



# LEADING HEALTHCARE

Here and Everywhere

 **WVU**Medicine

**2023** ANNUAL REPORT

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In many ways, 2023 was like any other year for WVU Medicine.

We expanded our System by welcoming new hospitals, physicians, and employees to improve access to care for the people we serve, thereby continuing our work to eliminate the financial, geographic, and social barriers they endure to receiving the primary and specialty care they need.

We celebrated the first birthday of WVU Medicine Children's Hospital and, in conjunction with the State of West Virginia, announced plans to expand the services provided by the WVU Cancer Institute.

We faced significant challenges in the last year with increased costs for the medications and supplies that are necessary for patient care, and we have implemented systems and solutions that have allowed us to remain strong in the face of this adversity.

Despite those challenges, we continued to provide state-, nation-, and world-leading care in a variety of specialties, making our flagship hospital in Morgantown a destination for people to seek and receive highly specialized care.

But, as you will see in the following pages, some of what happened in 2023 was brand new for our System.

Our growth wasn't exclusive to patient care, as both Peak Health and the WVU Innovation Corporation have continued to grow, providing new health insurance options, new businesses, and, in turn, new jobs and economic development for West Virginia.

To combat the national nursing shortage, our Center for Nursing Excellence launched the Aspiring Nurse Program to provide financial and human-centered support to nursing students enrolled at select schools in West Virginia and neighboring regions.

As we continue to navigate the evolving healthcare landscape, one thing remains constant: our dedication to our patients and all those we serve.

We go into 2024 steadfast in our work to forge our way forward as leaders in the industry and as a trusted member of our communities.

**Thank you for joining us on that journey.**



**Clay B. Marsh MD**  
Chancellor and Executive Dean  
WVU Health Sciences



**Albert L. Wright, Jr.**  
President and CEO  
WVU Health System



**Michael B. Edmond MD, MPH, MPA, MBA**  
Chief Medical Officer  
WVU Health System

# WHO WE ARE

## WVU MEDICINE

**1. BARNESVILLE, OHIO**

Barnesville Hospital

**2. BLUEFIELD**

Bluefield Pavilion Campus  
a campus of Princeton Community Hospital

**3. BRIDGEPORT**

United Hospital Center

**4. BUCKHANNON**

St. Joseph's Hospital

**5. CADIZ, OHIO**

Harrison Community Hospital

**6. CHARLESTON**

Saint Francis Hospital

**7. PRINCETON**

Princeton Community Hospital

**8. FAIRMONT**

Fairmont Medical Center  
a campus of J.W. Ruby Memorial Hospital

**9. GASSAWAY**

Braxton County Memorial Hospital

**10. GLEN DALE**

Reynolds Memorial Hospital

**11. KEYSER**

Potomac Valley Hospital

**12. MARTINSBURG**

Berkeley Medical Center

**13. MORGANTOWN**

J.W. Ruby Memorial Hospital

**14. MORGANTOWN**

Children's Hospital  
a campus of J.W. Ruby Memorial Hospital

**15. NEW MARTINSVILLE**

Wetzel County Hospital

**16. OAKLAND, MARYLAND**

Garrett Regional Medical Center

**17. PARKERSBURG**

Camden Clark Medical Center

**18. PETERSBURG**

Grant Memorial Hospital

**19. RANSON**

Jefferson Medical Center

**20. RIPLEY**

Jackson General Hospital

**21. SOUTH CHARLESTON**

Thomas Memorial Hospital

**22. SUMMERSVILLE**

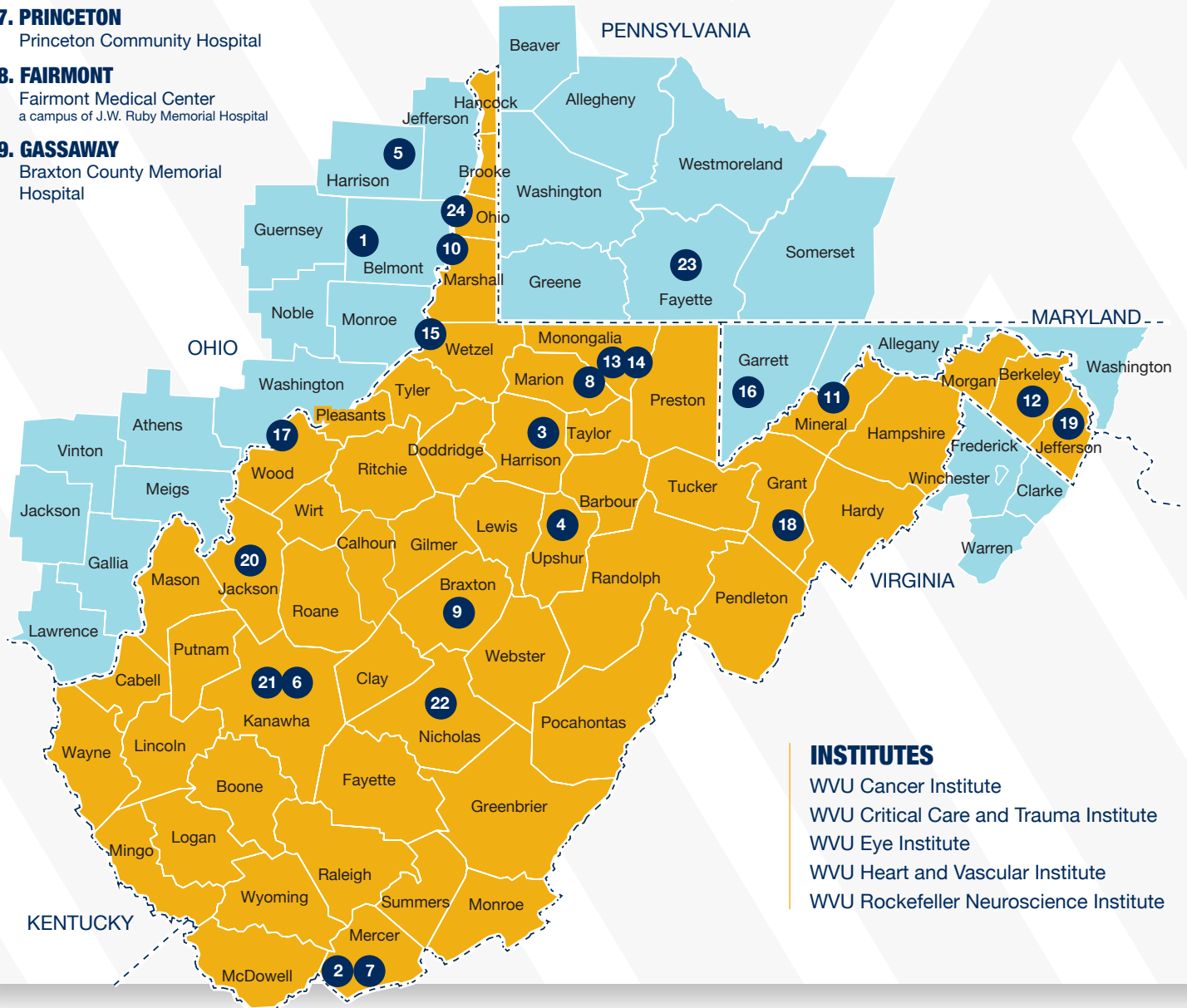
Summersville Regional Medical Center

**23. UNIONTOWN, PENNSYLVANIA**

Uniontown Hospital

**24. WHEELING**

Wheeling Hospital



### INSTITUTES

- WVU Cancer Institute
- WVU Critical Care and Trauma Institute
- WVU Eye Institute
- WVU Heart and Vascular Institute
- WVU Rockefeller Neuroscience Institute

# WHO WE ARE

## MORGANTOWN CAMPUS



## WEST VIRGINIA UNIVERSITY HEALTH SCIENCES

- / School of Dentistry
- / School of Medicine
- / School of Nursing
- / School of Pharmacy
- / School of Public Health

### HEALTH CAMPUSES

- / Morgantown
- / Charleston
- / Martinsburg

## WEST VIRGINIA UNIVERSITY HEALTH SYSTEM // BOARD OF DIRECTORS

### OFFICERS

- / PRESIDENT  
**Albert L. Wright, Jr.**
- / CHAIR  
**E. Gordon Gee**
- / VICE CHAIR  
**Thomas Heywood**
- / TREASURER  
**Thomas Heywood**
- / SECRETARY  
**Kathy Eddy**

### DIRECTORS

- |                             |                                 |                                |
|-----------------------------|---------------------------------|--------------------------------|
| / <b>Jeffrey L. Barger</b>  | / <b>Steve Ferguson</b>         | / <b>Michelle Rotellini</b>    |
| / <b>Joe Campbell</b>       | / <b>E. Gordon Gee</b>          | / <b>H. Wood Thrasher</b>      |
| / <b>Terry Capel, MD</b>    | / <b>Thomas Heywood</b>         | / <b>Bernie Twigg</b>          |
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| / <b>Kevin Craig</b>        | / <b>Clay Marsh, MD</b>         | / <b>Albert L. Wright, Jr.</b> |
| / <b>Kathy Eddy</b>         | / <b>Steve Meurer</b>           | / <b>Dennis Xander</b>         |
| / <b>Michael Edmond, MD</b> | / <b>Jocelyn Moore</b>          |                                |
| / <b>Beth Feldpush</b>      | / <b>Scott Roach</b>            |                                |

## WEST VIRGINIA UNIVERSITY // BOARD OF GOVERNORS

- |   |                             |   |
|---|-----------------------------|---|
| / CHAIRMAN<br><b>Taunja Willis-Miller</b> | / <b>Kevin J. Craig</b>     | / FACULTY REPRESENTATIVE<br><b>Stanley M. Hileman, PhD</b>      |
| / VICE-CHAIRMAN<br><b>Richard A. Pill</b> | / <b>Michael D'Annunzio</b> | / FACULTY REPRESENTATIVE<br><b>Frances E. "Frankie" Tack</b>    |
| / SECRETARY<br><b>Patrice Harris, MD</b>  | / <b>J. Thomas Jones</b>    | / CLASSIFIED STAFF REPRESENTATIVE<br><b>Shirley D. Robinson</b> |
| / <b>Charles L. Capito, Jr.</b>           | / <b>Alan Larrick</b>       | / STUDENT REPRESENTATIVE<br><b>Madison Santmyer</b>             |
| / <b>Bray Cary</b>                        | / <b>Susan Lavenski</b>     |   |
| / <b>Elmer Coppoolse</b>                  | / <b>Paul Mattox</b>        |   |
|   | / <b>Robert L. Reynolds</b> |   |

# WHO WE ARE

**MEMBER HOSPITALS: 21**

**INSTITUTES: 5**

**EMPLOYEES: 33,311**

**/ NEW HIRES: 8,490**

**STUDENTS: 3,810**

**/ UNDERGRAD: 2,016**

**/ PROFESSIONAL PROGRAMS: 1,059**

**/ GRADUATE: 735**

**/ DENTISTRY: 300**

**/ MEDICINE: 2,136**

**/ NURSING: 861**

**/ PHARMACY: 268**

**/ PUBLIC HEALTH: 245**

# 2023 BY THE NUMBERS

## INPATIENT / OUTPATIENT

### SURGERIES

45,295

### MRI

31,943

### LAB SERVICES

4,711,682

### SURGERIES

142,458

### MRI

80,572

### LAB SERVICES

8,294,270



**4,359,981**  
Clinic Visits



**151,204**  
Hospital  
Outpatient  
Visits



**3,244**  
Licensed  
Beds



**514,705**  
ED Visits



**8,128**  
Births

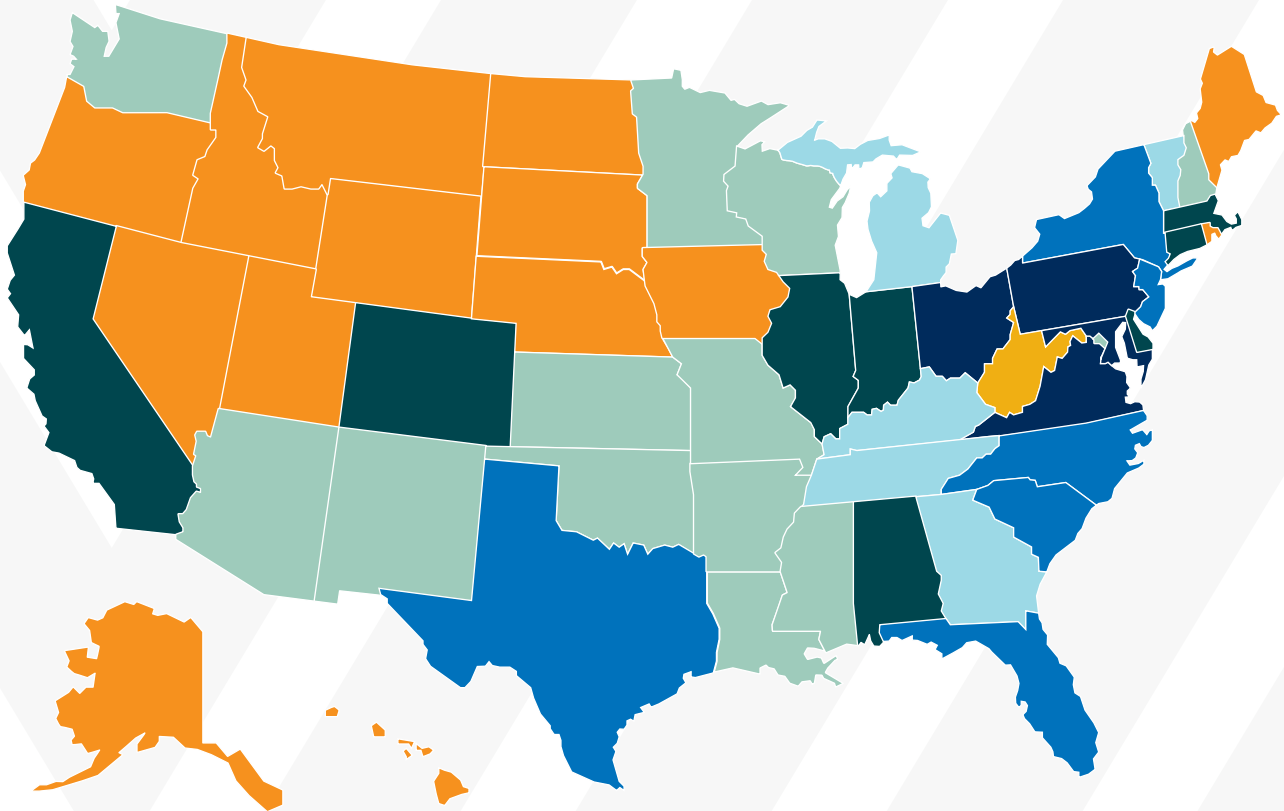


**149,977**  
Discharges



WVU Medicine Orthopaedics saw a record-setting 600-plus patients in 2023 for its office-based, wide-awake hand and upper extremity surgery program.

