



## Legislative Oversight Commission on Education Accountability January 8, 2023

- **West Virginia Health Sciences and Rural Health Report**  
(§18B-16-9)  
Cynthia Persily, Ph.D., Vice Chancellor for Health Sciences

1





**WEST VIRGINIA**

# **Higher Education Policy Commission**

---

**Report to the Legislative Oversight Commission  
on Education Accountability**

**West Virginia Health Sciences and Rural Health Report 2022  
(§18B-16-9)**



2022 WEST VIRGINIA

# HEALTH SCIENCES

AND RURAL HEALTH REPORT



WEST VIRGINIA HIGHER EDUCATION POLICY COMMISSION



# TABLE OF CONTENTS

<b>About the Division of Health Sciences .....</b>	<b>1</b>
<b>Executive Summary .....</b>	<b>1</b>
<b>Medical School Profiles .....</b>	<b>2</b>
Marshall University Joan C. Edwards School of Medicine.....	3
West Virginia School of Osteopathic Medicine .....	5
West Virginia University School of Medicine .....	7
<b>Medical Licensure Exams .....</b>	<b>9</b>
Allopathic Medical School Graduates .....	9
Osteopathic Medical School Graduates.....	9
<b>Medical School Indebtedness.....</b>	<b>10</b>
<b>Residency Training.....</b>	<b>11</b>
<b>Medical School Graduate Retention for Practice in West Virginia .....</b>	<b>13</b>
County of Practice of Recent West Virginia Medical School Graduates .....	15
Retention of West Virginia Medical School Graduates Completing Primary Care Residencies.....	17
<b>Pharmacy Program Profiles .....</b>	<b>18</b>
West Virginia University School of Pharmacy.....	18
Marshall University School of Pharmacy .....	18
Admission and Academic Year Report .....	18
Licensure Examinations .....	20
West Virginia Retention and Rural Practice .....	20
<b>Dentistry Program Profiles .....</b>	<b>21</b>
West Virginia University School of Dentistry .....	21
Admission and Academic Year Report .....	21
Licensure Examinations .....	22
West Virginia Retention and Rural Practice.....	22
<b>Loans and Incentives .....</b>	<b>23</b>
Health Sciences Service Program .....	23
Medical Student Loan Program.....	23
Choose WV Practice Program .....	24
Mental Health Loan Repayment Program.....	24
<b>Rural Health Initiative Program .....</b>	<b>25</b>
Statewide Housing System .....	25
Marshall University Joan C. Edwards School of Medicine.....	27
West Virginia School of Osteopathic Medicine .....	29
West Virginia University Health Sciences Center .....	31

## *About the*

# DIVISION OF HEALTH SCIENCES

The Division of Health Sciences at the Higher Education Policy Commission leads by leveraging expertise, fostering collaboration, and supporting innovation to improve the health of West Virginians, particularly rural and underserved populations. Our initiatives grow and strengthen the healthcare workforce of the future through promoting equitable access to health sciences and behavioral sciences education and support of research, practice, and policy. The Division coordinates health sciences programs, particularly those involving the state's three academic health centers at Marshall University, the West Virginia School of Osteopathic Medicine, and West Virginia University. The Division collaborates with stakeholders around key topics in the state's healthcare landscape. Current topics include behavioral health workforce development, graduate medical education, nursing workforce development, Emergency Medical Services (EMS) workforce development, mapping primary care and behavioral health access, and community based clinical research. The Division also oversees the Rural Health Initiative, a statewide program directed at improving the recruitment and retention of healthcare providers to rural areas of the state. In addition, the Division administers the Health Sciences Service Program, the Choose WV practice program, the Medical Student Loan Repayment Program, and the new Mental Health Loan Repayment Program which began in 2021. During 2022, the Division played a key role in implementing and evaluating the Governor's Nursing Workforce Expansion Initiative and the Governor's "Answer the Call" Emergency Medical Services Initiative.

## EXECUTIVE SUMMARY

West Virginia's three state-funded medical schools enroll more medical students per capita than any other state in the country. Due to its large number of medical student slots, the state typically is able to offer all qualified West Virginians the opportunity to complete their medical education in the state. In the academic year of 2022, 44 percent of the 392 medical students who enrolled in the first year classes of the state's three medical schools were West Virginia residents. (Pages 2-8)

In-state tuition at West Virginia medical schools is among the most affordable in the nation. In addition to affordability, all three schools continue to well prepare students to succeed as practitioners and report licensure exam passage rates ranging from 93-100 percent for the last five years. (Page 9)

Retaining medical school graduates in the state for their residencies is one of the most proven strategies for eventually recruiting them to practice in the state. The Commission and the three medical schools all offer programs to incentivize the state's medical students, particularly those students interested in primary care and rural practice, to complete their residency training in West Virginia. Among all 2022 medical school graduates in West Virginia, 55 percent chose to do primary care residencies, up from 52 percent last year. (Pages 13-17)

In recent years, West Virginia higher education institutions have expanded the number of health professions programs offered. West Virginia has experienced growth in social work, pharmacy, public health, occupational therapy, psychology, and physical therapy. It is hoped that graduates of these programs will assist in better addressing healthcare needs of the state's rural and underserved communities. (Pages 25-26) In this report we are reporting on public dentistry and pharmacy program outcomes for the first time.

The Commission administers three financial aid programs for students in health professions. These programs help to keep healthcare practitioners in West Virginia by providing incentives. Since its inception in 1995, the Health Sciences Service Program has had 231 participants complete the service program. The Medical Student Loan Program provides needs-based loans each year to the state's medical students. Loans are forgiven for service in underserved areas of the state or in shortage specialties. The newest program, the Choose WV Practice Program, began in 2019-2020. This program provides a tuition waiver to non resident West Virginia Medical Students who agree to remain in WV to practice in an underserved area of the state. (Page 23-24)

West Virginia medical school graduates select primary care residencies at a rate higher than the national average. Many of these graduates remain in state to practice, however, a maldistribution of primary care physicians persists especially in rural and low income areas. The Commission and the medical schools, through the Rural Health Initiative and other programs, develop innovative models and engage underserved communities to help redistribute the primary care physician workforce. (Pages 27-34)



# MEDICAL SCHOOL PROFILES

The Marshall University Joan C. Edwards School of Medicine and the West Virginia University School of Medicine are allopathic medical schools, and the West Virginia School of Osteopathic Medicine is an osteopathic medical school. The structure and content of allopathic and osteopathic medical education and training are similar in many ways, while different in others. For this report, where similarities exist, the three schools are discussed together, and where differences exist, the information for allopathic and osteopathic programs is broken out.

All medical school applicants complete the Medical College Admission Test® (MCAT®) as part of the application process. In 2015, the Association of American Medical Colleges redesigned the MCAT®. As a result, some West Virginia medical schools still accept scores from either the new and old versions of the MCAT®. The new MCAT® consists of four multiple choice sections each worth between 118 and 132 points (Biological and Biochemical Foundations of Living Systems, Chemical and Physical Foundations of Biological Systems, Psychological, Social, and Biological Foundations of Behavior, and Critical Analysis and Reasoning Skills). The old version of the MCAT® consisted of three multiple choice sections each worth 15 points (physical sciences, verbal reasoning, and biological sciences) and a writing sample.

The new national combined mean MCAT® score for students entering allopathic medical schools during the 2021-2022 academic year was 511.9. For students entering osteopathic medical schools, the score was 503. National performance data on the old MCAT® for students entering medical schools is no longer reported.

For the 2021-2022 academic year, the national mean grade point average (GPA) for students matriculating to allopathic medical schools was 3.75, and the national mean grade point average for students matriculating to osteopathic schools was 3.56 (Association of American Medical Colleges and American Association of Colleges of Osteopathic Medicine).

# Marshall University Joan C. Edwards School of Medicine



## ENTERING CLASS ADMISSION RATE

	2021-2022	2020-2021	2019-2020	2018-2019	2017-2018
<b><i>In-State</i></b>					
Acceptances/Applicants	103/199	95/209	88/190	88/189	81/160
Admission Rate	52%	45%	46%	47%	51%
<b><i>Out-of-State</i></b>					
Acceptances / Applicants	25/2123	15/1922	29/2,015	27/1,807	44/1,800
Admission Rate	1.2%	0.8%	1%	1%	2%
<b>Total Acceptances / Applicants</b>	<b>128/2322</b>	<b>110/2131</b>	<b>117/2,205</b>	<b>115/1,996</b>	<b>125/1,960</b>
<b>Total Admission Rate</b>	<b>6%</b>	<b>5%</b>	<b>5%</b>	<b>6%</b>	<b>6%</b>

## ENTERING CLASS ACADEMIC QUALIFICATIONS

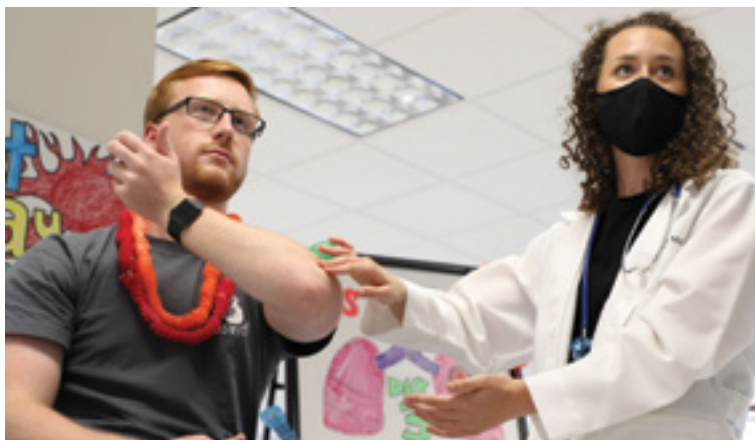
	2021-2022	2020-2021	2019-2020	2018-2019	2017-2018
Mean GPA	3.63	3.61	3.65	3.70	3.60
Mean MCAT <sup>®</sup> (Old Version)	-	-	-	-	30.0
Mean MCAT <sup>®</sup> (New Version)	504	502	502.0	504.0	503.0

