

Now a medical resident, Matt Miller remains grateful to the UVA physicians who helped to save his life.

PHOTOGRAPH © JACKSON SMITH

THE ROAD FORWARD: FROM TRAGEDY TO MEDICAL RESIDENCY

ONLY A SMALL TRACHEOTOMY SCAR HINTS at how close Matt Miller, MD, came to losing his life in a bicycle accident nine years ago. Today, he channels his energy into a demanding medical residency in Otolaryngology—Head and Neck Surgery. He’s putting his skills—and his personal experience—into helping others who may face the same long and uncertain recovery that he endured.

Miller’s ordeal began on November 2, 2008, when, as a UVA undergrad training for a triathlon, he lost control of his bike on the Blue Ridge Parkway, falling into oncoming traffic and being struck, face-first, by a car. Miller still has virtually no recollection of the accident or the days that followed, but he owes his survival to some skilled and fast-thinking medical experts and first responders, as well as a series of extremely fortunate events.

Remarkably, the person driving the car just behind the one that hit Miller was Mark Harris,

MD, an anesthesiologist who went to work on Miller immediately. Miller was air-lifted to UVA Medical Center, where physicians discovered that nearly every bone in his face had been broken or shattered. Amazingly, Miller survived and made a full recovery from a crushed face and traumatic brain injury. He even managed to graduate on time, with his stellar academic record intact.

The accident solidified Miller’s desire to become a physician, and, in June 2014, after finishing medical school at the University of Pennsylvania, he returned to UVA for his residency, in, not surprisingly, Otolaryngology—Head and Neck Surgery.

“I tried to keep an open mind when I was picking a specialty,” says Miller, “but it was very difficult to not be biased toward the one that helped save my life.”

Miller now trains with attending physician Jared Christophel, MD, who was chief resident

“

My family is so grateful for Matt’s recovery ... that we just want to do what we can to give back ...

”

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IN THIS ISSUE

GIVING VOICE TO NURSING RESEARCH

Scholarly Dissemination Awards Help Nursing Faculty Share Knowledge

For people facing imminent death—and for those who love them—having critical end-of-life conversations can be hugely therapeutic. It's equally important that the person sharing those conversations be skilled and empathetic. Finding nurses who can bear that weighty responsibility isn't easy. That's where Cathy Campbell, PhD, RN, comes in. A Fulbright Scholar and UVA associate professor of nursing, Campbell is researching what patients need and want in end-of-life, hospice care.

"Some patients are thinking deep thoughts and are relieved to have someone to talk to," says Campbell. "They are anxious to help future patients and know that their contributions can be a legacy to others."

Campbell is one of the recipients of the School of Nursing's Scholarly Dissemination Award (SDA), created by an anonymous donor. The award allowed her to travel to London, where she met other nurses interested in end-of-life care. She also earned the Joanna Mugridge Research Award for her team approach to recruitment in hospice research. Ultimately, Campbell will use her findings to educate professional nurses and home-based caregivers on how to best assist patients in hospice care.

The Scholarly Dissemination Award fund is critical in giving nursing faculty the opportunity to share their discoveries, create new collaborations, and bring back new ideas from professional conferences.

Associate professor Randy Jones, PhD, RN, used SDA funds to travel to Australia to present the results of his NIH-funded study on decision-aids for cancer patients. There, he was able to share ideas with a broad variety of researchers—



Fulbright Scholar and associate professor of nursing Cathy Campbell uses research to improve care for hospice patients.

PHOTOGRAPH BY STEPHANIE GROSS

all passionate about helping cancer patients make informed decisions about their care. Assistant professor Bethany Coyne, PhD, used her SDA to present UVA's undergraduate nursing research approach at an American Nurses Association meeting.

The highly sought-after awards are competitive and have supported everything from diabetes and breast cancer care to research in intimate partner violence. The SDAs allow faculty members to share their research and give voice to their findings. It's within that exchange that research begins to grow and take shape, redefining the future of patient care in real and meaningful ways. ●

Tragedy to Medical Residency—continued from page 1

when Miller's accident occurred. Christophel, along with Stephen Park, MD, and a host of others, made up the powerful team—in Trauma, Neurosurgery, Facial Plastics and other specialties—that cared for Miller throughout his recovery.

