians. Hospitals receiving IME payments would be required to report annually on how they contributed to education, improvements in clinical services and research infrastructure, and the provision of community services.

Medical Education Trust Fund Act of 1999

The Medical Education Trust Fund Act of 1999 (S.210, 106th Congress, 1st Session)[23] would establish separate Medicare and non-Medicare funds for direct GME and IME payments to teaching hospitals. There is also a medical school account. Total non-Medicare funding is estimated at $8 billion.[24] The funds would be generated through a 1.5 percent tax on health insurance premiums and health-related administrative services and 5 percent of Federal spending on Medicaid acute care services.

The payment formulae for the non-Medicare accounts mirror current Medicare payment methodologies. There are no special provisions for community-based training. The legislation provides for an Advisory Commission to study a number of issues, including policies designed to expand eligibility for GME payments to institutions other than teaching hospitals. Funding is authorized for demonstration projects.

COMMISSION ON THE FUTURE OF MEDICARE

The Balanced Budget Act of 1997 created the National Bipartisan Commission on the Future of Medicare to examine issues related to the future solvency of the Medicare program. One of its charges was to explore broad-based GME financing alternatives. A GME Study Group recommended carving direct GME payments out of the Medicare program (Breaux-Thomas, 1999). Direct GME funding would continue either through a mandatory entitlement or multi-year discretionary appropriation program separate from Medicare. The proposal also recommended exploring funding IME and disproportionate share payments outside the Medicare program. The full commission failed to reach consensus on this or other recommendations and did not issue a final report (National Bipartisan Commission, 1999).

MEDPAC PROPOSAL

The Balanced Budget Act of 1997 required the Medicare Payment Advisory Commission (MedPAC) to examine Federal policies that affect GME, Medicare's payments to teaching hospitals, and workforce issues. In its August 1999 report, the Commission concluded that the Medicare distinction between direct and indirect costs is an accounting artifact and that both represent costs of providing patient care. Instead of making separate payments for direct GME costs as an educational cost, the Commission recommended that these costs be combined with other patient care costs and that Medicare's payments be adjusted to reflect the higher costs of providing enhanced patient care in teaching hospitals. In addition, the Commission recommended that a teaching adjustment be developed for other settings where residents or other health professionals train if the added value of patient care justifies their higher costs. The MedPAC report concluded that Medicare's primary purpose is to provide beneficiaries with access to care and that specific targeted programs may be more appropriate vehicles for achieving physician workforce goals.

In its June 2000 report, MedPAC refined the recommendations in its earlier report (2000b). The Commission recommends that a revised Medicare teaching hospital adjustment be set at a level that would provide an aggregate teaching hospital subsidy comparable to that provided under current law (about $1.5 billion). The report defines the subsidy as the difference between payment amounts and higher costs per case attributable to teaching activities. The Commission is concerned that reducing the subsidy below the levels established by the BBA could place undue financial strain on teaching hospitals.

The June 2000 report recommends that the higher costs attributable to teaching activity be determined after folding direct GME costs for inpatient care into the Medicare inpatient cost base. In measuring teaching intensity, the full resident count rather than inpatient resident count would be used in the resident-to-bed ratio. The full resident count should avoid creating an incentive to shift residents from outpatient to inpatient settings. Direct GME costs for outpatient and other settings would continue based on a hospital-specific per resident payment amount determined from outpatient GME costs. The goal would be to eliminate any financial incentives hospitals might have to shift residents among settings.

Alternative Models for GME Funding

This section begins with a summary of COGME's overall goals for funding GME. It is followed by a discussion of specific policy considerations relevant to residency training in community-based settings. These subsections provide a policy framework for evaluating alternative models for distributing GME funds. Fundamental issues to consider in evaluating the models are:

- Who should receive payments directly from the fund;
- How to allocate the funds among the receiving entities; and,
- How to establish accountability for the funds.

The remainder of this section analyzes four potential models for distributing GME funds. The differences between three models are based on which entities would receive payments directly from the fund: health care providers, educational institutions, or GME planning bodies. The fourth model would link payment to specific performance measures. The models are not mutually exclusive and a combination is needed to achieve the policy objectives for the GME fund. Recommendations for GME funding follow in the next section, "Recommedations for GME Financing Reform."

POLICY GOALS FOR GME FUNDING

GME funding policies should meet the following objectives:

- Provide a stable funding mechanism that is responsive to the community yet consistent with national workforce objectives;
- Enable health care institutions to compete on price and quality by subsidizing higher costs attributable to educational activities and uncompensated care without supporting inefficiencies;
- Create adequate support and appropriate incentives for developing community-based educational programs;
- Encourage effective and efficient educational models that promote improved ways to meet health care needs;
- Foster mechanisms that will stabilize the total number of physicians while improving the specialty and geographic distribution of the future physician workforce; and,
- Hold recipients of Federal and State funds accountable for producing needed public goods.

POLICY CONSIDERATIONS FOR COMMUNITY-BASED TRAINING

Educating physicians in the environment in which they will eventually practice requires expansion of residency training in ambulatory settings for all specialties for most training in community-based settings. The BBA eliminated some disincentives for a hospital to rotate residents to non-hospital settings by paying IME for the resident's time in the non-hospital setting. However, the BBA limits on FTE resident counts operate against those hospitals that were already training residents in community-based settings. A modification in the law to count the residents who were in non-hospital settings in the base year would remedy this problem. The remaining disincentives to rotate residents to community-based settings are more difficult to resolve:

- As the recipient of the funds, the hospital is in the stronger bargaining position regarding who should bear the direct costs of training in the ambulatory setting.
- Hospital service demands compete with educational needs to rotate residents to community-based settings.
- The hospital's patient care needs and financial interests rather than physician workforce needs may determine the numbers and specialty mix of residents and residency programs.
- Accountability is difficult to establish because the program sponsor, rather than the hospital, has the ultimate responsibility for the conduct of the educational program.

To some extent, fund allocation policies could reduce these disincentives.

- Clear guidance might be provided regarding reasonable financial agreements between the hospital and community-based sites. In addition, public accounting of how the funds were dispersed could be required.
- Empirical research is needed to determine if an IME adjustment is also justified for other

settings (e.g. hospital outpatient and community health centers). If the research finds that teaching increases patient care costs in those settings, support for indirect teaching costs could flow directly to the ambulatory sites.

- Elimination of Medicare utilization as a payment factor will result in more comparable payments across teaching sites.
- The funding formulae could be modified to reinforce workforce objectives. For example, relatively higher payments could be made for residents in primary care programs or for training in community-based settings. Research is needed if the adjustments are to be established on an empirical rather than solely policy basis.
- Payments could be based on a historical resident count rather than current resident count. This has the advantage of providing neutral incentives for an individual hospital regarding the number of residents it trains and where the training takes place. However, it also reduces flexibility to move residents among hospitals and settings consistent with educational needs.

The remainder of this section discusses potential payment models that could be used to distribute the GME funds. The models focus on the general issues regarding who should receive direct payments from the GME fund and how to establish accountability for the payments. Allocation policies designed to expand community-based training opportunities can be built into each of these models.

HEALTH CARE PROVIDER MODEL

The health care provider model links payments for clinical training to patient care activities. This is the approach Medicare uses. It treats clinical training costs as patient care costs as opposed to educational costs. It is the most appropriate model for the indirect costs of clinical training. These costs reflect the impact of the teaching activity on the costs of the health care provider where the training takes place. The health care provider model does not provide support for training that does not occur in patient care settings. Residency programs in preventive medicine would typically receive little support under this model.

Under Medicare, the health care provider model is also used to support direct GME costs. Direct GME costs for a single residency program are typically incurred by multiple entities: the program sponsor, the faculty practice plan affiliated with the sponsoring institution, the hospital that is the primary training site for the residency program, and the community hospitals and ambulatory providers that serve as additional training sites. Each provider's direct costs for GME depend on its negotiations and arrangements with other entities involved in the training program over issues such as which party will assume the costs of the resident's salary or the opportunity costs of teaching. Typically, when training occurs in a non-hospital setting, the non-hospital site incurs some but not all of the training costs. At many community-based training sites, the hospital continues to incur the resident's salary costs and program administrative costs. The community-based site incurs site-specific direct costs and may incur indirect costs. The site's costs are funded to some extent by patient care revenues. The community-based site should be paid directly for indirect teaching costs that are supported by empirical research. The issue is how funding might be allocated for direct GME costs that are not recovered through patient revenues.

PAY PROVIDERS DIRECTLY

Medicare pays a hospital for the time residents spend in training at that hospital regardless of whether the hospital or another hospital or educational institution bears the costs of the residency training program. Different rules apply to non-hospital settings. Direct GME payments for training in non-hospital settings depends on which entity bears substantially all the training costs for the resident's time at the site, i.e. pays the resident's salary and reasonable compensation for teaching. Only the site or the hospital can receive payment for the time the resident spends in the non-hospital setting; there is no provision for splitting the payment based on the proportion of costs incurred by each entity. If GME fund payments for direct GME costs were made directly to health care providers, there are three basic options for distributing the funds when community-based training is involved:

- One option would be for the funding to follow the resident. That is, payments for direct GME costs would flow to the community-based site regardless of which entity bears the cost. This would require that virtually all agreements be renegotiated between hospitals and the community-based sites. The policy has appeal as a means to encourage non-hospital providers to become training sites; however, it could be counter-productive to expanding community-based training opportunities. Hospital sponsors may prefer to retain control over GME

funding and avoid negotiating with community-based sites by rotating residents to their own ambulatory clinics. It reduces the community site's accountability to meet the expectations of the program sponsor. It does not provide flexibility to have different remuneration and reward systems for preceptors based on extent of teaching involvement. This option would also require an administratively burdensome mechanism to identify and pay each community-based clinician involved in residency training programs.

