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Variations in Medicare Payments for Graduate Medical Education

in California and Other States

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Prepared for the
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Introduction

Medicare, one of the largest social programs administered by the federal government, provides health insurance for 39 million elderly and disabled Americans. It now covers one-fifth of all spending on personal health care and one-third of spending on hospital services in the United States (HCFA 2000). Due to Medicare's size and scope, its funding and regulations have a great impact on different parts of the nation's health care system. Inevitably, Medicare has become a means of supporting more general public health and social goals as identified by federal policymakers (NASI 1999).

One of Medicare's key social roles is to provide financial support for graduate medical education (GME). Medicare makes GME payments to the nation's teaching hospitals to cover both the direct and the indirect costs associated with training clinical residents, such as compensation for trainees and instructors, overhead expenses, and the higher costs of patient care in such institutions. Medicare is the single largest source of GME funding. In FY 1998, Medicare made $7.09 billion in payments for GME, while Medicaid and other state programs added an estimated $2.4 billion.

Both the amount of GME funding and the methods of determining payments to teaching hospitals have come under scrutiny as policymakers struggle to contain Medicare costs and to reconcile policies that subsidize medical training and research with policies that promote competition among health care providers (Oliver and Lee 2000). Changes in Medicare support for GME occur even as increasing competition and managed care threaten the clinical revenue that supports the mission of teaching hospitals (COGME 2000, 19).

The data in Table 1 show that until recently, GME payments represented about 5 percent of the total Medicare budget. According to the Congressional Research Service, Medicare payments for GME peaked at $8.41 billion in FY 1996. The subsequent decline in spending reflects a 9.4 percent drop in the number of residents, reductions in GME payments authorized in the Balanced Budget Act of 1997, and possibly the emphasis the federal government has placed on reducing fraudulent billing in its health care programs.[1]

In the past two years, policymakers have also started to address another feature of the present system: It produces wide variations in payments across teaching hospitals and geographic regions. Some degree of variation in GME payments is appropriate, given differences in the cost of living, the type and level of specialty training, and the

Table 1: Medicare GME Payments as a Percentage of Total Medicare Expenditures

Fiscal Year	Medicare GME Expenditures (in billions)	Total Medicare Expenditures (in billions)	GME as a Percentage of Total Medicare Expenditures
1990	$4.67	$ 70	6.7%
1991	$5.10	$107	4.8%
1992	$6.03	$114	5.3%
1993	$6.64	$129	5.1%
1994	$7.11	$143	5.0%
1995	$7.84	$159	5.0%
1996	$8.41	$177	4.8%
1997	$7.59	$191	4.0%
1998	$7.09	$207	3.4%

Source: Based on U.S. Congress (1999, 106); COGME (2000, 23).

type and intensity of patient care delivered by residents and their supervisors. Anderson (1996) has shown, however, that the actual variation in Medicare GME payments greatly exceeds the variation attributable to those factors.

This report documents variations in Medicare GME payments among some teaching hospitals and states receiving the largest amount of such federal support. This report will:

- demonstrate the wide variations in both direct medical education (DME) payments and indirect medical education (IME) payments;
- show how variations in payments across individual teaching hospitals and states have increased since the Medicare Prospective Payment System (PPS) was implemented in the mid-1980s;
- identify potential sources of the variations in Medicare GME payments; and
- explain how payment variations might be affected by recent policy changes and proposals for reform.

Data are not yet available to assess the degree to which recent policy changes have reduced payment variations. In the Prospective Payment System, however, variations continue to be tied to the historical organization of individual hospitals and the costs they report to Medicare's regional fiscal intermediaries. Further efforts to reduce payment variations require clearer agreement on what services provided by teaching hospitals deserve public support as well as better understanding of how the costs of those services appropriately vary among institutions.

2

The History of Medicare Payments for GME

Summary of Medicare Payment Policies for GME

1966

Medicare reimbursed graduate medical education expenses to teaching hospitals on the basis of "reasonable costs" from FY 1967 through FY 1983 and delegated the determination of these costs to private insurance companies acting as fiscal intermediaries.

1982

The Tax Equity and Fiscal Responsibility Act (TEFRA) acknowledged the increased cost of patient care for services at teaching hospitals. It increased limits on allowable hospital Medicare costs for teaching hospitals on the basis of the intern- and resident-to-bed (IRB) ratio. As Medicare moved to the Prospective Payment System (PPS), this indirect medical education (IME) adjustment was converted into a supplement to the Diagnosis Related Group (DRG) payment.

1983

Congress enacted the Medicare PPS, which paid hospitals a fixed amount for each episode of inpatient care using the DRG methodology. The legislation established the basic framework of prospective, per-resident payments for direct medical education (DME) and supplements to DRG payments for indirect medical education. The IME adjustment was set by adding 11.59 percent to the DRG for every 10 percent increase in the IRB ratio.

1986

Congress enacted the Consolidated Omnibus Budget Reconciliation Act (COBRA) of 1985 (April 7, 1986), which allowed a four-year transition period for phasing in payment rates under PPS. It clarified DME payment rules and reduced the IME adjustment to 8.1 percent for FY 1986 and FY 1987, and then 8.7 percent for future years.

1987

The Omnibus Budget Reconciliation Act (OBRA) of 1987 reduced the IME adjustment to 7.7 percent, effective for FY 1989.

1997

The Balanced Budget Act decreased the IME adjustment to 5.5 percent over five years, placed a cap on the number of residents eligible for DME payments, and carved out a portion of Medicare HMO payments for teaching hospitals.

1999

The Balanced Budget Refinement Act authorized steps toward a standard national DME payment, and froze the IME adjustment at 6.5 percent.

2000

The Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act raised the floor for DME payments and further delayed reductions in the IME adjustment authorized in 1997.

From its inception, federal policymakers authorized Medicare to support the mission of teaching hospitals. They reasoned that educational activities would enhance the quality of care and that the hospital insurance program should support an appropriate share of resident stipends, compensation of teachers, and other costs (U.S. Congress 1965). Policymakers assumed that treatments developed in teaching hospitals would benefit all patients as highly educated and specialized physicians left training to enter practice in community hospitals and clinics (Fox 1986). Also, Medicare was charged with caring for elderly patients, whose complex conditions often required the specialized services available at teaching hospitals.

Medicare reimbursed teaching hospitals for expenses associated with their services on the basis of "reasonable costs" from FY 1967 through FY 1983 and delegated the determination of these costs to private insurance companies acting as fiscal intermediaries. This changed when PPS was adopted in the 1983 Social Security amendments, introducing an entirely new system of paying for inpatient hospital care. PPS included a new structure of payments for GME that was further refined in the Consolidated Omnibus Budget Reconciliation Act (COBRA) of 1985. Beginning in FY 1984, Medicare made separate payments for direct and indirect medical education in order to offset the extra costs incurred by teaching hospitals compared to non-teaching hospitals.

The direct medical education (DME) payment was designed "to reimburse teaching hospitals for Medicare's share of the costs of salaries and fringe benefits paid to residents, interns, and teaching faculty, and certain overhead costs relating to teaching activities" (U.S. Congress 1999, 106). Medicare pays hospitals a fixed amount per resident based on their reported costs at the end of FY 1984, adjusted for inflation, specific specialties, and Medicare's share of inpatient days at the individual hospital.

