ENHANCING DIRECT MEDICAL EDUCATION AND INDIRECT MEDICAL EDUCATION PAYMENTS

A Report to the Joint Commission on Health Care

Virginia Department of Medical Assistance Services

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EXECUTIVE SUMMARY

In a recent study, the Joint Commission on Health Care (JCHC) identified workforce shortages affecting the delivery of and access to health care in Virginia. Based on this study, the JCHC made several recommendations directed at increasing the number of physicians practicing in the specialties with shortages in Virginia, including a request to the Department of the Medical Assistance Services (DMAS). That request asked that DMAS outline a methodology and furnish a cost estimate for enhancing direct medical education (DME) and indirect medical education (IME) payments to graduate medical education programs in Virginia for the specialties identified with shortages in primary care, general surgery, geriatrics, psychiatry, and emergency medicine.

For state fiscal year (SFY) 2009, DMAS reimbursed over $36 million in indirect medical education (IME) and direct medical education (DME) to private hospitals. Although DMAS also reimburses state teaching facilities and for paramedical costs, this report will focus on the payments for interns and residents made to private hospitals and will estimate the cost of enhancing their graduate medical education payments. This report will clarify the definition of DME and identify the assumptions necessary to develop a methodology to enhance reimbursement. An estimate of the cost associated with incentivizing training in programs with shortages will require data from the entities that authorize the various residency training programs.

Based on the assumptions and methodological options outlined in this report, enhancing payments for graduate medical education programs to address the workforce shortages in Virginia may cost between $1.07 million and $2.17 million in total funds. This estimate relies on information from Medicaid cost reports reported by facilities that participate with the Medicaid Program and residency program data from the entities that accredit national residency programs. Additional costs may arise from the out-of-state residency programs and new programs expected to begin in 2011.

INTRODUCTION

The JCHC conducted a study of Virginia's Health Professional Workforce Shortages in 2009 that identified physician shortages in primary care, general surgery, geriatrics, psychiatry, and emergency medicine. JCHC staff presented a number of potential options to increase the number of physicians practicing in these specialties. One option involves increasing Medicaid funding for graduate medical education. In a May 10, 2010 letter from the JCHC Chairman, the JCHC requested that DMAS "develop and report, by August 30, 2011, on a methodology and cost estimate for providing enhanced direct medical education (DME) and indirect medical education (IME) payments to graduate medical programs in Virginia that train physicians in primary care, general surgery, geriatrics, psychiatry, and emergency medicine." For this report, DMAS will refer to DME as Graduate Medical Education (GME), which is the terminology used in the State Plan for Medical Assistance and state regulations.

BACKGROUND ON VIRGINIA MEDICAID REIMBURSEMENT FOR MEDICAL EDUCATION

Medicare and Medicaid are the only two payers that explicitly reimburse for GME and IME and not all state Medicaid agencies reimburse for medical education. Commercial payers' overall reimbursement is generally higher than Medicare's or Medicaid's, so arguably they already contribute indirectly to medical education.

The formulas for GME and IME payments are not designed to pay for total GME or IME costs but the Medicare or Medicaid share of the costs. The potential Medicaid reimbursement for GME or IME therefore is proportional both to the size of the medical education program (number of residents and interns or total costs) and Medicaid utilization/revenue as a percentage of total utilization/revenue. The Medicaid inpatient hospital utilization for private hospitals who are involved in medical education is approximately 17 percent in Virginia. Therefore, Medicaid pays for about 17 percent of graduate medical education in Virginia private hospitals.

Although the payment of GME and IME is based on Medicare methodologies, the references to these payments in Virginia state regulations differ from federal regulations. (See Table 1).