## ACADEMIC YEAR DATA

		2021-2022	2020-2021	2019-2020	2018-2019	2017-2018
<b><i>First Year New Enrollment</i></b>	In-State	63	69	63	62	49
	Out-of-State	17	11	17	17	26
	<b>Total</b>	<b>80</b>	<b>80</b>	<b>80</b>	<b>79</b>	<b>75</b>
<b>Total Graduates</b>		69	74	79	61	68
<b>Total Medical Students</b>		321	315	335	340	305
<b>Tuition and Fees</b>	In-State	24,324	\$24,004	\$23,904	\$23,904	\$22,154
	Out-of-State	57,682	\$56,788	\$56,888	\$54,772	\$52,542



# West Virginia School of Osteopathic Medicine



## ENTERING CLASS ADMISSION RATE

	2021-2022	2020-2021	2019-2020	2018-2019	2017-2018
<b><i>In-State</i></b>					
Acceptances/Applicants	67/143	53/139	57/131	62/126	52/121
Admission Rate	47%	38%	44%	50%	43%
<b><i>Out-of-State</i></b>					
Acceptances / Applicants	533/5173	412/5290	374/5,081	378/4,591	391/4,581
Admission Rate	10%	8%	7%	8%	9%
<b>Total Acceptances / Applicants</b>	<b>600/5316</b>	<b>465/5429</b>	<b>431/5,212</b>	<b>440/4,717</b>	<b>443/4,702</b>
<b>Total Admission Rate</b>	<b>11%</b>	<b>9%</b>	<b>8%</b>	<b>9%</b>	<b>9%</b>

## ENTERING CLASS ACADEMIC QUALIFICATIONS

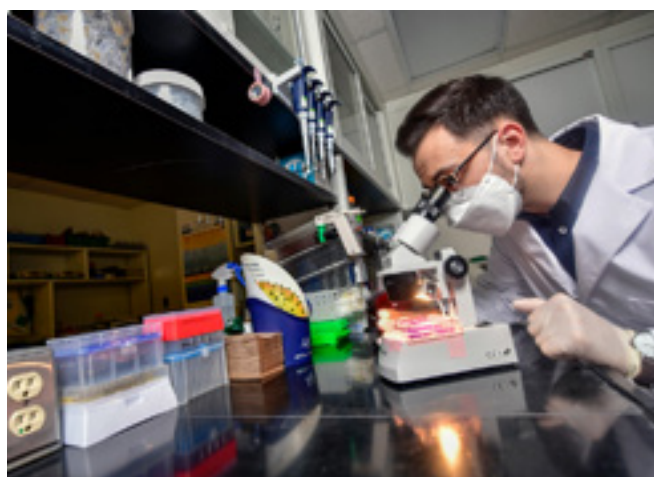
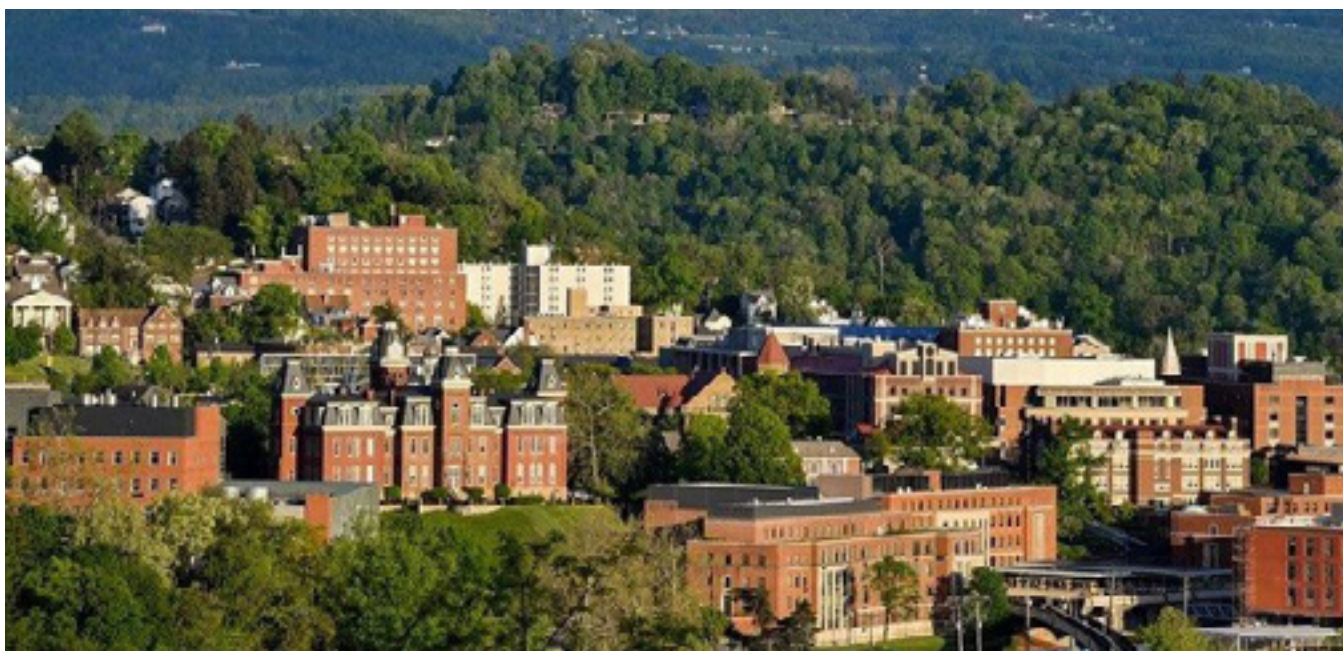
	2021-2022	2020-2021	2019-2020	2018-2019	2017-2018
Mean GPA	3.59	3.58	3.59	3.55	3.51
Mean MCAT <sup>®</sup> (Old Version)	-	21.8	24.7	20.6	23.5
Mean MCAT <sup>®</sup> (New Version)	501.8	500.7	500.8	499.6	498.3

## ACADEMIC YEAR DATA

		2021-2022	2020-2021	2019-2020	2018-2019	2017-2018
<b><i>First Year New Enrollment</i></b>	In-State	46	41	42	43	46
	Out-of-State	154	166	158	158	158
	<b>Total</b>	<b>200</b>	<b>207</b>	<b>200</b>	<b>201</b>	<b>204</b>
<b>Total Graduates</b>		199	178	194	208	192
<b>Total Medical Students</b>		806	800	809	841	849
<b>Tuition and Fees</b>	In-State	21,472	\$21,472	\$21,472	\$21,472	\$21,472
	Out-of-State	52,710	\$52,710	\$52,710	\$52,710	\$52,710



# West Virginia University School of Medicine



## ENTERING CLASS ADMISSION RATE

	2021-2022	2020-2021	2019-2020	2018-2019	2017-2018
<b><i>In-State</i></b>					
Acceptances/Applicants	81/212	75/212	79/208	88/226	77/182
Admission Rate	38%	35%	38%	39%	42%
<b><i>Out-of-State</i></b>					
Acceptances / Applicants	86/4850	90/4841	78/5,356	74/5,062	89/4,370
Admission Rate	2%	2%	1%	1%	2%
<b>Total Acceptances / Applicants</b>	<b>166/5062</b>	<b>165/5053</b>	<b>157/5,356</b>	<b>162/5,288</b>	<b>166/4,552</b>
<b>Total Admission Rate</b>	<b>3%</b>	<b>3%</b>	<b>3%</b>	<b>3%</b>	<b>4%</b>

## ENTERING CLASS ACADEMIC QUALIFICATIONS

	2021-2022	2020-2021	2019-2020	2018-2019	2017-2018
Mean GPA	3.8	3.8	3.8	3.86	3.80
Mean MCAT <sup>®</sup> (Old Version)	-	-	-	-	-
Mean MCAT <sup>®</sup> (New Version)	510	510	509.0	508.0	507.0

## ACADEMIC YEAR DATA

		2021-2022	2020-2021	2019-2020	2018-2019	2017-2018
<b><i>First Year New Enrollment</i></b>	In-State	65	63	67	73	66
	Out-of-State	47	49	45	39	46
	<b>Total</b>	<b>112</b>	<b>112</b>	<b>112</b>	<b>112</b>	<b>112</b>
<b>Total Graduates</b>		103	117	101	93	100
<b>Total Medical Students</b>		434	456	446	432	427
<b>Tuition and Fees</b>	In-State	32,940	\$32,643	\$32,643	\$32,373	\$31,023
	Out-of-State	64,935	\$64,152	\$64,152	\$63,342	\$60,642

# MEDICAL LICENSURE EXAMS

All medical students must complete a series of licensing exams in order to become licensed physicians. Allopathic students take the United States Medical Licensing Exam (USMLE), and osteopathic students take the Comprehensive Osteopathic Medical Licensing Examination (COMLEX)-USA.

These exams have multiple parts. Students typically take the final USMLE or COMLEX soon after graduating from medical school. The data reported below is for the final exam for first-time test takers who took their respective licensing exam within two years of graduation. In evaluating the data presented below, it is important to consider some of its limitations:

- ▶ The data is for first-time test takers.
- ▶ Graduates can elect to not report their results to their medical schools.
- ▶ The data does not reflect graduates who take the exam more than two years after graduation.
- ▶ Not all graduates enter residency programs and therefore do not sit for these exams.

## Allopathic Medical School Graduates

The USMLE, Step 3 is the final of three tests completed by allopathic medical students. Graduates normally take USMLE, Step 3 at the end of their first year of residency. The national average passage rate for first-time test takers for the graduating class of 2017 is 97 percent.

### NUMBER PASSING/NUMBER OF EXAMINEES, USMLE, STEP 3 GRADUATING CLASS

	2019	2018	2017	2016	2015
<b>Marshall University</b>	54/55	64/65	66/69	59/59	53/58
	98%	98%	96%	100%	91%
<b>West Virginia University</b>	82/84	92/93	99/101	89/90	94/99
	98%	99%	98%	99%	95%

## Osteopathic Medical School Graduates

Osteopathic graduates take the final COMLEX, Level 3 as early as six months into residency training. They must complete Level 3 before starting their third year of residency training. The national average is 96.6%.