- A second option would be to pay pro-rata amounts to the hospitals and the community-based ambulatory sites participating in the residency program based on their relative shares of direct GME program costs. This option would not be as disruptive of historical arrangements as the first option; however, it would require the affiliated hospitals and community-based training sites to agree on their relative shares of program costs. The administrative burden to track each agreement and determine appropriate payment amounts would be great. A less burdensome variation would be to establish a fixed allocation between hospitals and community sites based on national data on their relative shares of direct GME costs.
- A third option would be to pay the entity that bears substantially all the costs for the community-based rotations. As under current Medicare policy, it would require negotiation and agreement between the hospital and the community-based sites regarding which entity bears substantially all the costs. It would be less burdensome than the second option because no cost determinations would be required and only one party would be paid for the resident's time at the community site. It is the least disruptive to existing arrangements between the entities participating in residency training. For the same reason, it is least likely to increase community-based training without supplemental policies.

Designate Funds for Training in Community Settings

A payment or voucher earmarked for training in community settings could reduce the administrative burden of tracking resident time spent in community-based sites. This could be accomplished by requiring the hospital that assumes substantially all of the training costs to provide a minimum amount, e.g. 20 percent of the direct GME fund payment to community training sites. Alternatively, a voucher could be used to pay for resident time spent in community-based settings.[25] The voucher could be given to the hospital that bears substantially all of the training costs. Only a community-based site could redeem the voucher. This portion of the GME fund payment would be forfeited if it were not used for community-based training. Either approach would assure funding reaches community-based sites with less administrative burden than alternatives to pay the sites directly. There would be less local flexibility to determine the extent of training in community settings and an appropriate financial arrangement to support the direct GME costs of the training sites. However, hospitals would have the flexibility to pay varying amounts to different community sites within the overall requirement.

EDUCATION MODEL

The education model treats GME costs as an educational cost as opposed to a patient care cost. It should give educational needs more weight in deciding what and where residency training occurs and affords more opportunity to link payment with workforce objectives. The model is appropriate for direct GME costs only. Payment would flow to a single entity that would be accountable for how the funds were expended. This could be to a medical school or the program sponsor. Some have suggested the residency program director as the potential recipient of the GME funds. However, paying the program director could reduce the opportunities within the sponsoring institution for cross-subsidization of GME programs and for collective decision making on workforces issues. In addition, the program director does not have the ultimate responsibility for the residency program.

Institutional Sponsor

This alternative pays the GME funds to the institutional sponsor that has ultimate responsibility for the GME program. Using the ACGME definition, the sponsor could be a university or medical school, hospital, health department or public health agency, an organized health care delivery system, a consortium or other organization whose primary purpose is to provide education and/or health care services (AMA, 1999). If sponsors of the program were paid, funding could be contingent on meeting specific educational or workforce objectives. There is potential to introduce other elements into the allocation formula, such as program quality. This is more difficult to do when funds flow directly to providers.

For hospital-sponsored programs, this option represents the status quo. For programs that are sponsored by educational institutions, the relationship between the hospital and the educational institution will determine if paying the program sponsor would represent a significant change in flow of direct GME funds. It would be unnecessarily burdensome to interrupt existing arrangements when the sponsoring institution is satisfied with those arrangements. These situations could be addressed by allowing the sponsor to designate another entity to receive the payments. Payment would be made only to the sponsoring institution or its designated entity. The program sponsor would be accountable for allocating the funds to clinical training sites and for holding the sites accountable for high quality training experiences.

MEDICAL SCHOOLS

Paying medical schools would emphasize most strongly that the GME funds are to support education rather than patient care. Currently, the university or the medical center/affiliated hospital sponsors most residency programs at academic health centers. Medical schools sponsor relatively few programs. As a result, this option would create a mismatch between responsibility for the program and fund accountability at many academic health centers. Alignment could require disruptive changes in program sponsorship.

Some residency programs are sponsored by community-based hospitals. Many of these are family medicine residency programs. Funding through the medical schools for these programs would require a major shift in program accountability and funding.

RESIDENT VOUCHER SYSTEM

The resident voucher system under the education model differs from the designated funds or voucher discussed above under the health care provider payment model.

- The resident controls the funds rather than the program or hospital that incurs the costs for the residency program.
- The voucher is not limited to funding for community-based training experiences. Rather, it is for all training experiences.

Resident vouchers are intended to create competition among residency programs. However, it is not clear that the voucher system is significantly different from other payment models. Programs already compete for residents and GME payments are based on where the resident trains. The resident's ability to hold the program accountable is limited once the resident has selected a program. The voucher adds value only if there is a regulatory apparatus to determine the number of positions to be funded and which residents should receive funding.

PLANNING MODEL

Under the planning model, the GME funds would flow through a GME planning and coordinating body. This is an entity whose primary functions would be to assess the health care needs of the community and allocate funds based on local workforce considerations. In contrast to the education model, the planning model could afford States, payers and consumers a stronger role in how the funds are allocated to support workforce objectives. The GME funds could be distributed to a broad-based GME consortium or to the States. Under either option, funding allocation decisions could support local health care needs more readily than distributions directly to health care providers or program sponsors based on national allocation formulae.

CONSORTIA

Payment to consortia under the GME fund could be either a natural outgrowth of paying the program sponsor or could result from deliberate policies to encourage consortia. Several definitions of consortium are in use.

- The ACGME defines a consortium as "two or more organizations or institutions that have come have come together to pursue common objectives." A consortium may be a sponsoring institution if "it is formally established as an on-going entity with a documented commitment to GME" (AMA, 1999).
- The Association of American Medical Colleges and the Center for the Health Professions at University of California at San Francisco built on the ACGME definition in their 1996 survey of 30 consortia. They defined GME consortia as "formal partnerships involving two or more separate organizations involved in graduate medical education, formed to reorganize or strengthen medical education and characterized by shared or joint decision making" (Cox, 1996).
- The BBA defined a consortium as a teaching hospital and one or more of the following: a medical school, another teaching hospital, a

Federally qualified health center, a medical group practice, a managed care entity, or an entity furnishing outpatient services.

The AAMC/UCSF study surveyed 30 multidisciplinary consortia meeting its definition (an estimated 80 percent of all such consortia) (Cox and Dower, 1996). Key findings from the survey included:

- Most consortia included a medical school and teaching hospitals; other health professions schools, health care providers, or public agencies were rarely involved.
- Fifty percent controlled GME expenditures, while 10 percent controlled expenditures for some members. GME expenditures remained under the exclusive control of the individual members in 40 percent of the consortia.
- Few had dealt with medical education in a comprehensive way. Sixty percent had considered clinical resources for community-based training sites. However, only 43 percent had addressed issues related to developing clinician-educators in the community.
- Physician workforce achievements were mixed and largely mirrored the remainder of the academic community.

COGME's 9th Report, *Graduate Medical Education Consortia: Changing the Governance of Graduate Medical Education to Achieve Workforce Objectives* (1997) suggested that the consortium concept provides the organizational flexibility to draw upon the expertise of the broad group of stakeholders needed to restructure medical education and achieve substantive physician workforce reform. The Council envisioned consortia that would include medical schools, teaching hospitals and community training sites and would promote an interdisciplinary approach to health care delivery. COGME found that consortia as a group have not instituted changes that would influence physician supply and distribution. COGME concluded that current consortia do not have the authority and resources to achieve workforce objectives. To be effective, consortia need local sponsorship authority and access to financial resources. Performance to date for consortia suggests that providing payment only to consortia would be premature.

The Medicare consortia demonstration projects authorized by the BBA are intended to foster workforce objectives. Payments would flow to the consortia. However, the financial rewards are minimal. Under the statute's budget neutrality provisions, HCFA cannot pay more to the consortia that it would otherwise pay to the participating entities for direct GME costs. The demonstration does not involve IME payments. Additional incentives are needed to encourage effective models that are responsive to the health care needs of the community. Consortia of medical schools and teaching hospitals may not be sufficiently broad-based to be responsive to the health care needs of the community. Many are limited to a few specialty programs, and do not involve all resident programs in an area. Broad-based consortia of hospitals, community-based providers, educational institutions, purchasers and community representatives, such as the Utah consortium, should be encouraged through development funds. Beyond developmental support, any preferential funding for consortia should be tied to achieving specific workforce objectives rather than to meeting the formal definition of a consortium.

STATES

Many States have established commissions or task forces related to GME and physician workforce. Some are permanent groups with the structure and expertise that could become physician workforce planning bodies in their State. A 1998 assessment by the Center for Health Workforce Studies concluded at least seven States had permanent organizations with some authority for advising on GME policies that could become physician workforce planning groups: New York, Illinois, North Carolina, Minnesota, Louisiana, Arizona, and Utah (COGME, 1999b).

