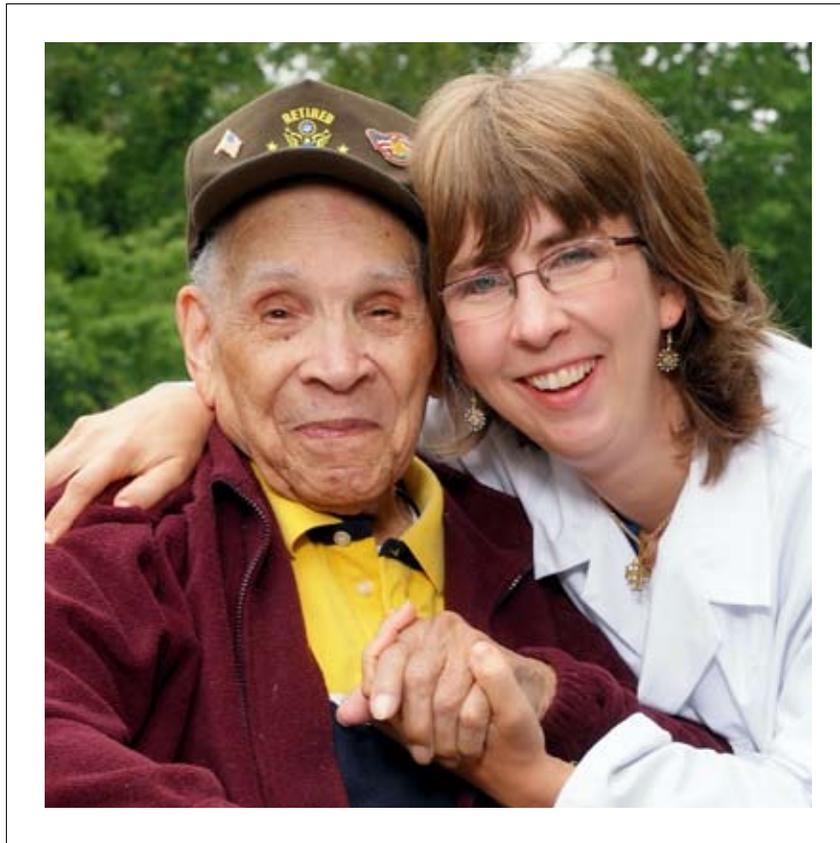


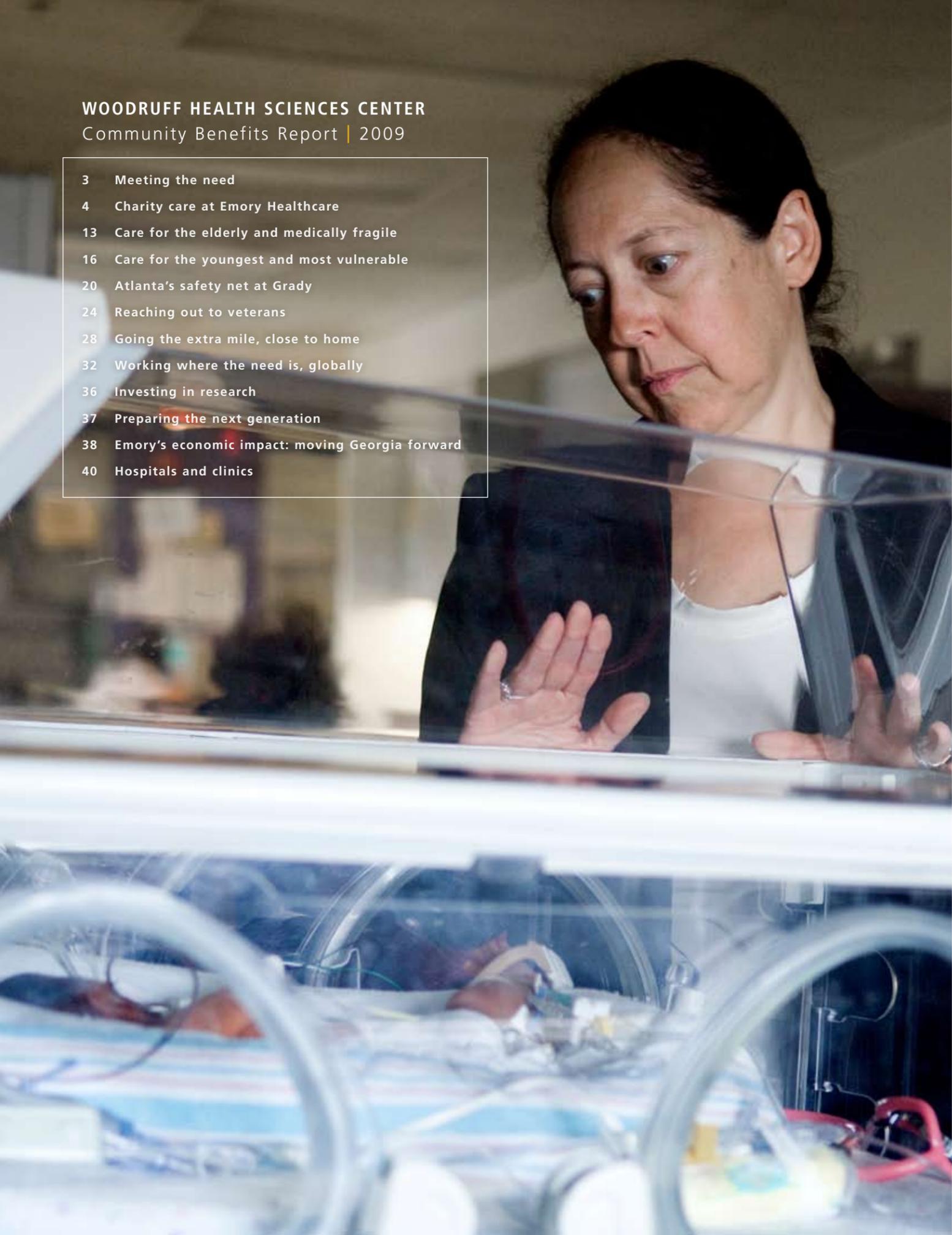
meeting the need



EMORY
UNIVERSITY

Woodruff Health
Sciences Center

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Georgia has the sixth highest number of residents without health insurance in the United States: 1.7 million people, including one in five working-age Georgians, half in families headed by someone who works for a small business. Other Georgians are part of the 25 million Americans, up 60% in recent years, with inadequate health insurance to cover their medical expenses. Others, a growing number, don't know they are underinsured until they suddenly find that their health insurance has been depleted or that life-saving treatments they need are not covered.

These are not faceless statistics to Emory clinicians. The people behind these numbers arrive daily to Emory emergency rooms, clinics, and hospitals. They are sick, worried, often apologetic for the financial situation in which they find themselves. Many come to Emory from across Georgia because the medical services they so desperately need are unavailable elsewhere. If Emory won't help them, where else can they go? Once here, they find doctors determined to provide the best and most compassionate care possible, regardless of these patients' ability to pay.

Patient stories throughout this book are real, but patients' names and in some cases details have been changed to protect privacy (see pages 6-11, 14-21, 25-27). Photos on these pages are representational and not those of the patients whose stories are being shared.



Faculty and students from nursing and medicine spend two weeks in south Georgia each year to provide free health care to migrant farmworkers and their children.

Meeting the need

The past year has been one of the most economically, politically, and socially turbulent in our nation's history. It has been a period during which most of us have experienced need—the need for support, for understanding, and for hope. Fortunately for thousands of people here in Atlanta, throughout the state, and around the world, Emory's Woodruff Health Sciences Center (WHSC) continues to stand poised to meet those needs.

In this fifth edition of stories about our community impact, you will meet not only the WHSC faculty, staff, and students who have provided so much help and hope to people in need, but also the people themselves, who have faced adversity with strength and courage and whose stories inspire all that we do to serve humanity by improving health.

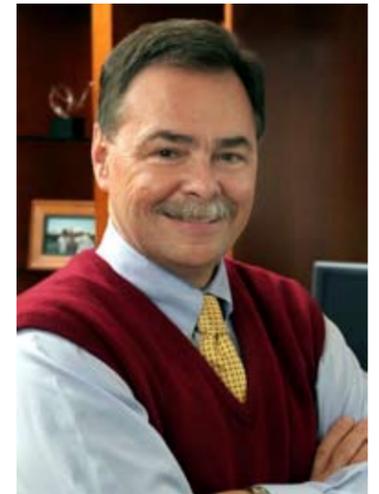
The Woodruff Health Sciences Center has an immeasurable impact on our community: through gifted and selfless medical professionals who provide high-quality care to the sickest and most grievously injured patients regardless of their ability to pay, through talented and compassionate students who understand that sometimes doing the most good means meeting people at their point of need, and through brilliant and dedicated scientists whose innovative discoveries are shaping our understanding of and effective response to disease.

Why do we do it? Because, quite simply, it's our mission as an academic health center. We feel not only a passion for providing care to all people—but also an obligation to do all that we can to serve everyone who turns to us in their hour of need. Sometimes that service takes the form of charity care for the uninsured and the underinsured; sometimes it means providing complex, comprehensive, and cutting-edge care for our most vulnerable—children and the elderly; sometimes it means working where the need is, even when that place is far from home.