## WHAT WE DO



## NATIONWIDE PATIENT REACH:

Patients came to us from 50 states and Washington, D.C.

### PLUS

- / AFGHANISTAN
- / ALBANIA
- / ANDORRA
- / ANGOLA
- / ARMENIA
- / AUSTRALIA
- / BAHAMAS
- / BAHRAIN
- / CANADA
- / EL SALVADOR
- / FRANCE
- / GAMBIA
- / HONDURAS
- / INDIA
- / JAPAN
- / MOLDOVA
- / MONGOLIA
- / NEW ZEALAND
- / PERU
- / SAINT KITTS AND NEVIS
- / SAUDI ARABIA
- / SWEDEN
- / THAILAND
- / TONGA
- / TURKMENISTAN
- / TUVALU
- / UGANDA
- / UKRAINE
- / UNITED ARAB EMIRATES
- / UNITED KINGDOM
- / URUGUAY
- / UZBEKISTAN
- / VANUATU
- / VENEZUELA
- / VIETNAM
- / YEMEN

### COMPLETED CLINIC VISITS AND INPATIENT / OBSERVATION DISCHARGES

- : 11-100
- : 101-250
- : 251-500
- : 501-1,000
- : 1,001-15,000
- : ≥ 15,000
- : 3,492,530

# WVU HEALTH SYSTEM

## Grant Memorial Hospital officially joins WVU Medicine

Grant Memorial Hospital (GMH) in Petersburg officially became a full member of the WVU Health System effective July 1. GMH is a not-for-profit critical access hospital owned by the Grant County Commission and previously operated by the Board of Trustees appointed by the Commission. It serves the valley of the Potomac Highlands, which includes citizens of Grant, Hardy, Pendleton, Hampshire, and Mineral counties. It has a combined 25 licensed inpatient beds and is a 501(c)(3) organization. The facility is supported by more than 350 employees and a medical staff of over 15.



## Three new tenants to join WVU Innovation Corporation

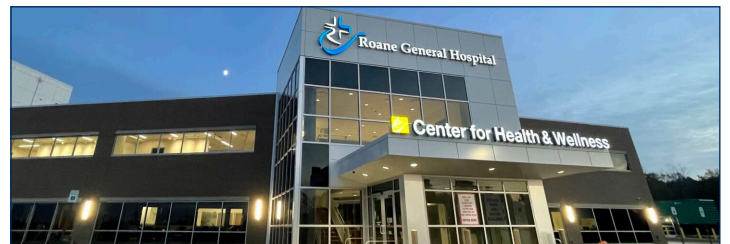
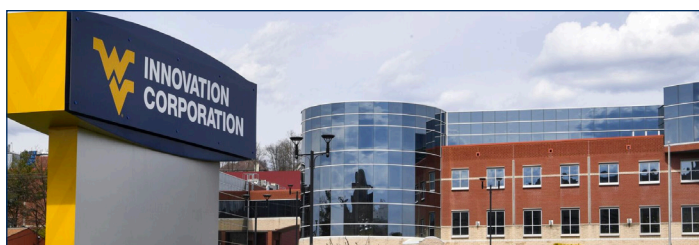
The West Virginia University Innovation Corporation (WVUIC) announced that three new science and technology tenants – California-based GATC Health Corp and Yunigen, LLC, and Morgantown-based ExesaLibero Pharma – will lease a space in the Chestnut Ridge Road facility.

WVU and WVU Medicine officially took ownership of the 1.1 million square foot property in March 2022 and have been handling daily operations of the facility since. It previously served as the Mylan pharmaceutical manufacturing facility. The Innovation Corporation announced Hope Gas as its first tenant in August.

**ExesaLibero Pharma**, which was formed to complete preclinical toxicology and efficacy studies on a small molecule drug designed to control excess bone erosion associated with rheumatoid arthritis, will lease 1,034 square feet of laboratory space for drug development.

**GATC Health**, a technology company “revolutionizing drug discovery and disease prediction using artificial intelligence (AI),” will lease more than 7,000 square feet of lab and office space to establish an AI hub to develop safer and more effective medicines with greater efficiency.

**Yunigen**, a pharma company with a vision of making a difference in drug discovery, development, and commercialization, will lease 25,000 square feet of space with plans for expansion to manufacture rapid dissolvable Hydroxyurea tablets in 100 mg and 500 mg for pediatric sickle cell anemia patients in Africa. Its next phase is to manufacture high quality and affordable branded generic drugs in the U.S.



## Roane General Hospital, WVU Health System launch clinical affiliation agreement

Roane General Hospital and the WVU Health System announced a clinical affiliation designed to expand access to specialty care in pursuit of improved patient outcomes and experiences. With this agreement, Roane General, already home to a WVU Cancer Institute clinic, will explore new services to provide patients in Roane County and the surrounding region. The agreement, effective May 1, identified pediatrics, urology, and endocrinology as a few of the areas for expanded services at Roane General Hospital. The clinical affiliation agreement will enhance physician and provider recruitment at Roane General through connections with the WVU School of Medicine, the WVU School of Nursing, and co-recruitment initiatives to attract healthcare providers. While the clinical affiliation agreement provides for greater collaboration and an increased focus on patient outcomes and experiences, the agreement does not affect the governance of either institution. Roane General Hospital will continue to be governed by a board of Roane County community figures under the same corporate structure with the same mission established at the hospital’s founding.

# WVU HEALTH SYSTEM

## Leadership Updates

### Two WVU Medicine nurses named Johnson & Johnson Nursing Innovation Fellows

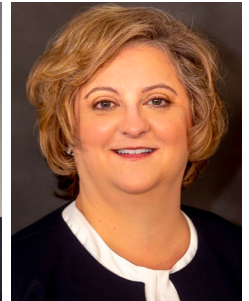
Two WVU Medicine nursing leaders – Melanie M. Heuston, DNP, RN, NEA-BC, chief nurse executive, and Lya M. Stroupe, DNP, APRN, CPNP-PC, NEA-BC, NPJ-BC, director of nursing professional practice and education – were selected for the Johnson & Johnson Nurse Innovation Fellowship Program (JJNIF), powered by Penn Nursing and the Wharton School.

Drs. Heuston and Stroupe are one of the 10 two-person teams from health systems around the country that have been selected for the ground-breaking, one-year, team-based nursing fellowship for chief nursing officers, nurse executives, and senior nurse leaders.

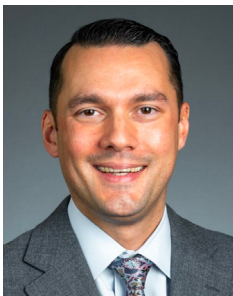
The fellowship will immerse participants in the innovation process by focusing on human-centered design and design thinking methodologies and will teach fellows how to apply it to their specific challenge area. The innovation curriculum provided by Penn Nursing will be paired with business acumen, change management, and strategic leadership skills development through Wharton Executive Education. At the conclusion of the fellowship, fellows will pitch their innovative solutions with the goal of bringing that solution back to their healthcare system to implement.



Heuston



Stroupe



### Barcellona named WVU Health System's new chief financial officer

Nicholas (Nick) J. Barcellona was appointed senior vice president of finance and chief financial officer (CFO) of the WVU Health System. Barcellona joined the WVU Health System in July, succeeding Douglas Coffman after a 30-year distinguished career. Named a "Rising Star" among CFOs by the *Philadelphia Business Journal*, Barcellona previously served as executive vice president, chief financial officer, and treasurer of Temple University Health System in Philadelphia. Before joining Temple in 2020, Barcellona served in several senior financial and operational leadership roles at UPMC in Pittsburgh.



### Rosencrance named president of WVU Medicine Thomas Hospitals

Gregory Rosencrance, MD, FACP, president of the Cleveland Clinic Indian River Hospital in Vero Beach, Florida, was named the new president and CEO of WVU Medicine Thomas Hospitals in South Charleston.

Assuming this role was a homecoming for Dr. Rosencrance, a Charleston native, who received his undergraduate degree from West Virginia University and his medical degree from Marshall University. He completed his residency in internal medicine at Charleston Area Medical Center, where he worked for over two decades.

"We are so glad that one of West Virginia's native sons came home to join the WVU Medicine family," Albert L. Wright, Jr., president and CEO of the WVU Health System and interim CEO of Thomas Health, said. "Dr. Rosencrance brings a wealth of experience and knowledge of the healthcare needs of Charleston area residents to the position."

# WVU HEALTH SYSTEM

## Awards and Recognitions

### J.W. Ruby Memorial Hospital named top hospital in state by U.S. News & World Report

**OB/GYN ranked 41<sup>st</sup> in nation, eight WVU Medicine hospitals recognized as High Performing**

WVU Medicine J.W. Ruby Memorial Hospital retained its title of number one hospital in West Virginia and ranked 41st in the nation in Obstetric and Gynecological Care according to the 2023-24 U.S. News & World Report Best Hospital rankings. U.S. News evaluated more than 4,500 hospitals across 15 specialties and 21 procedures and conditions; only 12 percent of evaluated hospitals earned a Best Hospitals ranking. Hospitals awarded a “Best” designation excelled at factors such as clinical outcomes, level of nursing care, and patient experience.

In the Specialties category, J.W. Ruby Memorial was recognized as High Performing in Cancer, Neurology and Neurosurgery, and Urology, and according to the U.S. News & World Report Hospital Data Insights, the **WVU Heart and Vascular Institute is the highest ranked heart program in the state.**

Eight WVU Medicine hospitals, including Ruby Memorial Hospital, were recognized as High Performing in one or more categories:



- **Berkeley Medical Center** – Chronic Obstructive Pulmonary Disease (COPD), Heart Failure, and Stroke
- **Camden Clark Medical Center** – COPD, Diabetes, Heart Failure, and Stroke
- **Garrett Regional Medical Center** – Hip Fracture
- **Princeton Community Hospital** – COPD and Heart Failure
- **Ruby Memorial** – Abdominal Aneurysm Repair; Aortic Valve Surgery; Colon Cancer Surgery; COPD; Diabetes; Heart Attack; Heart Failure; Kidney Failure; Leukemia, Lymphoma, and Myeloma; Lung Cancer Surgery; Maternity Care (Uncomplicated Pregnancy); Pneumonia; Stroke; and Transcatheter Aortic Valve Replacement (TAVR)
- **Thomas Memorial Hospital** – COPD and Heart Failure
- **Uniontown Hospital** – Stroke
- **United Hospital Center** – COPD, Heart Attack, Heart Failure, Kidney Failure, Lung Cancer Surgery, and Stroke

### WVU Medicine Children’s and United Hospital Center named to Newsweek’s “America’s Best Maternity Hospitals”

WVU Medicine Children’s Hospital in Morgantown and WVU Medicine United Hospital Center in Bridgeport were named to Newsweek’s 2023 list of “America’s Best Maternity Hospitals.” Hospitals named as one of “America’s Best Maternity Hospitals” have fully met Newsweek’s standards for maternity care on evidence-based, nationally standardized metrics. This includes lower rates of early elective delivery, C-section, and episiotomy, as well as compliance with process measures, including newborn bilirubin screening prior to discharge and blood clot prevention techniques for mothers delivering via C-section.

### WVU Health System on Forbes “America’s Best Employers by State 2023” list

Forbes included WVU Health System on its list of “America’s Best Employers By State 2023.” The recognition was based on a survey of 70,000 full- or part-time employees across all 50 states and the District of Columbia who work at companies with more than 500 workers nationwide. Participants were asked if they would recommend their employer to friends and family and evaluate them based on criteria including working conditions, diversity, compensation packages, potential for development, and company image.

## Becker's Top 150 Places to Work in Healthcare

2023

Becker's Healthcare named WVU Medicine – which employs nearly 30,000 people at hospitals and clinics in West Virginia, Maryland, Ohio, Pennsylvania, and Virginia – on its 2023 list of Top Places to Work in Healthcare. It is the only health system in the state and region to be named to the list.

# WVU HEALTH SYSTEM

## System honored for digital excellence as a 2023 Digital Health Most Wired Survey recipient

When the College of Healthcare Information Management Executives (CHIME) released its coveted Digital Health Most Wired Survey results for the 2023 data collection period in the fall, the WVU Health System received Level 10 achievement – the highest possible – for the Acute and Ambulatory survey selections for the second consecutive year.

Among the more than 55,000 facilities represented, the WVU Health System ranked above peers in categories like analytics and data management, population health, infrastructure, and patient engagement. The survey assessed the adoption, integration, and impact of technologies in healthcare organizations at all stages of development, from early development to industry leading.

Amid escalating challenges posed by growing cybersecurity threats, evolving care models, staffing shortages, and budget constraints, the call for revolutionizing healthcare through technology is moving forward at a rapid pace. The future of health and care over the next 30 years will be a world apart from what it is now. Driven by emerging technology, digital innovation – enabled by fully interoperable data, artificial intelligence, and



open, secure platforms — will drive much of this change. A strategic roadmap will be more critical than ever to navigate this myriad of change.

