

2012 Annual Report

Reflections of real life

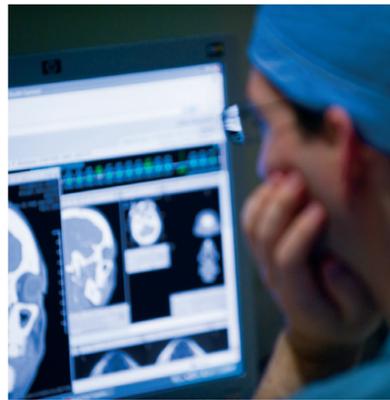


VCU Medical Center

VIRGINIA COMMONWEALTH UNIVERSITY

Virginia Commonwealth University Medical Center's greatest achievements lie not only in our visionary research and pioneering treatments, but rather, they rest in the people at the heart of everything we do — in the lives forever changed, families strengthened and communities invigorated.





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Health care is about people. For us, it's about people who need care, who provide care, who teach care and who advance care through research. In our ever-changing health care industry, we reflect on our commitment to human health and maintain our focus on what we do and why we do it — helping our fellow human beings live healthier, more fulfilling lives.

VCU Medical Center's greatest triumphs often lie in the real lives of our patients. The patient's story is an emotional and engaging portrait of extraordinary outcomes by those whose lives are forever changed by the commitment of a dedicated and talented health care team. In this year's annual report, we are pleased to share some of them with you. Their stories exemplify what we do in treatment, research, education and community outreach every day.

For example, Mary Hostinsky is still going strong at age 95 because of transcatheter aortic valve replacement, a state-of-the-art procedure for severe aortic stenosis that is being pioneered by our world-class colleagues in the VCU Pauley Heart Center.

When Roberta Richardson's cancer developed into an aggressive form of acute myeloid leukemia, she was told that she had — at most — two years to live. That was in 2011. Today, after an innovative clinical trial developed by VCU Massey Cancer Center researchers, Roberta is cancer-free.

Tony Carr had multiple fractures and extensive second-, third- and fourth-degree burns on more than half his body after a fiery plane crash. With the help of dedicated doctors, nurses and staff in VCU's trauma and burn centers, Tony was able to overcome the physical and mental pain of the accident and find hope again.

These are just some of the stories that illustrate how the VCU Medical Center's accomplishments affect real lives on a daily basis.

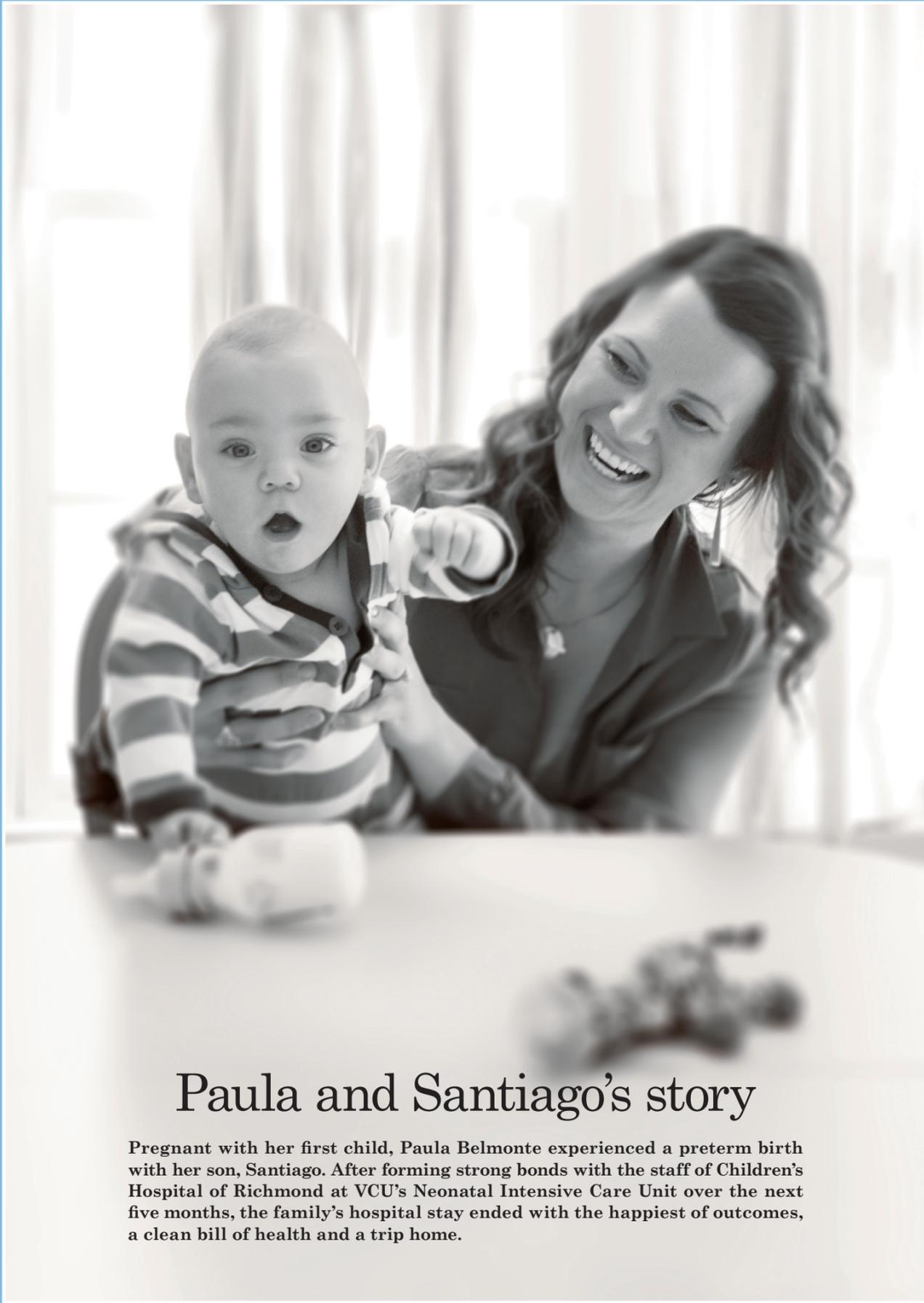
Along with these stories, we have included some of the highlights of 2012. *U.S. News & World Report* ranked VCU Medical Center as the No. 1 hospital in the commonwealth, while also placing four of our programs — nephrology, pulmonology, orthopaedics and urology — among the top 50 in the nation. Children's Hospital of Richmond at VCU broke ground on a new Children's Pavilion, which will be the largest outpatient facility dedicated to children in Central Virginia. We trained our 1,000th combat medic, as one of only three civilian institutions in the country to participate in the U.S. military's Special Operations Combat Medic training program. And our Community Health Education Center celebrated 10 years of providing health information to the community.

As one of the pre-eminent, comprehensive academic medical centers in the nation, we are proud to be part of an institution that is helping and advancing the lives of so many people. We invite you to spend time browsing the report here and also online at www.vcuhealth.org/annualreport.

Sincerely,

Michael Rao, Ph.D.
President
VCU and VCU Health System

Sheldon M. Retchin, M.D., M.S.P.H.
CEO, VCU Health System
Senior Vice President, VCU Health Sciences



Paula and Santiago's story

Pregnant with her first child, Paula Belmonte experienced a preterm birth with her son, Santiago. After forming strong bonds with the staff of Children's Hospital of Richmond at VCU's Neonatal Intensive Care Unit over the next five months, the family's hospital stay ended with the happiest of outcomes, a clean bill of health and a trip home.

"Everyone demonstrated excellent medical care and attention, but they were also passionate and compassionate."

After more than a year of trying to conceive and finally achieving success through in vitro fertilization, first-time parents-to-be Paula and Ivan Belmonte delighted in the idea of adding a new member to their family. The pregnancy began smoothly and the first four months proved uneventful.

"I felt great," Belmonte said. "I had no symptoms. I just craved lemonade."

Then at 23 weeks and five days, she started experiencing contractions. Self-described as "a pretty laid-back person," Belmonte said she didn't worry initially. But the next day she began bleeding. Belmonte was rushed to the VCU Medical Center labor and delivery floor and placed on bed rest.

Because she couldn't move, the nurses took complete care of Belmonte. One in particular, Phyllis Pillow, R.N.C., B.S.N., bathed her and washed her hair. "She did so many sweet things," Belmonte said. "That made a really big difference."

Karen Hendricks-Munoz, M.D., M.P.H., vividly remembers meeting Belmonte and her husband because the introduction occurred on her first day of joining Children's Hospital of Richmond at VCU. The professor and chief of the Division of Neonatal Medicine and inaugural William Tate Graham Professor of Neonatal Medicine talked to the Belmontes about the situation and the intended course of action.

"My role was to explain what's going on right now, what potentially could happen and answer any questions," she said.

Their hope was to keep the baby in utero for as long as possible. The baby, however, had other plans. On March 13, 2012, at 9:13 p.m., Santiago Belmonte was born by emergency C-section. He weighed 1.5 pounds and measured 12.25 inches. The family immediately

moved to a room in the Neonatal Intensive Care Unit (NICU) on the sixth floor of the Critical Care Hospital. In the NICU, Santiago continued his development despite dealing with feeding difficulties, pneumonia and other respiratory issues. Whatever his ups and downs, he always rallied.

"He'd come back from these events and he'd open his eyes and look at me like, 'What happened?'" Hendricks-Munoz said. "He always remained very responsive and alert so I felt thoroughly positive about his ultimate neurological outcome."

Because Santiago remained in the unit for the several months, the nurses took steps to personalize the family's room. Megan Holloway, R.N.C., B.S.N., made hand- and foot-prints of Santiago each week and hung them on the wall. By the end of the family's stay, the wall was covered.

"Everyone demonstrated excellent medical care and attention, but they were also passionate and compassionate," Belmonte said. "They just made you smile and that made the difference — they all truly cared."

So much so that Belmonte began calling the nurses Santiago's "NICU aunts."

"They become your family," she said. "Not just anyone can be Santiago's aunt. They are a special club."

On Aug. 26, after 161 days in the NICU, the Belmontes brought Santiago home. Two months later, Belmonte said, the NICU sometimes felt like a distant memory and having Santiago home seemed completely natural. Today, as a 10-month-old (six months corrected), he is hitting all the expected milestones.

"It's just awesome to see him now from where he's been," Belmonte said. "And he would not be here today if it wasn't for the staff in the NICU."



Caring

By seeing patients for the lives they lead and not just the symptoms they present, we deliver comprehensive support and transformative treatments

Ranking reflects world-class care

U.S. News & World Report confirmed in its July 2012 "Best Hospitals" rankings that when it comes to care in Virginia, VCU Medical Center remains unmatched. VCU Medical Center earned the distinction of No. 1 hospital in the state, as well as the Richmond metropolitan area, while also placing four programs — nephrology, pulmonology, orthopaedics and urology — in the top 50 in the nation.

The rankings showcased more than 720 of the nation's roughly 5,000 hospitals. Fewer than 150 of those, however, are ranked in at least one of 16 medical specialties.

"All of these hospitals are medical centers that should be on your list when you need the best care," said U.S. News Health Rankings Editor Avery Comarow. "They are where other hospitals send the toughest cases."

The VCU Medical Center also ranked as "high-performing" in cancer; cardiology and heart surgery; diabetes and endocrinology; ear, nose and throat; gastroenterology; geriatrics; gynecology; neurology and neurosurgery; and rehabilitation.



VCU Medical Center employees celebrating No. 1 ranking

VCU joins forces to care for military personnel

First lady Michelle Obama visited VCU in January 2012 to announce the launch of Joining Forces, an initiative of the country's top medical colleges and universities to create a new generation of doctors, medical schools and research facilities to ensure that servicemen and servicewomen receive the medical care they deserve.

The School of Medicine was among 101 members of the Association of American Medical Colleges (AAMC) that signed a pledge to support Joining Forces with a commitment to pursue groundbreaking research in the areas of post-traumatic stress disorder and traumatic brain injury (TBI). The initiative also unites the school with the AAMC and the American Association of Colleges of Osteopathic Medicine to enhance

education and share research to better serve veterans and their families.

The White House selected VCU to host the announcement because it is a national leader in TBI research and a strong partner with the Hunter Holmes McGuire VA Medical Center. VCU's Department of Physical Medicine and Rehabilitation faculty members have served in physician leadership and clinical positions at McGuire for more than 30 years. In addition, VCU's leadership in rehabilitative science was part of the reason it was awarded a \$20 million Clinical and Translational Science Award from the NIH in 2010 to become part of a nationwide consortium of research institutions working to turn laboratory discoveries into treatments for patients.



Michelle Obama at VCU

Massey retains prestigious NCI designation

After a rigorous review, the National Cancer Institute (NCI) renewed the VCU Massey Cancer Center's Cancer Center Support Grant, maintaining Massey's NCI designation. Only 67 cancer centers in the U.S. have earned NCI designation. The grant totals more than \$7 million to be distributed over five years.

Massey was commended for advances made toward NCI Comprehensive status, the top level awarded. "This feedback is a solid indicator that we are on track for meeting the goal set in our Vision 2016 strategic plan," said Gordon D. Ginder, M.D., Massey's director, and the Eric and Jeanette Lipman Chair of Oncology.

Reduced transfusions improve patient safety

Through a program called PET, or Practicing Excellence in Transfusion, the VCU Medical Center is working to educate health care providers about transfusions, specifically providing new published data that show that reducing the number of transfusions performed for certain patient populations is not only safe, but can actually improve outcomes.

Although the risk of certain viral infections has been markedly reduced through testing, other transfusion risks include changes in the patient's immune system that can lead to higher infection rates. This often causes longer hospital stays or return trips to emergency departments. In addition, transfusion can lead to bacterial infection and certain respiratory reactions that can cause death.

"It is important to consider each patient individually and to determine the best transfusion protocol based on that patient's medical treatment," said Susan Roseff, M.D., professor in the Department of Pathology and director of the Division of Clinical Pathology. "We have learned that more isn't always better when it comes to blood transfusion — sometimes patients who are not transfused do better."