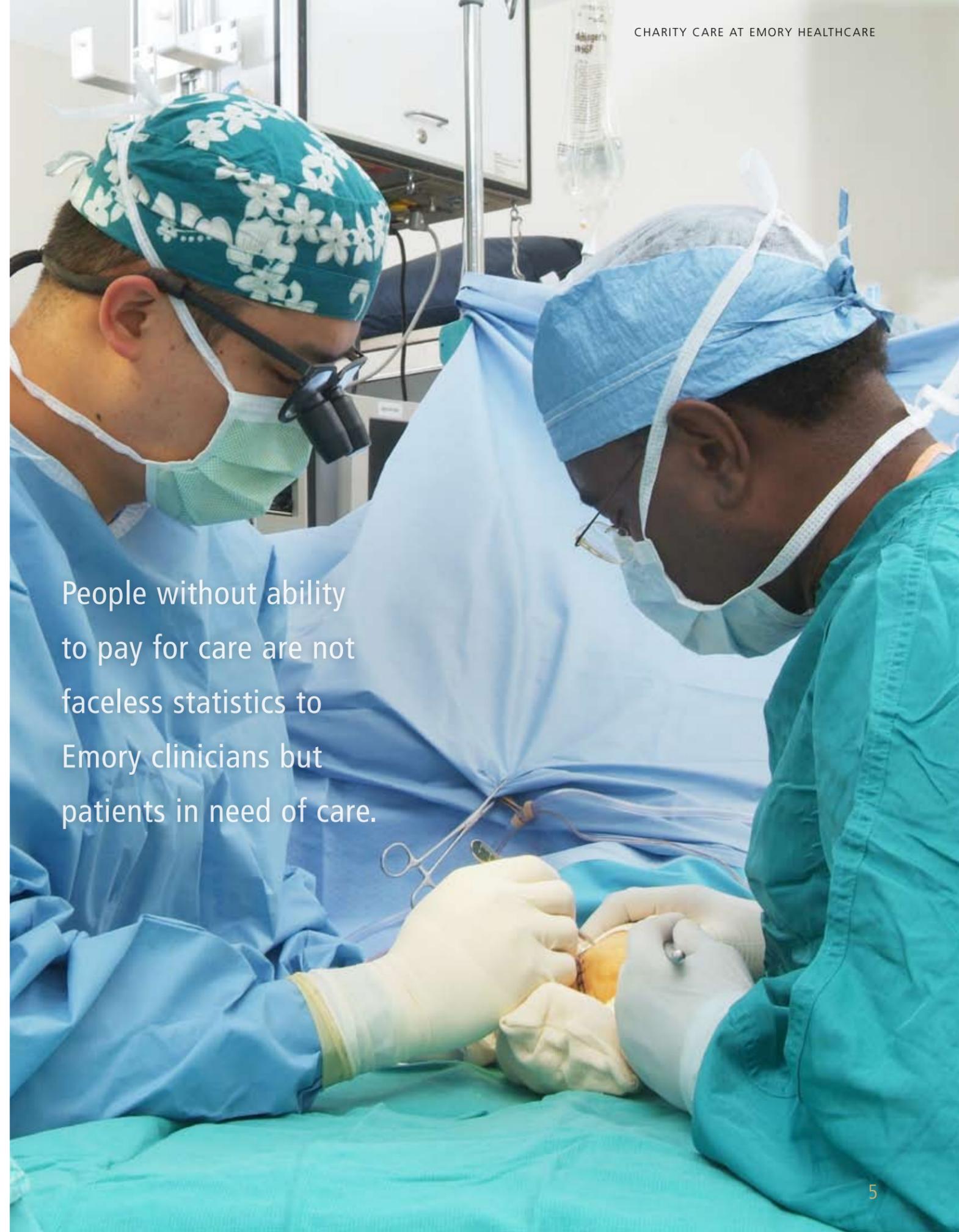
As you read this year's community book, we hope you'll be as inspired as we are by the stories of courage, compassion, and hope. Alongside the people and communities we serve, the Woodruff Health Sciences Center of Emory University continues its tradition of meeting the need and transforming health and healing ... together.

Fred Sanfilippo, MD, PhD

Executive Vice President for Health Affairs, Emory University
 CEO, Woodruff Health Sciences Center
 Chairman, Emory Healthcare



Charity care: access to life-saving care In fiscal year 2008–2009, Emory Healthcare physicians provided \$48.9 million in charity care, a total that does not include uncompensated care provided by Emory physicians practicing at publicly funded Grady Memorial Hospital and other affiliate institutions. Charity care includes two types of care: (1) Indigent care refers to care provided to patients with no health insurance, not even Medicare or Medicaid. (2) Catastrophic care refers to care provided to patients who have some coverage but whose medical bills are so large that paying them would be permanently life-shattering.



People without ability to pay for care are not faceless statistics to Emory clinicians but patients in need of care.



Charity care at Emory Healthcare

Fiscal year 2008–2009

Emory University Hospital	\$17,020,266
Emory University Hospital Midtown	16,781,265
The Emory Clinic/Emory Children's Center	14,341,621
Wesley Woods Center	767,023
Total	\$48,910,175*

*This total represents the cost of providing charity care, based on actual expenses to Emory Healthcare. Cost reporting is now standard for calculating charity care totals, as required by the IRS and advocated by the Healthcare Financial Management Association and the Catholic Health Association.



Hubo un problema con su cabeza. Usted está en el hospital. Estamos con usted. Nosotros nos encargamos de usted.

When treatment can't wait for coverage

Insurance would pay for the standard treatment for Terrell Smith's glioblastoma multiforme, the most common and aggressive of the primary brain tumors. Unfortunately, Smith's egg-sized tumors were unresponsive to the standard drug, designed to interfere with cell growth. The star-shaped tumors kept growing, worsening his headaches, contributing to the personality changes that had brought him to seek diagnosis in the first place.

His doctor at Emory Winship Cancer Institute, David Lawson (pictured at right), wanted to try infusions of bevacizumab, a then-new drug that works by cutting off tumors' blood supply. The drug had already been approved by the FDA for use in patients with advanced lung, colon, or breast cancer, and some studies had shown that it also worked against glioblastoma multiforme. Indeed, after a few weeks of bevacizumab infusion, Smith's tumors began to shrink.

The insurance company denied the claim, however. Without FDA approval for its use in brain cancer, the drug

was deemed medically unnecessary. Nor would Medicare pay. Smith had been delighted with his improvement, but now his stress levels shot up. Each infusion cost \$11,000, and he had already had seven. He was on disability. How could he possibly afford this?

Emory told him not to worry; discussions were under way with Genentech, the maker of the drug, about accepting Smith in a program in which the company would cover the drug's cost. And if it didn't, then **Emory University Hospital Midtown, which handles billing for Emory**



Winship's infusion center, would figure out a way to get this paid for or would cover it. The important thing was that he get the treatment he needed.

Two months later, Genentech said yes. So, suddenly, did the insurance company. The following week, the drug was approved for use in patients with Smith's type of brain tumor (the same kind suffered by the late U.S. Senator Ted Kennedy). Medicare also agreed to pay. Emory had just been a little ahead of the game—and willing to pay if need be. It's been more than two years since Smith's cancer was diagnosed. He is doing well.

We are with you

At 24, Jose Romanez was the primary breadwinner for his family back in Mexico. He sent them money each week from his work in landscaping or whatever jobs he could get, since he



The patient was medically stable within a week after neurosurgeon Michael Cawley repaired his brain aneurysm.

had no papers.

One day, he began complaining of head and neck pain and seemed confused and disoriented.

Everyone knew that American emergency rooms would help, so his friends

persuaded the job manager to drive him to the closest hospital.

There, doctors diagnosed a brain aneurysm and sent him to Emory University Hospital, where neurosurgeon Michael Cawley clipped the aneurysm to prevent further bleeding and ordered a course of drugs to prevent spasm and control pain.

Cawley's physician's assistant spoke good Spanish, but when she was out of the hospital, a translator was brought in to explain to the frightened young man what was happening: **There was a problem with your head. You are in the hospital. We are with you. We will take care of you.** (Spanish version above)

Within a week, Romanez was medically stable, but he needed around-the-clock supervision. Emory Hospital social workers located his family in Mexico, who were eager to provide the care he needed.

But how to get him home? Getting Romanez a passport took two weeks. Cawley saw him every day, and the nurses hovered over him. The bill for his care had climbed to almost \$70,000 by the time the Spanish-speaking care provider from the medical transportation agency arrived to accompany him on the flight back to Mexico. Emory Healthcare paid for that too, adding another \$7,000 to the costs for which neither the hospital, nor the doctors, would ever be paid. The payoff came in satisfaction from a job well done. In Cawley's words, "He was sent to us, he needed us, and we did our best for him."



The insurance company denied the claim. Without FDA approval, the drug was deemed medically unnecessary. Nor would Medicare pay.



Doctors in the ER at Emory University Hospital started her on IV steroids to jump-start the failed signals from the brain's neural transmitters to the rest of her body.

Making sure patients have what they need

Perhaps it was related to the stress of her husband losing his job, but Melody Freeman's multiple sclerosis had kicked into overdrive. Since her diagnosis two years earlier, she had suffered intermittent fatigue, vertigo, and weakness in her legs. Now, suddenly, she could neither walk nor control her bladder. Her flailing arms seemed to have a mind of their own.

Doctors in the ER at Emory University Hospital started her on IV steroids to jump-start the failed signals from the brain's neural transmitters to the rest of her body. After a few days in the hospital, she was sent to Emory's Center for Rehabilitation Medicine (CRM), where physician Dale Strasser began her on medicines to help control her bladder so she could sleep through the night. A team of rehab specialists at the CRM began teaching her how to manage activities of daily life, such as how to transfer from bed to wheelchair and back.

She was a willing and hard-working student, eager to return home to her three young children. But social worker Dorothy Reed noticed problems that went beyond Freeman's illness.

The young woman appeared to be malnourished. Her children's clothes were clean but threadbare. Her husband sometimes did not have enough money for gas for the trip from Gainesville.

Reed had taken all the usual by-the-book steps to help Freeman with her situation, arranging for her to receive food stamps and documenting the extent of Freeman's illness in hopes of expediting her application for Social Security. But Reed and her staff also collected clothes from their own children's closets and reached into their own pockets to buy school supplies. Freeman was stunned at their generosity.

When she left the CRM after three weeks, Freeman's bill was almost \$50,000. Her Social Security application was still being processed, which meant she was still ineligible for Medicaid. Freeman is scheduled to return to the CRM for further therapy on an outpatient basis. She's an Emory patient now, whether or not she ever has a way to pay for it.

The worst and best of Christmases

This was supposed to be the best Christmas ever. Jen and Bill Arnold were going to celebrate their first anniversary and, three months later, welcome the arrival of their first baby. What looked like a glitch—Tom being downsized from his job—had turned into a new job paying \$50 more per week. Enough that Jen could keep working on her degree and stay home with the baby.

