

WORKING SIDE BY SIDE

Community Benefits Report 2018



QUICK STATS



11

hospitals

250

outpatient locations

2,673

inpatient beds

2,800

physicians

30,000

employees

5,700

students and trainees

\$8.8 b

annual economic impact

\$89.1 m

annual charity care

For more details, see pages 2, 18, 19, 21

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On the cover:

Inpatient pharmacy staff and trainees at Emory University Hospital Midtown. Front cover, l to r: Candice Sanders, Michael

Stuckey, Shawn Lubic, Reggie Thomas, Alacia Troutman, Jessica Hicks, Ivory Childs. Back cover, l to r: Alex Medders, Shailly Shah, Karen Hamilton, Lauren Riley, Montalita Burch, Jessica Walton, Erich Brechtelsbauer

Patient stories throughout this book are real, but patients' names and identities have been changed to protect their privacy.

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WORKING SIDE BY SIDE

Collective efforts to serve patients and community

Few people in Atlanta's history have ever made such a lasting impact as our center's namesake, Robert W. Woodruff. It was largely his vision, leadership, kindness, and generosity that helped make Atlanta a dynamic, world-class city with a highly diverse and rapidly growing population.



That dynamic population brings increasingly complex health challenges to which no one medical professional can possibly have all the answers. Instead, modern health and healing require interdisciplinary, interprofessional teams working

side by side across education, research, and clinical care to most effectively prevent and treat disease.

Working side by side harnesses the extraordinary talents of our medical professionals, educators, and investigators to improve quality of life for all the people we serve. Through the collective efforts and dedication of our entire Woodruff Health Sciences Center, we provide value to our patients and our community and help ensure continued health and well-being for the city, the state, the region, and beyond.

Jonathan S. Lewin, MD

Executive Vice President for Health Affairs, Emory University

Executive Director, Woodruff Health Sciences Center

President, CEO, and Chairman of the Board, Emory Healthcare



SUSTAINING A VISION FOR THE COMMUNITY

Robert W. Woodruff—the health sciences center's namesake and longtime leader of The Coca-Cola Company—dedicated his life to supporting the community, and his legacy lives on in work like that described herein.

Charity care in Emory Healthcare

EMORY HEALTHCARE PROVIDED \$89.1 MILLION IN CHARITY CARE IN FISCAL YEAR 2017-2018. "Charity care" includes (1) indigent care for patients with no health insurance, not even Medicaid or Medicare, and no resources of their own and (2) catastrophic care for patients who may have some coverage but for whom health care bills are so large that paying them would be permanently life-shattering.

The box below details the charity care provided at individual Emory Healthcare facilities. Included elsewhere in this book is information about uncompensated care provided by Emory physicians who practice at Grady Memorial Hospital and at other facilities.

In addition to charity care, Emory Healthcare provides many other services to help improve access to care, advance medical knowledge, and relieve or reduce dependence on taxpayer-funded community efforts. In fiscal year 2017-2018, this total for Emory Healthcare was \$102.7 million. Examples of what this total includes are as follows:

- \$61.4 million shortfall between Emory Healthcare's cost to provide care to Medicaid patients and Medicaid reimbursement
- \$27.7 million in costs to Emory Healthcare for the Georgia provider tax, which supports the state's Medicaid budget and helps maintain payment levels for all Medicaid providers
- \$13.6 million for activities such as discounted/free prescription drug programs; programs and contracted services for indigent patients; in-kind donations to organizations such as MedShare; transportation services; flu shots; blood drives; subsidized continuing care, nursing home care, and home care; sponsorship of selected charity health awareness events; and educational programs for the public, future health professionals, and patients

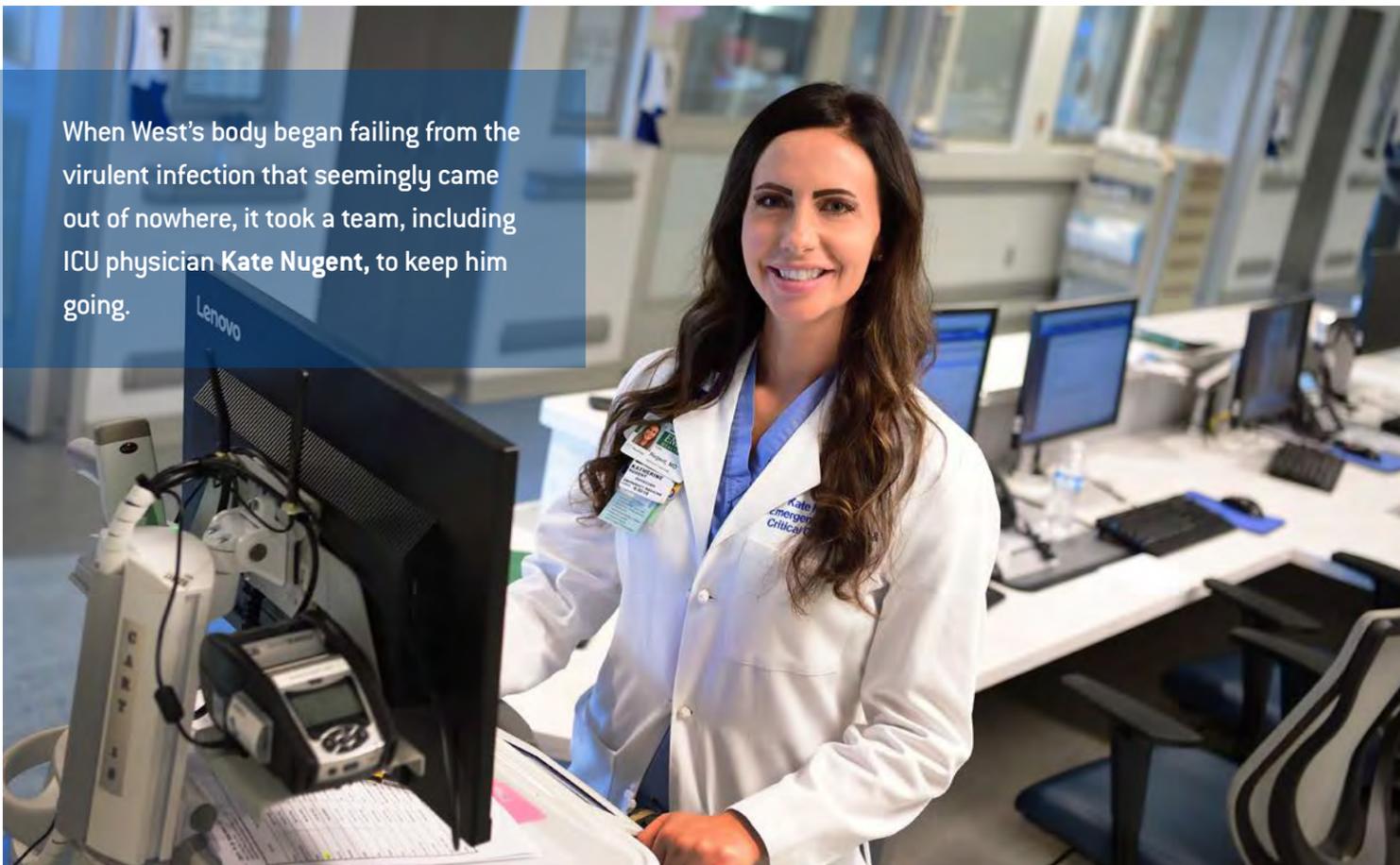
Charity care totals

Fiscal year 2017–2018

	(millions)
Emory University Hospital and Emory University Orthopaedics & Spine Hospital	\$27.4
Emory University Hospital Midtown	27.2
Emory Rehabilitation Hospital	1.9
Emory Saint Joseph's Hospital	6.2
Emory Johns Creek Hospital	1.8
Emory Clinic and Emory Specialty Associates	24.4
Budd Terrace skilled nursing facility	0.2
Total	\$89.1



When West's body began failing from the virulent infection that seemingly came out of nowhere, it took a team, including ICU physician Kate Nugent, to keep him going.



