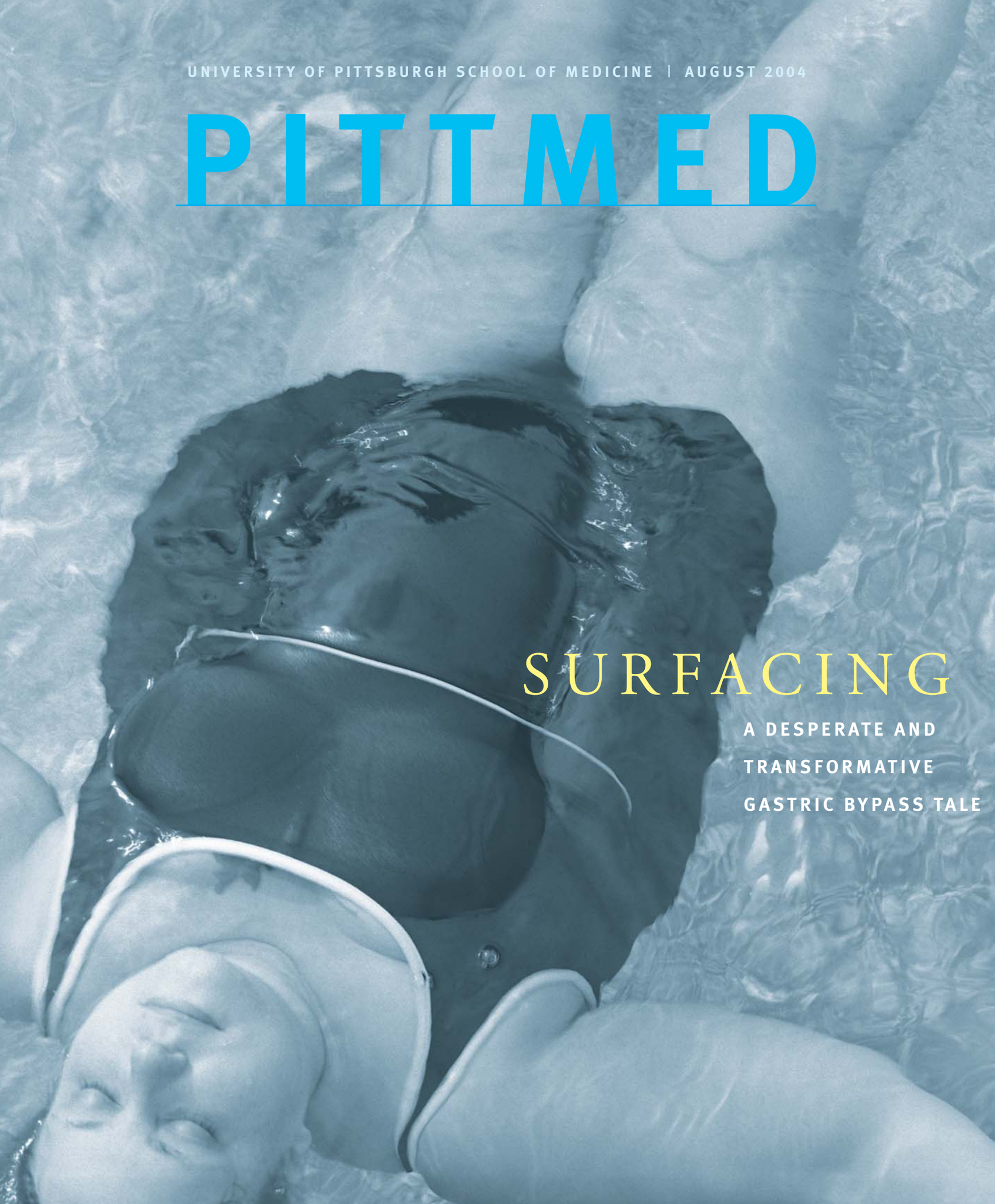
UNIVERSITY OF PITTSBURGH SCHOOL OF MEDICINE | AUGUST 2004

PITTMED



SURFACING

A DESPERATE AND TRANSFORMATIVE GASTRIC BYPASS TALE



BUDDY SYSTEMS

As usual, *Pitt Med* [February issue] was great. I was particularly impressed with the buddy programs featured. I wish we'd had them 59 years ago.

John Fulton (MD '45)
Missoula, Mont.

MOST LIKELY TO DISCOVER A BIOCHEMICAL PATHWAY?

I greatly enjoyed your piece on my classmate John Hibbs. I recall him as a soft-spoken, highly intelligent maverick who was always a source of fun and bright ideas. Keep up the excellent reviews.

Barry Brenner (MD '62)
Boston, Mass.

COVERED

Your last issue pulled me right in. I know you don't often do cover illustrations, but this one was gripping.

Edith Nichols
Editor, *Hopkins Medicine*

We gladly receive letters (which we may edit for length, style, and clarity).

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2004 MAGAZINE HONORS

CASE District II Accolades
- Gold Medal, Covers
- Gold Medal, Multipage Publ. Design
- Honorable Mention, Magazines
- Honorable Mention, Best Article

Women in Communications
- Matrix Award, Feature Writing
- Honorable Mention, Feature Writing



You should see what went on during Medical Alumni Weekend!

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UNIVERSITY OF PITTSBURGH SCHOOL OF MEDICINE MAGAZINE | AUGUST 2004, VOL. 6, ISSUE 3



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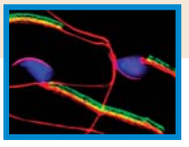
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One alum has brought former Presidents Carter
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Universal coverage.

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CONTRIBUTORS

The sophisticated yet somehow childlike illustrations of JULIETTE BORDA ["America XL"] have charmed viewers around the world. Her bright, opaque colors come from gouache paints. Borda's work has appeared at the Carnegie Museum of Art, the Society of Illustrators Museum, in magazines ranging from *Time* to *Playboy*, and on book jackets for W.W. Norton. Although living in Brooklyn keeps her close to the action, there's a lot she misses from her years living in Pittsburgh and studying art at Carnegie Mellon University. For starters, she says, Central Park doesn't hold a candle to Frick.

Photographer CHARLEE BRODSKY [cover, "Ghost Body"] spent four years photographing Stephanie Byram's battle with breast cancer and then published the book, *Knowing Stephanie*, last year. The late Byram once said that their work together had allowed her to see her own body as beautiful rather than maimed. This power of photography to change lives and alter perception continues to amaze and motivate Brodsky, a professor in the School of Design at Carnegie Mellon. She says her recent project with bariatric surgery patient Sally Stewart demonstrates that photography can also be an outlet for deep-seated emotions.

Originally from Louisiana, writer JESSICA MESMAN ["Ghost Body"] was attracted to Pittsburgh because of the Andy Warhol Museum (she has been fascinated by the artist for years) and Pitt's writing program. Three years later, she has her Pitt MFA in writing and a budding career as a freelancer. In addition to assignments for *Pitt Med* and magazines like *Elle*, Mesman is managing editor of the literary journal *Creative Nonfiction*.

COVER

Thirty pounds off and just another 120 to go. Rude strangers and a bleak health outlook put Sally Stewart in motion. She shares her emotional ride of going from a size 24 to a size 8 with gastric bypass surgery.



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How do we stop young people from killing themselves? Thankfully, we at least know the risk factors now.

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Despite all we've learned about treating psychiatric disorders, patients tend to fall through the cracks. How about a new model for intervention?

BY ROBIN MEJIA

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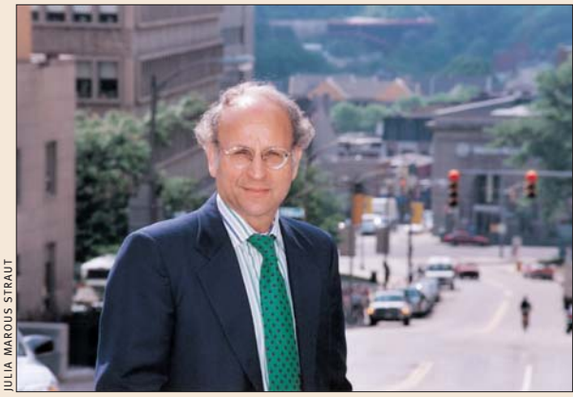
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JULIA MAROUS STRAUT

The ship sprang through the water like a thing possessed. The sail being nearly all forward, it lifted her out of the water … had it been life or death with every one of us, she could not have borne another stitch of canvas.

—Richard Henry Dana
Two Years Before the Mast

I am a sailor, and have been, on and off, since my days as an intern in Minneapolis, the city of lakes. I love sailing—it's both exhilarating and innervating—and it requires all of my psychic and cognitive energy to balance the boat (a Flying Scot!) between wind and water, leaving me no time to worry about NIH monies, conflicts of interest, unfunded mandates, the state appropriation, or the cost of malpractice insurance—unless I want to end up in the drink.

But there are days when conditions are perfect and seductive, and it's tempting to kick back. The water is azure, sparkling beneath a brilliantly clear sky. The wind drives me forward, its vector is constant, and the boat is fast. On a recent weekend day like this, with the sail out in a broad reach, I allowed my mind to wander as the Scot glided. Suddenly, an unanticipated gust filled the sail and swung it around so quickly that the boom almost knocked me out of the boat. So much for letting the mind wander .

Sailing is my escape from the demands of work, from my thoughts about where our nation is headed, and even from my beloved science and medicine. And after that smack from the boom, I realized that sailing is not unlike science and medicine—it demands high vigilance and certain discipline, lest we find ourselves flipped out of the boat.

At the School of Medicine, our job is to nurture creative, analytical, evidence-based thinking in our students. Our graduates must demonstrate a monolithic habit of mind—the ability to focus with extraordinary clarity and intensity. Beginning this year, our students will find that research (or, more broadly, a substantive exposure to scholarship) is a mandatory part of the new curriculum. Most of our entering students will spend their first summer pursuing research and then carry a scholarly research project through to graduation. Our rationale for this new requirement reflects, in part, our obligation to expose more students to the possibility of a life in medical research at a time when the number of physician-investigators continues to decline nationally, thereby thwarting the translation of our spectacular advances at the laboratory bench to medicine at the bedside. As importantly, we believe that the successful experience of hypothesis-driven, independent research will give our students confidence in their ability to think about complex illness in creative and analytical terms—beyond the confines of textbook knowledge.

They will need to display extraordinary discipline and singleness of purpose to carry this through. But success will speed our graduates into the world with intellectual acuity, and perhaps also an awakened zeal for scholarship. Another sailor, Walt Whitman, wrote this:

Our life is closed—our life begins;
The long, long anchorage we leave,
The ship is clear at last—she leaps!
She swiftly courses from the shore;
Joy! shipmate—joy!