Table 1 – Medical Education Reimbursement Categories

Medicare	Virginia Medicaid
Direct Graduate Medical Education (DGME)	Graduate Medical Education (GME)
Nursing and Allied Health	Nursing and Paramedical Education (DMedEd)
Indirect Medical Education (IME)	Indirect Medical Education (IME)

Payment for direct medical education costs of nursing schools, paramedical programs, and graduate medical education for interns and residents is described in state regulations at *12VAC 30-70-281* (see Appendix A). DMAS reimburses for nursing and paramedical programs on an allowable cost basis. DMAS reimburses graduate medical education for interns and residents based on the per resident amount prospectively determined using the 1998 base year Medicaid costs (or a more recent year for new programs) for GME inflated each year by hospital inflation times the number of residents and interns. Each year the estimated DMedEd and GME reimbursement is calculated and paid on an interim basis. Total DMedEd payments are settled to actual Medicaid costs for nursing and paramedical education. GME payments are settled to the actual number of interns and residents and allocated to inpatient and outpatient services for all hospitals including freestanding rehabilitation hospitals. The reimbursement methodology implicitly includes reimbursement for the Medicaid managed care share of DMedEd and GME. The only hospitals excluded from medical education reimbursement are freestanding psychiatric hospitals.

Payment for IME costs is described separately in *12VAC30-70-291* (See Appendix B). There is a separate formula for Type One – state-owned teaching hospitals, and Type Two – all other hospitals. Both methodologies use the ratio of interns and residents to beds and a specific formula to determine the IME percentage that is multiplied by Virginia Medicaid operating payments to calculate the IME payment. The IME percentage used in the methodology for reimbursement for Type Two hospitals was based on Medicare-sponsored research on the additional diagnostic and treatment costs incurred by hospitals as a result of physician training programs. The IME percentage and payment is calculated on an interim basis and settled to the actual IME percentage and operating payments for the rate year. The IME formula explicitly includes an additional amount for Medicaid managed care members based on managed care discharges.

Some out-of-state hospitals, primarily hospitals located in hospital markets that serve Virginia residents (Tennessee, North Carolina and the District of Columbia), also enroll and are reimbursed the same as Virginia hospitals. If these hospitals meet the requirements for DMedEd, GME and IME payments, Virginia Medicaid makes these same payments to out-of-state hospitals in proportion to the services furnished Virginia Medicaid residents. Beginning in SFY 2011, the budget directed DMAS to make IME payments only to out-of-state hospital that have Virginia Medicaid utilization in the rate setting base year of at least 12 percent of total Medicaid days.

DMAS reimburses hospitals an interim amount of IME, GME and DME on a quarterly schedule. The actual reimbursement amount is determined during the cost settlement process. The reimbursement amount of IME, GME and DMedEd totaled $103.8 million for public hospitals and $36.9 million for private hospitals for SFY 2009. See Table 2. This reflects the reimbursement based on the settled cost report.

Table 2 – Summary of SFY 2009 Medical Education Costs

Hospital Type	DMedEd - Nursing & Paramedical	GME	IME	Total GME DMedEd IME
Type One (UVA and VCU)	**$ 567,875**	**$ 22,208,140**	**$ 80,978,021**	**$ 103,754,036**
Type Two (all Other Hospitals	**$ 1,605,634**	**$ 11,669,908**	**$ 23,578,339**	**$ 36,853,881**
All Hospitals	**$ 2,173,509**	**$ 33,878,048**	**$ 104,556,360**	**$ 140,607,917**

The reimbursement for nursing and paramedical education will be excluded from the cost estimate for this study since the request is focused on reimbursement options for physician training programs for interns and residents. DMAS already pays Type One hospitals up to the Upper Payment Limit and cannot pay those facilities more in non-Disproportionate Share Hospital (DSH) Medicaid reimbursement. Therefore, we have also excluded them from any further analysis of options for increased reimbursement for physician training programs. The exclusion of Type One hospitals and costs for nursing and paramedical education costs reduces the amount of medical education reimbursement for IME and GME for the cost estimate to $35.2 million, see Table 3. Table 3 has further summarized reimbursement for out-of-state and in-state

Type Two hospitals given that there may be interest in different policies for in-state and out-of-state hospitals.

Table 3 – Summary of SFY 2009 Medical Education Reimbursement for Type Two Hospitals for Physician-Training Programs

Type Two Hospitals	GME	IME	Total
Out-of-State	$ 1,339,534	$ 5,132,453	$ 6,471,987
In-State	$ 10,330,374	$ 18,445,886	$ 28,776,260
Total	$ 11,721,237	$ 20,588,450	$ 35,248,247

Appendix C reports hospital specific reimbursement for GME and IME, the number of interns and residents (FTEs) and utilization from cost reports for providers with fiscal year ends (FYEs) in SFY 2009. Based on the number of residents and interns, Medicaid annual reimbursement averaged $39,940 per resident for in-state Type Two hospitals and $2,741 per resident for out-of-state Type Two hospitals in FY09. In the future, the average reimbursement per resident for out-of-state hospitals will be reduced by the elimination of IME for some out-of-state hospitals in SFY 2011.