In disaster, courage (and support) count

BRAD WEST WAS TIRELESS. HE RUSHED HOME FROM HIS LANDSCAPING JOB TO WORK IN HIS OWN GARDEN, PLAY BASKETBALL WITH HIS SON, VOLUNTEER AT CHURCH. When he developed fever and chills, the 35-year-old assumed he would soon shake it off. But he had never before faced streptococcal bacteremia (and never found out where the uncommon infection came from). By the time he got to Emory University Hospital, the bacteria already had released chemicals in his bloodstream, setting off inflammatory responses throughout his body, lowering his blood pressure and reducing the heart's ability to pump blood to vital organs.

Despite a course of increasingly stronger IV antibiotics and blood pressure support, West's condition rapidly worsened. At one point, his heart spiraled into an abnormal rapid beat, requiring the ICU team to shock it back into a stable rhythm. Shortness of breath progressed to reliance on a mechanical ventilator. Dialysis was initiated to support his kidneys. Dry gangrene began spreading across his arms and legs as his skin and soft tissue died from lack of blood.

Halting deadly spread of the infection would require amputation. Surgeons Thomas Dodson and Robert Fang were called in to save the young man's life.

After two months of intensive care, the bacteremia was gone, and West's heart, lungs, kidneys, and other organs had recovered. But he now had to learn to cope without his legs and arms. His bravery, determination, and unquenchable good nature and the support of his wife and extended family in the face of this disaster had an enormous impact on the team caring for him, including Dodson, ICU doctors Kate Nugent and Prem Kandiah, bedside nurses, ICU social worker Courtney Faulkner, physical therapist Primrose Mlilo, occupational therapist Rebekah Kirk, and speech therapist Stuart Schleuse. They encouraged West as he healed and prepared to get his prosthetic limbs. Since West had no insurance, Emory set in motion his application for Medicaid. In the meantime, the hospital wrote off more than \$770,000 in bills.

Continuing care after hospitalization

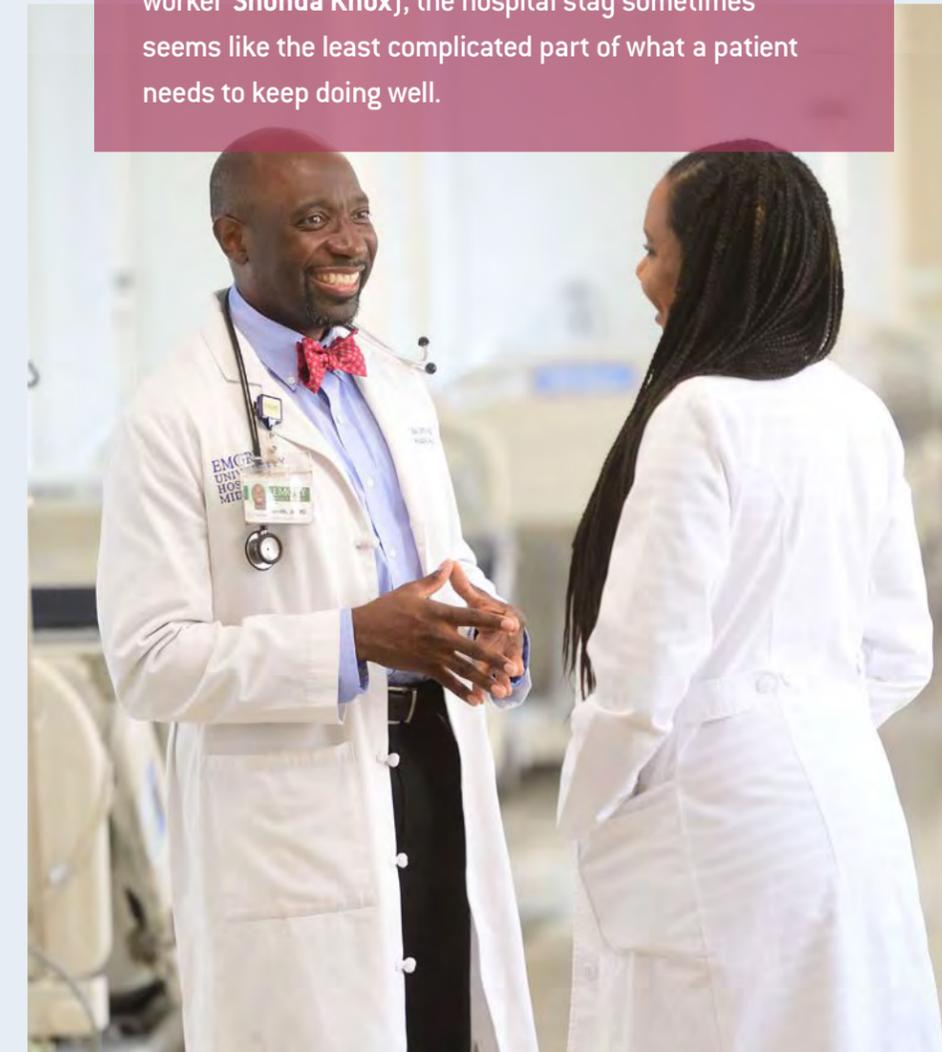
BEFORE MYRA COLLINS ARRIVED AT EMORY UNIVERSITY HOSPITAL MIDTOWN'S EMERGENCY ROOM, SHE HAD BEEN LIVING IN A PERSONAL CARE HOME. An aunt checked in on her regularly, but Collins required more care than she could provide. The 48-year-old woman could barely see, was hard of hearing, and had moderate cognitive disability.

At Emory Midtown, she received swift, textbook-perfect treatment for rectal cancer, including surgery and chemotherapy. Collins seemed to settle in. She smiled when doctors and nurses asked her how she was doing, and she responded to the warmth and patience of the nurses teaching her about her colostomy.

Soon, she was in stable condition. According to protocol, she was ready for discharge, with the need to return for daily outpatient radiation and follow-up on her colostomy. But her care team did not believe, given her challenges and the limits of the personal care home where she had been living, that she would be able to manage logistics of transportation, appointments, and colostomy care. Her case was presented at the hospital's Complex Patient Care Committee, headed by Willie Smith, medical director of care coordination. The committee, consisting of various clinicians and social workers, routinely sees patients like Collins whose complex personal situations create "barriers to discharge." The committee works hard to find ways to overcome these barriers and ensure all patients have a safe discharge back into the community or to another level of care.

After hearing Collins' case, the committee decided she could leave the hospital—but not return to where she had been living. Oncology social worker Shonda Knox arranged a six-week stay in a closer, more experienced personal care home. She also coordinated transportation for Collins' various medical appointments. Medicaid and Medicare had paid

According to hospitalist Willie Smith (here with social worker Shonda Knox), the hospital stay sometimes seems like the least complicated part of what a patient needs to keep doing well.