PERFORMANCE MODEL

The performance model would link payment to achieving specific performance measures or objectives. Payment could be formula-driven based on meeting specific educational or workforce objectives. Alternatively, there could be support for specific projects or demonstrations needed to support infrastructure development or workforce goals. The performance model is more suitable as a mechanism for making supplemental payments than as a primary payment mechanism. Educational quality measures and workforce priorities are not sufficiently defined to be used to determine all fund allocations. Also, if all funding were predicated on meeting specific performance measures, significant year-to-year fluctuations in funding could occur that would be inconsistent with the need for stable GME funding.

INCENTIVE PAYMENTS

The GME funding formulae could provide incentive payments for meeting specific objectives. These objectives could be in the area of curriculum

content and quality, training opportunities, or workforce objectives. One approach would be to use an incentive pool along the lines of those employed by New York or Michigan (described in the section "Current Financing of Graduate Medical Education," in the subsection "Medicaid Support for GME"). Limiting the size of the pool, however, provides less stable funding since the amount of funding for individual participants declines as the percentage of participants meeting the objectives increases. The alternative would be fixed incentive payments that any participant would receive if it met specific performance criteria. Incentive payments could also be used to reward residents for career decisions that advance workforce objectives to improve the specialty and geographic distribution of the physician workforce.

INFRASTRUCTURE SUPPORT

Some funding could be set aside for infrastructure development. Examples of the types of programs that could be funded include the targeted Public Health Service primary care training grants, support for developing academic-community partnerships to serve medically underserved populations, consortia development, and faculty development programs for clinician-educators in the community.

Recommendations for GME Financing Reform

Graduate medical education (GME) should meet community needs and remain current as new technology and evolving health systems affect the way care is delivered. The funding policies should provide incentives to support high quality training in both traditional and community settings. It should encourage training innovation and improved ways to meet patient needs. Funds should be allocated to regional or local levels consistent with national workforce priorities. However, Federal support must be sufficiently flexible to allow some funding allocation decisions to be made at the local level. At the same time, recipients of those funds must be accountable for producing:

- an appropriate number and specialty mix of physicians distributed across geographic areas consistent with current and future national health care needs; and,
- educating physicians who are well-equipped to provide high quality, effective and efficient care.

The recommendations outlined below are based on these principles. The recommendations are made within the context of an all-payer GME fund. However, some recommendations could also have applicability to current GME funding policies under the Medicare program.

RECOMMENDATION 1

CREATE A GME FUND THAT COMBINES FEDERAL FUNDING TO SUPPORT GRADUATE MEDICAL EDUCATION WITH ALL-PAYER FUNDS.

To assure financing policies are consistent across Federal programs and reflect national workforce priorities, the various Federal funding streams for GME that is provided by non-Federal institutions (i.e., excluding DoD and DVA) should be combined into a single fund and supplemented with all-payer funds obtained through a modest surcharge of private insurance premiums. The GME fund would include amounts that would otherwise be paid under current formulae for Medicare for direct GME and indirect payments to teaching hospitals, the Federal portion of Medicaid payments that are implicitly GME payments, and the Children's Hospital GME fund. In addition, the HRSA Title VII grants for GME, e.g., primary care residency training grants, would be included in a set-aside fund for specific workforce goals.

Within the general GME fund, five separate accounts should be established for:

- Medicare direct GME payments;
- non-Medicare direct GME payments;
- Medicare IME payments;
- non-Medicare IME payments; and,
- targeted payments to support specific workforce and educational objectives.

The separate Medicare and non-Medicare accounts are needed as a transitional measure. They would assure full funding on behalf of Medicare patients if contributions from other payers are not sufficient. Also, since the Medicare funds are currently being paid, changes in the allocation of the Medicare funds should be phased-in or offset by additional funding from the non-Medicare accounts. A transition may not be needed for the non-Medicare funds. To the extent they represent new funding streams, funds in the non-Medicare accounts should be allocated consistent with preferred policies from the outset.

While the GME fund would not include funding for residency training in DoD and DVA-sponsored programs, the Federal budget for those programs should be consistent with the policy objectives for the GME fund. Residency training in these programs has significant impact on the size and specialty composition of the physician workforce.

a. GME should be broadly supported by all-payers.

Explicit funding for GME should be spread more broadly across all sectors of society. A permanent and stable funding source, such as premium contributions from all health insurance plans, should supplement current Federal funding for GME. In the long run, Medicare and Medicaid's contribution to the GME fund should be proportionate to the percentage of insured population represented by their enrollees.

b. Funding from all sources should be sufficient to support high-quality, efficient training of an appropriately sized physician workforce.

Total aggregate funding should be sufficient to support the efficient training of an appropriately sized physician workforce. Together with payments from other sources (primarily patient care revenues and State funds), GME funding should be adequate to train the number

of physicians required to meet current and future national health care needs. Additional funding would not be in the public interest since it could contribute to a continuing surplus of physicians.

In the past, COGME has recommended that the total number of physicians entering first year residency should not exceed the number of U.S. medical school graduates in 1993 plus 10 percent (COGME, 1994). The Council's 14th Report found that a reduction of 3,386 first year positions in 1997-1998 was needed to meet the 110 goal. In view of recent changes in the health care delivery system since its initial recommendations were issued, COGME plans to review the 110 goal and its target of a 50/50 mix of primary care and other specialists.

Most of the increase in the total number of residents in recent years is attributable to an increase in the number of graduates from medical schools outside the United States. Support should be discontinued for new exchange visitors (J-1 visa) residents. As COGME has previously recommended (1997), exchange visitor residents should be funded by alternative sources, such as home country financing or foreign aid.

A conceptual framework should be used to establish an appropriate level of Federal support for funded residency positions. Because GME is a joint product with patient care services, patient care revenues cover some direct GME costs. Consideration also needs to be given to issues such as maintenance of effort for current State funding through the Medicaid program and grant programs and whether all resident activities required for accreditation in an approved program should be funded. Under Medicare, only resident time spent in patient care activities is supported.

RECOMMENDATION 2

IME ACCOUNTS SHOULD PAY HOSPITALS AND OTHER CLINICAL TRAINING SITES AS APPROPRIATE FOR THE INDIRECT COSTS OF EDUCATIONAL ACTIVITIES.

IME accounts should be created to subsidize higher patient care costs associated with residency training. The funds should be allocated to hospitals and, to the extent it is empirically supported, to other clinical training sites that incur indirect teaching costs, including hospital outpatient clinics and community-based settings. Initially there should be separate accounts for Medicare and non-Medicare patients in order to assure the indirect costs for Medicare patients are fully funded. In the long run, a single account would be appropriate.

a. IME payments should be set at no more than the analytically justified level for teaching activities

Paying more than the analytically justified amount would subsidize inefficient providers and give teaching institutions a competitive edge over non-teaching institutions. For Medicare inpatient services, MedPAC's (2000b) current estimate is a 3.1 percent adjustment for each 0.1 increment in the resident-to-bed ratio after other refinements are made to the Medicare prospective payment system. Based on this estimate, Medicare IME payments would be $1.5 billion lower than the 5.5 percent adjustment provided by the BBA. The difference could be targeted toward achieving specific workforce and educational goals (see Recommendations 4 and 6) or toward supporting uncompensated care (see Recommendation 8). A transition would be needed to the extent reductions in Medicare IME payments are not offset by increases in non-Medicare IME funding.

b. Research is needed to determine the appropriate IME payment formulae.

Research is needed to refine the Medicare IME adjustment and to determine the appropriate IME teaching adjustment for non-Medicare hospital inpatients. Medicare's adjustment should be based on the higher costs attributable to teaching activities. For non- Medicare patients, the adjustment should be directed at "leveling the playing field" between teaching and non-teaching hospitals. It does not need to cover the full indirect teaching costs if teaching hospitals are able to command a premium for quality or specialized services.

Ideally, the IME payment formula should not reflect higher costs indirectly attributable to other teaching hospital missions, e.g. specialized services, uncompensated care, and research. Subsidies for those public goods should be directed toward the hospitals producing them through separate funding streams. Reducing the adjustment to an analytically justified level for teaching would reduce incentives to train more physicians than necessary. It would also eliminate confusion between funding for the teaching mission and funding to support charity care. Higher costs attributable to serving low-income patients and uncompensated care costs should be recognized

through a separate funding mechanism (which would also distribute payments to non-teaching institutions serving low-income patients. See Recommendation 8). Refinements in the IME payment methodology should not reduce the total level of support for hospitals with significant uncompensated care until specific funding for such services is provided. Reductions in the IME payment formula should be accompanied by refinements in the prospective payment system to incorporate better case-mix and severity measurements. An additional adjustment for research-intensive hospitals may also be appropriate.

Additional research is also needed to determine the extent to which there is an indirect teaching effect on costs when resident training takes place in hospital outpatient and non-hospital settings. If empirical research finds there is an indirect teaching effect on the costs of services provided in ambulatory/community settings, the IME account should pay for these services as well as inpatient hospital services.

RECOMMENDATION 3

DIRECT GME ACCOUNTS SHOULD PAY PROGRAM SPONSORS OR THEIR DESIGNEES FOR THE DIRECT COSTS OF GRADUATE MEDICAL EDUCATION.