BACKGROUND ON INTERNS AND RESIDENTS BY SPECIALTY

Although the Medicaid cost report collects the numbers of interns and residents by hospital, the specialties associated with those interns and residents are not reported. In order to develop a methodology and a cost estimate to enhance payments for the specialties recommended by the JCHC, another source will be required to estimate the numbers of interns and residents by specialty.

The Accreditation Council for Graduate Medical Education (ACGME) conducts the accreditation process for post-medical degree training programs in the United States. ACGME makes available data summarizing the number of interns and residents by programs and sponsoring institutions. The listing of programs and the corresponding sponsoring institutions contains the number of approved and filled positions for each year of the program. (See Appendix D.)

According to the ACGME data, graduate medical programs in Virginia for the specialties identified with shortages in primary care, general surgery, geriatrics, psychiatry, and emergency medicine, represent more than half (56 percent) of the graduate medical programs in Virginia. Primary care programs, defined as family medicine, internal medicine, pediatrics, represent over one-third (34 percent) of the graduate medical programs in Virginia. While we have included all residency programs for internal medicine, at least some residents in internal medicine may continue their medical education in specialties that are not in shortage.

In this report, the impact of increasing reimbursement for those programs with shortages will be estimated based on the distribution of residency programs by specialty as of May 2011. We have not made any adjustment for length of residency or type of program. Internships,

fellowships and transitional year programs are typically only one year in length. Most residency programs have various lengths from three to seven years. Surgery residency programs are typically five years, whereas family medicine, internal medicine and pediatric programs are typically three years. Fellowships in geriatric medicine are only one year of training after completion of a residency program.

The American Osteopathic Association (AOA) also performs accreditation for doctor of osteopathy (D.O.) programs. The AOA publishes a list of intern and residency opportunities for osteopaths including the number of approved and filled positions by hospital and program.

Out of state residency programs affiliated with medical schools like Duke University, East Tennessee State, Wake Forest University, George Washington University, Georgetown, and Washington Hospital Center may also provide physicians in training to Virginia hospitals. The programs sponsored by these facilities also have almost half, approximately 47 percent, of the specialties designated with a shortage and almost a third, 30 percent, of primary care specialties. However, estimating the impact of which residents will be trained at Virginia hospitals is complicated by the relationships with out-of-state hospitals and residency programs. Although the hospitals affiliated with these programs participate with the Medicaid program, the additional costs of enhanced payments would be difficult to estimate. The number of residents that will eventually practice in Virginia is even more difficult to predict. Additionally, the elimination of IME payments for some of these out-of-state hospitals would decrease the likelihood of enhanced medical education payments for specialties with shortage or primary care specialties increasing the number of residents in these specialties from out-of-state programs.

COST ESTIMATE

A proposed methodology to enhance medical education payments may be implemented in a couple of ways. Viable options must define the specialties and the facilities that will be eligible for the enhanced payments. Collection of this information will require modification of the Medicaid cost report to collect the specialty of the full-time equivalents (FTEs) currently collected. To increase payments for GME and IME, one feasible option would be to increase payments by a fixed percentage for qualifying specialties. For this study, DMAS modeled the cost of a 10-percent higher payment. If higher incentives are desired, the percentage can be increased with a proportional increase in the cost.

Table 4 shows the cost of applying a 10-percent differential to reimbursement for programs that train physicians in the specialties identified with shortages. Dual programs such as internal medicine/pediatrics, and internal medicine/emergency medicine, and subspecialties for pediatrics and psychiatry are included in the estimate. Implementing a 10-percent differential for graduate medical programs with residency programs for all specialty programs identified by JCHC as having a shortage of medical professionals will cost an estimated $1.97 million in total funds, ($0.98 million in general funds). If the differential is limited to in-state hospital interns and residents, the estimated impact is $1.61 million total funds, $0.80 million general funds.