Collins' medical costs while she was an inpatient. But from the moment she checked out, housing, transportation, medical, and other costs all were paid by Emory Midtown. The hospital arranged for Collins to receive mail-order colostomy supplies at no cost and is now working with Collins' relatives to see if Medicaid/Medicare will agree to let her stay in the personal care home that has been so helpful. It's all part of getting patients well.

Walking on her own

IT WAS ANOTHER LOW-KEY FRIDAY EVENING, WITH A FAVORITE TV SHOW ABOUT TO START, WHEN LOUISE LEVINE'S HUSBAND HEARD A GARBLED YELL. He found his wife on the kitchen floor, moaning, one hand to her head. When he tried to help her up, she stumbled, and her left arm hung uselessly. At Emory University Hospital, Levine was diagnosed with intracranial hemorrhage, the least common but most dangerous type of stroke. She was barely 25, but hypertension and lupus had increased her risk.

The neurosurgical team repaired the torn artery, relieving pressure on the brain. After a week of acute care, it was Emory Rehabilitation Hospital's turn. Over the next three weeks, a team of physical, occupational, and speech therapists worked with Levine seven days a week, under the direction of psychiatrist Samuel Milton.

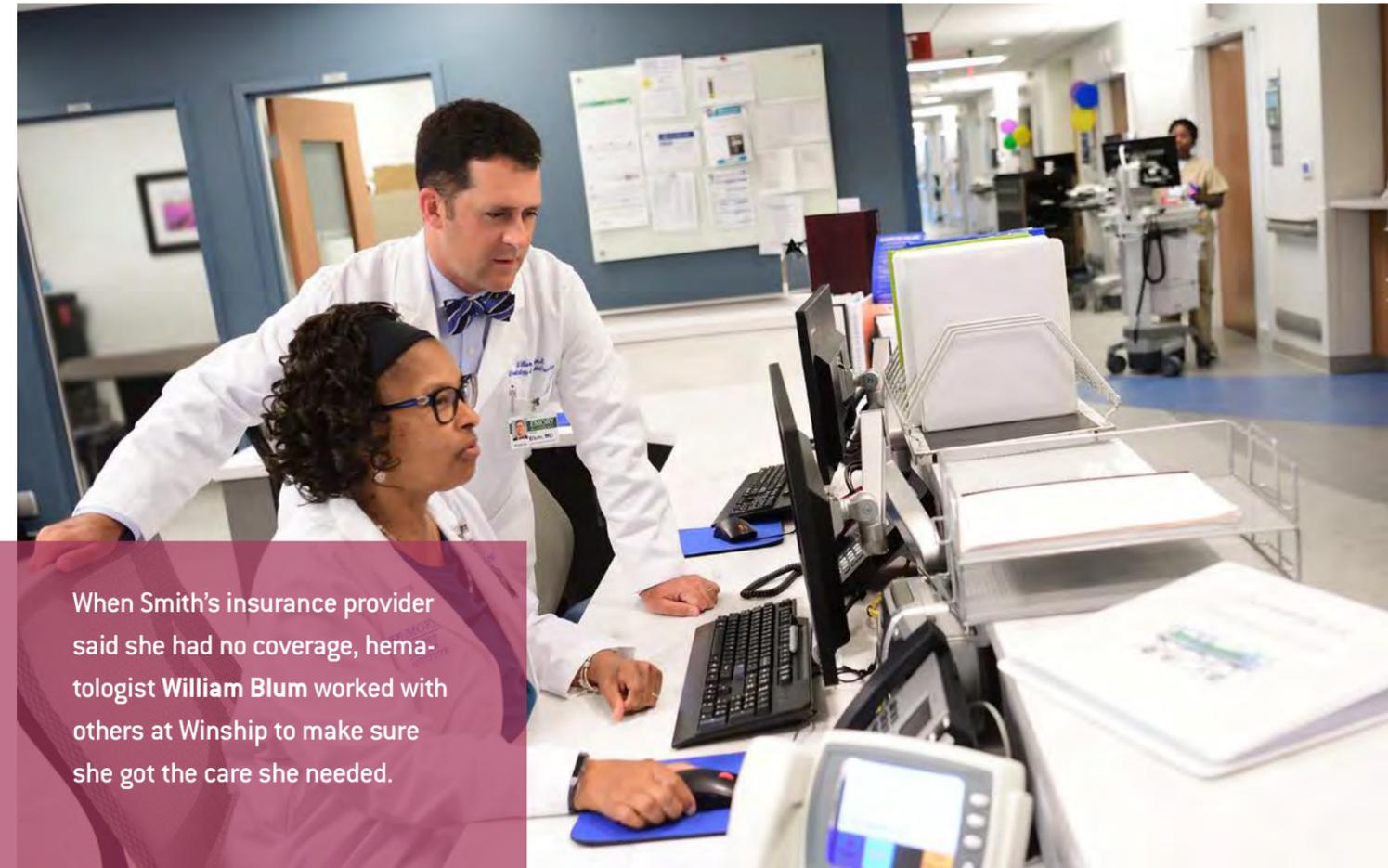
Occupational therapist Beth Terrell did the initial evaluation, determining what assistance Louise needed to bathe, get dressed, go to the bathroom. Levine knew her left leg was weak, but she seemed completely inattentive to her left arm,

as if she didn't recognize it as part of her body. Terrell had seen this before with stroke patients. She taught Levine to pay attention to the "dead" arm, positioning it to protect her elbow and wrist joints and using a sling to protect her shoulder. With lots of help from the therapy team, Levine slowly regained the ability to walk, talk, and eat. With her right hand, she could brush her teeth and use her cell phone. Her memory and problem solving improved.

Given her devastating diagnosis, her family considers her recovery a great success. Part of the credit goes to the hard work of Louise, her husband, and sisters, who attended the hospital's family education sessions to learn how to help with therapy and modify the home environment.

But none of her recovery would have been possible without tens of thousands of dollars in care at Emory University Hospital and Emory Rehabilitation Hospital. Since the young couple had neither insurance nor savings, there would be no reimbursement for these services. Except, says Terrell, for that smile on Levine's face as she left, walking on her own.

Occupational therapist Beth Terrell was part of a team of physical, occupational, and speech therapists who got Levine back on her feet after a hemorrhagic stroke.



When Smith's insurance provider said she had no coverage, hematologist William Blum worked with others at Winship to make sure she got the care she needed.

In the patient's corner

WHEN LUELLA SMITH GOT SICK, REALLY SICK, SHE REQUESTED MEDICAL LEAVE FROM THE CALL CENTER WHERE SHE WORKED. JUST A FEW WEEKS, UNTIL SHE FELT STRONGER. THREE DAYS LATER, SHE WAS TOLD SHE HAD ACUTE MYELOID LEUKEMIA.

At Winship Cancer Institute, the 45-year-old was scheduled for a bone marrow transplant. Then the notice arrived. Her insurance would no longer pay her medical bills. The company belatedly had realized that Smith was no longer working—and that she had not applied or paid for coverage through COBRA, a federal law that allows employees to continue employer-sponsored insurance for a limited time after leaving work.