The indirect medical education (IME) adjustment was designed "to compensate teaching hospitals for their relatively higher costs attributable to the involvement of residents in patient care and the severity of illness of patients requiring specialized services available only in teaching hospitals" (U.S. Congress 1999, 106). When the new payment system was established, policymakers noted that "the adjustment for indirect medical education costs is only a proxy to account for a number of other factors which may legitimately increase costs in teaching hospitals" (U.S. Congress 1983). The IME adjustment is added to a hospital's regular Diagnosis Related Group (DRG) payment for each patient discharge.[2]

There still is no widely agreed-upon method for calculating the costs of either the DME or IME components of graduate medical education.[3] Both economic analyses and cost accounting methods find that expenses in teaching hospitals are higher than in non-teaching hospitals, but that the added expenses of teaching cannot easily be separated from the routine costs of care (Blewett, et al. 2001). The IME adjustment was originally based on a 1983 estimate by the U.S. Department of Health and Human Services. This estimate took into account that Medicare inpatient operating cost per case had increased approximately 5.79 percent with each 10 percent increase in the number of residents per hospital bed. After the Congressional Budget Office projected that a majority of teaching hospitals would be adversely affected if the IME adjustment were set at that level, the Reagan Administration proposed

doubling it to 11.59 percent for each 10 percent increase in a hospital's intern- and resident-to-bed (IRB) ratio. Congress agreed to this proposal and included the IME adjustment in PPS. The IME adjustment was subsequently reduced several times, first to 8.7 percent in 1986, then to 8.1 percent when the Disproportionate Share Hospital payment system was established the same year, and finally to 7.7 percent in 1987. It remained at that level until October 1997, when further reductions authorized by the Balanced Budget Act began to take effect (AAMC 1999).[4]

Under this established method, IME payments are closely tied to increases in the number of residents (Wray and Sadowski 1998). Prior to the Balanced Budget Act, a hospital with 300 residents and 600 beds—an IRB ratio of 0.50—would receive a 38.5 percent increase in its DRG payment (7.7 percent for every 10 percent increase in the IRB ratio). According to the Medicare Payment Advisory Commission (MedPAC), 10 percent of teaching hospitals receive IME adjustments of more than 29 percent (MedPAC 1999). The average IRB ratio for all 1,069 teaching hospitals receiving Medicare GME payments in FY 1996 was 0.21, or slightly more than one resident for every five beds. Twenty-one hospitals had an IRB ratio of more than 0.9—nearly one full-time resident per inpatient bed.[5]

3

Variations in Medicare GME Payments across Teaching Hospitals

In previous studies, Anderson (1996) and Iglehart (1999) compared Medicare DME payments per resident at particular hospitals. Anderson noted that wide variations in reported costs resulted in "certain hospitals receiving three or four times as much to train a resident as are other hospitals." The variations could not be explained by available data on the structure and specialty mix of residency training, quality of training, cost of living, patient mix, or other factors presumed to affect the costs of GME.

Table 2 compares both DME and IME payments in FY 1996—the most recent year for which complete data are available—for the top five recipients of total Medicare GME funds in six selected states. These states include four with the largest populations and number of Medicare beneficiaries (California, Florida, New York, and Texas), and two states with large concentrations of teaching hospitals (Massachusetts and Pennsylvania).[6] The data indicate that there are considerable variations in both DME and IME payments to individual teaching hospitals, often within the same state.

Because payments for DME take the form of capitation, DME payments are represented on a per-resident basis for the selected hospitals. Many of the direct costs associated with training residents—especially salaries and benefits—might differ only slightly across teaching hospitals. However, the reported costs of DME also include differences in the compensation of attending (supervising) physicians and overhead costs, which can lead to significant variations in DME payments. The Fifteenth Report of the Council on Graduate Medical Education (COGME) split teaching hospitals into four cost categories and found that, regardless of resident salaries, "other direct costs and allocated overhead costs per resident" in the highest cost group were four times as high as those for the lowest cost group (COGME 2000, 25).

Among the selected hospitals, DME payments per resident in FY 1996 averaged $26,904 and ranged from $6,904 at Jackson Memorial in Florida to $66,250 at Beth Israel in New York—a difference of 860 percent. Because DME payments are based in part on Medicare's share of inpatient days in a hospital, Table 2 presents data adjusted for this factor. The adjusted rate represents the amount that a hospital would receive in DME payments per resident if it treated only Medicare patients. When this adjustment is made, the difference between the lowest rate of payment (Tampa General) and the highest (Massachusetts General) is 390 percent.

Because the IME adjustment is added to the DRG payment for the increased costs of patient care in teaching hospitals, Table 2 also compares IME payments per Medicare discharge. Among this group of teaching hospitals, these payments averaged $3,508 and ranged from $687 per discharge at Florida's Orlando Regional to $7,060 at the University of California, San Francisco (UCSF)—a difference of 928 percent.

The data illustrate that even when hospitals receive similar amounts of overall support, the two types of GME payments can vary substantially. For example, Albert Einstein Medical Center in

Table 2: Medicare GME Payments per Resident and Discharge for Top Five Recipients in Selected States, FY 1996

Hospital	Medicare GME (in millions)	DME per Resident	Adjusted DME per Resident*	IME per Discharge	Medicare Share of Days	Hospital Residents	Medicare Discharges
California							
UC Davis (UCD)	$29.76	$8,911	$37,129	$5,408	24%	410	4,828
Cedars-Sinai	$30.80	$21,316	$49,572	$2,091	43%	228	12,404
UC San Francisco (UCSF)	$34.08	$10,179	$46,268	$7,060	22%	529	4,064
Stanford University	$43.28	$20,617	$64,428	$5,801	32%	323	6,312
UC Los Angeles (UCLA)	$43.85	$11,169	$38,514	$5,150	29%	574	7,269
Florida							
Orlando Regional HCS	$9.53	$20,221	$67,403	$ 687	30%	123	10,253
Tampa General Hospital	$10.90	$9,806	$33,814	$1,656	29%	196	5,422
Mt. Sinai Medical Center	$14.04	$29,672	$60,555	$1,313	49%	145	7,414
Jackson Memorial	$18.49	$6,904	$57,533	$2,998	12%	614	4,753
Shands Teaching Hospital	$26.55	$19,217	$73,912	$4,077	26%	380	4,723
Massachusetts							
Baystate Medical Center	$30.26	$36,814	$102,261	$2,472	36%	237	8,710
U. Mass. Medical Center	$35.14	$16,826	$42,065	$5,937	40%	304	5,057
Brigham & Women's Hosp.	$37.07	$14,900	$62,083	$4,220	24%	456	7,173
Beth Israel Hospital	$39.68	$32,879	$91,331	$3,674	36%	301	8,105
Mass. General Hospital	$63.23	$30,325	$67,389	$3,636	45%	503	13,196
New York							
Long Island Jewish	$49.63	$33,203	$92,231	$4,298	36%	476	7,869
Beth Israel	$63.40	$66,250	$165,625	$2,074	40%	442	16,452
Presbyterian-Columbia	$63.78	$21,395	$62,926	$4,358	34%	655	11,420
The Mount Sinai Hospital	$67.71	$41,752	$119,291	$3,881	35%	538	11,660
Montefiore Medical Center	$95.00	$50,342	$122,785	$3,882	41%	770	14,485
Pennsylvania							
Allegheny General Hospital	$30.53	$26,868	$62,484	$2,391	43%	241	10,060
Albert Einstein Med. Center	$31.72	$48,604	$118,546	$3,089	41%	250	6,334
Thomas Jefferson	$48.16	$29,243	$79,035	$3,837	37%	485	8,853
Univ. of Pennsylvania	$57.68	$31,407	$95,173	$5,326	33%	521	7,758
UPMC Presbyterian	$59.05	$34,957	$74,377	$3,931	47%	396	11,498
Texas							
Baylor University	$17.84	$29,110	$78,676	$1,100	37%	148	12,302
Univ. of Texas (Houston)	$19.38	$10,926	$57,505	$2,780	19%	474	5,109
Hermann Hospital	$20.60	$7,135	$33,976	$4,074	21%	383	4,387
Scott and White Memorial	$25.79	$65,318	$138,974	$2,056	47%	143	8,000
The Methodist Hospital	$27.20	$20,839	$42,529	$1,959	49%	196	11,797