### NUMBER PASSING/NUMBER OF EXAMINEES, COMLEX, LEVEL 3 GRADUATING CLASS

	2019	2018	2017	2016	2015
<b>West Virginia School of Osteopathic Medicine</b>	191/198	188/192	168/178	169/181	189/200
	96%	98%	94%	93%	95%



# MEDICAL SCHOOL INDEBTEDNESS

The average indebtedness of each graduating medical school class is calculated from all loans, public and private, accumulated while pursuing medical degrees. It does not include pre-medical school debt. Members of the graduating class who do not have any debt are excluded from the calculation. The difference in graduate indebtedness among the schools can be attributed in part to differences in the proportion of students paying out-of-state tuition and fees. Historically, the West Virginia School of Osteopathic Medicine has had classes composed of more out-of-state students. As of 2021, 76-89% of medical students leave medical school with an average of \$203,062 in total education debt. Average debt for students attending a public medical school was \$194,280. (AAMC, 2022)

## AVERAGE MEDICAL STUDENT DEBT, BY GRADUATING CLASS

Class	Marshall University	West Virginia School of Osteopathic Medicine	West Virginia University
2022	\$150,911	\$252,340	\$186,254
2021	\$160,827	\$271,200	\$194,955
2020	\$149,691	\$253,341	\$201,334
2019	\$158,731	\$240,727	\$197,999
2018	\$147,414	\$249,870	\$196,694

# RESIDENCY TRAINING

Upon graduation from medical school, physicians complete specialized residency training programs (also referred to as graduate medical education) before beginning practice. Residency training typically takes three to five years to complete. The federal Medicare program is the major funder of residency programs nationwide. Sponsoring hospitals provide additional funding for residency training.

Through a computerized process referred to as “the match”, medical students rank their top residency program choices, and residency programs rank the top medical students they would like to recruit. Based on these rankings, an algorithm then matches each medical student with a residency program. Previously, there was an allopathic matching program and an osteopathic matching program. In 2020, the “Single Match” represented the first time that all allopathic and osteopathic applicants participated in one matching program. The Single Match comes after the creation of a single accreditation system forged by the Accreditation Council for Graduate Medical Education (ACGME), the American Osteopathic Association (AOA), and the American Association of Colleges of Osteopathic Medicine. In 2014, those organizations approved an agreement to recognize the ACGME as the primary accrediting body for graduate medical education programs by 2020. As part of that transition, the AOA Match ended in 2019 (National Resident Matching Program). Across West Virginia, more than 50 different residency programs exist. Although many of these programs are for primary care specialties such as family medicine and pediatrics, training programs for other critical non-primary care specialties are offered that help ensure West Virginia has providers practicing critical specialties such as dermatology, anesthesiology, psychiatry, ophthalmology, and surgery.

## WEST VIRGINIA RESIDENCY PROGRAMS

Sponsoring Institution	Primary Site	City	Specialty	Filled Residency
Access Health THC	Access Health Teaching Health Center	Beckley	Family Medicine	12
Charleston Area Medical Center	Charleston Area Medical Center	Charleston	Emergency Medicine	17
Charleston Area Medical Center	Charleston Area Medical Center	Charleston	Urological Surgery	10
Charleston Area Medical Center	Charleston Area Medical Center	Charleston	Family Medicine	19
Charleston Area Medical Center	Charleston Area Medical Center	Charleston	Internal Medicine Categorical	31
Charleston Area Medical Center	Charleston Area Medical Center	Charleston	Internal Medicine Preliminary	5
Charleston Area Medical Center	Charleston Area Medical Center	Charleston	Internal Medicine/Psychiatry	10
Charleston Area Medical Center	Charleston Area Medical Center	Charleston	Obstetrics and Gynecology	12
Charleston Area Medical Center	Charleston Area Medical Center	Charleston	Pediatrics	20
Charleston Area Medical Center	Charleston Area Medical Center	Charleston	Psychiatry	15
Charleston Area Medical Center	Charleston Area Medical Center	Charleston	Surgery Categorical	20
Charleston Area Medical Center	Charleston Area Medical Center	Charleston	Surgery Preliminary	2
Charleston Area Medical Center	Charleston Area Medical Center	Charleston	Vascular Surgery Integrated	5
Greenbrier Valley Medical Center	Greenbrier Valley Med Center	Ronceverte	Family Medicine	11
Greenbrier Valley Medical Center	Greenbrier Valley Med Center	Ronceverte	Osteopathic Neuromusculoskeletal Medicine	6
Marshall University	Cabell Huntington Hospital	Huntington	Family Medicine	24
Marshall University	Cabell Huntington Hospital	Huntington	Internal Medicine	67
Marshall University	Cabell Huntington Hospital	Huntington	Internal Medicine/Pediatrics	8
Marshall University	Cabell Huntington Hospital	Huntington	Neurology	9
Marshall University	Cabell Huntington Hospital	Huntington	Obstetrics and Gynecology	11
Marshall University	Cabell Huntington Hospital	Huntington	Orthopedic surgery	15

Data were obtained September 2022

*Continued on next page*

Sponsoring Institution	Primary Site	City	Specialty	Filled Residency
Marshall University	Cabell Huntington Hospital	Huntington	Pediatrics	18
Marshall University	Marshall University/University Physicians and Surgeons Clinics	Huntington	Psychiatry	24
Marshall University	Cabell Huntington Hospital	Huntington	Surgery	23
United Hospital Center	United Hospital Center	Bridgeport	Family Medicine	20
West Virginia University School of Medicine	Ruby Memorial Hospital	Morgantown	Anesthesiology	36
West Virginia University School of Medicine	Ruby Memorial Hospital	Morgantown	Dermatology	6
West Virginia University School of Medicine	Ruby Memorial Hospital	Morgantown	Emergency Medicine	30
West Virginia University School of Medicine	Ruby Memorial Hospital	Morgantown	Family Medicine	18
West Virginia University School of Medicine	West Virginia University Rural Family Medicine	Harpers Ferry	Family Medicine	19
West Virginia University School of Medicine	Ruby Memorial Hospital	Morgantown	Internal Medicine	74
West Virginia University School of Medicine	Camden Clark Medical Center	Parkersburg	Internal Medicine	17
West Virginia University School of Medicine	Ruby Memorial Hospital	Morgantown	Internal Medicine/Pediatrics	16
West Virginia University School of Medicine	Ruby Memorial Hospital	Morgantown	Neurosurgery	7
West Virginia University School of Medicine	Ruby Memorial Hospital	Morgantown	Neurology	28
West Virginia University School of Medicine	Ruby Memorial Hospital	Morgantown	Obstetrics and Gynecology	12
West Virginia University School of Medicine	Ruby Memorial Hospital	Morgantown	Ophthalmology	12
West Virginia University School of Medicine	Ruby Memorial Hospital	Morgantown	Orthopedic surgery	18
West Virginia University School of Medicine	Ruby Memorial Hospital	Morgantown	Otolaryngology	13
West Virginia University School of Medicine	Ruby Memorial Hospital	Morgantown	Pathology-Anatomic and Clinical	11
West Virginia University School of Medicine	Ruby Memorial Hospital	Morgantown	Pediatrics	21
West Virginia University School of Medicine	Ruby Memorial Hospital	Morgantown	Plastics - Integrated	6
West Virginia University School of Medicine	Ruby Memorial Hospital	Morgantown	Psychiatry	35
West Virginia University School of Medicine	Ruby Memorial Hospital	Morgantown	Radiation Oncology	2
West Virginia University School of Medicine	Ruby Memorial Hospital	Morgantown	Radiology-Diagnostic	23
West Virginia University School of Medicine	Ruby Memorial Hospital	Morgantown	Surgery	29
West Virginia University School of Medicine	Ruby Memorial Hospital	Morgantown	Transitional Year	13
West Virginia University School of Medicine	Ruby Memorial Hospital	Morgantown	Urology	10
West Virginia University School of Public Health	WVU School of Public Health	Morgantown	Preventive Medicine - Occupational Medicine	3
West Virginia University School of Public Health	WVU School of Public Health	Morgantown	Preventive Medicine - Public Health/ General Preventive Medicine	3
Wheeling Hospital	Wheeling Hospital	Wheeling	Family Medicine	23
<b>Total Filled Slots</b>				<b>903</b>

Key indicators related to residency choice affecting the supply of physicians across West Virginia are:

- ▶ Location: graduates who complete residencies in West Virginia are much more likely to remain in the state, which is consistent with national trends.
- ▶ Specialty: primary care fields generally are most needed in rural West Virginia.

Graduates of all three West Virginia medical schools typically enter primary care residency programs at a rate at or above the national average for these same programs. Among all three medical schools, 55 percent of 2022 medical school graduates chose a primary care residency. Nationally for the 2022 single match program, 50 percent of US graduates matched with a primary care residency program (National Resident Matching Program).

Selecting a primary care residency program does not always translate to practicing primary care, particularly in an outpatient setting. For example, individuals entering internal medicine residencies often forego a general internal medicine track, and instead subspecialize in fields not traditionally viewed as primary care such as cardiovascular disease, gastroenterology, and infectious diseases. Additionally, primary care graduates frequently elect to work as hospitalists in inpatient settings. Thus, some of the graduates reported below ultimately may not practice in an outpatient, primary care setting.

## NUMBER AND PERCENTAGE OF GRADUATES CHOOSING PRIMARY CARE RESIDENCIES, BY GRADUATING CLASS

	2022	2021	2020	2019	2018
Marshall University	38 (56%)	37 (50%)	36 (46%)	30 (51%)	38 (58%)
West Virginia School of Osteopathic Medicine	114 (58%)	100 (56%)	117 (60%)	119 (59%)	124 (66%)
West Virginia University	49 (48%)	65 (56%)	51 (50%)	50 (55%)	47 (47%)

# MEDICAL SCHOOL GRADUATE RETENTION

## *for practice in West Virginia*

Retention denotes the number or percentage of West Virginia medical school graduates who remain in the state to practice. Retention is tracked annually for a six-year cohort of medical school graduates who have completed residency training. The data in this section focuses on retention of West Virginia medical school graduates in primary care and/or rural practice.

