

STRAIGHT FROM THE heart

SPRING/SUMMER 2023

» UPMC HAS EXPANDED ITS
WORLD-CLASS HEART AND
VASCULAR CARE TO HERSHEY.

121 Towne Square
Drive, Hershey

UPMC
LIFE CHANGING MEDICINE

COMPREHENSIVE ANEURYSM CARE CLOSE TO HOME

OFFERING TIMELY AND COMPREHENSIVE CARE FOR THE DIAGNOSIS, EVALUATION, TREATMENT, AND MANAGEMENT OF ANEURYSMS AND DISSECTIONS THROUGHOUT THE BODY.

» As a certified nursing assistant at a nursing home, Brenda Lenker had a busy day ahead of her. But soon after arriving at work in August 2020, the Millersburg, Pa. resident started having back pain.

"It got worse and worse. I couldn't wait to get home and take a hot shower," says Brenda, now 73. "Instead, my husband called an ambulance to take me to UPMC Harrisburg."

There, doctors found she had an acute aortic dissection — a tear in the inner layer of her aorta, the large vessel that branches off from the heart. Aortic dissections are a rare — but often fatal — medical crisis.

Randy Hubbard, MD, interventional vascular cardiologist at UPMC Heart and Vascular Institute in Central Pa., performed emergency surgery on Brenda. Using a minimally invasive procedure called a thoracic endovascular aortic repair (TEVAR), Dr. Hubbard inserted a stent to treat her dissection.



OUR GOAL WITH THE UPMC CENTER FOR AORTIC DISEASE IS TO PROVIDE A ONE-STOP RESOURCE THAT ENSURES PATIENTS GET THE RIGHT CARE AT THE RIGHT TIME.

David Loran, MD

The Right Care at the Right Time

"We see many patients like Brenda who come in for an emergency aneurysm or dissection. Usually there are no symptoms. These problems lurk in the body until they rupture or dissect — and then become a life-threatening event," explains **David Loran, MD**, chief of cardiothoracic surgery at UPMC Heart and Vascular Institute in Central Pa.

"Our goal with the UPMC Center for Aortic Disease is to provide a one-stop resource that ensures patients get the right care at the right time. We've brought together all the technology and medical expertise needed to screen high-risk patients," he says. "We also support patients with aneurysms who need to be watched and managed."

Today, Brenda is back at work at the nursing home in a new role as an activities aide. "I love what I do and don't see myself ever retiring," she says.

LEARN MORE

To schedule a screening or to learn more about our comprehensive center, visit [UPMC.com/CentralPaAortic](https://www.upmc.com/CentralPaAortic).

SHOULD YOU GET SCREENED?

» "About 25% of people who have an aneurysm also have one or more family members with one," says Dr. Loran. "We recommend that immediate family members of patients who have an aneurysm be screened starting at the age of 50." In addition to family history, other factors that put people at risk for an aneurysm include age, smoking, obesity, and diabetes.

Are you at risk? Visit [UPMC.com/CentralPaVascularScreenings](https://www.upmc.com/CentralPaVascularScreenings) to take our online vascular health risk assessment.

Have you been diagnosed with a heart problem — plus other complex medical conditions — that require the coordinated care of multiple specialists?



» Whatever the situation, many patients decide to get a second opinion. A second opinion can give you peace of mind. It can also suggest a different approach to your care — and even offer you hope for an improved outcome.

"The goal of any second opinion is to ensure you're getting the right care for you," says **Hemal Gada, MD**, president of UPMC Heart and Vascular Institute in Central Pa.

The benefits of expertise and broad resources

Choosing a nationally and regionally recognized research and teaching hospital is a great first step when seeking heart treatment or a second opinion. "We care for a large number of patients with complicated and unusual heart conditions," says Dr. Gada. "This gives us great depth of knowledge to apply to your situation."

With more than 60 specialists at UPMC Heart and Vascular Institute in Central Pa., expertise spans the full spectrum of cardiovascular care, including cardiology, interventional cardiology, electrophysiology, pediatric cardiology, cardiac surgery, and vascular surgery.

Second opinions are not just limited to cardiac procedures either. In the region, UPMC's program allows patients to access second opinions within cardiothoracic surgery and vascular surgery. This collaborative approach amongst sub-specialties provides patient-centric care that is committed to outcomes using the latest in innovative treatments and research.

DO YOU NEED A SECOND OPINION ON YOUR HEART CARE?

Do you have a cardiac condition that hasn't improved after treatment?

Do you have a new heart problem and aren't sure of the proposed plan of treatment?