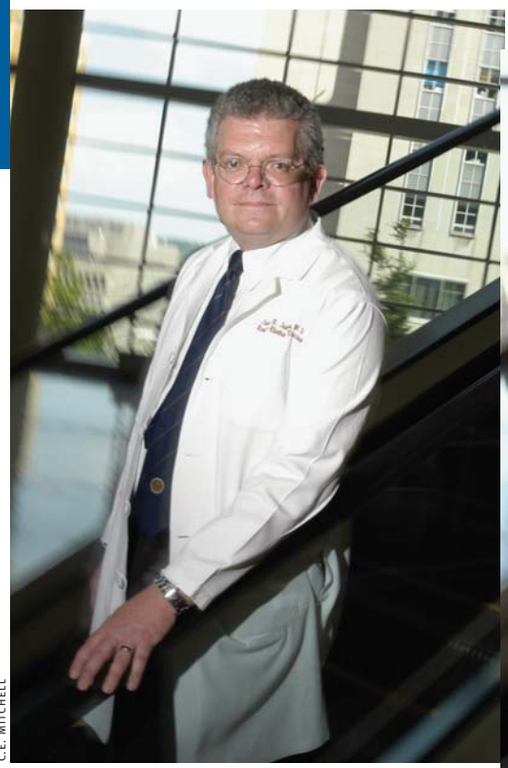
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Senior Vice Chancellor for the Health Sciences
Dean, School of Medicine



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JOHNSTON IS TOP U.S. TEACHER

Star Trek **slides pop up in the middle of his lectures. He offers towel-wrapped, home-baked loaves of bread to classes. Decades of Pitt med students have given teaching honors to James Johnston (MD '79), professor of medicine, who teaches the second-year renal block and other courses. Now, he has been recognized nationally. The American Medical Student Association has conferred on him the 2004 National Golden Apple for Teaching Excellence Award. Only one teacher is selected for the honor each year. His secret for effective teaching? "You have to be able to look at your audience, grasp whether or not they're understanding. ... I'm constantly working on different ways of presenting information in an understandable fashion to patients, students, residents, fellows. I still think there's a huge amount of room, that I can do a better job. I'm just going to keep listening to my students." —*Dottie Horn***



C.E. MITCHELL



Johnston (left) and South-Paul

SOUTH-PAUL, TOP MENTOR

Jeannette South-Paul (MD '79) has a slide of a turtle sitting on a fence. She likes to say, you know, the turtle didn't get there by itself—like all of us, it got some help along the way. Recently, South-Paul, chair of the Department of Family Medicine, was recognized for her accomplishments in mentoring others: The Joy McCann Foundation named her a 2004 McCann Scholar. The national award, given to only three people this year, honors outstanding mentors in medicine, science, and nursing and includes an unrestricted $150,000 grant.

For 15 years, first as family medicine chair and, later, as vice president for minority affairs at the Uniformed Services University of the Health Sciences, South-Paul organized monthly potluck dinners for women students, where faculty spoke about everything from leadership to dual-career relationships. After coming to Pitt in 2001, South-Paul helped organize a group for junior minority women faculty in the medical school that has since grown into a larger group for minority women leaders throughout the community.

She plans to use her monetary award to start a foundation to educate young people about disadvantaged populations. —*DH*

FOOTNOTE

Watch for the following hospital responses to news coming over the AP wire that the chance of finding infectious microbes on a physician's tie is 50/50:

- **Scrubbable latex ties (clip-on)**
- **Disposable necktie prophylactics**
- **Robots to launder your tie while you wear it**
- **Smug looks from those who've insisted the bow tie never went out of fashion**



CAMI MESA

A&Q

with Brian Primack—Media as Mother's Milk

In total, American kids watch TV for more hours than they are in school, according to Brian Primack, assistant professor of family medicine. "Mass media really is the new mother's milk, nurturing us into who we'll become," he says. In educational sessions at schools and colleges, Primack teaches media literacy—which includes looking at the process by which companies develop ads and target certain demographic groups for their products.

On using media literacy with patients

I just talked ... to a patient, a male, mid-30s, who smoked. I asked what brand he smoked. I said, "Wait, wait, wait, don't tell me—Newport." He said, "How'd you know?" I said, "Well, because you're African American." He said, "What does that have to do with anything?" I said, "Newport specifically targets African Americans, because it was noted years ago that menthol cigarettes worked well marketed in the African American population.

"There have been a lot of studies showing that menthol might make [the negative health consequences of smoking] even worse. ... Blacks have 40 percent more lung cancer than Whites, even though they don't smoke more. ... It's certainly never been proven, but—could it be because they smoke more menthols? Eighty percent of Black people [who smoke] smoke menthols; 25 percent of White people [who smoke] smoke menthols."

I was able to talk to him about something that really meant something to him. You know? His sense of group pride. His sense of being targeted because of his ethnicity. ... I had seen him multiple times before, and [he] was not interested at all in stopping smoking. ... For the first time, [he] seemed interested.

On marketing's influence over physicians

We all say, "Oh, I'm not affected by the fact that I get pens and free dinners, etc., etc., from [pharmaceutical] companies." But the fact is, it wouldn't be happening if it didn't work. They spend millions on that kind of marketing, so there's no question that it works. Our challenge is to be more aware of the messages we're sent on both a conscious and a subconscious level. Media literacy helps develop this awareness.

His question for us

In what ways are you affected by the mass media that you are not immediately ready to admit? ***—Interview by Dottie Horn***

FOR MORE INFORMATION: See Primack's June 1 article in *American Family Physician* or contact him at bprimack@pitt.edu.

Faculty Snapshots

This year, six of the 64 physicians invited to join the American Society for Clinical Investigation are from the School of Medicine. ASCI is an honor society of exceptional physician-scientists who must be inducted before they are 45. This year's Pitt invitees: **Yuan Chang**, professor of pathology, who discovered (with Patrick Moore) KSHV, the herpes virus that causes Kaposi's sarcoma; **Raphael Hirsch**, chief of the Division of Pediatric Rheumatology, who studies gene therapy as a tool for preventing and treating juvenile rheumatoid arthritis; **Jay Kolls,** chief of pediatric pulmonology, who is developing a vaccine for the pneumonia common among people with AIDS; **Roberta Ness**, chair of epidemiology in the Graduate School of Public Health and professor of medicine and of obstetrics, gynecology, and reproductive sciences, who researches ovarian cancer and sexually transmitted diseases in women; **Joel Schuman**, chair of ophthalmology, who helped invent optical coherence tomography, an imaging technique used worldwide for diagnosing and managing eye disease; and **Flordeliza Villaneuva**, associate professor of cardiology, who researches the microcirculation of the heart and is developing new ultrasound methods to evaluate blood-vessel function.

The Association of American Physicians, an elite group of some 1,000 of the nation's most accomplished physician-researchers, admitted just 56 new members this year. Three are Pitt faculty members: **Thomas Kleyman**, chief of the renal/electrolyte division, who is best known for his studies of the structure and regulation of ion channels; psychiatry Chair **David Kupfer** who researches long-term treatments for and underlying causes of depression; and **John Mellors**, professor of medicine, who revealed that the amount of HIV in a patient's blood sample correlates with clinical outcome.

–Melanie Donahoo



Kleyman



Kupfer



Mellors

"I Want to!"

Britney Spears and Christina Aguilera are sick! But Beyoncé, after sharing a meal with them, is fine. As a med student reveals this fictional scenario to a group of seventh-grade Pittsburgh girls, excited chatter fills the room. The girls step into the roles of epidemiologists and microbiologists, searching out the source of the pop stars' illness. Shawnniece Jackson, a student at Milliones Middle School, confides to her classmate that Beyoncé is her favorite of the three.

Shawnniece is 13, has a ponytail and big brown eyes, and is one of 220 seventh-grade girls who participated in the Young Women in Science Days program recently held at the University of Pittsburgh School of Medicine. The program hopes to pique interest in science among girls her age. About 75 women faculty and students, most from the medical school, volunteered to teach the girls about topics ranging from DNA to animal models of disease.

Eventually, Shawnniece's group, all wearing lime T-shirts, moves to the next station. Each girl dons latex gloves and is allotted one sheep's brain, which is about the size of a tennis ball. As SuJean Choi, assistant professor of psychiatry, points out various brain regions, most girls leave the brains alone, letting them rest on paper plates in front of them. Shawnniece takes the plastic knife on her desk and begins slicing hers into pieces. Then Choi brings out a real human brain. "Who wants to hold it?" she asks. The room is quiet as the girls cringe. Shawnniece breaks the silence: "Me, me, I want to!" Choi places it in her hands; Shawnniece inspects it as though it's a canteloupe she's considering putting into a grocery cart. She asks, "What's this blue thing?" and "Why are there so many wrinkles?" Choi answers her questions. The seventh-grader takes a moment more to check its heft before handing the brain back. "Eww, it's gross," she says, sticking out a sour tongue.

Later, Shawnniece reports that she doesn't know what she wants to be when she grows up, but she likes science. ***–Sonya Kanti Patel***

PATTY NAGLE







A bevy of seventh-grade girls speculates on conundrums of science like what might ail Britney Spears.

WEINBERGER ON LIMITS

Though only 5 feet tall, the 15-year-old girl was captain of her school's basketball team. "Does that tell you something about her motivation?" says Miles Weinberger (MD '65), professor of pediatrics at the University of Iowa and winner of this year's Hench award, given by the Medical Alumni Association.

The girl's doctor diagnosed asthma because she became short of breath when she exercised. Later, as part of a research study, Weinberger had the girl run on a treadmill and measured her oxygen usage and carbon dioxide production. The girl didn't have asthma, he found; she became short of breath when she reached the normal physiologic limits of how hard she could exercise. Asthma is often not at the root of exercise-induced dyspnea (labored breathing), Weinberger recently found. The researcher has published more than 150 articles on asthma since 1974. He established strategies for safely and effectively using the drug theophylline and made it the treatment of choice for asthma for years, says Leslie Hendeles, professor of pharmacy and pediatrics at the University of Florida. Weinberger also originated the therapeutic strategy of preventing asthma symptoms, rather than just treating acute attacks, notes Hendeles. *—DH*



Weinberger ran away with the Hench award this year. (He's shown here running the Pittsburgh Marathon.)