Direct GME costs are educational costs that should be supported through payments to the sponsoring institution ultimately responsible for the graduate medical education program. Payment allocation decisions should be made at the local level because the tremendous variety of existing arrangements cannot be accommodated at the national level. By making payments to either the sponsoring institution or its designees, the sponsor can determine the most appropriate recipient of the funds based on local circumstances for a particular program. For example, a sponsoring institution may decide to retain maximum control over the funds and receive them directly, elect to continue historical arrangements having the funds flow through the teaching hospital, or may choose to have a consortium distribute the funds. The same election would not need to apply to each program sponsored by the institution. Regardless of which entity received the funding, the sponsoring institution would be accountable for the funds being expended to support a high quality training program with the appropriate balance of hospital and community-based training experiences.

a. There should be written agreements between the program sponsor and training sites indicating the sponsor is assuming substantially all of the training costs and describing how GME payments will be allocated

The program sponsor or its designee must assume all or substantially all of the direct costs of operating the residency program as a condition of receiving direct GME payments. Written agreements should be required between the sponsoring institution and clinical training sites to formalize the negotiation process and to increase accountability for the funds. The agreements should detail how the direct GME funds will be allocated between the sponsor and the training site, identify which entity will pay resident salaries and fringe benefits, and specify teaching physician compensation arrangements for supervising residents. The goal is to strengthen the negotiating position of community–based sites without jeopardizing long-standing relationships between academic institutions and community training sites. A sponsoring hospital may have a disincentive to rotate residents to community-based training sites if all direct GME funds automatically follow the resident to a community-based training site through direct payments from the GME fund or a voucher system.

b. Model agreements and information on direct GME costs should be made available to facilitate equitable agreements between the sponsor and the sites

Local circumstances should determine how direct GME payments are allocated to teaching sites. However, benchmarking information should be provided to facilitate the negotiation process, including:

- breakdown of GME payments into three components based on average direct GME costs: resident salaries and related costs, teaching physician compensation, and an administrative and overhead cost component.
- benchmarks for teaching physician compensation and the added time per teaching session when residents are present in community-based practices on short-term rotations and on an on-going basis; and,
- model agreements between institutional sponsors and community-based sites.

c. Require separate reporting of resident time spent in inpatient hospital, hospital outpatient and community settings

At present, there is no formal accounting for the time residents spend in each type of training site. Standard definitions should be

developed to distinguish hospital outpatient settings from community settings. Community settings should be broadly defined to include both hospital-operated and community-based sites that are representative of the environment in which residents will eventually practice. The determining characteristics are the processes of care rather than proximity to the hospital or provider ownership. Community settings address the care of the individual patient in the context of the population of which the patient is a member. They teach residents to deliver culturally effective care to an ethnically and racially diverse population.

RECOMMENDATION 4

ESTABLISH A NATIONAL AVERAGE PER RESIDENT PAYMENT FOR DIRECT GME COSTS.

The base payment for direct GME costs should vary only for differences in the cost of living across geographic areas. For Medicare payments, there should be a transition from the hospital-specific per resident amounts to the national per resident payment. The length of the transition will depend on additional payments for non-Medicare patients. These can help compensate for any reductions in Medicare payments. At the end of the transition, separate Medicare and non-Medicare accounts would no longer be necessary. Higher payments may be appropriate for training in community-based settings. In addition, there should be an incentive payment for programs that meet specific workforce or educational objectives.

a. Base total direct GME payments on the net costs of supporting an appropriately sized workforce.

Ultimately, total direct GME funding should be based on the net costs of educating an appropriately sized physician workforce. Establishing a fixed payment per resident should provide incentives for efficiency in the educational process. However, the costs of efficiently delivering high quality GME and the extent to which these costs are offset by patient care revenues has not been determined. As an interim policy, either the average per resident amounts or average GME costs per resident could be assumed to represent the total costs of an efficient program. Total costs based on the FY1997 average per resident amount updated for inflation and the 110 percent target are estimated at $6 billion for FY2000.[26] A lower funding amount would be appropriate since the per resident amounts do not take into account patient care revenues attributable to GME.

b. Provide higher payments for training in community settings

When training occurs in a community setting, the sponsoring institution continues to incur some supervisory physician and overhead costs. The community setting incurs some direct GME costs as well (for example, to compensate the community physician for teaching) even if the sponsoring institution continues to pay resident salaries and fringe benefits. As a result, total GME costs may be higher when residents rotate to community-based settings than when they remain in hospital-based settings. A higher payment for training in community-based settings would be appropriate if the net total costs (after taking any additional patient care revenue into account) are higher in the community-based settings. Research is needed to determine whether this is the case. To counter any disincentive that might currently exist for community-based rotations, a temporary policy might be to increase the component of the per resident amount attributable to teaching physician compensation by a fixed percentage, e.g. 25 percent. The higher payment could apply in all community settings even though the rationale for the payment is primarily applicable to settings off the hospital premises. This would provide an incentive for hospitals to turn training in ambulatory clinics into experiences that are more representative of community physician practices.

c. Provide incentive payment for meeting specific workforce and educational objectives.

In addition to the base per resident payment, there should be an incentive payment for meeting specific workforce and educational objectives. Programs that meet one or more of the objectives would be eligible for a bonus on the national average base payment. The incentive payment should be established as a fixed payment rather than a pool so that the benefits do not erode as additional programs meet the objectives and qualify for payment. The bonus payment could be awarded based on:

- Participation in a broad-based consortia of the sponsoring institution(s) for residency programs in an area, hospitals and community providers participating in GME activities, and community representatives. The consortia would have to be designated by the sponsoring institutions to receive all direct GME funds. Bonus payments would be made if the consortia has a formal process to identify the health care needs of the community, engage in workforce planning, and promote community-based training opportunities;

- Number of graduates that provide significant amounts of care to medically underserved populations;
- Percentage of time residents spend providing care to medically underserved populations; and,
- Quality of the residency program.

d. Research is needed to understand variation in direct GME costs by specialty and setting.

Most research regarding residency training costs was conducted at a limited number of sites and before the growth of managed systems of care. A better understanding of differences in the net costs of training across residency programs and training sites is needed to refine the payment allocation methodology. A generic financial model should be used to examine systematically issues such as:

- Whether there are significant differences in the amount of teaching physician involvement between primary care and non-primary care residency programs and between initial residencies and fellowships;
- Whether there are significant differences in impact on clinical productivity and net physician practice revenue when teaching occurs in ambulatory settings relative to inpatient settings and between initial residencies and fellowships;
- How direct GME costs are affected by the presence of students in other health professions at the training site and by residents teaching medical students; and,
- Factors that affect the efficiency and quality of the educational process.

RECOMMENDATION 5

CONTINUE THE BALANCED BUDGET ACT OF 1997 LIMITS ON THE NUMBER OF RESIDENTS WITH MODIFICATIONS.

In concept, the Balanced Budget Act of 1997 limits on the residents that will be recognized by Medicare are consistent with the goal of reducing the future physician workforce and should be carried over to eligibility for payments under the GME fund. However, hospital-specific limits are not an appropriate long-term way to deal with physician supply issues. The limits hamper a program director's ability to move residents among hospital programs for educational reasons. In geographic areas with physician shortages, the limits preclude expansions in needed residency programs.

a. Modify the caps to apply to sponsoring institutions rather than hospitals.

The sponsoring institution is to be held accountable for educational outcomes and workforce objectives. Therefore, the limits should apply to the number of residents in the programs sponsored by the institution rather than the hospitals serving as training sites for the program. This will provide the flexibility to move residents between hospitals and other settings. Consortia that meet certain workforce planning objectives should be able to work under an aggregate limit for multiple sponsoring institutions.

Applying the limit to sponsoring institutions is consistent with making direct GME payments to sponsoring institutions. However, it complicates IME payments to individual hospitals. One option would be to apply no limit for IME as long as the sponsoring institutions whose residents are training at the hospital are under their caps. An adjustment would be needed only if the total number of residents in programs at the sponsoring institution(s) exceeded an aggregate cap. The three-year rolling average and the one-year cap on the resident-to-bed ratio should continue to apply. The rolling average provides a form of transition payments to hospitals that reduce the number of residents and slows the recognition of new residents in the IME count.

b. Include residents in non-hospital settings regardless of who paid the resident's salary in the 1996 base year count.

Residents who were working in non-hospital settings were not included in a hospital's 1996 base year count for Medicare IME payments. They were included in the direct GME count only if the hospital incurred substantially all of the training costs. The limit applicable to a sponsoring institution should be adjusted to include all resident time in non-hospital settings regardless of who paid the resident's salary.

e. Allow adjustments in the Balanced Budget Act of 1997 limits to improve the distribution of physician workforce.

Further research is needed to understand the impact of the Balanced Budget Act of 1997 limits and to develop policies that will result in a better geographic balance in the physician workforce while encouraging an overall reduction in the number of physicians. Appropriate indicators of adequate distribution by specialty are needed. As an interim measure, the limits should not apply to rural residency training tracks if their graduates practice

predominately in rural areas. In addition, the limits should not apply to primary care residency programs whose graduates practice predominately in those States with low physician-to-population ratios.

RECOMMENDATION 6

ESTABLISH AN ACCOUNT FOR FUNDING SPECIAL PROJECTS AND PROGRAMS DIRECTED AT BUILDING HIGH-QUALITY COMMUNITY-BASED TRAINING CAPACITY OR ACHIEVING SPECIFIC WORKFORCE GOALS.

At least 10 percent of the GME fund should be set aside to support specific projects and programs directed at building high-quality community-based training or achieving specific workforce priorities. The types of projects and programs that should be funded include:

- Primary care residency program grants;
- Faculty development grants to support training of community clinician teachers;
- Information technology infrastructure development to link patient care records at teaching hospitals and community sites within organized systems of care;
- Incentive programs to reward residents that focus their practice on medically underserved populations;
- Transition funds to cover residency replacement costs in hospitals with high uncompensated care patient loads; and,
- Demonstration projects involving development of broad-based consortia.