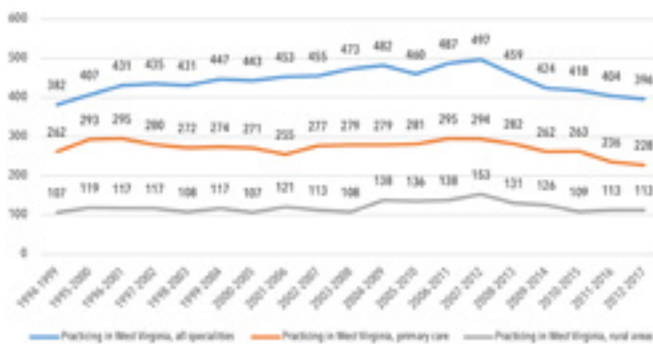
- ▶ Primary care is defined as family medicine, internal medicine, internal medicine/pediatrics, obstetrics/gynecology, and pediatrics.
- ▶ Rural areas include all areas of the state with a 2006 Rural Urban Commuting Area (RUCA) code of 4.0 or higher. These codes classify U.S. Census tracts using measures of population density, urbanization, and daily commuting.
- ▶ Data is provided only for graduates who have completed their residency training.

Between 2012 and 2017, of the 1954 students who graduated from the state's three medical schools and have completed residency training, either in West Virginia or out of state, 20 percent (396) of these graduates are practicing in West Virginia, 12% (228) are practicing in primary care in West Virginia, and 6% (113) are practicing in rural West Virginia. The growth in medical school class sizes in recent years is supplying more graduates to practice in West Virginia; however, issues still persist in recruiting graduates to practice in both primary care and rural settings.

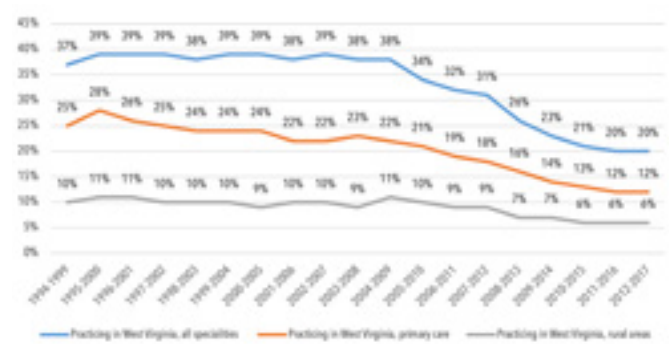
## MEDICAL SCHOOL GRADUATES RETAINED, BY INSTITUTION, GRADUATING CLASSES OF 2012–2017

	Total with completed training	Total in practice in West Virginia	Total in primary care in West Virginia	Total in rural areas of West Virginia
Marshall University	355	84 (24%)	41 (12%)	13 (4%)
West Virginia School of Osteopathic Medicine	1,064	164 (15%)	110 (10%)	74(7%)
West Virginia University	535	148 (28%)	77 (14%)	26(5%)
<b>Total</b>	<b>1,954</b>	<b>396 (20%)</b>	<b>228 (12%)</b>	<b>113 (6%)</b>

## NUMBER OF WEST VIRGINIA MEDICAL SCHOOL GRADUATES RETAINED, GRADUATING CLASSES OF 1994–2017

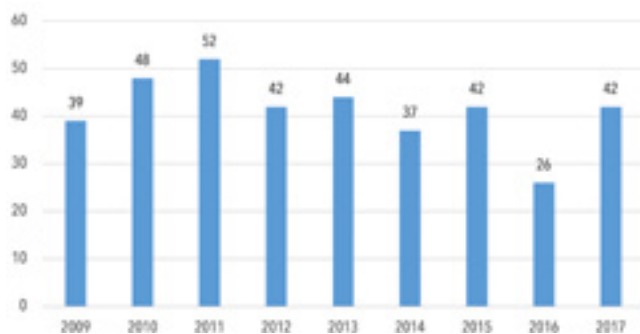


## PERCENTAGE OF WEST VIRGINIA MEDICAL SCHOOL GRADUATES RETAINED, GRADUATING CLASSES OF 1994–2017

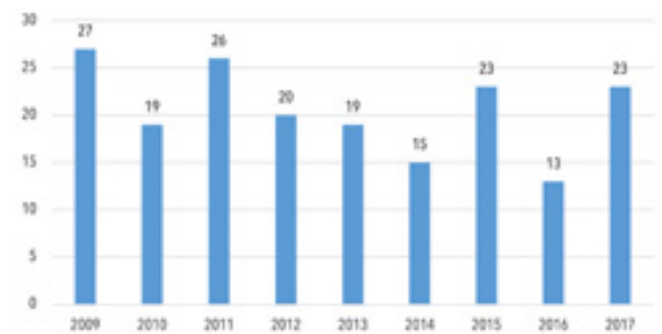


## NUMBER OF WEST VIRGINIA MEDICAL SCHOOL GRADUATES PRACTICING PRIMARY CARE OR IN RURAL AREAS, BY GRADUATING CLASS

### Practicing Primary Care in West Virginia



### Practicing in Rural Areas of West Virginia



\* These numbers only reflect those graduates who have completed their residency training.

# County of Practice of Recent West Virginia Medical School Graduates

West Virginia continues to focus on recruiting more physicians to the state, especially to rural areas. Having physicians who practice primary care and/or in rural areas is crucial to ensuring communities across the state have access to health care.

The table below illustrates recruitment of the most recent six-year cohort of West Virginia medical school graduates to all 55 counties of West Virginia. This information must be interpreted carefully. It is a snapshot of the placement of the most recent West Virginia medical school graduates over a six-year period only and does not include graduates of out-of-state medical schools or physicians who graduated prior to 2012 who are practicing in these counties. Thus, a zero listed in any column does not necessarily indicate that a county is underserved. At the same time, tracking this type of information over an extended period can help inform education and training program activities and physician recruitment priorities.

## WEST VIRGINIA MEDICAL SCHOOL GRADUATES PRACTICING IN WEST VIRGINIA BY COUNTY, GRADUATING CLASSES OF 2012–2017

County	Number in Practice	Number Practicing in Rural Areas	Number Practicing in Primary Care
Barbour	0	0	0
Berkeley	11	0	8
Boone	3	3	2
Braxton	1	1	1
Brooke*	0	0	0
Cabell*	64	0	31
Calhoun	1	1	1
Clay	1	1	0
Doddridge	1	1	1
Fayette	4	4	3
Gilmer	0	0	0
Grant	1	1	1
Greenbrier	19	19	18
Hampshire	0	0	0
Hancock	1	0	1
Hardy	0	0	0
Harrison	14	14	9
Jackson	3	3	2
Jefferson	6	6	5
Kanawha*	58	0	25
Lewis	2	2	1
Lincoln	1	1	1
Logan	4	4	3
Marion	5	5	2

*Continued on next page*

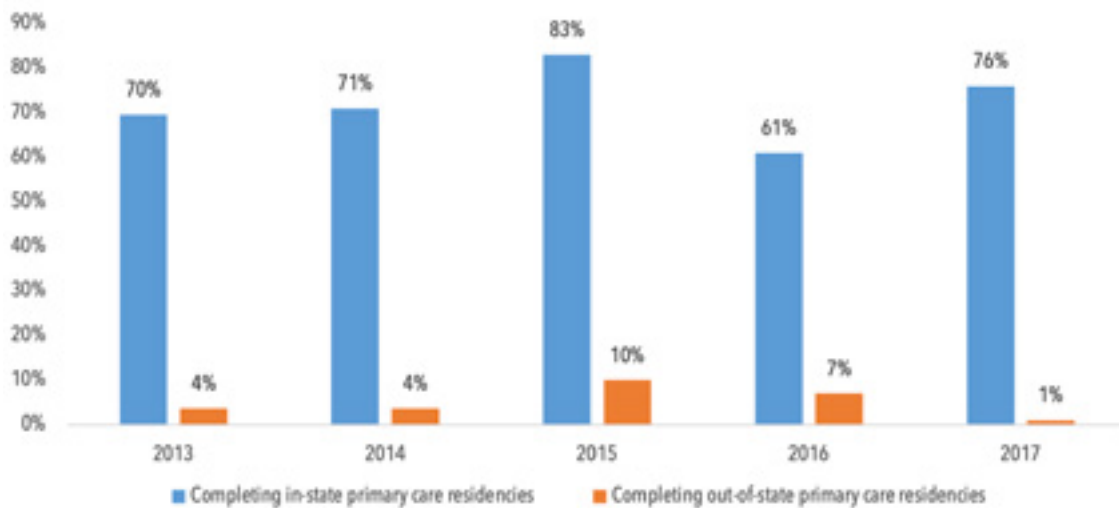
County	Number in Practice	Number Practicing in Rural Areas	Number Practicing in Primary Care
Marshall *	2	0	2
Mason	7	7	6
McDowell	1	1	1
Mercer	9	9	6
Mineral	2	2	1
Mingo	1	1	1
Monongalia*	116	1	50
Monroe	0	0	0
Morgan	0	0	0
Nicholas	2	2	2
Ohio*	9	0	6
Pendleton	0	0	0
Pleasants	0	0	0
Pocahontas	1	1	1
Preston	3	3	3
Putnam*	6	5	3
Raleigh	10	0	9
Randolph	2	2	2
Ritchie	0	0	0
Roane	1	1	1
Summers	0	0	0
Taylor	1	1	1
Tucker	0	0	0
Tyler	1	1	0
Upshur	5	5	4
Wayne	3	2	2
Webster	2	2	2
Wetzel	0	0	0
Wirt	2	2	2
Wood*	10	0	4
Wyoming	1	1	1
<b>Total</b>	<b>396</b>	<b>112</b>	<b>226</b>

\* Denotes urban/non-rural county with a 2006 Rural Urban Community Area Code (RUCA) of less than 4.0, and therefore, the county has no rural areas.