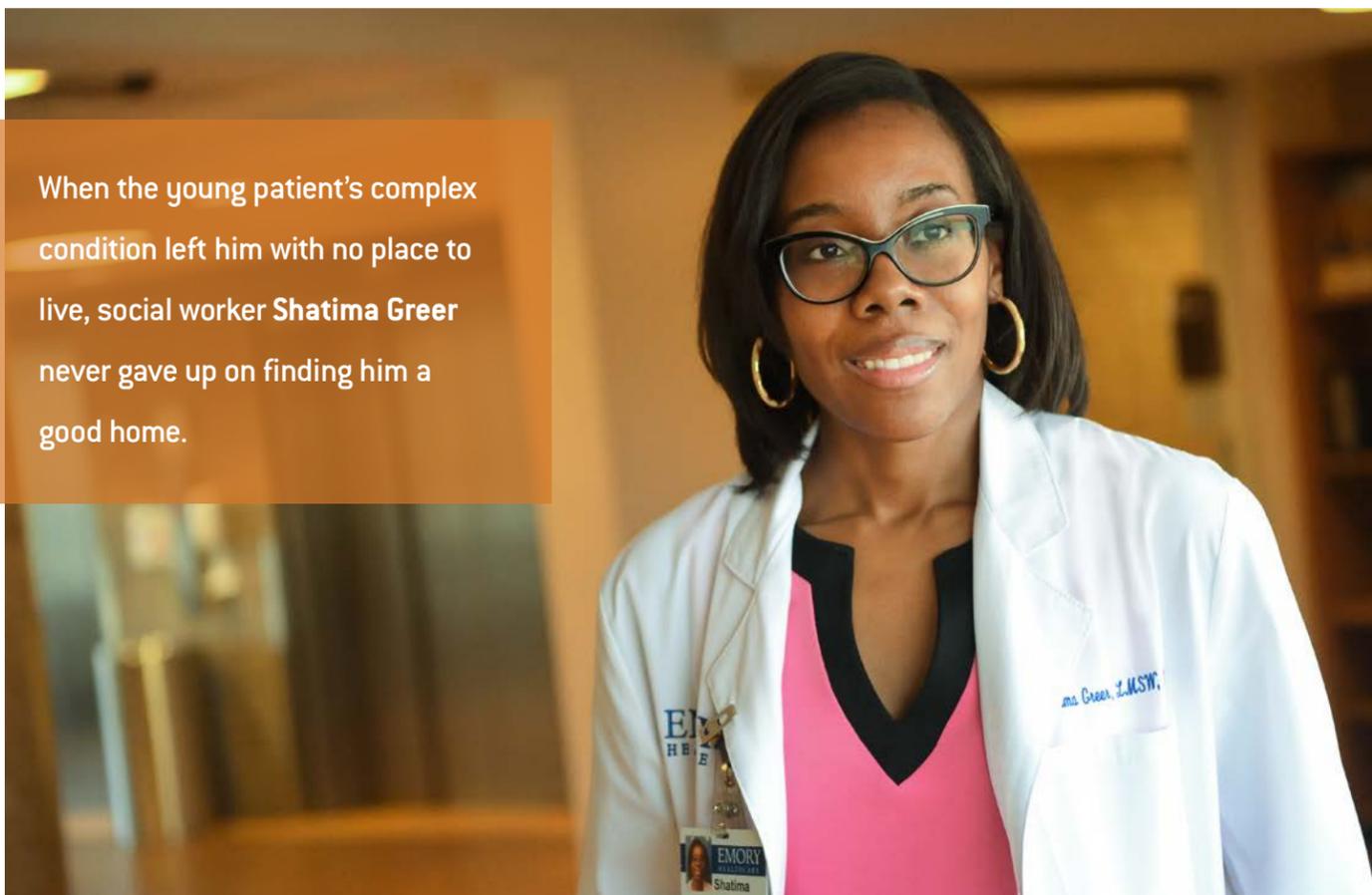
Smith was confused. COBRA? She didn't remember anyone ever mentioning this. Since she was on medical leave, she thought she had coverage. No? How could she reimburse the insurance company for what they had already paid Emory? And how would she pay hundreds of

thousands of dollars for the scheduled transplant and long recovery time?

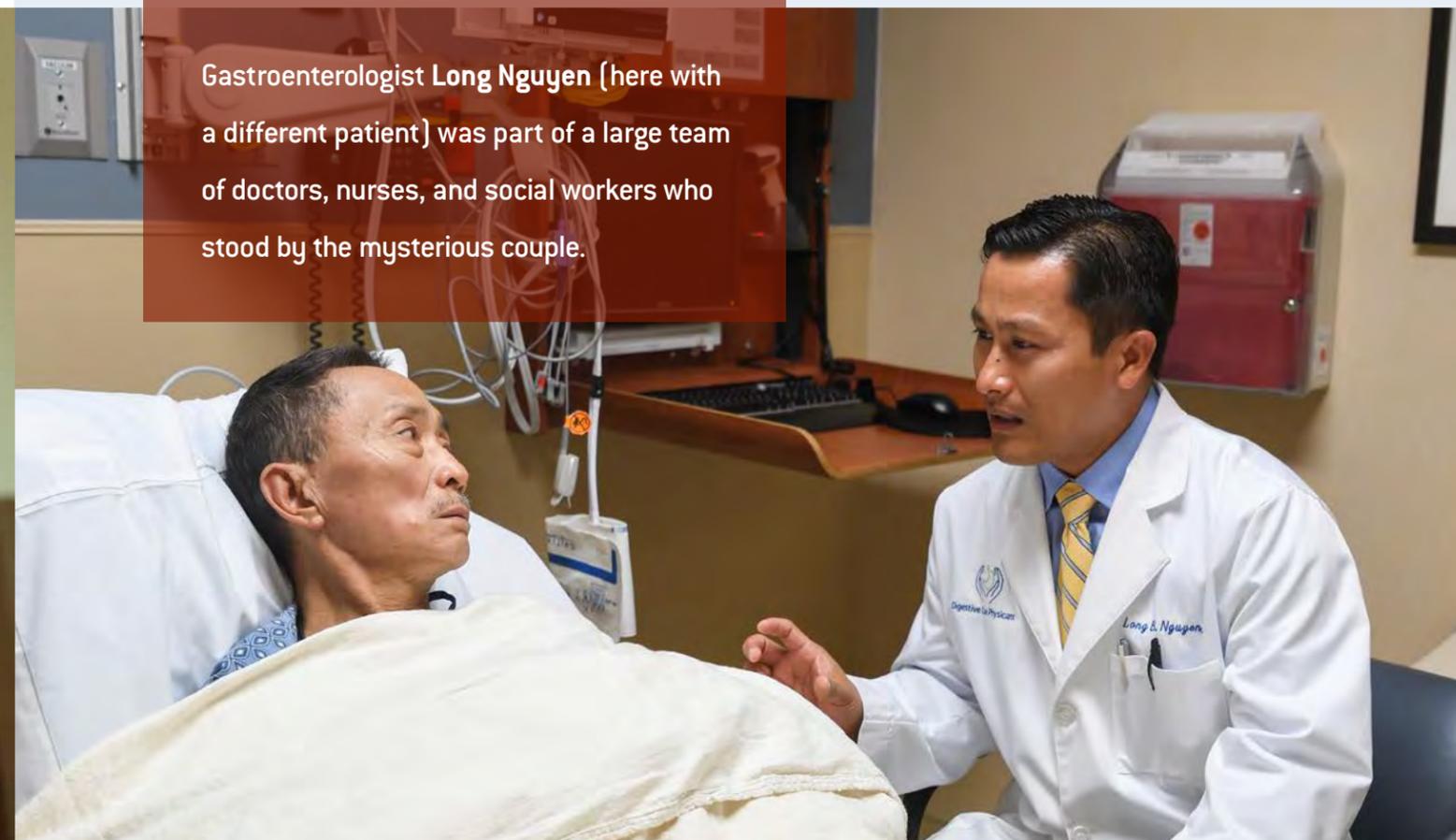
Hematologist William Blum and the transplant team stayed focused on Smith's medical case. Financial counseling manager Adam Yasin took up her financial case. After a review of her income (none) and resources (few), her expenses were deemed charity care, meaning Emory Healthcare would not be reimbursed. Now, as Smith recovers from a successful transplant, Yasin is acting as her advocate, helping her appeal to be able to sign up for COBRA retroactively, based on not having been given a proper opportunity to do so when she left. If she succeeds, her insurance company will pay for medical costs incurred. If she is not allowed to begin COBRA, then Emory Healthcare itself will cover her medical costs, including the transplant.