The Digital Health Most Wired survey and recognition program serves as a comprehensive “Digital Health Check-up” for healthcare organizations across the world. As success in digital health increasingly determines the quality of patient care, the scope of the CHIME Digital Health Most Wired survey reflects the progress of leading healthcare providers as they reinvent healthcare for a new century. This remarkable achievement stretches far beyond information technology and reflects an entire organization’s commitment to improve healthcare through the advancement of digital health strategies.

## Peak Health announces new option in Medicare Advantage coverage for West Virginia seniors

Peak Health began enrolling residents in its Peak Advantage Medicare plans in October.

Medicare-eligible residents had the chance to enroll in a plan created to meet the needs of seniors in West Virginia. The plan was designed in partnership with two of the state’s leading health systems, WVU Medicine and Marshall Health, whose combined experience in treating Medicare patients has led to a breakthrough approach that will offer more convenience, collaboration, transparency, and value to members.

Peak Health is the only West Virginia-based insurance company to offer Medicare Advantage plans sponsored by West Virginia providers. The WVU Medicine and Marshall Health alliance is key to creating a collaborative health coverage approach created by and for West Virginians.



## Valley Health joins Peak Health

Valley Health joined with the WVU Health System, Mountain Health Network, and Marshall Health as an owner of Peak Health, a provider-led health insurance services company with the mission of making healthcare more accessible, understandable, and collaborative.

Based in Winchester, Virginia, Valley Health is a nonprofit health system serving the Northern Shenandoah Valley of Virginia and the Eastern Panhandle and Potomac Highlands of West Virginia. The system includes six hospitals and more than 70 medical practices and urgent care centers.



# WVU HEALTH SYSTEM

## New initiatives support WVU Medicine nursing community

### Aspiring Nurse Program

The WVU Medicine Center for Nursing Excellence established the Aspiring Nurse Program— an initiative aimed at supporting nursing students with up to \$25,000 towards everyday life expenses.

Those selected receive \$5,000 for each of the four semesters they're in school plus a \$5,000 sign-on bonus upon hire in exchange for a three-year work commitment with their respective hospitals after graduation. The hospitals and schools not only support students financially throughout the program, but through human-centered approaches with academic success coaches and retention specialists.

Since launch, the following hospitals have accepted nursing cohorts into their ASPIRE programs:

- Berkeley Medical Center**
- Camden Clark Medical Center**
- Garrett Regional Medical Center**
- Jefferson Medical Center**
- Potomac Valley Hospital**
- Princeton Community Hospital**
- Reynolds Memorial Hospital**
- Thomas Hospitals**
- United Hospital Center**
- Wetzel County Hospital**
- Wheeling Hospital**
- WVU Hospitals**  
(J.W. Ruby Memorial Hospital, Fairmont Medical Center, and WVU Medicine Children's Hospital)

### Clinical Advancement for Professional Excellence (CAPE) Program

The CAPE Program is a nursing program designed to enrich professional development, provide a reward system for advancing clinical practice, promote quality nursing, and improve job satisfaction. Designed by nurses for nurses, CAPE is focused on rewarding, recognizing, retaining, and recruiting inpatient direct-care nurses throughout WVU Medicine. The CAPE Program was originally designed in 2018 by bedside nurses throughout the WVU Health System and was updated in 2023 to keep it contemporary, competitive, and relevant to the bedside nurses' work.

Through the program, nurses are rewarded and recognized for being charge nurses and precepting students and/or new employees. They are also recognized for elevating the voice of nursing on unit, hospital, or System-wide councils. Education and professional development are also recognized as ways to advance in the Program. As nurses gain more knowledge and expertise in their field of practice, patient care is affected in a positive way.



*Nursing students accepted into the WVU Medicine Aspiring Nurse Program at WVU Hospitals pose for a photo with WVUH and Center for Nursing Excellence leadership.*

# Using the latest technology for improved treatment and lifesaving diagnoses

**Surgeon develops device to improve visibility during surgery, another WVU Medicine surgeon first to use it in thoracic surgery**



WVU Medicine surgeon Nova Szoka, MD, developed a new fluorescence-guided medical device to help surgeons better visualize surgical instruments and the surgical area during thoracic and bariatric surgeries.

The device, called Endolumik, was tested at J.W. Ruby Memorial Hospital before receiving approval from the Food and Drug Administration (FDA). It is the first device approved through the FDA's Safer Technology Program, designed to expedite the development and approval of medical devices that can improve patient safety.



**Szoka**

During minimally invasive and robotic surgery, Endolumik is advanced under near infrared (NIR) guidance into the lower esophagus and stomach. The NIR light shines through esophageal and gastric tissue, allowing the surgeons to navigate the surgical field and take measurements more precisely.

The device can also be used for application of suction, stomach decompression, drainage of gastric fluids, irrigation, to test for leaks, to provide visualization of the tube position, and to serve as a sizing guide. The tube is also indicated for use in esophageal surgical procedures as an esophageal bougie, which widens the esophagus, and as a visualization device.

Endolumik has grown to envision a new generation of surgical tools that use light and digital surgery techniques to enhance surgeon performance.

Shalini Reddy, MD, WVU Heart and Vascular Institute thoracic surgeon, was the first to use the device in a thoracic surgery during a hiatal hernia repair.

The patient was a woman who had been suffering from severe heartburn and regurgitation for several years. She had tried a variety of medications and lifestyle changes, but her symptoms persisted.

The procedure was a success, and the patient was able to go home after two days. She reported immediate relief from her symptoms and has been doing well since.

## WVU Medicine performs the first endoscopic sleeve gastropasty and REVISE procedures in the mid-Atlantic region using new FDA-approved devices

The WVU Medicine Bariatric Endoscopy and Gastroenterology team led by Shailendra Singh, MD, and Neel Patel, MD, performed the first endoscopic sleeve gastropasty (ESG) and transoral outlet reduction procedures using the Apollo ESG and endoscopic bariatric revision procedures (REVISE) devices in the mid-Atlantic region.

The U.S. Food and Drug Administration authorized the Apollo ESG and REVISE devices, which combine several surgical tools into one, making bariatric endoscopic weight-loss procedures more efficient and allowing for access to more minimally invasive approaches.

In an endoscopic sleeve gastropasty, the volume of the stomach is reduced with the help of a suturing device, resulting in meaningful and durable weight loss.

Patients who have previously had a gastric bypass procedure and are no longer seeing results also benefit from the use of this endoscopic device in a transoral outlet reduction procedure. Over time, patients who have undergone bariatric surgery may begin to see weight gain if their stomach and outlet, the connection between the reduced stomach and intestine, stretch.

Transoral outlet reduction reduces the size of that connection to reduce the amount of food that can be eaten. Patients who undergo these procedures have a much shorter recovery time and can resume activity much sooner. Unlike traditional weight-loss surgery, ESG and revision endoscopic procedures are incisionless, do not involve removing part of the stomach, and the risk of adverse events is low.



# WVU HOSPITALS

## New pacemaker placement procedure offers hope for patients with sleep apnea

WVU Medicine was the first in the state to offer a new pacemaker placement procedure for patients who suffer from sleep apnea and have not responded to other treatments. The procedure, which involves implanting a pacemaker-like device in the neck, can help reduce the frequency and severity of sleep apnea episodes.

Traditional treatments for sleep apnea include continuous positive airway pressure (CPAP) therapy, bilateral positive airway pressure (BiPAP) therapy, and surgery. However, these treatments are not always effective for everyone. The *remedē™* System is an implantable stimulator that sends a signal to the phrenic nerve, a nerve in the chest that controls the diaphragm, when the patient stops breathing to trigger the diaphragm to begin working again so the patient can breathe.

“Central sleep apnea is more difficult to treat than the more common obstructive sleep apnea because CPAP and BiPAP machines aren’t as effective,” Sunil Sharma, MD, WVU Medicine pulmonologist, said. “Because these patients’ diaphragms aren’t receiving signals to breathe, air pressure alone can’t completely relieve their symptoms.”

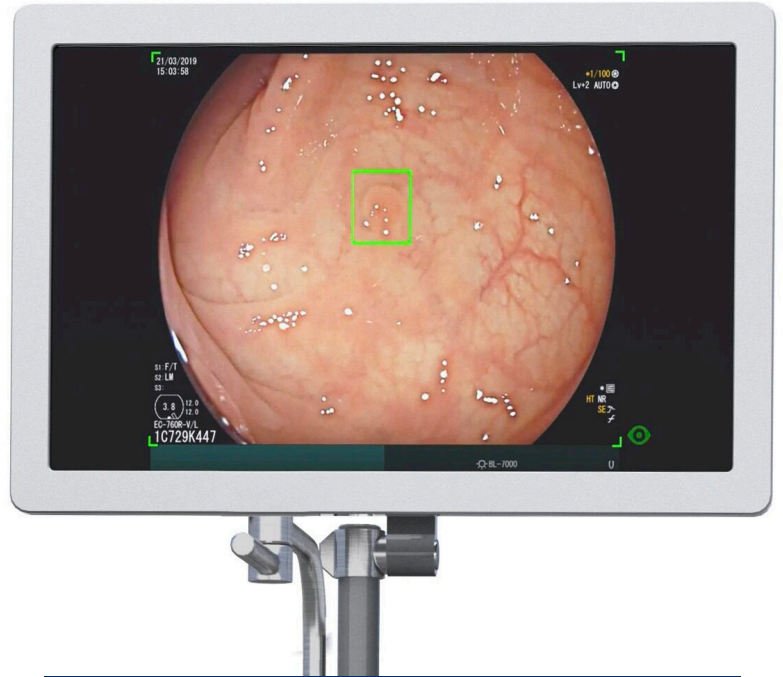
This new treatment continues offering significant improvement in the lives of patients who don’t respond to a CPAP or BiPAP device.



Sharma



The *remedē™* implantable stimulators for sleep apnea



## J.W. Ruby Memorial Hospital first in state to implement AI to detect colorectal cancer

J.W. Ruby Memorial Hospital was the first in the state to receive five GI Genius™ intelligent endoscopy modules as part of the Medtronic Health Equity Assistance Program for colorectal cancer screening.

The Program, which launched in February 2022 with support from the American Society for Gastrointestinal Endoscopy and Amazon Web Services, uses artificial intelligence (AI) in the detection of colorectal polyps, an indicator of colorectal cancer.

The module uses advanced AI software to highlight suspicious polyps with a visual marker in real time with a sensitivity rate per lesion of 99.7 percent. Studies have shown that AI-assisted colonoscopy can increase polyp detection rates, and every 1 percent increase in adenoma detection rate reduces the risk of colorectal cancer by 3 percent.

# WVU HOSPITALS

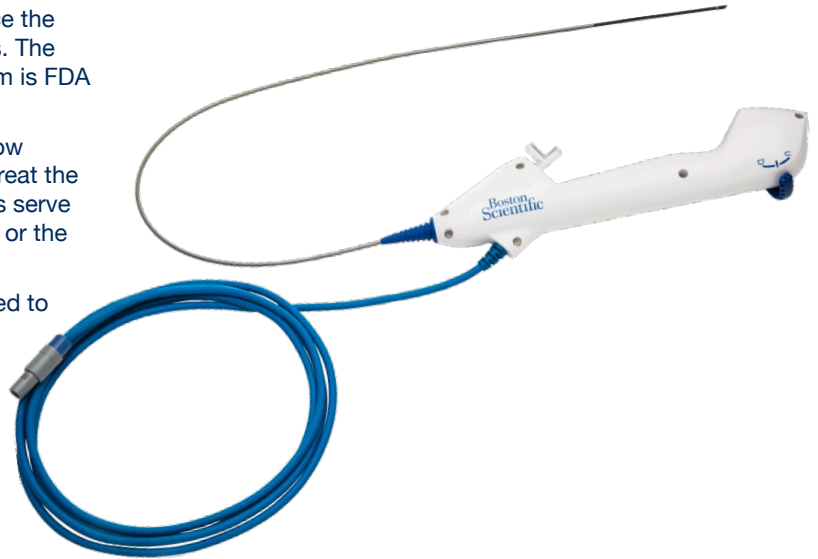
## WVU Medicine Urology offers new technology for treatment of kidney stones

Urologists at J.W. Ruby Memorial Hospital were among the first to implement intrarenal pressure monitoring technology to reduce the risk of infection during the surgical treatment of kidney stones. The LithoVue Elite Single-Use Digital Flexible Ureteroscope System is FDA approved and offered in a limited market release.

The system combines imaging and pressure monitoring to allow surgeons to visualize the internal anatomy of the kidney and treat the stones that are causing blockages, while the pressure sensors serve as an early warning system to prevent damage to the kidneys or the backflow of bacteria into the bloodstream.

Routine measurements of intrarenal pressures are also believed to reduce post-operative pain and risk of kidney damage during surgery.

The device is being used at a very limited number of facilities during its initial launch and is expected to have more widespread availability in the future.



## WVU Hospitals welcomes first class of MedEd interns

WVU Hospitals welcomed its first class of MedEd program interns in May during a signing day event. The new program provides students with skills, hands-on training, and innovative mentoring experiences through community partnerships for career opportunities in West Virginia healthcare.

The program is a collaboration between WVU Medicine, the West Virginia Department of Economic Development, the West Virginia Department of Education, the Education Alliance, Monongalia Technical Education Center, and Monongalia County Schools.

The two-year program uses a work-based learning approach placing students in the workplace during the school day



and includes a curriculum that combines technical and professional skills. Students can earn Career and Technical Education credits towards the Therapeutic Services pathway, can participate in a paid internship during their senior year, and may be offered jobs at WVU Medicine upon graduation.

The program is one of several initiatives that WVU Medicine is undertaking to address the state's growing need for healthcare professionals.