"The faculty at UVA are tremendous teachers," says Miller. "I'm constantly impressed by how much they care for their patients. I remember how important that was for me when I was the patient, and it is just as important for me to see this as a resident physician training with them."

Now that he's on the other side of the stethoscope, Miller rarely shares his personal story, unless a patient asks about his scar. "I think my personal experience motivates me in certain situations to take extra time with patients and provide explanations to patients and families about what they are going through," he says.

Miller's experience changed his life and the lives of his parents and older brother—all UVA graduates. Today, their many interests at UVA have expanded to include UVA Health System. They have not forgotten the physicians, nurses, and staff at UVA who were so attentive to Matt's care.

"We can never repay what UVA did for our son Matt," says Mike Miller, who also serves on the UVA Health Foundation Board. "But we can give of our resources

and of our time. You never think that something like what happened to Matt can happen to you. My family is so grateful for Matt's recovery and so proud of what he is accomplishing that we just want to do what we can to give back and hopefully help make a difference."

Matt's experiences are chronicled in *The Road Back, a Journey of Grace and Grit*, by Pulitzer-prize winning journalist and UVA grad Michael Vitez, formerly of *The Philadelphia Inquirer*. ●

IN THE SPOTLIGHT

JOSÉ OBERHOLZER, MD

HAVING PERFORMED MORE THAN 1,000 transplant-related surgeries, José Oberholzer, MD, brings experience and innovation to UVA's Charles O. Strickler Transplant Center. A pioneer in robotic surgery and an expert in liver, kidney, pancreas, and small bowel transplants, as well as a leader in transplants and research for diabetic patients, Oberholzer will lead the development of UVA's multidisciplinary Virginia Transplant Institute.

Q. WHAT ATTRACTED YOU TO UVA?

A. UVA's School of Medicine and Health System share a vision of their priorities. In transplantation, all of the players must be on the same team. You can't do anything alone. It's all team-based.

Q. How have robotics changed transplant surgery?

A. The robot reduces the learning curve for new surgeons and allows movement inside the body that is impossible with normal laparoscopic instruments. The robot has mini-hands that you can move in all directions—even more movements than you could make with your own hands. That allows us to take on cases that we might not consider for normal laparoscopic surgery. It is also less invasive and lowers many of the risks associated with traditional surgery.

Q. What are some innovations you foresee at UVA?

A. Developing a multidisciplinary transplant institute will allow us to open new doors. For example, UVA's heart transplant program has been hesitant to treat heart failure patients who also have kidney failure. Many dialysis units don't know how to handle those patients. It could be possible to explore new options and bring disciplines together to treat that patient population. We are also looking at new strategies to keep more organs viable for transplant.

Q. How will your work impact diabetes?

A. I'm interested in treating diabetes by using cell therapy technologies that replace cells in the pancreas. UVA has tremendous brainpower in diabetes technologies and is building a large cell therapy unit. That's something I've been doing for 20 years. I'm in the process of getting FDA approval for a cell therapy for juvenile diabetes that will be the first approved cell product for diabetes in the U.S.

Q. What do you wish more people knew about transplants?

A. Some people think transplantation is uncommon and rarely done. In reality, transplant has become the standard of care for many diseases—heart failure, diabetes, and various lung, liver, and kidney diseases. Outcomes from an organ transplant are amazingly good. For the donor, organ transplant lets an individual make one last altruistic act and give another person a second lease on life. That's the beauty of transplantation. It's a pure, altruistic act.

PHOTOGRAPH BY JACKSON SMITH



ORGAN TRANSPLANT AT UVA

There are 10 transplant programs at UVA:

Adult Heart
Pediatric Heart
Adult Liver



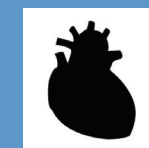
A kidney has
24-48
hours to be
transplanted

Pediatric Liver
Adult Kidney
Pediatric Kidney



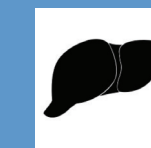
A lung has
6
hours to be
transplanted

Pediatric Lung
Adult Lung



A heart has
4
hours to be
transplanted

Islet Cell
Adult Pancreas



A liver has
16
hours to be
transplanted

Our transplant center began in the 1960s.