Yasin says, "She's sick and without many people in her corner. Emory wasn't going to abandon her."

When the young patient's complex condition left him with no place to live, social worker Shatima Greer never gave up on finding him a good home.



Gastroenterologist Long Nguyen (here with a different patient) was part of a large team of doctors, nurses, and social workers who stood by the mysterious couple.



Identifying all viable options

WHEN THE NORMALLY TALKATIVE 20-YEAR-OLD SUDDENLY GREW SILENT AND CONFUSED, HIS COUSIN BROUGHT HIM TO THE EMERGENCY ROOM AT EMORY SAINT JOSEPH'S HOSPITAL. Tests showed that Samuel Oni had suffered a stroke. Unable to swallow, he was given a nasogastric feeding tube. He was also diagnosed positive for tuberculosis.

After months of care by neurologists, infectious disease specialists, surgeons, hospitalists, nurses, and therapists, Oni regained most of his cognitive function and began to walk. He no longer required hospitalization—but someone needed to be with him at all times.

When his cousin could not take him in, social worker Shatima Greer set out to find a place for him to go. Shelters weren't a possibility, and no one from Oni's large Nigerian community could find a place with around-the-clock supervision. Finally, Greer called Oni's father in Nigeria. He loved his son but was terrified by feeding tube responsibilities. Time passed. By the time his feeding tube could be removed, Oni had been in the hospital almost three months. Now he can

come, said his father. The hospital paid for airline tickets for Oni and an employee of the medical transport agency who would accompany him.

The day before departure, the agency realized that Nigeria required visas, which their employee didn't have. Greer didn't take time to be furious. She called the father, who found an Atlanta friend of a friend of a friend, who had dual citizenship and was willing to accompany Oni. A week later, thanks to the hospital, he was headed home with a month's supply of medicines and a plan established by Greer through the county health department and the Centers for Disease Control and Prevention to assure that he continued TB treatment.

Oni's student visa had expired because of a missed paperwork deadline, leaving him ineligible for federal resources during his 90 days of hospitalization and medical care. That left the hospital on its own for almost half a million dollars in unreimbursed costs. But Greer recently checked in with Oni, who is doing much better and sends everyone many thanks.

Comforting a couple in need

THE COUPLE APPEARED AT EMORY JOHNS CREEK HOSPITAL EMERGENCY ROOM ALONE. THEY SPOKE NO ENGLISH. Diagnosis of the woman's condition proved the easiest part of the riddle. Cirrhosis and hepatitis C. Obstructed blood flow to the liver. Poorly functioning kidneys.

But who were these people, this woman in pain, with yellowed eyes and swollen belly, this distraught man? Using the hospital's translation line, the Korean interpreter was unable to learn very much. The wife, Seo-Yun, had been treated at another hospital but never went back. That was it.

Over the next 18 months, the couple returned 12 times. The devoted husband always slept by his wife's bed. His wife always encouraged her husband to eat from her tray.

As clinicians led by gastroenterologist Long Nguyen worked on care, social workers led by Catherine Crumrine tried to help with resources. She found that the couple was ineligible for government benefits since their visas had expired. (Perhaps that was why they were so private.) The husband, Joo-Won, spoke of a son—such a good boy,

so devoted—but he never called. Was he still in Korea? Estranged? Deceased? Imaginary?

What was real was the care. Dr. Nguyen saw the woman every admission, as did an entourage of cardiologists, nephrologists, hospitalists, and nurses. Seo-Yun was too sick for surgery, but the fluid in her abdomen was drained several times, relieving pressure and pain. The social work team tapped the hospital's HUGS Fund and the generosity of pharmaceutical companies to get medicine. Concerned nurses pooled their own money to make sure the husband was eating properly.

The two disappeared regularly, then suddenly reappeared, out of nowhere, Joo-Won literally falling to his knees and grasping the hand of the clinician or social worker in gratitude. After Seo-Yun died in the hospice arranged by Crumrine, Joo-Won disappeared for good. What remained was \$480,000 dollars in unreimbursed costs—and a sense of satisfaction that the doctors, nurses, and social workers had done all that they could do for this sad and mysterious couple.

Providing 80% of the care at the publicly funded Grady Hospital, Emory faculty and residents lead programs focused on problems experienced disproportionately by indigent, underserved populations. In 2017-2018, Emory faculty provided \$36.3 million in uncompensated care at Grady. All payments for Emory services for patients who have coverage go to the Emory Medical Care Foundation, which uses this revenue—\$53.1 million last year—to support Emory's mission at Grady. Right: Neurologist Raul Nogueira



Widening the treatment window for stroke

BEN FOSTER THOUGHT HE WAS DREAMING. HE COULDN'T MOVE HIS RIGHT SIDE. A WOMAN IN BED NEXT TO HIM WAS YELLING, BUT HE COULDN'T UNDERSTAND HER, COULDN'T QUITE RECALL HER NAME.

Foster's stroke had occurred at night, meaning no one knew the last time he had been OK. The doctor at the local hospital told his frantic wife that too much time had passed for an intravenous infusion of tPA to dissolve the blood clot causing the stroke. That treatment window closed after 4.5 hours. Her husband needed a specialist who could remove the clot by snaking a catheter up through the large artery in the thigh to where it was blocking blood flow to the brain. Foster's doctor called Raul Nogueira, director of the neuroendovascular service at Grady Hospital, to say the 68-year-old was on the way.

The Marcus Stroke & Neuroscience Center at Grady has one of the largest thrombectomy programs in the country, performing more than 300 such procedures a year. One of the country's most experienced interventional neurologists,

Nogueira also recently helped change the guidelines for use of thrombectomy, as co-principal investigator of a large, multi-national clinical trial.

Previous guidelines had recommended that clot removal take place within six hours of stroke onset. The clinical trial found that thrombectomy could make a significant difference in outcomes in properly selected patients even when performed up to 24 hours after a stroke began.

For years, even before the study, Nogueira had asked families if they wanted thrombectomy, the best he or anyone could do to try to prevent the almost certain devastating result of severe strokes. No one had ever refused. For many, the decision significantly improved recovery. As the new guidelines increase thrombectomy by an estimated 40% nationwide, thousands will have access to those same better results.