The medical center has a group of surgeons who specialize in techniques to limit the need for transfusions before, during and after surgery. These techniques include optimizing hemoglobin prior to surgery and using specialized equipment that washes, cleans and transfers the patient's own blood back during surgery.

PET, the first program of its kind in Virginia, also has made strides in reaching physicians on a wider scale to discuss when to perform blood transfusions. The program hosted two conferences to educate health care providers from the entire mid-Atlantic region, featuring national experts who provided the most recent data demonstrating improved patient outcomes, lower costs and reduced risk associated with implementing a hospitalwide blood conservation program.

Football pros tackle sickle cell disease

Pro football player Ryan Clark knows all about the challenges of living with sickle cell disease. A safety on the Pittsburgh Steelers since 2006, he has sickle cell trait and nearly died as a result of the condition in 2007.

So he was happy to join former teammate and two-time Super Bowl champion James Farrior, and several other current and former NFL players, at a fundraising event that helped raise nearly \$13,000 for the adult and pediatric sickle cell programs, including the nationally recognized sickle cell transition program, at the VCU Medical Center and the Children's Hospital of Richmond at VCU (CHoR).

The James Farrior Foundation and medical center teamed up to host the inaugural fundraiser, which included music, dancing and a silent auction, as well as the opportunity for attendees to join the bone marrow registry. Thirty potential donors registered that evening.

Currently, the only cure for sickle cell disease, which is a chronic, inherited blood disorder that affects red blood cells and causes periodic episodes of intense pain, is bone marrow transplant. CHoR is the only pediatric bone marrow transplant site in the state of Virginia and currently offers this lifesaving cure to its patients.



Darryl and Darryn Klu (center), sickle cell patients at CHoR, with Ryan Clark and James Farrior



Nurse with a heart patient

Accreditation reflects excellence in heart care

Heart disease is the leading cause of death in the U.S. — approximately 600,000 people die from heart disease each year. Additionally, more than 5 million Americans visit hospitals each year with chest pain.

But now patients visiting the VCU Medical Center can be more confident than ever that they will receive the best possible care for their heart conditions. The center received Chest Pain Accreditation from the Society of Chest Pain Centers, recognizing the hospital

for achieving a higher level of expertise in caring for patients who arrive with symptoms of a heart attack.

"This accreditation reflects the excellence and quality care heart patients at the VCU Medical Center receive through the coordinated effort of our emergency department and cardiac services professionals," said Sheldon M. Retchin, M.D., M.S.P.H., CEO of the VCU Health System and VCU senior vice president for health sciences.

Massey extends clinical care within Virginia

The VCU Massey Cancer Center has expanded its reach to Spotsylvania, Va., and South Hill, Va., meaning more Virginians, and even residents of northern North Carolina, now have access to the benefits of a nationally recognized, NCI-designated cancer center with top-notch cancer specialists, highly coordinated care and tailored treatment plans.

Leaders from Massey and the Community Memorial Healthcenter, a community-owned nonprofit hospital in South Hill, broke ground on the construction of the Solari Radiation Therapy Center — the first and only radiation therapy facility in Southern Virginia — in July 2012, culminating two years of planning and fundraising efforts to provide enhanced medical oncology services, in addition to health education seminars, cancer prevention programs and screening initiatives already in place in the area.

Massey also will jointly provide radiation oncology services at a new cancer center scheduled to open in April 2013 at Spotsylvania Regional Medical Center under a partnership agreement between HCA Virginia Health System and VCU Medical Center. The cancer center, which will encompass 7,000 square feet and cost \$7 million to build and equip, will feature a linear accelerator, a CT simulator and mobile PET/CT capabilities. In the first year, it is projected to have more than 4,000 patient visits, including those for radiation oncology, PET/CT and infusion services.

These two facilities are just the latest to join with Massey, which has cultivated partnerships in metropolitan Richmond, South Hill, Emporia and Kilmarnock and clinical research affiliations in Fredericksburg, Winchester, Lynchburg, Hampton Roads and Danville.



CHoR advances regional care for kids

The Children's Hospital of Richmond at VCU (CHoR) celebrated its second birthday in June 2012 and continues to grow in its quest to provide the best and most advanced health care to children throughout the region.

In September 2012, the hospital broke ground on its new Children's Pavilion, which will be the largest outpatient facility dedicated to children in Central Virginia. The \$168 million, 640,000-square-foot facility will house 72 exam rooms; a surgical area with two operating rooms and two procedure rooms; and areas for diagnostic testing, imaging and laboratory services. Construction also will include a parking garage with more than 600 spaces.

The new facility is being built adjacent to the existing Children's Pavilion on the campus of the VCU Medical Center and will bring under one roof the majority of outpatient pediatric services, which are currently spread throughout the medical

campus. It is set to open in the summer of 2015.

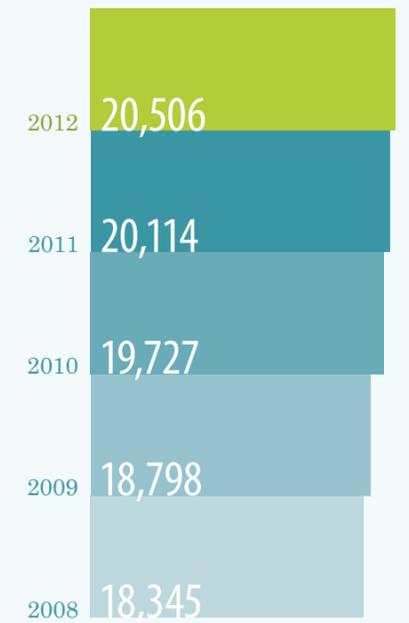
"The pavilion provides opportunities for VCU to have an even stronger impact in the community and to make a difference in the lives of so many children and families who need our help," said Michael Rao, Ph.D., president of VCU and the VCU Health System. "Children's health care significantly improves regionally and across the country when its research university invests in a comprehensive children's hospital."

CHoR's Brook Road Campus received the 2012 "Silver – Achievement in Quality" award for its outstanding performance in the health care profession. The American Health Care Association and the National Center for Assisted Living selected the hospital's Transitional Care Unit as a model of excellence in providing high-quality long-term care for children from birth to age 21.

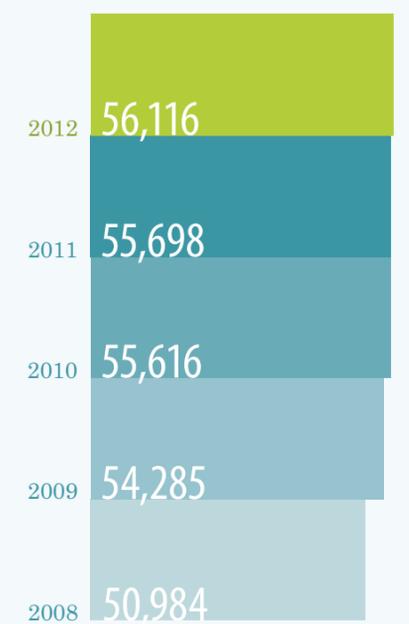
The hospital, along with the Cystic Fibrosis Foundation, also received a \$150,000 donation from the Denny Hamlin Foundation to help fund cystic fibrosis (CF) research and clinical trials in Richmond. CHoR is one of the country's leading research centers for CF. The Denny Hamlin Foundation, started by NASCAR driver Denny Hamlin, will give \$50,000 for the next three years for CF research and to support CHoR's Therapeutics Development Center, which conducts all phases of clinical trials for potential CF therapies.



Total surgeries



Adjusted discharges





Tony's story

Tony Carr landed his dream job as a pilot soaring among the clouds. But one fateful day, a plane crash left him fighting for his life. His long, painful recovery tested him both physically and mentally but, through his journey, he discovered a renewed sense of hope.

“I’ve had excellent care at VCU. All the surgeries I’ve had from day one have gotten the results we were hoping for.”

Tony Carr’s passion for flying developed when he was just a small boy taking trips with his parents.

“I loved going on trips. I got a kick out of going to the airport — I got a rush out of flying,” Carr said.

He loved it so much that he earned his pilot’s license when he was just 16. He went on to graduate with a bachelor’s degree in aviation from Oklahoma State University. After working as a flight instructor, Carr relocated with his wife, Sharon, to Richmond, Va., where he worked with a cargo/charter company. That was in mid-February 2011.

It was a Monday evening, April 11, 2011, when Carr’s life and passion would be changed forever. Just after takeoff, the twin-engine aircraft he was piloting came crashing down, exploding immediately into a ball of fire on a taxiway at Richmond International Airport. EMS crews arrived at the site almost immediately and transported Carr to the VCU Medical Center.

“I had extensive burns on approximately 60 percent of my body,” Carr said. “There were second-, third- and fourth-degree burns.” He also sustained multiple fractures on his face, ribs and pelvis.

“When Mr. Carr arrived in the burn center, he was the sickest patient in the hospital,” said Michael Feldman, M.D., medical director for the Evans-Haynes Burn Center at the VCU Medical Center and assistant professor in the Department of Surgery. “I think about this every time I see him in the clinic.”

Carr stayed in the hospital for more than two months before transferring to a rehabilitation facility. To date, he’s undergone 24 surgeries ranging from skin grafts to reconstruction.

“I’ve had surgeries to reconstruct my nose, which was pretty well destroyed.

They’ve also removed scar tissue from places such as my elbow. Scar tissue was limiting my range of motion, and since the surgery, I’ve had better range and functionality,” Carr said.

All of Carr’s surgeries took place at the VCU Medical Center.

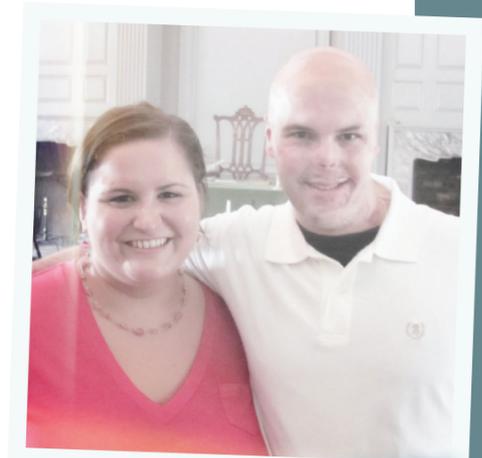
“Dr. Feldman has been there every step of the way,” Carr said. “I have about four or five surgeries to go, and I’ll have those at VCU as well. I’ve had excellent care at VCU. All the surgeries I’ve had from day one have gotten the results we were hoping for. My wife and I have good relationships with all the doctors and nurses at VCU.”

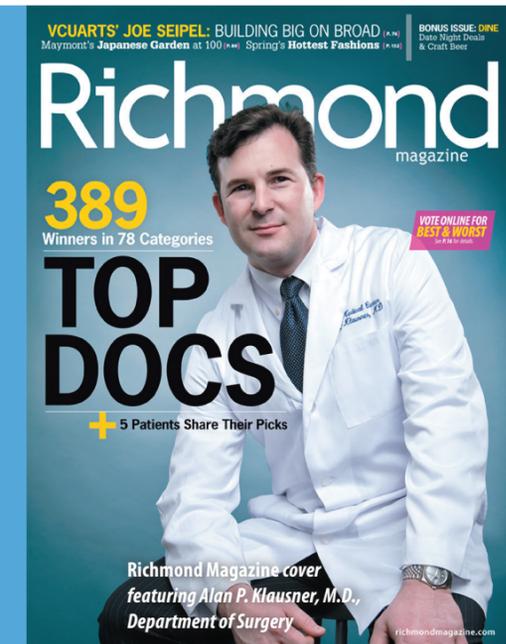
In fall 2011, just six months after the accident, Carr said he hit his lowest point, suffering from post-traumatic stress disorder and the painful road of rehabilitation. He began writing poetry as a way to cope with the adversity. He framed two of his poems and donated them to the Evans-Haynes Burn Center staff.

“I wanted to thank them for the big role they’ve played in my recovery,” Carr said. “And I wanted to have the poems hanging in the burn center to inspire other patients and provide comfort to those going through some level of trauma. I want to give them hope and show them that they can go through a terrible situation and overcome.”

Carr admits the accident has affected how he views flying, but he still wants to remain in the aviation industry. He’s pursuing a career as a flight dispatcher and hopes to begin this new chapter after his last surgery.

“This is a great fit for me. It still allows me to do something I’m knowledgeable in with a level of comfort, safety and security,” he said. “It’s been really tough, but I’ve been able to prevail.”





Physicians earn top rankings, cover spot

VCU Medical Center physicians figured prominently in *Richmond Magazine's* 2012 Top Docs survey, which asked Richmond-area physicians whom they would recommend in a range of specialties. Adam Klausner, M.D., associate professor and the director of neurourology, female urology and voiding dysfunction in the Division of Urology, who earned the most votes in the urology and urological survey category, even snagged the coveted cover photo.

Of the 389 physicians appearing on the "top docs" list, 133 (roughly one-third) were VCU Medical Center physicians. VCU doctors earned spots in all of the 78 categories but two, and they earned the most votes in 51 of the categories. In conjunction with the survey, *Richmond Magazine* asked readers to submit personal stories about their experiences with exceptional physicians. One of the five stories chosen honored R. Scott Lucidi, M.D., associate professor in the Department of Obstetrics and Gynecology and medical director of the Assisted Reproductive Technologies practice, for his care of a patient with uterine cancer who was struggling to become pregnant.

Consumers pick medical center for quality care

VCU Medical Center received a Consumer Choice Award from the National Research Corp. for providing quality health care services following a nationwide survey of hospital consumers' perceptions of the local health care facilities they use.

Participants rated the facilities on a variety of factors, including overall quality of patient care, quality of doctors and nurses, and overall image and reputation.

"To receive this award for the second year in a row is gratifying because it means our patients and their families recognize and appreciate our resolute commitment to their care," said Sheldon M. Retchin, M.D., M.S.P.H. "Our distinction as Virginia's No. 1 hospital is enhanced by this award, which acknowledges the devoted efforts of our physicians, nurses and staff to provide extraordinary care every day."

This is the eighth time and the second consecutive year the VCU Medical Center has received the award.