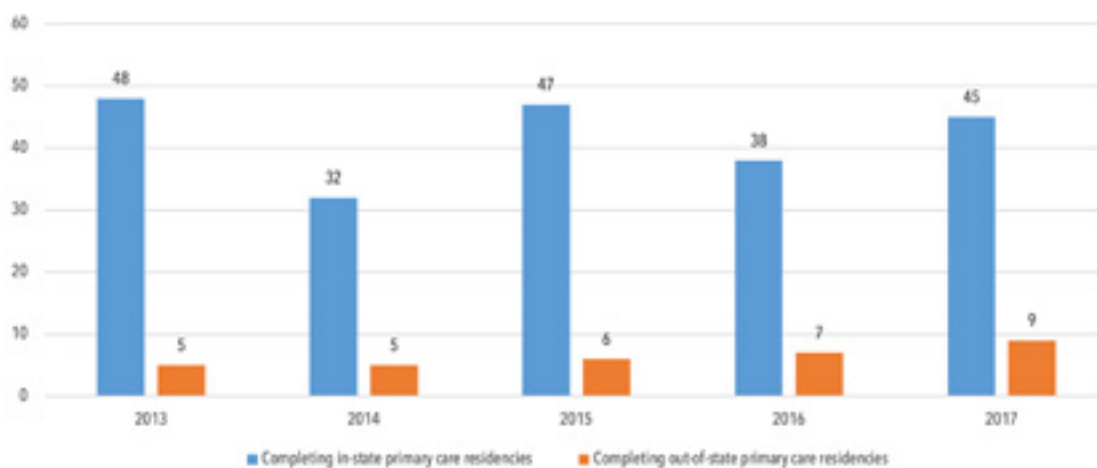
# Retention of West Virginia Medical School Graduates Completing Primary Care Residencies

The location of a medical school graduate's residency program frequently predicts whether that graduate will practice in West Virginia. For the 2017 graduates of West Virginia medical schools, 202 graduates went on to complete primary care residency programs. Upon completing residency, 76% of those who completed in-state primary care residencies were retained in West Virginia to practice, while only 1% of graduates who completed out-of-state primary care residencies returned to West Virginia to practice.

## PERCENTAGE OF WEST VIRGINIA MEDICAL STUDENTS GRADUATES COMPLETING PRIMARY CARE RESIDENCIES RETAINED, BY GRADUATING CLASS



## NUMBER OF WEST VIRGINIA MEDICAL SCHOOL GRADUATES COMPLETING PRIMARY CARE RESIDENCIES RETAINED, BY GRADUATING CLASS





# PHARMACY PROGRAM PROFILES

## West Virginia University School of Pharmacy

West Virginia University (WVU) School of Pharmacy is the oldest pharmacy school in the state, providing pharmacy education for more than a century. Students can enter into the program through the pre-pharmacy pathway, which prepares students for the Doctor of Pharmacy (PharmD) program, or the Direct Admit Pathway (DAP), an early assurance program for high achieving high school students who wish to pursue the PharmD. The program also offers a PhD program specializing in either Health Services and Outcomes Research or Pharmaceutical and Pharmacological Sciences. The program is fully accredited by the Accreditation Council for Pharmacy Education (ACPE).

The WVU School of Pharmacy and WVU Medicine also offers postgraduate year 1 and 2 residency programs for individuals wishing to pursue advanced clinical skills and training. The School of Pharmacy also offers a one-year academic pharmacy fellowship.

## Marshall University School of Pharmacy

Marshall University School of Pharmacy provides a four-year PharmD program. The program does not require a bachelor's degree for admission. Students can complete the necessary pre-requisite coursework for pharmacy school in as few as two years from any regionally accredited institution. Application is competitive. Active learning is the focus of Marshall's curriculum. Students earn three certifications while in the program including Immunization (APhA) certification, Medication Therapy Management (APhA) certification and Diabetes Management (APhA) certification. The program is fully accredited by the Accreditation Council for Pharmacy Education (ACPE).

This is the first year that Pharmacy programs are included in the West Virginia Health Sciences and Rural Health Report. Data including admissions (in state and out of state), GPA, graduates, total students, tuition costs, licensure pass rates and areas of practice of graduates are included here.

## Admissions and Academic Year Report

### WVU SCHOOL OF PHARMACY, ENTERING CLASS AND ACADEMIC YEAR REPORT

		2021
<b>Entering Class Data</b>		
<b>Applicants</b>	In-State	40 (34% of applicants)
	Out-of-State	78 (66% of applicants)
	<b>Total</b>	<b>118</b>
<b>Acceptances Issued</b>	In-State	35 (88% of in state applicants accepted)
	Out-of-State	58 (74% of out of state applicants accepted)
	<b>Total</b>	<b>93</b>
<b>Entering Class Mean GPA</b>		3.47

*Continued on next page*

		2021
<b>Academic Year Data</b>		
<b>First Year New Enrollment</b>	In-State	32 (52% of new students)
	Out-of-State	29 (48% of new students)
	<b>Total</b>	<b>61</b>
<b>Total Graduates</b>		81
<b>Total PharmD Students</b>		287
<b>Tuition and Fees</b>		
In-State		\$21,768
Out-of-State		\$43,152
<b>Avg Final Year Indebtedness</b>		<b>Not available</b>

## MARSHALL UNIVERSITY PHARMACY, ENTERING CLASS AND ACADEMIC YEAR REPORT

<b>Entering Class Data</b>		
<b>Applicants</b>	In-State	28 (21% of applicants)
	Out-of-State	104 (79% of applicants)
	<b>Total</b>	<b>132</b>
<b>Acceptances Issued</b>	In-State	25 (89% of in state applicants accepted)
	Out-of-State	39 (38% of out of state applicants accepted)
	<b>Total</b>	<b>64</b>
<b>Entering Class Mean GPA</b>		3.2
<b>Academic Year Data</b>		
<b>First Year New Enrollment</b>	In-State	17 (50% of new students)
	Out-of-State	17 (50% of new students)
	<b>Total</b>	<b>34</b>
<b>Total Graduates</b>		59
<b>Total PharmD Students</b>		Fall 2020=245 Spring 2021=240
<b>Tuition and Fees</b>		
In-State		\$21,848
Out-of-State		\$35,278
<b>Avg Final Year Indebtedness</b>		<b>\$148,476</b>

# Licensure Examinations

Pharmacy students take their Pharmacy Board examinations (NAPLEX) after graduation (in addition to other state-specific licensure requirements) in order to be eligible to practice in the United States. The national average pass rate for 2021 was 83.1%.

## WVU SCHOOL OF PHARMACY, PHARMACY BOARD EXAMINATION PASS RATES\*

Graduating Class	2021	2020	2019	2018	2017
Number Passing	73	62	63	70	n/a
Number of Examinees	82	67	69	79	n/a
Passage Rate (%)	89%	93%	92%	89%	88%

\* First time test takers

## MARSHALL UNIVERSITY SCHOOL OF PHARMACY, PHARMACY BOARD EXAMINATION PASS RATES\*

Graduating Class	2021	2020	2019	2018	2017
Number Passing	42	54	55	63	53
Number of Examinees	56	65	76	74	62
Passage Rate (%)	75%	83%	72%	85.1%	85.5%

# West Virginia Retention and Rural Practice

Opportunities for pharmacists are available in West Virginia in rural and underserved communities. The tables below show the number of graduates from each of the state's two public pharmacy programs, along with the number who continued training and the number who entered practice in either West Virginia or another state.

## WVU SCHOOL OF PHARMACY, 2021 WEST VIRGINIA UNIVERSITY SCHOOL OF PHARMACY GRADUATES: RETENTION IN WEST VIRGINIA AND RURAL AREAS

Number of Graduates	Number of Graduates who entered residency or continued training	Number of graduates practicing in WV	Number of graduates practicing outside of WV
81	35 (41%)	18 (56%) 4 practicing in rural WV	14 (44%)

## MARSHALL UNIVERSITY SCHOOL OF PHARMACY, 2021 MARSHALL UNIVERSITY SCHOOL OF PHARMACY GRADUATES: RETENTION IN WEST VIRGINIA AND RURAL AREAS

Number of Graduates	Number of Graduates who entered residency or continued training	Number of graduates practicing in WV	Number of graduates practicing outside of WV	Number of graduates practicing in rural WV
59	9	17 (34%) 15 practicing in rural WV	33 (66%)	15

# DENTISTRY PROGRAM PROFILE

## West Virginia University School of Dentistry

The only school of Dentistry in West Virginia is located at West Virginia University. A Doctor of Dental Surgery degree (D.D.S.) guarantees graduates can profoundly transform the first impression made by an individual. The curriculum includes a blend of the biomedical, behavioral and dental sciences with the goal of developing a competent oral health professional capable of practicing safely, ethically and independently. Every dental student learns and treats patients in a student clinic, the Center for Dental Innovation, rural practices and at community clinics. The program is fully accredited by the Commission on Dental Accreditation.



This is the first year that the Dentistry program is included in the West Virginia Health Sciences and Rural Health Report. Data including admissions (in state and out of state), GPA, graduates, total students, tuition costs, licensure pass rates and areas of practice of graduates are included here.