**Morgantown High School**



**University High School**

## WVU HOSPITALS

# Fairmont Medical Center/Fairmont Gateway Clinic

### Fairmont Gateway Clinic expands footprint, services



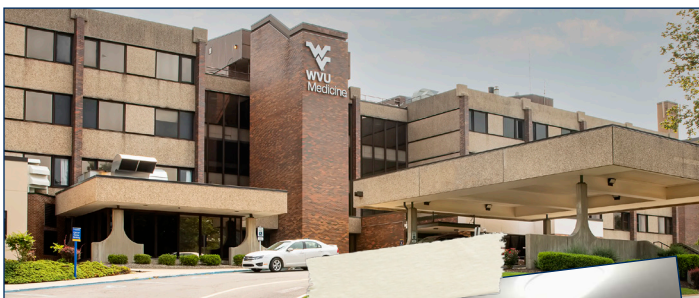
WVU Medicine officials cut the ribbon on a \$1.5 million expansion of the Fairmont Gateway Clinic in early 2023.

Since the Clinic opened in 2017, it exceeded expectations for clinic volume with 77,000 patient visits in 2022. It has seen a 45 percent increase in patient volumes since 2020, with many of those patients visiting Urgent Care.

The original construction included shell space originally intended for MRI and CT imaging. When WVU Medicine Fairmont Medical Center opened in 2020, access to advanced radiology services returned to the community. Now, that space will be used to add 11 rooms and a procedure room to the Clinic, expanding adult and pediatric primary care, specialty care, and Urgent Care services.

“Because we have had such an incredible response from Marion, Monongalia, and Harrison counties, we are bursting at the seams,” Michelle Wilson, WVU Medicine Fairmont Gateway Clinic manager, said. “This expansion is going to allow us to move our Urgent Care into the new portion of the building, providing more patient rooms and easier access to X-ray. Our other services will fill in the space previously occupied by Urgent Care, increasing the number of available patient rooms for appointments.”

### WVU Medicine Fairmont Medical Center opens Skilled Nursing Unit



WVU Medicine Fairmont Medical Center cut the ribbon in August on a 30-bed Skilled Nursing Unit (SNU) to house patients who require short-term care and observation post-surgery or illness.

The SNU cares for patients who need a higher level of care than they can receive at home, but do not need to be in the hospital. The unit is staffed by trained nurses and occupational and physical therapists, who help patients with their recovery so they can return to their normal activities.

The Unit is on the second floor of the hospital and includes private rooms and bathrooms; common areas, including a dining room; a physical therapy room; and a salon.

The new unit is part of a \$100 million, five-year renovation and remodeling plan that will expand on the services offered in Marion County.

*The lobby of the new Skilled Nursing Unit at WVU Medicine Fairmont Medical Center.*

WVU MEDICINE CHILDREN'S

Our **FIRST** Year

WVU Medicine Children's celebrates first anniversary of new hospital



Leaders, staff, and patient families celebrated the one-year milestone of the WVU Medicine Children's Hospital in September on the campus of J.W. Ruby Memorial Hospital.

Sept. 29 marked a year since the healthcare provider moved its first patients into the state-of-the-art hospital.

"When we opened the doors to the new Children's Hospital, we could have never imagined the amount of love and support we received from the community," Amy L. Bush, BSN, MBA, RN, CNOR, chief administrative officer for WVU Medicine Children's, said. "Our mission is to build healthier futures for our children, and it would not be possible without the extraordinary work of our entire healthcare team and community support. It's because of them that we will continue to grow and provide exceptional care for all our patients across the region."

Changes to the lives of children and their families were almost immediate. The 150-bed facility was a response to an ever-increasing demand for primary and specialty care for children and women.

The children's hospital features world-class healthcare facilities and specialties, including a Birthing Center, Blood Disorders and Cancer Center, Critical Care and Trauma Center, the Neonatal Intensive Care Unit, a Heart Center with West Virginia's only cardiac surgery program, and a Neuroscience Center with the state's only Pediatric Epilepsy Monitoring Unit.

"Everything that we do, every meeting that we have, and every project we undertake is aimed toward improving the health of our children. Even though our new hospital is celebrating its first birthday, the Children's Hospital itself is a gift. It is a gift that the children in our state and region have been very deserving of but have never received," Jeffrey Lancaster, MD, associate chief medical officer for WVU Medicine Children's, said.

WVU Medicine Children's kept growing even after the opening, adding additional locations and clinics across the healthcare system. The goal is to provide care close to home for patients across West Virginia and the surrounding region.

 **2,275**  
Births

 **47,997**  
Imaging Volumes

 **11,615**  
Emergency Department Visits

 **6,870**  
Surgeries/Procedures

 **52,503**  
Pediatric Clinic Appointments

 **46,207**  
Meals Served to Patients and Guests

 **7,811**  
Inpatient Unit Discharges

 **57,164**  
Room Turn-Overs

 **7,207**  
Volunteer Hours

# WVU MEDICINE CHILDREN'S

## News and Recognitions



### U.S. News & World Report: WVU Medicine Children's top hospital in West Virginia for third straight year

#### Pediatric Urology and Pediatric Neurology and Neurosurgery nationally ranked

WVU Medicine Children's received its third consecutive title as the top children's hospital in West Virginia, according to *U.S. News & World Report*, which also awarded national rankings to WVU Medicine's Pediatric Urology and Pediatric Neurology and Neurosurgery programs in its 2023-24 Best Children's Hospitals.

The recognition marked WVU Medicine Children's Pediatric Urology Program's sixth-consecutive national ranking, up six spots to 35<sup>th</sup> in the country.

It is the only pediatric urology practice in West Virginia. The Program's experienced, fellowship-trained doctors and medical professionals offer comprehensive, minimally invasive, robotic, and open surgical treatment options that ensure each child has the best outcome.

Pediatric Neurology and Neurosurgery at WVU Medicine Children's made its debut on the list, coming in at 42<sup>nd</sup> in the country.

At WVU Medicine Children's, Neurology, Neurosurgery, and Behavioral Medicine are part of the Neuroscience Center of Excellence, which, in conjunction with the WVU Rockefeller Neuroscience Institute, brings together the medical, surgical, and support services a child may need to live well with their condition. It is home to the largest, most experienced team of pediatric neurological specialists in the state.



### WVU Medicine Children's earns multiple imaging accreditations, introduces new testing

Imaging Services at WVU Medicine Children's earned multiple accreditations and introduced a new type of testing to better diagnose patients.

The American College of Radiology (ACR) awarded a three-year accreditation in computed tomography (CT) and ultrasound after extensive reviews.

This represents the highest level of image quality and patient safety.

Pediatric Radiology also completed the first contrast enhanced ultrasounds in the region. Contrast-enhanced voiding urosonography, or ceVUS, is an imaging study used to diagnose bladder reflux, which can damage the kidneys.

This service can be done in a comfortable and controlled setting. Caregivers can be present and even hold the patient during the ultrasound, putting them at ease.

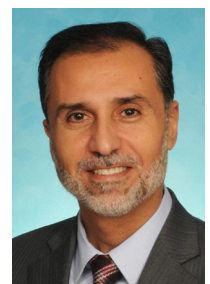
The first patients who underwent ceVUS at WVU Medicine Children's were successfully diagnosed and are now receiving proper treatment.



### WVU Medicine Children's now has West Virginia's only board-certified pediatric urologist

Osama Al-Omar, MD, MBA, chief of Pediatric Urology at WVU Medicine Children's became the only board-certified pediatric urologist practicing in West Virginia.

Dr. Al-Omar passed the American Board of Pediatric Urology certifying exam to earn the distinction.



Al-Omar

"Being board certified reflects my commitment to meeting the highest standards of professionalism, expertise, and patient care within the pediatric urology specialty," Al-Omar said. "It is a credential that families can rely upon when selecting a doctor for their kids' needs. Families will be assured that my skills and knowledge represent what would be expected from any pediatric urologist practicing in the United States."

# WVU MEDICINE CHILDREN'S

## WVU Medicine Children's Birthing Center sets yearly birth record

The WVU Medicine Children's Birthing Center set a record for the most births in one year with 2,611 deliveries in 2023.

The second highest number of births was in 2021, prior to moving into the new hospital, when WVU Medicine Children's welcomed 2,356 babies.

WVU Medicine Children's created a spa-like atmosphere when building its Birthing Center. The 17 labor and delivery rooms, seven of which have labor tubs, were designed to give mothers-to-be a calming and comfortable environment.

After the babies are born, mothers can stay with them in large inpatient rooms.

Families are given compassionate care through the entire birth process from the moment a patient arrives to the time they leave with a new baby.



## WVU Medicine Children's Epilepsy Program pioneers minimally invasive surgery

The WVU Medicine Children's Epilepsy Program pioneered a minimally invasive neurosurgery for patients.

Laser interstitial thermal therapy, or "laser ablation," is for patients with intractable focal epilepsy.

The surgery is performed by P. David Adelson, MD, executive director of the WVU Medicine Children's Neuroscience Center.

"Tumors, particularly deep in the brain, were traditionally difficult to reach via surgery. They required a significant open approach that yielded less precision and required long hospital stays for recovery and even increased risk of complications. With laser ablation, we are now able to attain sub-millimeter accuracy without injuring the surrounding brain tissue resulting in more favorable outcomes and prognoses while getting kids back home in one-to-two days," Dr. Adelson said.

The use of both the robotic guidance platform and the laser technology in the surgery provide unprecedented accuracy and imaging to remove or ablate a brain tumor in real time through a small, three-millimeter incision. This provides immediate results in destroying tumor cells without affecting potentially important structures nearby.



Adelson

# WVU CANCER INSTITUTE

## Reimagining cancer care in West Virginia

# WVU Cancer Institute receives \$50 MILLION state investment to fund expansion of research and treatments

West Virginia University's efforts to reimagine and expand cancer care received a \$50 million boost as Gov. Jim Justice joined WVU academic and Health System leaders in June to announce state surplus funding that will support investment to attain National Cancer Institute (NCI) designation – a first for West Virginia.

The funding was included in House Bill 2024 as part of the Fiscal Year 2024 budget passed by the West Virginia Legislature. These dollars will be used for comprehensive research programs, faculty, and facilities that will directly lead to innovative approaches in cancer prevention, diagnosis, and treatment for all West Virginians.

The National Cancer Institute leads cancer research across the country and recognizes cancer centers with an official NCI designation, the highest federal rating a cancer center can achieve. This designation is awarded to cancer centers that are leading in innovative research and treatments and is the gold standard for cancer programs.

Currently, there are 72 NCI-designated cancer centers in 36 U.S. states, and centers with this designation represent the top two percent of cancer centers in the country. The WVU Cancer Institute would be the first NCI-designated cancer center in West Virginia.

*(From left to right) Dr. Clay Marsh, WVU Health Sciences chancellor and executive dean; Gordon Gee, WVU president; Albert L. Wright, Jr., president and CEO of the WVU Health System; and Dr. Hannah Hazard-Jenkins, director of the WVU Cancer Institute, join Gov. Jim Justice (far right) to celebrate a \$50 million state investment in the WVU Cancer Institute. (WVU Photo)*



## WVU CANCER INSTITUTE



### Bonnie's Bus commemorates 30,000<sup>th</sup> screening mammogram in 15<sup>th</sup> season traveling country roads

Bonnie's Bus, a component of the WVU Cancer Institute's Mobile Cancer Screening Program, celebrated a significant milestone in 2023 by delivering its 30,000<sup>th</sup> mammogram, while recognizing its 15<sup>th</sup> season on the road.

The Bus, operational from mid-March to mid-December, covers all 55 counties in West Virginia, providing essential breast cancer screenings to those lacking access in their communities. With over 225,000 miles traveled and more than 1,700 screening days completed, Bonnie's Bus has detected over 170 breast cancer cases since its inception in 2009, offering critical screenings to under- or uninsured individuals, ensuring no one is turned away due to financial constraints.

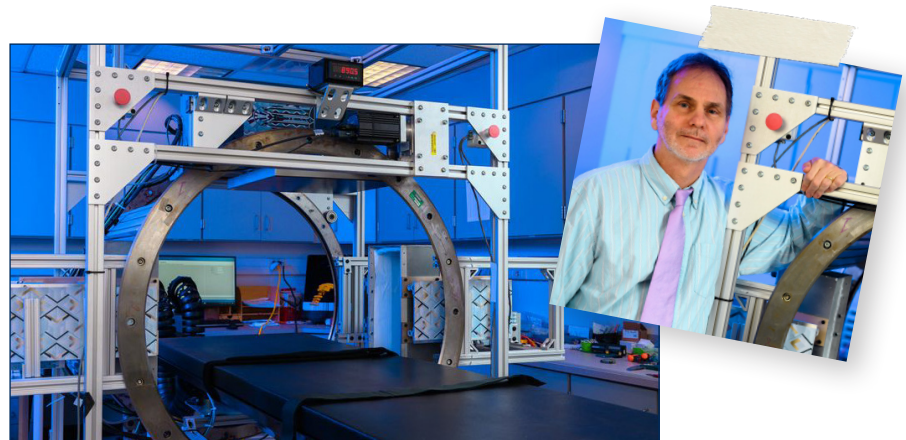
*Bonnie's Bus driver, Jerry Turner, with mammographer Cathy Humphries and 30,000<sup>th</sup> patient Linda Rohrbough*

### Researcher prototypes new equipment to improve head and neck cancer treatment

Head and neck cancer may not be as common as breast or prostate cancer, but it is one of the most challenging to treat. Its five-year survival rate can be as low as 25 percent, while its recurrence rate can be as high as 43 percent.

WVU researcher Raymond Raylman, PhD, has developed a new technology to improve the treatment of head and neck cancers. The scanner that he and his team prototyped — which combines positron emission tomography and X-ray computed tomography — showed promising results in recent preclinical testing of its performance. In the future, the scanner may lead to equally promising results in clinical testing.

“What makes this system unique is that it has much higher resolution than the standard PET/CT system,” Dr. Raylman, vice chair of research for the Department of Radiology and a member of the WVU Cancer Institute, said. “That’s because it’s designed specifically for head and neck cancer imaging. The typical scanner systems are general. They’re designed to image brain tumors, breast tumors, and prostate cancer. Instead of doing that, we decided to design one just for head and neck cancer.”