Weldon Bradshaw with his wife, Emily

Track coach receives lifesaving liver transplant

As the second-oldest program of its kind in the country, VCU's Hume-Lee Transplant Center has produced its share of inspiring stories and groundbreaking achievements since its inception in 1956, including the second successful liver transplant ever completed in the U.S. Collegiate School track and cross-country coach Weldon Bradshaw, 64, certainly didn't mind being in the hands of such an accomplished program as his chronic liver disease reached the critical stage.

VCU Medical Center doctors estimated that Bradshaw had less than a week to live before he received a new liver in December 2012 from a deceased 84-year-old woman — just eight years

younger than the oldest liver donors recorded in the U.S. by the United Network of Organ Sharing. The procedure — which lasted seven hours and required sustaining the donated liver and stabilizing Bradshaw's other organs that had begun shutting down due to his failing liver — marked the 56th liver transplant performed by Hume-Lee Transplant Center doctors in 2012, with eight of those involving donor livers from individuals between the ages of 64 and 84.

Currently, the clinical transplant program is ranked in the top 20 in the nation for the number of liver transplants performed and in the top 10 for organ and patient survival rates by HealthGrades.

Two generous donations benefit VCU's Evans-Haynes Burn Center

VCU's Evans-Haynes Burn Center received more than \$40,000 from two separate fundraising efforts.

The MCV Auxiliary, which raises funds through the Three Bears Gift Shop, vendor sales and special events, presented the center with \$36,000 to

help build a pediatric playroom in the burn center.

Pi Kappa Alpha also raised money for the center, nearly \$6,000, through a series of fundraisers that included partnering with Richmond firefighters for the Fireman's Challenge relay event.

Fraternity members agreed the burn center should be the focus of their fundraising efforts after a friend of the organization's members suffered second- and third-degree burns in a residence fire and spent months recovering in the Evans-Haynes Burn Center.

"This money is invaluable in directly helping improve patient care," said Michael Feldman, M.D.

The Evans-Haynes Burn Center, verified by the American Burn Association, is a 16-bed unit with an eight-bed ICU and eight non-acute beds. The center treats 250 to 300 patients a year and is the oldest civilian burn facility in the U.S. It serves as the regional resource for the care of acute burns and reconstructive needs of burn survivors and provides care for people injured from fire, chemicals, scalds, electrical burns, and skin loss injuries and diseases. In addition, the center provides education to EMTs, special government forces and rural hospitals.



VCU Evans-Haynes Burn Center

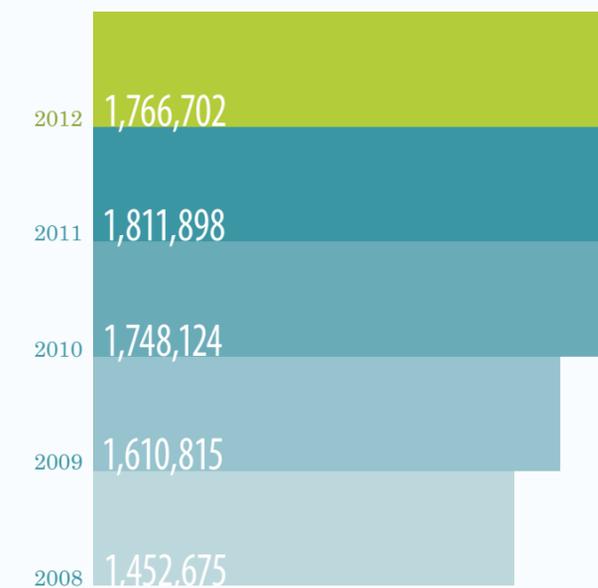
Initiative supports mothers, infants

Breastfeeding mothers will receive increased support, thanks to the efforts of the VCU Medical Center's Women's Health Program. The medical center was selected as one of 90 hospitals nationwide to participate in Best Fed Beginnings, a national program that involves training hospital health care employees to encourage breastfeeding. The National Initiative for Children's Healthcare Quality is leading the effort through a cooperative funding agreement with the Centers for Disease Control and Prevention.

"Although breastfeeding is one of the most effective preventive health measures for infants and mothers, half of U.S.-born babies are given formula within the first week, and by nine months, only 31 percent of babies are breastfeeding at all," said Valerie Coleman, coordinator of family life education and lactation services at VCU.

The hospitals selected will work together on a 22-month learning collaborative using proven quality-improvement methods to transform their maternity care services in pursuit of "Baby-Friendly" designation. To achieve this designation, hospitals must take specific steps, such as implementing a written breastfeeding policy that is routinely communicated to all health care staff, helping mothers initiate breastfeeding within one hour of birth, allowing mothers and infants to remain together 24 hours a day, and fostering the success of breastfeeding support groups by referring mothers to them on discharge from the hospital.

Virginia Premier Health Plan member months



Discovering

Through relentless inquiry and innovation, we challenge convention, enhance our knowledge of the world around us and find new ways to save lives

Faculty, students grant child's wish

Aaron Nalle had a wish: to ride a bike just like his big brothers. However, Nalle, 7, was born with arthrogryposis, a congenital, nonprogressive condition that severely limits movements of joints, including the knees, hips, ankles, elbows, wrists and hands.

J. Cortney Bradford, then a student in the Rehabilitation and Movement Science Ph.D. program at VCU, took it upon herself to find a recumbent bicycle that might be modified to fit Aaron's unique needs. After first-round modifications, Bradford knew more changes were needed, including a pedal-braking system since Nalle was unable to use hand brakes due to limited grip function. VCU faculty and students decided to get involved.

"Our goal was to give Aaron a safe, reliable way to brake, while still allowing him to use the bike completely independently. Another feature was to figure out how to allow Aaron to shift gears," Bradford said. "It was definitely a team effort."

Continued on next page



Aaron Nalle on his modified bike



William C. Broaddus, M.D., Ph.D., School of Medicine and Massey Cancer Center

Faculty, students grant child's wish *continued*

Peter Pidcoe, PT, DPT, Ph.D., associate professor in the Department of Physical Therapy, found Nalle's bike project unique because it was the first service-learning project that would help cross-train biomedical engineering and physical therapy students. The students completed a comprehensive evaluation, listing further modifications needed to the bike, and met each week during most of the fall semester to brainstorm and then implement solutions. Once finished, they put together a case report describing the project.

After several months, the bike was ready to go back to Nalle, who was off riding within minutes, pedaling, breaking and steering all in a very short time.

"He just blows everybody away with his joy. He wraps himself around people's hearts," said Nalle's mom, Julie. "His favorite thing is to ride his bike. This boy was made for biking! It's huge therapy that gets him using his legs, which makes them stronger. There are so many things he can't do, so riding his bike makes him feel normal. He loves to zoom around our circle driveway. We appreciate everything that Cortney did and everyone at VCU, they were all such a godsend."

Study reveals possible brain tumor treatment

One of the biggest challenges to treating brain tumors is their ability to spread, but a multi-institutional, multidisciplinary research team led by William C. Broaddus, M.D., Ph.D., the F. Norton Hord, Jr., Professor in Neurosurgery at the School of Medicine and researcher at the VCU Massey Cancer Center, may have found a way to reduce that ability by discovering a mechanism in glioma cells that promote the trademark invasiveness of glioblastoma multiforme (GBM), the most common and aggressive form of brain cancer.

This study, reported in the *Journal of Neurosurgery*, revealed for the first time that CD97, a protein that has been shown in prior research to facilitate tumor cell invasiveness in other malignancies, is overexpressed in GBM cells. The team also showed that suppression of the Wilms tumor 1 protein decreases the amount of CD97 gene expression in three GBM cell lines and reduces the cancer's ability to invade healthy brain tissue.

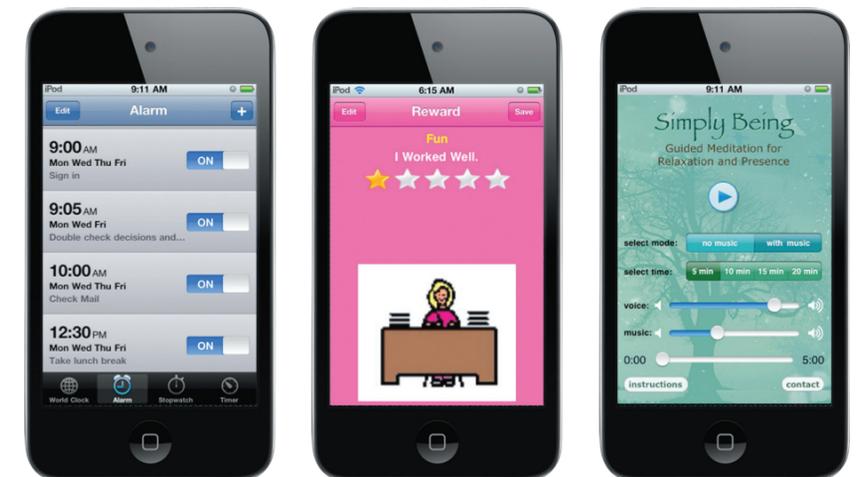
Autistic workers benefit from iPod devices

Ongoing research led by Tony Gentry, Ph.D., OTR/L, associate professor in the Department of Occupational Therapy, and published in the *Journal of Vocational Rehabilitation* has shown that the Apple iPod Touch can help autistic workers who have difficulty performing their jobs by giving them cues for job duties, video-based prompts and step-by-step instructions.

In the randomized study, individuals with autism were given vocational placement and paired with a job coach. One group received iPod Touch devices and training within the first month of work; the second group was given the iPods and training after working for three months. Both groups were tracked for at least six months after job placement, and researchers compared the need for job coaching support and independence between the two groups.

"What we've seen so far is that the amount of job coaching and support during the first three months of employment shows a significant difference, with those who have the iPod Touch doing better," Gentry said.

The study, "PDA-Enabled Job Support for People with Autism," is funded by the National Institute on Disability and Rehabilitation Research as part of a multi-project grant managed by the VCU Rehabilitation Research and Training Center. The Virginia Department for Aging and Rehabilitative Services collaborated with Gentry and supplied vocational placements, job coaches and iPod Touch devices for the participants.



Project examines patient health care decisions

Steven Woolf, M.D., professor in the Department of Family Medicine and director of the Center on Human Needs, will lead a multidisciplinary study on how to improve the ways by which patients make decisions about their health.

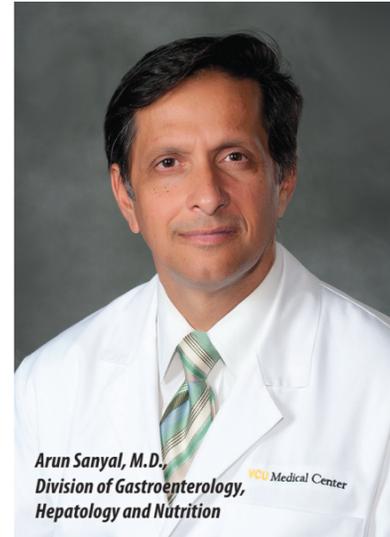
With funding from the Patient-Centered Outcomes Research Institute, an independent, nonprofit organization authorized by Congress, the newly named Department of Family Medicine and Population Health will collaborate with the departments of Social and Behavioral Health, Biostatistics and the School of Business to explore patients' preferred approach to making complex health care decisions.

The project will focus on decisions made about cancer screening and will be one of the first comprehensive efforts to seek patients' perspectives on how they can best be supported

in making decisions, which is a topic Woolf also addressed in an article published in the *Journal of the American Medical Association*.

Along with a co-author from the University of North Carolina School of Medicine and School of Public Health, Woolf argued that before being screened for a disease, patients should be informed with the full story — making sure they know the benefits, harms and scientific uncertainties associated with the screening test.

"Being more mindful of limitations and downsides will make patients more informed consumers," Woolf said in discussing the article. "They may still choose to be screened, but being armed with the full story will prepare them should they experience complications or later discover that the disease went undetected even with screening."



Arun Sanyal, M.D.,
Division of Gastroenterology,
Hepatology and Nutrition
VCU Medical Center

Fatty liver increases heart health risk

About one-third of Americans have a "fatty liver," a condition that carries with it increased cardiac risk and liver-related mortality through non-alcoholic fatty liver disease. However, researchers have determined that molecular changes responsible for abnormal cholesterol production and metabolism in the livers of patients with a fatty liver may help to explain the severity of liver disease and the risks to heart health.

A multidisciplinary study, funded by the NIH and led by Arun Sanyal, M.D., professor and chair in the Division of Gastroenterology, Hepatology and Nutrition, found that there is not only increased production of cholesterol but a decreased expression of the receptor that takes up cholesterol from the blood in patients with fatty liver disease, which enhances cholesterol output and reduces its removal, thereby making it more available to enter blood vessels and contribute to heart disease.

The findings, which were published in the journal *Cell Metabolism*, may provide researchers with potential new targets for treatment and also allow clinicians to further refine how they assess cardiovascular risk and develop ways to reduce it in individuals with fatty liver disease.

Virginia governor signs four new cancer-related bills at Massey

On April 30, 2012, Gov. Bob McDonnell signed four cancer-related bills at VCU's Massey Cancer Center that will continue the commonwealth's unprecedented support for advancing cancer research, treatment and education at Massey and throughout Virginia.

The new bills included legislation that requires physicians to report dense breast tissue to patients post-mammogram; designates Sept. 26 as Mesothelioma Awareness Day; requires health insurers to provide coverage for oral chemotherapy on par with coverage provided for intravenous or injected anticancer medications; and allows the Tobacco Indemnification and Community Revitalization Fund to provide grants to Virginia's NCI-designated cancer centers to conduct cancer research in the commonwealth's tobacco-dependent counties.