## Admissions and Academic Year Report

### WVU DENTISTRY, ENTERING CLASS AND ACADEMIC YEAR REPORT

		2021
<b>Entering Class Data</b>		
<b>Applicants</b>	In-State	53 (6% of applications)
	Out-of-State	909 (94% of applications)
	<b>Total</b>	<b>962</b>
<b>Acceptances Issued</b>	In-State	37 (70% of in state applications)
	Out-of-State	48 (30% of out of state applications)
	<b>Total</b>	<b>85</b>
<b>Entering Class Mean GPA</b>		3.62
<b>Entering Class Mean Total DAT Score</b>		19
<b>Academic Year Data</b>		
<b>First Year New Enrollment</b>	In-State	34 (71% of class)
	Out-of-State	14 (29% of class)
	<b>Total</b>	<b>48</b>
<b>Total Graduates</b>		46
<b>Total DDS Students</b>		187
<b>Tuition and Fees</b>		
In-State		\$48,292
Out-of-State		\$95,839

# Licensure Examinations

The National Dental Board Examination (NBDE) is in two parts, part 1 and part 2. Most students take part 1 after the first two years of dental school. Most student take part 2 during their final year of dental school. To be eligible, the student must have passed part 1. In 2021, the national pass rate for accredited programs for Part 2 was 90.1%.

This is the last year for the National Board Part 1 and Pat 2. Beginning in 2022 there will be the Integrated National Board Dental Examination (INBE) and there is only one part to the INBDE. The INBDE is a 500 item two-day test.

## WVU DENTISTRY, NATIONAL BOARD EXAMINATION PASS RATES PART 1\*

Graduating Class	2021	2020	2019	2018	2017
Number Passing	44	33	43	54	53
Number of Examinees	50	46	46	56	51
Passage Rate (%)	88%	71%	93%	96%	96%

\* First time test takers

## WVU DENTISTRY, NATIONAL BOARD EXAMINATION PASS RATES PART 2\*

Graduating Class	2021	2020	2019	2018	2017
Number Passing	44	41	45	57	53
Number of Examinees	48	43	46	58	58
Passage Rate (%)	91%	95%	97%	98%	91%

\* First time test takers

# West Virginia Retention and Rural Practice

West Virginia has opportunities for dentists in all counties. In 2022, West Virginia has 106 dental health professions shortage areas (HPSA) as designated by the Health Resources and Services Administration (HRSA). These include geographic HPSAs, as well as low income and facility designated HPSAs.

## WVU DENTISTRY, 2021 WEST VIRGINIA UNIVERSITY SCHOOL OF DENTISTRY GRADUATES: RETENTION IN WEST VIRGINIA AND RURAL AREAS

Number of Graduates	Number of Graduates who entered residency or continued training	Number of graduates practicing in WV	Number of graduates practicing outside of WV
46	13	7 (21%) 3 practicing in rural West Virginia	26 (79%)

# LOANS AND INCENTIVES

## Health Sciences Service Program

The Health Sciences Service Program is a state-funded incentive program and is administered by the Commission. The program provides financial awards to health professions students who agree to practice in underserved areas of the state upon completion of their education and training. Participants complete either two years of full-time service or four years of part-time service. Medical and dental students receive a \$30,000 award. Doctoral clinical psychology, licensed independent clinical social work, nursing education, nurse practitioner, physical therapy, occupational therapy, public health, pharmacy, and physician assistant trainees receive a \$15,000 award.

Since 1995, 231 participants have completed their service obligation. In the 2021-2022 academic year, 8 awards totaling \$195,000 were offered to:

- ▶ 3 medical students
- ▶ 1 physical therapy student
- ▶ 1 nurse practitioner student
- ▶ 4 clinical social work students
- ▶ 1 pharmacy student

## Medical Student Loan Program

The Medical Student Loan Program, which is funded from student fees, is a need-based program for students at West Virginia medical schools and administered by the Commission. Institutions award loans of up to \$10,000 each year per eligible student, and a student may receive a loan in more than one year of medical school. Upon graduation and once in practice, borrowers either must repay the loan or seek loan forgiveness. Borrowers are eligible for loan forgiveness of up to \$10,000 per year for each year they practice in West Virginia in an underserved area or in a medical shortage field. Borrowers are permitted to reapply for loan forgiveness in subsequent years.

### MEDICAL STUDENT LOAN PROGRAM ACTIVITY, BY PROGRAM YEAR

	2021-2022	2020-2021	2019-2020	2018-2019	2017-2018
Loans awarded in Fiscal Year	229	352	242	246	240
Total amount awarded	\$962,700	\$1,712,559	\$1,801,000	\$1,732,612	\$1,830,125
Amount of unexpended funds*	\$4,290,480	\$3,143,604	\$2,760,525	\$2,628,242	\$2,643,084
Loan postponement**	11	10	11	16	35
Loan forgiveness***	322	315	300	300	255
Default rate on previous awards	4.43%	6.74%	7.97%	7.17%	7.16%

\* Amount of unexpended funds includes loan repayments.

\*\* Loan postponement is the number of borrowers who applied for the first time in a given year to begin practicing toward earning loan forgiveness. If these borrowers complete one year of service, they receive up to \$10,000 in loan forgiveness, and then, are included in the subsequent year's loan forgiveness count.

\*\*\* Loan forgiveness is the number of borrowers who received up to \$10,000 in loan forgiveness in a given year.

# Choose WV Practice Program

The Choose WV Practice Program is a state funded incentive program administered by the Commission. The program provides a tuition waiver to non-resident WV medical students who agree to remain in WV to practice in an underserved area of the state upon completion of their education and training. Two students from each WV medical school are eligible to be awarded each academic year and receive a tuition waiver for the difference between in-state and out of state tuition (approximately \$30,000). The first awards were provided in 2019-2020.

## CHOOSE WEST VIRGINIA PRACTICE PROGRAM 2020-2021

	Marshall University	West Virginia School of Osteopathic Medicine	West Virginia University	Total
Number of New Awards	1	4	1	6
Number of Awards Renewed	1	3	4	8
New Tuition Waivers	\$33,358	\$93,714	\$31,995	\$159,067
Renewed Tuition Waivers	\$32,784	\$124,952	\$127,008	\$284,744
Total School Awards	\$66,142	\$218,666	\$159,003	\$443,811

# Mental Health Loan Repayment Program

The Mental Health Loan Repayment Program is a state-funded incentive program and is administered by the Commission. The program provides approximately 30 awards annually for loan repayment to practicing mental health professionals who agree to complete a service obligation to deliver therapy or counseling services in underserved areas of West Virginia. The award amount will be at least \$10,000 (depending on outstanding debt) and is renewable up to three (3) years based on availability of funds and continued eligibility for the loan repayment program.

Eligible disciplines include: Licensed doctoral level clinical psychologist, Master’s level licensed psychologist, Licensed independent clinical social worker, Licensed certified social worker, Licensed professional counselor, Licensed marriage and family therapist, or Psychiatric mental health nurse practitioner. Other mental health disciplines identified by the Senior Director of Health Sciences as experiencing a shortage of practitioners may be considered.

In 2021-2022, 20 awards totaling \$200,000 were offered to:

- ▶ 5 Licensed doctoral level clinical psychologists
- ▶ 1 licensed independent social worker
- ▶ 1 licensed clinical social worker
- ▶ 10 licensed professional counselors
- ▶ 1 applied behavioral analyst
- ▶ 2 psychiatric mental health nurse practitioners

# RURAL HEALTH INITIATIVE PROGRAM

The West Virginia Rural Health Initiative (RHI) Program is derived from West Virginia Code §18B-16-1 et seq. and focuses on several goals, including:

1. Increasing the recruitment of healthcare providers to rural areas.
2. Increasing the retention rate of healthcare providers in rural areas.
3. Developing pipeline programs to enhance student interest in rural healthcare careers.
4. Supporting the involvement of rural areas of the state in the health education process.

Overall responsibility for the RHI Program rests with the West Virginia Higher Education Policy Commission. To carry out the goals, the Commission grants the majority of funding to the Joan C. Edwards School of Medicine at Marshall University, the West Virginia School of Osteopathic Medicine, and the West Virginia University Health Sciences Center (the academic health centers). In FY 2022, each academic health center received \$587,000.

The Commission also uses RHI Program funding to make smaller grants to other higher education programs, healthcare facilities, and nonprofit organizations to further advance RHI activities across the state. Examples of projects funded during FY 2022 include:

- ▶ West Liberty University Department of Communication Sciences and Disorders to purchase high tech augmentative and alternative communication equipment to support the education of speech language pathologists to serve rural and underserved areas of WV.
- ▶ Future of Nursing Action Coalition to create, implement and evaluate a Health Equity Skills Building continuing education program to be offered free of charge to nurses and nursing students focused on the multicultural needs of rural and underserved Appalachian communities.
- ▶ WVU Tech-Beckley to implement and evaluate a Health Care Career Shadowing experiential course to allow students to gain exposure to rural health care provision.

The following pages contain a profile of the statewide student housing system for clinical rotations and program overviews for each of the academic health center's RHI activities during FY 2022.

## Statewide Housing System

The RHI statewide housing system for health sciences students has allowed students to complete clinical rotations away from the main campus and immerse themselves in a rural or underserved community. The housing is open to all health sciences students, but in FY2022, the housing was most frequently used by medical, pharmacy, physician assistant, pathologists' assistant, physical therapy, and dental students. The typical length of stay for students utilizing housing is about 4 weeks.

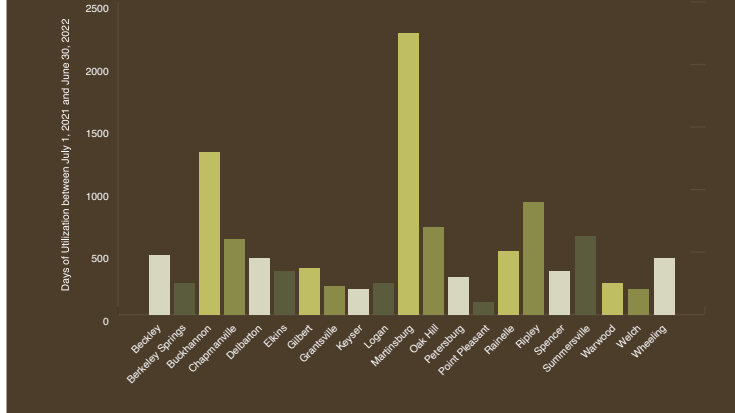
The 25 housing units are primarily leased houses or apartments, which are property managed by West Virginia University, located in 21 locations throughout WV. Housing is identified based on demand for clinical rotations in certain geographic areas, as well as the ability to secure the appropriate type of rental property. The operating costs of the program are supported through the Commission's RHI funding and a \$150/week fee paid by students utilizing the housing. Often, the cost of housing is covered by the student's institution. A total of 1,553 weeks were utilized across all housing unit locations in FY2022.