Foster gained some movement right after the procedure. Three days later, he was walking independently and talking to the woman whose name he hoped never again to forget!

Treating PTSD and depression

LIKE MANY OF THE VETERANS WHOM PSYCHIATRIST ALIZA WINGO SEES AT HER CLINIC AT THE ATLANTA VETERANS AFFAIRS MEDICAL CENTER, JOE RITCHIE HAD SYMPTOMS OF BOTH POST-TRAUMATIC STRESS DISORDER (PTSD) AND DEPRESSION. Wingo wants to understand how the two conditions interact. Why are some people resilient in the face of traumatic events, while others, like Ritchie, struggle to cope and sink into depression?

Some of the reasons may be genetic. Wingo and her colleagues have discovered that among genes regulating the stress response, one is significantly less active in patients with simultaneous PTSD and depression than in people without this double diagnosis. Another genetic variant discovered by her team, a gene in the brain's reward circuitry, is connected to positive emotions. Wingo hopes understanding these mechanisms will point to treatments that will increase the 35% improvement rate now seen with medication and psychotherapy for patients like Ritchie.

Ritchie's PTSD and depression can be traced to his experiences in the battlefield. These include three years of mortar

and rockets, having to bag bodies after IED explosions, and the unexpected suicide of his best friend. When Wingo first examined him, she looked for anxiety and mood disorders, suicidal thoughts, substance abuse, and other risk factors. She also assessed protective factors like a supportive family, belonging to a religious community, strong social networks, even having someone to talk to.

In addition to state-of-the-art treatment, she recommended that Ritchie develop hobbies and activities he enjoys, helping him set goals and make social connections. "Get sufficient sleep, exercise frequently, set small goals for yourself," she advised, "all of which will help you cope with stress."

It's working. And Wingo's research continues on psychological well-being (having positive emotions, inner peace, life satisfaction, a sense of purpose and meaning in life), its genetic and molecular mechanisms, and its ability to mitigate risks not only of PTSD and depression but also of cardiovascular disease, diabetes, stroke, and dementia.



Emory and the Atlanta VA Medical Center have been partners since 1946. Emory provides physician care at the facility and has made it one of the nation's most successful VA centers for research to improve care for veterans. Emory investigators attracted more than \$15 million in VA funding and \$10 million in non-VA funding for such research last year.

Psychiatrist Aliza Wingo translates her research on molecular mechanisms underlying PTSD and depression into concrete recommendations to increase emotional well-being for the many veterans she treats every year.





Last May, the team at Emory's Serious Communicable Diseases Unit and the Grady Hospital EMS Biosafety Transport team **took part in a nationwide exercise testing the capacity of specialty units across the country to intake patients infected with special pathogens.**

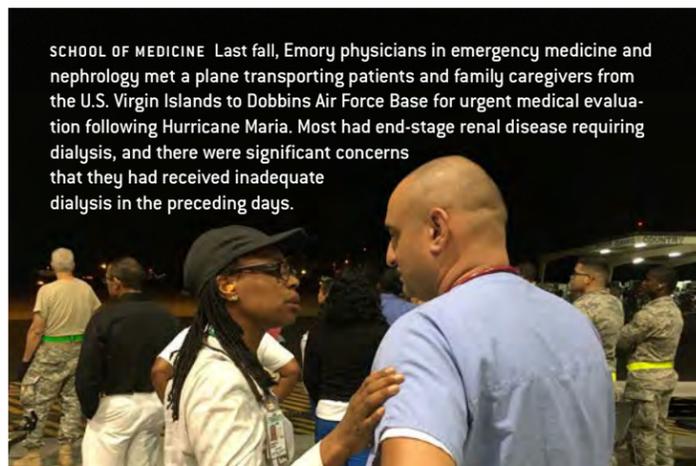
Helping neighbors near and far

Serving the community and teaching others how to do so undergirds the missions of teaching, learning, discovery, and care in Emory's Woodruff Health Sciences Center.

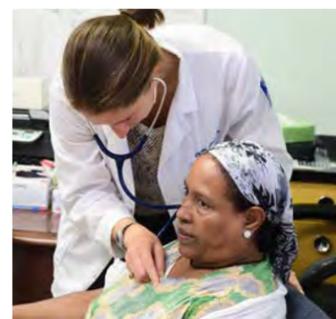
EMORY HEALTHCARE Last December, staff at Emory University Hospital Midtown teamed with Atlanta's HEALing Community Center, a federally qualified health center in southwest Atlanta, to donate toiletries and school supplies for the needy.



EMORY HEALTHCARE A recently launched telemedicine program provides acute renal consults for hospitals in rural Georgia that don't have on-site nephrologists or in-house dialysis programs so patients can stay closer to home for dialysis. Also aimed at making care more convenient is a new partnership between Emory cardiologists and nephrologists to combine dialysis visits with routine screening for heart disease.

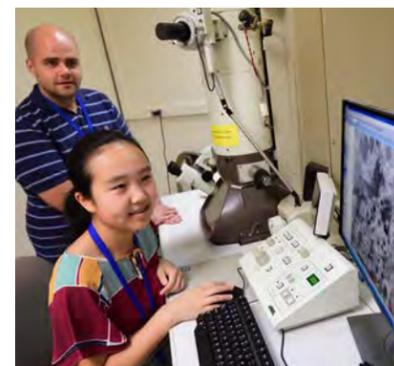


SCHOOL OF MEDICINE Last fall, Emory physicians in emergency medicine and nephrology met a plane transporting patients and family caregivers from the U.S. Virgin Islands to Dobbins Air Force Base for urgent medical evaluation following Hurricane Maria. Most had end-stage renal disease requiring dialysis, and there were significant concerns that they had received inadequate dialysis in the preceding days.

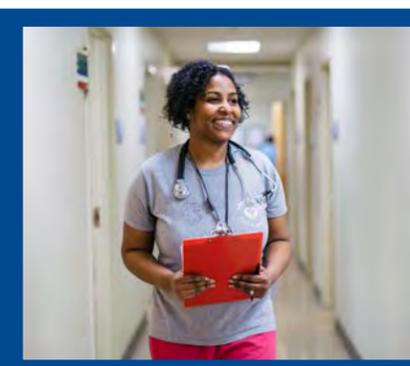


SCHOOL OF MEDICINE Under supervision of faculty, medical students see patients in free medical clinics at the Clarkston Community Health Center and at Atlanta's Gateway Center.

WINSHIP CANCER INSTITUTE Winship is tripling the size of its Phase 1 Clinical Trials Unit, which will allow for more first-in-human trials of new therapies. They used a life-sized cardboard model to design the unit to provide the best possible environment for patients and staff.



YERKES NATIONAL PRIMATE RESEARCH CENTER Christina Huang was one of several local high school students who spent time this past summer in a lab at Yerkes to learn firsthand about neuroscience research. Postdoc Dan Albaugh (background) studies how brain circuits are disrupted in Parkinson's disease.



SCHOOL OF NURSING Emory nursing students will learn to play a greater role in community-based primary care through a new partnership with Mercy Care of Atlanta, a federally qualified health center with several stand-alone and mobile health clinics in Atlanta providing services for the homeless.

