

**State of Connecticut**



*John G. Rowland, Governor*

**Office of  
Health Care Access**

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**Second Annual Report on  
Graduate Medical Education  
in Connecticut**

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*January, 2001*

## EXECUTIVE SUMMARY

This publication is the Office of Health Care Access' second annual report on graduate medical education (GME) and its impact on Connecticut hospitals. Key findings of the study include:

- *The number of resident and intern full time equivalents (FTEs) has increased by only one percent since 1995 – as the number of FTE residents eligible for federal funding was capped at 1996 levels under the Balanced Budget Act (BBA) of 1997.*
- *For most of the state's hospitals, GME contributes five percent or less of their total revenue from operations. As a percentage of total revenue, GME dropped from 3.8 percent in 1997 to 2.9 percent in 1999.*
- *Connecticut hospitals received approximately \$151 million in GME payments in 1999, a 15 percent decrease from a high of \$178 million in 1997.*
- *The effect of GME on the workforce may be less centered on establishing an appropriate minimum number of physicians in the state, and more focused on developing and maintaining diverse clinical skills available to state residents.*
- *Residents provide a significant amount of patient services while enrolled in GME programs. In addition to patient services provided in inpatient settings, each resident is required to work 20 hours each week in an outpatient setting. This amounts to approximately 3,000 hours per resident over the course of his or her graduate medical education.*

In addition, there have been a number of recent statutory and non-statutory policy changes influencing GME:

- *As a result of Medicare cuts in the BBA of 1997, the federal government has decreased its funding of graduate medical education.*
- *Because of concerns expressed that the BBA placed an unintended burden on teaching hospitals, the Balanced Budget Refinement Act (BBRA) of 1999 lessened the impact of the BBA by delaying reduced indirect medical education (IME) adjustments. The Balanced Budget Act of 2000 is expected to provide additional modifications that will benefit hospitals.*

- *The Medicare Payment Advisory Commission (MedPAC) has made recommendations on Medicare payment policies to Congress and the Secretary of Health and Human Services that have raised concerns with the American Association of Medical College (AAMC). The AAMC asserts that MedPAC's recommendation to combine GME funding and view it as primarily for patient care, rather than education, changes the purpose of GME and implies that patient care is more important than educating physicians. In addition, the AAMC suggests that other payers, in addition to Medicare, pay for their fair share of the costs associated with educating physicians.*

- *Two issues have recently emerged that may impact costs incurred by hospitals for GME in the future. In November of 1999, the National Labor Relations Board (NLRB) rendered a decision allowing resident physicians in teaching hospitals and related settings to organize in labor unions and bargain collectively. Also, most physician training programs in the state now have a maximum workweek of 80 hours, creating a significant impact on the availability of residents to provide services and the costs associated with provision of such services.*



## INTRODUCTION

Public Act No. 99-172 mandated the Office of Health Care Access (OHCA) to develop an annual study on graduate medical education (GME) and its impact on Connecticut hospitals. This legislation cited three specific areas to be addressed: the financial impact of GME; its effect on the sufficiency of the health care provider workforce; and its effect on access to health services. It also called for a council to be established to advise the Commissioner on the report. The Office of Health Care Access gratefully acknowledges the contributions made to this report by the members of this advisory council. The council members and their organizational affiliation are listed in the Appendix.

The purpose of this second report is to describe the background of graduate medical education and how it is financed, outline recent changes in the financing of health care that have an impact on GME, describe graduate medical education programs in Connecticut, and address the three issues noted in the enabling legislation. It will also update the information in the first report and address issues that may affect GME in the future.

The data in this report come from the Office of Health Care Access unless another source is noted. The majority of the financial data come from the Office of Health Care Access Hospital Budget System. These filings are reported by the hospitals and reviewed and verified by OHCA. Data have been reported to OHCA through the hospital fiscal year of 1999 (October 1998 to September 1999).

# UNDERSTANDING GRADUATE MEDICAL EDUCATION

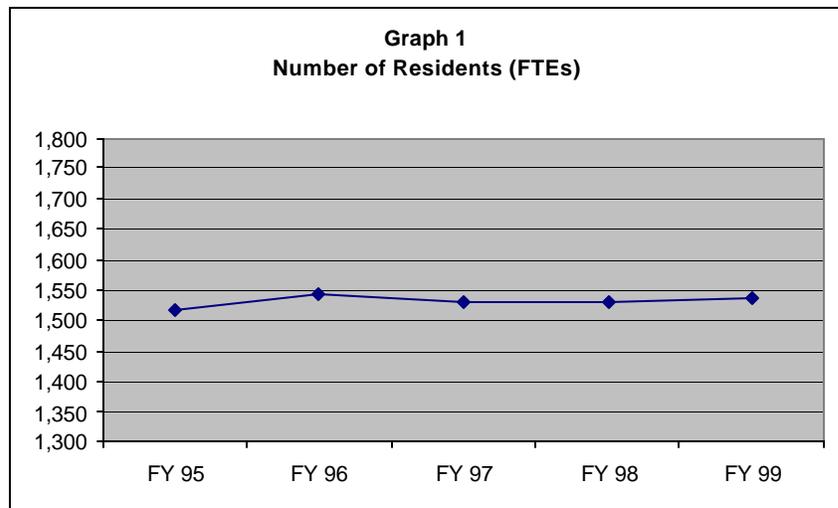
At the beginning of this century, a model was established for American medical education: preparation in a baccalaureate program for the study of medicine; a university-based medical school for undergraduate medical education; and direct clinical experience or graduate medical education. It is in the graduate medical education phase that the provider acquires specialty and possibly sub-specialty training. This model creates a link between teaching, research, and health care during graduate medical education.

Graduate medical education typically occurs in teaching hospitals or other health care settings, which provide the clinical environment for the advanced education of physicians. The majority of these teaching institutions are tertiary care hospitals, providing the most advanced and complex level of treatment available. Resident physicians in teaching hospitals receive specialized training and provide patient care under the supervision of a teaching physician. Teaching physicians are faculty members who train and supervise residents by providing classroom instruction, making rounds with residents, examining specific patients, and discussing courses of treatment. Most teaching hospitals not only train physicians, but also care for a higher proportion of poor and uninsured patients, engage in research, and provide specialized services.

## Graduate Medical Education Programs In Connecticut

Connecticut has two medical schools — The University of Connecticut School of Medicine and Yale University School of Medicine. There are four medical schools that are also affiliated with the residency programs in the state's hospitals: Dartmouth College; New York Medical College; Finch University of Health Sciences at the Chicago Medical School; and Columbia University College of Physicians and Surgeons. Residents are hired by a hospital or other health care provider to work in a residency program. Among these six schools, there are more than 80 residency programs in different medical specialty areas in 17 hospitals around the state.

There were 1,537 resident and intern full time equivalent (FTE) positions in Connecticut hospitals during fiscal year 1999 (excluding Connecticut Children's Medical Center<sup>1</sup>). **Graph 1** shows the number of resident and intern



FTEs from 1995 through 1999. Overall, there has been a net increase of only 1% in the number of FTE positions during the five-year period – the number of FTE residents eligible for federal funding was capped at 1996 levels under the Balanced Budget Act (BBA) of 1997. While institutions can increase the number of residents they employ, they do not receive GME payments for residents in excess of 1996 levels.