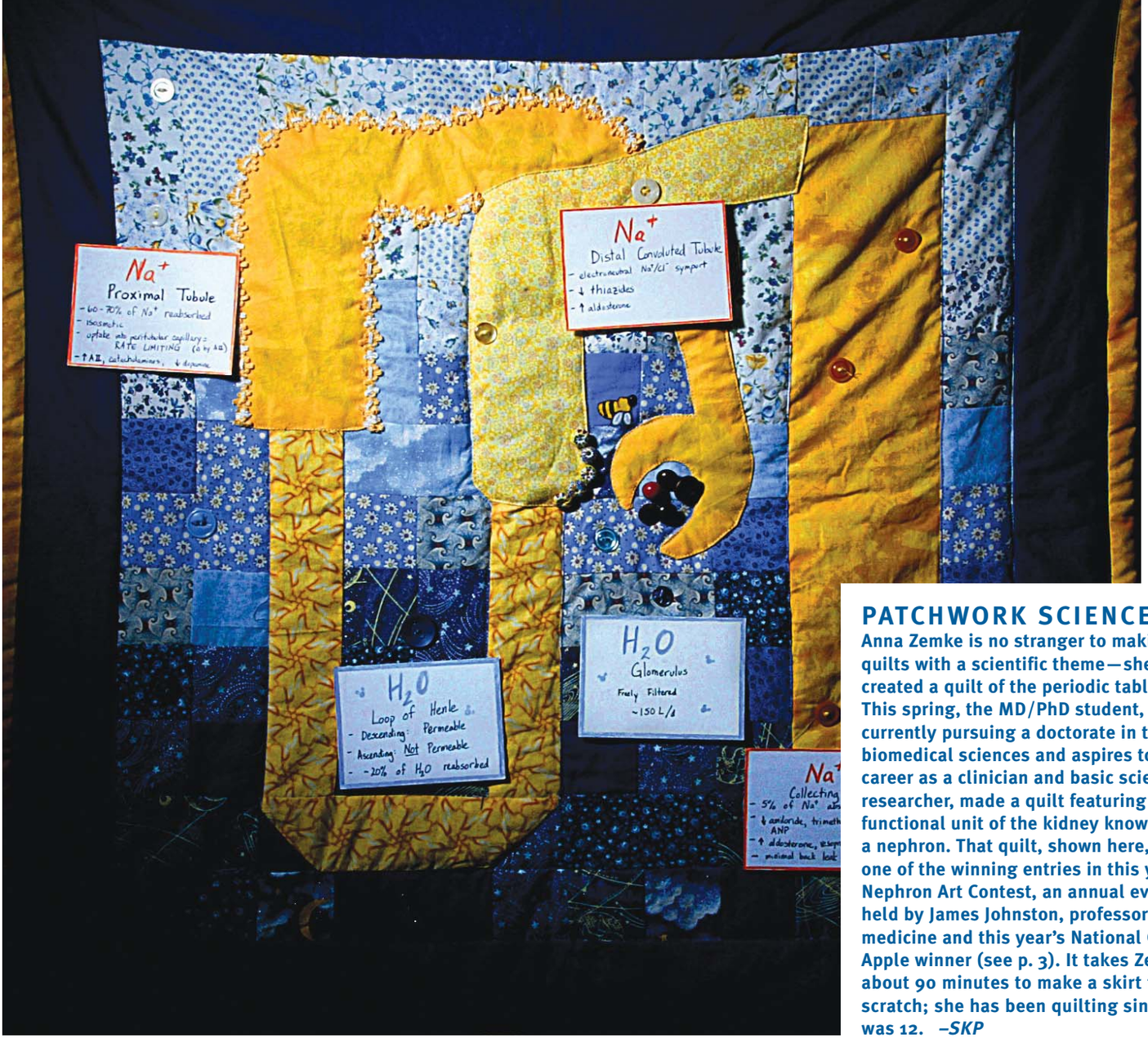
TWENTY-POINT CHECK WITH MICHAEL FINE

A woman comes into the emergency department with pneumonia. The doctors assess her on 20 different variables—checking, for example, her pulse rate, mental status, blood pressure, and whether a chest x ray shows any fluid in the sac surrounding her lungs. This Pneumonia Severity Index allows doctors to identify low-risk patients who, for the most part, can be safely treated with outpatient therapy. The tool was developed by a team that included Michael Fine (Res '86), professor of medicine at Pitt and winner of this year's McEllroy award. The award is given by the Medical Alumni Association to honor outstanding accomplishments by a doctor who did residency or fellowship training at Pitt but earned an MD elsewhere.

Fine's work has been cited in many medical texts, including the *Cecil Textbook of Medicine*. His clinical research career has focused on the management of community-acquired pneumonia. *–DH*



Fine won the McEllroy. (He's shown here with his son, Jacob.)



LISA KYLE

PATCHWORK SCIENCE

Anna Zemke is no stranger to making quilts with a scientific theme—she once created a quilt of the periodic table. This spring, the MD/PhD student, who's currently pursuing a doctorate in the biomedical sciences and aspires to a career as a clinician and basic science researcher, made a quilt featuring the functional unit of the kidney known as a nephron. That quilt, shown here, was one of the winning entries in this year's Nephron Art Contest, an annual event held by James Johnston, professor of medicine and this year's National Golden Apple winner (see p. 3). It takes Zemke about 90 minutes to make a skirt from scratch; she has been quilting since she was 12. *–SKP*

Appointments



Lagasse

In research published in 2000 in *Nature Medicine,* **Eric Lagasse**, a new associate professor of pathology, injected hematopoietic stem cells (the precursors of blood cells) into mice with liver disease. The injected cells not only gave rise to new blood cells, but also led to the diseased liver cells becoming fully functional. This suggested that these stem cells might perpetuate other types of cells and tissue besides those related to the system from which they originated. But further research showed that the hematopoietic cells did not actually turn into new liver cells. In a 2003 *Nature* paper, Lagasse showed that some of the hematopoietic cells had fused with liver cells—and in these fused cells, the liver cell had reprogrammed the hematopoietic cell to behave like a liver cell. At Pitt, Lagasse will continue to develop stem cell therapies for liver diseases. He'll also establish a research program on cancer stem cells. Before coming to Pitt, the PhD directed the stem cell program at StemCells in Palo Alto, Calif.



Niedernhofer

A mouse normally lives two years. Knock out its Ercc1 gene (a DNA repair gene) and it dies of old age at three weeks. **Laura Niedernhofer**, a new assistant professor of molecular genetics and biochemistry, mutated the gene so that it was partially functional, and the mouse's lifespan was six months. She made a less severe mutation, and the mouse lived 18 months. By altering DNA repair in this way, the MD/PhD has a series of mice who age at different rates. Niedernhofer recently finished her postdoc at Erasmus University in the Netherlands. At Pitt, she will continue to explore the link between DNA repair and aging.



Kroboth

Patricia Kroboth, a faculty member in the Department of Medicine since 1980, has been named the new dean of the School of Pharmacy. She helped establish the Clinical Pharmaceutical Scientist Program at Pitt and has chaired both the Department of Pharmacy and Therapeutics and the Department of Pharmaceutical Sciences. *—DH*

SCHOOL OF HARD HABITS

COUNSELING PATIENTS ON QUITTING TOBACCO

BY HATTIE FLETCHER



Students learn how to light up lives by helping patients quit.

© JOHN SPRINGER COLLECTION/CORBIS. ROSALIND RUSSELL STARS IN *AUNTIE MAME*, C. 1958.

The teenager, dressed in a black T-shirt and baggy pants, slumps in his chair in a room in Scaife Hall, staring at his feet. He tells third-year med student Rob Albrecht that he's been having stomach pains.

Zak's not a real patient, but an actor trained to give feedback. Albrecht has just been to a lecture, where David Eibling, professor of otolaryngology, explained how to counsel patients about tobacco use. "If we don't bring it up," he told the group, "patients assume our lack of concern is approval." Now, Albrecht's ready to try it out for himself; he'll practice with a few different "patients." The lecture and practice opportunities are part of a new tobacco cessation addition to the third-year Ambulatory Care Clerkship.

Standing while facing Zak, Albrecht asks a few patient-history questions, then zeros in. "Do you smoke?" he asks.

"I would never smoke," the bored-looking teen mumbles. "My grandfather just died of lung cancer."

A moment ago Albrecht was all set to counsel Zak; now he looks alarmed. He asks more about Zak's stomach pain, then after five minutes, stops the session to get feedback from the actor.

"Obviously, we were here to talk about quitting smoking…" Albrecht says.

"Hold on. Quitting what?" Zak interrupts.

"Smoking."

Zak sits back with a small smile and folds his arms over his chest.

"It says *tobacco* cessation."

As it turns out, Zak recently began using chew—which can lead to oral cancer, dental disease, nicotine addiction, as well as stomach ulcers. Later, tall, sandy-haired Albrecht shakes his head in frustration. "I will for the rest of my life ask about chewing tobacco," he says glumly.

Albrecht moves on to another case—Laura, a 35-year-old office worker. Her complaint: She quit smoking three weeks ago and has gained a pound a week since then. Albrecht congratulates her on quitting. He learns that Laura's been munching M&Ms in lieu of smoking, and suggests she try nicotine gum.

Afterward, Laura praises him for thoroughly explaining how to use the gum, but says that he didn't sound sincere when congratulating her on quitting: "It sounded like you were just saying the words to me."

"That's what I was doing," Albrecht agrees sheepishly. After leaving Laura's exam room, he notes, "That wasn't easy to hear."

Next is Carl, a 66-year-old man who's smoked for 53 years. Carl has recently cut back on his smoking, but is reluctant to quit.

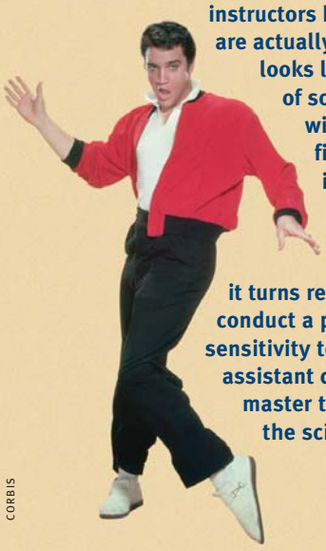
"Quitting smoking's a really difficult thing, and you've made great progress," says Albrecht. "Just because you haven't been able to do it instantly on your own is nothing against you. You're right on the brink, and let's see if we can try out some other ideas." He helps Carl brainstorm about how to change his behavior and explains that even after so many years, quitting has benefits.

Carl gives Albrecht high marks during the feedback. "You made me think very seriously about quitting," he says. ■