THE EMORY GLOBAL HEALTH INSTITUTE leads the Child Health and Mortality Prevention and Surveillance Network (CHAMPS), which is funded by the Gates Foundation to help countries with high child mortality strengthen their capability to collect, analyze, interpret, and share data to inform public policy. Established in 2015, CHAMPS now has sites in seven countries. Below: Bangladeshi women gather for a focus group to assess their perceptions of an arsenic-filtering water treatment plant implemented in their community.



ROLLINS SCHOOL OF PUBLIC HEALTH Rollins professor Kelli Komro has studied two interventions to curb teen drinking in the Cherokee Nation in northeast Oklahoma, one encouraging adults to actively engage with community leaders and law enforcement to change attitudes and practices toward underage drinking and the other aimed at teens themselves.



SCHOOL OF MEDICINE Every six months, Emory ophthalmologist Soroosh Bahshad leads a group from Emory to treat eye problems in people living in a Syrian refugee camp in Jordan.



EMORY HEALTHCARE Various community health education events take place at Emory hospitals throughout the year, including health screenings for women (left, Emory Johns Creek Hospital) and a year-long diabetes prevention program sponsored by Emory Saint Joseph's Hospital (right).



SCHOOL OF NURSING Fekadu Aga and Daniel Mengistu will soon become the first students to complete their PhD in nursing in a PhD program established by Emory's nursing school with Addis Ababa University in 2015. Currently, 12 students are enrolled in the program.



WINSHIP CANCER INSTITUTE Each year, the Winship Summer Scholars Program gives high school students the opportunity to work alongside cancer researchers in the lab to learn about a career in scientific research.



Students increasingly are learning in interdisciplinary teams to prepare them for a workplace in which teamwork is the norm.

- ||| Emory Healthcare provided \$103.3 million to support teaching and research missions in the Woodruff Health Sciences Center in fiscal year 2017-2018.
- ||| The Woodruff Health Sciences Center invested 23.4% of its tuition income last year in financial aid for its students, an amount totaling \$28.9 million.

- Emory University School of Medicine**
- 556 medical students, including 93 MD/PhD students
 - 1,311 residents and fellows
 - 530 students in allied health training, such as physical therapy and physician assistant programs
- Rollins School of Public Health**
- 1,164 master's and 180 PhD students
- Neill Hodgson Woodruff School of Nursing**
- 491 bachelor's, 301 master's, 31 PhD students, 76 DNP students

Teaching tomorrow's health professionals

THE WOODRUFF HEALTH SCIENCES CENTER INTEGRATES STRENGTHS OF ITS VARIED COMPONENTS (SEE PAGE 21) TO HELP SERVE STUDENTS AND TRAINEES BETTER.

The center recently created the Woodruff Health Educators Academy, for example, to give teaching across the health sciences more structure and foundation and provide more opportunities for interprofessional collaboration among faculty in medicine, nursing, and public health. One goal is to give students more opportunities to learn in interprofessional teams so their education more accurately mirrors the team dynamic on which workplaces increasingly depend.

The benefits of team training are quickly apparent. A residency program trains nurse practitioners and physician assistants to practice in critical care medicine, thus helping compensate for physician shortages in this area and providing staffing for rural hospitals with otherwise little access to such expertise.

Another program regularly assembles a team of surgeons,

anesthesiologists, and nurses and simulates different operating room emergencies to help them practice dealing with the unexpected. After each 15-minute scenario (a power outage, for example), they spend 30 minutes debriefing, discussing lessons learned and how those might be translated into action.

The benefits of closer collaboration among schools and units are obvious as well. The nursing school and Emory Healthcare (EHC) are working together to provide the best clinical training opportunities for students at EHC sites and to hire increasing numbers of graduates to fill Emory's own staffing needs.

In EHC's most recent annual quality conference poster competition, a fourth-year, dual-degree student in public health and medicine led the winning team in the student category. These students from public health, medicine, nursing, and business worked to improve interpretation services for patients with unmet language needs at the Clarkston Community Health Center, which serves refugees in Atlanta.

Making research possible

COLLABORATION IS A HALLMARK OF RESEARCH IN THE WOODRUFF HEALTH SCIENCES CENTER.

The center regularly grants "Synergy" awards to incentivize collaboration among researchers from schools and units throughout health sciences and the rest of the university. The eight universities in the Georgia Research Alliance share core service facilities and equipment to avoid duplication of resources and encourage collaboration. And researchers here partner routinely with investigators at other universities and organizations in attracting external funds.

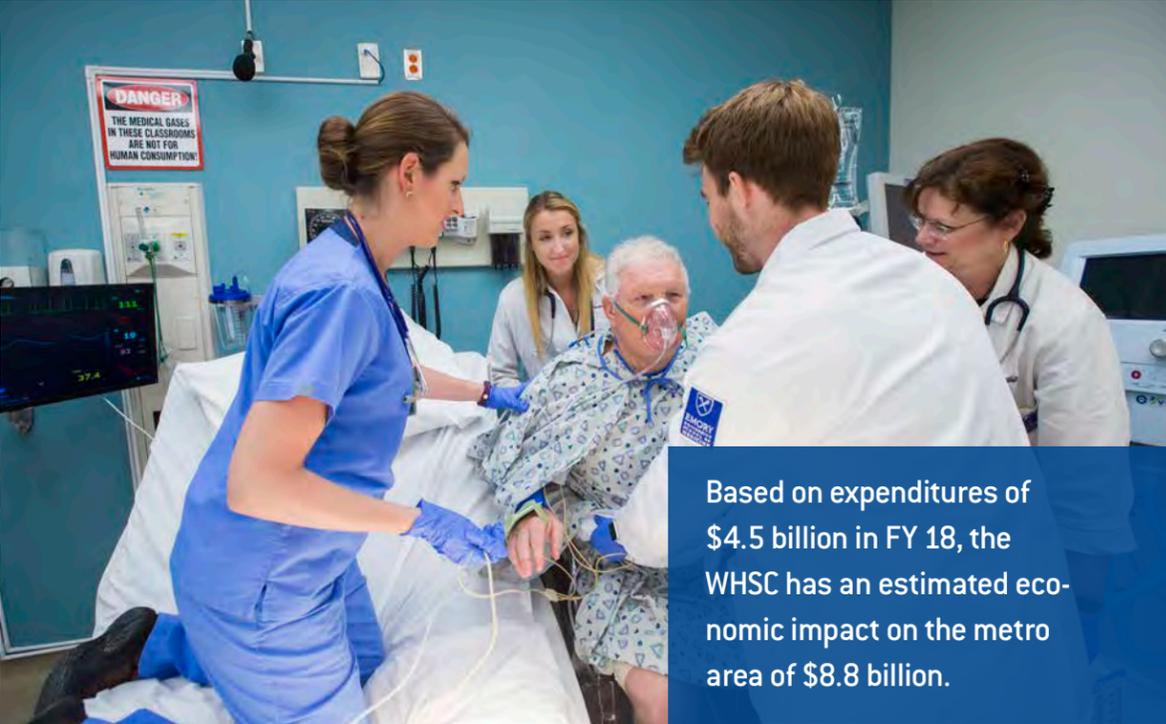
In fiscal year 2017-2018, researchers in the health sciences were awarded \$685.8 million in grants from the NIH and other entities. This includes funds to support the Georgia Clinical & Translational Science Alliance (comprising Emory, Georgia Tech, Morehouse School of Medicine, and

University of Georgia); funds to Emory and Grady Hospital to study Atlanta car crashes and subsequent injury; and funds to create the Marcus Stroke Network to establish the region's first mobile stroke unit, allowing medical teams to administer stroke treatment to patients before they reach the hospital.