The cost estimate assumes an average cost for all residency programs and makes no adjustments for length of the program.

Table 4 – Cost Impact of 10-Percent Increase to Designated Specialties

	In-State Hospital IME and GME Reimbursement	Cost Impact of 10-Percent Increase	Out-of- State Hospital IME and GME Reimbursement	Cost Impact of 10-Percent Increase	Total IME and GME Reimbursement	Cost Impact of 10-Percent Increase
All Specialties Identified with Shortages	*$16,080,091*	*$1,608,009*	*$3,616,528*	*$361,653*	*$19,696,619*	*$1,969,662*
Primary Care Specialties	*$9,686,802*	*$968,680*	*$2,178,631*	*$217,863*	*$11,865,433*	*$1,186,543*

If these higher payment formulas result in more intern and residency programs in shortage specialties as intended, the additional cost will include the cost for both existing and new programs. We do not have any information on the impact of higher payments, but we assumed for this study that a 10 percent increase in total payments would result in a 10 percent increase in Medicaid medical education reimbursement (see Table 5 for a summary of the increased costs for a 10 percent increase in Medicaid medical education costs for both existing and new programs for shortage specialties). The cost for new programs represents approximately 3.7 additional FTEs for In-State Type Two Hospitals at the current average reimbursement per resident of $39,940 increased by 10 percent.

Table 5 – Methodology Options and Cost

Options	Hospitals	Estimated Cost for Existing Programs	Estimated Cost for New Programs	Total Cost
Option 1 – 10-Percent Differential for Specialties Identified With Shortages	**All Type Two**	*$1,969,662*	*$196,966*	*$2,166,628*
	In-State Type Two	*$1,608,009*	*$160,801*	*$1,768,810*
Option 2 – 10-Percent Differential for Primary Care Specialties	**All Type Two**	*$1,186,543*	*$118,654*	*$1,305,197*
	In-State Type Two	*$968,680*	*$ 96,868*	*$1,065,548*

There could be future increases in Medicaid reimbursement for medical education in general and physician shortage specialties in particular that are not reflected in the current cost or this cost estimate. For example, the AOA's list of available residency programs for D.O.s in Virginia includes an additional 236 primary care positions in 2011. There may be other initiatives related to health care reform to address workforce shortages that will result in increases in reimbursement for medical education programs.

CONCLUSION

Addressing the workforce shortages in Virginia that contribute to the problems with delivery of and access to health care in Virginia may be addressed in several ways. This report concentrated on the development of a methodology and a cost evaluation of that methodology to enhance DME and IME payments at the request of the JCHC. The terminology related to graduate medical education in Medicaid versus other programs is clarified in this report to clearly define which costs are included in the methodology. Any assumptions used to develop the cost impact are enumerated including the lack of specialty and program information in the Medicaid data collected from facility cost reports.

The options presented in this report represent an estimated cost derived from applying a 10-percent differential to graduate medical education payments for the hospitals with interns and residents in the specialty programs as defined in each option. The estimate of costs for each option ranges from $0.96 million (if limited to primary care specialties for in-state private hospitals) to $1.97 million (if it includes all shortage specialties and both in-state and out-of-state private hospitals) in total funds for existing programs and an additional $0.10 million to $0.20 million in total funds for new programs. Additional cost may also be incurred by residents from out-of-state residency programs and, the future matriculation of over two hundred residents from the newly formed D.O. residency programs expected to be operational in 2011.

APPENDIX A

12VAC30-70-281. Payment for direct medical education costs of nursing schools, paramedical programs, and graduate medical education for interns and residents.

A. Direct medical education costs of nursing schools and paramedical programs shall continue to be paid on an allowable cost basis. Payments for these direct medical education costs shall be made in estimated quarterly lump sum amounts and settled at the hospital's fiscal year end.

B. Final payment for these direct medical education (DMedEd) costs shall be the sum of the fee-for-service DMedEd payment and the managed care DMedEd payment. Fee-for-service DMedEd payment is the ratio of Medicaid inpatient costs to total allowable costs, times total DMedEd costs. Managed care DMedEd payment is equal to the managed care days times the ratio of fee-for-service DMedEd payments to fee-for-service days.