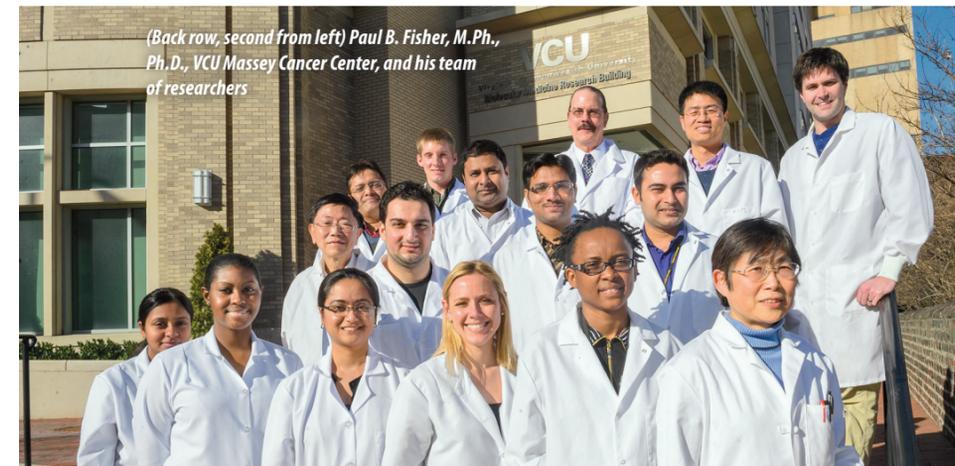
Virginia Gov. Bob McDonnell at the VCU Massey Cancer Center

Team makes gains in skin cancer prevention

A multi-institutional team of researchers led by Paul B. Fisher, M.Ph., Ph.D., the Thelma Newmeyer Corman Endowed Chair in Oncology Research and program co-leader of Cancer Molecular Genetics at the VCU Massey Cancer Center, made a breakthrough in preventing metastasis, the spread of cancer from the original tumor to other parts of the body.

Fisher, also chair of the Department of Human and Molecular Genetics and director of the Institute of Molecular Medicine, led a team that eliminated metastasis in melanoma, the deadliest form of skin cancer, by using a Raf kinase inhibitor protein to block another protein known as melanoma differentiation associated gene-9/syntenin, which has been shown to act as a catalyst for increased metastasis.

The study, published in the journal *Cancer Research* and funded by the NIH, the National Foundation for Cancer Research, the Goldhirsh Foundation for Brain Tumor Research, the Dana Foundation, the American Cancer Society and the Samuel Waxman Cancer Research Foundation, could lead to targeted therapies that stop metastasis in melanoma and potentially a broad range of additional cancers.



(Back row, second from left) Paul B. Fisher, M.Ph., Ph.D., VCU Massey Cancer Center, and his team of researchers

Clinical trial to aid knee replacement recovery

Researchers in the Department of Physical Therapy and the VCU Center for Clinical and Translational Research embarked on a four-year, \$5.2 million Phase III clinical trial aimed at determining the effectiveness of teaching a new and diverse set of pain-coping skills to patients following knee replacement surgery.

Led by Daniel Riddle, Ph.D., the Otto D. Payton Professor in Physical Therapy, and funded through the NIH's National Institute of Arthritis and Musculoskeletal and Skin Diseases, the study will determine whether the regimen is more beneficial than general arthritis information and standard rehabilitation care, and will examine the cost-effectiveness of delivering that service to patients. VCU will serve as the lead institution in the project, with several other universities also participating.



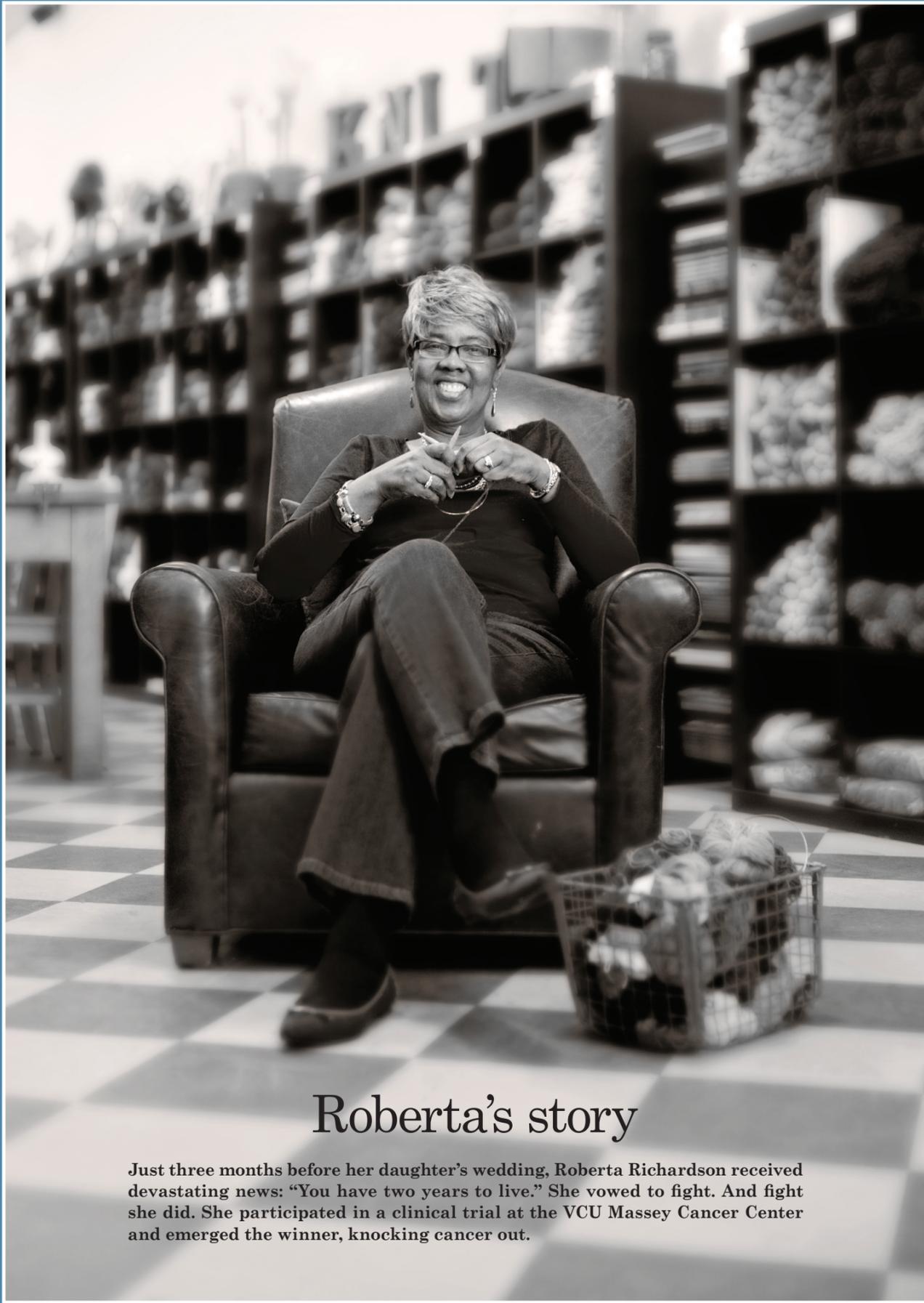
Daniel Riddle, Ph.D., Department of Physical Therapy (center) with research team

Need for primary care physicians rises

According to a study published in the journal *Annals of Family Medicine*, among the changes brought on by the passage of the Affordable Care Act will be a need for an estimated 25 percent increase in the number of primary care physicians practicing in the U.S. by 2025.

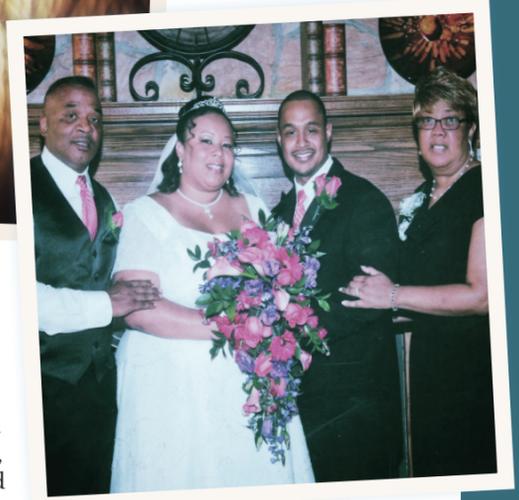
The multi-institutional research team, which included corresponding author Winston Liaw, M.D., assistant clinical professor of family medicine in the School of Medicine's Fairfax Family Medicine Residency program, examined population-based nationally representative data to project the number of primary care physicians needed to address the expected increases. The team reported that a 16 percent increase will be necessary to address population growth, while a 5 percent increase will be needed to address population aging. Also, a 3 percent increase will be needed to address insurance expansion following the law's passage.

According to the study, which was funded by the Agency for Healthcare Research and Quality (AHRQ), those percentages translate to nearly 33,000 additional primary care physicians needed to care for a growing population, and an additional 10,000 physicians needed to care for an aging population.



Roberta's story

Just three months before her daughter's wedding, Roberta Richardson received devastating news: "You have two years to live." She vowed to fight. And fight she did. She participated in a clinical trial at the VCU Massey Cancer Center and emerged the winner, knocking cancer out.



As she listened intently to the doctor in the exam room at the VCU Massey Cancer Center, Roberta Richardson's husband, William, sat beside her, his eyes welling up. "I don't know how to live without you." She instantly shot back, "You won't have to."

"When you get a prognosis of an aggressive form of cancer and that you have at the most two years to live, your mind won't allow you to accept it," Richardson said. "I said to myself, 'Jesus, I love you, but can I get a rain check?'"

Richardson was first diagnosed in June 2010 with myelodysplastic syndrome, a blood-related cancer, and subsequently developed a much more aggressive form, acute myeloid leukemia, in May 2011. That's when she received the grim prognosis.

"Your head just can't wrap itself around that. And I wondered, 'When do the two years begin?' It really and truly doesn't process," she said. "You look over your life and see it in slow motion. I thought of my family and asked, 'How do I tell my children?'"

In the midst of helping her daughter plan her July wedding, Richardson opted to keep the news a secret. "I didn't tell her. I didn't want the focus to come off of her wedding," Richardson said. "We didn't tell our children, who are both grown, until January 2012. We had to tell them then because I'd be in the hospital for 30 days."

Richardson had enrolled in an innovative clinical trial therapy developed by Massey researchers and led by Beata Holkova, M.D., the Harrison Endowed Scholar in Cancer Research, a research member of Massey's Developmental Therapeutics program

and assistant professor of hematology and oncology. The trial, supported by a highly competitive Grant Opportunities \$1.2 million award from the National Cancer Institute, stemmed from preclinical research developed in the lab of Steven Grant, M.D., the Shirley Carter Olsson and Sture Gordon Olsson Professor in Oncology, associate director for translational research and co-leader of Massey's Developmental Therapeutics program.

"We've been able to translate our basic laboratory findings into the clinical arena and have had patients who have either achieved or have come close to achieving a complete remission," Grant said.

Following the trial, Richardson's cancer cells had reduced enough for the doctors to perform a bone marrow transplant, with her sister as the donor.

Throughout her therapy and recovery, Richardson continued one of her favorite hobbies – crocheting – making several blankets for other cancer patients and for the Hospital Hospitality House in Richmond, Va.

"It was very rewarding making these for my fellow cancer patients," she said.

The subsequent transplant successfully eliminated all signs of her cancer. According to Richardson, she's doing well, and now waiting for grandbabies.

"I don't have a bucket list," she said. "I have a living list, and it's got all the things I want to do. I've taken up golf; I got a bike with a basket so I can go for rides with my dog; we go to concerts at the Kennedy Center." And she's taking trips she would never have made before her cancer fight. "But now, I'm going."

"I don't have a bucket list. I have a living list, and it's got all the things I want to do."

Medical center joins national clinical trial

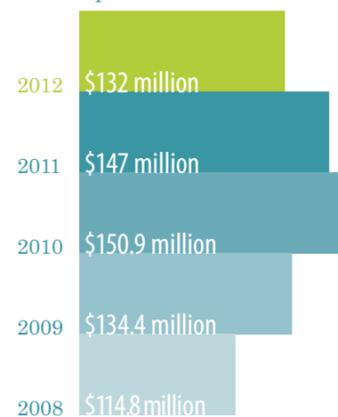
The VCU Medical Center is one of approximately 20 institutions taking part in a national clinical trial evaluating a medical device that provides focused stimulation to the brain that may offer an effective therapy for people with severe depression.

The BROdmann Area 25 DEep brain Neuromodulation study is the first randomized clinical research study to investigate the use of deep brain stimulation — a therapy that uses mild pulses of current to regulate specific areas of the brain much like a pacemaker uses current to regulate the heart — as a severe depression intervention.

The clinical study, which is sponsored by St. Jude Medical under a U.S. Food and Drug Administration (FDA) investigational device exemption, involves patients diagnosed with unipolar major depressive disorder, excluding bipolar disorder, who have failed at least four treatment options in their current episode.

The first two VCU patients underwent implantation of the deep brain stimulator in April 2012 under the guidance of Ananda Pandurangi, M.D., professor and vice chair of the Department of Psychiatry, and Kathryn Holloway, M.D., professor in the Department of Neurosurgery, who are leading the VCU portion of the study.

Sponsored research awards



New drug therapy aids blood cancer fight

Researchers at the VCU Massey Cancer Center have found that a new combination drug therapy may be key to combatting multiple myeloma, the second most common form of blood cancer.

A team led by Steven Grant, M.D., found that two drugs — obatoclox and flavopiridol — working in tandem dramatically increased a form of multiple myeloma cell death known as apoptosis.

Obatoclox is an experimental agent currently being investigated in various forms of blood cancers and works by disabling proteins that prevent cancer cells from undergoing apoptosis. Flavopiridol is a member of a class of agents known as cyclin-dependant kinase inhibitors and blocks the growth of cancer cells in addition to reducing levels of anti-apoptotic proteins.

“This research builds on nearly a decade of work carried out by our laboratory that focuses on manipulating mechanisms that lead to apoptosis in hematological malignancies,” Grant said. “Our findings could have immediate implications for the design of clinical trials using combinations of these types of drugs.”

This research was supported by the NIH, NCI, Multiple Myeloma Research Foundation, and Leukemia and Lymphoma Society of America.



Steven Grant, M.D.,
VCU Massey Cancer Center



Joseph Ornato, M.D., Department
of Emergency Medicine

Autoinjector might stop prolonged seizures

With patients suffering prolonged seizures, paramedics are often unable to administer anti-convulsive drugs intravenously due to the patient’s shaking. However, according to a study led by Joseph Ornato, M.D., chair of the Department of Emergency Medicine, drug delivery into muscle using an autoinjector, akin to an epinephrine autoinjector used to treat serious allergic reactions, may be a more effective way to stop a seizure lasting longer than five minutes.