Each year approximately 175 physicians enter the residency programs sponsored by the University of Connecticut, and each year the programs graduate between 150 and 160 physicians. Approximately half of these graduates begin practice, while the remainder enter other training programs (clinical and/or research). The University does not routinely track practice locations of graduates from the residency and fellowship programs. However, a review of results from a recent exit survey showed that of 52 graduates entering practice: twelve (23%) were remaining in the greater Hartford area; ten were staying in Connecticut (19%); and nine (17%) were going to practice somewhere in New England.

If these numbers are representative, it is estimated that each year, University of Connecticut-sponsored residency and fellowship programs train 20-25 physicians who practice in the state of Connecticut. This represents approximately 40% of those that enter practice immediately after completion of their training program.<sup>2</sup> In this academic year, 350 physicians entered the Yale University residency programs. A recent survey of Yale New Haven Hospital graduates from 1929 to 1994 showed that 34% of survey respondents lived in Connecticut. The number of trainees in the various residency programs of both schools is listed in the Appendix.

# HOW GME IS FINANCED

The federal government is the primary payer for of the costs associated with GME through the Medicare program, while state governments contribute through the Medicaid program. It should be noted however, that, as a result of Medicare cuts in the BBA of 1997, the federal government has decreased its funding of graduate medical education.

Remaining GME costs are financed by a variety of sources, including the Department of Veterans Affairs, the Department of Defense, state and local governments, faculty practice plans and philanthropies, and other public and private third-party payers' payments for patient care services. This report focuses on financing by Medicare and Medicaid, as the majority of GME payments are made to Connecticut by these programs, and because there is no way to specifically track the contribution from third party payers. Medicare was enacted in 1965 to improve access to health care for the elderly, and later for disabled individuals. Because a major effect of this new program would be to expand the demand for medical services, and a subsequent need for more physicians, the Medicare program also established a mechanism to help pay for physician training. In fiscal year 1999, the Congressional Budget Office anticipated these additional payments would account for \$6.2 billion in program spending.<sup>3</sup>

**Table 1** illustrates the two components of Medicare GME payments — direct medical education (DGME) and indirect medical education (IME).

<b>Table 1: Overview of Direct and Indirect GME</b>		
	<b>DGME</b>	<b>IME</b>
<b>What it pays for:</b>	<ul style="list-style-type: none"> <li>Salaries and fringe benefits of residents and faculty who supervise residents</li> <li>Other direct costs</li> <li>Allocated institutional overhead costs (e.g., maintenance and electricity)</li> </ul>	Intended to cover the cost of using additional resources needed for teaching residents in a facility and the treatment of patients with more complex conditions along with more intensive and technologically sophisticated patient care
<b>Payment method:</b>	<ul style="list-style-type: none"> <li>Per-resident basis specific to each teaching hospital</li> <li>Payment formula based on the hospital's calculated GME expenses in 1984 and 1985, updated annually by an inflation factor set by Medicare</li> </ul>	<ul style="list-style-type: none"> <li>Calculated as a percent "add-on" to the base of the prospective payment system price for every Medicare case</li> <li>Part of the calculation uses the ratio of residents to the average number of occupied beds – as the number of residents per bed increases, the percent of "add-on" also increases</li> </ul>
<b>Payment rates:</b>	<ul style="list-style-type: none"> <li>Slightly higher rate paid for residents in primary care specialties (family practice, general internal medicine, general pediatrics, osteopathic general practice, and OB/GYN)</li> <li>Slightly lower rate is based on the number of residents in sub-specialty programs</li> </ul>	Not applicable
<b>Other aspects:</b>	Residents paid in full for a set number of years; then partially funded for additional years	Not applicable
<b>Payment cap:</b>	Number of residents for which hospital can receive payments is capped at the number of residents in training at that hospital in 1996	None

In addition to Medicare, states pay a voluntary payment to graduate medical education through their Medicaid programs. Unlike Medicare, state Medicaid programs have no statutory obligation to support GME. Most states have made GME payments under their fee-for service program. In Connecticut, Medicaid provides DGME payments only, using the same formula used in the Medicare program.



# CURRENT FACTORS INFLUENCING GME PAYMENTS

Two recent trends in health financing have had a significant effect on GME payments to teaching hospitals — the federal government’s efforts to control health care costs and the managed care market. In order to reduce its health care expenditures, the federal government made changes to the Medicare payment structure. Several of these changes had a direct impact on the amount of payments that go to teaching hospitals. These changes were made in the Balanced Budget Act (BBA) of 1997 (P.L. 105-33). Prior to the BBA, this IME adjustment was increased approximately 7.7% for each 10% increase in a hospital’s ratio of residents to occupied beds. **Table 2** outlines the impact of the 1997 BBA on GME.

**Table 2: 1997 BBA Impact on GME**

	DGME	IME
<b>Balanced Budget Act (BBA) of 1997 changes to GME payments and adjustments:</b>	<ul style="list-style-type: none"> <li>• Placed limits on the number of “full time equivalents” (FTE) residents that hospitals can count for payments</li> <li>• Required that residents be counted using a three year rolling average method</li> <li>• Allowed Medicare to make GME payments to entities other than hospitals (e.g., federally qualified health centers, rural health clinics, and Medicare+Choice organizations)</li> <li>• Allowed hospitals to count the time residents spend in settings outside the hospital (e.g., freestanding clinics, nursing homes, and physician offices), subject to certain agreed-upon conditions between the hospital and outside entity</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced IME adjustment to 7.0% in FY 1998</li> <li>• Reduced IME adjustment to 6.5% in FY 1999</li> <li>• Reduced IME adjustment to 6.0% in FY 2000</li> <li>• Reduced IME adjustment to 5.5% in FY 2001 and subsequent years</li> </ul>

**Table 3** outlines the impact of the Medicare, Medicaid and SCHIP (State Children’s Health Insurance Program) Balanced Budget Refinement Act of 1999 (BBRA), signed into law on November 29, 1999, on GME. It is expected that the Balanced Budget Act of 2000 will contain more modifications that will benefit hospitals.

**Table 3: 1999 BBRA Impact on GME**

	BBRA 1999
Balanced Budget Refinement Act (BBRA) of 1999 changes to GME:	<p>Because of concerns expressed that the 1997 BBA placed an unintended burden on teaching hospitals, the BBRA delayed reductions in IME adjustments:</p> <ul style="list-style-type: none"> <li>• to 6.5% in fiscal year 2000</li> <li>• to 6.25% in FY 2001</li> <li>• to 5.5% thereafter</li> </ul> <p>In the past, hospitals did not receive payments for residents in pediatric services, because funding was based on the number of Medicare discharges – BBRA of 1999 allows for payments to free standing children’s hospitals</p>

The second major trend in health financing that has influenced GME is the growth of managed care in publicly paid health plans. Because IME rates are based on the number of Medicare cases that are paid by the federal or state government, it is based on a fee-for-service model of health care financing. As the federal government and the states enroll their eligible populations in managed care, support for GME decreases. Recently, the increase in Medicare managed care enrollment has begun to slow in Connecticut. Several managed care organizations are dropping or dramatically changing their managed care programs for seniors. As IME payments are tied to Medicare discharges, this trend would be beneficial to teaching hospitals.

Generally, under a managed care plan, the state pays the managed care company a per-patient fee determined in advance; the managed care company in turn negotiates a payment plan with hospitals to determine how much will be paid for covered health services. The historic rates upon which managed care contracts are negotiated included GME funds for teaching hospitals. That is, GME funding is distributed to HMOs as part of the capitation rate. But HMOs are not bound to distribute these dollars to hospitals with GME programs. And unlike payments for fee-for-service Medicaid or Medicare, there is no way to track the amount that goes to teaching hospitals for the purpose of GME payments from managed care plans. While GME funding is said to be distributed to HMOs within the capitated rate, it is unclear whether contracts differ between teaching and non-teaching hospitals. This point may be explored further in future reports.