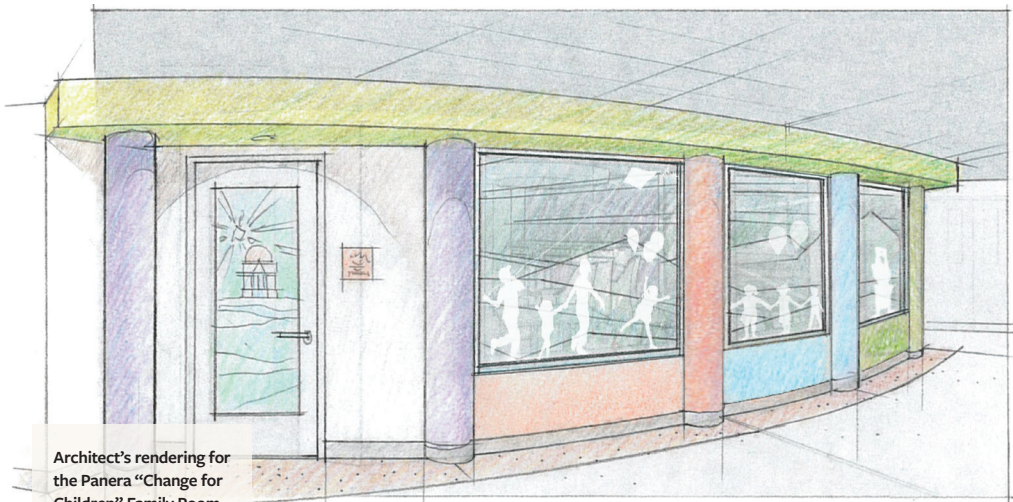
We receive over
4700
organ offers
annually

More than 5,000
patients have been
transplanted

There are currently
over **600** patients on
our waitlist.

We will add more than
400 names to our
waitlist this year

**Our patients live because others give.
Please consider becoming an organ donor.**



Architect's rendering for the Panera "Change for Children" Family Room.

“It will be a fun, new space for anyone who spends much of their time on the seventh floor.”

A HOME AWAY FROM HOME

Community Support Makes Redesigned 7th Floor Family Common Areas Possible

IF A CHILD HAS BEEN ADMITTED TO A HOSPITAL'S INTENSIVE CARE unit, the only place a family wants to be is not far from his or her bedside. At UVA Children's Hospital, this often means that UVA Medical Center's seventh floor—which includes both the neonatal and pediatric intensive care units—becomes a very familiar environment for patients and their families. During the past year, the space was renovated and transformed into a colorful and imaginative space, the same look and feel brought to life by UVA Children's Hospital clinics at the Battle Building just across from the Medical Center.

This transformation has been made possible by both hospital funding and private philanthropy, including proceeds from the 2017 Main Event Gala. The gala, held at Keswick Hall & Golf Club, brought together more than 400 members of the community and raised more than \$296,000 to help with the seventh floor's renovations.

Within the seventh floor, two special common areas have been designed specifically with families in mind.

“When your child is sick, you never want to be more than a few minutes away from them,” says Karin Skeen, MSN, RN, associate chief of women's and children's services. “We wanted to provide families with spaces that allow kids to play and to get away—without really leaving at all.”

Thanks to the generous philanthropic support of Panera Bread and its Change for Children campaign, a round-up initiative continuing into 2018 at 16 local and regional cafes, and the Log a Load for Kids Foundation, two new common areas on the seventh floor will be just that—large, colorful, modern rooms just down the hall from patients and their caregivers.

“Our Log a Load for Kids play area is meant for families and siblings, for play time and gatherings,” Skeen says. “It will be a fun, new space for anyone who

spends much of their time on the seventh floor.”