Source: Health Care Financing Administration

*The adjusted rate (DME per resident/Medicare share of inpatient days) reflects the amount a hospital would have received if it treated only Medicare patients.

Pennsylvania received almost $32 million in Medicare GME funds and UCSF received $34 million. Yet Einstein received DME payments of $48,604 per resident, more than four times the $10,179 per resident received by UCSF. In contrast, UCSF received $7,060 in IME per Medicare discharge, 129 percent more than the $3,089 per discharge received by Einstein. Beth Israel in Boston received 59 percent more in DME payments per resident than Stanford, while Stanford received 58 percent more than Beth Israel in IME per discharge.

Variations can also be considerable within the same state. In northern California, Stanford University received $20,617 in DME per resident in FY 1996, more than twice as much as UCSF ($10,179). Conversely, UCSF received 22 percent more in IME per Medicare discharge than Stanford received. In southern California, Cedars-Sinai received almost twice as much DME per resident ($21,316) as UCLA Medical Center ($11,169). In Massachusetts, Brigham and Women's Hospital received more in IME per discharge, but received less than half the amount of DME per resident ($14,900) when compared with Massachusetts General ($30,325) or Beth Israel ($32,879), and Massachusetts General received almost twice as much in total GME as either hospital. The variations in DME payments are reduced, but still substantial, when adjusted for the Medicare share of inpatient days in each hospital.

As the system currently operates, there are substantial differences in Medicare GME payments even among hospitals that are training nearly equal numbers of residents and treating nearly equal numbers of Medicare beneficiaries. The examples below compare FY 1996 data for three California hospitals with three northeastern hospitals. Each of the California hospitals had an equivalent or greater number of residents in training and Medicare discharges as its counterpart in the Northeast, yet in each comparison the California hospital received disproportionately lower Medicare GME payments:

- Loma Linda in California and Hershey in Pennsylvania had nearly identical numbers of both residents (280 vs. 279) and Medicare discharges (5,322 vs. 5,287), yet Loma Linda received substantially less in DME payments per resident ($7,932 vs. $19,741) and IME payments per discharge ($1,801 vs. $3,539) than Hershey did. Overall, Hershey received $24.2 million in Medicare GME payments compared with $11.8 million for Loma Linda.
- Cedars-Sinai in California trained almost as many residents as Baystate Medical Center in Massachusetts (228 vs. 237), and treated 42 percent more Medicare patients than Baystate (12,404 vs. 8,710). Nonetheless, Cedars-Sinai received substantially less in DME per resident ($21,316 vs. $36,814) and IME per discharge ($2,091 vs. $2,472) and received nearly the same amount of total Medicare GME funding as Baystate ($30.8 million vs. $30.3 million).
- University of California, San Diego had 55 percent more residents (269 vs. 173) and 16 percent more Medicare discharges (2,931 vs. 2,516) than University Hospital of Brooklyn in New York, but received less than one-third as much in DME payments per resident ($7,959 vs. $30,717) and $1.4 million less in total Medicare GME payments ($12.3 million vs. $13.7 million).

4

Medicare GME Payments to Teaching Hospitals in California and Other Top States

Although most of the payment variations for GME are related to characteristics of individual hospitals, there are also striking variations when payment data are examined state-by-state. The data presented below suggest that some variation in payments is due to shared characteristics of teaching hospitals or policies within states or regions of the country.

Medicare GME payments are highly concentrated: Twelve states received more than three times the median amount of total payments per state in FY 1985 and FY 1996, the first and last years of complete data available from the Health Care Financing Administration (HCFA). The data in Table 3 show that the total GME payments to these states ranged from $59 million in North Carolina to $291 million in Pennsylvania in FY 1985 and from $173 million in Missouri to $1,236 million in New York in FY 1996.

While the number of residents and volume of services that are delivered to Medicare beneficiaries vary widely state-by-state, GME payments are not consistently related to these indicators. For example, California has the largest population and greatest number of Medicare beneficiaries of any U.S. state, and is second only to New York in the number of residents it trains. Yet it ranks seventh among the states in total Medicare GME payments, and receives hundreds of millions of dollars less each year than New York and several other states. The disparity in GME funding has increased substantially over time. For example, California teaching hospitals had 5,917 residents in training in FY 1985, the first year of the Medicare PPS. New York had 53 percent more residents (9,197) and it received 53 percent more in GME payments from Medicare—$273 million versus $179 million. Eleven years later, in FY 1996, New York hospitals had 12,229 residents, 89 percent more than the 6,478 residents in California. That year, New York received $1.24 billion in Medicare GME payments, 351 percent more than the $352 million paid to California hospitals.

Similarly, in FY 1985 California trained 100 percent more residents than Massachusetts (5,917 vs. 2,961), had 123 percent more Medicare discharges (281,885 vs. 126,508), and received 101 percent more in Medicare GME payments ($179 million versus $89 million). By FY 1996, California teaching hospitals had 93 percent more residents than Massachusetts (6,478 vs. 3,354) and had 63 percent more Medicare discharges (253,837 vs. 156,121). Yet Massachusetts hospitals received 8.5 percent more in GME payments ($382 million) than California hospitals ($352 million).[7]

DME Payments

In FY 1996, teaching hospitals in the top twelve states received an average of $22,886 in DME payments per resident. California teaching hospitals received an average of $10,999 in DME payments per resident, less than one-third of the average $34,329 per resident in Pennsylvania, $34,294 in New York, and $33,185 in North Carolina. California ranked significantly below every other state, including Texas, which received an average of $15,214.[8]

It appears that California teaching hospitals receive relatively lower DME payments in part because

Table 3: Medicare GME Payments to Top Twelve State Recipients, FY 1985 and FY 1996