RECOMMENDATION 7

MODIFY THE MEDICARE RULES RELATED TO TEACHING PHYSICIANS TO EMPHASIZE THE TEACHING PHYSICIAN'S OVERALL RESPONSIBILITY FOR THE MANAGEMENT OF THE PATIENT'S CARE AND TO REDUCE THE IMPORTANCE OF DOCUMENTATION.

The Medicare rules pose two challenges to graduate medical education: 1) the supervision rules make it more difficult for residents to become progressively independent, and 2) the documentation requirements detract from the amount of time available for teaching and resident supervision. There is some evidence that the rules may adversely affect the willingness of community physicians to participate in teaching programs. The rules should be revised to address these concerns.

a. Establish different rules for residents in fellowship programs

HCFA's rationale for its teaching physician rules rests on: 1) making payment only when there is an identifiable physician service to an individual patient and 2) avoiding duplicate payment for the physician's supervisory time. Duplicate payment should not be an issue with residents who are beyond their initial residency period. These residents count as only .5 FTE and resident salaries and fringe benefits comprise only 43 percent of the per resident amount.

The rules on teaching physician supervision should be revised for residents who are beyond their initial residency program to permit Medicare billing if:

- the teaching physician is immediately available;
- reviews with each resident during or immediately after the visit the patient's medical history and care; and,
- documents his or her participation in the review and direction of services.

Accreditation standards for the residency program should be relied upon to determine issues regarding supervision requirements for specific services and resident-to-preceptor ratios.

An alternative would be to allow residents beyond their initial residency period to bill for services furnished in the hospital if an election is made to forego a direct GME payment for the resident's time.

b. Evaluate the impact of the teaching physician rules

The issue of when physician billing is appropriate for care provided by residents is not limited to the Medicare program. It will remain relevant under an all-payer fund. There is a need to evaluate formally the administrative and teaching burden associated with the current Medicare rules and their impact on the quality of clinical training and patient care. Particular attention should be paid to the effect in hospital ambulatory clinics and community-based settings where there is a low resident-to-preceptor ratio.

c. Develop clear and reasonable documentation requirements

There is need for additional guidance and common understanding of what constitutes adequate documentation of a teaching physician's participation in the care of patients involving residents. HCFA should work with

the academic physician community and the Office of Inspector General to develop reasonable standards that do not compromise high quality clinical education. The standards should provide a reasonable means for documenting the teaching physician's involvement in the care of the patient and assuring appropriate payments without imposing undue administrative burden. They should be tested in a variety of teaching settings and specialty programs before implementation.

RECOMMENDATION 8

PROVIDE ADDITIONAL SUPPORT FOR HOSPITALS AND COMMUNITY-BASED TRAINING SITES THAT SERVE A DISPROPORTIONATE SHARE OF LOW INCOME PATIENTS.

In the absence of national health insurance, "safety net" providers should be provided with additional funding to cover uncompensated care costs. Major teaching hospitals provide substantial uncompensated care. Faculty practice plans also furnish charity care. Uncompensated care is not an educational cost. However, it affects the training site's ability to provide high quality educational experiences. More importantly, teaching institutions that furnish high amounts of uncompensated care rely on current GME funding to support their charity care. As changes are made in the IME payment methodology, the current level and distribution of DSH payments should be examined to assure the funds are well targeted to subsidize uncompensated care. The subsidies should apply to hospitals for both inpatient and outpatient services and to community-based providers. Without additional support, GME is not sustainable in community-based training sites with a high volume of uncompensated care. These sites cannot generate the patient care revenues needed to support their educational activities.

Bibliography and Footnotes

BIBLIOGRAPHY

American Association of Colleges of Osteopathic Medicine, American Medical Association, American Osteopathic Association, Association of Academic Health Centers, Association of American Medical Colleges, and National Medical Association. *Consensus Statement on the Physician Workforce,* 1997.

American Board of Internal Medicine Foundation. *Resident Survey 1997-98*. National Study of Graduate Education in Internal Medicine, 1998a. http://www.abim.org, last accessed June 5, 2000.

American Board of Internal Medicine Foundation (1998b). "Summary of Key Findings from the Internal Medicine Residency Training Survey 1997-1998," National Study of Graduate Education in Internal Medicine. http://www.abim.org/nasgim/key9798.htm, last accessed June 5, 2000.

American Medical Association. "AMA Graduate Medical Education Directory 1998-1999." Washington, D.C.: American Medical Association, 1999.

American Medical Association. "AMA FREIDA Online Reporting System." Washington, D.C.: American Medical Association, 2000. http://www.ama.org, last accessed May 2000.

American Osteopathic Association. "Osteopathic Graduate Medical Education FAQ." http://www.am-osteo-assn.org, last accessed March 10, 2000.

Anderson G.F. "What Does Not Explain the Variation in the Direct Costs of Graduate Medical Education," *Academic Medicine,* Volume 71, Number 2, pp. 156-165, 1996.

Anderson G.F. Greenberg G. and Lisk C. "Academic Health Centers: Exploring a Financial Paradox," *Health Affairs,* Volume 18, Number 2, pp. 156-165, March/April 1999.

Association of American Medical Colleges. "Fact Sheet: Trends in Medical School Faculty Salaries," Washington, D.C.: Association of American Medical Colleges, December 1999a. http://www.aamc.org, last accessed May 2000.

Association of American Medical Colleges. "AAMC Press Release." Washington, D.C.: Association of American Medical Colleges, May 14, 1999b. http://www.aamc.org, last accessed May 2000.

Association of American Medical Colleges. "Fact Sheet: Impact of 1999 Balanced Budget Act of 1997 Refinement Act on DGME Payment Changes for Teaching Hospitals." Washington, D.C.: Association of American Medical Colleges, January 2000. http://www.aamc.org, last accessed May 2000.

Blewett L.A. and Weslowski V. "New Roles for States in Financing Graduate Medical Education: Minnesota's Trust Fund," *Health Affairs,* Volume 19, Number 1, pp. 248-252, January/February 2000.

Boex J.R., Boll A., Hogan A. Meservey P., Rubin R., and Seifer S. "Assessing Ambulatory Primary Care Training: Costs, Methods, and Quality." Bureau of Health Professions, Health Resources and Services Administration, with additional support from the W.K. Kellog Foundation and the New York State Department of Health, November 1997.

Boex J.R., Blacklow R., Boll A., Fishman L., Gamliel S., Garg M., Gilchrist V., Hogan A., Meservey P., Pearson S., Politzer R., Veloski J.J. "Understanding the Costs of Ambulatory Care and Training," *Academic Medicine*, Volume 73, Number 9, September 1998.

Breaux-Thomas Proposal. "Building a Better Medicare for Today and Tomorrow."National Bipartisan Commission on the Future of Medicare. March 16, 1999 version. http:rs9.loc.gov/medicare/bbmtt, last accessed October 10, 2000.

Bureau of Health Insurance, *Intermediary Letter 379*, 1969.

Calman N., personal communication, February 2000.

Commonwealth Fund Task Force on Academic Health Centers. "Leveling the Playing Field: Financing the Mission of Academic Health Centers." The Commonwealth Fund, 1997.

Commonwealth Fund Task Force on Academic Health Centers. "From Bench to Bedside: Preserving the Research Mission of Academic Health Centers." The Commonwealth Fund, April 1999.

Congressional Budget Office. "Budgetary Implications of the Balanced Budget Act of 1997," December 1997. http://www.cbo.gov/docs.shtml, last accessed May 2000.

Congressional Budget Office. "Conference Report on H.R. 3194 Consolidated Appropriations Act, 2000," December 8, 1999. http://www.cbo.gov/docs.shtml, last accessed May 2000.

Congressional Budget Office. "Budget Options, Annual Report to the House and Senate Committees on the Budget." March 2000. http://www.cbo.gov/docs.shtml, last accessed May 2000.

Council on Graduate Medical Education. "Ninth Report: Graduate Medical Education Consortia: Changing the Governance of Graduate Medical Education to Achieve Physician Workforce Objectives." Rockville, Maryland: Department of Health and Human Services, June 1997.

Council on Graduate Medical Education. "Eleventh Report: International Medical Graduates, the Physician Workforce, and GME Payment Reform." Rockville, Maryland: Department of Health and Human Services, March 1998.

Council on Graduate Medical Education. "Thirteenth Report: Physician Education for a Changing Health Care Environment." Rockville, Maryland: Department of Health and Human Services, March 1999a.

Council on Graduate Medical Education. "Fourteenth Report: COGME Physician Workforce Policies: Recent Developments and Remaining Challenges in Meeting National Goals." Rockville, Maryland: Department of Health and Human Services, March 1999b.

Cox M. and Dower C. "Graduate Medical Education Consortia: A National Survey." American Association of Medical Colleges and Center for the Health Professions. University of California: San Francisco, 1996.

Cunningham M., personal communication, March 2000.

Davis P. H. "The Effects of the Balanced Budget Act of 1997 on Graduate Medical Education: A COGME Review." Council on Graduate Medical Education Resource Paper. U.S. Department of Health and Human Services, March 2000.

Delbanco T.L and Calkins D.R. "Costs and Financing of Ambulatory Medical Education," *Journal of General Internal Medicine,* Volume 3, September 1988.