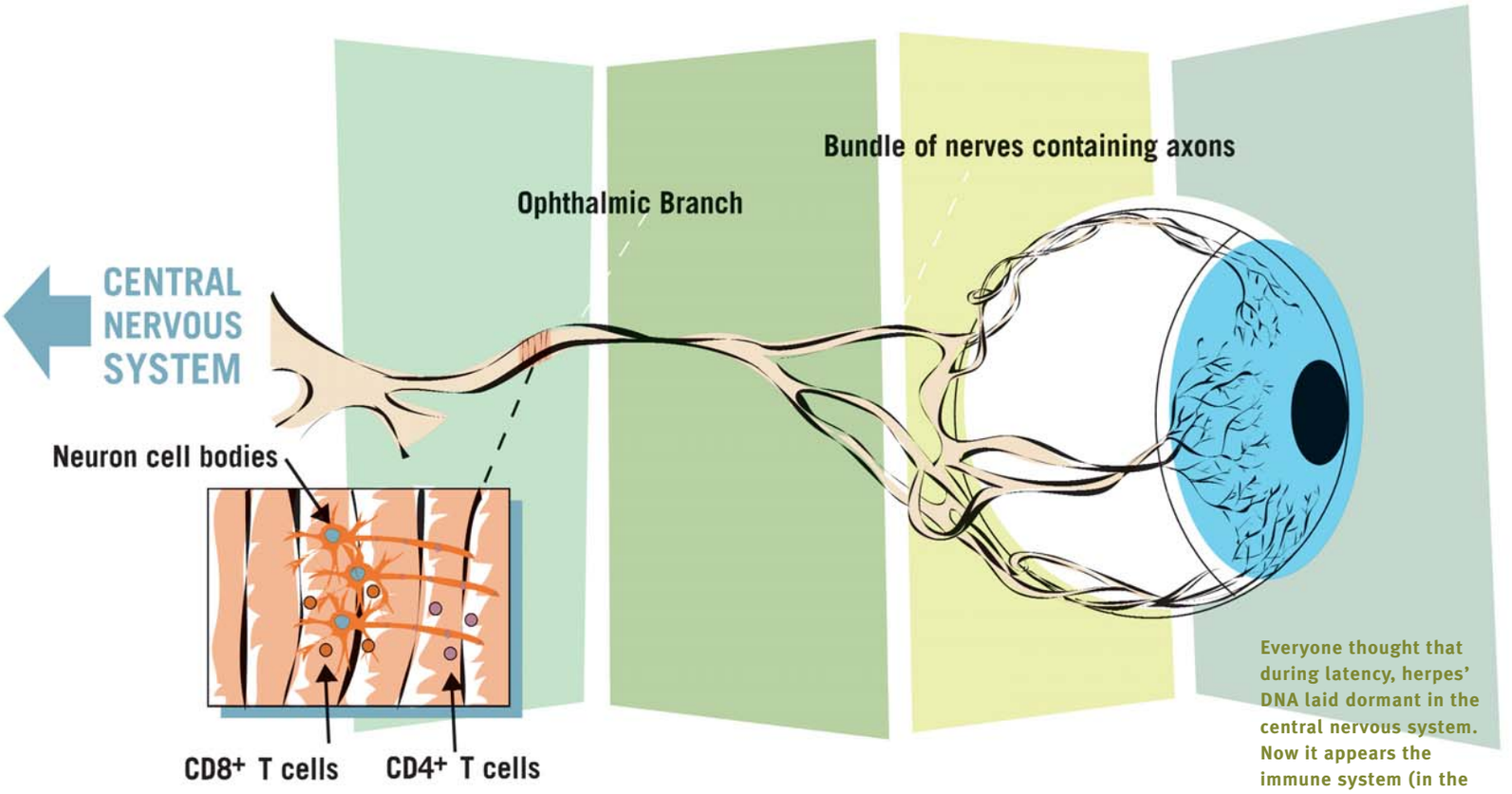
PRODUCTION MODEL NO. 3

Our medical school just got an electronic pelvis. First thought: Elvis would have been pushing 70 by now. But this is a female pelvis, designed to help medical students develop physical exam skills before working with, gulp, real patients.

This latest in Pitt's repertoire of simulator teaching tools is hot off the assembly line—ours is Production Model Number Three. California surgeon Carla Pugh invented the E-pelvis, recognizing that instructors have great difficulty telling what students are actually touching during a pelvic exam. Her invention looks like a supine 60s-era girdle mannequin made of soft rubber instead of hard plastic. It comes with normal anatomical parts and can also be fitted with three common abnormalities, including a fibroid uterus. When the student touches, say, the cervix, the cervix indicator on an attached laptop screen turns green; if the student applies too much pressure, it turns red. By using the mannequin, students learn to conduct a pelvic exam the same way every time, with sensitivity to the patient's comfort, notes John Mahoney, assistant dean for medical education. "It helps students master the art of medicine," he says, "as well as the science." *–Margaret C. McDonald*



CORBIS



Everyone thought that during latency, herpes' DNA laid dormant in the central nervous system. Now it appears the immune system (in the form of T cells) responds to some viral activity during that time.

MICHAEL LOTENERO

HERPES HARBORED

WHAT REALLY HAPPENS DURING LATENCY?

BY ERICA LLOYD

In a nonsensical yarn, Mercutio accuses Romeo of consorting with Queen Mab, an imaginary Lilliputian wonder. Among other excursions, Mab gallops "O'er ladies' lips, who straight on kisses dream,/Which oft the angry Mab with blisters plagues/Because their breaths with sweetmeats tainted are."

So it seems that Shakespeare knew of herpes, and there are much earlier reports of the disease. Hippocrates used the term to describe the spreading of lesions on skin. And today, Queen Mab still gallops. One in four women and one in five men have HSV-2, the herpes simplex virus that occurs in the genital region; 90 percent of those with HSV-2 do not know they have it and may never experience symptoms—however, they can infect others. The similar HSV-1, which commonly results in fever blisters, is estimated to be carried by 50 to 80 percent of adults in the United States. Although painful, unpleasant, and full of social stigma, HSV is often manageable, yet it's not to be taken lightly. If pregnant women become infected late in term, their fetuses are at great risk of not surviving. And HSV is the leading cause of infectious blindness.

Still, 2,500 years after identifying the disease, science has not offered a cure. But it seems to be inching closer, and now investigators at Pitt have repositioned the yardstick.

Virologists consider herpes simplex virus to be one of the most fascinating organisms known to us. But we don't know it very well. One source of HSV intrigue is its ability to remain dormant then somehow reawaken. The viral DNA survives during latency by camping out in the nervous system, where it's protected. In the case of ocular infection, the virus travels up the optic nerve connecting the eye to the brain, the viral DNA making itself at home in the cell bodies of ganglia. In most people, the virus never seems to assert itself. Others suffer from recurring infections—no one knows why, but stress and ultraviolet light probably have something to do with it.

Scientists had pretty much decided that the immune system didn't play a role during the latent period. The viral DNA didn't appear to be producing proteins during latency, so there was nothing for the immune system to do, no antigens to launch a response against. Herpes research focused on the neuron hosting the DNA. When virologists attended herpes latency meetings, they didn't talk about the immune system. Then Robert Hendricks' lab gave them something to talk about.

Ting Liu, who had been an ophthalmologist in China, came to the University of Pittsburgh School of Medicine several years ago and pursued a postdoctoral fellowship with Hendricks, a professor of ophthalmology interested in ocular latency. In 1996, Liu and Hendricks found T cells hanging around cell bodies during initial latency in mouse ganglia. T cells are sent by the immune system to shut down intruders. But what was the immune system responding to if the viral DNA wasn't producing proteins?

Then Kamal Khanna found out. Khanna completed his PhD in immunology at the School of Medicine this spring. Under Hendricks' guidance, he monitored herpes in a latent state in a mouse. Building on Liu's work, he discovered that T cells remained not just a couple of days into latency but appeared for the life of the mouse. Further, Khanna found highly suggestive indications of persistent, low-level production of viral glycoproteins, which can be thought of as viral building blocks. The immune system appeared to be operating after all—very subtly squashing these glycoproteins and the beginnings of a full-blown infection.

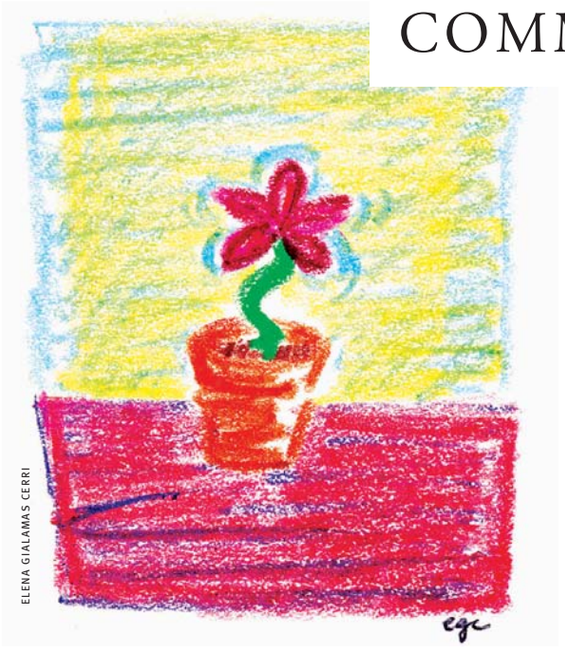
These findings were published in the *Journal of Experimental Medicine* and *Immunity.* Khanna's efforts brought him an American Association of Immunologists award usually reserved for postdocs. The lab's work has been called paradigm shifting. And it recently was translated to a human model by German investigators.

It makes sense that the immune system plays a role in latency, Khanna notes, pointing out that herpes is known to readily reinfect people with HIV, a population with compromised immune systems.

Herpes vaccine development has met with little success. But Hendricks suspects a vaccine would be effective if it targeted the glycoproteins that subtly appear during latency. "These are the most important ones to stop the virus from recurring," he says. He speculates that such a vaccine could be used therapeutically for people who suffer from recurrent infections. ■

GOOD INK

Editorial commentary is infrequent in peer-reviewed journals. It's reserved for papers that are likely to shake things up a bit, or at least turn heads. Along these lines, the School of Medicine's PhD program has scored a hat trick. Three papers on herpes submitted by doctoral students from the school as primary authors were judged worthy of editorial commentary in the past couple of years: two by Kamal Khanna, whose adviser is Robert Hendricks (see story above), and one in the *Proceedings of the National Academy of Sciences* (June 24, 2003) by Sara Jackson. Working with her adviser, Neal DeLuca, professor of molecular genetics and biochemistry, Jackson reported that the herpes virus does not replicate from a circular genome, as was previously assumed, but instead appears to replicate from a linear template. This finding has implications for understanding DNA repair in viruses. In that paper, Jackson and DeLuca also identified a protein that seems to determine the fate of the viral genome's configuration. —*EL*



ELENA GIALAMAS CERRI

COMMERCIALIZATION FOR BEGINNERS

ANGELS AND A NEW OFFICE HELP BIOMED START-UPS | BY DOTTIE HORN

Sometimes business was almost too good. In 2001, Theresa Whiteside was director of a specialized University of Pittsburgh Cancer Institute laboratory. UPCI researchers running clinical trials came to Whiteside, and she'd help them develop—and would then run—series of tests to indicate whether an experimental therapy was effective. For example, after a patient had received



a drug for two months, were his immune cells more active? What about at four, six, and eight months? Further, the test results obtained at point A had to be exactly comparable to results obtained at point B.

Whiteside, professor of pathology, immunology, and otolaryngology, and her colleagues developed a reputation for such testing. The lab, initially created to support UPCI scientists, began taking on industry clients. There was so much corporate interest that Whiteside began to wonder: Could we offer these same services outside the University to industry clients, and could we make a profit?

That was about the time Carolyn Green came to UPCI, as the director of the newly created Limbach Entrepreneurial Center. Her job was to foster the commercialization of technology developed at UPCI.

One day, Whiteside showed up in Green's office, asking about the possibility of starting a company. Intrigued, Green visited Whiteside's Immunologic Monitoring and Cellular Products Laboratory. She made phone calls, hired consultants, asked questions. How much did it cost the lab to do its testing? What laws would regulate the company? Who would be the company's competitors? Most important: Could the company turn a profit? After 10 months of research, Green decided the answer to this last question seemed to be yes.

It's a process in which Green specializes. When a University faculty member comes to her with a new technology or process developed at Pitt, she evaluates its commercialization potential. (She currently has some 70 such "cases.") In 2003, Mark Nichols, assistant professor of pharmacology, and Richard Steinman, associate professor of medicine and pharmacology, talked to Green and her team about a new method they'd developed for making random siRNA molecule libraries. (These molecules can silence a single gene in a cell.) The technology is now the focus of a new start-up company, Cellumen. That same year, Michael Buckley, associate professor of oral and maxillofacial surgery, and Eric Beckman, Bayer Professor of Chemical Engineering, spoke to Green about a new polymer they'd developed that could act as a surgical adhesive. Cohera Biomedical Adhesives is about to be launched to manufacture the surgical "glue."

