

REPORT CARD | 2008



WEST VIRGINIA HIGHER EDUCATION POLICY COMMISSION | **HEALTH SCIENCES AND RURAL HEALTH**





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## HIGHLIGHTS OF 2008

- 37.8% of West Virginia's medical school graduates from 1998 – 2003 are practicing in the state after completing residency training.
- If state medical school graduates do their hospital residency training in West Virginia, retention is even higher – 70% in primary care fields such as family practice. This year, 54 physicians completed their primary care residencies in West Virginia, the highest number in the past five years, and 38 (70%) are now practicing in the state.
- Retention in other health sciences fields was 32 (58%) dentistry graduates and 51 (67%) pharmacy graduates.
- In 1991, West Virginia began developing rural training sites for health professions students. Since then, 1,072 graduates in health fields have been retained and are currently practicing in the state. These graduates include 289 physicians, 106 nurse practitioners, 181 physician assistants, 111 dentists, 199 pharmacists, and 186 allied health personnel.
- State scholarships and loan repayment are helping to recruit rural providers – 35% of the physicians, 46% of the nurse practitioners, and 28% of the physician assistants who graduated since 1991 and are currently practicing in rural West Virginia.
- In the past 10 years, the number of physicians who participated in the RHEP program and are now in rural practice increased from 88 to 289, an increase of 228%, or an average annual rate of 14.1%.
- This year, the Rural Health Education Partnerships (RHEP) made a total of 71,487 contacts with rural West Virginians to provide community services and education on topics such as healthy lifestyles for children, fitness and nutrition, and oral hygiene.
- This year, RHEP dental and dental hygiene students provided 13,942 clinical procedures and 402 outreach activities. RHEP dental sites, including dentists and students, provided almost \$2.9 million in uncompensated care.
- The CARDIAC Project, which is administered locally through RHEP, provides screening and intervention programs in all 55 counties. Since 1998, the program has screened over 52,000 fifth graders and 1,000 ninth graders for cardiovascular risk factors. In recent years, the program has screened more than 18,000 kindergarten students and 9,000 second graders.

## **REPORT ON MEDICAL EDUCATION** in West Virginia

In April of 2008, Chancellor Brian Noland convened a meeting of the leaders of the state's three medical schools to begin a dialogue on medical education and training and retention of graduates. The Policy Commission contracted with Dr. Michael Friedland to facilitate these discussions and prepare a final report. During the meeting, Dr. Friedland presented several reports and data sets. In the following months, the group requested additional data and responded to draft reports. Dr. Friedland presented his report of findings and recommendations to the Policy Commission on August 1, 2008. A brief summary follows.

### **Policy Coordination**

The medical school leadership group should continue to meet on a routine basis to advise state policymakers. One goal would be to identify innovative models to strengthen medical education and training in the state. Priority could be given to models in geriatrics, rural health, and other areas that meet the state's health needs. The new Vice Chancellor for Health Sciences, Dr. Robert Walker, would coordinate this effort.

### **Enrollment**

Enrollment at the state's medical schools has almost doubled in the past 17 years – from 203 in 1990 to 391 in 2007. Although the number of state medical graduates who are practicing in the state has increased significantly in the past 25 years, the proportion – 40% of all graduates – has remained the same. In recent years, a growing number of out-of-state students are being enrolled, which may have a negative impact on retention. The state must focus rural health education resources on those who are most likely to practice in rural areas of West Virginia.

### **Accountability**

Medical school accreditation standards have changed. Expanded use of community-based clinical training sites has caused a tightening of standards over the content and delivery of all instruction, regardless of where it occurs. More emphasis is placed on (1) assuring that medical education occurs in an environment where faculty conduct research and students have an opportunity to participate in research; (2) including competencies related to medical decision-making, patient safety, etc; and (3) using technology in instruction and clinical management. It is more critical than ever that medical schools have responsibility for all aspects of their educational programs and can direct their financial resources in the most cost-effective manner.

### **Post-graduate Residency Training**

West Virginia must have adequate opportunities for physicians to complete residency training. Where a physician completes residency training is a stronger predictor of eventual practice location than where a physician graduates from medical school. Although higher education does not have authority over residency training – this is the domain of teaching hospitals – access to residency training needs to be coordinated with increased medical school enrollment, or graduates may be forced to go out of state.



## REPORT OF MEDICAL EDUCATION

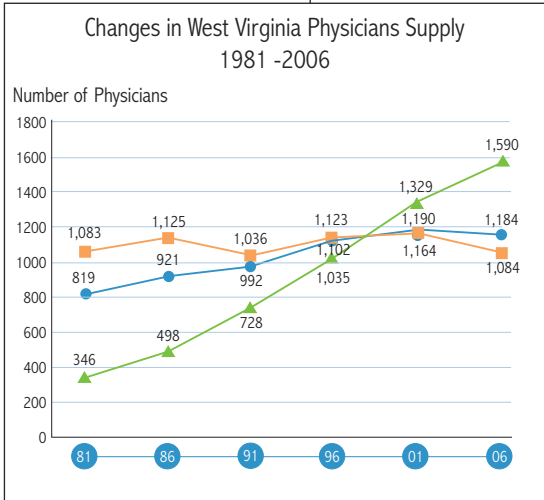
### 25-Year Trends in State Physician Supply

In 2008, the Policy Commission contracted with Dr. Donald Pathman, a nationally recognized researcher on physician retention, to conduct two studies: (1) sources of physician supply in West Virginia and (2) practice locations of state medical graduates. Data for both studies were reported in five-year intervals from 1981 to 2006 and included physicians active in patient care. The study findings were provided to Dr. Friedland and the medical school leaders. The results are striking.

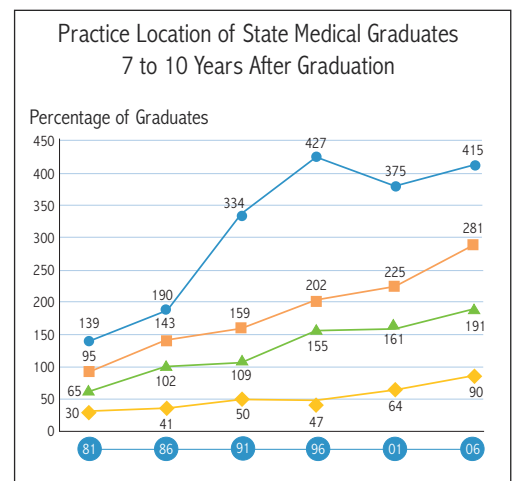
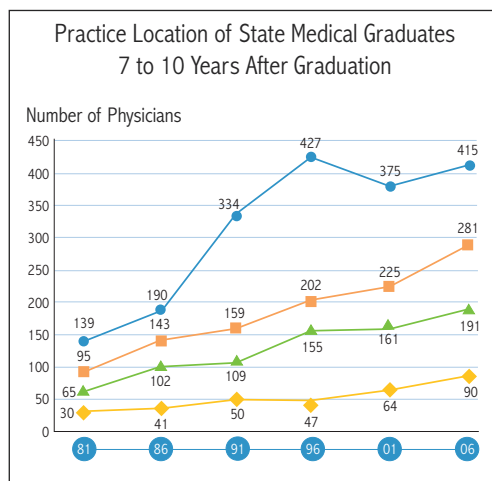
The study of physician supply found that the number of state medical graduates practicing in West Virginia increased from 346 to 1,590 physicians in 25 years, an increase of 360%. Stated another way, state medical graduates grew from the smallest proportion of West Virginia physicians, 15.4% in 1981, to the largest proportion, 41.2% in 2006. The other sources of physicians were graduates from other states/Canada, 48.2% in 1981 compared to 28.1% in 2006, and international graduates, 36.4% in 1981 compared to 30.7% in 2006.

The study of practice locations of state medical graduates focused on alumni 7 to 10 years after graduation, when they would have completed their hospital residency training. Data were reported in four locations: outside the state, within the state, and in urban or rural areas of the state.

The study found that the number practicing in the state has steadily increased from 1981 to 2006. While the number of graduates has increased, the proportion of West Virginia medical graduates who practice in the state has remained relatively flat – about 40%, which is approximately equal to the national average. Similarly, the number of West Virginia medical graduates who practice in rural areas of the state has increased, while the proportion has remained relatively flat from 1981 to 2006 – about 11%.



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The data source was the American Medical Association's Physician Masterfile listing of U.S. physicians, which includes both allopathic (M.D.) and osteopathic (D.O.) physicians.



## MEDICAL SCHOOL ENROLLMENT

### West Virginia University School of Medicine

Average scores for the Medical College Admission Test (MCAT) are reported as “means” for the multiple-choice sections and “medians” for the Writing Sample. Test scores on the multiple-choice are on a scale of 1-15 and on the Writing Sample, a scale of J-T. The national averages for students entering allopathic medical schools in 2007-08 were the following:

Biological Sciences:	10.6
Physical Sciences:	10.3
Verbal Reasoning:	9.9
Writing Sample:	P

The national mean GPA was 3.65.