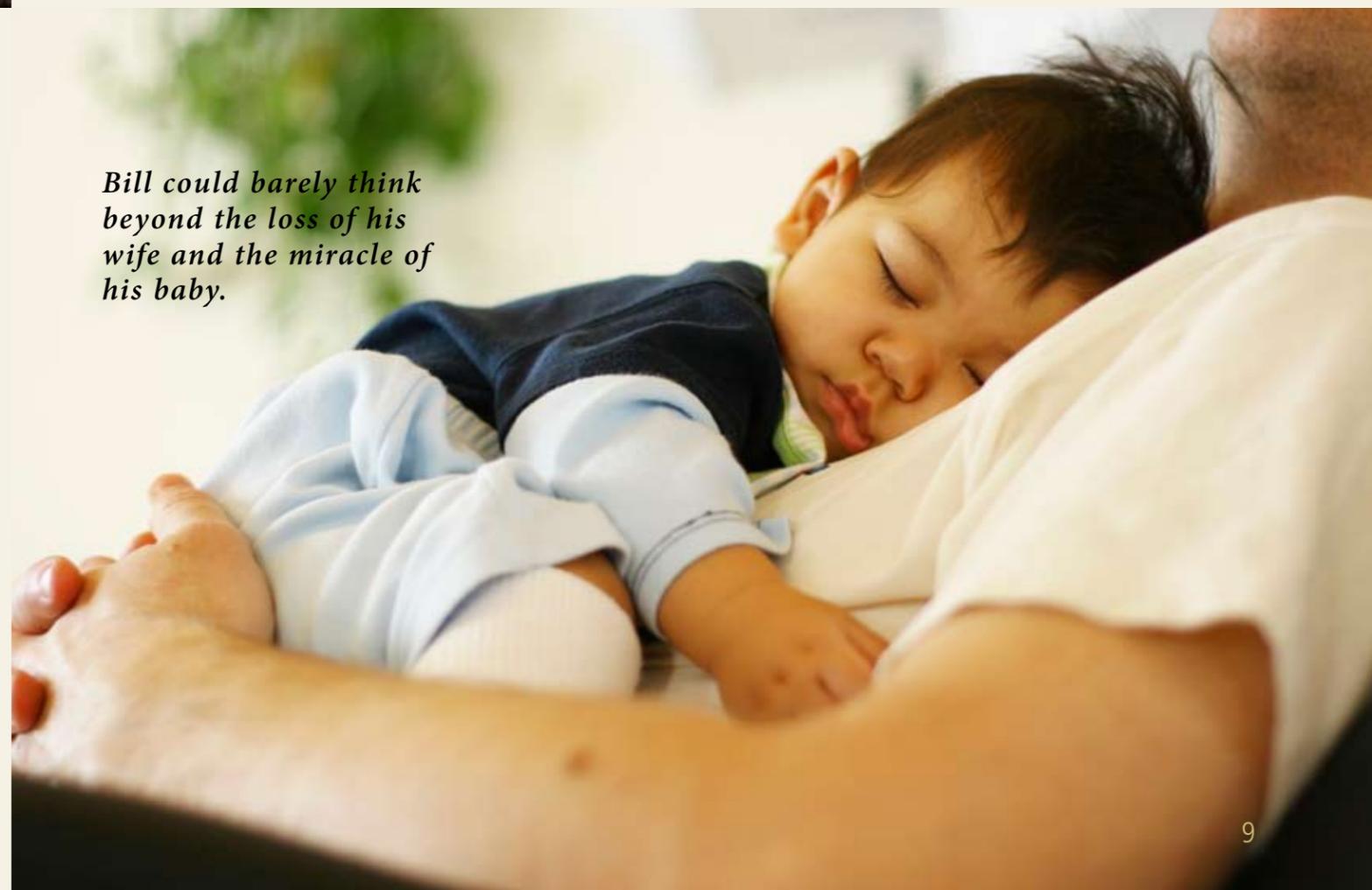
Then everything changed. Jen suddenly became lethargic and confused, struggling to talk. The next few days were a blur: an ER doctor trying to explain cerebral hemorrhage and the need to get Jen somewhere with expertise in high-risk pregnancy, the helicopter vibrating as it lifted into the air, then down again on the roof of Emory University Hospital Midtown. Hours after Jen arrived, unconscious, the two-pound baby was delivered by cesarean section in an effort to save his life and, perhaps, help his mother. Jen never saw him. Three days later, with Bill's consent, she was taken off life support.

For the next three months, Bill spent as much time as possi-

ble in Emory Midtown's neonatal intensive care unit, stroking his son's tiny hand through openings in the incubator. **The nurses—guardian angels, he called them—paid special attention to the baby.** Bill could barely think beyond the loss of his wife and the miracle of his baby.

In the hospital's patient financial services office, however, other guardian angels were working on his behalf. Insurance coverage from Bill's previous job had ended December 15, while coverage from his new job had not begun until January 1. Jen's cerebral hemorrhage, the air flight, the cesarean, all had taken place during the gap. His former and new employers tried to ensure that their insurance plans covered as much as possible. What was not covered, however—about \$20,000—was classified as charity care and became Emory Midtown's contribution. Bill was immensely grateful, but the money was not what he—or the doctors and nurses—were smiling about when he left the hospital holding his healthy son.

Bill could barely think beyond the loss of his wife and the miracle of his baby.





We knew how to cure him

When a metal toolbox fell from a shelf and hit him directly in the testicles, Jesus Perez, 29, had never felt such pain. He was confused when the doctor—well, the translator—kept saying that the lump in his testicle was not because of the cursed toolbox but something else.

Charity care throughout Emory Healthcare for treating cancer patients like this one totaled \$6.1 million over the past fiscal year.

At Hamilton Medical Center in Dalton, Ga., oncologist Hosam Naguib diagnosed testicular cancer.

After four cycles of chemo, Perez's tumor marker levels remained high. A CT-scan showed lung metastases. Naguib called Emory Winship Cancer Institute oncologist Ned Waller (pictured at right). Would he see Perez if a translator from the Northwest Georgia Healthcare Advocacy group brought him to Emory?

At Emory University Hospital, Waller and his team performed a stem cell transplant from Perez's own marrow after bouts of high-dose chemotherapy. The translator stayed with Perez each step of the way, transporting him back to Dalton in between treatments, so he could be near his wife and children.

Despite the fact that his tumor marker levels were falling, metastases were still visible in his lungs. Cardiothoracic surgeon Dan Miller at Emory University Hospital Midtown removed the cancerous masses in two separate operations.

Perez's tumor marker levels fell more, then to zero, where they have remained for months. **His treatment had required chemotherapy, stem cell infusions, surgery, and the partnership of an academic and community hospital, but as far as we know, says Waller, we have cured this young man.** It didn't come cheap, either for the Dalton hospital or for Emory Healthcare. "But what else could any of us have done?" asks Waller. "He was going to die and we knew how to cure him."



Many come to Emory from across Georgia because the medical services they so desperately need are unavailable to them locally.



Maximizing patients' ability to function on their own is a finely honed art at Emory's Wesley Woods Hospital, the oldest geriatric hospital in the country.

Caring for the elderly and medically fragile Emory's Wesley Woods Center exemplifies Emory Healthcare's commitment to serving patients and their families who are facing issues related to aging. The majority of the 30,000 patients treated last year at Wesley Woods' 100-bed hospital and outpatient clinic were elderly, in their 70s, 80s, 90s, and beyond.

But Wesley Woods also is a life-saver for many younger patients who require chronic care and specialty services for which the center is known, including wound care, rehabilitation, and respiratory care, such as weaning from ventilator therapy. The center's location, a mile up the street from Emory's Druid Hills campus, allows Emory Healthcare patients to be transferred easily between Emory's emergency, acute care, and clinic services and the facilities at Wesley Woods.

During fiscal year 2008–2009, expenses at Wesley Woods Center exceeded revenue by \$4.4 million, a number that seems destined to rise each year as personal resources and coverage to pay for complex care continue to decline.



Facilities at Emory's Wesley Woods Center
(specializing in geriatric care)

- **Wesley Woods Hospital** (100 beds and a 25-bed inpatient hospice service)
- **Wesley Woods Clinic** (outpatient primary care)
- **Budd Terrace** (250-bed long-term skilled nursing care)
- **Wesley Woods Towers** (201-unit residential retirement facility, including 18 units dedicated to personal care)
- **Emory Healthcare** also manages Wesley Woods Senior Living retirement facilities located throughout north Georgia.

A specialist in geriatric neuropsychiatry, Frank Brown (at left) is medical director and chief quality officer at Wesley Woods.



Was Lawrence able to hear and understand? The nurses believed she could. At times, tears would roll down her cheeks.

Complex, choreographed care

At first Sherry Smith thought she was gaining weight, a little potbelly distending her lower abdomen. By the time she developed pain, she was also having trouble breathing and had pretty much stopped urinating. She knew it must be serious when her doctor insisted that she go to Emory University Hospital, where a CT scan showed large blood clots blocking the vessels leading to her spleen and kidneys. Over the next two weeks, she had four operations. **Surgeons removed the clots and her spleen and cut out portions of her bowel that had been destroyed by lack of oxygenated blood.** She required a feeding tube and a tracheotomy to help with breathing as she recovered.

When patients require bowel surgery of this magnitude, they often end up at Emory for two reasons: the surgical expertise at Emory University Hospital and the long-term acute care provided at Emory's Wesley Woods Hospital.

Patients can move seamlessly between the two Emory Healthcare facilities, for surgery, treatment of the raging infections that can accompany bowel disruption, and total parenter-

al nutrition (TPN) in which nutrients are given intravenously.

Smith got it all, moving back and forth between Emory and Wesley Woods as her surgery sites healed and she graduated from TPN to a clear liquid diet, from a bed hooked to wires and tubes to a wheelchair.

She also got some unexpected help in paying for her care. When she got sick, Smith lost her job. During the six months she spent moving between the two hospitals, her bill at Wesley Woods was more than \$120,000, and that at Emory University Hospital, almost \$130,000.

To her relief, Emory offered to pay her hefty COBRA fees to help her maintain her insurance for the time allowed. It was a cost-effective move for Emory, even if the payments would cover only part of the actual cost of care, and it was an emotionally gratifying one for Smith. Wesley Woods social workers also helped her apply for Medicaid to cover health care costs when her COBRA coverage ends while she continues her recovery in a rehab facility closer to her home.

When the problem can't be fixed

When Brandy Lawrence began to suffer crushing pain in her head, it was one more health problem on a long list.

The breast cancer survivor also had high blood pressure and osteoporosis and required insulin injections for diabetes.

By the time she went to her local hospital and was referred to Emory University Hospital for surgery, the mass in her brain—a meningioma tumor—was the size of a small lemon.

Emory neurosurgeons placed a shunt to help drain the liquid built up in her brain and then painstakingly removed the tumor and its tentacles. Technically, the operation was perfect. But the brain is unforgiving, and the price was high: neural damage and stroke, followed by paralysis and respiratory failure.

After being stabilized, Lawrence was transferred to Emory's Wesley Woods Hospital, where she could be seen by specialists in managing patients needing ventilator therapy.

The team was able to wean her from the ventilator, but her

tracheotomy prevented her from speaking. She often appeared to have no awareness of her surroundings. Her family visited often. Was Lawrence able to hear and understand? The nurses believed so. At times, tears would roll down her cheeks.

After a year, there had been little change in Lawrence's ability to function, and her family wanted her closer to home. When Wesley Woods social workers began the search for a long-term nursing facility, one after another said no—the patient was incapable of participating in therapy. Almost two years after her surgery, Lawrence was finally moved to a facility closer to her family. Lawrence's insurance company had balked at paying for much of her care, and her unpaid account currently stands at more than \$400,000. Wesley Woods does not anticipate being reimbursed. That hurts the bottom line, but what hurt the most, say members of the team who cared for her, was being unable to restore Lawrence to her old life, no matter how hard they tried.



When Smith got sick, she lost her job. During the six months she spent between Emory's two hospitals, her accumulated charges totaled roughly \$250,000.

Serving the youngest and most vulnerable Children whose health care would otherwise fall through the cracks find a safety net in the services provided by Emory physicians in partnership with Children’s Healthcare of Atlanta, a hospital system affiliated with Emory’s medical school that is the largest provider of pediatric care in the country (see page 40 for more details).

The Emory-Children’s Center (ECC), for example, is a joint venture between Emory and Children’s that constitutes the largest pediatric multi-specialty group physician practice in Georgia. The ECC also leverages research resources between the two institutions to maximize potential benefit and application to patients.

Emory pediatricians also care for young patients at Grady Hospital, especially in highly specialized programs such as the burn unit, and in the neonatal intensive care unit at Emory University Hospital Midtown.