There are many steps in between an initial meeting with Green's staff and the creation of a new company. After researching Whiteside's idea, Green wrote a business plan and brought the company, dubbed ImmunoSite, into legal existence. Although the laboratory tests used by Whiteside were not patentable, the know-how for running the lab belonged to the University and UPMC. Green met with Pitt and UPMC officials and worked out an agreement to transfer the intellectual property surrounding Whiteside's lab to ImmunoSite.

Eventually, Green went in search of money. In many cases, a new service company is unlikely to generate the high rate of return on investment sought by venture capitalists. In such instances, Green looks for angel investors, wealthy individuals interested in placing private funds in promising opportunities like start-ups.

Green's office works with several angel networks in Pittsburgh. Some of her angels are School of Medicine faculty or alumni. "Angels are typically very quiet people. You'd never know they were there if you didn't know how to find them," she says.

Green also may approach UPMC Health Ventures, the investment arm of UPMC, which funds start-up companies.

It took Green two months to secure more than $1 million in support for ImmunoSite. In September 2002, a little more than a year after Whiteside first approached Green, ImmunoSite began operations.

Green likens the process of starting a company to having a baby. "[But] once it is born, I have to let someone else raise it."

Her office has itself recently grown. In February, the Limbach Entrepreneurial Center became the Office of Enterprise Development, Health Sciences (OED). Instead of serving just UPCI, the new office serves all of Pitt's health sciences schools. Green, who was once a one-person office, now has a staff of five, including an immunologist and neurobiologist.

"Many research discoveries cannot achieve their full impact on human health without going through the commercialization process," says Green.

But the office does not focus just on moving technology out of the University. OED also gets industries to invest money in technologies still under development at Pitt. In addition, the office educates faculty about commercialization—sponsoring seminars and publishing an e-mail newsletter, which has 900-plus subscribers.

"The most significant lesson our scientists can learn [is] that the business world requires intellectual property to be legally protected. If you don't take the time to disclose and protect it, it may be impossible for industry to promote your idea and to commercialize it." ■

FOR MORE INFORMATION: www.oed.pitt.edu

CAUSE OF DEATH: TBD

ADMINISTERING ONE OF THE WORLD'S LARGEST CLINICAL TRIALS

BY KRISTIN OHLSON



Determining the cause of death of participants in a huge cancer screening clinical trial is not always straightforward, yet it's key to the trial's results.

CORBIS

Every month, staff from the nation's largest and longest-running cancer screening trial sends out about 1,200 birthday cards.

Yes, birthday cards. The Prostate, Lung, Colorectal and Ovarian Cancer Screening Trial involves 155,000 participants at 10 locations across the country, including nearly 17,000 in the Pittsburgh area. Study administrators send cards as a personal reminder of how much they value the participants' involvement. "We get nice feedback," says Betsy Gahagan, an administrator for the Pittsburgh site. "In fact, one woman called to tell us that ours was the only card she received that year."

Aside from adding a spot of cheer to a sometimes lonely day, the cards serve another, more scientific purpose: They're one of the tactics Joel Weissfeld, principal investigator for the Pittburgh site, and his staff have developed to keep in touch with their many study subjects and encourage ongoing participation in the trial.

Launched in 1992, the $150 million study was designed to determine whether certain screenings help reduce deaths from prostate, lung, colorectal, and ovarian cancer. (Together, these cancers account for about half of all cancer deaths in the United States.) By 2001, the study had enlisted the army of men and women between the ages of 55 and 74 needed for a statistically relevant sample. Participants agreed to a random assignment to one of two groups. Those in the intervention group visit a designated center every year for six years for screening, while those in the control group simply continue routine care with their own doctors. Through 2006, all intervention group participants are expected to provide blood samples. They also fill out questionnaires each year. (In response to another required questionnaire that happened to be 39 pages long, one participant included a worn-away pencil stub with his returned tome.)

To obtain solid data, study organizers need at least 85 percent of the participants to cooperate with the trial's requirements. The Pittsburgh site has been able to maintain 90 percent compliance for the annual screening and 98 percent for the surveys, but this achievement is hard won. It requires the daily efforts of staff to set up appointments with participants and catch up with those who have been remiss in following through with other requirements; this can involve dozens of calls and letters to a single person.

If it's hard to keep tabs on 155,000 active participants, imagine how tricky it can be to get appropriate information about those who've died. Since the whole point of the trial is to determine whether there are fewer cancer deaths in the intervention group than in the control group, it's critically important to know the precise cause of each participant's death.

When someone enrolled in the study dies, organizers need authorization to access the deceased participant's medical records; however, the next of kin are often not aware that the deceased was part of a clinical trial. Specially trained staff members are charged with convincing families to authorize a release of information. Information about anybody whose death may have resulted from one of the target cancers—or whose cause of death is unclear—is turned over to a national death review committee.

The committee's job is to make sure that errors in determination of death don't skew the trial's results. "For instance, a death certificate might indicate that the patient died of pneumonia, but the pneumonia might have actually resulted from a progression in the patient's lung cancer," says Christine Berg, an oncologist who is the National Cancer Institute's project officer for the study. "That kind of error will underestimate the true number of cancer deaths."

The committee also looks out for the so-called "sticky-diagnosis bias," which can skew trial results in the opposite direction. In any screening trial, participants in the intervention group could be diagnosed with a cancer that might never have even presented symptoms. Still, the diagnosis from the screening tends to "stick," so that though the person dies of another cause, hospital staff in charge of determining cause of death assume that cancer is the culprit. The death review committee double checks to find out if the cancer is, in fact, the actual cause of death.

"People ask why we go through all this trouble," Berg continues. "They say, 'You've got the death certificate—why not just go with that?' But … errors creep in." ■



Emily's closet



Kevin's closet



Mom's closet



Dad's closet

THE KIDS ARE NOT ALRIGHT

BY CHUCK STARESINIC

AMERICA XL

When Caitlin Kelly was 14, her mother took her shopping in the men's section of a popular department store, because women's clothes were shaped all wrong for this very tall, very heavy girl. Caitlin hated shopping there. She wore a 38-inch waist in men's jeans and shorts. Sometimes, even those clothes were tight. She wore extra-large T-shirts. She favored the "layered look," draping a long-sleeve flannel shirt over her frame and leaving her shirttails swinging about to mask her shape. She weighed approximately 210 pounds when she started eighth grade.

Now our kids are overweight, too. Obesity in children and adolescents is likely to damage self-image and self-esteem; the medical consequences can be even more grave.

ILLUSTRATIONS | JULIETTE BORDA

There are more and more children like Caitlin in America these days. The percentage of American children who are overweight has increased two-and-a-half times in 20 years. It is much more than a cosmetic problem. Overweight children are at risk of developing a host of medical conditions that can reduce the quality and length of their lives. Some reach puberty and quickly learn that they may grow up to be infertile. Others graduate from high school burdened with a physique that puts them at risk of dying younger than their parents, as though the medical advances of the past few decades were all for naught.

Although unique in its particulars, Caitlin's story reveals important details about the effect that weight problems have on children; why parents and doctors have to recognize obesity as a medical problem early on; and how to go about treating the problem if children like Caitlin are to have any hope of experiencing a normal, healthy adulthood.

Caitlin is 18 years old now, entering her sophomore year at a small state university in West Virginia. It's only a 30-minute drive from the semirural outskirts of the town where she lives with her parents. She talks like an adolescent who is a bit uncomfortable being singled out, haltingly and even mumbling at times. She is a thoughtful young woman who'd been somewhat ostracized and introverted as a child. She was homeschooled for three years before she decided to attend eighth grade at a small Christian school. Being 14 and overweight at a new school is a vivid memory for her. She was painfully aware that she was bigger than everyone else, and she was frequently teased about her weight.

Caitlin had only two friends at that school, and neither was in her grade. Sometimes it was hard just to get through the day. She says she sometimes felt ashamed of the way she was, even though she "knew it wasn't bad."

Some diabetic teenagers are developing the cardiovascular systems of 60-year-olds.

Caitlin stood out in other ways. Since age 5, she'd had terrible allergies to food coloring, the preservatives in store-bought meat, and other ingredients commonly found in the American diet. She rarely ate the same things as the other kids. Her mother would chaperone school field trips to make sure Caitlin's diet was accommodated. She ate a lot of bread and pasta and potatoes. She was out sick more than most kids, and she was almost always low on energy. Physical activity was a challenge, and she was more likely to read a book than exercise.

"I didn't do too much in gym class or anything," Caitlin says, "because my ankles were weak back then. I had sprained my ankle just, like, walking down the road or something."

According to Caitlin's mother, Ruth Kelly, even the teachers had a difficult time accepting it when Caitlin didn't feel well or missed class. With little support outside of the home, it was a tough year at school.

"By the end of that year, I had pretty much starved myself and lost about 30 or 40 pounds because of the way I was treated, and the way it made me feel," Caitlin states plainly, betraying no emotion. She dropped down to one meal a day, if that. At the start of the year, she could eat a foot-long sub in one sitting and still be hungry. She could sit down with a large bag of potato chips and eat the whole thing. By the end of the year, she wouldn't finish a six-inch sub. But Caitlin's crash diet was hardly the solution to her weight problem. Her energy was as low as ever, and when she returned to her normal eating habits that summer, she quickly gained the weight back.

Ruth Kelly knew something was really wrong when Caitlin went five straight months without menstruating, then suddenly had two periods in two weeks. She must have asked half the women she knew to recommend a good gynecologist. She made scores of telephone calls and, finally, an appointment with a specialist in Morgantown, W. Va. She took Caitlin there and, as she recalls it, told the doctor, "I am not here as the mother of a young child to get her put on birth control pills. We don't want that. I do understand that this is one of the treatments. I know that's one of the things they do for irregularity, but I want testing done. I want to know what's going on."

The doctor ordered blood work, and he performed an ultrasound of Caitlin's reproductive organs. There were two highly suggestive findings: Caitlin had high insulin levels in her blood (meaning she was probably becoming resistant to her own insulin) and many large cysts on her ovaries. He referred her to a pediatric endocrinologist at Children's Hospital of Pittsburgh, whom he knew to be working on hormonal abnormalities in adolescent girls.

Silva Arslanian (Fel '84) became a pediatrician when the obesity epidemic

WHAT EVERY PEDIATRICIAN CAN DO

At Children's Hospital of Pittsburgh, there is a team of nutritionists, exercise physiologists, counselors, and physicians available to work with the families of overweight children. But what about the doctors who don't have such extensive resources? Silva Arslanian, director of the Center for Pediatric Weight Management and Wellness, advises family physicians and pediatricians how to address weight problems among kids:

- **Always calculate body mass index. Only height, weight, and age are required to tell whether a child is overweight or at risk.**
- **If a child has a weight problem, then spend at least 10 or 15 minutes with the child and parent discussing healthy nutrition and physical activity.**
- **Explain that this is a problem connected to the environment in which the child lives. To fix it, parents must be committed, and they must be role models. In other words, the person who shops for and prepares food for the family is as responsible as the child who eats it.**
- **Schedule a follow-up visit.**

—CS



was barely a blip on the horizon. She attended medical school and completed her pediatric residency at the American University of Beirut in Lebanon. In 1980, she came to the University of Pittsburgh and Children's Hospital of Pittsburgh for a fellowship in pediatric endocrinology. Today, she's a Pitt professor of pediatrics.