	2003-04	2004-05	2005-06	2006-07	2007-08
<b>Applicants</b>					
In-State	228	189	187	204	212
Out-of-State	617	865	933	1,629	2,454
<b>Total</b>	<b>845</b>	<b>1,054</b>	<b>1,120</b>	<b>1,833</b>	<b>2,666</b>
<b>Acceptances Issued</b>					
In-State	116	90	88	94	94
Out-of-State	48	73	79	84	62
<b>Total</b>	<b>164</b>	<b>163</b>	<b>167</b>	<b>178</b>	<b>156</b>
<b>First Year New Enrollment</b>					
In-State	82	66	43	62	82
Out-of-State	28	35	55	48	26
<b>Total</b>	<b>110</b>	<b>101</b>	<b>98</b>	<b>110</b>	<b>108</b>
<b>Entering Class Data</b>					
Mean GPA	3.7	3.7	3.7	3.7	3.7
Mean MCAT Scores					
Biology/Biological Sciences	9.4	9.2	9.6	9.8	9.9
Physics/Physical Sciences	8.7	8.7	9.2	9.2	9.5
Reading/Verbal Reasoning	9.1	8.9	9.0	9.0	9.1
Median Writing Sample	0	N/A	0	0	0
<b>Total Medical Students</b>	<b>376</b>	<b>391</b>	<b>424</b>	<b>424</b>	<b>421</b>

Source: Association of American Medical Colleges.

## MEDICAL SCHOOL ENROLLMENT

Marshall University School of Medicine

	2003-04	2004-05	2005-06	2006-07	2007-08
<b>Applicants</b>					
In-State	209	180	167	198	189
Out-of-State	502	539	618	1,375	1,756
<b>Total</b>	<b>711</b>	<b>719</b>	<b>785</b>	<b>1,573</b>	<b>1,945</b>
<b>Acceptances Issued</b>					
In-State	85	80	83	96	90
Out-of-State	11	16	19	27	33
<b>Total</b>	<b>96</b>	<b>96</b>	<b>102</b>	<b>123</b>	<b>123</b>
<b>First Year New Enrollment</b>					
In-State	47	43	50	48	51
Out-of-State	6	9	10	16	21
<b>Total</b>	<b>53</b>	<b>52</b>	<b>60</b>	<b>64</b>	<b>72</b>
<b>Entering Class Data</b>					
Mean GPA	3.5	3.5	3.5	3.5	3.6
Mean MCAT Scores					
Biology/Biological Sciences	8.9	9.2	8.9	8.7	8.9
Physics/Physical Sciences	8.7	8.4	8.2	8.3	8.7
Reading/Verbal Reasoning	8.9	9.2	9.1	8.9	8.9
Median Writing Sample	0	M	0	0	M
<b>Total Medical Students</b>	<b>199</b>	<b>200</b>	<b>211</b>	<b>227</b>	<b>246</b>

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Average scores for the Medical College Admission Test (MCAT) are reported as “means” for the multiple-choice sections and “medians” for the Writing Sample. Test scores on the multiple-choice are on a scale of 1-15 and on the Writing Sample, a scale of J-T. The national averages for students entering allopathic medical schools in 2007-08 were the following:

- Biological Sciences: 10.6
- Physical Sciences: 10.3
- Verbal Reasoning: 9.9
- Writing Sample: P

The national mean GPA was 3.65.

Source: Association of American Medical Colleges.





## West Virginia School of Osteopathic Medicine

Average scores for the Medical College Admission Test (MCAT) are reported as “means” for the multiple-choice sections and “medians” for the Writing Sample. Test scores on the multiple-choice are on a scale of 1-15 and on the Writing Sample, a scale of J-T. The national averages for students entering osteopathic medical schools in 2007-08 were the following:

Biological Sciences:	8.8
Physical Sciences:	8.2
Verbal Reasoning:	8.6
Writing Sample:	J

The national mean GPA was 3.45.



	2003-04	2004-05	2005-06	2006-07	2007-08
<b>Applicants</b>					
In-State	156	138	123	151	136
Out-of-State	1,276	1,362	1,512	2,170	2,634
<b>Total</b>	<b>1,432</b>	<b>1,500</b>	<b>1,635</b>	<b>2,321</b>	<b>2,770</b>
<b>Acceptances Issued</b>					
In-State	79	71	60	84	62
Out-of-State	188	237	250	508	456
<b>Total</b>	<b>267</b>	<b>308</b>	<b>310</b>	<b>592</b>	<b>518</b>
<b>First Year New Enrollment</b>					
In-State	50	53	50	61	56
Out-of-State	53	52	61	135	155
<b>Total</b>	<b>103</b>	<b>105</b>	<b>111</b>	<b>196</b>	<b>211</b>
<b>Entering Class Data</b>					
Mean GPA	3.4	3.4	3.4	3.5	3.4
Mean MCAT Scores					
Biology/Biological Sciences	7.5	8.1	7.4	7.9	8.0
Physics/Physical Sciences	7.0	6.9	7.1	7.1	7.4
Reading/Verbal Reasoning	7.8	7.4	7.8	7.8	8.1
Median Writing Sample	N/A	N/A	N/A	N/A	N/A
<b>Total Medical Students</b>	<b>336</b>	<b>363</b>	<b>397</b>	<b>503</b>	<b>598</b>

Source: American Association of Colleges of Osteopathic Medicine.

### MEDICAL SCHOOL GRADUATES

Number of Examinees/Number Passing US Medical Licensing Exam, Step 3

	2003-04	2004-05	2005-06	2006-07	2007-08
West Virginia University	71/68 (96%)	69/68 (99%)	81/79 (98%)	64/63 (98%)	77/74 (96%)
Marshall University	46/43 (93%)	41/35 (85%)	44/40 (91%)	38/36 (95%)	38/38 (100%)

All data are for first-time test takers. Data for MD students are based on the US Medical Licensing Exam (USMLE), Step 3. Data for MD students become available two years after graduation, i.e., results for 2005 graduates are shown in 2007-08. The national average for this cohort was 97%.

Number of Examinees/Number Passing COMLEX-Level 3

	2003-04	2004-05	2005-06	2006-07	2007-08
WV School of Osteopathic Medicine	73/67 (92%)	72/70 (97%)	68/58 (85%)	62/62 (100%)	64/64 (100%)

All data are for first-time test takers. Data for DO students are based on the Comprehensive Osteopathic Medicine Licensing Examination (COMLEX), Level 3. Results are for year of graduation. The national average for the 2007-08 cohort was not available for this report.

Medical School Graduates Choosing Primary Care Residencies\*

	2003-04	2004-05	2005-06	2006-07	2007-08 **
West Virginia University	32 (46%)	46 (61%)	55 (56%)	56 (53%)	43 (49%)
Marshall University	29 (73%)	29 (66%)	28 (62%)	33 (67%)	26 (62%)
WV School of Osteopathic Medicine	40 (56%)	36 (53%)	53 (68%)	66 (69%)	N/A***
<b>TOTAL</b>	<b>101</b>	<b>111</b>	<b>136</b>	<b>155</b>	

\* Primary care includes family medicine, internal medicine, pediatrics, internal medicine/pediatrics, and obstetrics/gynecology.

\*\* In 2008, the national average for choice of primary care residencies was 46.8% for all allopathic (MD) graduates.

\*\*\*Osteopathic students generally enter a one-year rotating internship after graduation. In 2008, 66 (69%) of WVSOM 2007 graduates chose primary care residencies. The national average is not available.

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## RETENTION

### Medical School Graduates from 1998-2003 Practicing in West Virginia

A total of 1,141 graduates of the state's three medical schools between 1998 and 2003 have completed residency training. Of these graduates, 37.8% are practicing in West Virginia. About 9.5% are practicing in rural areas. In tracking the retention of graduates, this report factors in the additional 3 to 5 years of residency training that physicians complete in their specialty before beginning practice.



Institutions	Total Number of Graduates	Graduates with Completed Training			
		Total Number	Number in Practice in WV	Number in Primary Care in WV*	Number in Practice in Non-Urban Areas in WV**
West Virginia University	514	481	176 (36.6%)	95 (19.8%)	34 (7.1%)
Marshall University	289	273	112 (41.0%)	68 (24.9%)	20 (7.3%)
WV School of Osteopathic Medicine	387	387	143 (37.0%)	109 (28.2%)	54 (14.0%)
<b>TOTAL</b>	<b>1,190</b>	<b>1,141</b>	<b>431 (37.8%)</b>	<b>272 (23.8%)</b>	<b>108 (9.5%)</b>

**Note:** Excludes SREB contract students at WVSOM who have a contractual obligation to return to their home state following graduation.