Students enrolled in training programs in West Virginia receive priority for housing. Students from out-of-state programs are accommodated based on availability. In FY2022, students from the following institutions utilized housing: Marshall University, University of Charleston, West Liberty University, West Virginia School of Osteopathic Medicine, West Virginia University, and Shenandoah University (VA).



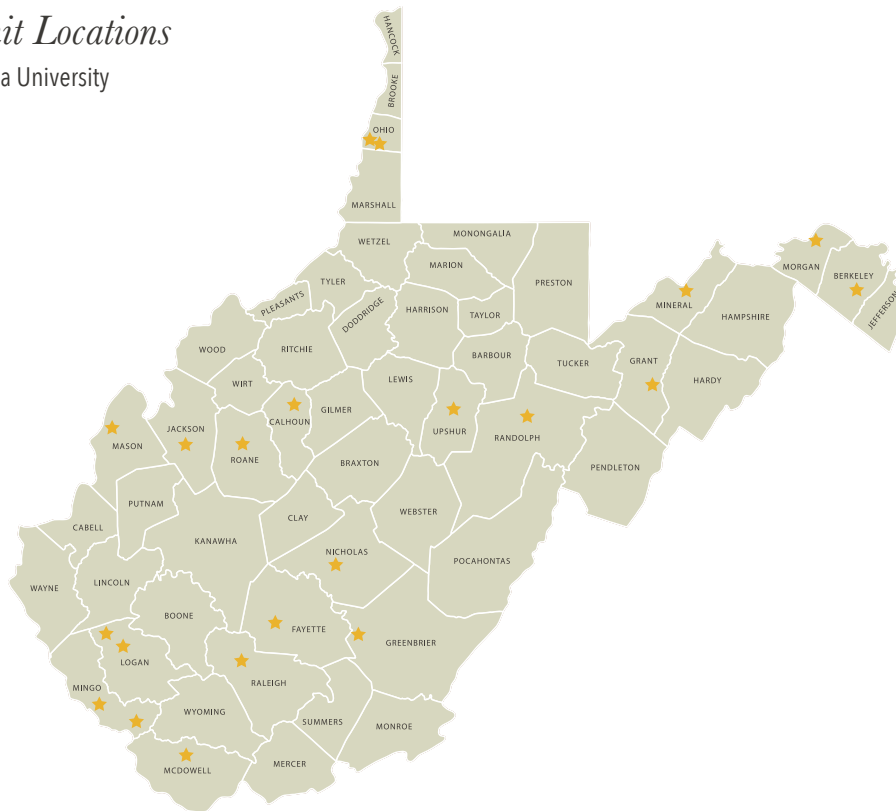
# HOUSING UTILIZATION

## 1553 total weeks!



Housing is provided across West Virginia where health sciences students from varied disciplines, which includes, dentistry, medicine, occupational therapy, pharmacy and physical therapy, complete community-based rotations. Students utilizing housing were from both in-state and out of state universities: Marshall University, University of Charleston, West Virginia School of Osteopathic Medicine, West Virginia University, Wheeling Jesuit University, Spaulding University in Kentucky, University of Pittsburgh in Pennsylvania and Shenandoah University in Virginia.

### *21 Housing Unit Locations* Managed by West Virginia University





## Marshall University Joan C. Edwards School of Medicine

Marshall University Joan C. Edwards School of Medicine (Marshall) is dedicated to providing high quality medical education and postgraduate training programs to foster a skilled physician workforce to meet the unique healthcare needs of West Virginia. Marshall is committed to the development of innovative rural initiatives that encourage and prepare students and residents to practice in rural communities.

*Increase the recruitment of healthcare providers to rural and underserved areas.*

**Rural Research:** This initiative provides students and residents with an immersion experience in some of the most rural underserved communities in the state. During the 2021-2022 academic year, the Center for Rural Health, provided 8 grants to medical students, residents, and fellows for rural research projects totaling approximately \$137,534.00. Those grants went to Orthopaedics, Surgery, Family Medicine/Addiction Sciences and Cardiology. To date the Center has provided approximately \$1,249,887.00 in rural research grants. In addition, there have been 27 presentations and 19 publications.

*Increase the retention rate of healthcare providers in rural and underserved areas.*

**Rural Health Service Program:** This opportunity provides a financial incentive of \$25,000 for third and/or fourth year medical students in exchange for a year of practice in a rural or underserved area. Three students were selected in 2021-2022 and received \$25,000. The five fourth-year students selected for this program over the past two years matched in Family Medicine residencies at Marshall University (3), Washington Hospital, PA and Self Regional Healthcare, SC. We currently have 2 physicians practicing, 2 more physicians beginning practice this year and 14 participants still in medical school and residency with service commitments. To date we have provided \$550,000 to fund this program.



*Develop pipeline programs to enhance student interest in rural and underserved healthcare careers.*

**Rural Family Medicine Scholars Track Program:** Working in collaboration with the Department of Family Medicine, resources were allocated to five participants who matched into Family Medicine. The students received a \$10,000 match bonus.

**High School Pipeline:** Center for Rural Health staff continue the high school pipeline activities in the 2021-2022 academic year. This pipeline works to encourage students to consider health care careers, remove perceived barriers and provide tools to help the students achieve their goals. Center staff worked in 13 counties, involving 660 students via 46 virtual and in person events. Events included running the medical portion of the West Virginia Science Olympiad, suturing workshops, and hosting student groups on campus for a variety of science and health care activities.



**Bachelor of Science/Doctor of Medicine (BS/MD) Program :** Marshall University and the Joan C. Edwards School of Medicine's Bachelor of Science/Doctor of Medicine (BS/MD) program for West Virginia high school students selected 10 students this year bringing the total to 28 undergraduate students in the program. There are currently 33 students that have completed the undergraduate portion of the program and are in medical school. The first group of BS/MD students selected in 2015, graduated this year. In addition, students matched into residencies in General Surgery, Radiology, Family Medicine, Emergency Medicine, Dermatology, Psychiatry and Pediatrics in very competitive programs across the nation. Two of them are remaining at Marshall for residency (Family Medicine, General Surgery) with an additional physician studying Ophthalmology at West Virginia University.

*Support the involvement of rural and underserved areas of the state in the health education process.*

The Center for Rural Health working in collaboration with the West Virginia School of Osteopathic Medicine (WVSOM) and Coalfield Health Center (Coalfield) in Logan County, we are combining resources to support community outreach and to improve health outcomes in southern West Virginia. Utilizing community-based research methods, medical students and undergraduate students are working with community leaders in a variety of focused health care activities and initiatives. The goal is for students to recognize the value in rural health and consider practicing in this region. This year, two Marshall BS/MD undergraduate students assisted with a health and wellness camp, designing curriculum and teaching. Two Marshall medical students are analyzing community data from a local community action agency. Several WVSOM students participated in vaccine clinics over the last 6-8 months while on rotation at Coalfield.





# West Virginia School of Osteopathic Medicine

The Rural Health Initiative's (RHI) mission is to enhance the rural primary care curriculum at the West Virginia School of Osteopathic Medicine (WVSOM) in order to produce graduates uniquely qualified to practice medicine in underserved communities of West Virginia. In addition to offering rural training opportunities to all students, WVSOM operates an intensive RHI program that provides special training and enrichment opportunities to students who express the strongest interest in rural practice.

*Increase the recruitment of health care providers to rural areas.*

**RHI Rural Practice Day 2022:** WVSOM hosted its 11th annual Rural Practice Day to 146 attendees including WVSOM students, spouses/significant others, faculty, staff and speakers on Feb. 11, 2022. This year's theme was "Emotional Health in Diverse Demographics." Future doctors heard from experienced rural physicians on providing emotional health support for various demographic groups.

**Student Rotations:** RHI students complete rotations in six different WVSOM Statewide Campus regions. Seven hospitals serve as RHI base sites in rural/underserved areas. RHI base sites for the 2021-22 academic year included:

- ▶ Davis Medical Center
- ▶ WVU Medicine St. Joseph's Hospital
- ▶ Grant Memorial Hospital
- ▶ Greenbrier Valley Medical Center
- ▶ Logan Regional Medical Center
- ▶ WVU Medicine Princeton Community Hospital
- ▶ WVU Medicine United Hospital



**Rural Physician Service Program:** The Rural Physician Service Program incentivizes WVSOM students to remain in West Virginia to practice. Students selected receive a monetary award in exchange for agreeing to practice in an eligible rural/underserved service site in West Virginia for one year. Additionally, students receive enhanced rural health training during medical school through the Rural Health Initiative program. Through the Rural Physician Service Program and the Rural Physician Scholarship Program, \$132,000 was awarded to six WVSOM medical students during fiscal year 2022.



*Increase the retention rate of healthcare providers in rural areas.*

**Residency Sign-on Incentive:** Seven of the 12 RHI program graduates from WVSOM's Class of 2022 each received a \$6,500 sign-on incentive for acceptance into a primary care or emergency medicine residency in West Virginia. One graduate accepted a residency at Greenbrier Valley Medical Center in Ronceverte, W.Va.; one accepted a residency at United Health Center in Bridgeport, W.Va.; four accepted residencies at Charleston Area Medical Center in Charleston, W.Va.; and one accepted a residency at Marshall University Joan C. Edwards School of Medicine in Huntington, W.Va.