"Collaboration is essential to understanding and diagnosing a patient," says Dr. Gada. That's particularly true for patients with multiple problems such as diabetes, high blood pressure, and vascular disease. "We have a broad range of specialists to call on. We have medical resources that may not be accessible at other health care facilities," he adds.



A SECOND OPINION ISN'T ABOUT ANOTHER DOCTOR OR HOSPITAL BEING A PROBLEM. IT'S ABOUT PUTTING YOUR HEALTH FIRST.

Hemal Gada, MD

A second opinion may include ordering new imaging tests or using different imaging methods to help doctors see expanded viewpoints of a patient's heart.

"Our best-in-class imaging helps us get a detailed look to determine the best options for our patients," says Dr. Gada.

And thanks to its academic teaching and research activities, UPMC Heart and Vascular Institute in Central Pa. also offers access to clinical trials. "These new treatments and therapies are usually available at only a select few centers in the country. We're fortunate to be one of these centers," explains Dr. Gada. "Our ability to submit patients for novel medical approaches can give you pioneering care."

Put your health first

Some patients worry that getting a second opinion will insult their current doctor or hurt their feelings. "But a second opinion isn't about another doctor or hospital being a problem," says Dr. Gada. "It's about putting your health first." A second opinion can help patients access more advanced care. This includes innovative therapies, broader medical expertise, and sophisticated lab and imaging resources.

CONVENIENT AND ACCESSIBLE

» UPMC Heart and Vascular Institute locations throughout central Pennsylvania offer second-opinion services close to your home. Complete the form online at [UPMC.com/CPAHeart2ndOpinion](https://www.upmc.com/CPAHeart2ndOpinion) and select your preferred location and condition category.

QUALITY CARDIAC CARE MATTERS

ACHIEVING EXCELLENCE BY EVERY MEASURE.



» Providing quality health care to his patients has always been a top priority for **Michael D. Bosak, MD**, chief of cardiovascular services at UPMC Harrisburg. Now as quality analytics director for UPMC Heart and Vascular Institute's network of seven hospitals in central Pennsylvania, Dr. Bosak is helping to ensure quality care for all UPMC cardiac patients.

In that role, he collects and analyzes data to assess cardiac performance based on key quality standards. "It's where the art of medicine meets the science of numbers," says Dr. Bosak. "Our goal is to consistently provide quality care to every cardiac patient, minimize risks, and contain costs."

A Harrisburg native, Dr. Bosak says he developed an analytical mindset as a pre-med major at Penn State University. With room for electives in his class schedule, he signed up for finance courses that introduced him to analytics. Later, he became interested in using data and following metrics to help people live healthier and longer lives.

"It's not that I'm a statistician or a number cruncher. Ensuring quality is personal to me," explains Dr. Bosak. "Working in my hometown, I'm not only caring for friends I've known for years — I'm caring for their parents, too. I want to make sure that we're doing everything possible to the best of our ability."

Measuring quality in cardiac care

In his role with UPMC Heart and Vascular Institute of Central Pa., Dr. Bosak leads a team that tracks and reviews patient outcomes — the results of treatment or surgery.

There are many measures used to evaluate quality cardiac outcomes, including:

- Volume of patients treated
- Complexity of their illness
- Type of treatment or procedure received
- Length of hospitalization
- Number of patients readmitted to the hospital within certain periods of time

Dr. Bosak heads a quality review committee made up of nine nurses and cardiac technologists. They collect and enter data from charts of every admitted cardiac patient. "It's a very labor intensive and time-consuming process that requires a solid knowledge of cardiac disease," he says.



ENSURING QUALITY IS PERSONAL TO ME. WORKING IN MY HOMETOWN, I'M NOT ONLY CARING FOR FRIENDS I'VE KNOWN FOR YEARS — I'M CARING FOR THEIR PARENTS, TOO. I WANT TO MAKE SURE THAT WE'RE DOING EVERYTHING POSSIBLE TO THE BEST OF OUR ABILITY.

Michael D. Bosak, MD

"We review data weekly. We also review data monthly with all our doctors at all seven hospitals. We're constantly looking for ways to improve care and best practices."

These outcomes are also reported to various external governmental, public health, and professional registries for both cardiology and cardiac surgery procedures. The quality performance demonstrated by Heart and Vascular Institute teams in the Central Pa. region has led to prestigious recognition from organizations with the highest standards for cardiovascular care and patient outcomes, including:

- **Three-star ratings from the Society of Thoracic Surgeons** — the leading cardiac surgery quality assessment program.