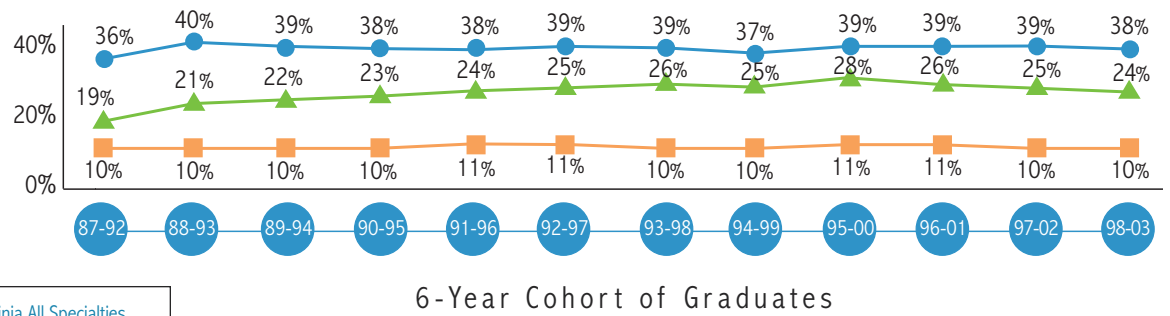
\* Primary care is defined as family medicine, internal medicine, pediatrics, internal medicine/pediatrics, and obstetrics/gynecology.

\*\* Non-urban areas exclude graduates practicing in: Beckley, Charleston (including South Charleston, Dunbar, Nitro, Institute, etc.), Clarksburg, Fairmont, Huntington (including Barboursville), Hurricane, Martinsburg, Morgantown (including Star City and Westover), Parkersburg (including Vienna), Weirton, and Wheeling.

### RETENTION

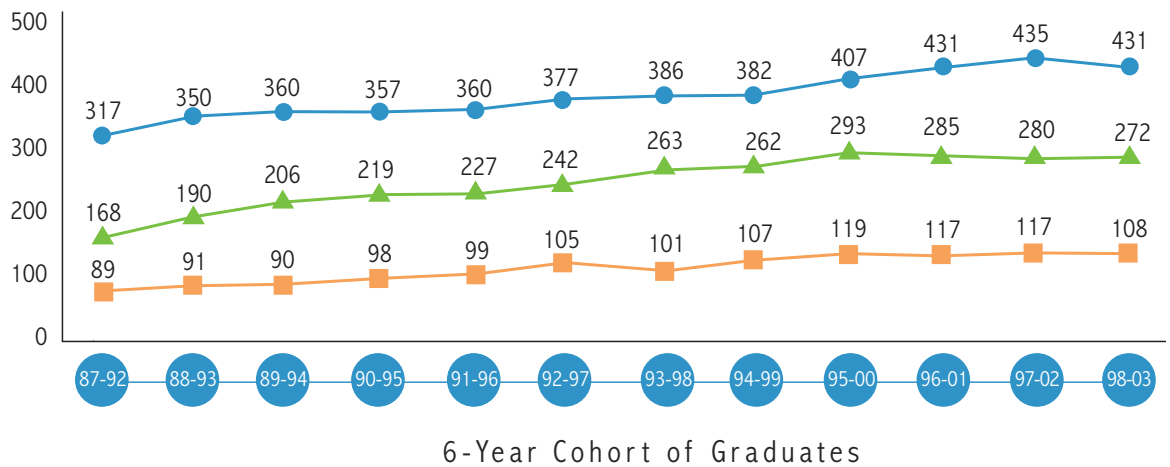
#### West Virginia Medical School Graduates Practicing in West Virginia

#### Percentage of Graduates Retained, 1987-2003



- Practicing in West Virginia All Specialties
- ▲ Practicing in West Virginia Primary Care
- Practicing in West Virginia Non-Urban Areas

#### Number of Graduates Retained, 1987-2003



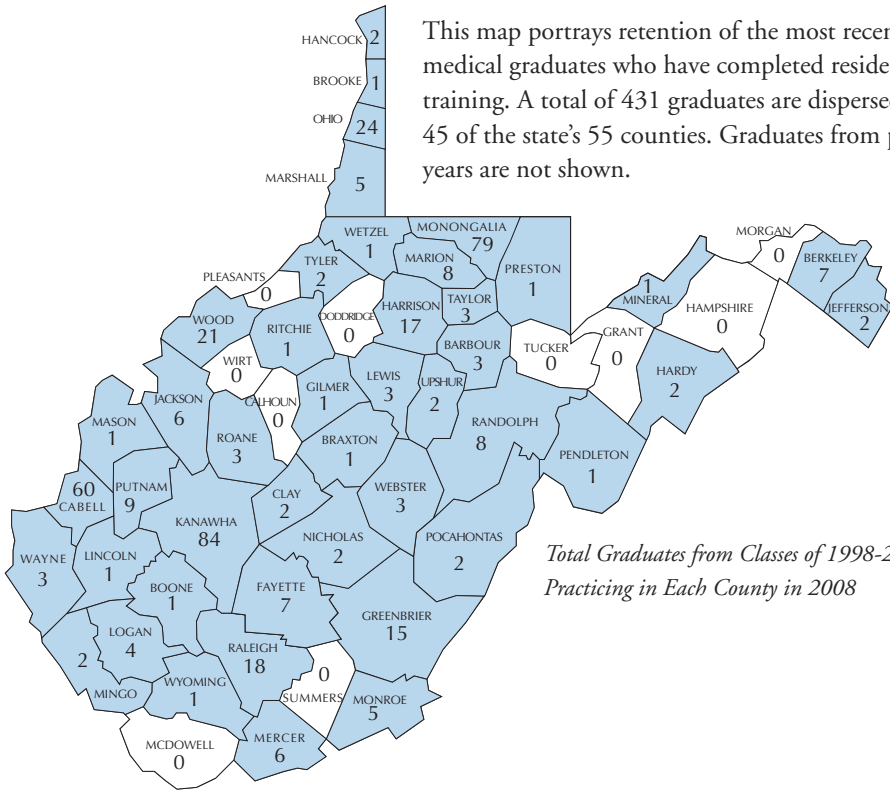
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Retention is tracked annually for a 6-year cohort of medical school graduates who have completed residency training. The greatest change has been in retention of graduates in primary care fields. In the past 12 years, the number of graduates retained in primary care increased from 168 (19%) to 272 (24%) although this year there was a slight decline.

## West Virginia Medical Graduates, 1998-2003, in All Specialties

This map portrays retention of the most recent medical graduates who have completed residency training. A total of 431 graduates are dispersed to 45 of the state's 55 counties. Graduates from prior years are not shown.

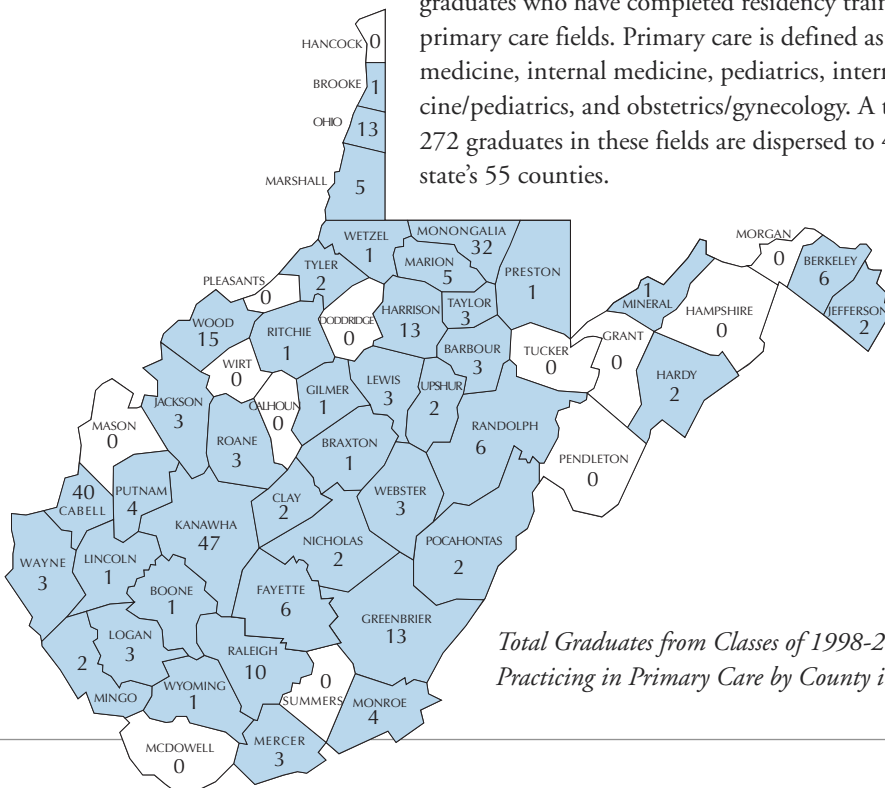


Total Graduates from Classes of 1998-2003 Practicing in Each County in 2008



## West Virginia Medical Graduates, 1998-2003, in Primary Care

This map portrays retention of the most recent medical graduates who have completed residency training in primary care fields. Primary care is defined as family medicine, internal medicine, pediatrics, internal medicine/pediatrics, and obstetrics/gynecology. A total of 272 graduates in these fields are dispersed to 42 of the state's 55 counties.