Meanwhile, the Panera “Change for Children” Family Room is meant as a comforting sanctuary for patient families, and will have a private area as well as a kitchen—a new and improved home away from home.

“We're incredibly appreciative of our customers and proud of our employees who, through the Change for Children campaign, have made this new space a reality for patients and families,” says Rick Postle, UVA Children's Hospital Committee member and owner of Blue Ridge Bread, Inc., which operates the Panera franchises participating in the campaign. “This was truly a community fundraising effort, and we're so excited for the room to open in November.”

The Log a Load for Kids Foundation has pledged \$100,000 over the course of three years, and its play area will open in December of 2017.

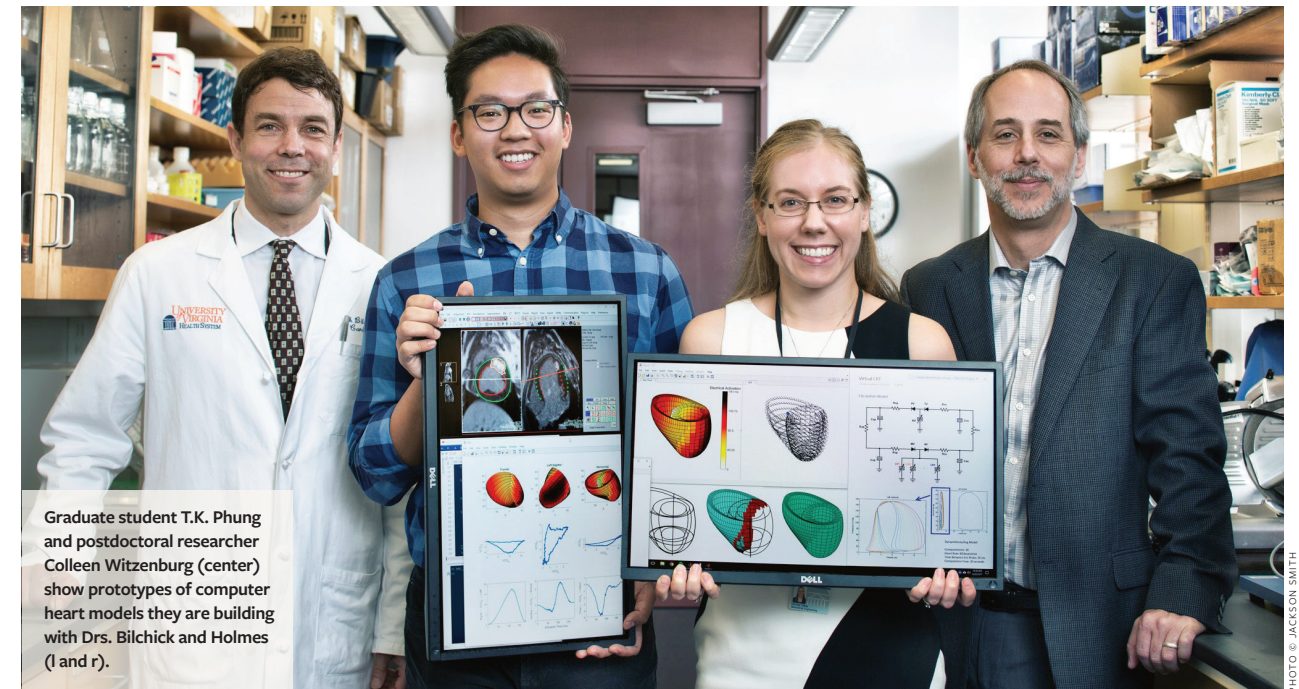
“Log a Load for Kids is very excited about this renovation,” says Rich Palermo, local chairman for the Log a Load for Kids Foundation. “We have been partnering with UVA Children's Hospital for more than 25 years, so to be able to make this pledge is truly special for all of us.” ●



Playful artwork will brighten the Log a Load Kids play area.

CHARTING THE RHYTHM OF A BEATING HEART

Virtual Software Offers Life-Changing Option for Heart Failure Patients



Graduate student T.K. Phung and postdoctoral researcher Colleen Witzenburg (center) show prototypes of computer heart models they are building with Drs. Bilchick and Holmes (l and r).