*Radiology researcher Raymond Raylman with the WVU Cancer Institute developed a prototype of a scanner that could improve identification of head and neck cancers. His team is currently awaiting regulatory approval to test the device on 40 cancer patients.*

One reason head and neck cancers tend to be so hard to treat is their size. By the time the typical patient receives a diagnosis, “the tumor can often be centimeters in diameter,” Raylman said.

In addition, as physicians plan and execute tumor treatment, they have to avoid sensitive areas nearby, like glands and muscles.

“This system is designed for estimating the edges of the tumor as accurately as possible,” Raylman said. “The more accurately you can assess the size, shape, and spread of the tumor, the more accurately — and, hopefully, effectively — you can plan either surgery or radiation therapy.”

He and his team recently tested their system by using it to produce highly detailed images of simulated head and neck cancers. Now they’re seeking regulatory approval to test its performance on 40 cancer patients.

The prototype was made possible by funding from the National Cancer Institute, which awarded the project \$1.9 million over five years.

It’s also the result of a collaboration between Raylman and his colleagues in the School of Medicine, advanced manufacturing experts from the Benjamin M. Statler College of Engineering and Mineral Resources’ Lane Innovation Hub, and Xoran Technologies, a manufacturer of X-ray CT scanners.

# WVU CANCER INSTITUTE



## LUCAS recognized with White Ribbon from Breathe BioMedical

The WVU Cancer Institute’s Mobile Cancer Screening Program received a White Ribbon from medical device company Breathe BioMedical, honoring its groundbreaking work in reducing lung cancer’s impact in West Virginia. LUCAS, an innovative mobile lung cancer screening unit, was recognized for its state-of-the-art capabilities, marking a significant step in lung cancer detection and prevention efforts. Deployed across 42 counties, LUCAS extends lung cancer screening to underserved areas, aiming to detect cancer early for better treatment outcomes. This recognition through the White Ribbon Project underscores the critical importance of education and awareness campaigns to address the low uptake of lung cancer screening in the state and encourages eligible individuals to consider this life-saving screening option.



*(From left to right) John Trembly, LUCAS driver; Jenny Ostien, director of the WVU Cancer Institute Mobile Cancer Screening Program; Lauren Hixenbaugh, LUCAS program manager; Lonnie Hughes, LUCAS driver; and Anna Baker, LUCAS CT technician pose for a photo with the White Ribbon inside LUCAS.*

Breathe BioMedical has been working with LUCAS for over a year on the implementation of a lung cancer clinical trial that collects breath samples from participants that are then analyzed to identify volatile organic compound markers for lung cancer found in breath. The development of this screening mechanism has the potential to increase access to screening and provide additional options for patients at high risk for developing lung cancer.

## WVU Cancer Institute named to Newsweek’s “America’s Best Cancer Hospitals”



The WVU Cancer Institute at WVU Hospitals was named to Newsweek’s 2023 list of “America’s Best Cancer Hospitals.” It is the only facility in West Virginia to be included on the list. The America’s Best Cancer Hospitals ranking was created to provide patients and family members with a comprehensive resource for informed decision making.

## WVU Medicine Urology, WVU Cancer Institute first in state to perform single-port kidney surgery

**Surgical system also used for prostate cancer surgery**

WVU Medicine Urologic Oncology surgeons at the WVU Cancer Institute were the first in the state to perform a single-port partial nephrectomy. The Institute is one of 130 facilities in the United States to implement the single-port robot platform, and only 140 urologists are certified to use this cutting-edge surgical system.

The new single-port robotic surgical system allows surgeons to insert robot-assisted instruments into the extraperitoneal space, a small, compartmentalized space within the pelvis and back, using only one or two incisions and avoiding the abdominal cavity completely.

This expands options for patients who are not candidates for open or multiple port procedures due to scarring from prior abdominal surgeries, obesity, or heart or lung conditions.

WVU Medicine surgeons are also using the system to perform single port radical prostatectomy procedures for prostate cancer, performing as many as two-to-four surgeries per week.

The approach offers several benefits over traditional open and multiple port robotic assisted approaches, including less pain, shorter recovery time, and smaller or fewer scars.



# WVU HEART & VASCULAR INSTITUTE

## FIRSTS

### NEW ROLES



**Alper Toker, MD**, was named professor and chief of Thoracic Surgery at the WVU Heart and Vascular Institute and the Department of Cardiovascular and Thoracic Surgery in the WVU School of Medicine.



**George G. Sokos, DO, FACC**, was named interim chair of the School of Medicine's new Department of Cardiology.



**Ramesh Daggubati, MD, FACC, FSCAI**, professor and chief of Interventional Cardiology, transitioned to chief of Interventional Cardiology Services and vice-chair of the Department of Cardiology.



The WVU Heart and Vascular Institute became the first in the state to offer the **Barostim™ Baroreflex Activation Therapy**, the world's first FDA-approved heart failure device to use neuromodulation to improve the symptoms of patients with systolic heart failure who may not receive adequate symptom relief from medications alone and those who are not suited for treatment with other heart failure devices, like cardiac resynchronization therapy.



The WVU Heart and Vascular Institute became the first center in West Virginia to enroll patients in the **RESPONDER-HF** trial evaluating the effectiveness of the Corvia® Atrial Shunt, an investigational cardiac implant designed to address the frequent hospitalizations and symptoms that limit quality of life in people suffering from heart failure.

The randomized trial will be offered to patients with preserved ejection fraction (HFpEF), the most common type of heart failure, but one for which effective treatments are limited.

### PARTNERSHIP

The WVU Heart and Vascular Institute and Story Health, a health technology and services company building specialty care models for the future, announced a collaboration to improve access to specialty care for patients with heart failure.

The WVU Heart and Vascular Institute's objective for this partnership is to improve treatment and experience for patients and their families, including increased access and medication support with the goal of improving heart function and reducing hospitalizations. WVU Heart and Vascular clinicians and Story Health coaches will work together to personalize patient treatments through structured clinical pathways, monitoring, and patient engagement.



### AWARDS & RECOGNITIONS



Named one of the 50 best hospitals for cardiac surgery in the United States

Listed in the top 10 percent of cardiac surgery programs in the United States

Recipient of the Cardiac Surgery Excellence Award

Five-star recipient for valve surgery

Five-star recipient for treatment of heart attack

Five-star recipient for treatment of heart failure for two consecutive years (2022-23)



The WVU Heart and Vascular Institute received six national recognitions from Healthgrades, the leading marketplace connecting doctors and patients.

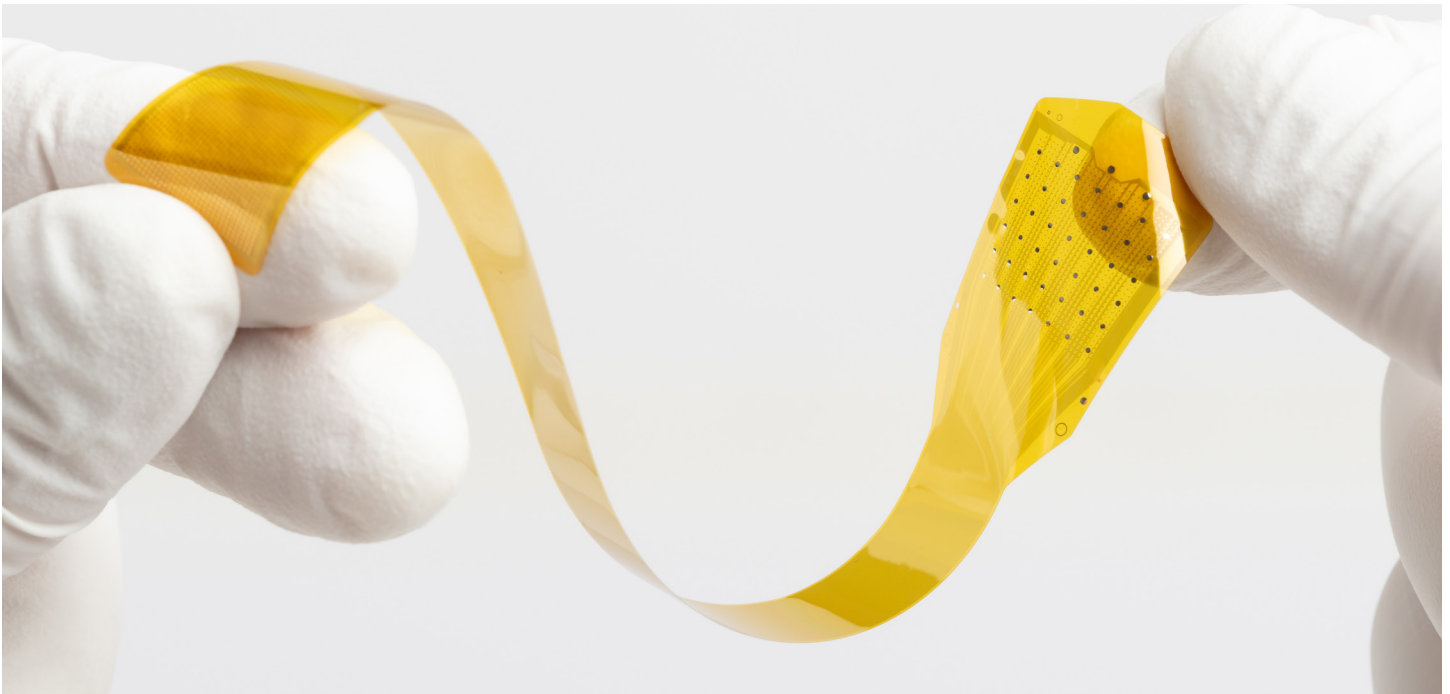


For the fifth consecutive year, the Society for Vascular Surgery's Vascular Quality Initiative awarded the WVU Heart and Vascular Institute three stars for its active participation in the Registry Participation Program.



The WVU Heart and Vascular Institute received national recognition for its extracorporeal membrane oxygenation (ECMO) team at the annual meeting of the Extracorporeal Life Support Organization, the world's leading ECMO organization with more than 20,000 users and members from more than 50 countries.

# WVU ROCKEFELLER NEUROSCIENCE INSTITUTE



## RNI partners with biotech startup to test brain-computer interface

The WVU Rockefeller Neuroscience Institute, in partnership with Precision Neuroscience Corporation, successfully completed first-in-human procedures in a pilot clinical study of Precision Neuroscience’s neural implant system.

The study was designed to record and map the brain’s activity in unprecedented detail, signaling a major step toward restoring meaningful function to millions of people suffering from neurological illnesses and disorders.

During the study, a team of RNI neurosurgeons led by Peter Konrad, MD, PhD, chair of the Department of Neurosurgery, temporarily placed the Precision system, called the Layer 7 Cortical Interface, on the brain of a patient undergoing resection of a brain tumor. They safely deployed the implant onto the brain for a portion of the surgery, allowing it to read, record, and map electrical activity from the surface of the brain.

The Layer 7 Cortical Interface contains 1,024 tiny electrodes spanning an area of one square centimeter, embedded in a flexible film that conforms to the brain surface. The film is one-fifth

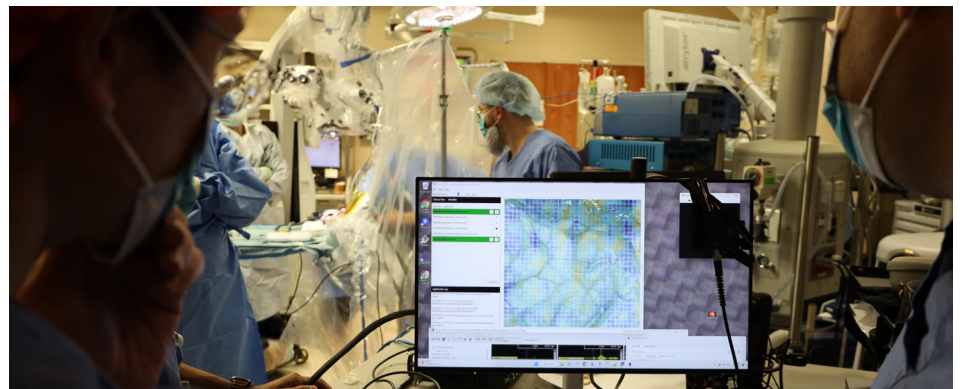
the thickness of a human hair and is designed to be implanted and removed by neurosurgeons without damaging brain tissue. The device is engineered to map a large area of the brain’s surface at resolutions hundreds of times more detailed than typical arrays used in neurosurgical procedures.

“This is a remarkable achievement in the real-time detection of electrical brain activity mapped with such high resolution,” Dr. Konrad said. “It’s as if I was seeing the patient’s brain think.”

Since the first procedure, a handful of additional patients have undergone similar operations at WVU using the

Precision system. These patients required surgery to remove tumors involving brain regions responsible for language. A portion of each of these operations was performed with the patients awake to identify critical language areas in real time.

*WVU RNI neurosurgeons successfully placed the Precision system—called the Layer 7 Cortical Interface— in the brain of a patient undergoing brain tumor resection surgery. One-fifth the thickness of a human hair, the system records and maps brain activity in real time without damaging delicate brain tissue.*



## WVU ROCKEFELLER NEUROSCIENCE INSTITUTE

# Top concussion expert joins WVU Rockefeller Neuroscience Institute, creates statewide network

Javier F. Cárdenas, MD, a leading expert in the fields of sports neurology, concussion, and traumatic brain injury, joined the WVU Rockefeller Neuroscience Institute as chief of the Division of Sports Neurology. Dr. Cárdenas is also professor of Neurology and holds the Ludwig Gutmann Endowed Chair.

Cárdenas joined WVU Medicine after having served as the founder and director of the Concussion and Brain Injury Center at the Barrow Neurological Institute, a renowned national comprehensive concussion prevention, treatment, and education program. During his tenure there, Cárdenas developed the nation's first mandated concussion education and

testing tool for student-athletes, which, since its inception in 2011, has provided concussion education to more than one million high school athletes.