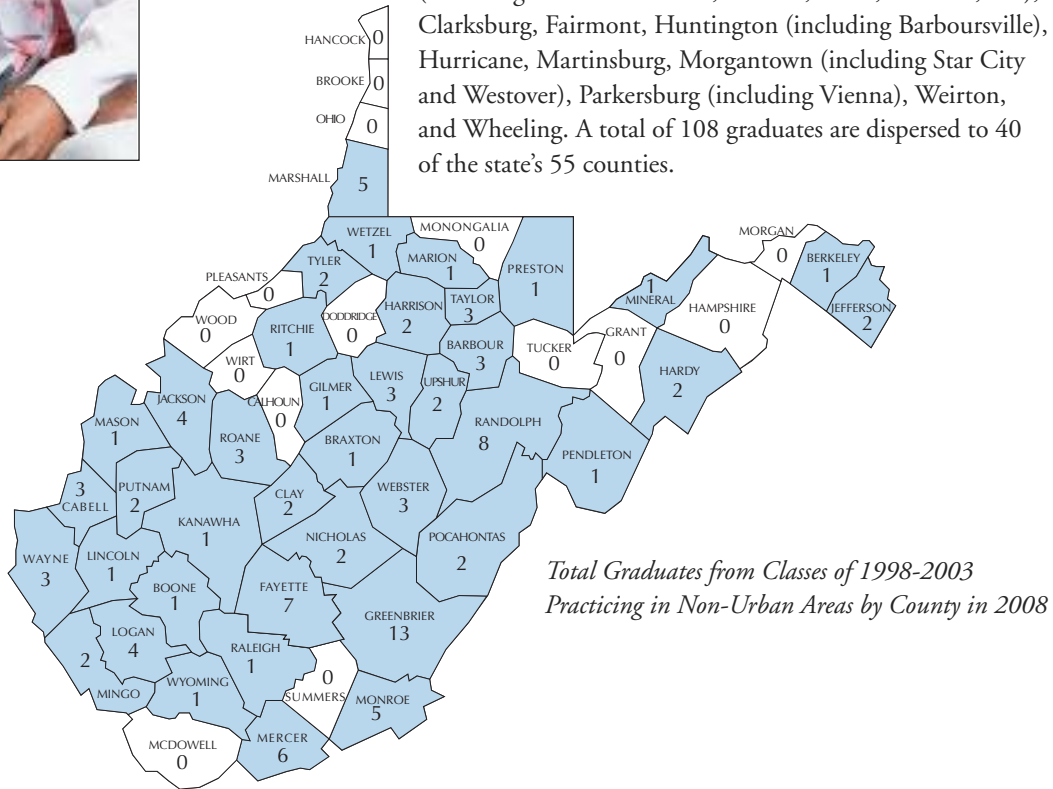
Total Graduates from Classes of 1998-2003 Practicing in Primary Care by County in 2008



**RETENTION**

**West Virginia Medical Graduates, 1998-2003, in Non-Urban Areas**

This map portrays retention of the most recent medical graduates who have completed residency training and are practicing in non-urban areas of the state. The “non-urban” definition excludes graduates practicing in Beckley, Charleston (including South Charleston, Dunbar, Nitro, Institute, etc.), Clarksburg, Fairmont, Huntington (including Barboursville), Hurricane, Martinsburg, Morgantown (including Star City and Westover), Parkersburg (including Vienna), Weirton, and Wheeling. A total of 108 graduates are dispersed to 40 of the state’s 55 counties.



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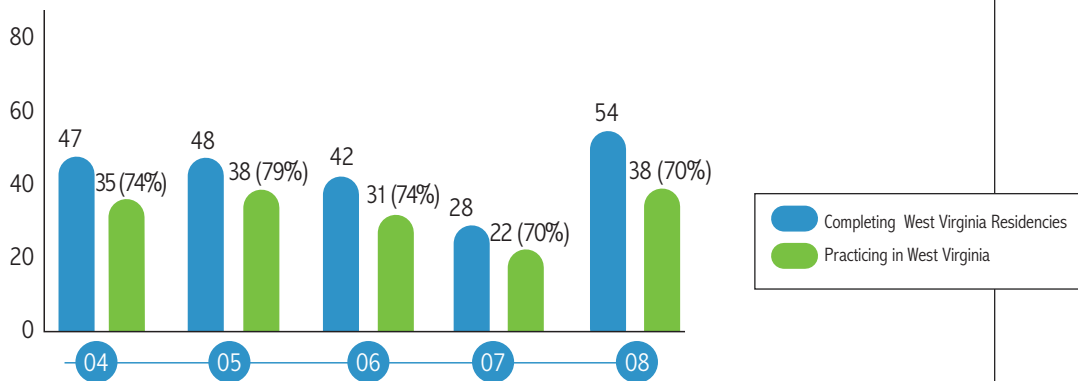
**Health Sciences Graduates, 2004-08**

	2004	2005	2006	2007	2008
<b>West Virginia University</b>					
Dental Graduates	37	44	43	45	45
Practicing in West Virginia	24 (65%)	22 (50%)	30 (70%)	26 (58%)	32 (71%)
Pharmacy Graduates	65	72	74	81	76
Practicing in West Virginia	35 (54%)	48 (67%)	41 (55%)	52 (64%)	51 (67%)
Nurse Practitioner Graduates	35	25	22	20	29
Practicing in West Virginia	31 (89%)	17 (68%)	13 (59%)	18 (90%)	17 (59%)
<b>Marshall University</b>					
Nurse Practitioner Graduates	9	11	16	20	24
Practicing in West Virginia	6 (67%)	8 (73%)	4 (88%)	15 (75%)	19 (79%)



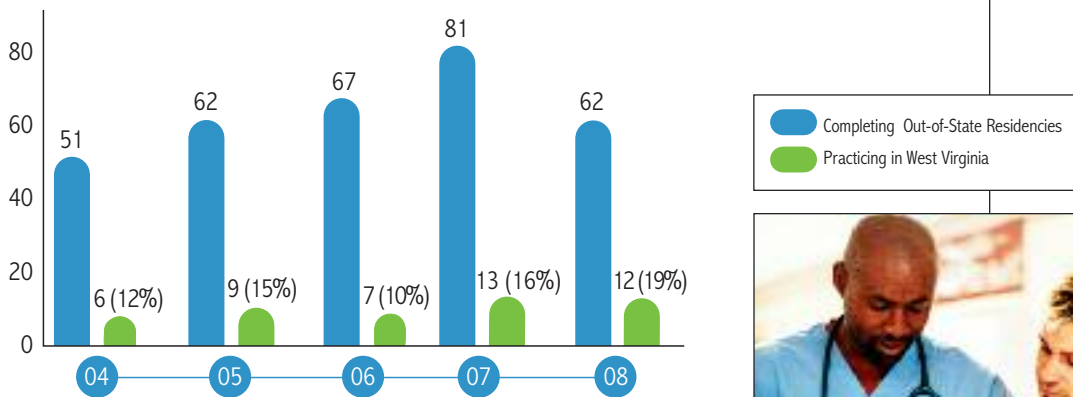
## West Virginia Medical Graduates Completing West Virginia Primary Care Residencies, 2004-2008

Medical school graduates begin practice after completing 3 to 5 years of residency training in a given specialty. Two factors are important in tracking their retention: (1) specialty choice, because primary care fields are generally most needed in rural West Virginia; and (2) location of the residency, because graduates who complete residencies in West Virginia are much more likely to practice in the state. This year, an increased number of medical graduates completed primary care residencies in West Virginia and are now practicing in the state.