Despite the availability of PeachCare, Georgia’s program to provide coverage to poor children who don’t qualify for Medicaid, one of every nine children in the state is uninsured.



Georgia numbers*

- 300,000 uninsured children
- ranks 5th out of 50 states in number of uninsured children

*from recent census data, which does not reflect blows to the U.S. economy that became manifest in the latter half of 2008



The demands of diabetes

Trina's type 1 diabetes was diagnosed when she was 11 months old. She did not like it one little bit, not the pricks, not the injections, not the limits on what she could eat, and especially not the visits to the diabetes doctor. Things got better last year when pediatric endocrinologist Inger Hansen (pictured above with another patient) prescribed an insulin pump. Trina started laughing more, sleeping through the night, and waiting patiently while her mother changed the pump's insulin cartridges.

This year, when the diabetes service that Hansen directs at Emory-Children's Center (ECC) started a toddler clinic, doctor visits became something to look forward to. Trina, now 3, could play under supervision with other children her age while her mother participated in educational programs with other parents.

Clinicians at the center were surprised then when Trina did not show up for clinic and her mother stopped calling nurse practitioner Megan Consedine for advice. After the second missed clinic visit, Consedine called her.

The mother was embarrassed, apologetic. **Trina's father**

had abandoned the family and did not support the child, but when Medicaid discovered that he had insurance, they removed Trina from their rolls. Trina's mother had been able to pay for some insulin but, well, not as much as before.

Consedine tried to keep the alarm out of her voice as she asked Trina's mother to please bring her little girl in right away, assuring her that "Emory will give you all the insulin she needs for as long as it takes until this is straightened out."

Diabetes is an expensive disease for patients, with insulin alone often costing \$160 per month and lancets, strips, and other paraphernalia another \$200 to \$300. Diabetes is expensive also for Emory Healthcare. Although insurance (when patients have it) provides limited reimbursement for physician visits, it does not cover diabetes classes or the hours educators spend each week on the phone with parents.

But such support is vital to managing diabetes in children, which is why Hansen insists on it for the 1,500 to 1,800 kids seen each year in the ECC diabetes clinic.

Doing what can be done

When Sammy Lamb died, his nurses at Children's Healthcare of Atlanta at Egleston were devastated. They had been the boy's most constant source of comfort and support, and he had clung to them like substitute parents. Emory pediatric pulmonologist Michael Schechter (pictured below), who directs the Emory Cystic Fibrosis Center (ECFC), grieved too, but he also was angry—10-year-olds should not die of CF.

Sammy, however, lacked any semblance of a good support system at home. His parents abused drugs, and he lived in a constant cloud of cigarette smoke. Even as he grew more malnourished and his respiratory problems worsened, his nebulizers, breathing exercises, and nutritional supplements were ignored. He was brought back, again and again, to Emory. Sammy always seemed pleased when Schechter told him he needed to be readmitted to 5 West at Children's. When told he could go home, he often wanted to stay in the hospital.

A third of CF patients develop diabetes during their teen years. Sammy had full-blown diabetes by the age of 8. A quarter

of patients with CF develop liver disease at or before puberty. Sammy's came on early. **He was in the hospital for several weeks at a stretch at least three or four times a year and had spent so much time out of school that he never learned to read.** He spent 10 of his last 12 months in the hospital.

Doctors and social workers at ECFC talked frequently with his parents and other relatives, none of whom wanted the boy, but also were in constant contact with state social workers. Foster care seemed not to be an option. "We did what we could," says Schechter. "We probably could have beaten back the CF, but we couldn't beat the perfect storm that was this child's life."

Most patients seen in the pediatric unit of the ECFC are luckier than Sammy in terms of their home environment—and most parents don't forget or refuse, as his parents did, to do the Medicaid paperwork so the center and the hospital can be paid. But no one, not Medicaid, not even private insurance, is willing to pay more than pennies on the dollar for the intense, ongoing, complex treatment of any patient with CF.



Atlanta's safety net at Grady With health care costs continuing to increase, along with the number of people unable to pay them, many Atlantans feared that the city's safety net hospital would close, throwing the city's health care system into disarray. Emory medical faculty and residents working at the publicly funded Grady Memorial Hospital kept their eyes on the goal: care for the thousands of patients who pass through Grady's doors each year: 27,571 admissions, 113,849 adult emergency department visits, and 689,152 outpatient visits in 2008. Everyone knew that neither Emory nor Morehouse School of Medicine would ever be reimbursed for much of this care, provided to the city's indigent, uninsured, and underinsured patients.



During fiscal year 2008–2009, Emory physicians at Grady provided roughly \$23.1 million in uncompensated care. Any payments they did receive went to the Emory Medical Care Foundation, which plowed every cent back into Grady: \$28.9 million in fiscal year 2008–2009, used to upgrade equipment and support vital services provided by Emory medical faculty at the hospital.

Grady's survival seems more likely now, thanks to help from leaders of the city's diverse business and philanthropic community. Last year, despite its own budgetary pressures, Emory School of Medicine forgave \$20 million of the \$60+ million in debt that the Grady Health System owed the medical school for services rendered. Their reason was simple: "The community needs Grady, and Grady needs us."

Emory faculty physicians at Grady include internist Lorenzo Diffrancesco (first photo at right, with flu patient) and diabetes specialist Guillermo Umpierrez (second photo at right), who recently received an award from the American Association of Clinical Endocrinologists for his work in promoting endocrine health among the underserved.



From a minor illness to full-blown AIDS

Bethany Bennett couldn't get her mind around it. An hour earlier, she had walked into Grady's emergency department with a dry, hacking cough and shortness of breath, and now a soft-spoken counselor was telling her that she had full-blown AIDS. She was only 19. She needed to wake up from this bad dream and get back to her life. Instead, she was being admitted to the hospital for PCP pneumonia, isolated until TB could be ruled out, and then referred to the pediatrics section of Grady's Ponce Clinic, where she would begin an intense course of antiretroviral drugs to try to extend her life.

In one sense she was lucky. Without an AIDS diagnosis, Bennett would have been given a prescription for conventional pneumonia and sent home, her immune system continuing to deteriorate. She benefitted from a Department of Human



ER physician Debra Houry heads a rapid screening project at Grady for HIV-AIDS.

Resources/CDC grant given to Emory doctors in Grady's emergency department in which every patient 18 or older is given (with their permission) a free HIV test.

The new rapid screening test for HIV works a little like a pregnancy test: the patient swabs his or her own mouth, and the swab is placed in a developer solution, producing a result in 20 minutes.

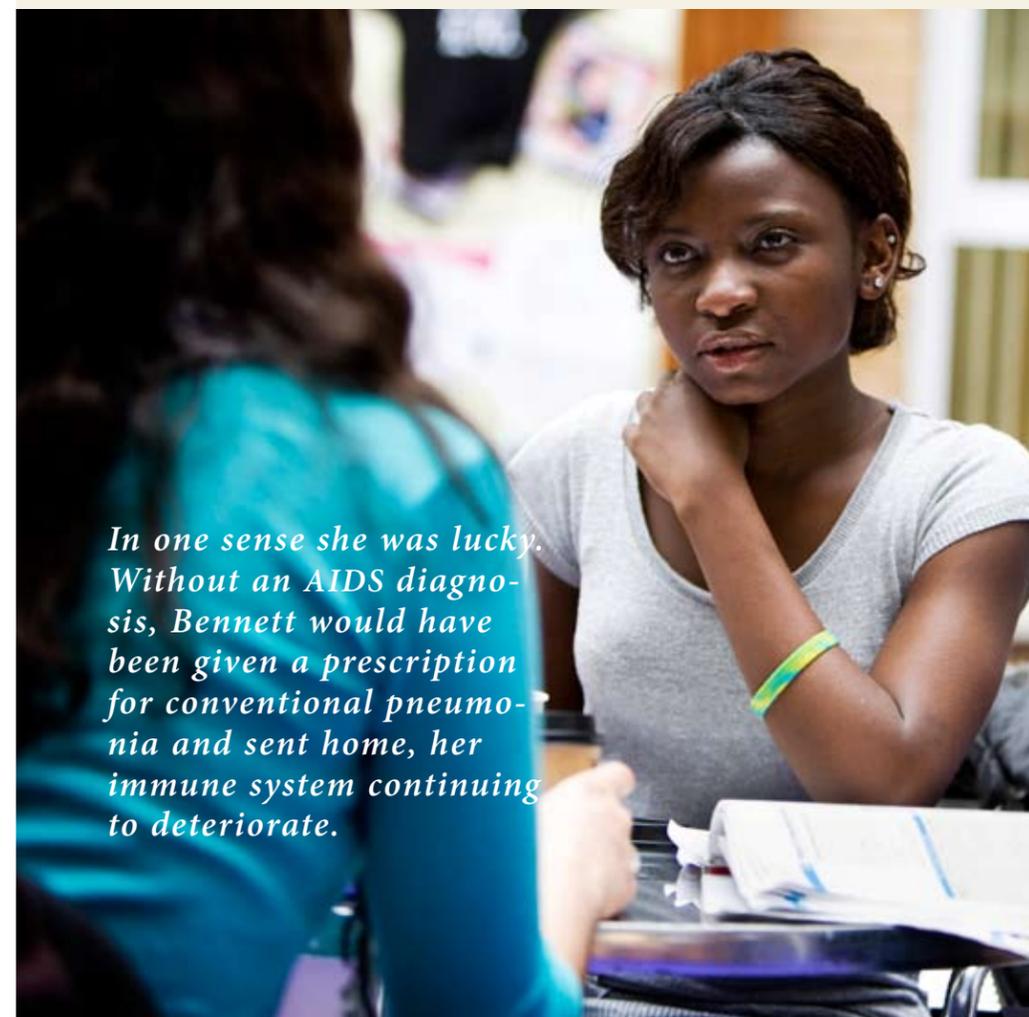
Of the 400-plus patients screened each month, 10, like Bennett, hear news they are not expecting. That doesn't surprise emergency medicine physician Debra Houry, who heads the rapid-screening project. What does

surprise her is that half of those newly diagnosed have already progressed to full-blown AIDS and 75% already require antiretroviral therapy.

All HIV-positive patients are referred to treatment and

counseling about their own personal risk factors. The test and counseling are covered by the grant, but the treatment is not, and many patients are without insurance or resources to pay. What is more important, however, says Houry, is that the emergency department is proving to be a good place to reach underserved populations with undiagnosed HIV infection.

Offering free testing to all patients removes the stigma of such testing and provides opportunities for some badly needed patient education and counseling. A diagnosis of HIV infection gets patients to the care they need earlier and helps protect the public health by making more people aware that they are infectious as well as infected.



In one sense she was lucky. Without an AIDS diagnosis, Bennett would have been given a prescription for conventional pneumonia and sent home, her immune system continuing to deteriorate.



Three times daily with food

For many years, health care providers assumed that a nod, a mumble, or even silence meant that their patients understood what they were being told about their condition and the treatments being prescribed. Not so then, and not so now. According to the Institute of Medicine, more than half of all adults in the United States have difficulty in understanding health information. Some are too embarrassed to admit that they can't read or that they read poorly. Others lack the vocabulary needed to understand what is being said or they hear the words from a cultural perspective that is different from the speaker's.