Arslanian found that Caitlin was suffering from more than insulin resistance and excess weight. She sat down with the mother and daughter and described how many of Caitlin's seemingly unrelated symptoms were linked under a condition known as PCOS—polycystic ovarian syndrome.

PCOS is the most common endocrine disorder in women of reproductive age. According to the National Institutes of Health, it affects 5 to 10 percent of American women. Many women's health researchers believe that is a conservative estimate and that lots of women go undiagnosed. In addition to Caitlin's symptoms of insulin resistance, obesity, and irregular menstruation, PCOS is marked by acne and excessive facial or body hair. The ovaries of women with PCOS produce more testosterone than needed and are filled with benign cysts that interfere with ovulation and make it difficult to conceive.

The link between obesity and PCOS is well documented, says Arslanian. The majority of adolescents and adults with PCOS are obese. There are genetic risk factors, but she suggests that obesity is often responsible for bringing the symptoms to the surface and intensifying them. PCOS is characterized by high levels of insulin, which is a potent growth factor that causes multiple cell systems, including fat cells, to accelerate growth—so women with high insulin are predisposed to weight gain. Excess weight promotes insulin resistance, and the cycle feeds itself.

It was a sobering diagnosis for a 210-pound, 14-year-old girl to hear. Caitlin said very little in the doctor's office that day, but she appreciated the fact that Arslanian was frank and open. The doctor talked directly to her instead of just speaking to her mother. She told Caitlin that she was at risk of losing the ability to conceive a child unless she changed her lifestyle and worked to correct the hormonal imbalance. She would be given metformin, an oral drug that would alleviate her insulin resistance and lower her blood sugar, but if she did not make changes in her diet and physical activity, her insulin resistance and ovarian cysts would probably not go away. She might develop type 2 diabetes. She had to begin by drastically reducing the carbohydrates in her diet, including bread, potatoes, pasta, and sugary sodas and juices.

Arslanian says that PCOS is not directly related to diet, but if an adolescent like Caitlin loses 20 to 30 pounds, depending on how overweight she is, there is a good chance the hormonal abnormality will get better and the menstrual cycle will become more normal.

In the car on the way back to West Virginia, Caitlin cried over changing her diet again. *What was left for her to eat?* she asked her mother. Ruth Kelly chokes up when she tells this story. "A child that age is picky," she says now, laughing away her tears, adding that Caitlin always did love potatoes.

"For me it was a relief," Ruth Kelly says of her daughter's diagnosis, "because I had an answer. Now I just had a new direction to go in."

In time, Caitlin came to realize that things would never be the same for her. She struggled to adjust to the medication, which upset her stomach terribly at first, and struggled to find a diet that was both healthy and palatable. Whatever worked for her would have to be a permanent lifestyle change, or she would slip right back to where she started.

Since first coming to Pitt in 1980, Arslanian has studied insulin resistance—then a relatively uncommon phenomenon in children. In treating children with insulin resistance, she has become an expert on childhood obesity and type 2 diabetes, and she has met many young people like Caitlin.

Another is Deborah Hays, who, like Caitlin, is 18 years old. She became a patient of Arslanian's about two years ago. Deborah had been uncomfortable with her weight for even longer, going all the way back to the fifth grade. From then until 10th grade, she says, she gained about 30 pounds each year. When she was 16, she went for a routine physical in order to apply for a Pennsylvania driver's license. She weighed about 300 pounds. Her urine sample contained excess sugar, so her doctor ordered some blood work and asked her to schedule a return visit.

When Deborah came in the second time,

she was advised to go to Children's Hospital of Pittsburgh right away. Her insulin and blood sugar were dangerously high. At Children's, she was admitted and given a diagnosis of type 2 diabetes. Like Caitlin, Deborah was put on metformin to lower her blood sugar and decrease her insulin resistance. She was also put on a low-sugar (including low carbs) and low-fat diet.

Diabetic children are typically associated with type 1 diabetes, a condition in which they suddenly cease to produce the insulin that regulates the cellular uptake of sugar. As a result, they immediately become dependent upon insulin therapy. The disease is not linked to obesity. Although the Centers for Disease Control and Prevention says that nationally representative data on type 2 diabetes in children are not available, it's clear that more children now develop type 2—what used to be called "adult onset" diabetes. Type 2 develops gradually from increased insulin resistance. As the body becomes resistant to the effects of its own insulin, the levels of the hormone rise. Blood sugar rises, too. In children, as in adults, the condition is linked to obesity. Not only is the incidence of type 2 diabetes increasing in children, but there are signs that its comorbidities—heart disease, cardiovascular disease, hypertension, high cholesterol, even blindness and loss of limbs—are more aggressive in children. Arslanian notes that some diabetic teenagers are developing the cardiovascular systems of 60-year-olds.

The solution for young people who are obese with type 2 diabetes? Arslanian is blunt: There is no question that they need to change their lifestyles, because their eating and exercise habits are unhealthy. Consuming 64 ounces of sugary soda every day and whiling away hours on screen-related activities is a recipe for trouble. There is a genetic component to type 2 diabetes—Deborah, for example, has a family history of the disease—but by and large, children develop it because of their routines. In the long run, Arslanian says, many such kids will become dependent upon insulin therapy, because the disease progresses fast.

Cultural shifts throughout the past few decades that contribute to the obesity epidemic went almost unnoticed at first. Fewer children walk to school, and more children live in neighborhoods where there are no sidewalks and driving is the regular mode of transportation. And of course, there's the popularity of sedentary activities like video games and television. Further, more people eat at restaurants now, where portions are large. High-calorie foods are ubiquitous, even in the vending machines in schools.

There's evidence that we learn to overconsume. It's been demonstrated that young children have a natural ability to regulate caloric intake. In one Pennsylvania State University study, children younger than 6 ate a cup of pudding before lunch. Some ate a high-calorie pudding, and some ate an otherwise identical, low-calorie pudding. Twenty minutes later, the children had an all-you-can-eat lunch of sandwiches, fruits, and vegetables. The kids who ate the high-calorie pudding reduced the amount of lunch they ate, as if their bodies knew they required fewer calories. But when the experiment was repeated with adults, those who ate the high-calorie pudding ate the same amount of lunch as the others. Did the adults lack the ability to physiologically register calories consumed? Probably not. It's more likely that adults cognitively override that ability. Adults have learned to follow other cues: We're full when the plate (no matter how large) is empty. We're satisfied when we've gotten our money's worth from the all-you-can-eat buffet.

If children and families are not given the tools they need, then a doctor might do little more than label and further stigmatize the child as overweight.

Lewis Kuller, professor and former chair of epidemiology in Pitt's Graduate School of Public Health, cautions that physicians who work with obese children have to be certain that they provide the tools necessary for these children to change. That means involving the entire family in the lifestyle adjustment. Imagine, he says, a family physician who examines an overweight child with two overweight parents and says to the child, "You need to lose weight." It's exactly the same problem with smoking cessation, he says: "Getting kids to quit smoking when both parents are smokers—that's a tough row to hoe." If children and families are not given the tools they need, then a doctor might do little more than label and further stigmatize the child as overweight.

Arslanian agrees wholeheartedly. As director of the new Pediatric Wellness and Weight Management Center at Children's, she is overseeing the creation of an organization that includes not only physicians, but also nutritionists, behavioral psychologists, and exercise physiologists. All of these people are available to work with children and families to facilitate behavioral lifestyle changes, including diet, activity levels, and habits.

The center is participating in two large-scale NIH grants to address the increase in insulin resistance and obesity. One will treat youth with established type 2 diabetes under one of three treatment protocols that involve various levels of medication, education, and lifestyle coaching. The trial will help establish the most effective comprehensive treatment for diabetic children. The second is a prevention trial in which the staff of the center will implement one of several lifestyle changes, such as nutrition education and increased physical activity, in various public schools. They will measure body mass index and insulin sensitivity over the course of several years to discover the most effective ways to prevent insulin resistance and diabetes in children.

It's been four years since Caitlin Kelly was diagnosed with PCOS as an eighth-grader. Her story has borne out much of the received wisdom on treating adolescent obesity—the entire family has been involved in her successes.

Caitlin's family has had some experience with these sorts of adjustments. When she was found to be allergic to preservatives in store-bought meat as a little girl, her mother began raising chickens in the backyard. Her father built a house in which to raise them from 2-day-old peeps to adults. The family raised and slaughtered them 50 at a time and filled freezers with chicken. Caitlin's father, a former farmer, used his connections to buy local, preservative-free beef.

After much struggling to find other foods that she could eat and enjoy, Caitlin and her parents now eat fewer of the carbohydrates that once caused her so much trouble. Her mother and father have been a part of her treatment for so long that even when she is away at college, they habitually eat the foods



that she can eat and go to restaurants that have healthy options. "I got to the point where I can just eat something and know it's got something in it we're not supposed to have. I can just taste it," says Ruth Kelly.

Caitlin is now a healthy weight for her 5-foot, 10-inch frame—160 pounds. Just before dinnertime recently she described what she had eaten that day: a low-carb shake for breakfast (she usually has cereal, but she was in a hurry to get to class) and chicken salad for lunch with some crackers. On a day like this, she'll splurge on a baked potato with dinner. She's even had days, during finals week, for example, when she's eaten pizza for breakfast, lunch, and dinner, but those days are few and far between. Ruth Kelly marvels at how her once-introverted daughter has come out of her shell in her first year in college.

Deborah Hays' progress in the two years she's been under Arslanian's care has not been as concrete. At age 16, she stopped gaining weight each year, but her weight remains around 300 pounds. Her insulin resistance is somewhat controlled with the help of medication. But she has found it difficult to increase her level of physical activity while working a full-time job at a home for mentally retarded youth and finishing high school. Arslanian worries about the effects of her weight on the progression of her diabetes.

Arslanian and her staff have enrolled the Hayses in a pilot study in which they provide the family with intensive education and support for developing a healthy lifestyle. A counselor visits with Deborah and her mother weekly to discuss healthy eating and living. A few weeks into the study, Arslanian's team already had a finding: It was a challenge to bring everyone together for the regularly scheduled appointment. The same busy schedules that cause so many Americans to eat readily available, unhealthy food and neglect physical activity also complicate the process of finding alternatives.

Martha Hays, Deborah's mother, who struggles with her own weight, roots for her daughter, saying, "I hope that, at the end of the 20 weeks, Debbie has a complete understanding that this is going to be a lifestyle change for her. ... Maybe she can be 30 pounds lighter and have the understanding that it's hard, but it's not something she can't do."