## Recommendations from the Medicare Payment Advisory Commission (MedPAC)

Under the BBA of 1997, Congress required the Medicare Payment Advisory Commission (MedPAC) to examine the need for changes in federal policy affecting GME, Medicare's payments to teaching hospitals, and federal health care workforce issues. In fulfilling its mandate, the Commission focused on how Medicare payment policies for graduate medical education and teaching hospitals should be changed. MedPAC made six recommendations in its August 1999 *Report to the Congress: Rethinking Medicare's Payment Policies for Graduate Medical Education and Teaching Hospitals*, intended to assist the development of refinements in Medicare's payments for GME and teaching hospitals.

This mandate was driven by several concerns of key stakeholders: Should Medicare, with its uncertain financial prospects, continue to pay for GME programs seen as primarily benefiting physicians, who are expected to earn high incomes in future private practice?; How appropriate is the wide variation in Medicare's payments to teaching hospitals?; and Is supporting GME programs through Medicare's hospital payment policies distorting teaching hospitals' decisions about the number and specialty mix of physicians and the appropriateness of training sites? These concerns were coupled with relative uncertainty in the teaching hospital community about private insurers' future payment policies.



The Commission's recommendations are as follows:

- *Medicare should pay more for patient care in teaching settings when the enhanced value of that care justifies its higher costs.* Higher patient care costs at teaching hospitals are generally reflective of a broader and more technically sophisticated array of services, a more acutely ill patient mix, and more complex and intense care than other hospitals. MedPAC recommends that Medicare continue to pay for this care when the benefits exceed the additional cost. The Commission suggests that Medicare's case-mix measurement methods be more reflective of differences in severity of illness among patients and that Medicare's indirect and direct GME payments be combined into a single payment adjustment to be applied to per case payment rates under the Prospective Payment System (PPS).
- *The Congress and the Secretary of Health and Human Services should improve the diagnosis related groups (DRGs) to reflect more accurately the relationship between illness severity and the cost of inpatient care, thereby making Medicare payments more consistent with efficient providers' costs.* MedPAC recommends three policy changes: 1) Refine DRG definitions to more accurately reflect illness severity by expanding the number of patient categories to account more fully for how coexisting conditions and complications affect the cost of care; 2) Alter the method for calculating DRG weights to account for differences in the markups hospitals apply in setting charges; and 3) Finance outlier payments for extremely costly cases based on the prevalence of such payments in each DRG, rather than reducing payments in all DRGs by a flat percentage as currently required. The Commission believes such improvements in case-mix measurement would make PPS payments more reflective of efficient hospitals' costs and would redistribute payments among hospitals.
- *The Congress should revise Medicare's payments to recognize the higher value of patient care services provided in teaching hospitals through an enhanced patient care adjustment.* MedPAC recommends developing an enhanced patient care (EPC) adjustment that would combine Medicare's current additional payments to teaching hospitals into a single adjustment to PPS for patient care. This adjustment would help to ensure beneficiaries' access to care in teaching hospitals by making Medicare's payments reflect the added cost of the services these facilities provide.
- *The Congress should phase in the payment adjustment for enhanced patient care and any related policies that substantially change payments to individual providers.* MedPAC recommends this phase-in to help cushion the financial impact of a change in Medicare policy on certain hospitals. The appropriate time period and type of transition mechanism would depend on the estimated impact of potential policy changes on providers and beneficiaries.

- *The Congress and the Secretary of Health and Human Services should develop payment adjustments for enhanced patient care in all settings where residents and other health care professionals train when the added value of patient care justifies its higher costs.* The Commission believes the potential contribution of residents and other health care trainees to patient care services in other settings would improve the consistency of Medicare's payment policies across settings, giving providers incentives to use the most appropriate setting for patient care and training. Moreover, MedPAC believes that while Medicare spending for health care services influences the health workforce, payment policy is not the appropriate means to achieve specific workforce goals.
- *Federal policies intended to affect the number, specialty mix, and geographic distribution of health care professionals should be implemented through specific targeted programs rather than through Medicare payment policies.* MedPAC suggests that Medicare payment policy is not especially well suited to affecting the overall supply, specialty mix, and distribution of health care professionals. The Commission believes that specific targeted programs, e.g., education grants or loans, may be a more appropriate means for achieving workforce goals.<sup>4</sup>

## American Association of Medical Colleges' Response to the MedPAC's Recommendations

The American Association of Medical Colleges' (AAMC) analysis of the MedPAC report identified several areas of concern. First, MedPAC's recommendation to combine GME funding and view it as primarily for patient care, rather than education, essentially changes the purpose of GME. Moreover, the Association asserts, by changing the traditional role Medicare plays in funding GME, there is the implication that patient care services is more important than educating the next generation of physicians. Not providing a distinct payment associated with education could send a message to policymakers and providers that education of physicians should not be a primary function of teaching hospitals. In addition, the AAMC cites the added burden administrators who must decide how resources are used would face if GME were no longer identified as specifically for education.

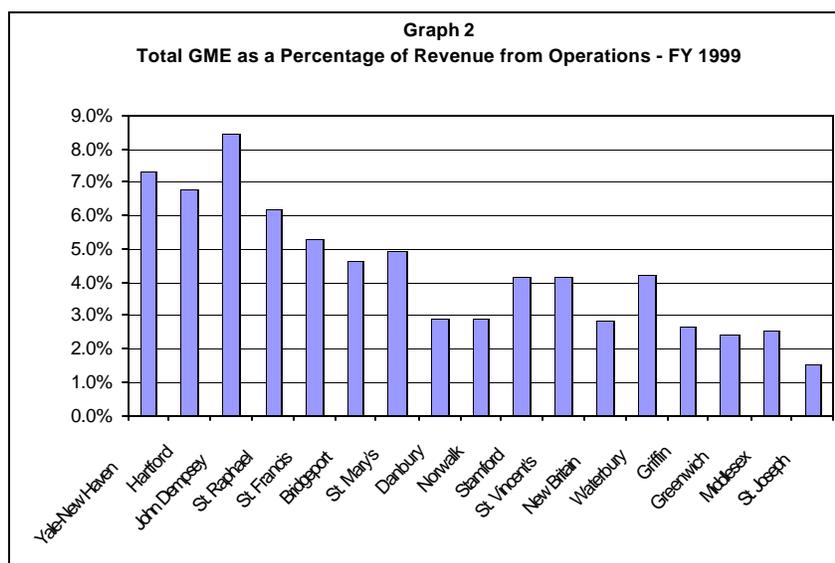
The MedPAC report essentially eliminates an explicit role for Medicare in helping to fund GME. According to AAMC, this long-standing recognition by Medicare in funding residency education costs through DGME has contributed significantly to sustaining high quality graduate medical education in the U.S. The payment system has worked effectively for over twenty years, and existing flaws are not so immense as to justify the need to discard the entire DGME payment system. AAMC believes the fundamental flaw of the current system is not Medicare, but rather, the failure of other payers, in an increasingly competitive market, to accept and pay for their fair share of the costs associated with the education of physicians and the missions of teaching hospitals. All payers of health care services should contribute the funds necessary to educate residents and sustain teaching hospital missions.