Shortly after arriving at WVU, Cárdenas launched the Rockefeller Concussion Network, offering free statewide concussion testing to young athletes. The RNI outreach program will provide West Virginia youth access to baseline and post-injury ImPACT testing to all West Virginia athletes with an athletic trainer. ImPACT (Immediate Post-Concussion Assessment and Cognitive Testing) is a computerized neurocognitive assessment tool used to evaluate the effects of a concussion.

Board certified in neurology and brain injury medicine by the American Board of Psychiatry and Neurology, Cárdenas is vice chair of the National Football League's (NFL) Head, Neck, and Spine Committee as well as a senior advisor for the NFL Concussion Program. He is also a member of the American Academy of Neurology and the NCAA Concussion Safety Advisory Group.

*Javier F. Cárdenas, MD, a leading expert in sports neurology, concussion, and traumatic brain injury, joined WVU Rockefeller Neuroscience Institute as chief of the Division of Sports Neurology.*



# WVU CRITICAL CARE & TRAUMA INSTITUTE

# TRANSPLANT

## Dr. Elizabeth Sinz joins WVU Critical Care and Trauma Institute



**Sinz**

Elizabeth Sinz, MD, MEd, anesthesiologist and critical care physician, became the associate medical director of the WVU Critical Care and Trauma Institute in December.

The WVU Critical Care and Trauma Institute is the centerpiece of the comprehensive critical care mission at WVU Hospitals. Established in December 2015, the Institute oversees care for the most seriously injured and sickest patients. Its team of

board-certified surgeons and critical care physicians provides care for thousands of patients every year.

Dr. Sinz returned to WVU Medicine from the Penn State University (PSU) College of Medicine Department of Anesthesiology and Perioperative Medicine, where she has worked since 2004, most recently serving as the first associate dean for clinical simulation in the PSU College of Medicine, director of the Penn State Health Clinical Simulation Center, and medical director for resuscitation for the Penn State Health Hershey Medical Center. She was a professor of Anesthesiology and Neurosurgery and has previously served as the director of critical care anesthesia, fellowship education, and neuro-anesthesiology.

Previously, she was an associate professor in the WVU Department of Anesthesiology and its Critical Care Fellowship Program director.

## WVU Critical Care and Trauma Institute plans expansion of Fresh Tissue Training Lab

Since it was established in 2018, the WVU Critical Care and Trauma Institute Fresh Tissue Training Program has provided opportunities for surgical residents and military medics to train for procedures and hone their skills. Due to its success and the high demand, the program is planning a \$2.2 million renovation and expansion of its facilities with funding provided by WVU Medicine.

The Program's innovative training model uses fresh cadavers provided by the WVU Human Gift Registry and connected to perfusion machines, which pump simulated blood through the body to create lifelike trauma and surgical scenarios. The groundbreaking program, one of four in the nation, is a collaborative effort between the WVU Critical Care and Trauma Institute, the Department of Surgery, and the Department of Pathology, Anatomy, and Laboratory Medicine.

The program operates out of a 500-square-foot space with one operating table in the autopsy suite at the WVU Health Sciences Center in Morgantown, and an off-site location.

The WVU Critical Care and Trauma Institute has opened the facility to surgical trainees throughout the state and special forces, both on active duty and as part of the National Guard, to offer sustaining skills and refresher training for military and surgeons statewide. The renovation and expansion will allow the program to create more training opportunities for the next generation of WVU surgical residents and special forces medics.

## Transplant Alliance leads in development, publication of ISHLT heart transplant guidelines

Michael Shullo, PharmD, WVU Medicine Transplant Alliance vice president of transplant services, led 38 other expert contributors from 11 countries worldwide in the development of the new International Society for Heart and Lung Transplantation Guidelines for the Care of Heart Transplant Recipients.



**Shullo**

The Guidelines were originally published in 2010 and provided the first comprehensive guideline for the care of heart transplant patients.

The redeveloped guidelines reflect changes in practices and literature that have emerged since the original recommendations were published. They also include specific new areas of focus that were undeveloped, undiscovered, or unsupported at the time of the original publication.

Four task forces, each co-chaired by an adult and a pediatric heart transplant clinician, focused on all aspects of the care of heart transplant recipients, including perioperative care; immunosuppression and rejection; management of complications as part of long-term care; and prevention and prophylaxis as part of long-term care.

The guidelines were drawn from nearly 1,000 peer-reviewed studies on the lives and health of heart transplant recipients.



## UNITED HOSPITAL CENTER

### UHC surgeon completes 2,000 robotic-assisted surgeries, ranks nationally in top one percent

Sugam B. Vasani, MD, surgeon at UHC General Surgery, successfully completed 2,000 da Vinci Xi robotic-assisted surgeries, which places him in the top 1 percent nationally regarding successful completion of robotic-assisted surgeries.

The da Vinci Xi system, considered one of the most dynamic tools for minimally invasive surgery in the world, has been a staple of Dr. Vasani’s practice since 2013. Robotic-assisted procedures performed include cholecystectomy, hernia repair, and colon surgery.



*Pictured from left to right: Kelly Babel, RN; Shelby Wilmoth, LPN, CST; Jeff Gribble, RN; Julia Cramer, CRNA; and Sugam B. Vasani, MD, UHC General Surgery*



## WHEELING HOSPITAL

### WVU Medicine Children’s services expanding in Wheeling



#### Wheeling Hospital to invest in new WVU Medicine Children’s clinic

Wheeling Hospital CEO Douglass Harrison announced plans for a WVU Medicine Children’s outpatient pediatric center at Wheeling Hospital.

With the opening of WVU Medicine Children’s Hospital in Morgantown in 2022, the charge now comes down to the individual regional hospitals to reimagine pediatric care, with Wheeling Hospital leading the way with an estimated \$8 million local investment.

The new outpatient pediatric clinic will be on the first floor of the former Continuous Care Center. There will be extended “after hours,” so children can be seen by a pediatrician outside of normal business hours, as well as a specialty unit where children can be seen locally by doctors from WVU Children’s Hospital in Morgantown. Specialists will come to Wheeling weekly to serve kids with more specific needs, avoiding the trip to and from Morgantown for those families.



# CAMDEN CLARK MEDICAL CENTER

## Camden Clark named one of America's 250 Best Hospitals for clinical excellence in 2023 by Healthgrades

Camden Clark was named one of America's 250 Best Hospitals by Healthgrades in 2023. This achievement ranks Camden Clark in the top five percent of hospitals nationwide for overall clinical performance across the most common conditions and procedures. Camden Clark is the only hospital in the Mid-Ohio Valley and surrounding region to be ranked amongst America's Best Hospitals in 2023.

Healthgrades evaluated patient mortality and complication rates for 31 of the most common conditions and procedures at 4,500 hospitals across the country to identify the top-performing hospitals.

In addition to being named one of America's 250 Best Hospitals, Camden Clark received national excellence of care awards across major clinical areas in 2023 from the Society of Thoracic Surgeons, CareChex, the American Heart Association, the American College of Cardiology, *U.S. News & World Report*, and other Healthgrades national awards.

*Pictured from left to right: Kelly Babel, RN; Shelby Wilmoth, LPN, CST; Jeff Gribble, RN; Julia Cramer, CRNA; and Sugam B. Vasani, MD, UHC General Surgery*



CARING FOR OUR COMMUNITY



YEARS  
1898-2023

### Camden Clark commemorates 125<sup>th</sup> anniversary

Camden Clark Medical Center commemorated its 125<sup>th</sup> anniversary of serving the Mid-Ohio Valley and surrounding region as part of its American Hospital Association National Hospital Week celebration.

As part of the festivities, employees and community members gathered to celebrate the hospital's history at the Camden Clark 125<sup>th</sup> Celebration Ceremony, where hospital leadership, state and local officials, and other guests highlighted Camden Clark's legacy of service.

To mark the occasion, an 85-foot wall mural connecting the hospital's North and South Towers was installed, featuring events throughout Camden Clark's history.



*(Pictured from left to right) Sean Smith, Camden Clark chief operating officer; Joe Campbell, Camden Clark Board of Directors; Shari Vance, MD, Camden Clark chief medical officer; Sara Young, daughter of Jean Young; Nancy Brooks, retired nurse and director of the Camden Clark Physicians Leadership Academy; and Steve Altmiller, Camden Clark president and CEO*

# JACKSON GENERAL HOSPITAL

## Jackson General celebrates “Topping Out” with placement of final beam in \$30M expansion

Jackson General Hospital commemorated the placement of the final steel beam on its new, \$30 million two-story expansion during a topping out ceremony in February. The new Jackson General Hospital expansion project is slated to be open for patient care in the late spring of 2024.

The first floor of the expansion is comprised of a new Emergency Department with 14 private rooms, including two triage rooms, two trauma rooms, a decontamination room, and a mental health room. A new Surgical Department with 12 pre-/post-anesthesia bays, two large operating suites, and two procedure rooms will also be housed on the first floor of the expansion.

The second floor of the expansion will include the inpatient/swing-bed unit with 18 private rooms, a three-chair patient infusion area, and a rehabilitation room. Four of the inpatient rooms will have the ability to be converted into critical care rooms, as needed.

A smaller third floor, which will house a mechanical penthouse, is also part of the expansion project.



*Stephanie McCoy, Jackson General Hospital president and CEO, provides remarks during topping out ceremony in February 2023.*

## Jackson General Hospital nationally recognized for the HCAHPS Measurement of Nurse Communication by *Becker’s Hospital Review*

Jackson General Hospital was honored with a five-star rating from the *Becker’s Hospital Review* in 2023 for its outstanding communication amongst its nursing staff. Jackson General was one of only 350 hospitals in the nation to receive five-stars in the 2023 ratings.

Each year, Becker’s compiles a list of the best hospitals for nurse communication in each state using Hospital Consumer Assessment of Healthcare Providers and Systems data from the Center for Medicare & Medicaid Services (CMS).

CMS shares 10 HCAHPS star ratings based on publicly reported HCAHPS measures. The nurse communication star rating combines data from three HCAHPS survey questions and summarizes how well patients feel that their nurses explained things clearly, listened carefully to the patient, and treated the patient with courtesy and respect.



# WETZEL COUNTY HOSPITAL

## Wetzel County Hospital achieves 4-star CMS rating, named among Top Rural Health Clinics in the U.S. by Liltypad

Upon updating its Overall Hospital Quality Star Ratings for 2023, the Centers for Medicare & Medicaid Services (CMS) awarded Wetzel County Hospital with a four-star rating.

The four-star rating is the highest that Wetzel County Hospital has achieved within recent scoring cycles. CMS ratings are calculated by combining several quality metrics into a single score, including safety of care, mortality, readmission, patient experience and timely and effective care.

In addition to receiving a four-star CMS rating, Wetzel County Hospital Primary Care was named among the 2023 Liltypad Award recipients, recognizing it as one of the top rural health clinics in the United States.

The Liltypad Awards program, which honors rural health clinics for their efficiency and operational excellence, is the only ranking program for the nation's more than 5,000 rural health clinics. The program uses data from CMS to calculate rural-relevant metrics across five domains to provide a comprehensive and objective assessment of rural health clinic performance.



## Wetzel County Hospital sleep lab receives Joint Commission Accreditation

Wetzel County Hospital earned The Joint Commission's Gold Seal of Approval for its Sleep Lab, which demonstrates continuous compliance with its performance standards. The Gold Seal is a symbol of quality that reflects a healthcare organization's commitment to providing safe and quality patient care.

Wetzel County Hospital's Sleep Lab provides sleep disturbance testing options for patients ages 16 and older living within a 60-mile radius of New Martinsville. The Sleep Lab treats conditions and symptoms including sleep apnea, daytime sleepiness, REM sleep behavior disorders, restless leg syndrome, among several others.

The Wetzel County Hospital Sleep Lab includes double beds, a television, and a private bathroom to ensure the comfort of patients throughout their study.

## Grant funds enhance patient care and comfort at Wetzel County Hospital

### \$10,000 Grant for the Enhancement of Patient Communication

Wetzel County Hospital leadership and representatives from MPLX/Marathon Petroleum gathered for the reveal of the hospital's newly installed patient communication white boards.

The \$10,000 in grant funding allowed for the purchase and installation of the patient communication boards in the Emergency Department, Intensive Care Unit, and inpatient Medical/Surgical units.

These upgrades have benefitted patients, their families, and medical staff by providing the latest, up-to-date patient and mobility information to ensure seamless care.

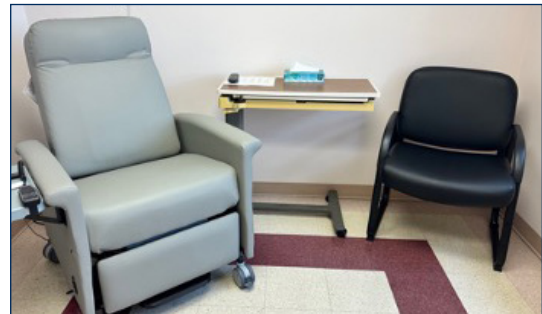


Jessica Huffman highlights the benefits of new patient communication boards with nursing staff and an MPLX/Marathon representative.

### \$17,000 Grant for New Infusion Chairs

A \$17,000 grant from the Antero Foundation was awarded to Wetzel County Hospital for the purchase of new state-of-the-art comfort chairs to improve infusion treatments and aid in the comfort and healing of patients.

The Infusion Center at Wetzel County Hospital is now equipped with five new patient infusion chairs, two of which include heat and massage features, providing patients with comfortable, close-to-home treatments in New Martinsville



# REYNOLDS MEMORIAL HOSPITAL

## Reynolds Memorial Hospital keeps investing with new helipad



Reynolds Memorial Hospital celebrated the ribbon cutting for its newly constructed helipad in October. The new helipad was constructed in an open field directly behind the St. Jude Parish Hall, where helicopters had traditionally landed on the open grass surface.