State	Teaching Hospitals		Hospital Residents		GME (in millions)		DME (in millions)		IME (in millions)		DME per Resident		IME per Discharge		Growth in Total Medicare GME Payments
	1985	1996	1985	1996	1985	1996	1985	1996	1985	1996	1985	1996	1985	1996	1985–1996
California	105	112	5,917	6,478	$179	$ 352	$ 59	$ 71	$120	$281	$9,990	$10,999	$426	$1,107	197%
Connecticut	25	21	1,466	1,575	$ 68	$ 195	$ 26	$ 46	$ 42	$149	$17,762	$28,948	$420	$1,357	286%
Illinois	81	94	4,224	4,707	$173	$ 403	$ 69	$119	$104	$284	$16,257	$25,318	$369	$ 896	234%
Massachusetts	43	40	2,961	3,354	$ 89	$ 382	$ 46	$ 92	$ 43	$290	$15,654	$27,513	$339	$1,857	428%
Michigan	71	63	3,693	4,578	$170	$ 483	$ 65	$123	$106	$360	$17,530	$26,829	$474	$1,274	283%
Missouri	48	60	1,931	1,926	$ 82	$ 173	$ 38	$ 60	$ 45	$113	$19,509	$31,359	$304	$ 690	211%
New Jersey	54	56	2,465	2,626	$ 99	$ 252	$ 54	$ 84	$ 45	$168	$21,924	$31,884	$218	$ 650	253%
New York	132	101	9,197	12,229	$273	$1,236	$272	$412	$ 1	$824	*$25,855	$34,294	*$415	$1,712	453%
North Carolina	29	33	1,768	1,761	$ 59	$ 192	$ 21	$ 58	$ 38	$134	$11,873	$33,185	$372	$ 865	327%
Ohio	81	81	4,209	4,025	$182	$ 433	$ 77	$119	$104	$314	$18,350	$29,517	$324	$ 863	238%
Pennsylvania	132	114	4,897	5,891	$291	$ 676	$138	$202	$153	$474	$28,205	$34,329	$320	$1,054	233%
Texas	91	133	3,162	3,704	$ 64	$ 218	$ 24	$ 56	$ 41	$161	$7,447	$15,214	$183	$ 536	338%

Source: Health Care Financing Administration

*New York was operating an all-payer hospital rate setting program in FY 1985 and received almost all of its Medicare GME funding in the form of DME; this changed the following year. For the purposes of this comparison we have used FY 1986 data for New York.

Medicare's share of inpatient days is lower than in hospitals in other top states. In FY 1996, Medicare accounted for only 24 percent of inpatient days in California teaching hospitals, whereas its share was considerably higher in Texas (38 percent), New York (42 percent), Massachusetts (44 percent), and Pennsylvania (49 percent). When payments are adjusted for Medicare's share of inpatient days, California hospitals received almost two-thirds the amount of DME per resident in Pennsylvania and more than one-half the amount in New York hospitals.

IME Payments

Table 3 also compares IME payments per Medicare discharge. For the top twelve states in FY 1996, these averaged $1,135 and ranged from $536 in Texas to $1,857 in Massachusetts—a difference of 246 percent. The average IME payment per discharge in California was $1,107, which was 107 percent higher than in Texas and 60 percent lower than in Massachusetts.[9]

Payment Trends

The variations in Medicare GME payments among the top state recipients have increased since the inception of PPS. The data in Table 3 show that California had the lowest rate of growth in GME funding among the top states, with total payments increasing 197 percent from FY 1985 through FY 1996. In New York and Massachusetts, GME funding increased by more than 400 percent during the same period. There is considerable variation among states in the growth of both DME and IME payments. For example, IME payments per Medicare discharge in Massachusetts grew by 447 percent, compared to 160 percent in California. In contrast, DME payments per resident rose by just 76 percent in Massachusetts and 10 percent in California. Appendix 2 presents additional data on Medicare GME payments from FY 1985 through FY 1998 for six selected states. It also shows that the northeastern states have increased their GME funding at faster rates since the new system was instituted.

The provisions of the Balanced Budget Act of 1997 authorized reductions in overall Medicare GME payments and, along with subsequent budget legislation, should also reduce payment variations across teaching hospitals. The preliminary data in Appendix 2 suggest that the impact of the budget cuts varied widely at the state level. The data reported to HCFA for FY 1998, complete for 88 percent of all hospitals in the United States, indicate that total Medicare GME payments declined in all but one of the selected states in the first year after the Balanced Budget Act. Between FY 1996 and FY 1998, total payments rose 1.9 percent in Florida. In contrast, payments declined 1.5 percent in New York and there were much larger declines elsewhere: 13.4 percent in Massachusetts, 16.0 percent in Texas, 23.4 percent in California, and 32.2 percent in Pennsylvania. While payments for DME actually increased in Florida and New York, IME payments declined in every state.

5

Possible Factors Underlying Variations in Medicare GME Funding

No single factor explains the varying Medicare GME payments described in this report. Instead, the variations across states, among individual teaching hospitals, and over time are the result of a number of factors.

Medicare Share of Inpatient Days

Some of the variation in DME payments is related to Medicare's share of inpatient days in each hospital (COGME 2000, 26). Medicare's share of inpatient care will generally be lower in states where Medicare beneficiaries represent a smaller proportion of the total population.[10] In addition, the DME payment formula rewards hospitals with longer lengths of stay (even though they receive standardized DRG payments for each episode of care). On average, teaching hospitals in California have fewer inpatient days per Medicare discharge than in any other state examined in this study.[11] This pattern of care may be influenced by the relatively high enrollment of California Medicare beneficiaries in managed care.[12] Although there are marked discrepancies among individual hospitals, California hospitals clearly receive lower DME payments than their counterparts in the Northeast, as well as in Texas and Florida.

Growth in Number of Residents

Some states have a large number of teaching hospitals and train more residents; these states have significantly higher aggregate GME payments from Medicare. The northeastern states, especially New York, have consistently trained more residents than other states of comparable size. In recent years, they have increased both the absolute and relative number of residents. Between 1983 and 1994, the number of residents in New York rose from 60 to 80 per 100,000 population, a 33.3 percent increase. In contrast, the number of residents in California increased only from 27 to 28 per 100,000 population, or 3.7 percent. The number of residents per capita rose 10.5 percent in Florida and 23.1 percent in Texas during the same period.

The relative number of medical residents is an important factor in Medicare GME payment variations because the intern- and resident-to-bed (IRB) ratio—a measure for the intensity of a hospital's teaching program—greatly influences the IME adjustment to a hospital's DRG payment. As shown in Table 4, almost all states have increased the average IRB ratio in their teaching hospitals over time and some have increased it much faster than others. California teaching hospitals increased

Table 4: Intern- and Resident-to-Bed Ratios for Selected States, FY 1985 and FY 1996

State	FY 1985 IRB Ratio	FY 1996 IRB Ratio	Percent Change FY 1985–FY 1996
California	0.20	0.26	27%
Florida	0.12	0.17	44%
Massachusetts	0.22	0.42	87%
New York	0.11	0.38	249%
Pennsylvania	0.15	0.25	73%
Texas	0.12	0.18	60%

Source: Health Care Financing Administration.

their combined IRB ratio by 27 percent between 1985 and 1996, less than in any of the other states included in this analysis. In contrast, the comparable increases in IRB ratios were 44 percent in Florida, 60 percent in Texas, 73 percent in Pennsylvania, 87 percent in Massachusetts, and 249 percent in New York.