Deborah, who will be a full-time student at a local community college this year, says, "I just hope that I have the will to continue what I do for the rest of my life, because that's what it's going to take to continue being healthy, or being okay. I think it's kind of hard because I'm young, and I can't go out and just eat everything like everyone else does and drink whatever I want."

Names have been changed in this story to protect patient privacy. ■

FAMILIES CAN JOIN A NATIONAL STUDY ON TYPE 2 DIABETES AT CHILDREN'S: CALL 412-692-5928 OR VISIT WWW.TODAYSTUDY.ORG

A SURGICAL SOLUTION?

Bariatric surgeries—abdominal procedures to treat obesity—can lead to loss of excess weight and improved overall health in obese adults. (See "Ghost Body," p. 18.) The most common of these procedures is gastric bypass, in which the upper portion of the stomach is stitched off, reducing the capacity of the stomach by two-thirds. The small intestine is rerouted to connect to this smaller stomach. According to the American Society for Bariatric Surgery, the number of gastric bypasses performed increased 500 percent between 1993 and 2003.

But is gastric bypass appropriate for an adolescent? Only a few hundred such procedures have been performed on adolescents nationally, and evidence-based reports with long-term follow-up are lacking for both adolescent and adult populations. As of 2002, four adolescents had gastric bypass at UPMC; all showed significant weight loss, with the maximum follow-up being 22 months.

The National Institutes of Health recommends the procedure only for children who have not responded to conventional weight management programs and who have significant complications related to their obesity, such as sleep apnea, hypertension, fatty liver, arthritis, and respiratory problems. —*CS*



After undergoing Roux-en-Y gastric bypass surgery to reduce the size of her stomach, poet Sally Stewart went from a size 24 to a size 8. Working with photographer Charlee Brodsky, she documented her journey in the project "Reconfigured." She's shown here six months after surgery.

GHO

HALF OF HER WAS GONE

BY CHARLEE BRODSKY | PHOTOGRAPHY

AND JESSICA MESMAN | TEXT






ST BODY

Sally Stewart has a family and friends who love her no matter how large her dress size. So after years of dangerous fad dieting, she happily surrendered to the constant, aching hunger that had chased her since puberty. She indulged in entire bags of potato chips and mixing-bowls full of noodles that could feed a family of four. She hid the scale and avoided mirrors.

But then she started getting tired—and breathless too—from just one trip up a staircase on her swollen ankles. She got tired of dizziness and headaches, the constant backwash of stomach acid in her esophagus, the rudeness of salespeople, and the complete stranger who walked right up to her on the street and yelled, "My God, you're huge!" When the scale at her doctor's office reached nearly 300, the reality stunned her. Soon after, she talked with a doctor about gastric bypass surgery. When the doctor told her that four out of every 100 people who undergo the procedure die from complications, she went home and cried.



BELOW: Sally Stewart's daughter, Joanna Mongelli, supports her mother's arm, too heavy to be raised for more than a moment. ➤ TOP RIGHT: Stewart's husband, Scott Stewart, is now on the South Beach Diet. ➤ When her wedding band and engagement ring no longer fit on her finger, Stewart wore them on a necklace, as she does today. ➤ BOTTOM RIGHT: Before surgery.











But she signed up for the surgery anyway. She was a 40-year-old woman who could barely walk. No matter how scary the statistics sounded, she thought, "I have to do something, or die." Robert Quinlin, a University of Pittsburgh clinical professor of surgery and bariatric specialist at Pittsburgh Bariatrics, would perform Roux-en-Y minimally invasive gastric bypass on her. (As it turns out, the statistics Stewart had heard were high: The mortality rate is more like 1–2 percent for gastric bypass.)

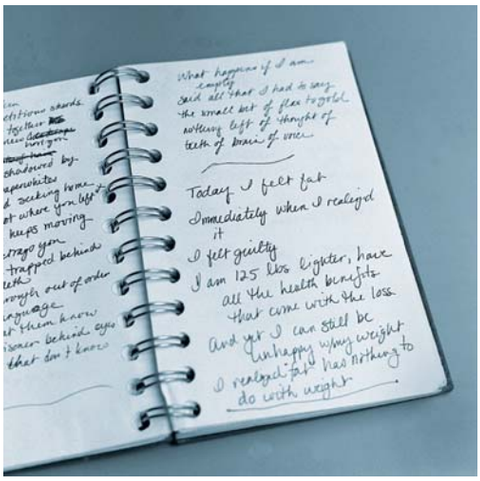
A common misconception is that gastric bypass is the "easy" way to lose weight; it's cheating. But it requires intense self-discipline and a commitment to changing your habits—your life—forever. In the months prior to her surgery, Stewart researched the procedure doggedly and met with anyone she could find who'd had it. She then contacted photographer Charlee Brodsky, whose documentation of one woman's experience with breast cancer has been widely acclaimed. Stewart wanted to document her procedure so that others might understand its radically transformative effects, both physical and emotional. And after years of hiding from cameras, she was used to seeing only fragments of her body—mostly from the neck up. No matter how painful it might be, she wanted, once and for all, to take a good, long look.



FROM LEFT: Reconfigured and in a little black dress. ➤ Writing poetry helps Stewart work through the psychological implications of the surgery. "Some poems surprised me with their anger," she says. Others focus on the energy of her new body and her fear of regaining the weight.







Stewart emerged from surgery with a stomach the size of her thumb. Within 10 days she dropped 17 pounds. For the first time in decades, she could see the curves of bones in her ankles. After six months, she'd dropped another 83. She could cross her legs. After a year and a half of tiny portions of healthy food, protein shakes, vitamin supplements, and rigorous daily exercise, she'd lost 150 pounds. Her own sister didn't recognize her in the airport.

But the rapid weight loss left behind uncomfortable flaps of skin. Under the care of J. Peter Rubin, Pitt assistant professor of surgery who'd founded a unique UPMC clinical program dedicated to excess skin removal, Stewart endured a painful lower-body reconstruction—including several feet of incisions and seven weeks of recovery. She's still saving up to do her arms and breasts. Until then, her newly toned arms are masked by useless flesh, the ghost of her former body. "I lost half of me," she says. "But it takes the brain a while to catch up. I'm always pulling things off the rack that are much too large for me." Her poetry expresses fears of sliding into old habits, or worse, waking to discover it has all been a dream.

What if this is all just beautiful vapor,
A slight drift of success precious enough
To make failing that much more painful?

Yet this is real, and some days Stewart has to stop herself from approaching people on the street and saying, *I have been reborn, and I want to share my joy with you!* ■



"SO

How can we stop young people from killing themselves? Now we at least know the risk factors for teen suicide.

PLUMBING THE DEPTHS OF TEEN SUICIDE

BY DOTTIE HORN

UNNECESSARY"

Robbie grew up in a working-class Pittsburgh neighborhood. He won a scholarship to the Massachusetts Institute of Technology, but turned it down. He didn't want to leave his girlfriend and his buddies at home. Then, his girlfriend broke up with him. Robbie (not his real name) became depressed and started smoking marijuana. He got back together with his girlfriend, then she broke up with him again.

Before he killed himself, Robbie left a suicide note. It was a poem written on a scrap of paper from a Giant Eagle bag, in the form of a Shakespearean sonnet—written in iambic pentameter, true to the form's precise meter. The poem expressed his love for the girl and his feeling that life was not worth living. Robbie shot himself.

GETTY IMAGES

One evening in the mid-'80s, David Brent, professor of psychiatry, pediatrics, and epidemiology at the University of Pittsburgh, heard Robbie's story from the boy's parents. They brought out the piece of paper that Robbie had ripped from the grocery bag. *It's a poem of some sort,* his parents said.

Nearly 20 years later, Brent's voice fills with emotion as he remembers the boy he never met. Robbie's final communication to the world made an unforgettable impression on him. "The kid had an amazing intellect. Those aren't easy poems to write.

"There was something he was trying to communicate beyond the words in the poem," says Brent. "I mean the metaphor, that he did it on the back of a Giant Eagle bag, that was exactly his dilemma. He was between two worlds. And I have the feeling that for him to succeed, he [would] perhaps have had a sense of loss, that he would lose all his buddies and his neighborhood. But if he stayed, he had the loss of this potential.

"It's almost as if he'd wished that somebody … would read it and experience a sense of regret, as I did," says Brent.

"It was so unnecessary, what happened to that kid."

Nearly 1,900 Americans between the ages of 10 and 19 killed themselves in 2001. Teen suicides tend to evoke, as Robbie's story did in Brent, a feeling of needless tragedy. Teenagers end lives full of potential because of difficulties that, to an adult outsider, seem as though they might have been overcome. The waste leaves us wondering, *How can we prevent these deaths?*

In 1980, when Brent was in his final year of a psychiatry residency at Western Psychiatric Institute and Clinic, he was on a consultation/liaison service. Pediatricians would call him and say, *We have a kid who made a suicide attempt last night. Will you evaluate him and recommend whether he should go home or be admitted to the hospital?* Three or four times a week, he was asked to evaluate suicidal children, yet he had no reasoned way to determine who was at the greatest risk.

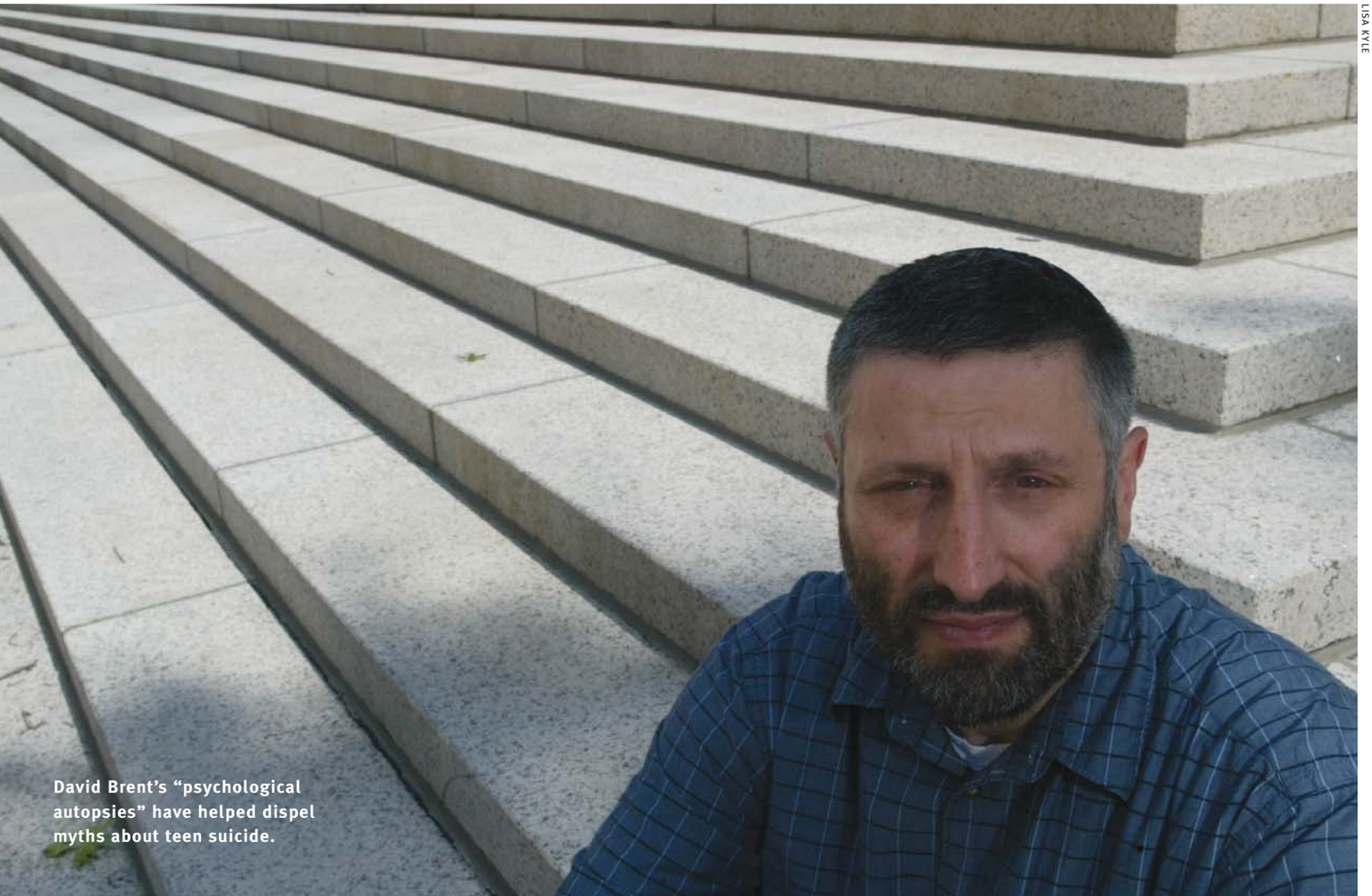
As a resident, Brent planned to practice in a rural area after finishing his training.