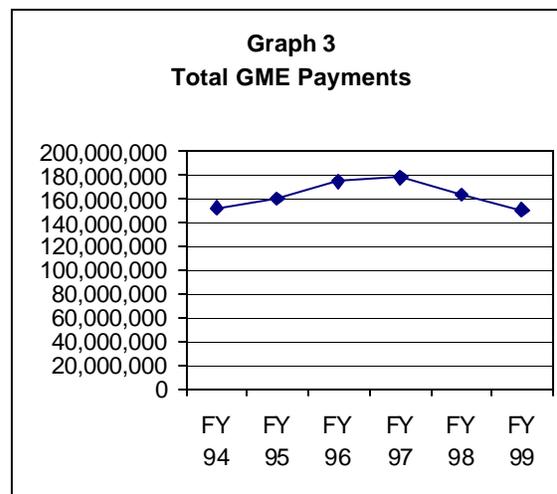
# IMPLICATIONS OF GME FUNDING ON HOSPITALS

Seventeen Connecticut hospitals received GME payments as a part of their gross revenue in 1999.<sup>5</sup> Although the Connecticut Children's Medical Center has residents, its pediatric services residents did not receive GME payments in the past, because funding was based on the number of Medicare discharges. The Medicare, Medicaid and SCHIP Balanced Budget Refinement Act of 1999 allows for GME payments to free standing children's hospitals. The first payments were made in FY 2000.

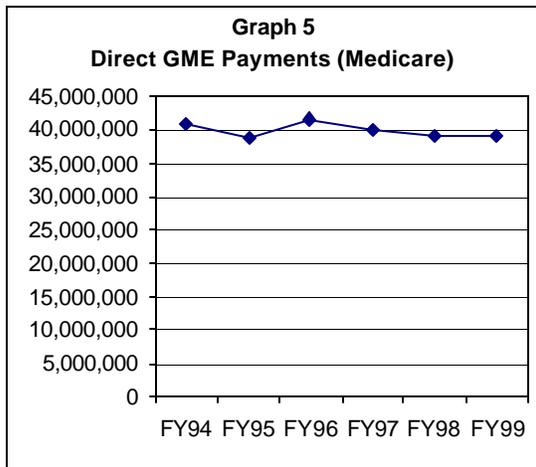
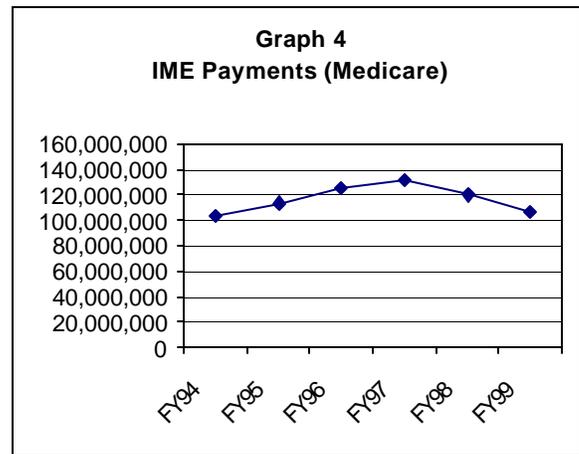
For most of the state's hospitals, GME contributes five percent or less of their total revenue from operations, the amount of money received from patient care services (**Graph 2**). Overall, GME as a percentage of total revenue, (which includes revenue from direct patient services and indirect revenue from such sources as parking lots, cafeterias, philanthropies, etc.) dropped from a high of 3.8 percent in 1997 to 3.0 percent in 1999.



In fiscal year 1999, approximately \$151 million in GME payments was received from Medicare and Medicaid. This amount is approximately 15 percent lower than 1997, the year with the highest level of GME payments between 1994 and 1999 (**Graph 3**).

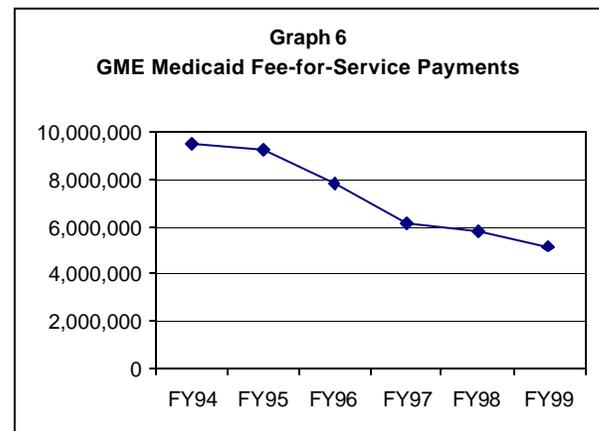


The majority of this decline is largely due to reductions in Indirect GME (IME) payments (**Graph 4**). While the reduction in IME payments between 1997 and 1999 is minimal in proportion to the total amount of IME, any decrease has a significant effect, since IME payments represent the majority of total payments.



The amount of direct GME payments has declined since fiscal year 1996 (**Graph 5**).

Medicaid GME payments have decreased each year since 1994 (**Graph 6**). This is largely due to the fewer number of people who are enrolled in Medicaid fee-for-service and the larger number of people who are enrolled in the Medicaid managed care program.



Finally, the cost of graduate medical education is a question that is frequently raised, but difficult to answer. Hartford Hospital studied this question in 1992, and a recently updated analysis of these costs put the estimate at approximately \$98,500 per resident FTE. (This amount does not include tests that might be ordered as part of the education process.)

Understanding the costs of GME as compared to the payments is an area in which many in the hospital community have strong feelings. Non-teaching hospitals believe they have additional costs that teaching hospitals do not, such as offering services 24 hours a day with staff paid at full market value, rather than with residents paid at a lower rate. Teaching hospitals are concerned that the current payment structure, and in particular the reduction of payments from Medicare, puts them at an increasing financial disadvantage. Data reported to OHCA on hospitals' intern and residents' salary, fringes and other program costs in 1999 totaled \$189,768,146, at an average of \$117,286 per FTE.

Connecticut has the third highest concentration of graduate medical education in the nation, as determined by a resident-to-beds ratio. New York and Massachusetts have higher ratios, as well as the District of Columbia.<sup>6</sup> As hospitals with teaching programs are considered to have higher costs (the reason for indirect GME payments), Connecticut's high proportion of GME may be a cost driver for its hospitals. It is difficult to determine whether this is the result of inefficiencies, a higher quality of care, or both. It is known however, that the quality of care in Connecticut is comparatively high.<sup>7</sup>