PHOTO © JACKSON SMITH

MOST OF US TAKE THE beating of our hearts for granted. For many heart failure patients, however, those beats are not so reliable. In some, different portions of the heart contract at different times, wasting energy and resulting in poor pumping of the blood and overall weakness. A specialized treatment, called cardiac resynchronization therapy (CRT), implants a pacing device to restore proper heart contractions. But there's a catch: some patients require customized placement of the CRT stimulation wires or personalization of pacemaker settings—and the possible permutations are vast.

That's the challenge facing Kenneth Bilchick, MD, from cardiology and Jeff Holmes, MD, PhD, from biomedical engineering. Together, these researchers envision a Virtual CRT computer program that will allow physicians to screen and identify the best stimulation locations and patterns for any individual patient, prior to implanting the device. The best part? The Virtual CRT software will run

in five minutes or less on a desktop PC. When used as part of routine pre-implantation planning, the Virtual CRT will enable physicians to place and program stimulation that is specifically customized to each individual patient.

This work has recently received significant support from a private family foundation interested in UVA research.

“This could be a game-changer for many of the five million patients in the U.S. suffering with heart failure,” says Bilchick. “CRT can stop and even reverse the progression of heart failure, reducing the size of the heart while dramatically improving heart function, exercise capacity, and quality of life.”

Bilchick, Holmes, and their UVA colleagues are uniquely qualified to advance this work. Bilchick is a national leader in using MRI to improve patient selection for CRT and directs UVA's Program for Advanced Imaging in Cardiovascular Electrophysiology and Heart Failure. Holmes is a leading expert in computational modeling of the

heart and the director of UVA's new Center for Engineering in Medicine, which fosters collaborations between engineers and physicians. The pair is supported by the Cardiovascular Imaging Center and a leading heart MRI group at UVA. They are also working with an innovative vest device that is worn by a patient to aid in mapping patterns of electrical activation in the heart. Funding for the device came from the same private foundation.

“The early stages of this project are only possible with private funding,” says Holmes, “since we are upending the current paradigm for building and using heart models. Most heart models are impractical for routine clinical use because they require days or weeks to customize and run. Our current prototypes can already simulate three months of heart remodeling in just a few minutes. Our goal is to identify the minimum number of factors that must be tailored to an individual patient to correctly predict CRT response, then determine the best practical approach to achieving that response.” ●



Residents at UVA learn from the best. The Department of Neurosurgery is Virginia's foremost research and treatment center for nervous system disorders.

PHOTOGRAPH COURTESY OF UVA HEALTH SYSTEM

CELEBRATING A LEGACY

Professorship, Fund for Excellence Honor Legendary UVA Neurosurgeon

FOR SEVEN LONG YEARS, NEUROSURGERY residents hone their craft. They perform more than 300 operations a year, take classes, conduct research, and present at conferences. At UVA, they learn from the best, and it shows. Today, the program's residents are ranked second in the nation in research and academic productivity, a notable accomplishment with UVA's small size.

The strength of the program began with one man—John Jane. Dr. Jane, one of the world's most renowned neurosurgeons, died in 2016 after a remarkable career as a teacher and clinician.

"When Pop became chair, he had to decide what he would create," says his son, John Jane, Jr., MD (Med '96, Res '03), who now directs the Neurosurgical Residency Program. "He chose to create a department that would be known for training residents and future leaders in neurosurgery. Of all his accomplishments, Pop was most proud of the residency program."

Dr. Jane's career spanned 45 years, during which time he earned the respect of colleagues around the world and the admiration of thousands of grateful patients. Perhaps his most famous case came in May 1995 when actor Christopher Reeve suffered a severe neck injury after being thrown from his horse during an equestrian competition. Dr. Jane also founded two premiere neurosurgery journals and won the Cushing Medal, the highest award presented to neurosurgeons.