By comparing two medicines known to be effective in controlling seizures, midazolam and lorazepam (both in the benzodiazepine class of sedating anti-convulsant drugs), Ornato and his team found that an intramuscular injection of midazolam using an autoinjector is as safe and at least as effective, and for some endpoints, better than the standard intravenous lorazepam in stopping seizures.

VCU was one of 17 sites to participate in the NIH-funded consortium examining potential new therapies for the most common and devastating neurological emergencies, and Ornato said the study has the strong potential to change the standard of care nationally with respect to how seizure patients are treated.

Team studies genetic role in sleep disorders

A research team that included Sarah H. Elsea, Ph.D., associate professor in the departments of Pediatrics and Human and Molecular Genetics, found that a gene known as RAI1 controls CLOCK, one of the most important genes in circadian rhythm, which could provide further insights into the nature of sleep disorders and neurodevelopment and behavior.

Circadian rhythms are physical, mental and behavioral changes that follow a roughly 24-hour cycle, responding primarily to light and darkness in the environment. Earlier

studies identified that mutation or deletion of the RAI1 gene results in Smith-Magenis Syndrome, a complex neurodevelopment disorder characterized by obesity, sleep disturbances, negative behaviors and developmental delays. However, Elsea’s study, published in *The American Journal of Human Genetics*, is the first to identify that gene as a key regulator of CLOCK, which could have far-reaching impacts.

“Sleep problems affect millions of people around the world, and these issues can impact many aspects of



Sarah H. Elsea, Ph.D.,
departments of
Pediatrics and Human
and Molecular Genetics

one’s life, including body weight, metabolism, productivity and emotional state,” Elsea said. “Understanding fully how circadian rhythm functions is of great importance to all of us.”

Two genetic factors impact anti-social behavior

An NIH-supported, multi-institutional study led by Kenneth Kendler, M.D., the Rachel Brown Banks Distinguished Professor in Psychiatry and director of the VCU Virginia Institute for Psychiatric and Behavioral Genetics, has found that anti-social personality disorder is influenced by two areas of genetic risk, as opposed to the one genetic factor outlined in *The Diagnostic and Statistical Manual of Mental Disorders*.

The study, which was published in the journal *Biological Psychiatry*, assessed adult twins from the Virginia Twin Study of Psychiatric and Substance Use Disorders by a self-report questionnaire. Next, a multivariate twin analysis was conducted to test for the presence of genetic and environmental factors on the criteria. Once the dimensions were identified, Kendler and his team evaluated its validity.

“The key finding of this report is that genetic risk factors for anti-social personality disorder cannot be captured by just one dimension,” Kendler said. “You need at least two independent sets of risk genes to explain the underlying nature of this disorder.”

Kendler also served as lead author on a study, funded by the National Institute on Drug Abuse (NIDA), the Swedish Research Council and an ALF project grant, that found the risk of abusing drugs is greater — even for adopted children — if the family environment in which a person is raised is dysfunctional. Published in the journal *Archives of General Psychiatry*, this is the first large-scale study to verify family dynamics on adopted children.

Enzyme manipulation study might help regulate, reduce obesity

Approximately 68 percent of U.S. adults are overweight or obese, according to the NCI, which puts them at greater risk for developing cancer, cardiovascular disease, diabetes and a host of other chronic illnesses. However, an international team of scientists led by VCU Massey Cancer Center researcher Andrew Larner, M.D., Ph.D., the Martha Anne Hatcher Distinguished Professor in Oncology and co-leader of the Cancer Cell Signaling program at Massey, has successfully

reversed obesity in the lab by manipulating the production of an enzyme known as tyrosine-protein kinase-2 (Tyk2).

This enzyme helps regulate obesity in humans through the differentiation of a type of fat tissue known as brown adipose tissue (BAT), which is responsible for energy expenditure in order to maintain body temperature. Diminished BAT activity is associated with metabolic syndrome, a combination of medical disorders that increase the

risk of developing cardiovascular disease and diabetes.

Larner’s study is the first to provide evidence of the relationship between Tyk2 and BAT and how Tyk2 may be used to restore BAT activity, which could open potential avenues for further research and development of new pharmacological and nutritional treatments for obesity.

This study was supported by the NIH, the Austrian Science Fund and a Massey NIH-NCI Cancer Center Support Grant.

VCU climbs into NSF top 100

VCU continued its climb up the National Science Foundation (NSF) rankings board in 2012, making it a top 100 institution in both the federal and total spending categories for research and development.

Expenditures from federal grants and contracts for research and development for fiscal year 2010 increased 48 percent from 2009, boosting VCU into the No. 79 position, up from No. 102. And while total expenditures during that time increased at a slightly lower clip, the 31 percent increase in spending propelled VCU’s ranking in that category to No. 98.

Use of IPHRs keeps patients up to date

A study led by Alexander H. Krist, M.D., M.P.H., research member of the Cancer Prevention and Control program at the VCU Massey Cancer Center and associate professor of family medicine in the School of Medicine, has shown that interactive personal health records (IPHRs) may be the wave of the future in encouraging patients to take preventive measures regarding their health, as patients who use an IPHR are almost twice as likely to be up to date with clinical preventive services as those who do not.

Published in the journal *Annals of Family Medicine* and funded by grants from the AHRQ and the NIH-NCI, the randomized controlled trial involved eight primary care practices and 4,500 patients who were divided into a control group and an intervention group.

The IPHRs addressed 18 services recommended by the U.S. Preventive Services Task Force and generated personalized prevention recommendations. At 16 months, about 25 percent of those who used the IPHRs were up to date with all recommended preventive services, nearly double the rate of nonusers. At four months, delivery of colorectal, breast and cervical cancer screening increased by 19 percent, 15 percent and 13 percent, respectively, among IPHRs users.

Antibiotic regimen could aid COPD sufferers

Chronic obstructive pulmonary disease (COPD) — a lung condition that creates recurrent, acute episodes of shortness of breath, cough and sputum production — is the third-leading cause of death and disability in the U.S.

However, a team of researchers led by Richard P. Wenzel, M.D., M.Sc., professor in the Department of Internal Medicine, published a study in the *New England Journal of Medicine* that argues a large segment of COPD

FDA-approved test aids diagnosis

The FDA has approved a test designed by Lawrence Schwartz, M.D., Ph.D., the Charles W. and Evelyn F. Thomas Chair in Rheumatology, Allergy and Immunology, that will allow physicians to more easily diagnose mastocytosis — a group of rare chronic disorders found in both children and adults that is caused by the presence of too many mast cells.

Mast cells are vital to the inflammatory process within the body and may play protective roles in wound healing and fighting infections. When triggered, they release chemicals such as histamine and tryptase, which cause itching, swelling, sneezing and other signs of allergic reactions. However, if there are too many mast cells in the body, the increased burden of chemicals released from these cells can cause several symptoms that range from mild to severe.

Schwartz's test measures the level of tryptase in the blood as an aid in the diagnosis of systematic mastocytosis, with a persistently elevated baseline level of tryptase as an indication of possible mastocytosis. The test may also aid in the diagnosis of systemic anaphylaxis, the prediction of increased risk for future episodes of severe anaphylaxis, as well as help medical examiners determine whether an anaphylactic event occurred near the time of death.

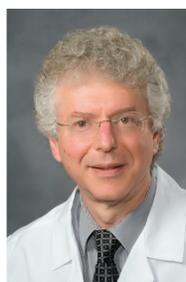
Pilot study leads to improved exercise rates

Through a multi-institutional pilot study, researchers from the VCU Pauley Heart Center, the School of Pharmacy and the Department of Physical Therapy showed that targeting and blocking Interleukin-1 (IL-1), a key mechanism of inflammation in the heart, may lead to an improved ability of heart failure patients to exercise.

According to lead author Benjamin Van Tassel, Pharm.D., assistant professor of pharmacy, and Pauley research team leader Antonio Abbate, M.D., Ph.D., assistant professor of medicine, patients receiving anakinra, an IL-1-blocking medication, improved their performance on a standardized exercise test by 23 percent after just two weeks of treatment.

The findings of the study were published in the journal *PLoS ONE*, and Van Tassel said the next step will be to confirm the findings in randomized, double-blind studies that involve a larger heart failure population with more advanced disease.

The work was supported by a grant from the Institutional National Center of Health Research and a Scientist Development Grant from the National Center for Research Resources of the American Heart Association.



Lawrence Schwartz, M.D., Ph.D., Division of Rheumatology, Allergy and Immunology



Randall E. Merchant, Ph.D., Department of Anatomy and Physiology

Drug shows no benefit for those with TBIs

A four-year study has found that citicholine, a supplement believed to have neuroprotective properties and is used worldwide as a memory enhancer, provides no benefit to patients who have suffered an acute traumatic brain injury (TBI).

Between 2007 and 2011, the citicholine brain injury treatment trial brought together researchers from across the U.S., including Randall E. Merchant, Ph.D., professor in the Department of Anatomy and Physiology, to determine if dietary consumption of citicholine would lessen the degree of nerve damage, speed recovery and improve the outcomes for people with TBI.

The team examined the effectiveness of citicholine versus a placebo in 1,213 patients with acute TBI, measured recovery by neuropsychological testing at 30, 90 and 180 days after injury with a particular emphasis on how closely the patients could return to doing their daily activities, and found that the use of citicholine compared with the placebo did not result in improvement of functional and cognitive status in this patient population. Rather than citicholine, Randall suggested, researchers should test and look to drugs or hormones which have multiple effects on brain cells and chemical reactions in the brain.

The study was supported by grants from the National Institute of Child Health and Human Development to the various universities involved in the trial.



Richard P. Wenzel, M.D., M.Sc., Department of Internal Medicine

Research on the horizon

Andrew Barnes, Ph.D., assistant professor, Department of Healthcare Policy and Research
Co-leading a VCU research team to examine the cognitive attributes of uninsured Virginians and determine the best way to target insurance coverage expansion efforts in the state under health care reform

Louis J. De Felice, Ph.D., professor, Department of Physiology and Biophysics;
S. Stevens Negus, Ph.D., professor, Department of Pharmacology and Toxicology;
Richard A. Glennon, Ph.D., Alfred and Frances Page Burger Professor in Biological and Medicinal Chemistry and chair, Department of Medicinal Chemistry
Investigating bath salts' effect on brain transporters, supported by a \$2.5 million grant from NIDA

Sarah K. Lageman, Ph.D., clinician-investigator, VCU Parkinson's and Movement Disorders Center, and assistant professor, Department of Neurology
Working under a three-year, \$107,000 grant from the Michael J. Fox Foundation for Parkinson's Research to examine how different types of cognitive therapy affect Parkinson's patients compared to supportive therapy

Michael Mason, Ph.D., associate professor, Department of Psychiatry, and director, Commonwealth Institute for Child and Family Studies
Leading a \$2.9 million NIDA-funded project to examine how teens' social networks impact substance abuse

Gary R. Matzke, Pharm.D., FCCP, FCP, professor and director of Pharmacy Practice Transformation Initiatives, School of Pharmacy
Leading a three-year, \$4.1 million grant project, supported by the U.S. Department of Health and Human Services' Center for Medicare and Medicaid Innovation, that will fund a medication management program in 23 rural Virginia counties predicted to save \$4.3 million in health care costs during the study's period

Alison Montpetit, Ph.D., R.N., assistant professor, School of Nursing
Leading a \$750,000 NIH grant-funded study to identify markers of disease in exhaled breath of mechanically ventilated, critically ill patients in ICUs

Daniel Nixon, D.O., Ph.D., director, VCU HIV/AIDS Center, and associate professor, Department of Internal Medicine
Leading a multidisciplinary team, funded by a \$100,000 Grand Challenges Exploration grant from the Bill & Melinda Gates Foundation, to perform research at community health clinics in Ségou, Mali

Wally Smith, M.D., professor and scientific director, VCU Center on Health Disparities
Leading a multi-institutional \$3.1 million NIH-funded study — the first research dissemination award in blood diseases issued by the NIH — to address barriers to health care among adults with sickle cell disease

Bruce Spiess, M.D., professor, Department of Anesthesiology, and director, Blood Utilization Committee and Practicing Excellence in Transfusion Therapies
As part of the VCU Reanimation Engineering Science Center, leading a study — funded by a \$5.57 million grant from the U.S. Army Medical Research and Material Command, Combat Casualty Care Research Program — to determine whether emergency medical services personnel should give plasma to victims with critical injuries rather than the traditional saline solution

Learning

With world-class faculty and groundbreaking technologies and facilities at their fingertips, we inspire the health care professionals of tomorrow

Nursing school offers hybrid Ph.D.

In fall 2012, the School of Nursing introduced a new degree format for nurses who want to continue working while pursuing a doctorate. The new Ph.D. in Nursing combines distance education with periodic on-campus learning and research opportunities. The first of its kind in Virginia, the new format expands the program's reach to a much wider range of students who aspire to become scholars, make a significant difference in the field of nursing and study with nationally recognized nurse-scientists at VCU conducting cutting-edge biobehavioral research.

"We have a tradition of using the latest technology and best practices to educate the nation's top nurses, so we feel it's important to adjust our instructional format to reflect the needs of today's workforce," said Ann Hamric, Ph.D., R.N., FAAN, professor and associate dean of academic programs in the nursing school. "The hybrid format gives us the ability to attract nurses nationwide and even globally."



Ann Hamric, Ph.D., R.N., FAAN (center), School of Nursing, with nursing students Afua Ossei-Agyeman-Yeboah (left) and Joel Gill

Satellite campus addresses pharmacist shortage in Central Virginia

In addition to its Inova Fairfax Campus, the School of Pharmacy has opened a second satellite location at the University of Virginia Medical Center in Charlottesville, whereby a limited number of Doctor of Pharmacy students will have the opportunity to spend their third and fourth years at U.Va. after completing their first two years at VCU. The first cohort of nine students began at U.Va. in August 2012.

Rafael Saenz, director of acute care pharmacy services at U.Va., serves as assistant dean for the division. He is a VCU alumnus, having earned his Pharm.D. at the School of Pharmacy in 2003.