The disparate increases in residents and, especially, IRB ratios may not always reflect conscious decisions of hospital boards and administrators about training new doctors. Some hospitals have relied on residents to develop research programs, for example. Other hospitals have reacted to market conditions by reducing the number of staffed beds or, alternatively, by increasing their use of residents to provide patient care. Many hospitals have increasingly relied on resident physicians to provide care to indigent populations, while still other hospitals make a business decision to use residents because they are often less expensive than advanced practice nurses or physician assistants and they generate GME revenues. In its Fifth Report, the New York Council on Graduate Medical Education acknowledged that GME payments represent a "substantial stream of hospital revenue" and an "incentive in a state where many hospitals are in a precarious financial position" (NY COGME, 1992/93). So while increasing training positions has been financially attractive for most institutions, hospitals in some states have made greater use of these Medicare funding opportunities as well as other sources such as Medicaid.

Hospital Organization and Accounting Practices

Payment variations also reflect institutional differences in organization and accounting practices. The Medicare GME system is based upon reported costs from FY 1984 or 1985, as determined by the individual hospital and approved by the regional fiscal intermediary; these reported costs vary without a consistent cause (Anderson, 1996; MedPAC 2000; COGME 2000). Hospitals that reported higher costs for either teaching or patient care at the inception of PPS, therefore, continue to have higher rates.

One source of variations is how hospitals account for faculty costs, which dominate the costs of resident training (Blewett, et al. 2001). In many hospitals, especially private institutions in the East, faculty were employed directly by the institution and their full salaries were incorporated into both DME costs and the hospital wage index. In contrast, many of the public university teaching hospitals may not have included the full allowable costs of residents, faculty salaries, and administrative overhead because the faculty had independent practices and the state provided some direct appropriations for clinical teaching support. The data in Table 2 on DME payments per resident suggest this is a common situation for hospitals in the University of California system.

Historical cost differences also influence the IME payment, since it is a proportional adjustment to the DRG. For example, the DRG rates have traditionally been much higher in New York city compared with other metropolitan areas, partly due to higher labor costs. These adjustments cannot entirely account for current variations in DRGs, however: The wage index adjustment is 45 percent for New York city and 42 percent for San Francisco (Federal Register 2000), yet most New York hospitals receive DRG payments considerably higher than their San Francisco Bay Area counterparts. Hospital trade associations have developed a

plan with HCFA to standardize reporting of hospital labor costs that will exclude teaching faculty and residents whose compensation is covered by DME payments (Federal Register 1999). The new calculation of the hospital wage index is being phased in over five years beginning in FY 2000 and will reduce some variations in DRG payments and the IME adjustment.

6

Policy Changes and Implications for California Teaching Hospitals

Despite the wide variation in GME payments by hospital and by state, policymakers did not seriously consider major initiatives to change GME payments until the mid-1990s. Many proposals have focused on the overall number of residents, balance of primary care residents and other specialties, and the source of funds for GME and have not recommended changing the method or calculation of GME support. Most of the proposals to establish new payment methods have not further defined the services provided by teaching hospitals that merit public support. Nor have they attempted to refine hospital accounting practices, which appear to differ widely among institutions.

Many Ideas and Proposals for Improvement

In 1990, the U.S. Department of Health and Human Services proposed to establish a more uniform DME payment per resident, yet it took nine years before the idea was incorporated into legislation. In 1995, the Congressional Budget Office recommended reducing the IME adjustment for hospitals with higher ratios of residents-to-beds, and to eliminate DME payments for international medical graduates and foreign citizens.

The 1996 Medical Education Trust Fund Act (S. 1870), sponsored by Senator Moynihan (D-NY), was one of the most significant proposed reforms of the current GME system. Its basic approach arose in the formulation of the Clinton health plan and was adopted by Congress in the original Balanced Budget Act of 1995 and vetoed by President Clinton. It would have shifted GME funding from Medicare into an all-payer pool and substantially expanded federal support of GME to nearly $10 billion. Both the Pew Health Professions Commission (1998) and COGME (1999; 2000) have subsequently advanced alternative proposals to establish a separate, all-payer pool for GME. In the 106th Congress, two bills (H.R. 1224 and S. 210) were introduced to establish such a funding mechanism. The COGME recommended that an all-payer fund include revenues from a modest surcharge on private insurance premiums, as well as amounts currently paid through Medicare IME and DME formulae, a federal portion of Medicaid payments, the Children's Hospital GME fund, and Title VII grants from the Health Resources and Services Administration for primary care residency training (COGME 2000, 9).

Recently, MedPAC proposed a very different approach to restructuring support for GME. It acknowledged that "teaching hospitals have systematically higher costs for inpatient care than do other hospitals because teaching facilities offer a broader and more technologically sophisticated array of services, attract patients who are more acutely ill, and furnish care that is more complex and intensive" (MedPAC 2000, 54). The commission recommended that Medicare consolidate current DME and IME payments into a single "teaching hospital adjustment" ranging from 3.2 to 5.9 percent of the DRG payment. In addition, it recommended setting ceilings on increases based on a hospital's IRB ratio. While MedPAC proposed that a new system be budget neutral, it estimated

that the actual cost differential for teaching and patient care in these institutions is only about $3.4 billion, approximately half of FY1998 GME outlays (MedPAC 2000, 70). MedPAC's approach would substantially reduce payment differences and could be used to justify reducing the overall level of federal support for teaching hospitals.

Recent Changes in Policy

The course of actual policy change has been more incremental than the proposals outlined above. The Balanced Budget Act of 1997 (P.L. 105-33) included a number of provisions to save costs in the Medicare program, among which were the first significant changes to the method of paying for GME. The Balanced Budget Act:

- Established a cap on the residents eligible for Medicare DME payments. The cap was based on the number hospitals reported for the period ending on or before December 31, 1996.
- Began phasing in reductions in the IME adjustment that Medicare adds to DRG payments for teaching hospitals. The initial reduction was from 7.7 to 7.0 percent (for each 10 percent increase in the IRB ratio) in FY 1998 with subsequent reductions to 5.5 percent by FY 2001.
- Set a retroactive, hospital-specific cap for the IRB ratio, such that a decline in hospital beds would not artificially inflate the IME adjustment. The Association of Academic Medical Centers (AAMC) projected that the new policy would reduce total Medicare IME payments by 29 percent over a four-year period from FY 1997 to FY 2001 (AAMC 1999).
- Authorized Medicare to carve out a portion of its capitation payments to HMOs and send them directly to teaching hospitals based on their services provided to beneficiaries enrolled in managed care plans. The carve-out provided a major new source of funding for GME, estimated to reach $2.6 billion as of FY 2002 (COGME 1999, xvi). Nationally, this new source of GME funding was expected to largely offset the reduction in IME payments. In states with high Medicare managed care enrollment, like California, the new carve-out could substantially increase overall GME payments.

Two years later, the overall fiscal environment had improved dramatically. Amid new forecasts of a substantial federal budget surplus, teaching hospitals and health plans lobbied heavily for relief from the payment cuts authorized in the Balanced Budget Act. The Balanced Budget Refinement Act of 1999 (P.L. 106-113) delayed the reductions in the IME adjustment adopted in 1997, restoring an estimated $600 million to teaching hospitals (AAMC 2000).