Helicopter traffic is not new to Reynolds, but historically the helicopters had to land in an unlit, open grass field behind the hospital. Transportation from the helicopter to Reynolds was more difficult, as the medical crews would have to transport patients over unpaved, grassy terrain. The new helipad provides a safer, smoother transport experience and is well lit 24 hours a day.



Officials from HealthNet Aeromedical Services, WVU Medicine Reynolds Memorial Hospital, and the local Marshall County community gather to celebrate the ribbon cutting of Reynolds Memorial Hospital's brand new helipad.

# THOMAS HOSPITALS

## Thomas Hospitals, Camden Clark form joint cardiac program

Patients throughout southern West Virginia will benefit from expanded cardiac services at Thomas Hospitals. Thomas Hospitals will work with Camden Clark Medical Center, an experienced provider of invasive cardiac and open-heart services, to develop the new services at Thomas Memorial, enabling the two to operate a joint cardiac surgery program with shared cardiac surgeons and policies for patients at both hospitals.

The services will be directed by a cardiovascular surgeon employed under the leadership of the WVU Heart and Vascular Institute. The joint program will provide increased access with more consistent coverage at both Thomas Memorial Hospital and Camden Clark Medical Center, facilitating more cardiac surgeries than are currently offered and provided.

“This is about building the infrastructure – the people and programs – necessary to meet the high demand for cardiac services in our combined service areas,” Greg Rosencrance, MD, president and CEO of Thomas Hospitals, said. “The needs are significant, and over time, we will transform Thomas Memorial Hospital into a regional referral center for advanced cardiac care that is fully affiliated with the WVU Heart and Vascular Institute, which is anchored in Morgantown.”

The expanded services include the welcoming of several renowned cardiologists and vascular surgeons and includes an open-heart program at Thomas Memorial Hospital.



(Pictured from left to right) Shawn Groves, MD; Srinivasan Narasimhan, MD; Kishore Challa, MD; Vinay Badhwar, MD; Mohammad Yousaf, MD; James Stanton, MD; John Goad, MD

## WVU Medicine Thomas Hospitals announces plans to offer pediatric services

WVU Medicine Thomas Hospitals announced plans for the opening of an inpatient pediatric unit located at Thomas Memorial Hospital and the welcoming of a renowned pediatric physician, Youmna Mousattat, MD, lead hospitalist for pediatric inpatient services.

The inpatient pediatric unit, opening in 2024, will be a partner and extension of WVU Medicine Children’s Hospital, home to the state’s largest and most experienced group of pediatric specialists.

Dr. Mousattat currently serves as an associate professor of pediatrics at the WVU School of Medicine and has been in practice for more than 15 years. In her academic work, Mousattat provides didactic teaching and clinical supervision for medical students and residents. She has been recognized for her research and has authored many peer-reviewed publications and local and national presentations.

She is board certified in pediatrics and pediatric hospital medicine by the American Board of Pediatrics.



Mousattat

# POTOMAC VALLEY HOSPITAL

## Potomac Valley Hospital named “most socially responsible hospital” in West Virginia

The Lown Institute, a non-partisan health care advocacy organization, named Potomac Valley Hospital (PVH) the 2023 most socially responsible hospital in West Virginia in its Lown Hospitals Index for Social Responsibility.

PVH was awarded an “A” grade in the Lown study, receiving the highest score among the 37 West Virginia hospitals considered. In addition to its state placement, PVH also ranked 17th among 850 critical access hospitals across the United States. The annual Lown rankings include 3,637 hospitals throughout the country.

As part of WVU Medicine, PVH is a critical access hospital that provides several specialty medical services, including cancer care, infusion services, behavioral health, integrative pain management, cardiology, urology, vascular care, pulmonology, orthopedics, and wound care services. PVH is



(Left to right) Jason Smith, senior director of operations; Kendra Thayer, chief nursing officer/ vice president clinical services; Amy Boothe, chief financial officer/chief operating officer/VP operations and finance; Mark Boucot, president and CEO; Dr. Marjorie Fridkin, chief medical officer; Laura Waters, regional director human resources; and Angie Maule, senior director performance improvement.

also WVU Medicine’s only Stroke Certified Critical Access Hospital. That designation is more commonly achieved at larger hospitals.

The quality of patient care at the hospital is a direct reflection of the dedication of the PVH staff; patients that utilize the hospital do not experience any hospital acquired infections, and the hospital’s quality indicators are superlative. In 2022-2023, the hospital has had no catheter urinary tract infections, no central line associated blood stream infections, no bed sores, and no venous thrombo-embolisms.

The Lown Institute, located near Boston, annually ranks over 3,600 U.S. hospitals on more than 50 metrics in its Hospitals Index for Social Responsibility.

## Potomac Valley Hospital primary care clinics achieve designation

Potomac Valley Hospital (PVH) achieved Patient Centered Medical Home (PCMH) certification for its three primary care clinics, located in Keyser, Piedmont, and Fort Ashby in 2023. The certification, from the National Committee for Quality Assurance, identifies medical practices investing in care that is patient centered and prioritizes continuous quality improvement.

The three clinics awarded certification include the Mineral County Rural Health Clinic on the PVH campus in Keyser; the Riverside Rural Health Clinic in Piedmont; and the Fort Ashby Rural Health Clinic. The clinics focus on family medicine, though the Keyser practice also offers general surgery and pulmonology, and the Fort Ashby practice offers pulmonology.

According to the Centers for Disease Control and Prevention, the Patient Centered Medical Home focuses on the delivery of high quality, affordable, patient centered care through the creation of stronger provider/patient relationships, addressing care needs comprehensively, and coordinating patient care across all sectors of the healthcare system. Patients are involved in creating their own individualized care plans and work with providers to ensure their goals are met.

A PCMH primary care practice works as a team with other referring clinicians, community resources, and secondary services as warranted by patient need. Care is focused on the patient as opposed to the healthcare setting.

The National Committee for Quality Assurance notes that research across healthcare payers has shown that patients in practices with PCMH certification receive better management of chronic conditions, experience reduced fragmentation of care, and realize lower healthcare costs overall.

## Potomac Valley Hospital receives Joint Commission Center of Excellence accreditation in orthopedic surgery

Potomac Valley Hospital (PVH) was recognized as a Center of Excellence for Orthopedic Care by the Joint Commission on the Accreditation of Hospitals. The Joint Commission is the oldest and largest standards-setting and accrediting body in healthcare in the United States. Achieving Center of Excellence status means PVH provides the highest standard of care possible in orthopedic surgery.

The PVH orthopedic department, led by Dr. Hamed Vahedikafshgari and Dr. Sherif Dabash, provides a full stable of orthopedic surgeries and treatments. The level of care provided ensures that many orthopedic patients can receive the care they need without having to travel to a larger medical facility.

The Joint Commission is acknowledged as the gold seal in healthcare accreditations, developing standards in quality and safety that incorporate measures from the Centers for Medicare and Medicaid as well as the Occupational Safety and Health Administration.



# BERKELEY MEDICAL CENTER

## WVU Medicine Berkeley Medical Center announces perioperative, clinical expansion project

WVU Medicine Berkeley Medical Center announced plans in September for a \$37.8 million project to expand perioperative and clinical space on the hospital's first floor.

Berkeley Medical Center began expanding its surgical capacity in 2018 with the addition of five new operating rooms. This new project will complete that expansion by adding both pre-operative and post-anesthesia care unit space, allowing the full complement of operating rooms to be utilized. It will also allow for the expansion of cardiovascular surgery capabilities by combining two smaller operating rooms and converting them into a hybrid operating room featuring advanced procedural space and an image-guided interventional suite.

This project also includes the expansion of laboratory space and the addition of a new 20-bed observation unit and a neuro-interventional biplane suite, the latter of which will be used to provide comprehensive stroke care and treatment of other disorders of the brain and spine, including aneurysms and arteriovenous malformations.

## Berkeley Medical Center and WVU Heart and Vascular Institute open new, expanded cardiovascular clinic



Leaders from Berkeley Medical Center and the WVU Heart and Vascular Institute cut the ribbon on a new, expanded cardiovascular clinic at the Dorothy McCormack Center in Martinsburg.

The WVU Heart and Vascular Institute first opened a clinic at Berkeley Medical Center in 2017, marking the expansion of cardiovascular services in the eastern region. In addition to eight cardiologists, the Heart and Vascular team in Martinsburg has expanded in recent years to include both a vascular and a thoracic surgeon.

Construction of the new, 10,000 square foot clinic began in Oct. 2022 at the Dorothy McCormack Center. It includes 12 exam rooms, two procedure rooms, two echocardiogram rooms, office space for providers, a dedicated patient entrance and waiting area, and all the required ancillary and support spaces. It also includes more than 2,000 square feet of adjacent space for a new cardiopulmonary rehabilitation suite with space for over 20 pieces of rehab equipment.

# JEFFERSON MEDICAL CENTER

## WVU Medicine to build new medical office building, expand services in Jefferson County



Residents of Jefferson County and the surrounding area will benefit from a new WVU Medicine regional medical office building, slated to open at Blue Ridge Crossing, a 64-acre property in Charles Town.

The planned three-story, 40,000-square-foot building will be at the intersection of US Route 340 and WV Route 9 East in Charles Town. This \$37 million project will be owned and operated by Jefferson Medical Center and will house both primary and specialty care clinics in addition to laboratory, diagnostic imaging, and outpatient rehabilitation services.

Specialty services will include cardiology, gastroenterology, orthopaedics, physical medicine and rehabilitation, rheumatology, obstetrics and gynecology, and spine care services. Integrated behavioral health services will be offered as part of primary care following a model that has been successful at other WVU Medicine clinics, including WVU Medicine Harpers Ferry Family Medicine.

ABOVE: A new three-story, 40,000-square-foot WVU Medicine regional medical office building is slated to open at Blue Ridge Crossing in Charles Town.

LEFT: (Left to right) Elizabeth Webster, president and CEO, Martinsburg Berkeley County Chamber of Commerce; George G. Sokos, DO, director of cardiology operations, associate chief of cardiology, WVU Heart and Vascular Institute; Leslie Crabill, chairman, WVU Hospitals East Foundation Board of Directors; Dean Thomas, president and CEO, WVU Medicine Berkeley Medical Center and Jefferson Medical Center; Vinay Badhwar, MD, executive chair, WVU Heart and Vascular Institute; Ajay Virmani, MD, medical director, WVU Heart and Vascular Institute, Martinsburg; D. Scott Roach, chairman, WVU Hospitals East Board of Directors; Andrew Bradford, LaBella Associates; Michael Dramby, Hoar Construction; Betsy Michael, Valley Engineering



# GARRETT REGIONAL MEDICAL CENTER

## Garrett Regional Medical Center ends 2023 with notable national recognitions and accolades



Garrett Regional Medical Center (GRMC) was among the most recognized hospitals in the state of Maryland, achieving awards regarding care through agencies that vet facilities for patient care and safety.

A two-time Top 20 Rural and Community Hospital by The National Rural Health Association, GRMC finished 2023 with many notable national recognitions and accolades, including:

- ✔ Top 100 Rural and Community Hospital by the National Rural Health Association and The Chartis Center for Rural Health for fifth consecutive year
- ✔ Fall 2023 Hospital Safety Grade A from The Leapfrog Group
- ✔ 2023 Performance Leadership Award for Excellence in Outcomes recognized by The Chartis Center for Rural Health
- ✔ Best Nursing Homes: High-Performing for Short-Term Rehabilitation (GRMC Subacute) by *U.S. News & World Report* for 10 years in a row
- ✔ Best Hospitals for Maternity Care: High-Performing Hospital in Unplanned Pregnancies and named a Maternity Care Access Hospital by *U.S. News & World Report*
- ✔ Recognized for Effective Nurse Communication by *Becker's Hospital Review*: GRMC is the only hospital in Maryland to make the list of 350 facilities.

# UNIONTOWN HOSPITAL

## Uniontown Hospital launches Nurse Residency Program

Uniontown Hospital developed a Nurse Residency Program that launched in March.

Designed using Benner's Novice to Expert Model, this nine-month program focuses on supporting newly graduated nurses as they transition from student to professional practice. The initial cohort consisted of nurses from the emergency department, intensive care unit, intermediate care unit, and medical-surgical departments.

The curriculum was designed to help new nurses overcome transitional hurdles most common during their first year of practice. The focus on prioritization, communication, leadership, critical thinking, professional development, and evidence-based practice allows the newly graduated nurses to feel confident in their abilities. The program utilizes traditional didactic instruction, case studies, simulation, expert guest speakers, and interactive activities to engage the nursing residents.

The first graduate nurses completed the program in November with all residents employed at Uniontown Hospital. The second cohort of graduate nurses began the program in the fall and are expected to complete the program in April 2024. A third cohort will begin in March 2024. The nurse residency program is a commitment to the well-being, success, development, and retention of newly graduated nurses at Uniontown Hospital.



*The first cohort of graduate nurses successfully completed WVU Medicine Uniontown Hospital's Nurse Residency Program, which launched in March 2023. Each of the first cohort's nurse residents began employment at Uniontown Hospital after graduation.*

## HEALTH SCIENCES

# Lei outlines vision for research, graduate education at WVU Health Sciences with a focus on rural health



Lei

As WVU Health Sciences continues to improve the health of West Virginians through education, research, service, and patient care, Ming Lei, PhD, is just beginning to envision the possibilities by expanding graduate education and research efforts.

Dr. Lei, who joined Health Sciences in August 2023, serves as senior associate vice president for research and graduate education and vice dean of research for the School of Medicine, as well as professor in the Department of Microbiology, Immunology, and Cell Biology.

“I think we can strive to meet West Virginians’ needs and also serve as an example for others with similar challenges,” Lei said. “I find the land-grant mission of WVU is really powerful and highlights our purpose and brings

everybody in the state together to serve our people and educate the state’s next generation.”

To improve health outcomes through research, Lei hopes to contribute to increasing the number of clinical trials conducted in the state while also increasing the rates of rural population participation in the trials.