UPMC Harrisburg recently received a prestigious three-star rating in four categories of heart surgery including CABG, TAVR, and mitral valve replacement. This reinforces our reputation as one of the leading centers for excellence in the state and in the country.

- **Chest Pain-MI Registry Platinum Performance Achievement Award from the American College of Cardiology** — presented to UPMC Harrisburg, UPMC West Shore, UPMC Hanover, and UPMC Memorial for demonstrated achievement in the National Cardiovascular Data Registry (NCDR) for 2022. Only 240 hospitals nationwide received the award, which recognizes success in implementing a higher standard of care for heart attack patients.

"Participating in these databases allows hospitals to monitor surgical quality and outcomes," explains Dr. Bosak. "We use that information to identify new areas for quality improvement and accurately evaluate risk for major procedures."



Other notable recognitions

UPMC in Central Pa. also stands out on a regional and statewide level. According to the Pennsylvania Health Care Cost Containment Council's (PHC4) 2022 Cardiac Surgery Report, UPMC had "significantly better than expected" outcomes in preventing hospital readmissions and long hospital stays. The PHC4 report, which is available to the public for hospital comparisons, looked at nearly 60,000 adult cases involving four kinds of heart procedures.

UPMC stood out in all areas, including:

- Transcatheter aortic valve replacement (TAVR)
- Coronary artery bypass graft surgery (CABG)

"We are proud of these awards and recognitions, but it doesn't stop there. We are always setting new goals," says Dr. Bosak. "The bottom line is that quality matters because we are taking care of people's lives. Quality metrics are not there just to get our patients out of the hospital quicker or to save money; those metrics are to help patients live healthier and live longer."

WHAT IS AN ELECTROPHYSIOLOGY STUDY?

With each heartbeat, electrical signals travel from the top of your heart to the bottom. The signals conduct impulses that force your heart to contract and relax in a regular rhythm and pump blood through your heart.

Cardiologists specially trained in heart rhythm disorders perform an electrophysiology study (also called EP study) to check your heart's electrical system. To do the test, they guide wire electrodes through a blood vessel and to your heart.

The electrodes send signals to your heart and collect information about your heart's electrical activity on a computer. During the EP study, doctors create a detailed map of how the signals move between heartbeats. Sometimes, doctors can also fix heartbeat problems during the EP study.

"EP Studies are the backbone of cardiac electrophysiology," says **Brett Roberts, MD**, electrophysiologist at UPMC Heart and Vascular Institute in Central Pa., "They enable us on a very granular level to detect electrical abnormalities in the heart that may result in a patient's ailment."

An EP study takes more time and is more invasive than many other heart tests, but the results provide valuable information and help guide your doctor in treating your heart rhythm problem.



DIAGNOSING HEART PROBLEMS

IN THE WOMB

» Each year, nearly 40,000 babies are born with a congenital heart condition in the United States.* UPMC Heart and Vascular Institute in Central Pa. offers state-of-the-art fetal echocardiograms to identify cardiac problems — from minor to life-threatening.

The human heart is one of the first organs to develop — and function — in a mother’s womb. Three weeks after conception, the baby’s heart begins to beat. By five or six weeks, doctors can detect a heartbeat during a routine pregnancy ultrasound — and by 20 weeks, doctors can hear a heartbeat using a stethoscope. If your obstetrician notices something unusual, they may recommend a fetal echocardiogram.

“Diagnosing heart defects before birth is crucial to ensure your baby receives treatment as early as possible,” says **Sunil R. Patel, MD**, a UPMC pediatric cardiologist and adult congenital heart disease specialist.

What is a fetal echocardiogram?

A fetal echocardiogram is an ultrasound test that provides a detailed look at the unborn baby’s heart anatomy. Dr. Patel performs all fetal echocardiograms for UPMC in Central Pa. He then reviews the test results to check the structure, functions, connections, and rhythm of the baby’s heart.

Who needs a fetal echocardiogram?

“If the baby has a suspected cardiac abnormality, that’s a red flag for testing,” says Dr. Patel.

He adds that women at higher risk of having a baby with a congenital heart condition should consider a fetal echocardiogram. This includes women with:

- A family history of a congenital heart condition
- Exposure to certain drugs known to result in cardiac abnormalities
- Insulin-dependent (type 1) diabetes mellitus

Babies diagnosed while in the womb with certain conditions like these may also be at higher risk for a congenital heart condition:

- Abnormal fetal heart rhythm
- Fetal chromosomal or genetic abnormality, such as Down syndrome
- Fetal hydrops (abnormal fluid buildup in a baby’s tissue or organs)
- Monozygotic (“identical”) twins

What are the benefits of a fetal echocardiogram?