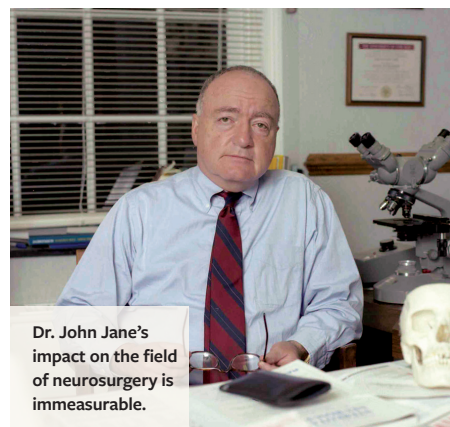
"John had a remarkable depth and breadth of interests and skill," remembers Mark Shaffrey, MD (Med '87, Res '94). "He was a surgeon, scientist, communicator, and an educator most of all. You just have to look at the number of his former residents who are now leaders in the field to see the impact he had on all of us."

A former student who followed in Dr. Jane's footsteps as chair of the Department of Neurological Surgery, Shaffrey remembers Jane's dedication. "He would hold Saturday conferences and Sunday journal clubs, opening up his home for learning and discourse. This drive translated to the success of his students. We were all part of his extended family."

Now this family of students, colleagues, and grateful patients is coming together to honor Dr. Jane. Their goal is to increase the John A. Jane Professorship in Neurosurgery, currently held by another of Dr. Jane's students, Christopher Shaffrey, MD (Med '86, Res '95). Increasing the size of the professorship will allow Shaffrey—one of the top 28 spine surgeons in North America—and his successors to devote more time to teaching future neurosurgeons and to pursue lifesaving research for patients.

A second effort will establish the John Jane Fund for Excellence in Neurosurgery, which will enhance the resident program by supporting research projects, academic and teaching awards, and John Jane visiting professorships, which give students the chance to learn from neurosurgeons around the world.

"My father believed that—after caring for patients—our role is not to foster our own careers, but to teach who comes after. He instilled this belief into every resident he mentored, and that belief is what sets UVA's neurosurgery residency program apart to this day," his son says. ●



Dr. John Jane's impact on the field of neurosurgery is immeasurable.

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Over its 35 year history, the annual Charlottesville Women's Four Miler has raised \$4 million to support UVA's Breast Care Center.

PHOTOGRAPH © ANDREW SHURTLEFF

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PULSE

PHILANTHROPY IN ACTION AT UNIVERSITY OF VIRGINIA HEALTH SYSTEM

UVA NO. 1 HOSPITAL IN VIRGINIA AGAIN!

FOR THE SECOND YEAR IN A ROW, *U.S. News & World Report's* "Best Hospitals" guide has ranked UVA Medical Center as the No. 1 hospital in Virginia. The publication also honors 10 UVA specialties as among the best in the U.S.



Six specialties are rated among the top 50 nationally:

CANCER: 30

EAR, NOSE & THROAT: 32

ORTHOPEDICS: 33

UROLOGY: 35

DIABETES & ENDOCRINOLOGY: 44

CARDIOLOGY & HEART SURGERY: 50

These honors follow recognition for UVA Children's Hospital, which has four specialties—cardiology & heart surgery, diabetes & endocrinology, neonatology and orthopedics—ranked in the top 50 nationally in the publication's 2017–2018 "Best Children's Hospitals" guide. ●

UVA STROKE CENTER EARNS NATIONAL CERTIFICATION



UVA's dedicated stroke team offers excellent care, while always looking ahead to the next best treatment options for patients.

UVA'S STROKE CENTER HAS RECEIVED NATIONAL CERTIFICATION as a Comprehensive Stroke Center in recognition of the high-quality care it provides for stroke patients with complex health needs. UVA is just one of just three stroke centers in Virginia—and the only center in Charlottesville and the Shenandoah Valley—to earn Comprehensive Stroke Center certification from the Joint Commission. Approximately three per-cent of hospitals nationwide have earned this Joint Commission certification.

"These honors for our stroke team reflect their dedication to providing excellent, timely care as well as finding ways to enhance our care and service," says Richard Shannon, MD, UVA's executive vice president for health affairs. ●

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