C. Effective with cost reporting periods beginning on or after July 1, 2002, direct graduate medical education (GME) costs for interns and residents shall be reimbursed on a per-resident prospective basis, subject to cost settlement as outlined in subsection E of this section.

D. The new methodology provides for the determination of a hospital-specific base period per-resident amount to initially be calculated from cost reports with fiscal years ending in state fiscal year 1998 or as may be re-based in the future and provided to the public in an agency guidance document. This per-resident amount shall be calculated by dividing a hospital's Medicaid allowable direct GME costs for the base period by its number of interns and residents in the base period yielding the base amount.

E. The base amount shall be updated annually by the DRI-Virginia moving average values as compiled and published by DRI-WEFA, Inc. (12VAC30-70-351). The updated per-resident base amount will then be multiplied by the weighted number of full-time equivalent (FTE) interns and residents as reported on the annual cost report to determine the total Medicaid direct GME amount allowable for each year. Payments for direct GME costs shall be made in estimated quarterly lump sum amounts and settled at the hospital's fiscal year end based on the actual number of FTEs reported in the cost reporting period. The total Medicaid direct GME allowable amount shall be allocated to inpatient and outpatient services based on Medicaid's share of costs under each part.

F. Direct medical education shall not be a reimbursable cost in freestanding psychiatric facilities licensed as hospitals.

APPENDIX B

12VAC30-70-291. Payment for indirect medical education costs.

A. Hospitals shall be eligible to receive payments for indirect medical education. Out-of-state cost reporting hospitals are eligible for this payment only if they have Virginia Medicaid utilization in the base year of at least 12% of total Medicaid days. These payments recognize the increased use of ancillary services associated with the educational process and the higher case-mix intensity of teaching hospitals. The payments for indirect medical education shall be made in estimated quarterly lump sum amounts and settled at the hospital's fiscal year end.

B. Final payment for IME shall be determined as follows:

1. Type One hospitals shall receive an IME payment equal to the hospital's Medicaid operating reimbursement times an IME percentage determined as follows:

IME Percentage for Type One Hospitals = $[1.89 \text{ X } ((1 + r)^{0.405}-1)] \text{ X (IME Factor)}$

An IME factor shall be calculated for each Type One hospital and shall equal a factor that, when used in the calculation of the IME percentage, shall cause the resulting IME payments to equal what the IME payments would be with an IME factor of one, plus an amount equal to the difference between operating payments using the adjustment factor specified in subdivision B 1 of 12VAC30-70-331 and operating payments using an adjustment factor of one in place of the adjustment factor specified in subdivision B 1 of 12VAC30-70-331.

2. Type Two hospitals shall receive an IME payment equal to the hospital's Medicaid operating reimbursement times an IME percentage determined as follows:

IME Percentage for Type Two Hospitals = $[1.89 \text{ X } ((1 + r)^{0.405}-1)] \text{ X } 0.5695$

In both equations, r is the ratio of full-time equivalent residents to staffed beds, excluding nursery beds. The IME payment shall be calculated each year using the most recent reliable data regarding the number of full-time equivalent residents and the number of staffed beds, excluding nursery beds.

C. An additional IME payment shall be made for inpatient hospital services provided to Medicaid patients but reimbursed by capitated managed care providers. This payment shall be equal to the hospital's hospital specific operating rate per case, as determined in 12VAC30-70-311, times the hospital's HMO paid discharges times the hospital's IME percentage, as determined in subsection B of this section.

D. An additional IME payment not to exceed $1.9 million in total shall be apportioned among Type Two Hospitals with Medicaid NICU utilization in excess of 50% and with overall Medicaid utilization in excess of 50% as reported to the Department of Medical Assistance Services as of March 1, 2004. These payments shall be apportioned based on each eligible hospital's percentage of Medicaid NICU patient days relative to the total of these days among eligible hospitals as reported by March 1, 2004.

(Regulations do not yet reflect changes to IME payments for Medicaid NICU services effective July 1, 2011 adopted by the 2011 General Assembly.)