Minorities, immigrants, the poor, the elderly, and people with chronic mental and/or physical conditions are especially vulnerable. Emory medical professor Ruth Parker (pictured below), who sees many such patients in her work at Grady Memorial Hospital, sounded the alarm 20 years ago

when she co-authored the first published study of low health literacy and its correlation with poor health outcomes.

With Parker on board, Emory has become a leader in health literacy efforts. Thanks in large part to her continuing effort, the importance of health literacy is beginning to get its due nationwide. It is now routinely addressed in all medical school curricula so future health care providers learn how to ensure that their patients understand their verbal instructions and those on their prescriptions.

None too soon, says Parker. According to an article she recently co-wrote, demographics suggest that U.S. literacy skills are expected to worsen, causing more problems, unless changes continue to be made. "We have some pretty powerful people today who are paying attention to health literacy, so I'd have to say I'm optimistic," says Parker. "But if we don't address it, we are going to end up in a bad place."

A second chance at life

Rebecca Moore (inset, right) remembers the massive light pole that appeared unexpectedly as she tried to leave the expressway exit. She remembers the impact, the sense that something had gone terribly wrong with her body, the Grady EMS team, ceiling lights flashing by as she was rushed into surgery. Then nothing.



She spent five weeks in a medically induced coma while a team of Emory trauma surgeons and Grady nurses repaired the jumble of injuries she had suffered.

The collapsed lung, broken ribs, ankle and leg fractures were standard high-impact fare, but trauma surgeon Christopher Dente (pictured at top) and his team also found massive bleeding in Moore's abdomen. The impact had torn both of her kidneys and severed her colon. In addition to kidney repair (and dialysis), she required a temporary colostomy and a skin graft.

She remained in the hospital six weeks and returned, two or three times a week, for the following seven months.

The first time Moore asked about how much all this was costing—long before the final surgeries to reverse the colostomy and reconstruct her abdominal wall, before the return visits and twice-weekly physical rehab sessions—the bill had already exceeded \$500,000. Two months before the accident, the 32-year-old single mother had health insurance, but that vanished when she left her job to work in a restaurant while starting her own business.

Who would pay the mounting costs? During her coma, social workers had helped Moore's family apply for Medicaid. Eventually, the hospital and the Emory Medical Care Foundation, the billing agency for Emory physician services at Grady, received partial payment for the bill, even if only a fraction of the total cost. But the big payoff for Dente and the team who cared for her is the sight of a healthy, happy Moore, now a frequent volunteer at Grady.



Emory and the Atlanta VA Medical Center In a partnership that reaches back more than 60 years, Emory medical faculty provide virtually all physician care for more than 60,000 veterans seen every year at the Atlanta Veterans Affairs Medical Center, the largest, most complex tertiary care VA facility in the Southeast. Emory scientists also have made the Atlanta VA one of the nation's top VA centers for research, in areas ranging from infectious disease to dementia and traumatic brain injury.

Emory pulmonologist David Bower (first photo at right) is medical director of the Atlanta VA Medical Center.

One of 250 Emory faculty who practice at the Atlanta VA Medical Center (VAMC), Maria Ribeiro (second photo at right) is chief of medical oncology. The American College of Surgeons Commission on Cancer recently granted three-year "approval with commendation" to the VAMC's cancer program, a designation held by only one in four cancer programs at hospitals across the country.



Returning (all the way) home

Ben Johnson first came to the Atlanta VA Medical Center for help with pain that persisted three years after his humvee had hit an improvised explosive device and burst into flames, searing into his memory the sight and sounds of his best friend being killed. It was not the first death that Johnson had witnessed during two tours in Iraq.

With more than 1,000 Georgia veterans referred for treatment to the Atlanta VAMC trauma recovery program (TRP) every year, Emory physicians who practice there have seen virtually every kind of reaction to wartime trauma: veterans who patrol the perimeter of the house, drive in the center of the road, wear combat boots to bed, or keep a gun under the pillow—all symptoms reflecting a type of constant vigilance appropriate to wartime and hard to turn off after a return to civilian life.

Clinical psychologist Bekh Bradley and psychiatrist Kelly Skelton lead the team that works with Johnson. Suicidal, often irrationally angry toward his wife and children, he agreed with the clinicians that he suffered from post-traumatic stress dis-

order. But initially, he didn't want to engage in treatment that would address his traumatic memories.

The treatment team agreed instead to focus initially on psychosocial skills that would allow him to better manage his distress. When that was successful, he agreed to a treatment known as "in-vivo" exposure in which veterans take progressive steps to engage in activities that they have been avoiding. Johnson now can spend time in a crowded mall without undue anxiety. He no longer avoids traffic. He goes grocery shopping during normal hours instead of at midnight.

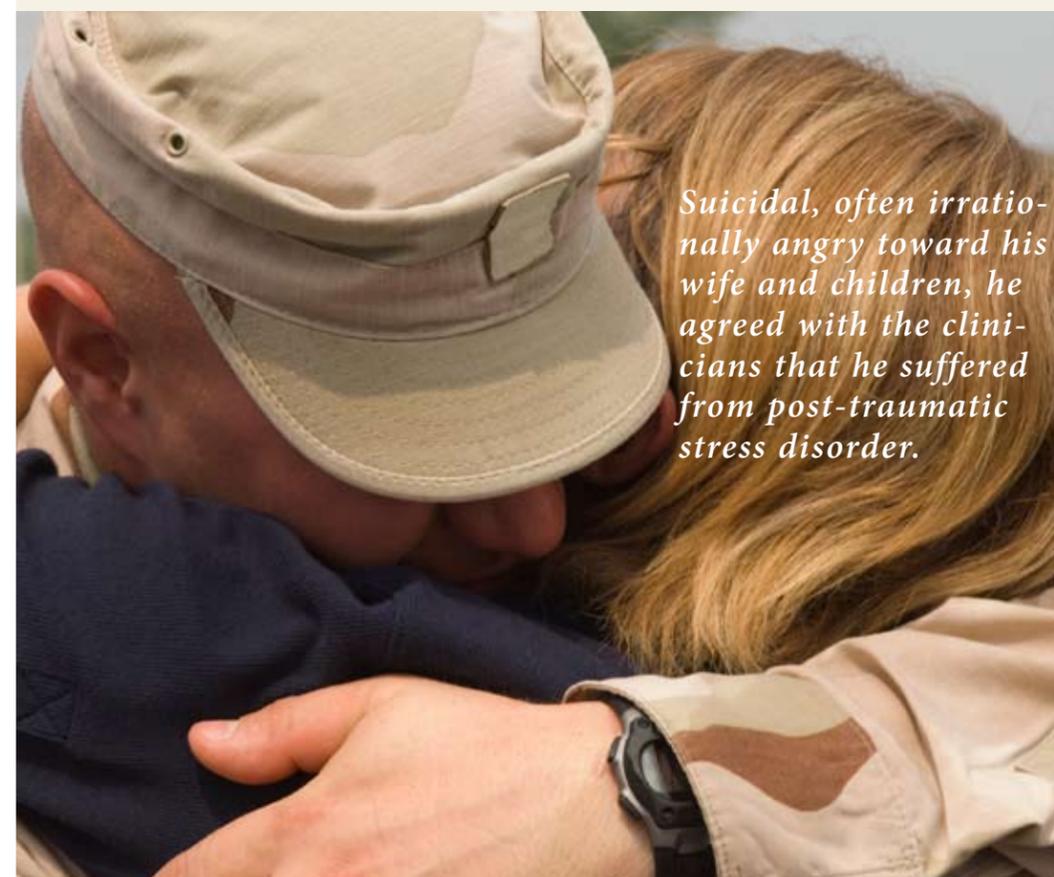
Following this approach, he felt as if he might be ready to



Emory clinical psychologist Bekh Bradley co-leads a team that helps veterans deal with battlefield trauma.

begin working with his therapist on a detailed description of his traumatic combat experiences to gain perspective and learn to regard these memories as memories and not as actual events recurring again and again.

As Johnson relearns how to live outside a war zone, many of his anger problems have subsided, and he no longer contemplates taking his own life. His ongoing care includes psychiatric medications and working with a unit at the VA to address problems associated with a mild traumatic brain injury that occurred while he was in Iraq. "It's not a fast cure," says Bradley, "but we have a responsibility to help bring our veterans truly back home again."



Suicidal, often irrationally angry toward his wife and children, he agreed with the clinicians that he suffered from post-traumatic stress disorder.

Where the magic comes from

Nothing in his past—not wartime skirmishes, a car crash, or a health scare related to his diabetes—nothing filled Al Williams, 64, with as much gnawing fear as the thought of having Alzheimer’s.

At first, it was the usual misplaced car keys. Then he began to forget directions, birthdays, and conversations. I just told you that, his wife often insisted, with growing frustration. Lots of days he couldn’t remember whether he had taken his diabetes and cholesterol medicines. He was depressed and slept poorly. Finally, he confessed his concerns to his primary care doctor at the Atlanta VA Medical Center, who referred him to the center’s new clinic for mild cognitive impairment.

Emory neuropsychologist Anna Moore, who practices full-time at the VAMC, administered an intensive cognitive function exam. **Williams had some problems, but his ability to learn new things was pretty good, especially if he had simple cues or reminders.**

In the meantime, Emory/VA geriatrician Birju Patel reviewed Williams’ medical records, finding that his blood sugar and cholesterol levels had gone up, along with his blood pressure and weight, probably because of his increasingly erratic use of medications, his minimal physical activity, and his lack of sleep.