“The rural population faces two major challenges,” Lei explained. “One is that there are not enough clinical trials being supported or conducted in rural states. The other is that the rates of participation by rural patients in clinical trials are low. Both contribute to the urban-rural disparity because if you do not have enough rural patients participate in trials, then the trial outcome is inherently biased.”

To expand graduate education efforts, Lei will pursue projects and initiatives that give students the best training experience so they can be competitive in pursuing research careers.

“Our graduate education mission is perfectly aligned with our land-grant institution mission in educating the best and brightest West Virginians to contribute to the state’s future,” Lei said. “Building the state would depend on the efforts of people who are from the state. We must focus on our state and the state’s students.”

“We are all making a considerable effort to position our institution for the future to address all the challenges and thrive. I’m optimistic for what we can accomplish.”

### Teeth reach: More WVU-trained dentists staying in West Virginia to practice

The WVU School of Dentistry is upholding the University’s commitment to improve healthcare for West Virginians by creating opportunities for hands-on experiences that have contributed to an increase in practitioners choosing to stay in the Mountain State following graduation.

Of the students who begin dental practice following graduation, the number of WVU graduates deciding to start their career in West Virginia more than doubled from 19 percent to 41 percent with the Class of 2023, compared to the previous year’s

graduates. Additionally, 40 percent of graduates who have chosen to continue their education have remained in the state and are completing a residency program at WVU. Each year, the Doctor of Dental Surgery program enrolls 48 students.

The increase of graduates staying in the state to practice is much needed, as West Virginia experiences a shortage of dentists.

“It’s imperative to the overall health of West Virginians that we train and retain high-quality oral health clinicians,” Valerie

Perrine, DDS, School of Dentistry associate dean for student affairs, community health, and outreach, said. “Retaining our graduates to address West Virginia’s dental provider shortage is a priority, and we’re energized to continue this positive trend.

“Empowering our graduates to become dental professionals in our state is a lifeline for our community’s oral health. Their commitment to serving locally is the cornerstone of a brighter, healthier West Virginia.”

# HEALTH SCIENCES

## Patients with Parkinson’s find strength and support through Boxing for Power program

A loud signal beeps, indicating it’s time to switch stations. The room buzzes with activity as people shuffle to various stations: ladder drills, punching bags, battle ropes.

Tom Covey, MD, gears up for a punch, sending the bag shattering against the force and earning a clap of appreciation from the exercise physiology student with whom he is paired. Dr. Covey isn’t an aspiring boxer or a former champion. He’s a retired physician on a mission to improve his health after receiving a Parkinson’s diagnosis.

Like his fellow classmates in WVU’s Boxing for Power program, he’s hoping to counteract the effects of Parkinson’s, a brain disorder that causes unintended or uncontrollable movements affecting both balance and coordination.

The classes are offered through the School of Medicine’s Human Performance Lab and pair exercise physiology and physical therapy students and faculty with clients to improve physical health and well-being.

The twice-weekly classes are modeled after a typical, 50-minute boxing session with a warm-up, five-to-seven different “rounds” of tasks, and a cool down.

In addition to improving physical health, Boxing for Power acts as a support group for clients and their families as they learn new ways to work through their diagnosis.

“For people with Parkinson’s, functionality is different day-to-day,” Lauren Dart, an exercise physiology master’s student, said. “We get to celebrate with clients as they progress on their good days, and we get to be there for them on their bad days.”

That support system is something the clients feel throughout the program.

“It is comforting to be in a class with other patients with Parkinson’s,” Firdoss Sarwari, a client in the class, said. “We learn how others get along with their symptoms and how to overcome challenges around them.”

WVU’s Boxing for Power program was founded by physical therapists Josh McGough, DPT, and Cheryl Brandmeir, PT, out of their passion for exercise as a form of therapy.

“In a region where specialized medical care is scarce, access to early treatment is important,” Brandmeir said. “Boxing with Power provides early access to a supervised exercise program, social support, and professionals with knowledge and experience in Parkinson’s disease.”



Students work with patients in the WVU School of Medicine’s Human Performance Lab.

## Pharmacy professor to lead groundbreaking research with new \$11.2 million grant

The WVU School of Pharmacy will join the elite institutions championing biomedical research excellence. With a five-year grant from the National Institutes of Health, the School is committed to groundbreaking interdisciplinary research targeting, diagnosing, and treating health issues.

Paul Lockman, PhD, professor and chair of the Department of Pharmaceutical Sciences and senior associate dean of research will lead the efforts as the principal investigator. Additionally, Dr. Lockman is the assistant vice president of neuro-experimental therapeutics.

The NIH awarded WVU an additional \$11.2 million to make the total federal award from 2018-2028 over \$22 million. These monies for the Center of Excellence will help the WVU School of Pharmacy, School of Medicine, and Cancer Institute researchers work together to investigate how tumors interact with hosts and potential treatments that attack them. The team hopes to develop new probes for tumor diagnosis and identify better ways to prevent and treat melanoma and pancreatic and bladder cancers.

Additionally they will focus on improving treatments for leukemia and other blood cancers.

According to the Centers for Disease Control and Prevention, one in four deaths in the United States is due to cancer. As of 2021, West Virginia had the highest cancer death rate in the nation.

*Research reported in this publication was supported by the National Institute of General Medical Sciences of the National Institutes of Health under Award Number 2P20GM121322-06. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.*

# HEALTH SCIENCES

## WVU Health Affairs Institute designated state's first public health institute

The WVU Health Affairs Institute, formerly the Office of Health Affairs, is joining the National Network of Public Health Institutes as the first member representing West Virginia. This designation benefits the University and state through national visibility, resource networks, technical assistance, and direct funding opportunities.

The WVU Health Affairs Institute began in 2017 under the vision and leadership of Jeff Coben, MD, through a formalized state-university partnership. Health Affairs provides the administrative infrastructure for this partnership — recognized by the national group AcademyHealth — which supports West

Virginia's advancement in health services program development, monitoring, and evaluation.

Late last year, the WVU Board of Governors approved the name WVU Health Affairs Institute in recognition of its continued growth and innovation.

The WVU Health Affairs Institute supports the University's tripartite mission of teaching, research, and service. More than 20 WVU faculty affiliates receive external funding from Health Affairs through various research and evaluation projects, and more than 30 WVU students have benefited from experiential learning opportunities,

including capstone project support, work-study partnerships, and paid graduate assistantships for doctoral students.

With a staff of nearly 100 highly skilled scientists and professionals, the WVU Health Affairs Institute leads program development and management, large-scale program evaluation, public impact research, and health data analytics work in collaboration with partners across West Virginia. The impact of this work has improved data-driven decision-making and expanded efficacious community-based programs to improve health statewide.

## Aromatherapy could provide a sweet smell of success for substance use disorder patients, study finds

Aromatherapy eases stress in people undergoing treatment for substance use disorder, which, in turn, could enhance their chances of a successful recovery, according to WVU research. The study, which is ongoing, incorporates the use of essential oils as an integrative therapy that is part of a bigger picture model focusing on the whole person.

Researchers set out to determine whether the use of an aroma inhaler filled with bergamot essential oil produced an increase in comfort and ease and a decrease in stress. For the study, comfort was defined as the experience of relief, while ease was defined as calmness amid distress.

“Those in treatment struggle to handle everyday living and overwhelming demands from work, family, the disease itself, and even the treatment program,” Marian Reven, PhD, assistant professor in the WVU School of Nursing and a registered aromatherapist, who led the study, said. “Those individuals have identified that relieving distress and increasing comfort during substance use recovery is vital to their success.”

Dr. Reven said various studies on substance use disorder treatment indicate that when people no longer have

the drugs in their systems in sufficient amounts, they experience a loss of pleasure and an increased sensitivity to stress and anxiety.

Study participants, all in treatment for substance use disorder, report an increase of comfort and ease and a decrease in perception of stress after using the inhaler at least three times daily for one week. Participants track the frequency of administering the inhalers and rate their comfort levels in daily logbooks. Results include reduction in stress and anxiety and an increase in feeling calm and relaxed.

The research is a spinoff of Reven's 2020 aromatherapy study in which nurses reported feeling significantly less stressed, anxious, fatigued, and overwhelmed after wearing aromatherapy patches during their shifts at the WVU Cancer Institute Mary Babb Randolph Cancer Center.

She hopes the findings can be applied to future research using various essential oils for patients receiving chemotherapy and other treatments such as palliative care, as well as people seeking to improve their overall health.



Reven



# PHILANTHROPY

## Galas raise money for WVU Medicine hospitals, institutes

The 19<sup>th</sup> Annual WVU Medicine Children's Gala in February raised more than \$1.3 million to benefit West Virginia children and their families. More than 1,200 people gathered on Saturday at the Morgantown Marriott at Waterfront Place for an evening of "Gilded Glamor." All proceeds from the event, minus expenses, support WVU Medicine Children's mission to build healthier futures for our children.

Charles Mullett, MD, PhD, chair of the WVU Department of Pediatrics, received the Champion for Children Award, and the entire WVU Medicine Children's team was recognized for their unlimited passion, care, and collaboration leading up to the opening of the new Children's Hospital in Morgantown. Bob Contraguerro, Jr., Panhandle Cleaning and Restoration vice president, received the Community Service Award, which recognized his unshakable integrity and ability to show compassion and empathy in his quest to help kids throughout the region.

*(Left to right) Entertainer Joey Fatone, who emceed the 19<sup>th</sup> Annual WVU Medicine Children's Gala, poses for a photo with Champion Child Zane Webber and his mom, Marcia.*



# PHILANTHROPY

Dedicated supporters of the WVU Cancer Institute contributed over \$750,000 to support cancer care, research, outreach, and more as the **annual Spring Gala** celebrated nearly 40 years of history. More than 375 people attended the signature fundraising event in April at The Greenbrier Resort in White Sulphur Springs.

U.S. District Judge Frederick P. Stamp, Jr., and his wife, jewelry designer Joan Corson Stamp, were named the 2023 Betty Puskar Winged Victory Award recipients in recognition of their many years of dedication to the WVU Cancer Institute. Joan Corson Stamp has long served on the WVU Cancer Institute Leadership Council and is a former chair of the Gala.

The Gala program also included a special tribute to Aimee Underwood Thorn, who died of colon cancer at age 35 in August 2022. A lifelong lover of music, Underwood Thorn purposely scheduled her cancer treatments when music therapy was available at the WVU Cancer Institute. Her family has generously supported ongoing fundraising efforts to expand the program in her memory to provide a full-time music therapist to aid cancer patients at WVU Medicine.

**Garrett Regional Medical Center's Bi-Annual Foundation Gala** raised a new record – over \$90,000 – to benefit the Foundation's campaign and commitment to improving behavioral health services in the Garrett County community and surrounding region. The campaign seeks to enhance the existing facility space through renovation and/or expansion to better serve the needs of patients and the community. The Foundation has raised over \$260,000 since the beginning of the campaign.



**Jackson General Hospital's Better Together Gala** raised \$38,500 in March. Community members gathered at the Jackson County Armed Forces Reserve Center for an evening of celebration with all proceeds from the event to benefit the Jackson General Hospital \$30M expansion project slated to open in the late spring of 2024.



*Jackson General Hospital leadership and board members gather for a group photo during the "Better Together" Gala.*



# PHILANTHROPY



## Pink Party raises record \$162,616 to mark 15-year anniversary of Bonnie's Bus

The WVU Cancer Institute celebrated the 15-year anniversary of the ribbon-cutting that launched Bonnie's Bus at the 2023 Pink Party, which raised a record \$162,616 to support the mobile mammography unit.

More than 200 people gathered in September at Cosmo in Morgantown for the signature event. The festivities included raffles, a silent auction, hors d'oeuvres, and an appearance by WVU Mountaineer Mascot Mikel Hager.

Attendees, sponsors, and other supporters topped last year's fundraising tally by over \$40,000 to set a record. All proceeds from the Pink Party benefit Bonnie's Bus, which provides lifesaving breast cancer screening to patients in all 55 West Virginia counties.

*The 2023 Pink Party, held at Cosmo in Morgantown, raised a record \$162,616 to benefit Bonnie's Bus, a mobile mammography unit that provides breast cancer screening throughout West Virginia.*



## Rosenbaum Family House stay inspires \$30K corporate gift

A \$30,000 gift from a Massachusetts-based electronics distributor aided Rosenbaum Family House in its mission to provide a home away from home for WVU Medicine patients and their families. Leadership at Sager Electronics was motivated to support Rosenbaum Family House after a business partner shared her positive experience at the facility, where she stayed while supporting a family member undergoing a liver transplant.



# PHILANTHROPY



## Gifts to Children's aid patients, families

WVU Medicine Children's is adding a new playground to support children's health and well-being thanks to a \$500,000 gift from the Hayhurst family. **The Hayhurst Family Playground** will feature state-of-the-art playground equipment – accessible for every child – to help patients and their families find moments of joy amid their healthcare challenges. The gift reflects the Hayhurst family's ongoing commitment to ensuring that West Virginians have every resource – including education, athletics, healthcare, and more – available at home in the Mountain State.

## Holiday contribution to support West Virginia children and beyond

Children's celebrated the holiday season with gifts from the **Mountain Loggers Group, Inc.**, which contributed over \$191,000, a giant Christmas tree, and toys to continue its tradition of giving to support children in West Virginia and beyond. The gift set a record for the organization's largest single contribution.

The Mountain Loggers' financial gift will support specialized beds for the Cardiac Intensive Care Unit, warming beds for the Birthing Center, and additional TVs for the Emergency Department. The donation will also provide plush versions of Musket – the Mountaineer mascot's dog – and other toys to aid the Child Life program, which helps children deal with the challenges of surgery and hospitalization. The Mountain Loggers Group includes about 50 members spanning three states – West Virginia, Maryland, and Pennsylvania.

Since the mid-1990s, its members have contributed more than \$2.4 million to benefit WVU Medicine Children's.

*Mountain Loggers Group, Inc., contributed more than \$191,000, a Christmas tree, and toys to support children in West Virginia and beyond.*



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