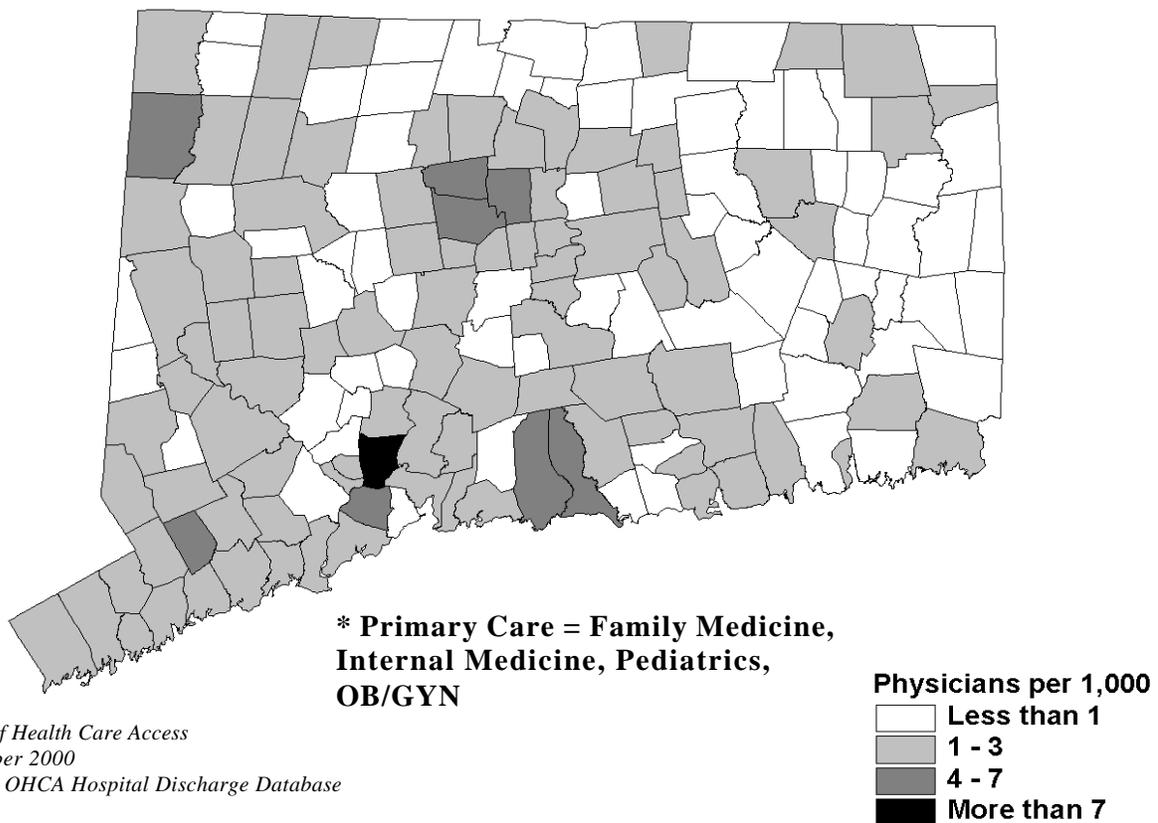
In summary, the amount of a teaching hospital's revenue that comes from GME payments is a small part of its overall gross revenues, but one that is expected to continue to decline over the next several years.

# WORKFORCE ISSUES

Establishing the effect of the financial structure of GME payments on hospitals is relatively straightforward; asserting the effect of graduate education on the sufficiency of the health care provider workforce is less so. Even the notion of “workforce” can have different boundaries or dimensions. In discussing this issue, the advisory council determined that “workforce” would include physicians, advance practice nurses, and physician assistants. The discussion in this report focuses only on physicians, as there is currently little funding for the advanced education of nurses and physician assistants.

Connecticut has 3.75 physicians per 1,000 residents, making it the fifth highest state in the nation for number of physicians per population (the District of Columbia, Massachusetts, Maryland, and New York are higher).<sup>8</sup> While Connecticut has a large number of physicians, the distribution of primary and specialty practices may be out of proportion to the need. Currently there are no data sources readily available to provide evidence about that issue in Connecticut. The maps below and on the next page illustrate the distribution density of both primary care physicians and specialty physicians by town in Connecticut. Connecticut had 73 active primary care physicians per 100,000 population in 1998, compared to 59 per 100,000 for the entire country.<sup>9</sup>

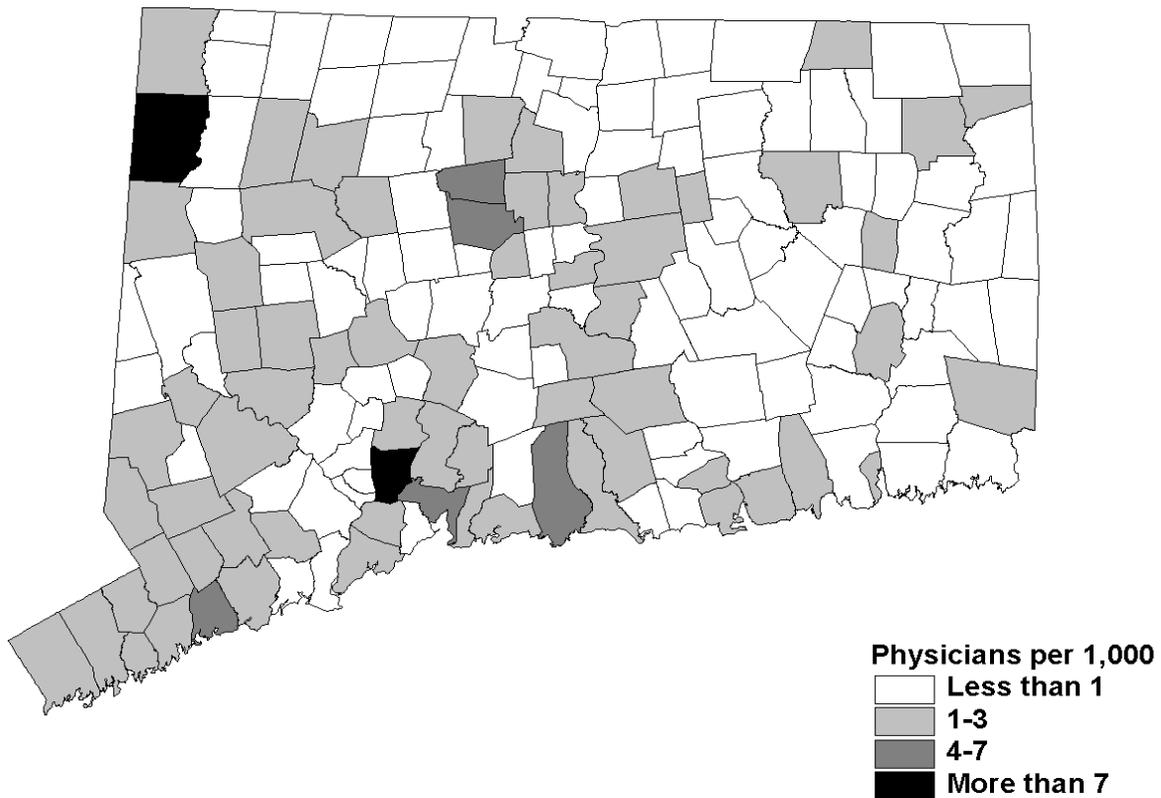
### Primary Care\* Physicians Per 1,000 Population by Town



Office of Health Care Access  
December 2000  
Source: OHCA Hospital Discharge Database



## Specialty Care Physicians Per 1,000 Population by Town



Office of Health Care Access  
December 2000  
Source: OHCA Hospital Discharge Database

There is little evidence to assess whether the number of residents in GME programs has a significant impact on the sufficiency of the physician work force, that is, whether Connecticut has too few or too many physicians. Connecticut has a high number of physicians per capita as compared to other states, however it is unlikely that the number of residents contributes in a practical way to the sufficiency of the work force. In addition, the majority of graduates of Connecticut's two schools of medicine leave the State after graduation, making graduate medical education an "export industry" for Connecticut. This is not to say that the "industry" does not provide significant service while residents are in their graduate education program. Such services provided by residents are described further in the following section.