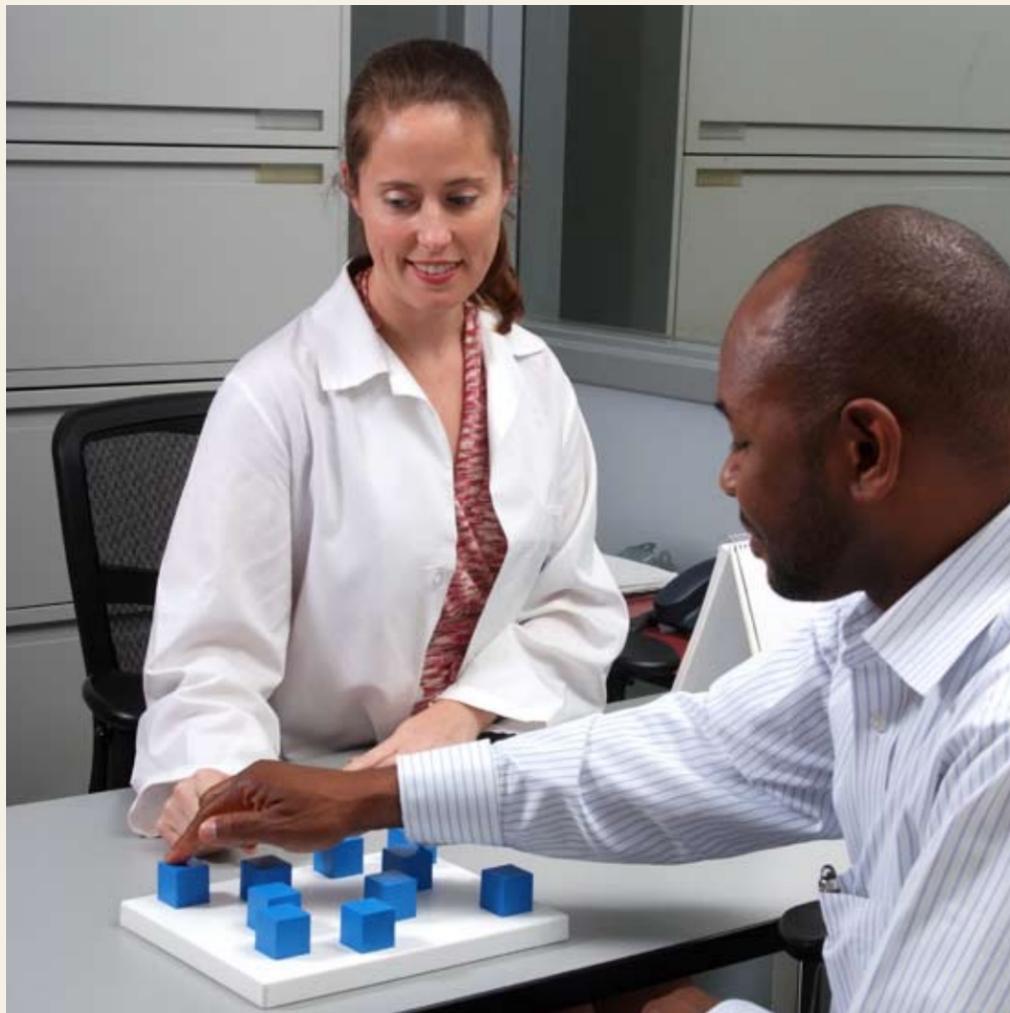
Patel reviewed Williams’ medications with his primary care doctor. A night in the VAMC’s sleep lab confirmed this patient’s suspected sleep apnea. Williams got his first good night’s sleep in months on the night he wore his continuous positive-airway pressure mask. His new-found energy helped him resume the walking, bending, and other mild exercise that all his doctors agreed were essential in getting his weight, diabetes, and hypertension under

control. Patel also gave Williams a series of B12 injections.

Moore started Williams on an eight-week training session focused on memory and organizational strategies geared to his specific weaknesses. Because he had trouble with multi-tasking, he now turned off the television when talking with his wife or paying bills.

As his memory improved, Al himself gave much of the credit to the B12 injections. “Those shots were magic,” he told his buddies when they complained of their own forgetfulness. His wife suspected that her husband’s improvement had more to do with his weight loss and diabetes control. Williams’ primary care doctor took an even broader view. The real magic was in the interdisciplinary team in the mild cognitive impairment clinic who had the expertise and had taken the time to address all aspects of this patient’s memory decline.

Emory neuropsychologist Anna Moore conducts exams to determine level of cognitive function and best treatment approach for patients with problems ranging from Alzheimer’s and traumatic brain injury to impairment caused by low B12 blood levels.



He was increasingly angry at home. And work? His plumbing partner, at first so buddy-buddy, complained about him constantly for confusing work orders, losing addresses, or packing the wrong tools for a job.

The key to a better recovery

As a gunner, riding high, Leon Bridge, 29, had been thrown when his team’s vehicle struck a roadside bomb. In the bright, amazingly quiet rooms of the hospital in Germany, they told him his buddies had dragged him to safety. He was given a medical discharge, much to his pregnant wife’s relief, and returned to south Georgia to work in a family friend’s plumbing company.

The pain was bearable, most days, but life back home did not go as smoothly as he had hoped. As much as he loved Patty and their infant son, the pressures of family life sometimes got to him. He was increasingly angry at home. And work? His plumbing partner, at first so buddy-buddy, complained about him constantly for confusing work orders, losing addresses, or packing the wrong tools for a job.

At first he didn’t believe the doctors when they talked about a mild brain injury. But then he began to see the sense in what Emory neuropsychologist Anna Moore was telling him. For example, because of the location of his injury, he could handle

language, but he had problems with visual images, like maps.

At work, he had always been the navigator and his partner, the driver, but now they switched roles. Plumbing manuals were filled with pictures, so he wrote words over the pictures to explain them to himself. He began to rely more on lists. But it was talking about his problems that changed him most—one-on-one and couples counseling and participation in a weekly support group at the VAMC with other veterans.

Traumatic brain injury is the “signature wound” of the wars in Iraq and Afghanistan, in part because faster access to specialized care means that soldiers often survive injuries that once would have killed them. **Almost one in three soldiers who requires medical evacuation for battle-related wounds has some form of traumatic brain injury (TBI).** That’s why the TBI clinic is one of the Atlanta VAMC’s busiest. Successes like those with patients like Bridge are why clinicians find working there so rewarding, says Moore.

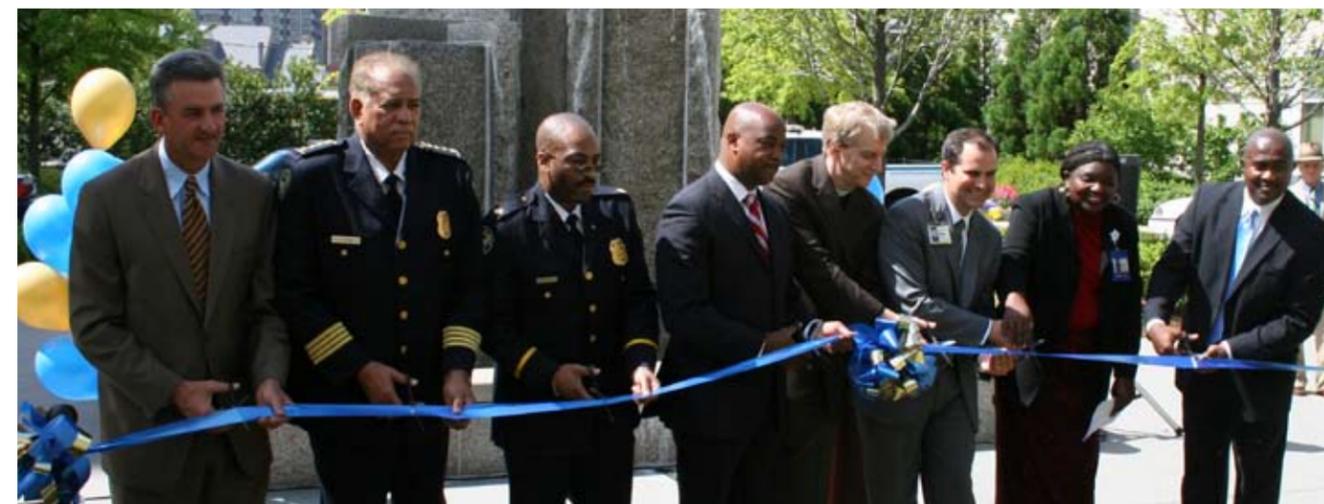
Going the extra mile, close to home Many faculty, staff, and students are drawn to Emory as more than just a place to work or earn a degree. It is also a place where people find opportunity to contribute to the health and well-being of Atlantans and Georgians.

In February, Emory was one of only three universities and colleges honored with the 2008 Presidential Award for General Community Service, the highest federal recognition such an institution can receive for its commitment to volunteering, service learning, and civic engagement. Nowhere is the spirit of community service that earned this recognition more in operation than in Emory's Woodruff Health Sciences Center.



STUDENTS AND FACULTY in the medical school's physician assistant (PA) program and in family and preventive medicine trekked down to south Georgia this summer to provide free basic health care to migrant farmworkers. The team diagnosed and treated everything from hypertension, headaches, and diabetes to respiratory infections, athlete's foot, and eye problems. "We get a fair number of workers who say they

have never seen a health care provider or that it's been years since they have," says Tom Himelick, director of community projects for the PA program. Over the course of two weeks in June, they saw about 1,700 migrant farmworkers and family members in the Valdosta and Bainbridge areas. Emory nursing students and faculty also serve this migrant population each summer.



HELPING PROTECT THE NEIGHBORHOOD: The Atlanta Police Department's newest mini-precinct is located in a 1025-sq-ft space on the grounds of Emory University Hospital Midtown, a partnership that hospital COO Dane Peterson believes will bring patients, visitors, and employees an extra measure of safety. As the midtown area continues to grow and develop, the increased police presence is an added

benefit for those who live and work in the surrounding community. The new mini-precinct houses some 30 police officers responsible for patrolling midtown and downtown Atlanta. For years, residents and business owners in the area have asked for a more visible public safety presence, says Kwanza Hall, Atlanta City Council member. "The opening of this new mini-precinct responds to their con-

cerns and reminds us of the important role that Emory is playing in midtown's progress." This year, as the former Emory Crawford Long Hospital changed its name to better reflect its commitment to midtown, Emory Healthcare contributed funds to get the new precinct open, and hospital employees volunteered hours of their time to help clean up the areas surrounding the hospital.

FOR MORE THAN A DOZEN YEARS, Emory trauma surgeon Jeffrey Salomone (pictured at right) has been the go-to doctor for Atlanta police officers injured in the line of duty.

Salomone, who practices at Grady Memorial Hospital, handles about 150 police officer emergencies each year, both large and small. He also spends time teaching police academy classes, visiting zone offices, and sometimes riding along on patrols—whatever it takes to ensure that officers know him and understand that he has their back should they be injured. Salomone often stays in touch with wounded officers and their families, many of whom regard him almost like family.

Salomone's most recent honor for outstanding service to law enforcement officers came last February from the Metro-Atlanta Police Emerald Society, from which he received the



Emerald of the Year Award. What was the cost of Salomone's services to the Atlanta Police Department or to Grady for the special detail? Nada. Salomone juggles it with his

regular duties. It's his passion. "I've got tremendous respect for the Atlanta police," he says. "They put themselves on the line for us every day. Someone has to look out for them."



SHARING EXCITEMENT FOR SCIENCE: This past summer, Emory's Yerkes National Primate Research Center attracted NIH stimulus funds to hire six high school "interns" from the Gwinnett School of Mathematics, Science, and Technology, located near the Yerkes field station. The students, including the two pictured at left with Yerkes director Stuart Zola, worked in different Yerkes labs under the tutelage of neuroscientists. Two students made short videos to be used in studies of whether monkeys normally gaze longer at unfamiliar objects than familiar ones, part of ongoing efforts to design means of earlier diagnosis in humans of mild cognitive impairment as a precursor to Alzheimer's. Other students worked with scientists studying emotional processing, changes in brain volume in aging, or the role of the basal ganglia in Parkinson's disease. Three teachers also worked in the labs at Yerkes. Their task: to serve as "ambassadors of science," preparing and sharing unit lesson plans on what they learned to enrich the program at their own schools and those of other science educators in a state network.