The 1999 legislation, while slowing the impact of the earlier cuts to teaching hospitals, also represented the first effort to explicitly reduce some of the variations in Medicare payments for GME. The key leadership in the 1999 legislation came from Representative Thomas (R-CA), then chair of the House Ways and Means Subcommittee on Health. It authorized a five-year transition to a "national average per resident DME payment system" and established a floor and ceiling for per-resident payments. Beginning in FY 2001, hospitals would receive a minimum of 70 percent of a locality-adjusted national average. The highest paid hospitals, with payments more than 40 percent above the national average for each resident, would not receive an inflation allowance in fiscal years

2001 or 2002. During the following three years, their payments would increase 2 percent less than the Consumer Price Index, while other teaching hospitals would receive a full inflation allowance (Pear 1999; AAMC 2000). The AAMC projected that the new method would have no significant impact on overall Medicare DME payments, allowing them to increase $19.8 million between 2001 and 2005.

During the past year, legislators continued efforts to reduce the variation in Medicare DME payments. In July 2000, Representative Bilbray (R-CA) proposed legislation (H.R. 5005) to set the DME per-resident payment floor at 100 percent of the locality-adjusted national average per resident amount. In its FY 2001 budget package, Congress continued to move in this direction by adopting H.R. 5661, the Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000. This legislation, sponsored by Representative Thomas, raised the floor for DME payments to 85 percent of the national average by FY 2002, and simultaneously provided some general relief to all teaching hospitals by delaying reductions in the IME payment formula authorized in the Balanced Budget Act. In January 2001, Senator Feinstein (D-CA) and four co-sponsors introduced S. 135, which would initiate a series of increases in the floor for DME payments-per-resident to reach 100 percent of the locality-adjusted national average by FY 2006. This proposal was consistent with the new report by COGME (2000, 11), which recommended establishing a base payment for DME costs that would vary only for differences in the cost of living across geographic areas.

Although California is relatively disadvantaged by the current allocation of Medicare GME payments, in the past its medical establishment appeared to place greater emphasis on supporting the national effort of teaching hospitals to protect their aggregate pool of GME funding than on seeking greater equity in its distribution. It has recently pursued both objectives. In 1999, the California Medical Association (CMA) portrayed the outcome of the status quo: "Due to the differences in the ways hospitals account for costs, there is a wide variation in Medicare's direct payments for medical education on a per-resident basis. . . . [The University of California] reports, for example, UCLA is paid $47,911 per resident for 531 FTE residents, while Mount Sinai Hospital (NY) is paid $122,402 per resident for 531 FTE residents."

The CMA proposed to (1) change the methodology by which DME payments are calculated; and (2) form a coalition with other states that may also be penalized by the current methodology. "We would not propose to reduce funding for states benefiting from the current funding mechanisms, but merely change the methodology to assist states that have historically been unfairly treated." This position is consistent with the framework for DME payments subsequently established through the efforts of Representative Thomas and advanced by members of the California congressional delegation from both parties.

7

Conclusions

The variations in GME payments across states and teaching hospitals described in this report reinforce the following points about Medicare policy:

- Academic medical centers are still rewarded for having more, not fewer, teaching programs and residents.
- Despite the Prospective Payment System set in place 16 years ago and recent refinements, GME payments are still tied to the historical cost allocation of individual hospitals and to variations in what costs hospitals report to Medicare's regional fiscal intermediaries.
- Because a large majority of total payments are for IME, not DME, significant reduction in payment variations depends on standardization of the IME adjustment or comprehensive reform of GME financing.

Given the incentives under the current system, it is not surprising that the number of U.S. residency positions grew 42 percent from 72,400 in 1984 to 102,600 in 1995 before stabilizing in the wake of cost containment measures in the Balanced Budget Act (Wray and Sadowski 1998; U.S. Congress 1999). Some institutions found that expanding their teaching programs would substantially increase revenue, mostly in the form of IME payments (Diamond, et al. 1993). In the judgment of COGME (2000, 29), "IME payments in excess of the analytically supported level have been counter-productive to physician workforce goals."

The incentives for larger teaching programs may be reinforced by state GME payments—typically through the Medicaid program—that totaled $2.4 billion in FY 1998. The National Conference of State Legislatures estimated that, in FY 1998, California teaching hospitals received $129 million in Medicaid GME payments, third among states and trailing behind only Michigan with $191 million and New York with $812 million (Henderson 2000, 226). The degree to which state GME payments offset or reinforce Medicare payment variations depends on the structure of those policies and level of payments.[13] Changes in Medicare payment policy, therefore, should take into account disparities in the overall funds available for GME across the states.

Federal policymakers have initiated action to reduce variations in Medicare GME payments to teaching hospitals, yet current policies are unlikely to achieve a significant reduction in payment variations. Most teaching hospitals receive far more revenue through IME than DME: In FY 1998, Medicare IME payments totaled $4.99 billion compared to $2.10 billion in DME payments (COGME 2000, 23). Furthermore, IME payments are the main source of growing disparities in total GME funding across individual hospitals and states. Thus, standardizing DME payments only will not address the main source of variation in total GME payments. Proposals such as the one by MedPAC, which eliminates the current DME and IME payments in favor of a single "teaching hospital adjustment," would establish a much more narrow range for total payments.

In examining GME payments, policymakers must consider whether some variations are related to changes in the broader health care system. Although the current policy favors hospitals with relatively large teaching programs, it is not clear

whether hospitals have expanded the number of residents in order to increase GME funding or, instead, simply to assure adequate staffing in a competitive market. These and other questions must be explored through further research and dialogue on the future of teaching hospitals.

Policymakers must proceed with caution because any change in GME payment policy will have a concentrated impact on a relatively small number of major teaching hospitals. As of 1995, more than 1,200 hospitals received Medicare IME payments; but one-fifth of the hospitals trained two-thirds of all residents and received two-thirds of all IME funds (AAMC 1999). The institutions affected by GME policy hold a central position in the economic, political, and health care systems of their communities and states.

Future policy decisions should rest, therefore, on (1) clearer agreement about which personal services and public goods provided by teaching hospitals deserve governmental support; (2) more research to determine what the costs of those services are and how they vary across hospitals of different types and sizes; and (3) more uniform administrative procedures that can distinguish between appropriate and inappropriate payment variations.

Appendices

Appendix 1: Medicare GME Payments to the Top Quartile of Teaching Hospitals in Selected States, FY 1987 and FY 1996*

State	Teaching Hospitals		Residents per Hospital		Medicare Discharges per Hospital		GME per Resident		DME per Resident		IME per Discharge		Medicare Share of Days	
FY	1987	1996	1987	1996	1987	1996	1987	1996	1987	1996	1987	1996	1987	1996
California	28	28	165	181	4,188	3,305	$44,317	$73,172	$14,636	$16,563	$1,030	$2,471	31%	25%
Florida	10	12	138	160	5,125	5,141	$46,503	$80,852	$20,249	$22,825	$ 644	$1,432	32%	36%
Massachusetts	9	10	183	261	4,960	7,059	$52,608	$124,631	$15,869	$27,185	$1,359	$3,474	36%	41%
New York	30	25	199	345	6,376	8,083	$66,703	$104,555	$33,003	$32,844	$ 992	$3,041	39%	37%
Pennsylvania	30	28	105	169	4,965	6,999	$75,142	$127,812	$34,942	$37,457	$ 888	$2,083	47%	45%
Texas	18	33	121	109	5,301	4,700	$56,786	$100,914	$30,678	$36,228	$ 564	$1,125	32%	37%

Source: Health Care Financing Administration

*The top 25 percent of hospitals (by total Medicare GME funding) in each state were included in this comparison.