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## West Virginia Medical Graduates Completing Out-of-State Primary Care Residencies, 2004-2008



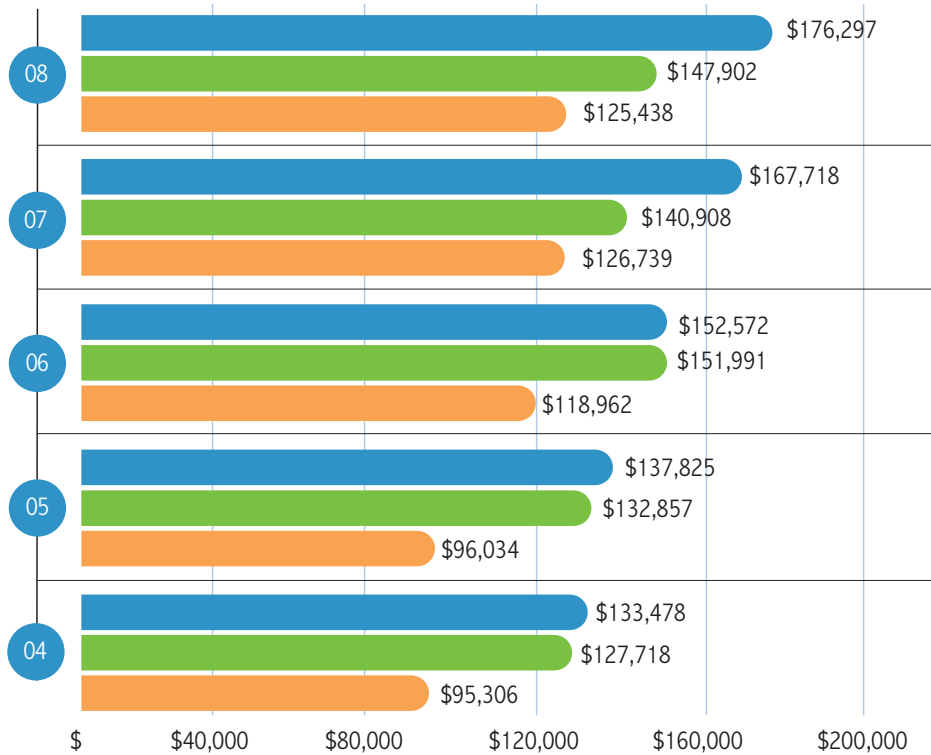
## MEDICAL SCHOOL INDEBTEDNESS

2004 - 2008

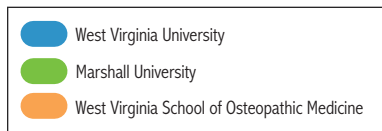
This chart shows the average indebtedness of graduating medical students. As a point of reference, the annual tuition and fees for the medical schools in 2007-08 are shown below.

	Resident	Non-Resident
West Virginia University	\$19,204	\$41,866
Marshall University	\$18,114	\$42,934
WV School of Osteopathic Medicine	\$19,830	\$49,073

The difference in graduate indebtedness may be attributed in part to differences among the schools in the proportion of students paying non-resident tuition and fees.

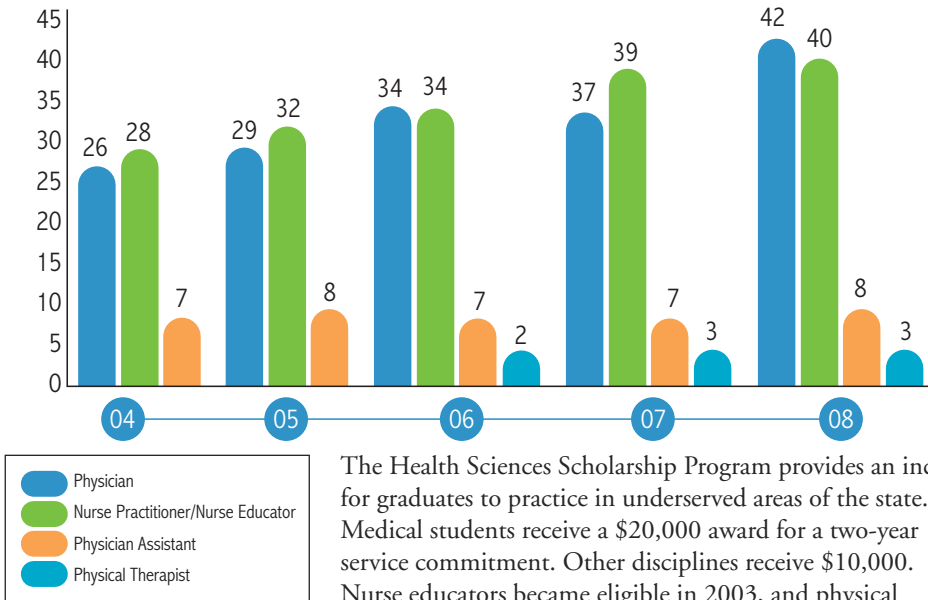


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## SCHOLARSHIPS AND LOANS

### Health Sciences Scholarship Participants Practicing in Rural West Virginia



The Health Sciences Scholarship Program provides an incentive for graduates to practice in underserved areas of the state. Medical students receive a \$20,000 award for a two-year service commitment. Other disciplines receive \$10,000. Nurse educators became eligible in 2003, and physical therapists became eligible in 2005. In 2008, the Vice Chancellor for Health Sciences approved eligibility for licensed independent clinical social workers and doctoral clinical psychologists beginning in 2009. The chart shows graduates who are fulfilling their service obligation.

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### Medical Student Loan Program

	2003-04	2004-05	2005-06	2006-07	2007-08
Loans Awarded in Fiscal Year	291	306	317	323	296
Total Amount Awarded	\$1,354,228	\$1,586,700	\$1,023,705	\$1,349,155	\$1,861,456
Amount of Unexpended Funds	\$2,296,022	\$2,609,608	\$3,157,511	\$3,525,991	\$3,145,311
Loan Forgiveness <sup>1</sup>	21	21	15	12	9
Default Rate on Previous Awards	2.5%	3.3%	3.0%	2.9%	2.8%

The Medical Student Loan Program is a need-based program to assist state medical students. It is funded from fees charged to medical students, and borrowers may earn loan forgiveness for practicing in an underserved area or in a medical shortage field in West Virginia. The unexpended funds include loan repayments. In 2005 the Legislature approved a rule change to allow the schools to increase loans from \$5,000 to \$10,000 per year so that these funds will be utilized. In 2008 the Legislature amended the statute to increase the loan forgiveness amount to \$10,000 per year. A committee of agency staff and campus personnel is implementing these changes and promoting the enhanced program to students. The loan forgiveness data show the number of physicians who began practicing in West Virginia each fiscal year.

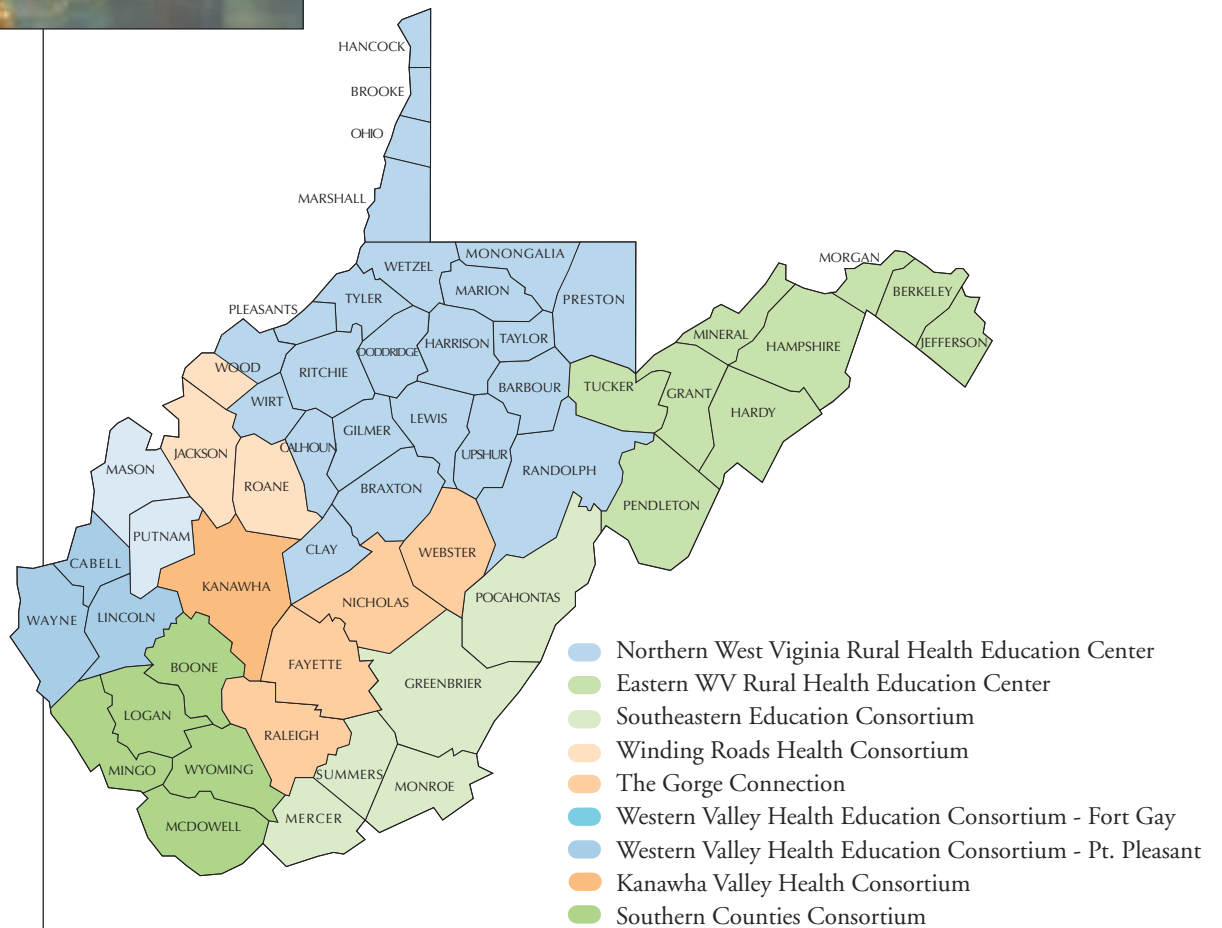
<sup>1</sup> The loan forgiveness data show borrowers who began practicing in West Virginia each fiscal year. Requests for loan forgiveness are expected to increase in future years.