The idea for an additional pharmacy satellite campus was conceived several years ago to meet a shortage of pharmacists, including health system-based pharmacists, in Central Virginia and surrounding areas. Similarly, the program also aligns with the 2011 Virginia Higher Education Act, known as the Top Jobs Act, which calls for the awarding of 100,000



Students at the School of Pharmacy's U.Va. division

more degrees to Virginians, especially in science, technology and health. The U.Va. campus is "another example of our efforts to ensure that the commonwealth's health professional needs are met in every corner of this

state," said Sheldon M. Retchin, M.D., M.S.P.H.

Technology in the U.Va. space expands on the interactive and collaborative work space designs that were implemented in VCU pharmacy classrooms and labs in 2010.

Nursing students exchange culture, knowledge

In summer 2012, students from the University of Cordoba in Spain visited the School of Nursing as part of a three-week student exchange program through the university's Center for Integrative Mediterranean Studies. Their visit followed a similar experience that VCU nursing students had in May 2012 at the University of Cordoba.

The exchange program compared nursing education and the primary health care systems in the two countries. The Spanish students shadowed VCU students, participated in patient simulation exercises and spent time at the school's community outreach locations, such as the Mosby Resource Center and CrossOver Health Care Ministry clinics.



University of Cordoba students in the School of Nursing's Clinical Learning Center

Dean paints a picture of scholarship support

Victor Yanchick, Ph.D., dean of the School of Pharmacy since 1996, took his first watercolor painting class 12 years ago. Since then, his paintings have fetched nearly \$30,000 at various auctions for pharmacy student scholarships.

A selection of his watercolors on display in February 2012 at VCU's Tompkins-McCaw Library for the Health Sciences raised nearly \$11,000 for scholarships, and Yanchick says he's not done.

"As long as I can pick up a paintbrush," said Yanchick, who also holds the Archie O. McCalley Chair in Pharmacy, "I will do this for the school and the community."



Victor Yanchick, Ph.D., School of Pharmacy



David Murray, R.N., VCU Life Evac, with Cosby High School student Kennae Rawlings

High schoolers explore health science careers

A group of Cosby High School students from Chesterfield County, Va., visited the VCU Medical Center and shadowed health care workers in a variety of fields. The experience, coordinated between the high school and VCU's Division for Health Sciences Diversity, gave students the chance to learn about the roles various health care workers play in delivering emergency care services.

In addition to their time spent at the VCU Medical Center, the 15-week health science exploration exposed students to lectures, lab experiences and in-class exercises taught by Cosby faculty and VCU professors.

Medical center trains 1,000th combat medic

The VCU Medical Center serves as one of only three civilian institutions in the country to participate in the U.S. military's Special Operations Combat Medic (SOCM) training program.

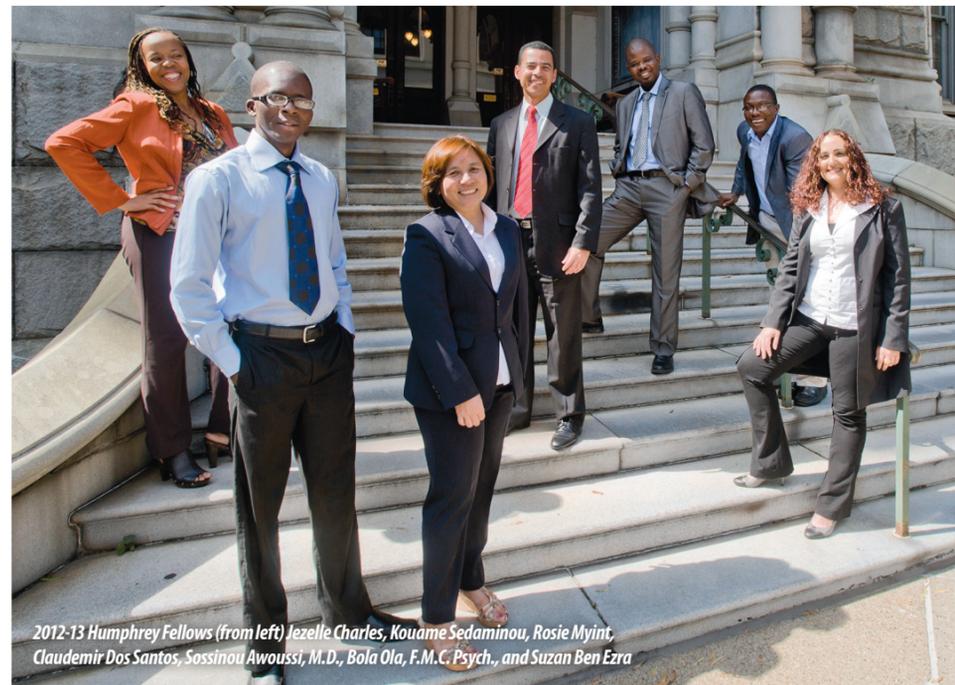
With its graduating class in June 2012, the SOCM training program at VCU trained its 1,000th combat medic, complementing students' extensive classroom and field medic training at Fort Bragg, N.C., with hands-on experiences in the VCU Medical Center's Emergency Department, trauma and burn center, intensive care units, operating rooms, and labor and delivery area.

From here, the medics will go on to serve in highly specialized and isolated combat military operations where they will care for wounded soldiers, often providing the difference between life and death for many U.S. military personnel.

Distance education aids Appalachia residents

Using an \$85,000 educational grant from the Southern Virginia Higher Education Center (SVHEC) in Abingdon, Va., the Department of Nurse Anesthesia in the School of Allied Health Professions developed and instituted a distance-education seminar granting continuing medical education credits to providers who reside in the coalfields of Appalachia.

SVHEC was established by the Virginia General Assembly in 1991 to strengthen the economy of Southwest Virginia by providing workforce education and training through partnership agreements with institutions of higher education. The Department of Nurse Anesthesia has partnered with SVHEC since 2004 to successfully deliver its entire didactic Master of Science in Nurse Anesthesia curriculum, as well as its Doctor of Nurse Anesthesia Practice program, to qualified residents in the area using state-of-the-art telecommunications technology.



2012-13 Humphrey Fellows (from left) Jézelle Charles, Kouame Sedaminou, Rosie Myint, Claudemir Dos Santos, Sossinou Awoussi, M.D., Bola Ola, F.M.C. Psych., and Suzan Ben Ezra

International scholars tackle substance abuse

VCU's Institute for Drug and Alcohol Studies welcomed seven international scholars chosen to participate in the Hubert H. Humphrey Fellowship Program — a Fulbright exchange administered by the Institute of International Education that brings established health professionals from developing countries to VCU for two semesters of study and related professional experiences.

VCU has hosted international fellows since 2006, when the university was first designated a Humphrey Campus

for Substance Abuse Prevention, Treatment and Policy, and this year's cohort includes midcareer professionals from Togo, Israel, Trinidad and Tobago, Nigeria, Myanmar and Brazil.

Humphrey fellows enhance their professional knowledge and leadership ability not only by drawing on the expertise of university faculty, but also through affiliations with community-based state agencies, which provide real-world exposure to substance abuse prevention, treatment, research and policy in a mid-sized American city.

Student enrollment*

	Allied Health Professions	Dentistry	Medicine	Nursing	Pharmacy
2012	1,044	505	1,294	866	611
2011	1,060	516	1,276	954	608
2010	1,100	509	1,290	975	609
2009	1,096	489	1,318	968	603
2008	1,036	465	1,262	967	617

*includes on-campus and off-campus enrollments

Students nab top spots for biomedical research

Three VCU students earned awards for their research during the 2012 Annual Biomedical Research Conference for Minority Students held in November.

Matthew Allen-Daniels, a post-baccalaureate trainee in the Department of Microbiology and Immunology; Benjamin Koppenhaver, a senior studying bioinformatics; and La Shanale Wallace, a post-baccalaureate trainee in the Department of Internal Medicine's Division of Hematology, Oncology and Palliative Care, received awards in the microbiology research, developmental biology and genetics research, and cancer biology research categories, respectively.

In total, several faculty members and 28 undergraduate students and post-baccalaureate trainees — many of whom are participants in one of several pipeline research training programs for underrepresented minorities offered through the VCU Center on Health Disparities — attended the four-day meeting, which represents the largest national professional conference for students studying biomedical and behavioral sciences.

Program advances expertise in geriatrics

The Virginia Geriatric Education Center, directed by the Virginia Center on Aging (VCoA), graduated 12 health care professionals — a number that ranks among the highest in the country for all 45 federally funded Geriatric Education Centers — from its 160-hour interdisciplinary faculty development program in geriatrics.

The program involved VCU faculty from the departments of Occupational Therapy and Physical Therapy and the VCoA in the School of Allied Health Professions, as well as faculty from the schools of Medicine, Nursing, Pharmacy and Social Work.

Fellowship facilitates niche pharmacy training

Through \$100,000 of funding from Richmond, Va.-based Altria Group Inc., the School of Pharmacy awarded in May 2012 the first Altria Group Tobacco Products Regulatory Science Fellowship to Poonam Delvadia — a graduate student in the Department of Pharmaceutics whose research focuses on biopharmaceutical analysis.

A need for specialized training in this area was noted in the 2009 Family Smoking Prevention and Tobacco Control Act, which empowered the Food and Drug Administration to review and regulate products with the intention of reducing "risks or exposures associated



Students host regional conference for peers

The VCU Chapter of the Student National Medical Association hosted a regional meeting in February 2012 that brought together more than 110 medical and premedical college students from Virginia, Maryland and Washington, D.C., to try out techniques in a variety of specialties, including robotic surgery, anesthesiology and cardiology, as well as attend individualized advising sessions on applying to medical school.

The daylong conference featured speakers from the VCU Medical Center, the VCU Center on Health Disparities and the Richmond Behavioral Health Authority, as well as Rep. Robert C. "Bobby" Scott and Virginia Del. Jennifer McClellan, as part of a health policy panel focused on addressing the needs of medically underserved communities and increasing the number of underrepresented minorities in medicine.



Maureen's story

Living with multiple chronic conditions, Maureen Peterson used to see so many doctors she couldn't keep their names straight. Just getting to her appointments added stress and burden to her life. But now, thanks to the VCU House Calls program, she receives the primary care she needs in the comfort of her own home.

Maureen Peterson stops midsentence and squeezes her eyes shut. She lifts a hand to her chest and harmonizes with the radio, letting a long, soulful note hang in the air before continuing.

"Susanna, she's always fussin' at me," Peterson says.

As her nurse practitioner, Susanna Payne visits the Richmond, Va., home Peterson shares with her husband and caregiver, Harry, about every two weeks. She takes Peterson's vital signs, listens to her breathing, checks how much fluid she's retaining, reviews her medications and diet and examines her legs and feet, especially the broken ankle that, until recently, had kept Peterson bedridden for a year and eight months with only her stuffed animals to keep her company some days.

At a clinic, Payne says, she might spend 15 minutes with Peterson and miss much of what she really needs to know, but through the VCU House Calls program, which has provided primary care for more than 5,000 homebound patients over the past 25 years, Payne may spend half an hour or more with a patient like Peterson and be far more effective at maintaining her in a stable condition.

"House Calls has really been a blessing," Peterson says. "They're my partners. Katherine, my first nurse, then Meredith, and now Susanna — I've loved them all."

Peterson has been with House Calls for four years and says that before she enrolled in the program, the burden of her care was beginning to take its toll.

At 57, Peterson has suffered three heart attacks and lives with serious chronic conditions, including congestive heart failure, pulmonary and essential hypertension, coronary artery disease, peripheral vascular disease, anemia, asthma and diabetes. Before House Calls, these conditions required numerous emergency hospitalizations and clinic appointments, which not only increased the cost of Peterson's care, but also the hardship on herself and her husband to meet the demands of obtaining that care.



Now, however, Payne manages Peterson's conditions through comprehensive planning and eliminates many of those hospital stays and clinic appointments by making home visits.

"That really takes a lot off your mind," Peterson says. "You don't have to ask, is the van going to show up on time or come at all? Or, where am I going to get \$2 for parking? I know that may not seem like a whole lot of money, but it's a lot when you don't have it."

For Peter Boling, M.D., professor of medicine and chair of the Division of Geriatric Medicine, who started and still leads the House Calls program, the keys to the program's success involve timely access, better understanding of the patient and comprehensive medical management.

"By going to these patients, you make it much easier for them to have the care that they need," he says, adding that with safely managed conditions comes the potential for fewer ambulance rides, fewer ER visits and billions of dollars in cost savings each year.

With that goal in mind, Boling and several colleagues worked with members of Congress to help craft the Independence at Home Act of 2009, which became Section 3024 of the Affordable Care Act signed into law in 2010. As a result, the U.S. Centers for Medicare and Medicaid Services has asked the House Calls program, in collaboration with similar programs at 19 locations nationwide, to test how effective this approach can be at improving care and reducing health care costs for chronically ill patients over the next three years.

But, as Peterson can attest, treating patients in their homes offers benefits that reach far beyond finances. It allows for greater peace of mind for patient and caregiver, a personal connection with a provider and, above all, a chance at a life where, even in the face of illness, you can still take the time to sing.



"House Calls has really been a blessing. They're my partners. Katherine, my first nurse, then Meredith, and now Susanna — I've loved them all."

Engaging

With every partnership we forge, we grow a collective voice and build a comprehensive network of compassionate care and influence

School of Nursing reflects on its past

The VCU School of Nursing marked the 50th anniversary of the closing of the St. Philip School of Nursing — one of the first nursing schools in the state for African-Americans — with the panel discussion “Segregation and Desegregation in Higher Education: Confronting Our Past, Facing Our Future.”

The discussion featured a variety of leaders in higher education from the VCU and Richmond, Va., communities, as well as St. Philip alumnae, to reflect on an important part of the VCU and School of Nursing legacy. Established as a separate nursing school for African-American women at the Medical College of Virginia during racial segregation, the school operated from 1920 to 1962, when the last of its 688 graduates received their nursing diplomas.

The panel discussion was held as part of VCU’s Year of Freedom celebration to commemorate the 150th anniversary of the American Civil War and Emancipation.