Department of Health and Human Services, "Office of Inspector General; Medicare Program; Prospective Payment for Hospital Outpatient Services," *Federal Register,* Volume 65, Number 68, 18434-18820, April 7, 2000a.

Department of Health and Human Services, "Medicare Program: Changes to the Hospital Inpatient Prospective Payment Systems and Fiscal Year 2001 Rates," *Federal Register*, Volume 65, Number 148, 47504-47211, August 1, 2000b.

Department of Veterans Affairs. "Graduate Medical Education Realignment, Strategies for Meeting VHA's Goals for Graduate Medical Education Realignment," Office of Academic Affiliations. http://www.va.gov/OAA/docs/GMEDocs/General/Article_GME_PCSTRAT3.asp, last accessed May 29, 2000.

Department of Veterans Affairs, Office of Academic Affilitations. "Strategies for Meeting VHA's Goals for Graduate Medical Education Alignment." September 22, 1997. www.va.gov/OAA/Docs/General/Article, last accessed May 29, 2000.

Desmarais H.R. and Hash, M.M. "Financing Graduate Medical Education: The Search for New Sources of Support," *Health Affairs*, Volume 16, Number 4, pp. 48-63, July/August 1997.

Diamond H.S., Fitzgerald L.L., Day R. "An Analysis of the Cost and Revenue of an Expanded Medical Residency," *Journal of General Internal Medicine,* Volume 8, November 1993.

Fishman L. E. *Medicare Payments with an Education Label: Fundamentals and the Future.* Association of American Medical Colleges: Washington, D.C., 1996.

Flanagan T., Mitchner B., Weyl-Feyling D., and Laros R.K. "The Cost of Teaching Residents Outpatient Obstetrics and Gynecology in a University Medical Center," *Obstetrics and Gynecology,* Volume 86, Number 6, December 1995.

Franks, R.D., personal communication, November 1999.

Gamble J.G., and Lee R. "Investigating Whether Education of Residents in a Group Practice Increases the Length of the Outpatient Visit," *Academic Medicine*, Volume 66, Number 8, August 1991.

Gavett J.W., and Mushlin A.I. "Calculating the Costs of Training in Primary Care, *Medical Care,* Volume 24, pp. 301-312, 1986.

General Accounting Office. MEDICARE: Concerns with Physicians at Teaching Hospitals (PATH) Audits. Report to the Chairman, Subcommittee on Health, Committee on Ways and Means, House of Representatives. GAO/HEHS-98-174, July 23, 1998. http://www.gao.gov, last accessed March 2000.

Hanft R., and White C. "Financing Ambulatory Care Training of Primary Care Physicians: Sites, Costs and Options for the Future." June 1997.

Health Care Financing Administration. Hospital Cost Report Information System. 1997.

Health Care Financing Administration. "Medicare Health Insurance Manual." 14, Section 15016ff, Revision 1566 (5/97). http://www.hcfa.gov/pubforms, last accessed March 1, 2000.

Health Care Financing Administration. "Managed Care Penetration Rates by States as of December 31, 1998." http://www.hcfa.gov/medicaid/omcpr98.htm, last accessed June 2000.

Health Care Financing Administration. "Medicare: A Profile." July 2000. http://www.hcfa.gov, last accessed October 10, 2000.

Health Care Financing Administration. Office of the Actuary, personal communication, January 2000.

Health Resources and Services Administration, personal communication from American Academy of Family Practice (AAFP), January 31, 2000.

Henderson T.M. "Medicaid Support for Graduate Medical Education: Should There Be a National Policy?" A Policy Brief for The Center for the Health Professions, University of California, San Francisco, August 1998.

Henderson T.M. "Funding of Graduate Medical Education by State Medicaid Programs." Association of American Medical Colleges, April 1999.

Henderson T.M. "Medicaid's Role in Financing Graduate Medical Education," *Health Affairs*, Volume 19, Number 1, pp. 221-229, January/February 2000.

Holmes D., Director, Plan Administration and Customer Service, Department of Community Health, State of Michigan, personal communication, 2000.

Institute of Medicine. "On Implementing a National Graduate Medical Education Trust Fund." Committee on Implementing a National Graduate Medical Education Trust Fund, Division of Health Care Services. Washington, D.C.: National Academy Press, 1997.

Institute of Medicine. "Primary Care Physicians: Financing their GME in Ambulatory Settings." A Report of a Study by a Committee of the Institute of Medicine, Division of Health Care Services. Washington, D.C.: National Academy Press, 1989.

Institute of Medicine, Committee on the Changing Market, Managed Care, and the Future Viability of Safety Net Providers. "America's Health Care Safety Net. Intact but Endangered," Ed. by Marion Ein Lewin and Stuart Altman. Washington, D.C.: National Academy Press, 2000.

Jones T.F., Culpepper L., and Shea C. "Analysis of the Cost of Training Residents in a Community Health Center," *Academic Medicine*, Volume 70, Number 6, June 1995.

Jones T.F. "The Cost of Outpatient Training of Residents in a Community Health Center," *Family Medicine*, Volume 29, Number 5: 347-52, May 1997.

Journal of the American Medical Association. "Graduate Medical Education." Appendix II. Volume 282, No. 9, September 1, 1999.

Karp S., Langschwager L., Gamliel S., and Fernandez, S. "The Need for Comprehensive Data on Educational Affiliations between Academic Health Centers and Managed Care Organizations," *Academic Medicine*, Volume 72, Number 5, May 1997.

Kellogg Foundation, "Community Partnerships: A Summary of National Public Policy Objectives." # 489, 8/99. See also "Community Partnerships in Graduate Medical and Nursing Education," Item #487.

Kosekoff J., Brook R., Fink A., Kamberg C., Roth P., Goldberg G., Linn L., Clark V., Newhouse J., Delbanco T., et al. "Providing Primary General Medical Care in University Hospitals: Efficiency and Cost, *Annals of Internal Medicine*, Volume 107, Number 3, pp.399-405, September 1987.

Lake T., Gold M., Hurley R., Sinclair M., and Waltman S. "Health Plans' Selection and Payment of Health Care Providers, 1999." Final report by Mathematica Policy Research, Inc. to the Medicare Payment Advisory Commission. Washington, D.C.: May 16, 2000.

Lave J. R., "The Cost of Graduate Medical Education in Outpatient Settings, a Report of a Study by a Committee of the Institute of Medicine, Division of Health Care Services." Paper commissioned by the Committee to Study Strategies for Financing Graduate Medical Education for Primary Care Physicians in Ambulatory Settings. Washington, D.C.: National Academy Press, pp. 144-172, 1989.

Levinsky N.G., "A Survey of Changes in the Proportions of Ambulatory Training in Internal Medicine Clerkships from 1986-1987 to 1996-1997," *Academic Medicine*, Volume 73:1114-1115, 1998.

Levit K., Cowan C., Lazenby H., Sensenig A., McDonnell P., Stiller J., Martin A., and the Health Accounts Team, "TRENDS: Health Spending In 1998: Signals Of Change," *Health Affairs,* Volume 19, Number 1, pp. 124-132, January/February 2000.

Medicare Intermediary Letter 372 (1969).

Medicare Payment Advisory Commission. "Rethinking Medicare's Payment Policies for Graduate Medical Education and Teaching Hospitals." Washington, D.C., August 1999.

Medicare Payment Advisory Commission. "Report to the Congress: Medicare Payment Policy." Washington, D.C., March 2000a.

Medicare Payment Advisory Commission. "Report to the Congress: Selected Medicare Issues." Washington, D.C., June 2000b.

MEDSTAT Group, "Comparison of Admissions to Academic and Non-Academic Medical Centers for Capitated and Fee-for-Service Plans," May 29, 1997. http://www.aahp.org, last accessed June 2000.

Meyer G.S. and Blumenthal D. "TennCare and Academic Health Centers: The Effect of Public Sector Health Care Reform in Tennessee." Unpublished manuscript, March 1999.

Minnesota Department of Health (MDH) website. http://health.state.mn.us/divs/hpsc/hep/merc, last accessed May 2000.

National Bipartisan Commission on the Future of Medicare. Minutes from the March 16, 1999 meeting. . http:rs9.loc.gov/medicare, last accessed October 10, 2000.

New York State Department of Health (NYSDOH), Graduate Medical Education (COGME) website. http://www.health.state.ny.us/nysdoh/gme/main.htm, last accessed June 2000.

Partnerships for Quality Education website. http:/www.pqe.org, last accessed in April 2000.

Peinado S. and Eisenberg J.M. "Financing Graduate Medical Education in Primary Care: Options for Change," *The Journal of Family Practice*, Volume 31, Number 6: 637-644, 1990.

PEW Health Professions Commission. "Beyond the Balanced Budget Act of 1997: Strengthening Federal GME Policy." University of California, San Francisco, Center for Health Professions, 1998.

Philibert I. "Medical Education In Ambulatory Care Settings An Annotated Bibliography of Selected Works," Second Edition. Washington, D.C.: Association of American Medical Colleges, March 1999.

Prospective Payment Assessment Commission. "Medicare and the American Health Care System: Report to the Congress," June 1992

Prospective Payment Assessment Commission. "Report and Recommendations to the Congress," March 1, 1997.

Public Law 106-113, "Balanced Budget Refinement Act of 1999."