Appendix 2: Trends in Medicare GME Payments for Selected States, FY 1985–FY 1998*

State	FY	Teaching Hospitals	Beds	Medicare Discharges	Hospital Residents	GME per Resident	DME per Resident	Adjusted DME per Resident†	IME per Discharge	Medicare Share of Days	Medicare GME Payments (in millions)
California	1985	105	30,276	281,885	5,917	$30,286	$9,990	$34,448	$426	29%	$179.20
	1986	111	31,859	295,887	6,393	$23,526	$8,988	$29,960	$314	30%	$150.40
	1987	110	30,522	278,064	6,207	$30,122	$9,658	$34,493	$457	28%	$186.97
	1988	110	30,783	259,002	6,109	$35,782	$9,314	$34,496	$624	27%	$218.59
	1989	108	30,156	238,808	‡	‡	‡	$22,862	$756	26%	$245.98
	1990	115	30,960	261,941	6,758	$39,675	$9,614	$36,977	$776	26%	$268.12
	1991	117	30,958	266,763	6,627	$42,033	$10,040	$38,615	$795	26%	$278.55
	1992	118	30,543	293,190	6,775	$44,309	$11,168	$41,363	$766	27%	$300.19
	1993	121	31,340	297,472	6,957	$46,562	$11,395	$43,827	$822	26%	$323.93
	1994	122	30,941	285,102	6,916	$50,478	$11,832	$47,328	$937	25%	$349.11
	1995	121	30,594	258,900	7,017	$47,673	$10,301	$42,921	$1,013	24%	$334.52
	1996	112	25,918	253,837	6,478	$54,375	$10,999	$45,829	$1,107	24%	$352.24
	1998	119	26,796	266,305	6,993	$38,130	$9,768	$42,470	$745	23%	$266.64
Florida	1985	37	12,944	138,399	1,539	$32,395	$12,584	$34,956	$220	36%	$49.86
	1986	36	12,516	120,463	1,479	$29,421	$12,496	$36,753	$208	34%	$43.51
	1987	38	13,068	122,537	1,655	$30,239	$11,565	$35,045	$252	33%	$50.05
	1988	42	13,190	124,257	1,743	$35,482	$11,789	$35,724	$332	33%	$61.84
	1989	39	12,501	69,764	1,637	$45,619	$19,754	$59,861	$607	33%	$74.68
	1990	45	14,586	140,014	1,661	$41,970	$14,199	$40,569	$329	35%	$69.71
	1991	48	15,762	150,704	1,774	$42,761	$13,486	$38,531	$345	35%	$75.86
	1992	46	15,472	164,008	2,152	$40,785	$13,084	$35,362	$363	37%	$87.77
	1993	52	17,435	201,160	2,026	$51,402	$16,902	$42,255	$347	40%	$104.14
	1994	49	16,356	188,822	2,170	$52,299	$15,873	$40,700	$419	39%	$113.49
	1995	49	16,130	183,563	2,166	$57,789	$16,551	$45,975	$487	36%	$125.17
	1996	46	12,631	167,026	2,123	$58,363	$15,609	$42,186	$543	37%	$123.90
	1998	53	16,396	220,863	2,369	$53,285	$16,315	$46,614	$397	35%	$126.23
Massachusetts	1985	43	13,242	126,508	2,961	$30,131	$15,654	$42,308	$339	37%	$89.22
	1986	41	12,171	110,382	2,565	$33,283	$12,680	$39,625	$479	32%	$85.37
	1987	38	10,904	108,866	2,719	$37,348	$10,208	$27,589	$678	37%	$101.55
	1988	40	11,117	120,367	2,842	$54,448	$15,873	$39,683	$911	40%	$154.74

Appendix 2: Trends in Medicare GME Payments for Selected States, FY 1985–FY 1998* (continued)

State	FY	Teaching Hospitals	Beds	Medicare Discharges	Hospital Residents	GME per Resident	DME per Resident	Adjusted DME per Resident†	IME per Discharge	Medicare Share of Days	Medicare GME Payments (in millions)
	1989	46	11,780	‡	2,640	$57,284	$22,176	$56,862	‡	39%	$151.23
	1990	49	13,792	143,887	3,981	$56,131	$18,522	$46,305	$1,041	40%	$223.46
	1991	51	13,914	148,363	3,571	$76,849	$23,865	$61,192	$1,275	39%	$274.43
	1992	54	14,331	172,362	3,993	$77,711	$23,411	$60,028	$1,258	39%	$310.30
	1993	53	13,998	178,938	4,045	$83,229	$24,608	$60,020	$1,325	41%	$336.66
	1994	52	13,452	181,550	5,095	$72,929	$20,262	$48,243	$1,478	42%	$371.57
	1995	49	11,847	164,854	3,532	$89,630	$24,238	$56,367	$1,401	43%	$316.57
	1996	40	8,074	156,121	3,354	$113,949	$27,513	$62,530	$1,857	44%	$382.18
	1998	36	7,485	143,792	3,432	$96,463	$24,587	$63,044	$1,716	39%	$331.06
New York	1985	132	85,679	477,751	9,197	$29,654	$29,532	$105,471	$2#	28%	$272.73
	1986	120	51,789	446,791	8,581	$47,445	$25,855	$86,183	$415	30%	$407.12
	1987	119	44,764	430,071	8,721	$62,892	$31,724	$93,306	$632	34%	$548.48
	1988	114	46,587	438,118	9,099	$68,648	$28,769	$79,914	$828	36%	$624.63
	1989	117	47,094	444,540	10,140	$69,743	$28,407	$75,800	$943	38%	$707.20
	1990	113	44,164	448,324	10,549	$74,008	$29,654	$72,918	$1,044	39%	$780.71
	1991	108	41,805	447,168	10,896	$75,775	$28,956	$69,956	$1,141	41%	$825.64
	1992	132	46,919	472,022	13,996	$67,945	$27,529	$78,631	$1,198	35%	$950.95
	1993	131	46,252	481,956	14,646	$76,309	$29,322	$81,800	$1,428	35%	$1,117.62
	1994	135	46,455	503,494	15,272	$80,159	$29,725	$84,067	$1,530	36%	$1,224.19
	1995	134	45,795	512,204	15,087	$86,408	$30,932	$86,422	$1,634	36%	$1,303.64
	1996	101	33,218	481,413	12,229	$101,039	$33,651	$81,652	$1,712	42%	$1,235.61
	1998	110	35,509	486,762	13,968	$87,121	$32,651	$83,531	$1,563	39%	$1,216.90
Pennsylvania	1985	132	34,885	476,939	4,897	$59,403	$28,205	$60,011	$320	47%	$290.90
	1986	115	31,769	420,328	4,660	$45,845	$22,892	$47,692	$254	48%	$213.64
	1987	122	31,618	426,997	4,383	$74,797	$38,307	$78,178	$375	49%	$327.83
	1988	140	34,734	472,826	5,253	$73,794	$29,428	$61,308	$493	48%	$387.64
	1989	141	34,185	398,073	5,491	$78,501	$30,172	$61,576	$667	49%	$431.05
	1990	140	34,679	364,473	5,621	$84,678	$33,092	$66,184	$796	50%	$475.98
	1991	140	34,901	422,719	5,727	$92,336	$34,703	$68,045	$781	51%	$528.81
	1992	135	33,808	535,942	6,006	$99,284	$36,603	$70,390	$702	52%	$596.30
	1993	135	34,075	546,595	6,122	$111,008	$44,788	$86,131	$742	52%	$679.59
	1994	131	31,654	483,112	6,252	$110,872	$39,183	$75,352	$928	52%	$693.17
	1995	127	30,243	460,452	6,370	$112,661	$38,089	$77,733	$1,032	49%	$717.65
	1996	114	24,283	450,006	5,891	$114,813	$34,329	$70,059	$1,054	49%	$676.37
	1998	93	20,112	367,495	5,091	$89,957	$31,495	$69,989	$810	45%	$457.97