NURSING FACULTY MEMBER ANN CONNOR (at right in the nursing school's patient simulation teaching lab) received a Celebration of Nurses Award from the *Atlanta Journal-Constitution* this year for her role in local community service. Connor helps oversee the nursing school's work at Atlanta's Gateway Center, which treats homeless patients with acute or chronic illness and where Emory nursing students provide an extremely popular and badly needed foot clinic for people who use Gateway's services.

Connor also leads students on rotations at Café 458, a full-service restaurant for the homeless that she and her husband founded. Customers can access not only food but also medical care, drug and alcohol treatment, counseling, employment services, phones, and a mailing address.



MEDICAL FACULTY AND STUDENTS like the one at left volunteer regularly at various free or sliding-scale-fee clinics throughout the city. These include the Good Samaritan Health Center, founded by an Emory medical alumna, which is open each weekday at its location near Centennial Olympic Park, and the Harriet Tubman Clinic in the Open Door Community near the intersection of Freedom Parkway and Ponce de Leon, which is open two hours each Wednesday evening.

Some 40 Emory Healthcare nurses, doctors, lab techs, pharmacists, and others also regularly donate their time on Wednesday and Thursday evenings at a free clinic at DeKalb County Health Center. "Wednesdays are known unofficially as 'Emory night,'" says Emory Healthcare nurse Mary Kreisle.



THE ATLANTA YOUTH SOCCER ASSOCIATION (AYSA) had a request for one of their coaches, soccer dad and Emory internist David Propp. Would Emory be willing to provide enough basic first aid kits so that every coach would have one to deal with injuries as they arise?

The response was quick. Emory Healthcare donated 100 such kits, more than enough for AYSA's 90-plus teams of children, ages 4 to 16. The blue first aid bags have already shown their value as they have been put to good use in addressing the various cuts, scrapes, sprains, bee stings, and other minor emergencies that go with the game.

CARING FOR ADULTS WITH CYSTIC FIBROSIS: Thanks to medical advances, children with cystic fibrosis now live well into adulthood. As adults, their challenges are medical but also financial—they are too old for their parents' insurance coverage and often unable to obtain private coverage of their own.

Emory's CF Center, one of the five largest in the country, is committed to caring for these medical miracles, whatever their financial situation. With more than 200 patients, the center's adult program recently expanded, moving to a new location in The Emory Clinic and bringing in several specialists in adult CF. We helped get them to this point, say these clinicians, and we want to keep them well.



NAVIGATING THE SYSTEM: A breast cancer diagnosis can be surreal. The diagnosis is so frightening, the process so overwhelming, that some women just don't show up for treatment.

The "pink ladies" at Grady Memorial Hospital are

working to ensure that that doesn't happen. Strong and confident in the colorful smocks for which they are named, these breast cancer survivors are living witnesses that there is life after breast cancer. When a woman is diagnosed at the Avon Foundation Comprehensive Breast Center at Grady Hospital, a pink lady is there for emotional support. In the days and weeks ahead, she calls to remind the patient of her next appointment, links her to needed resources like transportation and child care, and meets her at the hospital. She's also available by phone.

The patient navigators are trained to teach underserved minority women about breast health. In addition to Avon and Grady, initiative partners include the Georgia Cancer Coalition, the Emory Winship Cancer Institute, and Emory's Rollins School of Public Health.

Public health faculty are studying why patient navigation is effective and whether an extra layer of support—home visits and support groups, for example—can enhance treatment adherence rates. Patients have their own finding: breast cancer is easier with a warm, experienced guide by your side.

Working where the need is Emory health sciences faculty and students travel the globe, providing care and establishing partnerships within other countries to address intractable health challenges like tobacco use, diabetes, and AIDS. What they do there helps both individuals and populations, now and for generations to come. What they learn from these experiences has indelible effect on their own lives and on the collective life of Emory as a whole.

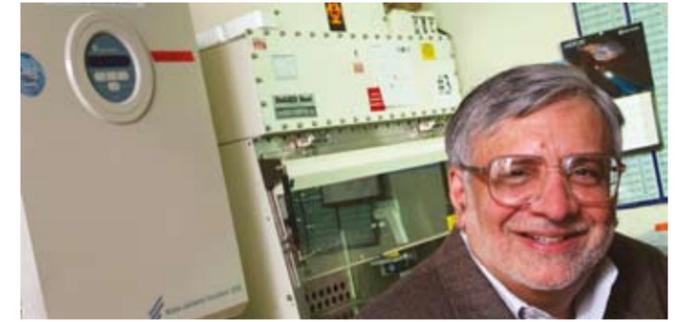


GOING GREEN: Emory Healthcare has worked hard to reduce, reuse, and recycle, including working with MedShare International, a nonprofit organization dedicated to improving the environment and health care through redistribution of surplus medical supplies and equipment to underserved health care facilities in more than 75 developing countries. Since 2007, Emory Healthcare has collected more than 160,000 pounds of supplies for MedShare, including 21,446 pounds in 2009 alone.

One Saturday each month, Emory Healthcare employees

gather at Atlanta's MedShare national headquarters and Southeastern distribution center in nearby Decatur, Ga., to sort supplies like gloves, gowns, surgical instruments, and anesthesia devices and ready them for shipment to needy countries around the world. These are supplies remaining from bulk packaging that remain in sterile packaging but cannot be restocked, per guidelines in this country. This work helps ensure not only that these supplies go where they can be put to good use but that they stay out of local landfills.

THE EMORY VACCINE CENTER, directed by Rafi Ahmed, has partnerships around the globe, including with the Australian Centre for Vaccine Development at the Queensland Institute of Medical Research and with the International Center for Genetic Engineering and Biotechnology in New Delhi, the latter to develop vaccines against diseases that disproportionately affect India and other parts of the developing world.



TWO YEARS AGO, Emory Healthcare opened its heart and medical resources to Isabelah Robi, a Kenyan woman whose first worry, when her breast cancer was detected, was what would happen to the 600 students she had "adopted" in her

remote Kenyan village. Although she long since returned to her home after clinicians at Emory Winship Cancer Institute treated her cancer, they continue to this day to provide her with drugs for hormone therapy.

This year, when Emory Winship pharmacist Mike Bloomfield made his own annual personal trek to Kenya, three Emory Winship oncology nurses accompanied him. The team completed physical exams on all 600 students under Robi's care, their 30 teachers, and dozens of villagers. They also saw how, under the direction of Robi, the school's aggressive feeding program had nursed children from severe malnutrition to health. But the best sight of all, said Bloomfield, "was to see how a life saved by the care and generosity of Emory Winship helped save the lives of hundreds of children."

REDUCING TOBACCO USE IN CHINA: How glamorous, adventurous, and socially acceptable smoking was back in the days of Bogart and Bacall, when ad campaigns touted one cigarette brand as that "most often chosen by doctors." The Surgeon General's 1964 report on the dangers of smoking was insufficient by itself to make Americans snuff out their cigarettes, but during the past four decades a combination of strategies, interventions, and policies have changed Americans' view of tobacco use.

Now, using lessons learned in this country, the Emory Global Health Institute (GHI) and the Tobacco Technical Assistance Consortium (TTAC), the

latter located in Emory's Rollins School of Public Health, are collaborating with Chinese public health leaders to reduce smoking in that country. As the number of U.S. tobacco users has fallen, the number of Chinese smokers has continued to rise, currently totaling 400 million.

That's why Emory's GHI director Jeffrey Koplan asked TTAC to consider taking its U.S. tobacco control program global and why the Bill & Melinda Gates Foundation decided to fund the Emory GHI-Chinese Tobacco Partnership to the tune of \$14 million.



Working at the local level, the partnership will help four to six Chinese cities develop programs and policies with the greatest potential for eliminating tobacco use, sustaining anti-tobacco norms, and building a healthier, tobacco-free China.



EACH SPRING BREAK, a group of Emory nursing students travels to the Caribbean, not for fun in the sun but to help and learn from patients there. This year, they went to Eleuthera, in the Bahamas, where they worked in local clinics. At a local community center where elderly locals gather, students led yoga sessions, gave massages, and discussed the importance of managing hypertension and diabetes. At left, a student works with a nurse in the pharmacy at Governor's Harbor Clinic.

DECREASING MATERNAL DEATHS: Why were new mothers dying in the Dominican Republic—15 times more often than in the United States—despite a large network of public hospitals where most pregnant women went to give birth? Emory nursing faculty member Jenny Foster, a midwife with a doctorate in medical anthropology, was a member of the team of nurse-midwives asked to try to change those dismal statistics.

After intensive interviews at the large Dominican hospital requesting help, team members told the nurses what they themselves already knew: they were stretched too thin, with inadequate resources for follow-up after mothers delivered. In full collaboration with the Dominican nurses and the community, Foster and her colleagues came up with a three-pronged plan. First, the local nurses would receive additional training in available technology; second, they would train volunteers in the community to be doulas, available to help women after childbirth. And third, Foster would work with health care providers, women, and others, including men who had watched their wives die after childbirth, to determine if women understood dangerous symptoms during pregnancy and how well nurses were communicating with patients. The community was involved in every aspect of the research. Last year, the hospital reported no maternal deaths.



LEARNING MEDICINE, WESTERN-STYLE: For years, Emory's schools of medicine, nursing, and public health have helped build the health system in Atlanta's sister city Tbilisi, Georgia, in the former Soviet Union. In 2006, Emory helped clinicians in Tbilisi establish the first modern pediatric emergency room in any country from the former Soviet Union, and now they are helping implement an emergency medicine residency program to train clinicians in this specialty. Most recently, Emory received \$2 million from the U.S. Agency for International Development to develop a nursing program and train more than 1,600 nurses in the Georgia capital. Emory Healthcare nurse Laura Hurt, director of nursing operations at Emory University Hospital Midtown, will make multiple trips to Tbilisi to get the program up and running and to begin the teaching process. The immediate goal is to improve the standards of currently practicing nurses through in-service vocational training (both classroom and clinical), with a long-term goal of establishing a degree-granting nursing school that will produce future leaders of the nursing profession in Georgia.

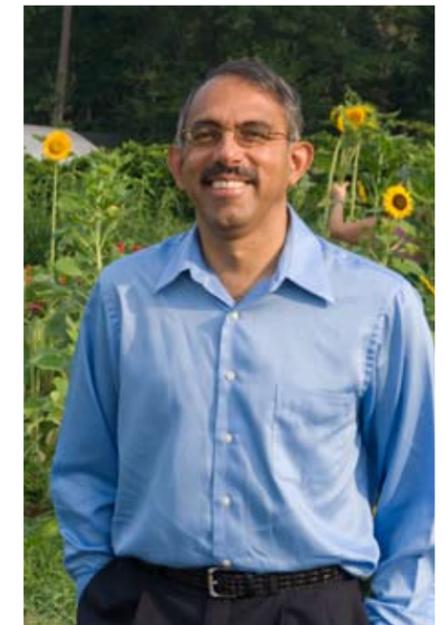


THE NEXT GENERATION OF GLOBAL SERVICE: Students interested in health professions are drawn to Emory for its emphasis on service, at home and around the world. Javier Gutierrez, for example, is a Colombian physician who this year received his master's from Emory's Rollins School of Public Health. After graduating from Bogotá's best medical school, Gutierrez set out for a distant outpost in the jungle to complete his obligatory rural service. In the isolated community, he saw maladies urban physicians rarely see and treated patients who had never seen a doctor. When the only hospital in the area closed, he and his wife took their savings and begged loans from friends to open a clinic in a small hotel on the edge of town. A decade later, the clinic has 28 beds, two surgical rooms, two delivery rooms, and an ER. Gutierrez was one of six students to receive Emory's Humanitarian Award for 2009.