Public Law 105-33, "Balanced Budget Act of 1997: Conference Report to Accompany H.R. 2015." House of Representatives, 105th Congress, 1st Session, Report 105-217.

Rabb H. Letter from the HHS General Counsel to the American Medical Association and the Association of American Medical Colleges, July 11, 1997.

Retchin S. M. "Three Strategies Used by Academic Health Centers to Expand Primary Care Capacity," *Academic Medicine*, Volume 75, Number 1, pp.15-22, January 2000.

Ricer R.E., Filak A.T., David A.K. "Determining the Costs of a Required Third-Year Family Medicine Clerkship in an Ambulatory Setting," *Academic Medicine,* Volume 73, Number 7, pp. 809-811, July 1998.

Robinson J. C. "The Future of Managed Care," *Health Affairs,* Volume 18, Number 2, pp. 7-24, March/April 1999.

Salsberg E. "State Strategies for Financing Graduate Medical Education," Center for Health Workforce Studies, School of Public Health, SUNY at Albany, August 1997.

Stern R.S., Jennings M., Delbanco T.L., Dorsey J.L., Stoeckle J.D., and Lawrence R.S. "Graduate Education in Primary Care: An Economic Analysis," *The New England Journal of Medicine,* Volume 297, Number 12, September 22, 1977.

U.S. Congress. House of Representatives, House Report No. 213, 89th Congress, 1st Session 32, 1965.

U.S. Congress. "Ways and Means Committee Report." House of Representatives, House Report Number 98-25, March 4, 1983.

U.S. Congress. "Medicare and Health Care Chartbook." House of Representatives, Committee on Ways and Means, 106th Congress, 1st Session, WMCP:106-4, March 17, 1999.

University of California. "Sixth Report: Changing Directions in Medical Education. 1999 Update on Systemwide Efforts to Increase Training of Generalists." University of California, July 1999.

Utah Health Policy Commission website. http://www.hlunix.hl.state.ut.us/hpc/meded, last accessed May 2000.

FOOTNOTES

[1] Based on 83,422 residents and $71,468 average per resident cost incurred by hospitals in FY1997, full funding would require $6 billion.

[2] In 1994, academic health center's market share of HMO patients was 80 percent of their market share of other privately insured patients. (Commonwealth, 1997). A study of 1994 private sector health data found that severity and geographic adjusted hospital payments per admission in high managed care penetration areas were significantly lower for managed care plans than fee-for-service plans. For teaching hospitals, managed care payments were about 30 percent lower than the fee-for-service payments (MEDSTAT, 1997).

[3] Margins are defined as revenues minus expenses divided by revenues.

[4] The $33.6 billion includes provisions affecting PPS updates, outlier policy, transfer policy, bad debt and outpatient services. The extent to which the Medicare cuts are offset by the carve-out amounts will depend on whether managed care plans take account of the carve-out amounts in negotiating payments with teaching hospitals.

[5] For example, if a hospital's per resident amount was $100,000 and the hospital had 10 residents and 35 percent Medicare utilization, the hospital's Medicare GME payment would be $350,000 ($100,000 x 10 residents x .35).

[6] The Omnibus Reconciliation Act of 1993 provided for a two-year freeze on per resident amounts for programs other than those in primary care and OB-GYN. In addition, the Balanced Budget Refinement Act of 1999 affected the updates for per resident amounts that exceed 140 percent of the national average.

[7] The analysis excludes 428 hospitals that reported fewer than 10 residents. These residency programs are more likely not to incur certain costs (e.g. teaching physician compensation for rotating residents) and could distort a comparison of the components of GME costs.

[8] Pearson's correlation coefficient was .51; prob > lRl .0021.

[9] HCFA calculated the FY1997 average per resident amount (standardized for wage differentials) to be $68,684. The FY 1997 70 percent floor is $47,925 and the 140 percent ceiling is $95,850.

[10] Information on direct GME costs by specialty programs is not readily available. For example, only aggregate direct GME costs are reported on the Medicare cost report. However, the resident count is separately provided for residents in primary care and OB-GYN programs and in other programs.

[11] Pearson's correlation coefficient for the per resident amount =.17; prob > lRl = .00004. The coefficient for GME costs = .14; prob > lRl =.0037.

[12] The low-income patient percentage defined is consistent with the formula used to distribute Medicare DSH payments. It is the sum of the hospital's percentage of inpatients who are Medicare patients who are entitled to SSI plus the percentage of inpatients who are non-Medicare patients who are entitled to Medicaid.

[13] The Balanced Budget Act of 1997 reduced the payment from 7.7 percent in FY1998 to 6.0 percent in FY2000, and 5.5 percent in FY2001 and subsequent years. The Balanced Budget Refinement Act of 1999's modification in the phased reduction increases payments to teaching hospitals by $600 million during FY2000-FY2004 relative to the Balanced Budget Act of 1997.

[14] Medicare's indirect teaching adjustment for capital costs was established empirically, based on the effect of teaching on total Medicare inpatient operating costs per discharge. The formula is based on the ratio of residents to average daily census and is therefore not directly comparable to the adjustment for operating costs. The adjustment increases payment by [e raised to the power of (.2822 times the ratio of residents to average daily census)] minus 1.

[15] MedPAC's June 2000 report recommends that time spent in both inpatient and outpatient settings be counted in determining the refined Medicare teaching hospital adjustment.

[16] Medicare managed care enrollment varies significantly across geographic areas. For example, 24 percent of beneficiaries were enrolled in managed care plans in California in 1998 compared to fewer than 7 percent in New York. Managed care penetration tends to be concentrated in urban centers where teaching hospitals are also concentrated. In 1998, 22.5 percent of Medicare beneficiaries residing in urban centers (generally the core cities of metropolitan areas) were enrolled in risk-based managed care plans compared to 11.7 percent in outlying urban areas (U.S. Congress, 1999).

[17] The $4 billion in additional payments assumes managed care plans do not adjust for the carve-out by reducing their payments.

[18] Section 541 of the Balanced Budget Refinement Act of 1999 provides for up to $60 million in nursing and allied health education direct payments for Medicare managed care enrollees and a proportionate reduction in direct GME payments under the GME carve out. The provision is effective January 1, 2000.

[19] The NYS formula for distributing IME payments provides a higher payment to primary care, preventive medicine and emergency medicine programs meeting State criteria than programs in other specialties.

[20] The estimated Medicare per resident direct GME payment in FY 2000 is $24,900. The estimated per resident IME payment in FY 2000 is $48,300.

[21] To qualify for GME payments for residents in a non-hospital setting, the hospital must assume substantially all of the training costs in the setting. As discussed more fully in the section entitled "Current Financing of Graduate Medical Education" (beginning on page 23), there must be a written agreement between the hospital and the community site that indicates that the hospital is paying the resident's salary and fringe benefits and reasonable compensation for teaching physicians.

[22] Introduced by Rep. Cardin on March 23, 1999.

[23] Introduced by Senator Moynihan on January 19, 1999. The same legislation was also introduced as H.R. 2771 by Rep. Lowey on August 5, 1999.

[24] Estimate assumes $5 billion in tax on private health insurance and $3 billion from Federal payments for Medicaid acute care services.

[25] In this report, hospital-based sites that provide training that is representative of the environment in which the residents will ultimately practice are considered community settings.

[26] Based on 83,422 residents and $71,468 average per resident cost incurred by hospitals in FY1997, full funding would require $6 billion.

APPENDIX A: Explicit Medicaid GME Payments, FY1998

STATE	TOTAL GME PAYMENTS (Millions of Dollars)		STATE	TOTAL GME PAYMENTS (Millions of Dollars)	
	Explicit Payments	Implicit Payments		Explicit Payments	Implicit Payments
Alabama	$0	$10	Montana	*	*
Alaska	*	*	Nebraska	$5.0	$0
Arizona	$17.8	N/R	Nevada	$8.4	$0
Arkansas	$5.7	$0.00	New Hampshire	$2.1	$0
California	$129.1	$0	New Jersey	$20.0	$23.4
Colorado	$8.0	$0	New Mexico	$4.4	$0
Connecticut	$6.0	*$1.5*	New York	$812	$0
Delaware	$1.07	*$0.2*	North Carolina	$102.5	$0
District of Columbia	$15.2	$0	North Dakota	$.93	$0
Florida	N/R	N/R	Ohio	$115.7	*$28.9*
Georgia	$70.0	$0	Oklahoma	$15.7	$0
Hawaii	N/R	N/R	Oregon	$8.6	$0
Idaho	*	*	Pennsylvania	$66.6	$0
Illinois	*	*	Puerto Rico	*	*
Indiana	$12.0	*$3.0*	Rhode Island	N/R	N/R
Iowa	$43.8	N/R	South Carolina	$57.8	$0
Kansas	$7.7	*$1.9*	South Dakota	*	*
Kentucky	$49.7	*$12.4*	Tennessee	$46.3	$0
Louisiana	$50.0	$0	Texas	$40.0	$0
Maine	$2.4	$0	Utah	$4.0	*$1.0*
Maryland	$54.8	$0	Vermont	$.63	$0
Massachusetts	$25.0	$0	Virginia	$16.1	$0
Michigan	N/R	N/R	Washington	$63.5	$0
Minnesota	$39.0	$19.0	West Virginia	N/R	N/R
Mississippi	$12.5	*$3.1*	Wisconsin	$25.0	$12.0
Missouri	$26.7	$0	Wyoming	$.06	$0

Italicized amounts are estimated.