Dr. Patel believes that identifying heart problems before birth is important.

“It helps parents understand what’s coming their way,” he says. “They’ll know how serious the heart condition is and what options and treatments are available.”

In some cases, doctors can treat a fetus during pregnancy. For example, an abnormal heart rhythm might be treated by administering medicine to the expectant mother. For babies with a major heart defect, a prenatal diagnosis means that a medical team can be there at the delivery. That team can include surgeons, pediatric cardiologists, and neonatal specialists.

“Every second counts. Having everyone ready just as the baby is born can make a big difference in the delivery,” says Dr. Patel.

Where are fetal echocardiograms offered?

Fetal echocardiogram services are offered at UPMC locations in Harrisburg, Mechanicsburg, and York. To learn more visit UPMC.com/CentralPaFetalEcho.

REDUCING THE RISK OF STROKE

IN PEOPLE WITH ATRIAL FIBRILLATION

» Stroke is a serious risk for people with atrial fibrillation (AFib) — the most common type of heart arrhythmia. The irregular heartbeat can cause blood clots to form in a small pouch within the heart called the left atrial appendage (LAA), which leads to stroke.

“During episodes of AFib, blood stasis forms clots in the appendage,” says **Chinmay Patel, MD**, medical director of electrophysiology at UPMC Heart and Vascular Institute in Central Pa. “When the clotted blood finds its way to the brain, patients suffer strokes.”

First line of defense

The good news is blood thinners can lower the stroke risk by preventing clots from forming. But those medicines also increase the risk of bleeding. “The problem is, the blood thinners keep blood thin all over the body — not just in that one small area,” explains Dr. Patel.

That means minor scrapes and bumps can cause bruising and bleeding. Some people can’t take blood thinners because they develop major bleeding, which requires emergency treatment. “In the past, these patients would have to live with the risk of stroke,” says Dr. Patel. “Fortunately, we now have alternatives.”

Closing off the LAA

For patients who cannot tolerate blood thinners, cardiologists may recommend a procedure to close off the LAA. Like your appendix, the LAA doesn’t have an essential physiological role in the body. “We can close off that section of the heart where blood clots form. It’s as effective as a blood thinner,” says Dr. Patel.

There are two options for closing off the LAA: percutaneous (through the skin) and surgical procedures.

Minimally invasive percutaneous procedures

The UPMC Heart and Vascular Institute offers minimally invasive, catheter-based LAA procedures using either the WATCHMAN™ or Amulet™ device. Both are performed in the catheterization lab. After making a small incision in the upper leg, the doctor inserts the device through a narrow tube in the vein and guides it into place using x-ray and ultrasound. The device forms a seal that closes off the LAA.

“These appendages are like fingerprints — they have different sizes and shapes. Some are shallow, some are deep, some are very wide,” says Dr. Patel. “Depending on the anatomy of the appendage, one device may be a better fit than the other one. Both are equal when it comes to stroke prevention.”

Surgical solutions

In some cases, doctors use the AtriClip® device to permanently seal off the LAA. The small device is inserted around the outside of the appendage, preventing blood from flowing there.



IN THE PAST, THESE PATIENTS WOULD HAVE TO LIVE WITH THE RISK OF STROKE.

FORTUNATELY, WE NOW HAVE ALTERNATIVES.

Chinmay Patel, MD

“The AtriClip procedure can be performed as a minimally invasive procedure or during an open-heart surgery,” says **A. Reza Abrishamchian, MD**, a cardiothoracic surgeon at UPMC Heart and Vascular Institute in Central Pa.

He adds that both procedures are performed by a cardiothoracic surgeon. In the minimally invasive procedure, the clip is inserted through a small incision in the chest below the breastbone. The device can also be inserted in patients who are already undergoing an open-heart procedure, such as a coronary bypass graft, aortic valve replacement, or mitral valve repair.

For more information, visit UPMC.com/CentralPaAfib.

Amulet™ is a trademark of Abbott. AtriClip® is a trademark of AtriCure. WATCHMAN™ is a trademark of Boston Scientific.

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VASCULAR CARE

EXPANDING AT UPMC MEMORIAL

Early detection plays a major role in preventing serious complications of vascular disease.



»» **Steven Woratyla, MD**, vascular surgeon, complements the team of heart and vascular specialists at UPMC Memorial, providing comprehensive care for a range of vascular conditions, including:

- Abdominal aortic aneurysms
- Carotid artery stenosis
- Dialysis access
- Peripheral arterial disease
- Renal artery stenosis

For more information about vascular care in Central Pa., visit UPMC.com/VascularCPA.