EMORY OPHTHALMOLOGY RESIDENT Grace Prakalapakorn (foreground) was one of several eye specialists on a recent trip to Santo Domingo in the Dominican Republic by ORBIS, the "flying eye hospital." ORBIS volunteers treat patients and train clinicians in developing countries all over the world. Prakalapakorn joined ORBIS following completion of her residency training at Emory.

VENKAT NARAYAN IN THE ROLLINS SCHOOL OF PUBLIC HEALTH is principal investigator of the Emory portion of an NIH-funded partnership with the Public Health Foundation of India to establish a global center for prevention and control of "cardiometabolic" diseases in South Asia. Center researchers will test 4,000 people in each of three cities in India and Pakistan in an attempt to postpone and control heart disease. They will also recruit 1,200 people living with diabetes to test effectiveness of various treatments and care strategies for diabetes and heart disease. Both diabetes and heart disease disproportionately affect people in this region. The South Asia region includes three of the top 10 countries in the world in terms of people with diabetes (India, Pakistan, and Bangladesh), and is the region with the highest number of diabetes-related deaths. Asian Indians are projected to account for 40% to 60% of the global cardiovascular disease burden over the next 10 to 15 years. In addition, 35% of cardiovascular disease-related deaths in India occur in people aged 35 to 64 compared with just 12% of people in those age groups in the United States.



Investing in research In fiscal year 2008–2009, Emory’s Woodruff Health Sciences Center (WHSC) was awarded \$446.5 million in research funding, bringing Emory University’s research funding for the year to \$484.3 million, an 18% increase over the previous year.

These awards include National Cancer Institute designation and \$4.2 million in funding for Emory Winship Cancer Institute, a \$16 million NIH grant to explore fundamental questions about how vaccines work, \$14.5 million from the NIH to fund a clinical trial of progesterone for traumatic brain injury (a treatment pioneered at Emory), \$7.5 million to study cancer imaging, and \$6 million to study environmental causes of Parkinson’s, among many others.

Each of these grants represents a belief on the funding agencies’ part that their investment in Emory will yield important dividends for patients. Each grant also represents an investment by the Woodruff Health Sciences Center in overhead costs to support such research. Last year, the total cash loss for such unrecovered costs of research in the WHSC totaled \$97.7 million.



Preparing the next generation This fall, Emory’s Rollins School of Public Health had record student enrollment, an increase of almost 25% over the previous year, a reflection likely of the fact that students enrolled in global health programs across the United States and Canada doubled over the past three years. To help increase the number of U.S. doctors, as recommended by groups like the Association of American Medical Colleges, Emory’s medical school admitted its largest class ever this fall as well. Meanwhile, nursing enrollment held steady, while the school set a goal

Emory Healthcare invests millions each year in the WHSC’s teaching and research missions, including \$69.6 million in fiscal year 2008–2009.

of seeding its PhD program with at least two students each year from its undergraduate program to help address the continuing national shortage in nursing faculty.

Learning a profession in the health sciences is an expensive undertaking for students, which is

why the Woodruff Health Sciences Center invests 24% of its tuition income in financial aid for students. Last year, this amount totaled \$14 million.



Education stats in health sciences

Emory University School of Medicine

- 517 medical students, including 73 MD/PhD students; 468 post-docs
- 1,117 residents and fellows
- 447 students in health profession training, such as physical therapy and physician assistant programs

Rollins School of Public Health

- 888 master’s students, 104 PhD students, and 17 post-docs

Nell Hodgson Woodruff School of Nursing

- 210 BSN, 163 master’s, 16 PhD students

Emory's economic impact: moving Georgia forward

Operating expenses in the Woodruff Health Sciences Center (WHSC) totaled \$2.5 billion in fiscal year 2008-2009, a total that translates into an impact of \$5.7 billion on the metro Atlanta economy. Following are examples of other ways in which the WHSC brings economic value to the community.



Jobs: With 18,083 employees, the WHSC makes Emory the largest private employer in the 20-county Atlanta area and the second largest in the state. The WHSC brings jobs to the area in other ways as well. Every \$1 million in research income, for example, is estimated to generate an average return of \$2 million in revenue for the area and 32 jobs, meaning that WHSC's sponsored research funding received over the past year (\$446.5 million) will generate more than \$890 million in economic impact and more than 14,000 jobs for Georgia.

Growth: In the past year, the WHSC dedicated the Emory University Orthopaedics & Spine Hospital, a six-story, 208,000-sq-ft facility 6 miles east of the Emory campus. Emory's Yerkes National Primate Research Center dedicated a new Clinical Veterinary Medicine Administration Research Building at its field station in Lawrenceville, Ga., which received LEED gold certification for its site sustainability qualities and water and energy efficiency. Meanwhile, a new building for Emory's Rollins School of Public Health, currently under construction, is on schedule to open in 2010.

Georgia gained its first National Cancer Institute designated cancer center this year when Emory Winship Cancer Institute became one of 65 NCI-designated centers nationwide. Two new WHSC initiatives—the Center for Critical Care and the Center for Comprehensive Informatics—reflect strategies to standardize quality of care across the enterprise, to exploit the full potential of information technology, and to increase the efficiency and overall value of health care to society.

Biotech leadership: Since the early 1990s, the WHSC has helped Emory bring more than \$775 million into the state in licensing revenues

from drugs, diagnostics, devices, and consumer products. A robust product pipeline includes more than 50 products in all stages of development or regulatory approval, with 27 having reached the marketplace and 12 more in human clinical trials. Over the past decade, Emory has launched 47 start-up companies, some with help from Emtech Bio, a biotech incubator developed in collaboration with Georgia Institute of Technology.



Value to the community

In addition to providing charity care, Emory's Woodruff Health Sciences Center (WHSC) benefited the community in many other ways in fiscal year 2008-2009:

	<i>(millions)</i>
Charity care provided by Emory Healthcare	\$48.9
Financial aid provided to students from WHSC resources	14.0
Emory Healthcare investment in WHSC teaching and research	69.6
WHSC research income	446.5*
Cash loss for unrecovered costs for WHSC research	97.7
Unreimbursed care provided at Grady Hospital	23.1
Investment of Emory Medical Care Foundation in Grady Hospital	28.9
Total (millions)	\$728.7

The WHSC has a total of 4,528 students and trainees. With 18,083 employees, the WHSC helps make Emory the largest private employer in Atlanta and the second largest private employer in Georgia. Based on annual operating expenses of \$2.5 billion in fiscal year 2008-2009, the WHSC's economic impact on metro Atlanta is estimated at \$5.7 billion.

*Every \$1 million of research funding is estimated to generate an average return of \$2 million and 32 jobs in our state, meaning that WHSC's \$446.5 million in research funding will generate more than \$890 million in economic impact and more than 14,000 jobs for Georgia.

Woodruff Health Sciences Center of Emory University

- Emory University School of Medicine
 - Nell Hodgson Woodruff School of Nursing
 - Rollins School of Public Health
 - Yerkes National Primate Research Center
 - Emory Winship Cancer Institute, with almost 300,000 patient services annually and more than 150 ongoing therapeutic trials
 - Emory Healthcare, the largest, most comprehensive health care system in Georgia, which provides millions of dollars in charity care each year and includes
 - Emory University Hospital, a 579-bed adult, tertiary care facility staffed exclusively by 1,125 Emory faculty physicians
 - Emory University Hospital Midtown (formerly Emory Crawford Long Hospital), a 511-bed community-based, tertiary care center in Atlanta's midtown, staffed by 1,002 medical school faculty and 489 community physicians
 - Emory University Orthopaedics & Spine Hospital, a 120-bed hospital staffed by Emory faculty and located 6 miles east of the Emory campus
 - The Emory Clinic, made up of 1,153 Emory faculty physicians, the largest, most comprehensive group practice in the state, with facilities on Emory's Druid Hills and midtown campuses and throughout metro Atlanta
 - Emory-Children's Center, the largest pediatric multispecialty group practice in Georgia (and a joint venture with Children's Healthcare of Atlanta)
 - Wesley Woods Center of Emory University
 - Wesley Woods Hospital, a 100-bed facility with inpatient geriatric care and hospice service)
 - Wesley Woods Clinic, providing outpatient primary care for geriatric patients
 - Budd Terrace, a 250-bed skilled nursing care facility
 - Wesley Woods Towers, a 201-unit residential retirement and personal care facility
- Emory Healthcare joint ventures
- Emory-Adventist Hospital, an 88-bed community hospital located in a suburb of Atlanta and jointly owned by Emory and the Adventist Health System
 - EHCA, LLC, created in collaboration with the Hospital Corporation of America
 - Emory Eastside Medical Center, 222 beds
 - Emory Johns Creek Hospital, 110 beds

HOSPITAL AFFILIATES

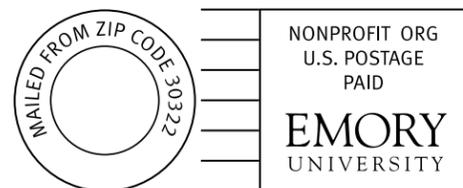
- Grady Memorial Hospital, 953 beds, located in downtown Atlanta, staffed by Emory physicians (285 FTEs, 363 residents and fellows), in collaboration with Morehouse School of Medicine
- Children's Healthcare of Atlanta
 - Children's at Egleston, 255 beds, Emory campus, staffed by 268 Emory faculty physicians and 512 community physicians
 - Children's at Hughes Spalding, 24 beds, Grady campus, staffed by 26 Emory faculty physicians, 12 Morehouse physicians, and 20 community physicians
 - Some Emory pediatric faculty also teach and have admitting privileges at Children's at Scottish Rite, 250 beds, located in north Atlanta
- Atlanta Veterans Affairs Medical Center, 165 hospital beds and 100 nursing home beds, 2 miles northeast of the Emory campus, staffed by 250 Emory physicians

FOUNDING LEGACY IN COMMUNITY SUPPORT

The center's namesake, Robert W. Woodruff—the legendary leader of The Coca-Cola Company—dedicated his life to support of the community, at Emory and in Atlanta, in Georgia and beyond.



For more information, please contact Health Sciences Communications: 404-727-5686 emoryhealthsciences.org



Emory University's Woodruff Health Sciences Center is meeting the need, providing millions of dollars in high-quality, compassionate care, regardless of patients' ability to pay.