St. Philip School of Nursing Class of 1958



Community Health Education Center

CHEC celebrates 10 years of success

In October 2012, the Community Health Education Center (CHEC) celebrated 10 years of success in providing the Richmond, Va., community with reliable and up-to-date consumer health information.

The idea for CHEC grew from three partners — the MCV Hospitals Auxiliary, VCU Medical Center and VCU Libraries — who secured 2,225 square feet of space in the medical center’s Gateway Building. After raising funds, the center opened concurrently with the Gateway Building in 2002.

Today, CHEC remains one of a few community health education centers tied not only to a top-tier academic medical library — the nearby Tompkins-McCaw Library for the Health Sciences — but also to a major university medical center.

CHEC serves patients, their families and professionals within the health care community who refer patients to the center’s resources, which are free. Some 1,300 people visit the center monthly to seek information about health and wellness.



Dentistry students at Tough Mudder

Dentistry students compete for a good cause

Twelve School of Dentistry students traveled to Frederick, Md., in October 2012, to test their strength, stamina, resolve and teamwork — and raised more than \$1,000 for the Wounded Warrior Project — by participating in an intense 12-mile, military-designed obstacle course known as Tough Mudder.

“We get so hung up in lab and clinic work, we don’t always have an option to help out,” said Jay Owen, team leader and third-year dental student. “We

vowed to be servants, and we wanted to find a way to have fun, raise money and help those who help us.”

The Wounded Warrior Project provides several programs for injured service members, such as combat stress recovery programs, peer support, rehabilitative services and employment services, and Tough Mudder participants worldwide, 700,000 to date, have raised more than \$5 million for the cause.



VCU LifeEvac flight paramedics, area first responders and EMT students
Photo courtesy Jay Lovelady

Simulated accident scene brings lessons to life

“You can’t stop a real accident or emergency to ask why certain things happen.” This stark truth was spoken by Jay Lovelady, VCU LifeEvac’s interim chief flight nurse, after participating in a simulated accident in Isle of Wight County, Va. The simulation involved area first responders and EMT students who re-created a head-on collision between two cars with the victims trapped inside.

The event pooled the resources of Smithfield Fire and Rescue, the Isle of Wight County Rescue Squad and VCU LifeEvac to build skills and teamwork among area first responders as well as teach the public what it takes to save lives.

“For the EMT-Basic students who participated, it gave them time to ask questions that would normally be difficult,” Lovelady said. “This was the best part of the event, seeing light bulbs turn on for the students.”



Dental school earns first-of-its-kind honor

Stemming from a partnership started in 2011 with the National Children's Oral Health Foundation: America's ToothFairy (NCOHF), the School of Dentistry has since been recognized as the first NCOHF University Affiliate Oral Health Zone.

With a mission to increase oral health awareness and fight early childhood caries — the No. 1 chronic childhood disease — the School of Dentistry has worked with organizations throughout Richmond, Va., and the Tri-Cities area to offer free oral health education and screenings.

The school has partnered with select area public elementary and middle schools, the Boys and Girls Clubs of Metro Richmond, the Richmond City Health District's Resource Mothers and WIC programs, and the Richmond City Police Activities League and will continue to reach out to more organizations to spread awareness as an officially designated University Affiliate Oral Health Zone.

Resource centers help Southern Virginia patients navigate cancer

Thanks to an extensive and collaborative cancer needs assessment conducted in Southern Virginia by VCU Massey Cancer Center researchers and community partners, the region now has a reliable and accessible source of cancer health information through the new Cancer Resource Center of Southern Virginia, located in Danville.

With this resource, supported by Massey through a grant from the Virginia Tobacco Indemnification and Community Revitalization Commission, individuals living in Southern Virginia can more easily search for community cancer resources, identify transportation options to treatment centers and

Prevention program makes an impact on teens

The Injury and Violence Prevention Program and the Division of Trauma, Critical Care and Emergency Surgery visited four local high schools in Richmond, Va., and surrounding communities to expose local teenagers to the very real and devastating consequences that can result from one bad decision through the division's Project IMPACT (Impacting Minors Perceptions And Cognizant attitudes toward Trauma).

This year, the VCU team visited J.R. Tucker High School in Henrico County, Armstrong High School in Richmond, Central High School in Victoria and Cosby High School in Chesterfield County, engaging students with local fire and emergency medical service members, VCU LifeEvac helicopter operators and forensic and Surgical Trauma ICU nurses. Students also had the chance to witness the extrication of a motor vehicle collision victim as part of a simulation exercise — all in the name of promoting injury and violence prevention through awareness and education within the school setting.



doctors' appointments, and research co-payment assistance programs and providers for the uninsured. The center also works with area providers, advocates and support systems to plan cancer-related programs and activities, as well as provide disease-related, site-specific education packets to cancer patients and local oncology practices.

Similarly, access to health literacy information also received a boost in Petersburg, Va., with the opening of the Petersburg Healthy Living and Learning Center at the Petersburg Central Library, the result of a partnership between Massey Cancer Center, the Petersburg Central Library and the Crater Health District.

Located on the main floor of the library, the center is staffed with specially trained librarians and health education specialists to help residents find information regarding their health concerns and connect them to health resources within the community. The center also is planning to form partnerships with local physicians who will be able to refer their patients for information that clarifies or expands on the physicians' discussions with their patients.

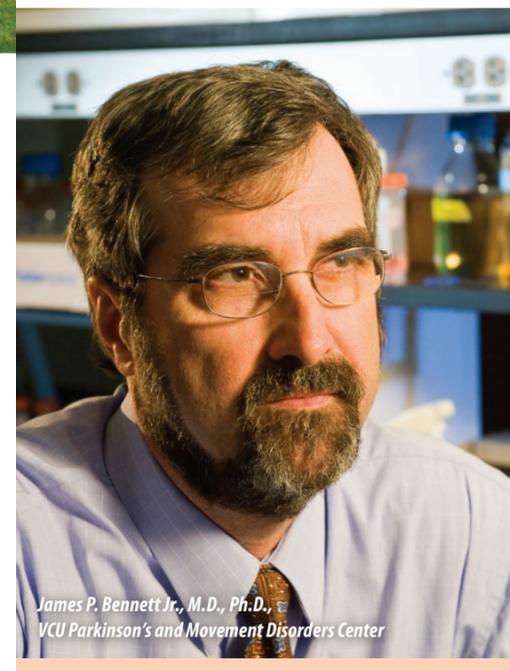
The Petersburg center is based on similar programs that Massey has helped develop with several other Virginia public libraries.

VCU joins in national Parkinson's symposia

The VCU Parkinson's and Movement Disorders Center joined other local health organizations and the Davis Phinney Foundation in hosting the Victory Summit for Virginia and West Virginia-area Parkinson's communities in May 2012.

Participants heard from experts such as James P. Bennett Jr., M.D., Ph.D., director of the center and the Bemiss Endowed Chair of the Department of Neurology, who discussed his latest research advances and treatment options. Ron Kessler, a Midlothian, Va., resident and veteran who earned the Local Hero award for outstanding leadership in the Parkinson's community, also spoke. Presentations on cognitive changes in Parkinson's disease patients, sleep disturbances, gastrointestinal symptoms and care for the caregiver, as well as discussions on deep brain stimulation therapy, local clinical trials and research programs rounded out the agenda.

The Victory Summit is a national symposia series created by the Davis Phinney Foundation to provide information and inspiration for people with Parkinson's and their loved ones.



Pharmacy partners to prevent heart attacks

In coordination with the national Million Hearts campaign, 19 faculty members, residents and students from the School of Pharmacy teamed with MeadWestvaco Corp. (MWV) in May 2012 to provide free blood pressure checks for more than 350 MWV employees over the course of two days.

The partnership marked the first of its kind in the state to support the campaign, led by the Centers for Disease Control and Prevention and Centers for Medicare and Medicaid Services, which has set a goal of preventing 1 million heart attacks and strokes in the U.S. over the next five years.

In addition to having their blood pressure checked, MWV employees received counseling on exercise, smoking cessation and reducing salt intake to help keep blood pressure under control, as hypertension leads to unnecessary chronic disease progression and complications, avoidable hospitalizations, premature disability, a lower quality of life, and even death.

Dentistry brightens smiles in Jamaica

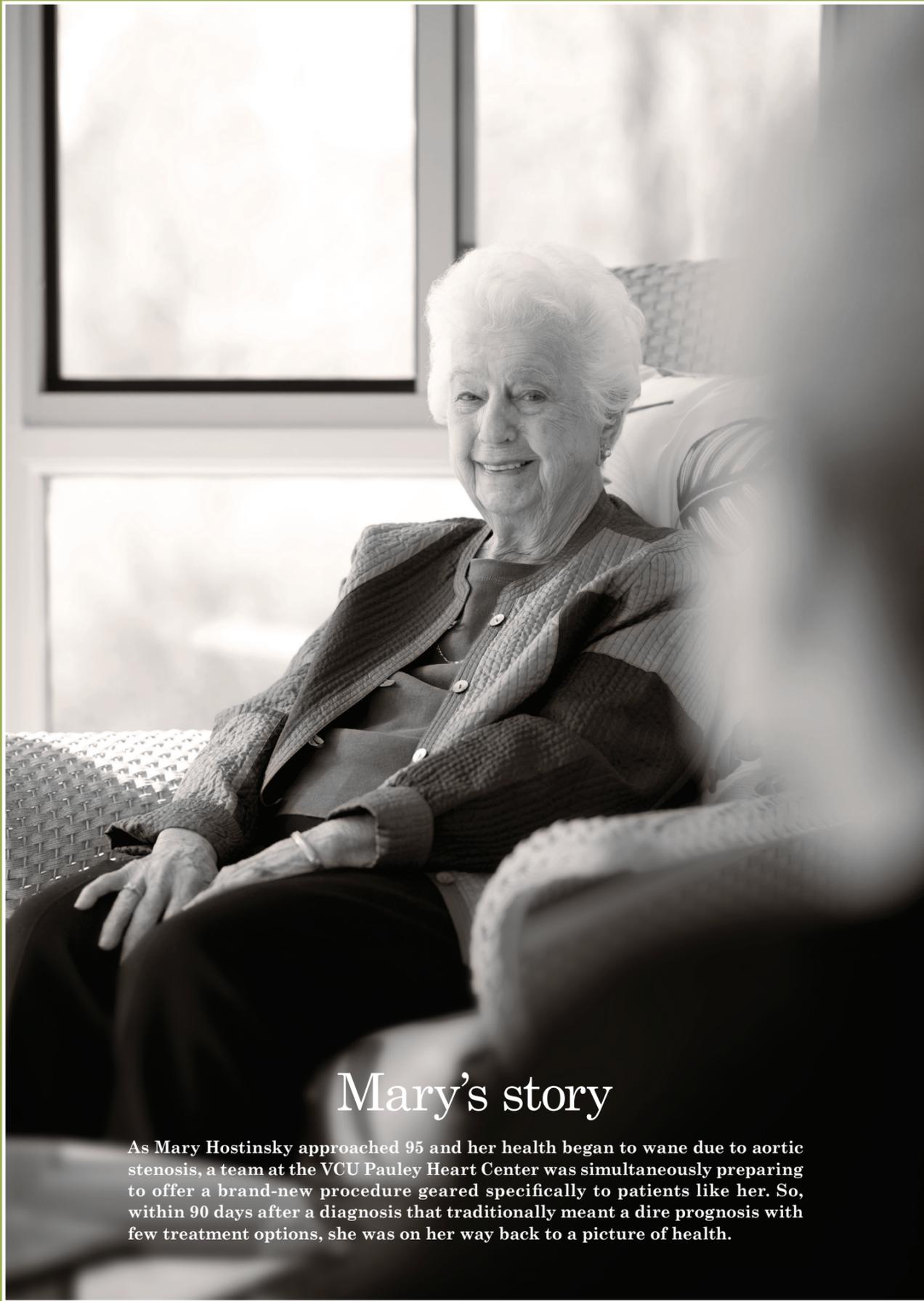
Nearly 40 students, hygienists, residents and faculty from the School of Dentistry helped brighten the smiles of more than 1,100 residents of Jamaica's Trelawney Parish from Oct. 22 through Nov. 9, 2012, performing general patient examinations, cleanings, restorations and extractions.

Despite the effects of Hurricane Sandy diminishing people's ability to travel to the free clinics offered during the first week of operation, volunteers were still able to perform more than 3,000 procedures, with a noted increase in preventive and restorative measures taken over last year's trip — a trend Alex M. Kordis, D.D.S., assistant professor in the Department of Pediatric Dentistry, says he hopes to see continue when school volunteers return in October 2013.

Project promotes inclusive learning

The Department of Occupational Therapy, the School of Education and the Children's Hospital of Richmond at VCU embarked on an interdisciplinary effort with the Children's Museum of Richmond to better assess and adapt the physical and learning environments of young children with disabilities and develop collaborative training to support the engagement of those children and their families.

"Developing Interdisciplinary Partnerships for an Inclusive Learning Community" will be supported by a seed grant from the VCU Council for Community Engagement, which has awarded 38 grants totaling more than \$550,000 since 2007 to enhance and increase university engagement with the Greater Richmond community.



Mary's story

As Mary Hostinsky approached 95 and her health began to wane due to aortic stenosis, a team at the VCU Pauley Heart Center was simultaneously preparing to offer a brand-new procedure geared specifically to patients like her. So, within 90 days after a diagnosis that traditionally meant a dire prognosis with few treatment options, she was on her way back to a picture of health.

About a year ago, the only medication Mary Hostinsky required was a baby aspirin a few times a week. When the weather was nice, she'd walk a half-mile loop near the Williamsburg, Va., home she shares with her daughter and son-in-law, Cathy and Don Wilson; and when it wasn't, she'd go to a nearby fitness center and walk 10 laps.

But then she started noticing shortness of breath. Ten laps turned to five, Don Wilson would have to take a chair on their neighborhood walks so that she could rest periodically and by the time she turned 95 in August, Hostinsky had difficulty breathing after very little exertion at all.