Another workforce effect of a GME program is its ability to attract highly qualified people and clinical programs. Although it is difficult to quantify this effect, advisory council members and other hospital representatives

attribute to their teaching programs the ability to attract clinicians in difficult to fill, specialty clinical fields. Because these hospitals offer the challenges of a teaching environment, they can attract more doctors, particularly in sub-specialty areas, who prefer a teaching environment.

It is important to note that the number of residency positions that a hospital offers in a given residency program is determined through direct oversight by an accrediting process as well as by the indirect process of market forces. The Accreditation Council for Graduate Medical Education (ACGME) determines the number of positions that a hospital may have in a specific residency program. The Council establishes national standards for GME, and through these standards assesses and approves programs. These standards include the minimum number of hours of education and clinical service that are required within each specialty. Through this accreditation process, a hospital must document that a residency program has the capacity to provide the necessary education and volume of clinical experience to each of the program's residents, or the ACGME will reduce the number of resident positions allocated to that program.

Physicians selecting residency programs also affect the number of positions that a hospital can fill in a given residency program. Residents will select programs that are perceived as having long-term career opportunities for them after their significant investment in their medical education.

At any given time, graduate medical education programs provide for more than 1,500 of the state's physicians serving primarily in hospitals. In addition, teaching programs made possible by GME payments have the estimated effect of attracting highly experienced clinicians in sub-specialty areas to the state's hospitals. Connecticut, however, is a state with a large supply of physicians. Therefore, the effect of GME on the workforce may be less centered on establishing an appropriate minimum number of physicians in the state, and more focused on developing and maintaining diverse clinical skills available to state residents.



## EFFECT ON ACCESS TO HEALTH CARE

The relationship between GME and access to health care is, like the issue of the workforce, unclear. Treatment is provided, regardless of ability to pay, at all Connecticut hospitals. However, it is likely that without GME programs in our hospitals, this provision of health care to the uninsured and underinsured would be more costly to Connecticut taxpayers. Without the significant contribution of the Medicare payments in the form of direct and indirect payments, Connecticut citizens might be faced with higher health care costs to continue the current standard of hospital treatment to all. Thus, GME programs do not directly alter the level of access to inpatient care in Connecticut as much as they affect how this access to care is financed.

That said, it is important to consider the amount of service provided through these GME programs, in both inpatient and outpatient settings, regardless of the insurance status of the patient. We can estimate the amount of service because the Accreditation Council for Graduate Medical Education has established regulations on the minimum and maximum hours of education and patient care activities that residents must have in each year of their graduate education. The amount of patient care activities required for the residency programs of Internal Medicine, General Pediatrics, Obstetrics and Gynecology, and Psychiatry are summarized in **Table 4** below.

**Table 4**  
**Patient encounters for Selected Residency Programs for Total Years in Program**

	General Internal Medicine	Pediatric	Obstetrics & Gynecology	Psychiatry
Continuity Clinics	798	874	1,090	500
Specialty Clinic	n/a	280	264	2,200
Consult/Liaison	n/a	n/a	n/a	300
Ambulatory Care Blocks	606	4,800	240	*
Emergency Room	1,958	n/a	n/a	480
Inpatient	1,872	7,236**	8,568**	1,250
Intensive Care	2,392	n/a	n/a	n/a
Total	7,626	12,930	10,162	4,730

\*Incorporated in specialty clinic number  
 \*\*Includes patient encounters for whom resident acts as a supervisor and may not have direct patient responsibility

Residents provide a significant amount of patient services while enrolled in GME programs. In addition to patient services provided in inpatient settings, each resident required is to work 20 hours each week in an outpatient setting. This amounts to approximately 3,000 hours per resident over the course of his or her graduate medical education. In addition, residents expand access to care in urban areas, providing access to care to those who would otherwise not have an opportunity to receive hospital services. In turn, this may lower the cost of those services to Connecticut taxpayers.

## EMERGING ISSUES

**T**wo issues have recently emerged that may impact the cost incurred by hospitals for GME in the future.

**First**, in November of 1999, the National Labor Relations Board (NLRB) rendered a decision holding resident physicians to be “employees,” reversing two prior decisions. The major outcome of this decision is that resident physicians in teaching hospitals and related settings who are not already covered by a state collective bargaining law may organize in labor unions and bargain collectively, with full rights and protections under the National Labor Relations Act.

**Second**, as a result of medical malpractice litigation in the 1990s, most physician training programs across the nation have a maximum 80-hour workweek (down from 100).<sup>10</sup> ENT, surgery and OB-GYN residents in Connecticut teaching hospitals are now limited to an 80-hour work week. This reduction has a significant impact on the availability of residents to provide these services and the costs associated with provision of such services.

It is difficult to estimate the exact GME costs associated with these issues, and unlikely that their financial impact will soon be addressed in federal legislation to increase GME payments or considered by MedPAC. Consequently, hospitals will either have to reduce services or finance the extra costs via other means.



## CONCLUSION

This publication is the Office of Health Care Access' second annual report on graduate medical education (GME) and its impact on Connecticut hospitals. Key conclusions of the study include:

- *Seventeen Connecticut hospitals received \$151 million graduate medical education dollars from Medicare and Medicaid in 1999. While the amount of the state's teaching hospitals' revenue derived from GME payments is relatively small, it has declined for the past several years and is expected to continue to decline in the future due to federal payment policy changes.*
- *Although GME programs may have little effect on the sufficiency of the physician workforce in Connecticut in terms of the adequacy of the actual number of physicians, their effect may be more appropriately viewed as one of establishing and maintaining diverse clinical skills available to the state's citizens at hospitals and other health care settings.*
- *The state's two medical schools, the University of Connecticut and Yale University, supply the majority of the 1,537 FTE residency positions in Connecticut's hospitals and other health care settings. It is likely that without GME programs in our teaching hospitals, the cost of providing the uninsured and underinsured with access to care would be more costly to Connecticut taxpayers.*
- *Connecticut's health care delivery system, like the rest of the nation, is in a period of flux largely driven by the changing nature of health care financing. Both public and private payers have attempted to control the ever-increasing costs of providing care. Consequently, payments for graduate medical education have declined and this trend is expected to continue. The Office of Health Care Access will continue to monitor changes in public policy involving GME, in an effort to provide policy makers with the information necessary to appropriately address the issue of decreasing revenue supporting graduate medical education.*