**Mentor Program:** During fiscal year 2022, 52 RHI and RHI pipeline students received a rural practitioner mentor. Mentorship program goals for RHI students include:

- ▶ Participation in rotations that will enhance rural primary care training
- ▶ Reinforcement of students' interests in rural primary care through mentor interactions
- ▶ Exposure to the quality of life offered by rural communities

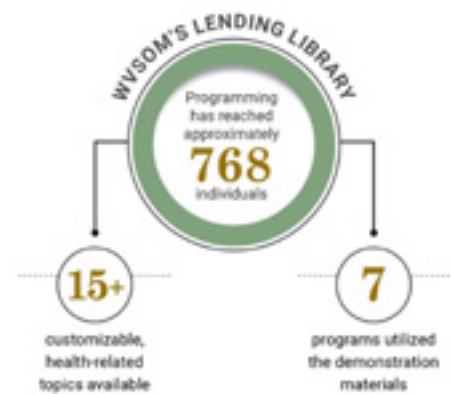


*Develop pipeline programs to enhance student interest in rural healthcare careers.*

**Green Coat Programs:** The WVSOM Green Coat Program provides undergraduate students who are interested in medical school or a health care profession an opportunity to gain exposure to clinical responsibilities in a hospital environment. The seventh cohort of Davis Health System Green Coat students was composed of four students

**WVSOM Lending Library:** RHI's Health Education Lending Library expands on the health education supplies available to community groups, medical students and schools through RHI for in-state health education-related events. The resource library provides education and demonstration materials geared toward various age groups. To address concerns related to the COVID-19 pandemic, the library has resources available to educate people on the prevention of the spread of respiratory viruses such as COVID-19. Additionally, items such as handwashing stations and thermometers are available to facilitate proper sanitation and screening at educational events.

**High School Pipeline:** A weeklong Just Say KNOW educational camp for six high school students took place on the Lewisburg campus in June. The theme for the camp was pharmacology. RHI was proud to co-sponsor the event.



RHI co-sponsored tours of WVSOM for 10 high school groups. Students had the opportunity to tour either the anatomy lab or the Clinical Evaluation Center to increase their medical knowledge and explore careers in health care. About 245 high school students toured WVSOM.

*Support the involvement of rural areas of the state in the health education process.*

**RHI Industry Activities:** Rural Health Initiative activities seek to acquaint RHI students with state industries to understand environmental exposures that could cause injury or disease to rural patients. Four RHI industry activities occurred during fiscal year 2021:

- ▶ "Alcohol: Good or Bad?" in Lewisburg, WV on Oct. 11, 2021
- ▶ "Barns, Buildings, and Barrels" in White Sulphur Springs, WV on Nov. 15, 2021
- ▶ "RHI at the Capitol" in Charleston, WV on March 7, 2022
- ▶ Poultry tour in Moorefield, WV on April 11, 2022
- ▶ Coalfield Chronic Care Management activity throughout the fiscal year

**Coalfield Collaboration:** The Rural Health Initiative has begun collaborating with the Coalfield Health Center (Coalfield) and Marshall University's Center for Rural Health in an outreach effort in Logan County. Coalfield is a strategic member of the "Wild, Wonderful and Healthy Logan County" initiative, which is working to change poor health outcomes for Logan County and the surrounding areas. Coalfield, a Federally Qualified Health Center look-alike, has served as a hub for outreach opportunities for medical students from Marshall University Joan C. Edwards School of Medicine and WVSOM. The goals of the collaboration are to use resources to assist Coalfield in reaching more positive health outcomes for the community, provide opportunities for community-based research, support an underserved area and encourage health care students to consider practicing in the region. This fiscal year, WVSOM sponsored a chronic care management position to improve health outcomes of patients. RHI students worked with the chronic care manager to view methods of ensuring continuity of care and demonstrate clinical opportunities to improve community health outcomes.

# West Virginia University Health Sciences Center

*Increase the recruitment of healthcare providers to rural areas.*

**A.H.E.C.:** The WV Area Health Education Centers Program (WV AHEC) developed by Congress in 1971, is a program to recruit, train and retain a health professions workforce committed to underserved populations. WVUs AHEC program includes five regional Centers that conduct continuing education, pipeline programs, interprofessional education and training, and rural immersions throughout the state.

**WVAHEC Rural Community Health Scholars:** The WVAHEC Rural Community Health Scholars program (RCH Scholars) provides supplemental and interprofessional educational experiences for graduate health professions students interested in practicing in rural and/or medically underserved communities. In FY22 fifty-six students from ten institutions were recruited into the fourth cohort of the WV AHEC Rural Community Health Scholars Program, and 28 Scholars graduated in June 2022. Forty-one Scholars from cohort four are moving into the second year of the program, and recruitment for the fifth cohort of Scholars is underway.

**Rural Track:** The WVU Rural Track Program goals are to better prepare enrolled students to enter primary care residency and ultimately to practice in a rural primary care setting. There are 39 graduates with 34 committing to primary care residencies. There have been 12 WVU Rural Scholars, 11 class officers, and 10 residency specialists represented.

**Rural Immersions:** Health professions students attend rural immersions to gain supplemental educational experience regarding community health and disease processes. In FY22, Scholars participated in five immersions topics: Substance Use Disorder: Diagnosis, Connection to Care, and Treatment in Rural Environments; Cultural Competence and Cultural Humility in Healthcare; Rural Opioid Misuse; Food Insecurity and Nutrition in Rural Communities; Health Inequities and Disparities in Rural Communities.

**R.H.I.G.:** The Rural Health Interest Group is a student-led group of health professions students of different disciplines who learn about rural health issues through guest speakers and activities. In FY22, seven meetings were held: three in person and the rest via Zoom. Topics included Bonnie's Bus and cancer screening, healthcare in Bulgaria and its comparisons to rural WV, rural minority health, rural medicine post-COVID, rural emergency medicine, and HIV in the LGBTQ community. Students also participated in a service-learning project by organizing a food and school supply drive for the food bank in Clay County, WV and participated in a diabetes clinic in Clay County.

**WVU:** Collaborated with WV AHEC to coordinate five interprofessional team activities that included 24 students from an array of disciplines: medicine, nursing pharmacy, public health, physician assistant and dental hygiene. Thirty-one health professionals from psychology, addictions counseling, behavioral health, physician assistant, medicine, nursing, pharmacy, public health, medical assistant, and social services joined the IPT activities. Topics addressed: Mental Health Awareness, First Aid and Trauma, Strengthening Families, and affordable produce for patients with chronic disease).



*Increase the retention of healthcare providers in rural areas.*

**WVU:** partnered with WVAHEC to provide 19 continuing education opportunities for 983 individuals working in WV. Of the 983 participants, 57.2% work for an employer located in a rural and/or underserved area of WV. Some topics addressed: Elder Abuse, Neglect and Financial Exploitation, Motivational Interviewing, Neuropsychiatric Aspects of COVID-19, and MAT as Overdose Protection. The WV Project ECHO partnership addressed chronic lung disease, COVID-19, campus mental health, endocrine, HCV/HIV, memory health, and pregnant and parenting women with Substance Use Disorder.

*Develop pipeline programs to enhance student interest in healthcare activities.*

**H.S.T.A.:** The Health Sciences Technology Academy is a unique mentoring program in WV that prepares participating high school students to enter and succeed in STEM-based (science, technology, engineering and mathematics) undergraduate and graduate degree programs. In FY22 WVU collaborated with HSTA clubs covering 32 of 55 counties in WV with 647 students participating in education and research activities. Of these HSTA student participants, 98% attended schools in rural and/or underserved areas and/or a disadvantaged school.

**Rural Health Day:** Rural Health Day brings pre-health undergraduate students together to learn more through various speakers and hands-on activities about the medical school application process and health professions career opportunities in rural areas. RHD was held via Zoom on April 9, 2022. There were over 100 applicants and 52 participants from colleges and universities in WV, PA, OH, and MD.

**R.U.S.H.:** The Rural Undergraduate Shadowing in Healthcare Program is designed to provide pre-health participants with a unique experience that offers insight into what it is like to practice a health profession in rural WV. Seven selected students from over 60 applicants were placed in Calhoun, Jefferson, Pendleton, Logan, Upshur, and Wyoming counties for the 20-hour shadowing program. All seven students reported the experience increased their interest in rural health.

**PREP:** Pipeline Rural Education Program introduces WVU rising juniors and seniors to pathways into rural healthcare professions. In FY22, the inaugural cohort of ten students participated and completed the program. Requirements included attending two RHIG meetings, one Project REACH event, one Rural Immersion, attend Rural Health Day, and the completion of a rural healthcare topics poster.

## MEDICAL AND DENTAL STUDENT SERVICE PROGRAMS AWARDED 2012-2022

# \$2.5 MILLION

### WHERE OUR AWARD RECIPIENTS ARE TODAY

#### 25 DENTAL STUDENTS



#### 20 MEDICAL STUDENTS



6 IN SCHOOL

5 RESIDENCY

10 PRACTICING IN WV

85% (22 out of 26 recipients; 22 dental and 4 medical students) have honored their service obligation. Ten of 25 recipients are 5 years beyond their service commitment. 50% continue to practice in a rural and/or underserved area of WV or dental HPSA. No medical recipients are five years beyond their service commitment.



*Support the involvement of rural areas of the state in the health education process.*

**Project R.E.A.C.H.:** Project Rural Education Alliance for Community Health is a student-run outreach program that provides education and health information throughout the state. In FY22, students participated in 11 health education events that served 240 people from Raleigh, Preston, Greenbrier, Clay, Wyoming, Kanawha, and Marion counties.

**CARRS:** Community and Rural Rotations Support Program provides financial support for health professions students (medicine and dentistry) interested in rural practice and offers the opportunity to contribute to impacting health outcomes through community-based projects. CARRS also creates a platform for rural community recruitment efforts. This year, the CARRS Program welcomed 4th year PharmD students and Physician Assistant students. In FY22 eight students from all 4 health profession programs completed CARRS rotations and projects in Wyoming, Fayette, Mingo, and Logan counties. Current community project mentors include HSTA, Project ECHO, and a community engagement partnership with Try This WV.

**Newsletter:** Provides annual updates on WVU health profession students' educational and outreach activities to nearly 1000 field faculty across the state.

## **West Virginia Higher Education Policy Commission**

1018 Kanawha Boulevard East, Suite 700  
Charleston, WV 25301

[www.wvhepc.edu](http://www.wvhepc.edu)