N/R = Not Reported

*The Medicaid Agency reported that it does not pay for GME.

Source: Henderson, 2000.

APPENDIX B: Program Requirements for Residency Education in Ambulatory/Community-Based Settings

SPECIALTY	*RESIDENCY REVIEW COMMITTEE REQUIREMENT*
FAMILY PRACTICE	The primary training site is the model office or family practice clinic where each resident must provide continuing, comprehensive care to a panel of patient families. The clinic must be for the exclusive use of the residency. Residents may not be away for remote assignments more that 1month in the first year and two months in each of the last years.
INTERNAL MEDICINE	The clinical settings must include a minimum of one-third of the time in ambulatory sites and a minimum of one-third of the time in inpatient sites. Over the 36 months of training, at least ½ day each week must be spent managing a panel of general internal medicine patients in continuity. Total required emergency medicine experience must not exceed 3 months in 3 years of training for a resident.
INTERNAL MEDICINE SUBSPECIALTIES – **CARDIOVASCULAR DISEASE** – **GERIATRIC MEDICINE** – **HEMATOLOGY** – **ONCOLOGY** – **RHEUMATOLOGY**	Minimum requirement for experience in ambulatory settings that includes consultative as well as continuing care at least ½ day per week for at least 18 months. Continuing care experience must occur at least ½ day per week for at least 24 months. The ambulatory care program must compromise a minimum of 33% of the resident's time. In a long-term care institutional setting, each resident must have 12 months of continuing longitudinal clinical experience. Experience with home visits and hospice care must also be included. Residency program must provide residents with experiences in an ambulatory care setting at least ½ day each week over 24 months of training. The residency program must provide experiences in ambulatory settings at least ½ day per week throughout 2 years. Each resident must have equivalent of 1 full day per week of continuity care experience the first year and at least ½ day per week in second year.
PEDIATRICS	A minimum of 50% of clinical training should be devoted to ambulatory experiences. This may include all assignments in the continuity practice, emergency and acute care, and community-based experiences, as well as the ambulatory portion of normal/term newborn, subspecialty, behavior/development, and adolescent experiences. Residents must devote at least one-half day per week to their continuity experience throughout the three years, and an additional one-half day session per week is suggested.

SPECIALTY	*RESIDENCY REVIEW COMMITTEE REQUIREMENT*
DERMATOLOGY	Adequate exposure to both outpatients and inpatients is necessary. It is essential that an active outpatient service furnish sufficient clinical material representing the broad array of diseases seen by the dermatologist.
EMERGENCY MEDICINE	No specific requirement for ambulatory/community-based training outside the emergency department. There must be a structured resident experience involving pre-hospital care (EMS).
NEUROLOGY	Program must include 6 months outpatient experience and must include a resident longitudinal/continuity clinic with attendance by each resident 1/2 day per week.
OBSTETRICS AND GYNECOLOGY	Primary and preventative care experiences should occupy the equivalent of at least 6 months of the 4 years of residency. Experiences should be strongly oriented toward ambulatory care and must include at a minimum a 4-month rotation in general medicine or family practice medicine and a 1-month rotation in emergency medicine. Residents should have a continuity clinic experience at least ½ day per week for 3 years.
OPHTHALMOLOGY	Residents should be responsible for the care of an adequate number of outpatients representing a broad range of ophthalmic disease. Each resident should participate in a minimum of 3,000 outpatient visits.
OTOLARYNGOLOGY	Residents must have an opportunity to see patients, establish provisional diagnoses, and initiate preliminary treatment plans on an outpatient service that operates in relation to an inpatient service used in the program. Experience should be provided in office practice procedures and management.
PSYCHIATRY	Inpatient clinical experiences must be no more that 18 months. Outpatient experiences must include at least one year of continuity experience. Clinical experience should include continuity-based mental health activities. Psychiatric consultation in medical, surgical, and community settings.
PHYSICAL MEDICINE AND REHABILITATION	Residents must spend at least 1/3 of their time in care of outpatients. Residents should gain fundamental understanding of types of patients and care provided in the continuum of rehabilitation care in community rehabilitation facilities.
UROLOGY	Residents must participate in continuity of care through pre- and post-operative clinics.

Source: AMA, 1999

APPENDIX C: Site Visits and Interviews

As part of this study, site visits or telephone interviews were conducted with individuals involved with selected residency programs with community-based training sites. The sites that were involved in the interviews are listed below.

Beth Israel/Institute for Urban Family Health Family Medicine Residency Program. As the only family medicine residency program operating in Manhattan, the program's focus is quality training of physicians that will meet the needs of urban underserved. Beth Israel and The Institute jointly own a Medicaid managed care plan and the Institute's family practice centers have contracts with other HMOs. One family practice center serves as a training site.

Boston University/Boston Medical Center Internal Medicine Residency Program. The Boston University/Boston Medical Center residency programs have a long-history of involvement with Boston's network of community health centers. Of particular interest is the role of the Center for Community Health, Education, Service and Research, a consortium that places medical residents and advanced practice nursing students in interdisciplinary teams in the community health centers. The consortium has a Kellogg Community Partnerships grant.

East Tennessee State University. Founded in 1974 to alleviate a primary care shortage, this community-based medical school has 14 training sites outside its primary service area. The medical school used a Kellogg grant to develop multi-disciplinary training sites in two rural communities. The medical school is the direct recipient of Medicaid GME funds under Tenncare.

Georgetown University Medical Center. For several years, Georgetown University operated a joint medicine/pediatrics residency program with Kaiser Permanente where the residents' continuity experience was in a Kaiser community site. This program has now been moved out of the Kaiser site into a university-owned suburban physician clinic.

George Washington University. The university owns an HMO. The medical school is now community-based, having recently sold its hospital. As a partner in the Washington Regional Academic and Community Consortium (WRACC), George Washington University has four residency programs participating in a Kellogg-funded Community Partnerships demonstration involving an interdisciplinary faculty practice at six community clinics.

Harvard Pilgrim Health Care/Brigham and Women's Primary Care Residency Program. In 1992, the Department of Ambulatory Care and Prevention was started by Harvard Medical School and Harvard Pilgrim Healthcare as the first medical school department to be based in a freestanding HMO. It is a model of an academic medical center-managed care organization partnership. Participants spend 70 percent of their time practicing ambulatory medicine at Harvard Pilgrim Health Centers in one-on-one relationships with preceptors and 30 percent of their time at Brigham and Women's on inpatient services.

Henry Ford Health System. In affiliation with Case Western Reserve, the Henry Ford Health System operates residency programs with sites in the Detroit area, including community health centers, and 31 Henry Ford Medical Centers located throughout the State of Michigan. Most community-based training takes place within the Henry Ford System.

Michigan State University. The university houses community-based schools of allopathic and osteopathic medicine. The osteopathic consortia is a Statewide network of 17 hospitals with the osteopathic college and over 1,000 interns that have pooled funds for central administrative expenses, as well as formal academic programs and workshops. This Statewide campus system is overseen by a governance board and osteopathic GME committee representative of all members. Among the allopathic residency programs, the Department of Family Practice sponsors a network of affiliated family medicine residency programs throughout the State. The internal medicine program is affiliated with two Lansing hospitals and the MSU Medical Clinic. The program uses a "firm" approach that teams small groups of residents with a full-time academic general internist for the care of their continuity primary care patients on both an outpatient and inpatient basis. The Institute for Managed Care is an interdisciplinary managed health care initiative for education and research created through funding by the Blue Care Network of Mid Michigan to advance education in the managed health care system. The Institute has a PQE grant to develop a multidisciplinary curriculum for community-based training.

Montefiore/Albert Einstein School of Medicine. Montefiore and the Albert Einstein School of Medicine have unified clinical departments that are responsible for academic and clinical programs. Montefiore has a long-standing history of training in community clinics in the Bronx. The hospital has expanded its network of hospital-owned clinics in order to compete more effectively for managed care contracts. As these clinics develop strong clinical practices, they are used as residency training sites.

Ohio University. The College of Osteopathic Medicine is part of Centers for Osteopathic Regional Education (CORE). CORE, the first Osteopathic Post-Doctoral Training Institution accredited by the AOA, combines the College, 14 osteopathic teaching hospitals in Ohio and three other osteopathic medical schools located in Iowa, Maine, and Pennsylvania. CORE trains 472 interns/residents, 376 of which are in primary care specialties.

University of California, Los Angeles. Over a 5-year period, UCLA changed from 47 percent primary care residency programs to 54 percent. The increase in primary care residency positions has led to continuing efforts to increase community-based training sites. Expansions have occurred through a network of university-owned primary care offices as well as increased use of county health centers. Building on a successful program at Harbor/UCLA, the family medicine residency program is moving out of the hospital and into a county health center.

University of Washington. The WWAMI network involves 45-50 residency training sites in five States (Washington, Wyoming, Alaska, Montana, Idaho). About 30 sites provide opportunities for 2-month block residency rotations to rural community sites. Training sites for residency programs within the Seattle area include a hospital-based clinic, a university-owned network of physician clinics, community health centers, private practice offices including the not-for-profit University of Washington Physicians Network (UWPN) organized under the auspices of UWAMC. The Affiliated Family Practice Residency Network consists of sixteen residency programs in the five-State region. Sponsors of programs in the network include Group Health Cooperative of Puget Sound and four programs with rural training tracks.

U.S. Department of Health and Human Services

HRSA

Health Resources and Services Administration