APPENDIX C

Graduate Medical Education Reimbursement By Hospital for SFY 2009

Provider Name	Medicaid Utilization	FTEs	SFY 2009 GME Reimbursement	SFY 2009* IME Reimbursement	SFY 2009 Total Medical Education Reimbursement
Bristol Memorial Hospital	0.1448	31.37	$ 89,245	$ 406,539	$ 495,784
N. C. Baptist Hospital	0.2179	617.00	$ 408,880	***$ 1,161,288***	$ 1,570,168
Georgetown University Hospital	0.1714	274.76	$ 152,126	***$ 604,576***	$ 756,702
George Washington University Hospital	0.2246	236.49	$ 64,630	***$ 125,452***	$ 190,082
Holston Valley Hospital	0.1590	36.88	$ 46,568	$ 274,881	$ 321,449
Washington Hospital Center	0.1870	294.95	$ 34,748	*$ 76,179*	$ 110,927
Children's Hospital NMC	0.0662	222.81	$ 141,146	***$ 1,811,164***	$ 1,952,310
Johnson City Medical Center Hospital	0.2479	97.45	$ 99,479	$ 401,867	$ 501,346
Duke University Medical Center	0.2160	539.64	$ 298,863	***$ 264,175***	$ 563,038
Indian Path Hospital	0.1346	1.42	$ 3,849	***$ 6,332***	$ 10,181
National Rehabilitation Hospital	0.0008	8.38	$ 913	$ -	$ 913
Out of State Hospitals Total		**2,361.15**	**$ 1,340,447**	**$ 5,132,453**	**$ 6,472,900**
Carilion Medical Center	0.2218	126.55	$ 1,564,258	$ 2,613,599	$ 4,177,857
Depaul Medical Center	0.1112	16.59	$ 160,225	$ 364,142	$ 524,367
Montgomery Regional Hospital	0.0768	12.13	$ 21,277	$ -	$ 21,277
Norton Community Hospital	0.2840	14.66	$ 280,107	$ 175,862	$ 455,969
Riverside Hospital	0.1993	59.69	$ 936,193	$ 1,611,625	$ 2,547,818
Louise Obici Memorial Hospital	0.1527	2.04	$ 56,735	$ 36,940	$ 93,675
Loudoun Memorial Hospital	0.1224	0.13	$ 248	$ 7,394	$ 7,642
Warren Memorial Hospital	0.1093	8.12	$ 69,135	$ 131,807	$ 200,942
Sentara Norfolk General Hospital	0.2505	116.33	$ 849,851	$ 3,544,787	$ 4,394,638
Bon Secours St Francis	0.0884	17.38	$ 45,532	$ 64,288	$ 109,820
Sentara Bayside Hospital	0.0830	3.32	$ 32,982	$ 20,220	$ 53,202
Chippenham Johnston Willis Medical Ctr	0.1408	3.99	$ 9,788	$ 89,338	$ 99,126
Winchester Medical Center	0.1575	5.28	$ 64,499	$ 88,519	$ 153,018
Virginia Beach General Hospital	0.0999	4.93	$ 24,607	$ 49,533	$ 74,140
Maryview Hospital	0.1728	16.07	$ 116,427	$ 339,821	$ 456,248
Virginia Baptist Hospital	0.1908	15.73	$ 230,605	$ 361,988	$ 592,593
Arlington Hospital	0.1158	41.23	$ 1,119,738	$ 532,072	$ 1,651,810

Graduate Medical Education Reimbursement By Hospital for SFY 2009 continued

Provider Name	Medicaid Utilization	FTEs	SFY 2009 GME Reimbursement	SFY 2009 IME Reimbursement	SFY 2009 Total Medical Education Reimbursement
Sentara Leigh Hospital	0.0957	9.76	$ 52,063	$ 139,587	$ 191,650
Fairfax Hospital	0.2087	160.91	$ 912,175	$ 3,686,776	$ 4,598,951
CHKD	0.8594	76.31	$ 3,726,282	$ 4,487,165	$ 8,213,447
St. Mary's Hospital Richmond	0.1078	7.32	$ 26,866	$ 97,674	$ 124,540
Rehabilitation Institute of VA	0.1114	1.00	$ 4,531	$ -	$ 4,531
Children's Hospital	-	1.00	$ 25,337	$ 2,749	$ 28,086
In State Type Two Hospitals Total		**720.47**	**$ 10,329,461**	**$ 18,445,886**	**$ 28,775,347**
UVA Hospital	0.2516	654.17	$ 13,907,157	$ 40,461,506	$ 54,368,663
MCV Hospital	0.2899	498.00	$ 8,300,983	$ 40,516,515	$ 48,817,498
Type One Hospitals Total		**1,152.17**	**$ 22,208,140**	**$ 80,978,021**	**$ 103,186,161**
Grand Total for All Hospitals		**4,233.79**	**$ 33,878,048**	**$ 104,556,360**	**$ 138,434,408**