## WEST VIRGINIA RURAL HEALTH EDUCATION PARTNERSHIPS

The West Virginia Rural Health Education Partnerships (RHEP) comprise nine training consortia statewide. The program has formed a partnership with the federally funded West Virginia Area Health Education Centers (AHEC) to provide community-based education and training in the northern, eastern, and central areas of the state. The AHEC grant is administered by the West Virginia University Office of Rural Health, which also administers the RHEP program.

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*Note: Clay County and Wood County are shared by the Northern and Winding Roads consortia*

## TRAINING CONSORTIA INFRASTRUCTURE

Consortium Lead Agency and Sub-areas	Counties	Number of Training Sites	Number of Field Faculty
Eastern WV Rural Health Education Consortium -- Martinsburg	Berkeley, Jefferson, and Morgan	33	71
	--Petersburg Grant, Hampshire, Hardy, Mineral, Pendleton, and Tucker	53	85
The Gorge Connection	Fayette, Raleigh, Nicholas, and Webster	29	64
Kanawha Valley Health Consortium	Rural areas of Kanawha	19	31
Northern WV Rural Health Education Center -- Region 1	Brooke, Hancock, Marshall, Ohio, and Wetzel	37	58
	-- Region 2 Calhoun, Doddridge, Gilmer, Pleasants, Ritchie, Tyler Wirt, and Wood ( <i>partial</i> )	72	41
	-- Region 3 Braxton, Harrison, Lewis, Marion, Monongalia, and Clay ( <i>partial</i> )	67	101
	-- Region 4 Barbour, Preston, Randolph, Taylor, and Upshur	68	119
Southern Counties Consortium	Boone, Logan, McDowell, Mingo, and Wyoming	30	51
Southeastern Education Consortium	Greenbrier, Mercer, Monroe, Pocahontas, and Summers	40	77
Western Valley Health Education Consortium -- Ft Gay	Cabell, Wayne, and Lincoln	17	26
	-- Point Pleasant Cabell, Lincoln, Mason, Putnam, and Wayne	48	64
Winding Roads Health Consortium	Clay( <i>partial</i> ), Roane, Jackson, and Wood ( <i>partial</i> )	20	53
<b>TOTAL</b>		<b>533</b>	<b>841</b>

841 Field Faculty by Discipline			
2	Clinical Psychology	1	Occupational Therapy
65	Dentistry	102	Pharmacy
339	Medicine	33	Physician Assistant
25	Medical Technology	60	Physical Therapy
145	Nursing	5	Social Work
8	Nurse-Midwife	1	Speech Therapy
55	Nurse Practitioner		

**TRAINING CONSORTIA**

**EXPENDITURES**

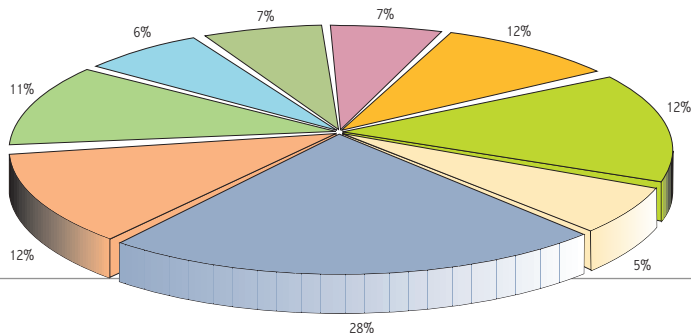
July 1, 2007 – June 30, 2008

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CONSORTIA Lead Agency	EASTERN WRHEC Grant Memorial Hospital	GORGE CONNECTION New River Health Association	KANAWHA VALLEY Cabin Creek Health Center	NORTHERN WRHEC Tri-County Health Clinic
Salaries and Benefits	165,800	95,677	51,936	326,212
On-Site Clinical Director	-	19,900	12,938	25,000
Operating Costs	25,508	27,189	17,246	64,560
Staff Travel and Development	7,982	21,851	9,455	28,524
Annual Honorarium	26,775	52,208	4,578	-
Faculty Development	3,005	5,668	7,322	7,965
Interdisciplinary Sessions	9,540	6,239	3,397	34,147
Graduate Medical Education	-	-	-	17,500
Recruitment and Retention	59	7,028	-	15,109
Community Service/Health Promotion	7,131	4,372	13,941	36,399
Student/Resident Housing	43,334	30,104	660	83,999
Property and Equipment	17,337	995	-	-
Administrative Cost-Lead Agency	22,195	14,700	9,742	55,300
<b>Subtotal</b>	<b>\$328,666</b>	<b>\$285,931</b>	<b>\$131,215</b>	<b>\$694,715</b>
<b>SPECIAL PROJECTS (Other Programs)</b>				
CARDIAC Program Expenses	3,266	1,297	-	10,344
WV Geriatric Education Center Grant Expenses	5,000	-	-	8,214
Oral Health Project Expenses	-	-	-	744
<b>Subtotal</b>	<b>\$8,266</b>	<b>\$1,297</b>	<b>-</b>	<b>\$19,302</b>
<b>TOTAL PROJECT COST</b>	<b>\$336,932</b>	<b>\$287,228</b>	<b>\$131,215</b>	<b>\$714,017</b>
<b>LESS OTHER INCOME</b>				
Other RHEP Income Earned	(1,498)	-	-	(6,544)
Lead Agency Funds Contributed	(2)	-	-	-
CARDIAC Income	(6,150)	(2,046)	-	(13,176)
WV Geriatric Education Center Grant Income	-	-	-	-
Other Grants/Special Project Income	(5,184)	-	-	(3,556)
<b>TOTAL RHEP GRANT EXPENDITURES</b>	<b>\$324,098</b>	<b>\$285,182</b>	<b>\$131,215</b>	<b>\$690,741</b>



SOUTHEASTERN EDUCATION Rainelle Medical Center	SOUTHERN COUNTIES WVU Research Corporation	WESTERN VALLEY - FT GAY Valley Health System	WESTERN VALLEY - PT PLEASANT Pleasant Valley Hospital	WINDING ROADS Jackson General Hospital	TOTALS
106,723	160,015	78,861	103,432	89,986	1,178,642
35,417	5,000	21,923	-	-	120,178
51,407	14,390	3,587	15,117	25,487	244,491
19,203	5,419	876	5,430	8,209	106,949
30,100	14,400	20,000	10,000	14,400	172,461
1,116	113	2,365	-	-	27,554
248	1,950	8,000	600	300	64,421
-	59	1,000	16,500	-	35,059
-	-	-	-	-	22,196
4,893	1,632	1,429	46	5,103	74,946
35,230	17,186	13,434	6,613	10,720	241,280
-	1,347	-	-	-	19,679
12,000	19,949	22,964	8,000	-	164,850
<b>\$296,337</b>	<b>\$241,460</b>	<b>\$174,439</b>	<b>\$165,738</b>	<b>\$154,205</b>	<b>\$2,472,706</b>
4,085	3,097	1,144	5,826	814	29,873
-	-	-	-	-	13,214
-	-	-	-	-	744
<b>\$4,085</b>	<b>\$3,097</b>	<b>\$1,144</b>	<b>\$5,826</b>	<b>\$814</b>	<b>\$43,831</b>
<b>\$300,422</b>	<b>\$244,557</b>	<b>\$175,583</b>	<b>\$171,564</b>	<b>\$155,019</b>	<b>\$2,516,537</b>
-	(3,608)	-	-	-	(11,650)
-	-	(17,557)	(69)	-	(17,628)
(4,014)	(3,702)	-	(5,826)	(1,462)	(36,376)
-	(11,469)	(3,500)	(4,500)	-	(19,469)
-	-	-	-	-	(8,740)
<b>\$296,408</b>	<b>\$225,778</b>	<b>\$154,526</b>	<b>\$161,169</b>	<b>\$153,557</b>	<b>\$2,422,674</b>