## Appendix 1: Graduate Medical Education Study Advisory Council

**Philip Cusano**  
President & CEO  
Stamford Health Systems

**Rosemarie Fisher, MD**  
Director, Graduate Medical Education  
School of Medicine  
Yale-New Haven Hospital

**Jennifer Jackson, Esq.**  
President  
Connecticut Hospital Association

**Brian Kiss, MD.**  
Vice Chairman  
St. Vincent's Hospital

**Bruce Koeppen, MD**  
Dean, Academic Affairs and Education  
University of Connecticut Health Center

**Kyle Ballou**  
Administrative Director of Community and  
Government Relations  
Yale-New Haven Hospital

**John C. Russell, MD**  
Chief of Surgery & Sr. VP for Medical Affairs  
New Britain General Hospital

**Robert Scalettar, MD**  
VP Medical Policy & Chief Medical Officer  
Anthem Blue Cross & Blue Shield

**Kathleen Shaughnessy**  
Principal Cost Analyst  
Department of Social Services

**Michael Simms**  
Chairman, Education Residency Program  
St. Mary' Hospital

**Keith Stover**  
Government Relations  
CT Association of HMOs

**Neil Yeston, MD**  
VP for Academic Affairs  
Hartford Hospital



## Appendix 2: Additional Tables

<b>Program</b>	<b># Trainees</b>
Internal Medicine	115
Primary Care Medicine	57
General Surgery	45
Pediatrics	43
Emergency Medicine	20
Psychiatry	20
Ob/Gyn	24
Orthopedic Surgery	20
Family Medicine	10
Anesthesiology	16
Cardiology A	10
Cardiology B	10
Diagnostic Radiology	8
Medicine/Pediatrics	8
Neurology	8
Otolaryngology	8
Urology	8
Geriatrics	7
Oral Maxillofacial Surgery	7
Gastroenterology	6
Child Psychiatry	5
Neonatal/Perinatal	5
Pulmonary/Critical Care	5
Hematology/Oncology	4
Infectious Disease	4
Surgery/Critical Care	4
Endocrinology	3
Maternal/Fetal	3
Addiction Psychiatry	2
Nephrology	2
Nuclear Medicine A	2
Nuclear Medicine B	2
Occupational Medicine	2
Reproductive Endocrinology	2
Rheumatology	2
Surgical Research	2
Academic Pediatrics	1
Blood Banking/Transfusion	1
Hand Surgery	1
Pediatric Endocrinology	1
Pediatric Orthopedic Surgery	1
Sports Medicine	1
Vascular Surgery	1
<b>TOTAL</b>	<b>533</b>

<b>Program</b>	<b># Trainees</b>
Internal Medicine Traditional	93
Internal Medicine Primary Care	76
Psychiatry	72
Anesthesiology	66
Surgery	56
Pediatrics	48
Emergency Medicine	30
Obstetrics and Gynecology	24
Pathology	24
Cardiovascular Disease	20
Orthopedic Surgery	20
Neurology	14
Children & Adolescent Psychiatry	12
Gastroenterology	12
Ophthalmology	12
Laboratory Medicine	10
Infectious Diseases	9
Otolaryngology	9
Nephrology	8
Dermatology	7
Neurogeriatrics	7
Plastic Surgery	7
Medical Oncology	6
Radiation Oncology	6
Urology	6
Addiction Psychiatry	5
Endocrinology Diabetes Metabolism	5
Neuroradiology	5
Pediatric Cardiology	5
Pediatric Critical Care	5
Preventive Medicine	4
Rheumatology	4
Thoracic Surgery	4
Pediatric Infectious Disease	4
Allergy and Immunology	3
Dentistry	3
Medical Genetics	3
Neonatal/Perinatal Medicine	3
Nuclear Medicine	3
Pediatric Gastroenterology	3
Geriatrics	3
Critical Care Surgery	2
Forensic Psychiatry	2
Vascular Surgery	2
Pediatric Nephrology	2
Pediatric Surgery	1
Hand Surgery	1
Blood Banking	1
Clinical Cardiac Electrophysiology	1
Critical Care	1
Geriatric Psychiatry	1
Medical Microbiology	1
Pain Management	1
Pediatric Anesthesiology	1
Pediatric Endocrinology	1
Plastic Surgery of the Hand	1
Sports Medicine	1
<b>TOTAL</b>	<b>745</b>

## Appendix 2: Additional Tables (cont.)

<b>Table 6A</b> <b>University of Connecticut School of Medicine</b> <b>Distribution of Residents by Hospital</b> <b>(1999/2000)</b>	
	<b>Number of</b> <b>Residents</b>
<b>School of Medicine</b>	
John Dempsey Hospital	93
Hartford Hospital	162
St. Francis Hospital and Medical Center	135
New Britain General Hospital	53
Veteran's Administration	12
Connecticut Children's Medical Center	50
<b>TOTAL</b>	<b>505</b>

<b>Table 6B</b> <b>Yale University School of Medicine</b> <b>Distribution of Residents by Hospital</b> <b>(1999/2000)</b>	
	<b>Number of</b> <b>Residents</b>
<b>School of Medicine</b>	
Bridgeport Hospital	30
Connecticut Mental Health Center	36
Hospital of St. Raphael	18
St. Mary's Hospital	20
Waterbury Hospital	20
W. Haven Veteran's Administration	124
Yale-New Haven Hospital	424
Other outpatient and inpatient site	82
<b>TOTAL</b>	<b>754</b>



## Appendix 2: Additional Tables (cont.)

**Table 7**  
**Total GME Payments from Medicare and Medicaid**

FY 94	FY 95	FY 96	FY 97	FY 98	FY 99
\$29,105,302	\$29,444,065	\$29,636,439	\$29,635,417	\$34,107,504	\$32,520,616
\$27,686,143	\$31,275,523	\$31,898,882	\$32,752,498	\$28,358,286	\$24,208,774
\$5,512,325	\$6,175,032	\$7,897,551	\$8,801,589	\$8,697,159	\$9,532,090
\$17,060,782	\$19,832,892	\$20,283,452	\$21,546,602	\$18,227,462	\$15,977,830
\$13,900,304	\$14,201,754	\$18,753,147	\$18,537,698	\$18,271,431	\$15,628,797
\$11,336,461	\$11,912,497	\$12,355,856	\$11,254,687	\$9,120,930	\$8,325,483
\$6,590,832	\$6,127,395	\$7,527,873	\$8,493,311	\$5,844,480	\$6,091,462
\$5,676,127	\$5,704,768	\$5,679,119	\$6,019,860	\$6,022,702	\$5,480,077
\$5,931,948	\$5,489,687	\$5,748,988	\$5,749,512	\$5,245,853	\$4,315,006
\$3,530,806	\$3,791,774	\$3,644,799	\$4,076,310	\$4,026,044	\$5,805,904
\$6,238,883	\$6,601,878	\$7,339,927	\$8,135,146	\$6,753,611	\$6,545,560
\$5,369,462	\$5,649,072	\$6,298,939	\$5,331,297	\$4,696,351	\$4,264,790
\$5,589,127	\$5,121,907	\$5,671,701	\$6,686,711	\$5,618,002	\$5,023,876
\$1,880,798	\$2,245,229	\$2,541,743	\$2,083,660	\$1,904,124	\$1,602,235
\$1,752,615	\$1,966,536	\$2,773,591	\$2,884,856	\$2,580,414	\$2,621,800
\$4,754,653	\$3,957,910	\$4,359,596	\$5,071,538	\$3,928,964	\$3,348,840
\$1,193,552	\$1,343,322	\$1,572,134	\$1,380,520	\$1,015,004	\$49,312
\$153,110,121	\$160,841,242	\$173,983,740	\$178,441,209	\$164,418,321	\$151,342,453