Such research is important to patients and society at large, but it involves significant investment on the part of research institutions, requiring building space, heating and air-conditioning, lights, custodial services, administrative management, and more. Each year, Emory covers a large portion of the infrastructure costs for research conducted here. Last year, for example, the Woodruff Health Sciences Center invested \$136.5 million in such support costs unrecovered from research sponsors.



The Woodruff Health Sciences Center invested \$136.5 million in research costs unrecovered from sponsors in fiscal year 2017-2018.



Based on expenditures of \$4.5 billion in FY 18, the WHSC has an estimated economic impact on the metro area of \$8.8 billion.



Spurring the economy

WITH THE ADDITION OF THREE LOCAL HOSPITALS,* THE WOODRUFF HEALTH SCIENCES CENTER (WHSC) HAS ALMOST 30,000 EMPLOYEES THROUGHOUT METRO ATLANTA AND MAKES EMORY THE CITY'S SECOND LARGEST EMPLOYER AS WELL AS THE LARGEST IN DEKALB COUNTY.

The WHSC has an annual \$8.8 billion economic impact on the local economy, deriving not just from jobs but also construction, collaborations, and more.

A new tower, serving as the new “front door” for Emory University Hospital (EUH), opened last year on Clifton Road, making possible current ongoing renovations to the original EUH hospital building across the street. Facilities at Emory University Hospital Midtown and Emory Saint Joseph’s hospitals are undergoing expansion, thanks in part to a new relationship with Kaiser Permanente* in which they will serve as the two primary hospitals for local Kaiser patient members and physicians. A recent \$400 million gift from the Woodruff Foundation will fund construction of a Winship Cancer Institute building on the EUH Midtown campus and a new health sciences research building on the Emory main campus. Much of Emory University, which was recently annexed into the city of Atlanta, is situated on the “Clifton Corridor,” a major employment hub including facilities for the Centers for Disease

Control and Prevention, Children’s Healthcare of Atlanta, and the nearby Atlanta VA Medical Center. The corridor is under consideration regionally for construction of a light rail line, a project that is well positioned to compete against other projects nationally for additional federal funding. If implemented, this would ease traffic for the 50,000 cars passing through the area each day as well as increase opportunities for partnerships between Emory and other local academic institutions.

The Emory Sports Medicine Complex opened in the past year, in partnership with the Atlanta Hawks, whose training facility is part of the complex. In addition to the Hawks, Emory is the official provider for other major local teams, including the Braves, Falcons, and Atlanta Dream.

*Effective Fiscal Year 2019

A recent gift will fund construction of a Winship Cancer Institute building at EUH Midtown and a health sciences research building on the Emory campus.

Value to the community

EMORY’S WOODRUFF HEALTH SCIENCES CENTER BENEFITED THE COMMUNITY IN A VARIETY OF WAYS IN FISCAL YEAR 2017-2018

	(millions)
Cost of charity care provided by Emory Healthcare (page 2)	\$89.1*
Financial aid provided to students from tuition income (page 16)	28.9
Emory Healthcare investment in WHSC teaching and research (page 16)	103.3
WHSC investment in research unrecovered from sponsors (page 17)	136.5
Unreimbursed care provided at Grady Hospital (page 10)	36.3
Investment of Emory Medical Care Foundation in services at Grady Hospital (page 10)	53.1
Other community benefits (page 2)	102.7†
Total (millions)	\$549.9

* In addition to providing charity care, Emory Healthcare conducts ongoing community health needs assessments (CHNAs) for its hospitals as part of its continued commitment to the health and well-being of community members. The reports assess the needs of the communities served by the hospitals using quantitative data and input from individuals representing the broad interest of the communities. Using the CHNAs, Emory Healthcare develops strategies to outline plans to address the identified health needs of the communities it serves. Through these strategies, Emory Healthcare strives to improve the overall health of communities, while providing the best possible care to its patients.

† This includes the following:

- Shortfall between Emory Healthcare’s cost to provide care to Medicaid patients and reimbursement from Medicaid **\$61.4 million**
- Costs to Emory Healthcare for the Georgia provider tax, which supports the Medicaid budget and helps maintain payment levels for all Medicaid providers **\$22.7 million**
- Discounted/free prescription drug programs; programs and contracted services for indigent patients; in-kind donations to organizations such as MedShare; transportation services; flu shots; blood drives; subsidized continuing care, nursing home care, and home care; sponsorship of selected charity health awareness events; and educational programs for the public, future health professionals, and patients **\$13.6 million**

Electronic ICU at Emory Saint Joseph's Hospital: Remote monitoring of ICU patients in other hospitals helps expand access to critical care services, lower costs, and address the looming national shortage of critical care physicians.

Woodruff Health Sciences Center of Emory University

Office of the Executive Vice President for Health Affairs

Emory University School of Medicine

Nell Hodgson Woodruff School of Nursing

Rollins School of Public Health

Yerkes National Primate Research Center

Winship Cancer Institute of Emory University

Emory Global Health Institute

Emory Healthcare, the most comprehensive health care system in Georgia

- Emory University Hospital, 733 beds, including 82 at Wesley Woods
- Emory University Hospital Midtown, 529 beds
- Emory University Orthopaedics & Spine Hospital, 120 beds
- Emory Rehabilitation Hospital, in partnership with Select Medical, 56 beds
- Emory University Hospital at Wesley Woods, 82 beds
- Emory Saint Joseph's Hospital, 410 beds
- Emory Johns Creek Hospital, 110 beds
- Emory Decatur Hospital, 451 beds*
- Emory Hillandale Hospital, 100 beds*
- Emory Long Term Acute Care, 76 beds*
- Emory University Hospital Smyrna, 88 beds
- Emory Clinic, 2,000 physicians, nurse practitioners, physician assistants, and other providers, with offices throughout the city and state
- Emory Specialty Associates, outreach physician group practice organization with locations throughout the city and state
- Emory Wesley Woods Campus (includes Emory University Hospital at Wesley Woods, Wesley Woods Towers residential and personal care apartments, and Budd Terrace, a 250-bed skilled nursing care facility)
- Emory Healthcare Network, network of physicians and hospitals formed to improve care coordination and quality outcomes and to control costs for patients and the community

**Part of Emory Healthcare as of September 1, 2018*

HOSPITAL AFFILIATES

Grady Memorial Hospital, 953 licensed beds, staffed by 701 Emory faculty and 368 residents and fellows, in collaboration with Morehouse School of Medicine, with Emory providing 80% of care

Children's Healthcare of Atlanta

- Children's at Egleston, 278 beds, Emory campus, staffed by Emory and private practice physicians
- Children's at Hughes Spalding, 24 beds, Grady Hospital campus, staffed by Emory, Morehouse, and private practice physicians
- Children's at Scottish Rite, 273 beds, staffed by Emory and private practice physicians

Atlanta Veterans Affairs Medical Center, 466 hospital beds, including a 120-bed community living center, 61-bed domiciliary, and 12-bed psychosocial residential rehabilitation program. Staffed by 342 Emory physicians.



Woodruff Health
Sciences Center

For more information, please contact Health Sciences Communications: 404-727-5686 ■ whsc.emory.edu

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