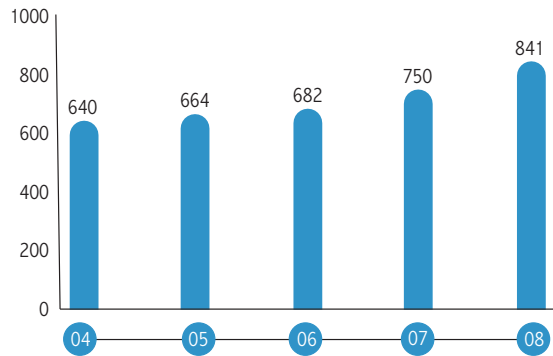
**RHEP STATE GRANT EXPENDITURES**  
**\$2,422,674**

- Eastern
- Southern
- Gorge
- Western Valley - Ft. Gay
- Kanawha
- Western Valley - Pt Pleasant
- Northern
- Winding Roads
- Southeastern

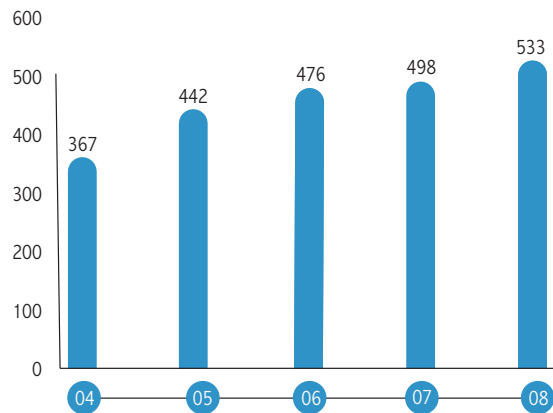
## TRAINING CONSORTIA

West Virginia RHEP field faculty are active rural practitioners who also teach students. In 2008, the Faculty Development Conference was held jointly with Area Health Education Centers. The theme was “Teaching and Assessing Essential Elements of Health Care Communication.” A total of 158 field faculty, institutional staff, and others attended the conference in Morgantown.

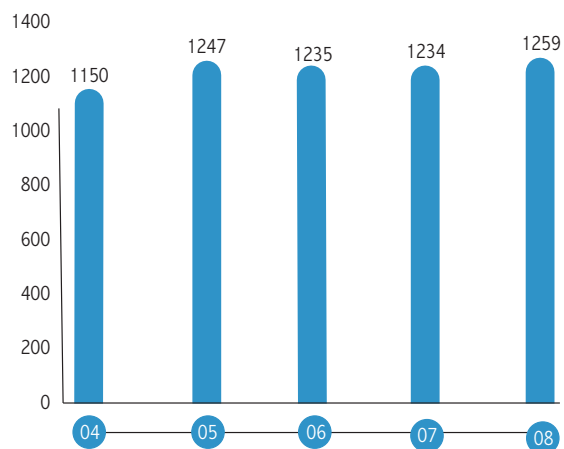
RHEP Field Faculty



RHEP Training Sites



RHEP Student Rotations



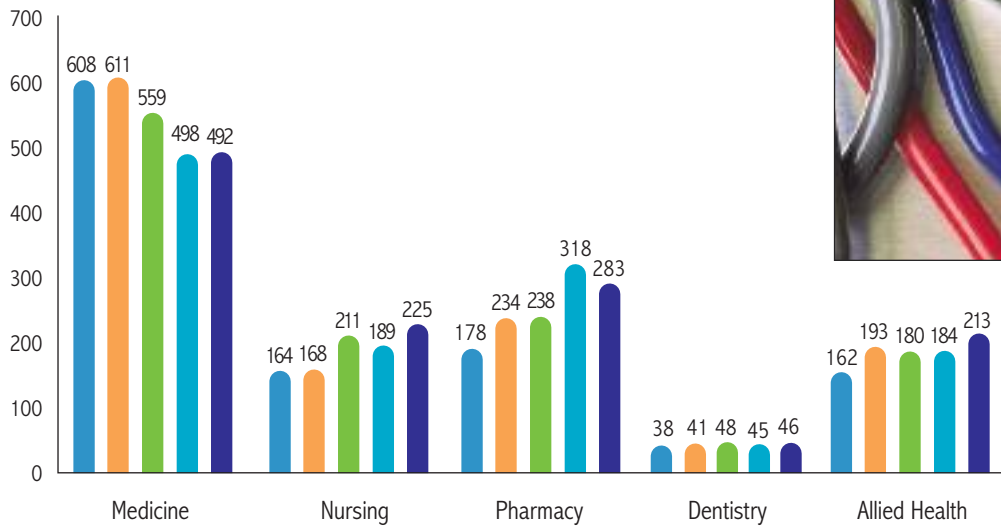
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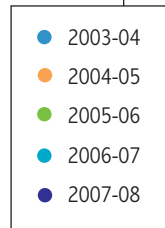
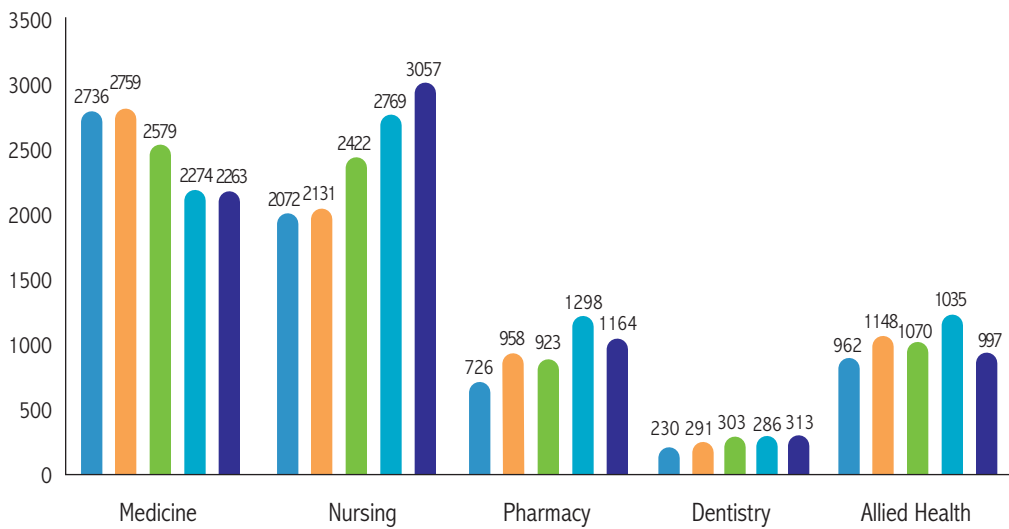
**STUDENT ROTATIONS**  
2004-2008



RHEP Rotations by Year/Discipline



RHEP Student Week by Year/Discipline



Rotations by School/Discipline:  
June 1, 2007- May 31, 2008

School/Discipline	RHEP		Other Rural Sites	
	Student Rotations	Student Weeks	Student Rotations	Student Weeks
Alderson-Broaddus College Physician Assistant	81	332	10	38
Mountain State University Physician Assistant	69	277	4	16
Marshall University Medicine	83	411	2	6
Medical Resident	0	0	4	242
Nursing	16	222	12	126
Nurse Practitioner	0	0	4	30
Social Work	0	0	3	12
West Liberty State College Dental Hygiene	1	3	0	0
WV School of Osteopathic Medicine Medicine	178	935	455	1,719
Medical Resident	5	25	40	172
West Virginia University Dental Hygiene	16	96	0	0
Dentistry	46	313	1	6
Medical Resident	7	27	2	8
Medical Technology	30	97	0	0
Medicine -Morgantown	110	432	10	21
-Charleston	74	304	1	4
-Eastern Panhandle	32	116	0	0
Nurse Practitioner -Morgantown	15	230	6	90
-Charleston	6	76	6	81
Nursing	139	1,838	0	0
Pharmacy	283	1,164	17	70
Physical Therapy	16	192	1	1
West Virginia University Institute of Technology Nursing	48	673	1	14
Wheeling Jesuit University Nurse Practitioner	1	18	1	7
Out-of-State Programs Medicine	1	6	0	0
Medical Resident	2	7	2	8
<b>Total Rotations</b>	<b>1,259</b>	<b>7,794</b>	<b>582</b>	<b>2,671</b>

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## COMMUNITY SERVICE CONTACTS

JUNE 1, 2007- MAY 31, 2008

Consortium	Prevention and Education for General Public	Prevention and Education for Adults	Prevention and Education for Children	Total
Eastern WV Rural Health Education Consortium				
Martinsburg	30	818	8,981	9,829
Petersburg	1,661	1,771	6,997	10,429
The Gorge Connection	1,605	2,488	3,833	7,926
Kanawha Valley Health Consortium	680	635	4,980	6,295
Northern WV Rural Health Education Center				
Region 1	1,060	2,013	10,098	13,171
Region 2	663	862	3,836	5,361
Region 3	850	2,140	6,390	9,380
Region 4	1,033	3,414	7,046	11,493
Southern Counties Consortium	250	610	2,601	3,461
Southeastern Education Consortium	673	1,140	2,891	4,704
Western Valley Health Education Consortium				
Fort Gay	613	60	4,454	5,127
Point Pleasant	621	478	3,483	4,582
Winding Roads Health Consortium	425	155	2,130	2,710
<b>Total Community Service Contacts</b>	<b>10,164</b>	<b>16,584</b>	<b>67,720</b>	<b>94,468</b>

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RHEP provides community services (e.g., dental and vision screenings and immunizations) and education on topics such as healthy options for public school children, wellness for women, depression and anxiety, and meal preparation for diabetics. The program links its prevention and education programs to the West Virginia Healthy People 2010 objectives to ascertain where student efforts are being directed. RHEP strives to provide students with service-learning opportunities that are directly linked to their clinical and educational learning.