Appendix 2: Trends in Medicare GME Payments for Selected States, FY 1985–FY 1998* (continued)

State	FY	Teaching Hospitals	Beds	Medicare Discharges	Hospital Residents	GME per Resident	DME per Resident	Adjusted DME per Resident†	IME per Discharge	Medicare Share of Days	Medicare GME Payments (in millions)
Texas	1985	91	28,056	223,765	3,162	$20,366	$7,447	$25,679	$183	29%	$64.40
	1986	75	20,719	183,836	2,601	$18,863	$7,894	$26,313	$155	30%	$49.06
	1987	72	19,247	187,800	2,643	$26,117	$8,572	$25,976	$247	33%	$69.03
	1988	78	22,063	221,294	3,429	$29,424	$8,664	$26,255	$322	33%	$100.89
	1989	74	20,593	146,013	3,354	$33,611	$12,962	$40,506	$474	32%	$112.73
	1990	81	22,464	225,373	3,523	$34,892	$11,661	$35,336	$363	33%	$122.92
	1991	88	23,809	215,389	3,764	$37,343	$11,391	$33,503	$454	34%	$140.56
	1992	94	76,224	251,816	3,946	$37,345	$11,149	$32,791	$411	34%	$147.37
	1993	92	23,673	255,816	4,221	$39,433	$11,938	$35,112	$454	34%	$166.45
	1994	98	23,958	272,472	3,981	$44,797	$12,892	$35,811	$466	36%	$178.34
	1995	101	23,596	282,422	‡	‡	‡	$39,036	$506	36%	$198.81
	1996	133	20,572	300,873	3,704	$58,783	$15,214	$40,037	$536	38%	$217.73
	1998	116	20,520	301,180	3,738	$48,929	$14,540	$39,297	$427	37%	$182.90

Source: Health Care Financing Administration

* Data for FY 1997 are excluded due to reporting errors arising from a change in the cost report forms.

† The adjusted rate (DME per resident/Medicare share of inpatient days) reflects the amount a hospital would have received if it treated only Medicare patients.

‡ Missing or erroneous data.

New York was operating an all-payer hospital rate setting program in FY 1985 and received almost all of its Medicare GME funding in the form of DME; this changed the following year.

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Notes

[1] These estimates were compiled by the Congressional Research Service based on data from the Office of the Actuary in the Health Care Financing Administration. The report notes that the recorded decline in residency positions may be due to changes in data collection (U.S. Congress 1999, 107). The changes authorized in the Balanced Budget Act took effect in FY 1998.

[2] Each Medicare patient is classified according to the primary diagnosis of his or her medical condition. There is an established level of payment based on the average volume and costs of medical tests and treatments involved for that diagnostic category. The payments are adjusted for regional variations in hospital costs.

[3] For example, a study in Minnesota estimated that the average cost of IME to each hospital was $22,231 per resident while in Maryland the average estimated cost was $57,987 (United Hospital Fund, 1997).

[4] Medicare makes separate payments to hospitals with a disproportionate share of uncompensated care, many of which are teaching institutions.

[5] California hospitals in this category included Stanford University and four hospitals affiliated with the University of California.

[6] These data are compiled from the Hospital Cost Report minimum data set (public use file) and rely upon reporting by Medicare's fiscal intermediaries, which have reported most payments through FY 1998 and, in some cases, FY 1999. Data for FY 1997 are excluded due to reporting errors arising from a change in the cost report forms; HCFA and fiscal intermediaries are now correcting GME calculations. Data for FY 1998 are complete only for an estimated 88 percent of hospitals as of January 2001, so they are generally not used for this analysis.

[7] Although PPS was implemented in FY 1984, hospitals were phased into the new system over a period of several years. Depending on their cost-reporting period, hospitals received a different blend of hospital-specific rates and federal rates (a national-regional blend). In addition, hospitals in states with all-payer rate setting systems still in effect at the start of PPS (Massachusetts, New Jersey, and New York) may have experienced substantial changes in GME payments as those all-payer programs ended. Those changes mean it is difficult to make exact comparisons of GME payments across hospitals and states during the early years of PPS.

[8] These variations persist when smaller teaching programs are dropped from the analysis (see Appendix 1). In six selected states, the top quarter of teaching hospitals received between 76 percent (Massachusetts) and 87 percent (California) of all Medicare GME payments. For the top quarter of teaching hospitals, average DME payments per resident ranged from $16,563 in California to $37,457 in Pennsylvania. Most notably, average DME payments increased to $36,228 per resident in the top quarter of Texas teaching hospitals.

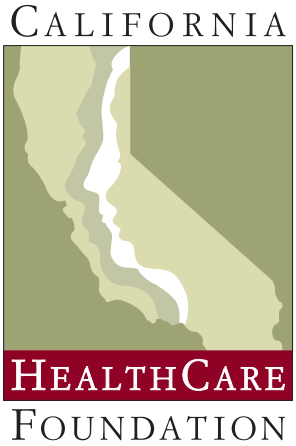
[9] Among the top quarter of teaching hospitals in each state, average IME payments per discharge ranged from $1,125 in Texas to $3,474 in Massachusetts (see Appendix 1).

[10] Medicare beneficiaries constitute 11.9 percent of the total population in California, compared with 14.4 percent for the United States as a whole (Green, et al. 1999, 18).

[11] The average number of inpatient days per Medicare discharge in FY 1996 was 5.57 in California, 6.03 in Ohio, 6.17 in Illinois, 6.19 in Missouri, 6.25 in Massachusetts, 6.34 in Texas, 6.43 in Michigan, 6.55 in Pennsylvania, 6.83 in Connecticut, 7.03 in North Carolina, 8.64 in New Jersey, and 9.04 in New York.

[12] For example, in 1996 California had high managed care enrollment in commercial insurance and Medicaid managed care enrollment (77 percent) as well as Medicare (38 percent). In contrast, Massachusetts had high commercial and Medicaid managed care enrollment (75 percent) but low Medicare managed care enrollment (16 percent). New York also had high commercial and Medicaid managed care enrollment (60 percent) but low Medicare managed care enrollment (13 percent) (Committee on Ways and Means 1999, Figure 4.25). These disparities in managed care penetration would likely affect hospital length of stay for Medicare beneficiaries.

[13] Several states, including Massachusetts and New Jersey, have completely eliminated Medicaid IME payments (United Hospital Fund 1997). Minnesota has established a medical education trust fund with general tax revenues, a portion of Medicaid capitation payment to health plans, and a portion of the state's tobacco settlement (Blewett and Weslowski 2000). In California, teaching hospitals receive direct state appropriations for clinical teaching support.



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