Her aortic valve, which regulates blood flow from the heart, had calcified and begun to deteriorate, robbing her body of oxygen-rich blood. Had she been diagnosed with severe aortic stenosis even a year earlier, there would have been very little doctors could have done. At her age, the risk of putting her through open-heart surgery to replace the valve would have been too great and, left untreated, the condition carries a 50 percent probability of death within two years.

But Hostinsky wasn't willing to give up her walks or family barbecues or shopping stints. And, thanks to a new treatment being offered at the VCU Pauley Heart Center, she wouldn't have to.

As soon as Hostinsky's cardiologist mentioned transcatheter aortic valve replacement (TAVR) as an option, Don Wilson called VCU to learn more about the procedure, which uses an image-guided catheter inserted into the femoral artery to deliver a new valve to the aorta. Once there, doctors inflate a small balloon to open and compact the deteriorated valve before anchoring the new valve in place.

"From the moment Don spoke with Delia Yanes, the nurse coordinator, we felt like we connected right away," Cathy Wilson said. "That really set the

"Every day is a great moment because I can feel I'm gaining strength. I'm very grateful for VCU. I'm thankful they did such a wonderful job."

stage for everything that followed, and you really couldn't imagine a better experience. Everyone was just so sincere with my mother, not to mention compassionate, accessible and reassuring, which is the best gift you can give a daughter."

Though developed specifically for patients like Hostinsky for whom surgery is not an option, the Pauley Heart Center team, led by Derek Brinster, M.D., director of thoracic aortic surgery and associate professor in the Division of Cardiothoracic Surgery, and Zachery Gertz, M.D., director of structural heart disease and assistant professor in the Division of Cardiology, still wanted to conference with Hostinsky's primary care physician, cardiologist and oncologist to determine whether she'd be able to return to her quality of life following the procedure.

"That was the best moment for me," Hostinsky recalled, "when they all got together to make sure and said, 'Yes, she's a candidate.'"

After undergoing the procedure on Dec. 12, 2012, less than 90 days after her diagnosis, Hostinsky faced an eight-day hospital stay for monitoring (during which the team made sure her daughter was allowed to remain at her bedside) and is now in the midst of a cardiac rehabilitation program to build her endurance.

"Every day is a great moment because I can feel I'm gaining strength," Hostinsky said. "I'm very grateful for VCU. I'm thankful they did such a wonderful job."

And, she added, though each session is a challenge, she looks forward to it because she knows it will allow her more time with Cathy and Don Wilson, as well as her six grandchildren, eight great-grandchildren, and the nearly 100 friends and relatives who helped her celebrate her 95th birthday — all of whom shouldn't be surprised to find an invitation to another party marking 100.



Honoring

In dedicating ourselves to individualized patient care and multidisciplinary approaches to education, outreach and research, we inspire others



Critical Care Hospital

Critical Care Hospital receives design award

The Critical Care Hospital earned a VISTA award from the American Society for Healthcare Engineering and the American Hospital Association. The VCU Health System, HKS Architects, Jones Lang LaSalle and the W.M. Jordan Co. were presented with the award, which recognizes teamwork in the design and construction of the health care environment and honors teams that have worked together to develop and maintain safe, quality health care settings.

Highlights of the hospital's innovative construction process include the erection of a bridge to relieve traffic and enhance safety measures within the tight historic urban campus, and extensive infection control, noise mitigation and air filtration.

Student organization earns excellence award

The School of Medicine's Student Family Medicine Association won an American Academy of Family Physicians 2012 Program of Excellence Award for its outstanding activities in generating interest in family medicine. The Program of Excellence Awards recognize medical

school organizations for their exceptional performance in family medicine, community service, promoting the value of primary care, exposure to family medicine and family physicians, professional development and measures of success.

Award recognizes School of Pharmacy

The National Association of Chain Drug Stores (NACDS) named the School of Pharmacy the recipient of the 2012 NACDS RxIMPACT "U" Advocacy Award. The award is presented annually to pharmacy school students and campuses in recognition of their active engagement in pro-patient and pro-pharmacy grassroots advocacy.

The winning School of Pharmacy team was helmed by students Catherine Floroff, Bradford McDaniel and Natalie Nguyen and faculty adviser Gary Matzke, Pharm.D., FCCP, FCP, associate dean for clinical research and public policy. The team planned and implemented a seven-part Student Pharmacist Policy and Advocacy Forum that featured guest speakers and discussion topics such as patient-centered care, proposed health care-related bills in the commonwealth and how to lobby for issues when meeting with legislators.



School of Pharmacy students and adviser Advocacy Award recipients



David Lanning, M.D. (left), at awards ceremony

CHoR surgeon-in-chief receives rank of knight

David Lanning, M.D., surgeon-in-chief at Children's Hospital of Richmond at VCU (CHoR), received the Order of Christopher Columbus rank of Knight from Dominican Republic President Leonel Fernandez Reyna. In 2011, Lanning successfully led a team of 45 physicians and pediatric subspecialists who worked together to perform a dramatic, 20-hour procedure that gave conjoined twins Maria and Teresa Tapia the chance to lead separate, healthy lives. The two tiny celebrities, who turned 2 years old in April 2012, traveled back to the VCU Medical Center from the Dominican Republic for a checkup in the fall and showed that they were healthy and thriving a year after their surgery.

VCU Health System wins nonprofit honor

The National Association for Female Executives (NAFE) named the VCU Health System as one of the NAFE Top Nonprofit Companies for Executive Women. This is the sixth time NAFE has presented the health system with the award, which is given based on female representation, hiring, attrition and promotion rates, access, and usage of key retention and advancement programs within an organization.

The VCU Health System also offers a wide array of progressive workplace programs that train, support and nurture working mothers, earning it a spot — for the eighth time — in *Working Mother* magazine's 100 Best Companies of 2012.

Individual appointments and awards

Marian Altman, M.S., R.N., CNS-BC, CCRN, ANP, School of Nursing, received a Circle of Excellence Award, American Association of Critical-Care Nurses.

Dixie Bowman, PT, DPT, Ed.D., School of Allied Health Professions, received the Distinguished Service Award, Commission on Accreditation in Physical Therapy Education.

Alfred Certosimo, D.M.D., M.Ed., School of Dentistry, received the Frank "Buddy" Boris Memorial Award for Distinguished Service, American Board of General Dentistry.

PonJola Coney, M.D., director of the Center on Health Disparities and professor of obstetrics and gynecology in the School of Medicine, elected to the Institute of Medicine.

Jeffrey Delafuente, M.S., FCCP, FASCP, School of Pharmacy, elected a Distinguished Practitioner and Fellow, National Academies of Practice; took office as president-elect, American Society of Consultant Pharmacists.

Dave Dixon, Pharm.D., BCPS, CDE, CLS, School of Pharmacy, named to the National Lipid Association's Patient Adherence Subcommittee.

R.K. Elswick Jr., Ph.D., School of Nursing, received the 2012 Judson C. Hickey Scientific Writing Award, Editorial Council of the *Journal of Prosthetic Dentistry*.

Sharon Gatewood, Pharm.D., School of Pharmacy, selected for the 2012-13 Faculty Scholars Program, National Association of Chain Drug Stores Foundation.

Mary Jo Grap, Ph.D., R.N., ACNP, FAAN, School of Nursing, received a 2012 American Association of Critical-Care Nurses Research Abstract Award.

Kenneth Kendler, M.D., Department of Psychiatry and Department of Human and Molecular Genetics, named one of Virginia's Outstanding Scientists of 2012 by Gov. Bob McDonnell.

Nancy Langston, Ph.D., School of Nursing, named Academy of Nursing Education Fellow by the National League for Nursing.

Steven Lindauer, D.M.D., M.D.Sc., School of Dentistry, named editor, *The Angle Orthodontist*.

Daniel Longo, Sc.D., Department of Family Medicine, appointed chair of an application review panel, Patient-Centered Outcomes Research Institute.

Debra Lyon, Ph.D., R.N., FNP-BC, FNAP, FAAN, School of Nursing, appointed to the Alliance Symptom Intervention Committee, Alliance for Clinical Trials in Oncology; appointed co-chair, Genetic Nursing and Health Care Expert Panel, American Academy of Nursing.

Gary Matzke, Pharm.D., FCCP, FCP, School of Pharmacy, appointed an American Association of Colleges of Pharmacy representative to the Agency for Healthcare Research and Quality Effective Health Care Program Pharmacy Workgroup.

Victoria Menzies, Ph.D., R.N., PMHCNS-BC, School of Nursing, appointed to the editorial board, *Arthritis Care & Research*.

Sheldon M. Retchin, M.D., M.S.P.H., VCU Health System and VCU Health Sciences, elected 2012-13 National Association of Public Hospitals and Health Systems executive committee member.

Arun Sanyal, M.D., Department of Internal Medicine, received the Ranbaxy Research Award in the field of Medical Sciences – Clinical Research, Ranbaxy Foundation.

Evan Sisson, Pharm.D., School of Pharmacy, appointed to the editorial board, *The Diabetes Educator*.

Kenneth White, Ph.D., the Sentara Professor in Health Administration in the School of Allied Health Professions and professor in the School of Nursing, inducted as a fellow during the American Academy of Nursing's 39th annual meeting.

Leslie Wyatt, Children's Hospital of Richmond at VCU, received a 2012 Outstanding Women Award, YWCA of Richmond.

Victor Yanchick, Ph.D., School of Pharmacy, named to the editorial team, *Libyan Journal of Pharmacy and Clinical Pharmacology*.

Leadership

Michael Rao, Ph.D.
President, VCU and VCU Health System



Sheldon M. Retchin, M.D., M.S.P.H.
CEO, VCU Health System, and senior vice president, VCU Health Sciences

John F. Duval
CEO, MCV Hospitals, VCU Health System



Jerome F. Strauss III, M.D., Ph.D.
Dean, VCU School of Medicine, and executive vice president for medical affairs, VCU Health System

John D. Ward, M.D.
President, MCV Physicians, VCU Health System



Nancy F. Langston, Ph.D., R.N., FAAN
Dean, VCU School of Nursing

Cecil B. Drain, Ph.D., CRNA, FAAN
Dean, VCU School of Allied Health Professions



David C. Sarrett, D.M.D., M.S.
Dean, VCU School of Dentistry, and associate vice president, faculty affairs, VCU Health Sciences

Victor A. Yanchick, Ph.D.
Dean, VCU School of Pharmacy



Jay Bonfili, M.P.A.
Associate vice president, finance and administration, VCU Health Sciences

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Mr. Stuart C. Siegel

Financial report

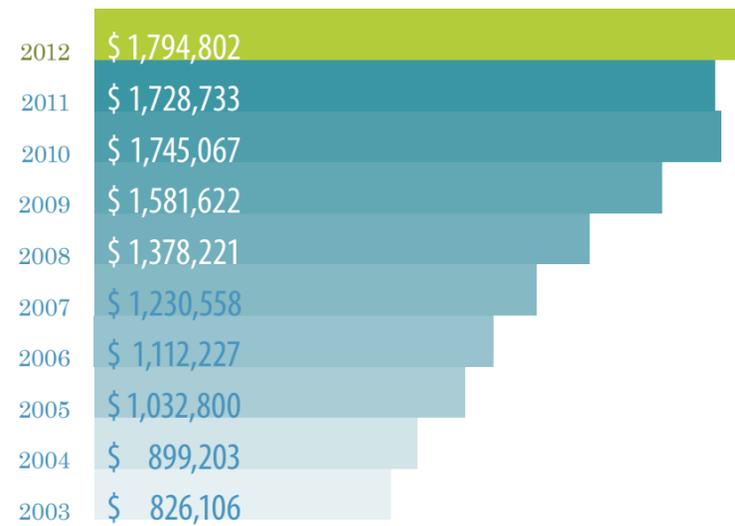
VCU Health System financial statement*

Total operating revenue	\$1,794,802	Supplies	\$ 245,895
Net income/(loss)	\$ 133,645	Purchased services and other expenses	\$ 180,746
Nonoperating revenues and expenses	\$ 448	Depreciation and amortization	\$ 58,309
Salaries, wages and benefits	\$ 748,133	Medical claims expense	\$ 428,522

(in thousands for fiscal years ending June 30)

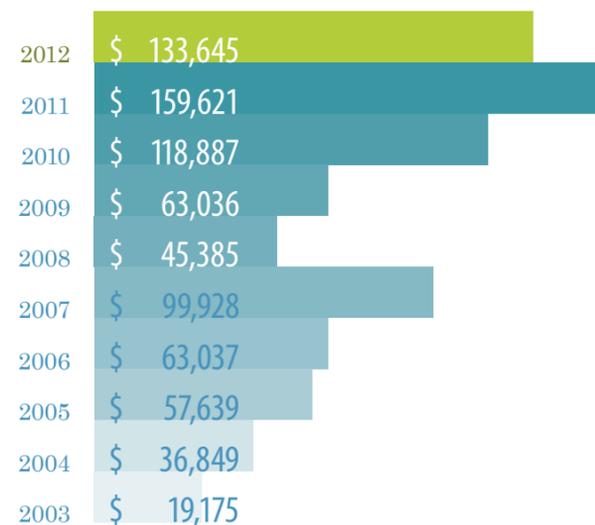
* includes VCU Health System components: MCV Hospitals, MCV Physicians, Virginia Premier Health Plan, Carolina Crescent Health Plan, Children's Hospital of Richmond at VCU, University Health Services (UHS) and UHS Professional Education Programs (UHS PEP)

Total operating revenue



(in thousands for fiscal years ending June 30)

Net income/(loss)



(in thousands for fiscal years ending June 30)

S&P rating
Outlook: Stable
AA-

Moody's rating
Outlook: Positive
A1



Through the lives of those we touch, we tell our story.

"It's just awesome to see him now from where he's been. And he would not be here today if it wasn't for the staff in the NICU."

– Paula Belmonte (Page 5)

"I wanted to thank them for the big role they've played in my recovery. And I wanted to have the poems hanging in the burn center to inspire other patients and provide comfort to those going through some level of trauma."

– Tony Carr (Page 11)

"Everyone was just so sincere and present with my mother, not to mention compassionate and accessible and reassuring, which is the best gift you can give a daughter."

– Cathy Wilson (Page 35)



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