The CARDIAC Project provides cardiovascular screening, intervention, and healthy lifestyles education statewide. The project is carried out locally through RHEP and the public school system. RHEP site coordinators provide local coordination and testing supplies for the screening, and RHEP students, under local preceptor supervision, provide the manpower. Since 1998, CARDIAC has screened over 52,000 fifth graders and 1,000 ninth graders for cardiovascular risk factors. In recent years, CARDIAC has expanded and is doing body mass index (BMI) screening of younger children. To date, more than 18,000 kindergarten and 9,000 second graders have been screened.

CARDIAC screening has increased awareness of children's heart disease risk factors, provided interventions, and helped to change health behaviors.

In 2007-08, RHEP dental and dental hygiene students provided 13,942 clinical procedures. Students and faculty participated in 402 outreach activities, serving 25,945 West Virginians. RHEP dental sites, including dentists and students, provided over \$2.8 million in uncompensated care.



## RECRUITMENT

### Health Professionals with RHEP Rotations Practicing in Rural Areas of the State

Discipline	Number in Rural Practice	Number who Received Financial Incentives
Physicians (1991-2005 graduates)	289	101 (35%)
Nurse Practitioners/Nurse Educators	106	49 (46%)
Nurse-Midwife	1	.
Physician Assistants	181	50 (28%)
Nurses	89	.
Dentists	111	2 (2%)
Dental Hygienists	26	.
Pharmacists	199	.
Physical Therapists	59	3 (5%)
Occupational Therapist	1	.
Medical Technologists	8	.
Masters in Public Health	1	.
Social Worker	1	.
<b>TOTAL</b>	<b>1072</b>	<b>205 (19%)</b>

Data on physicians include graduates from 1991-2005 who have completed residency training. Data on all other disciplines include graduates from 1991-2008.

#### Recruitment Incentives for Rural Practice

##### West Virginia Higher Education Policy Commission

Health Sciences Scholarship Program - 93

##### WV Rural Health Education Partnerships

SEARCH Training Stipends - 43

Community Scholarship Program - 7

*Note: SEARCH and the Community Scholarship Program, which were federally funded, have been discontinued.*

##### Bureau for Public Health, Division of Rural Health & Recruitment

Recruitment & Retention Community Project - 92

State Loan Repayment Program - 30

NHSC Loan Repayment Program - 13

**TOTAL 278 Awards**

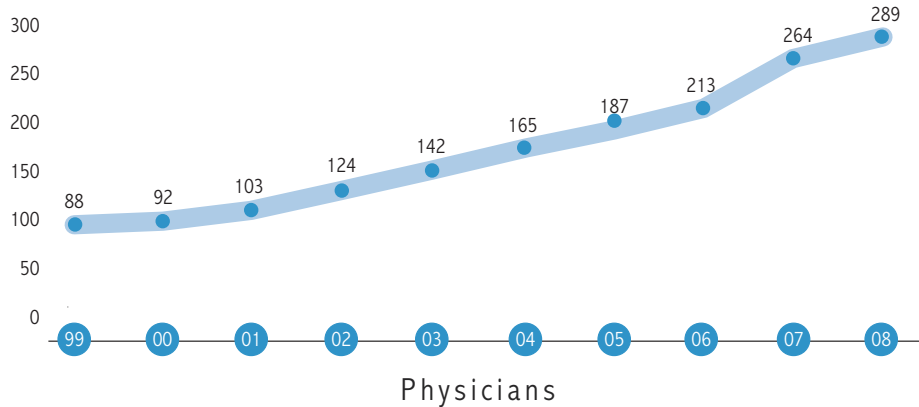
State scholarships and loan repayment are coordinated by the RHEP Recruitment and Retention Committee to target financial incentives to students and physician residents with rural training. Some practitioners have received awards from two or more programs. As of 2008, 205 rural practitioners have received a total of 278 awards. The agencies and programs shown above provided these awards. The National Health Service Corps (NHSC) Loan Repayment Program is included because the Bureau for Public Health assists physicians in applying to this program.

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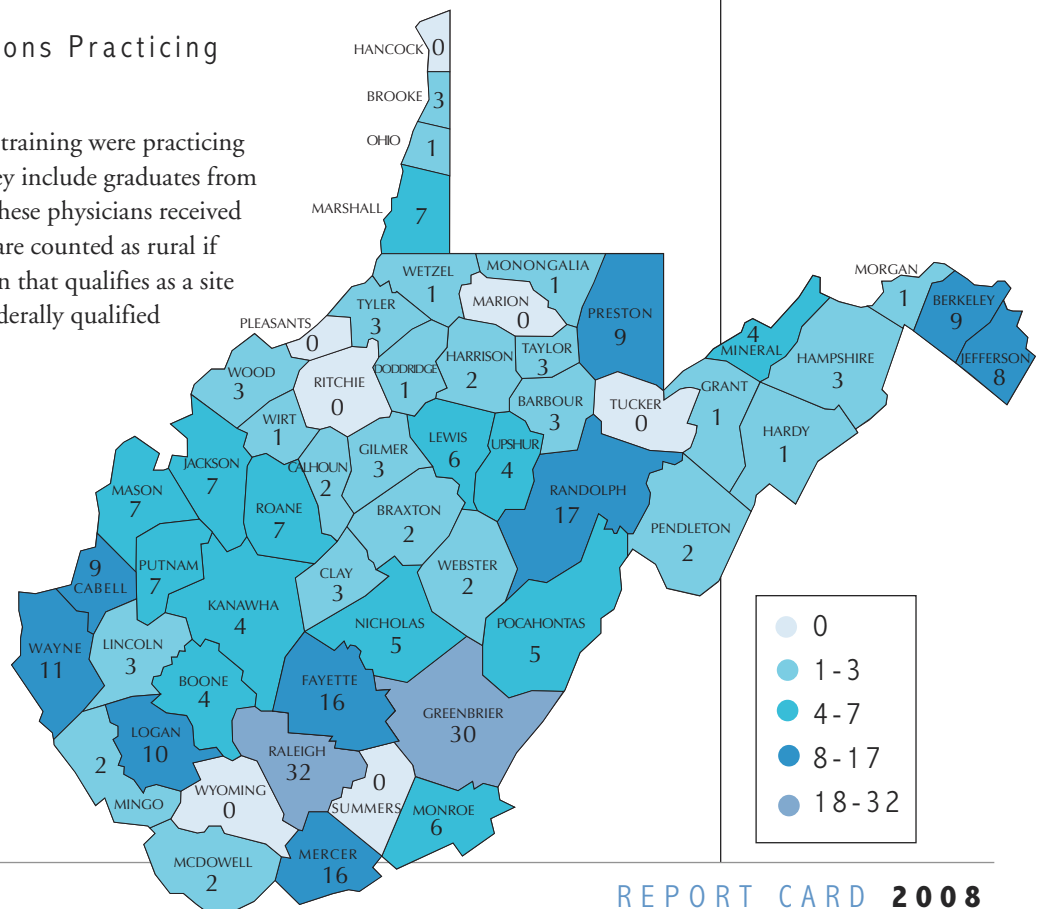
## Physicians with RHEP Rotations Practicing in Rural Areas of West Virginia, 1999-2008



From 1999 to 2008, the number of physicians who did RHEP rural rotations and are currently practicing in rural areas has increased steadily. These numbers include physicians who did rural rotations under RHEP and the federally funded Area Health Education Program. Each of the medical (DO & MD) graduates is re-verified annually so the count each year reflects the loss of some rural practitioners to urban and out-of-state practice. Despite this expected loss, the number of medical graduates in rural practice has increased dramatically in the past 10 years at an average annual rate of 14.1%.

## Physicians with RHEP Rotations Practicing in Rural Areas in 2008

A total of 289 physicians with RHEP training were practicing in rural areas of the state in 2008. They include graduates from 1991-2005. A total of 101 (35%) of these physicians received state financial incentives. Placements are counted as rural if the physician is practicing in a location that qualifies as a site for a rural rotation or if the site is a federally qualified health center (FQHC) or free clinic.





**HIGHER EDUCATION POLICY COMMISSION**

Health Sciences  
1018 Kanawha Blvd E  
Charleston, WV 25301