For amounts in bold, effective July 1, 2010 IME payments were eliminated for out-of-state hospitals with less than 12 percent Virginia Medicaid utilization.

Data Source: Medicaid Cost Reports collected by DMAS.

APPENDIX D

Residency Programs in Virginia by Specialty

Specialty	Filled Positions	Primary Care	Specialties Identified with Shortages
Addiction psychiatry	0		
Adult cardiothoracic anesthesiology	2		
Adult reconstructive orthopaedics	4		
Allergy and immunology	7		
Anesthesiology	117		
Blood banking/transfusion medicine	1		
Cardiovascular disease	33		
Child abuse pediatrics	0		0
Child and adolescent psychiatry	16		16
Child neurology	5		
Clinical cardiac electrophysiology	2		
Clinical neurophysiology	6		
Critical care medicine	1		
Cytopathology	4		
Dermatology	18		
Dermatopathology	2		
Developmental-behavioral pediatrics	3		3
Emergency medicine	112		112
Endocrinology, diabetes, and metabolism	14		
Family medicine	215	215	215
Forensic pathology	2		
Forensic psychiatry	1		1
Gastroenterology	27		
Geriatric medicine	6		6
Geriatric psychiatry	4		4
Hand surgery	1		
Hematology	3		
Hematology and oncology	14		
Hospice and palliative medicine	4		
Infectious disease	16		
Internal medicine	326	326	326
Internal medicine/Emergency medicine (non-accredited)	0		0
Internal medicine/Family medicine (non-accredited)	12		12
Internal medicine/Pediatrics	14	14	14
Internal medicine/Psychiatry (non-accredited)	0		0
Interventional cardiology	4		
Medical genetics	1		
Medical toxicology	1		
Molecular genetic pathology	1		
Neonatal-perinatal medicine	7		7
Nephrology	15		
Neurological surgery	29		
Neurology	38		
Neuropathology	1		
Neuroradiology	4		
Neurotology	1		
Nuclear medicine	0		
Nuclear radiology	1		

Residency Programs in Virginia by Specialty continued

Specialty	Filled Positions	Primary Care	Specialties Identified with Shortages
Obstetrics and gynecology	105		
Ophthalmology	24		
Orthopaedic sports medicine	2		
Orthopaedic surgery	70		
Orthopaedic surgery of the spine	2		
Orthopaedic trauma	1		
Otolaryngology	47		
Pain medicine	11		
Pathology-anatomic and clinical	36		
Pediatric cardiology	8		8
Pediatric critical care medicine	4		4
Pediatric emergency medicine	6		6
Pediatric endocrinology	3		3
Pediatric hematology/oncology	3		3
Pediatric infectious diseases	3		3
Pediatric nephrology	2		2
Pediatrics	195	195	195
Pediatrics/Physical med & rehab (non-accredited)	0		0
Physical medicine and rehabilitation	42		
Plastic surgery	6		
Plastic surgery – integrated	6		
Procedural dermatology	1		
Psychiatry	139		139
Psychosomatic medicine	2		
Pulmonary disease and critical care medicine	20		
Radiation oncology	13		
Radiology-diagnostic	111		
Rheumatology	7		
Selective pathology	1		
Spinal cord injury medicine	2		
Sports medicine	4		
Surgery	166		166
Surgical critical care	2		
Thoracic surgery	5		
Transitional year	45		
Transplant hepatology	0		
Urology	24		
Vascular and interventional radiology	7		
Vascular neurology	1		
Vascular surgery	7		
Total	**2,228**	**750**	**1,245**
Percent of Total		***33.7%***	***55.9%***

**Data Source: Extracted from the ACGME website database May 2011.*