**Table 8**  
**IME Payments (Medicare)**

	FY94	FY95	FY96	FY97	FY98	FY99
Yale-New Haven	\$20,384,129	\$21,158,627	\$22,186,123	\$23,091,305	\$25,368,012	\$22,923,293
Hartford	\$19,120,721	\$22,357,851	\$23,660,039	\$24,756,495	\$20,657,297	\$17,328,256
John Dempsey	\$4,065,873	\$4,864,240	\$6,636,753	\$7,675,436	\$7,138,070	\$7,718,784
St. Raphael	\$12,847,410	\$15,079,488	\$15,474,341	\$16,827,309	\$14,316,961	\$11,990,424
St. Francis	\$10,151,227	\$10,758,452	\$13,852,444	\$14,473,255	\$15,065,134	\$12,187,122
Bridgeport	\$6,435,838	\$7,711,876	\$7,980,016	\$7,801,101	\$6,326,538	\$5,308,462
St. Mary's	\$4,314,829	\$3,895,679	\$5,269,666	\$6,360,903	\$4,190,445	\$4,678,912
Danbury	\$3,795,455	\$3,850,361	\$3,827,706	\$4,397,806	\$4,207,491	\$3,719,592
Norwalk	\$3,182,014	\$2,895,012	\$3,194,290	\$3,751,632	\$3,236,965	\$2,413,633
Stamford	\$2,449,925	\$2,666,055	\$2,866,036	\$2,902,275	\$2,913,363	\$4,282,798
St. Vincent's	\$3,720,010	\$4,140,052	\$4,308,094	\$5,046,312	\$3,748,188	\$3,275,225
New Britain	\$3,651,745	\$3,914,135	\$4,488,347	\$3,607,225	\$3,198,533	\$2,978,806
Waterbury	\$3,864,901	\$4,204,815	\$4,206,244	\$4,847,021	\$3,744,457	\$3,468,413
Griffin	\$1,360,426	\$1,686,726	\$1,794,647	\$1,456,373	\$1,192,477	\$1,053,060
Greenwich	\$1,017,890	\$1,121,067	\$1,926,860	\$2,047,793	\$1,720,077	\$1,763,357
Middlesex	\$1,568,981	\$1,580,022	\$2,025,974	\$2,384,223	\$2,029,812	\$1,862,981
St. Joseph's	\$639,124	\$703,136	\$868,030	\$829,960	\$470,689	\$0
	\$102,570,499	\$112,587,595	\$124,565,613	\$132,256,421	\$119,524,509	\$106,953,119

## Appendix 2: Additional Tables (cont.)

**Table 9**  
**Direct GME Payments (Medicare)**

	FY94	FY95	FY96	FY97	FY98	FY99
Yale-New Haven	\$5,469,906	\$5,046,000	\$4,774,000	\$4,242,000	\$6,676,000	\$7,795,231
Hartford	\$6,645,524	\$6,906,165	\$6,805,409	\$7,020,340	\$6,814,452	\$6,168,196
John Dempsey	\$785,276	\$731,292	\$764,979	\$831,952	\$1,154,913	\$1,502,377
St. Raphael	\$3,646,515	\$4,221,316	\$4,382,105	\$4,324,538	\$3,539,353	\$3,612,768
St. Francis	\$3,300,000	\$3,010,738	\$4,304,046	\$3,618,430	\$2,746,163	\$3,012,510
Bridgeport	\$4,209,464	\$3,578,133	\$3,800,273	\$2,925,895	\$2,378,613	\$2,584,880
St. Mary's	\$2,055,124	\$1,998,109	\$2,082,124	\$1,995,364	\$1,537,414	\$1,301,659
Danbury	\$1,619,815	\$1,581,923	\$1,653,864	\$1,456,930	\$1,625,458	\$1,607,209
Norwalk	\$2,443,230	\$2,319,249	\$2,278,111	\$1,809,832	\$1,809,832	\$1,721,880
Stamford	\$899,450	\$956,159	\$582,929	\$1,034,618	\$989,200	\$1,390,895
St. Vincent's	\$2,247,982	\$2,270,635	\$2,819,340	\$2,924,723	\$2,820,510	\$3,092,494
New Britain	\$1,502,164	\$1,513,341	\$1,662,624	\$1,599,879	\$1,363,175	\$1,166,675
Waterbury	\$1,405,280	\$666,077	\$1,282,167	\$1,706,119	\$1,742,284	\$1,414,609
Griffin	\$507,819	\$507,819	\$690,419	\$592,684	\$690,419	\$524,778
Greenwich	\$720,000	\$810,484	\$797,356	\$814,297	\$843,751	\$824,729
Middlesex	\$3,053,301	\$2,258,806	\$2,244,151	\$2,614,448	\$1,838,478	\$1,432,977
St. Joseph's	\$518,639	\$601,487	\$663,000	\$526,442	\$526,354	\$48,774
	\$41,029,489	\$38,977,733	\$41,586,897	\$40,038,491	\$39,096,369	\$39,202,641

**Table 10**  
**GME Medicaid Fee-for-Service Payments**

	FY94	FY95	FY96	FY97	FY98	FY99
Yale-New Haven	\$3,251,267	\$3,239,438	\$2,676,316	\$2,302,112	\$2,063,492	\$1,802,092
Hartford	\$1,919,898	\$2,011,507	\$1,433,434	\$975,663	\$886,537	\$712,322
John Dempsey	\$661,176	\$579,500	\$495,819	\$294,201	\$404,176	\$310,929
St. Raphael	\$566,857	\$532,088	\$427,006	\$394,755	\$371,148	\$374,638
St. Francis	\$449,077	\$432,564	\$596,657	\$446,013	\$460,134	\$429,165
Bridgeport	\$691,159	\$622,488	\$575,567	\$527,691	\$415,779	\$432,141
St. Mary's	\$220,879	\$233,607	\$176,083	\$137,044	\$116,621	\$110,891
Danbury	\$260,857	\$272,484	\$197,549	\$165,124	\$189,753	\$153,276
Norwalk	\$306,704	\$275,426	\$276,587	\$188,048	\$199,056	\$179,493
Stamford	\$181,431	\$169,560	\$195,834	\$139,417	\$123,481	\$132,211
St. Vincent's	\$270,891	\$191,191	\$212,493	\$164,111	\$184,913	\$177,841
New Britain	\$215,553	\$221,596	\$147,968	\$124,193	\$134,643	\$119,309
Waterbury	\$318,946	\$251,015	\$183,290	\$133,571	\$131,261	\$140,854
Griffin	\$12,553	\$50,684	\$56,677	\$34,603	\$21,228	\$24,397
Greenwich	\$14,725	\$34,985	\$49,375	\$22,766	\$16,586	\$33,714
Middlesex	\$132,371	\$119,082	\$89,471	\$72,867	\$60,674	\$52,882
St. Joseph's	\$35,789	\$38,699	\$41,104	\$24,118	\$17,961	\$538
	\$9,510,133	\$9,275,914	\$7,831,230	\$6,146,297	\$5,797,443	\$5,186,693



## Appendix 2: Additional Tables (cont.)

**Table 11**  
**Number of Resident FTEs by Hospital**

	FY 95	FY 96	FY 97	FY 98	FY 99
Yale New-Haven	413.94	407.00	432.71	422.33	408.02
Hartford	238.39	224.54	208.58	219.23	209.12
John Dempsey	123.93	140.29	126.78	116.83	137.78
St Raphael	123.13	126.79	123.78	125.09	126.47
St Francis	113.30	126.63	129.07	132.43	133.71
Bridgeport	88.53	87.19	91.42	92.88	95.89
St Mary's	60.31	63.89	60.90	52.69	49.28
Danbury	56.45	57.46	56.44	61.55	62.36
Norwalk	43.00	53.96	54.05	52.53	52.37
Stamford	40.63	41.37	38.25	42.31	50.18
St Vincent's	51.97	53.30	51.10	48.64	51.19
New Britain	46.58	48.00	45.77	49.28	48.76
Waterbury	47.00	44.78	44.78	47.84	50.61
Griffin	19.00	19.00	18.00	17.00	22.06
Greenwich	22.00	22.00	20.80	21.56	19.96
Middlesex	16.18	16.18	16.74	16.63	16.53
St Joseph's	12.70	12.70	10.62	10.49	2.95
	1517.04	1545.08	1529.79	1529.31	1537.24