"But as my residency was winding to an end," he says, "I was beginning to confront the fact that I didn't know very much. I mean, there wasn't very much known in child psychiatry. So I didn't have anything to offer, or not much." To try to find answers, he was drawn toward research.

Two of Brent's early studies were "psychological autopsies." He and his colleagues spoke with the families and friends of some 90 suicide victims, in an effort to better characterize teens who commit suicide. (His conversation with Robbie's parents was part of this research.) Initially, Brent had limited funding and did most of the interviews himself; after a full day at work, he would drive out to a family's home, getting there around 6 or 7 p.m., many times not getting home until 2 the next morning. Often, it was hard to get to sleep after witnessing so much pain, recalls Brent.

From studies like this, data accumulated, and myths began to fall by the wayside. Up until the '80s, the prevailing belief was that adolescents who committed suicide were psychologically normal but reacted to an acute stressor, such as a disappointment or alienation from parents. "People were concerned that it could happen to their kid, to any kid, and you didn't know where to look and how to prevent it," says Brent. "Now we know that almost all teens who kill themselves have a psychiatric illness, most commonly a mood disorder."

On average, children suffer from a mental



LISA KYLE

David Brent's "psychological autopsies" have helped dispel myths about teen suicide.

illness, usually depression, for seven years before killing themselves.

Until the '80s, it was believed that teens who attempted suicide and those who completed it were in distinct groups—kids attempting suicide were simply making a gesture and didn't really intend to kill themselves. Brent helped to establish that the single largest risk factor for completed suicide was attempted suicide and urged clinicians and communities to take suicide attempts seriously. "It sounds like common sense now," says Brent, "but at the time it wasn't."

In the early '90s, research by Brent and others unearthed another trait linked to suicide: impulsive aggression, also known as reactive aggression—the tendency to react with hostility or aggression to provocation or frustration.

"Reactive aggression is," explains Brent, "say, you're sitting minding your own business and somebody insults you. You punch them or you act out. It has an emotional quality to it that has to do with the inability to modulate your response. Your response is out of proportion, perhaps, to the situation."

Through nearly 25 years of painstaking research by Brent and others, a cluster of traits—including depression, past suicide attempts, and reactive aggression—has emerged that helps professionals identify teens most at risk for suicide. (In 1998, Brent was one of the primary authors of the American Academy of Child and Adolescent Psychiatry's practice parameters on depression, which lays out risk factors for suicide.) The Pitt professor now holds an endowed chair in suicide studies, which is the only such appointment in the United States. But has the information made a difference?

The rate of teen suicide increased threefold from 1960 to 1980, peaked in 1987, remained stable for years, then 10 years ago began to decline. The change is too new, perhaps, to signify a consistent trend, but seems to be a hopeful sign. Researchers can only speculate about why rates have declined. Is it better identification of teens at risk, increasing use of selective serotonin reuptake inhibitors (there's now a contentious debate within the FDA; some believe certain formulations can actually increase the risk of teen suicide), or have environmental factors changed (like lessened access to alcohol or guns)? "Who knows what it is, but it's good," says Brent.

But it is not enough for Brent. "If we knew what type of interventions could actually reduce suicidal risk, that would be good, because right now we're sort of flying by the seat of our pants," he says. While many children at risk for suicide are treated for underlying depression, treating depression alone may not be enough to prevent suicide. Brent has seen teens appear to come out of depression, then try to kill themselves.

Brent has seen teens appear to come out of depression, then try to kill themselves.

"If there is another vulnerability [besides depression], say, related to … impulsive aggression, and you're not treating it, you're not making a difference," says Brent.

The National Institute of Mental Health (NIMH) has funded Brent to conduct a pilot study of depressed adolescents who have made a suicide attempt. He and his collaborators at five sites plan to enroll 120 teens. A third of the adolescents will receive a specially designed psychotherapy; a third will receive antidepressant medication; and a third will receive both the psychotherapy and the medication.

The psychotherapy sessions will entail looking at all of the events and emotions that led up to the suicide attempt and trying to understand what feelings or situations are most likely to trigger an attempt. The therapy then focuses on ways of coping with those triggers. (The parents of teens in the psychotherapy groups will also take part in an education program and counseling to help them provide a safe, supportive environment for their children.) This study is one of only a handful designed to test therapies whose primary focus is preventing suicide. The risk of a repeated suicide attempt in a depressed child is about 30 to 40 percent.

Although the NIMH funding for the study was in hand two years ago, the researchers only recently began enrolling their first participants. The delay stemmed in part from the Institutional Review Boards at the five sites. Charged with protecting the human subjects of research, the IRBs hesitated before granting approval, which is required for the study to proceed. The review boards are cautious because the study population is at high risk for suicide. (They possess the two greatest risk factors for suicide in teens, depression and a past suicide attempt.)

"I don't want anybody to die in our studies," says Brent.

"You have to recognize that if you deal with a higher risk group, then bad things happen.

"Depression is a potentially fatal illness; people will die [from it]."

He believes that if someone enrolled in the trial commits suicide, the trial may be stopped: "The general emotional attitude is much different than if somebody dies of end-stage cancer in a clinical trial. I'm not sure that the views should be quite that disparate."

Brent points out another concern raised when studying suicidal populations: Are people who don't particularly care whether they live or die capable of giving informed consent to participate in research?

"It's not that they don't understand the risks, but the risks may not matter to them," says Brent. He suggests researchers get consent from the study subject as well as a proxy—"somebody close to them, if you can find someone." In Brent's teen study, because the participants are minors, their parents or guardians give informed consent.

Brent speaks of the need to address such issues appropriately, but at the same time he is anxious to move the research forward: "There is a point where it's unethical not to study these people, because otherwise you'll never improve their treatment."

People who kill themselves are four times more likely than people who don't to have a close relative who has attempted or completed suicide. Revealing how genetics and neurobiology contribute to suicide might help reduce suicide rates over the long haul, says Brent. He's now engaged in a study of an extended family of 500 in Israel who all have the same ancestor. The family's rate of suicide attempts is three times higher than the rate in two other extended families who live in the same village. (The other families will serve as controls in the study.) Working with statistical geneticists like Bernie Devlin, a Pitt PhD associate professor of psychiatry and human genetics, he's hoping to find genes linked to a propensity to attempt suicide.

After some 25 years of research and clinical experience, Brent no longer feels ignorant when confronted with a teen who has attempted suicide. "I do feel pretty confident that I'll be able to do something for somebody, even though it feels like a real crisis for [the patient].

"I'm very grateful for that." ■

FOLLOW-UP

"I'D BE BETTER OFF DEAD"

AGING, SUICIDE, AND SOCIAL JUSTICE

BY DOTTIE HORN



GETTY IMAGES

Angela Brown (a pseudonym) was in her early 70s. Her husband died, then she had major surgery. Following the surgery, she developed a complication of anesthesia that caused scarring in her lungs. Brown had sung in her church choir for years; because of the scarring, she could no longer sing. Under the stress and pain of bereavement, major illness, and disability, she became clinically depressed. Sometimes she wished she could "just go to sleep and never wake up."

Six to 10 percent of Americans who are older than 60 suffer from major depression. In many, the disease is never diagnosed. Only half of depressed Caucasian elderly patients seen in primary care settings receive an appropriate diagnosis (according to national studies on the frequency of the disease compared to Medicare diagnosis data). In depressed elderly African Americans seen by primary care doctors, only 25 percent are diagnosed.

Even when the disease is recognized, an elderly patient treated in a primary care setting often does not receive appropriate treatment. "Typically, they may get a low dose of an antidepressant medication, which often isn't adjusted to a fully effective dose," says Charles Reynolds (Res '80), professor of psychiatry, neurology, and neuroscience at the University of Pittsburgh. "Typically, their medication is discontinued too soon, and they often don't receive counseling."

The underdiagnosis and undertreatment of depression in the elderly may contribute to the high rates of suicide among the elderly in the United States. Depression is one of the risk factors most strongly associated with suicide in old age. In those 60 and older, suicide is six times more common than it is in the general population—and suicide is even more prevalent in people older than 75.

"The elderly mean business. And very often when the elderly attempt suicide, the attempt is lethal," says Reynolds.

He and his colleagues have laid out a new strategy for improving depression treatment in the elderly—and, he hopes, reducing suicide rates. Reynolds' study was published in the March 3, 2004, issue of the *Journal of the American Medical Association.* The research involved 20 primary care practices that treat large numbers of the elderly. A "depression care manager"—a nurse, social worker, or psychologist—was placed in each practice. The manager screened elderly patients willing to participate in the study; depressed patients were randomized into one of two groups.

One group received usual care from the primary care provider; in the other group, the physician worked with the depression care manager, and patients were treated with medication and, when appropriate, interpersonal psychotherapy (IPT). The therapy deals with issues like bereavement and role transitions, such as retirement. "IPT also helps older people deal with the interpersonal conflicts that can arise out of increasing dependency. If I'm old and medically ill, and I'm more dependent on my spouse for daily care than I used to be, that's a situation that could be rife with conflict," says Reynolds.

The study found that 50 percent of the patients who received the services of the depression care manager recovered from depression, versus only 30 percent of patients who received usual care. Symptoms of depression, including suicidal ideation—thoughts such as Angela Brown's (thinking that one would be better off dead) or formulation of a plan for carrying out a suicide—were reduced more rapidly in the experimental group. (Suicidal ideation is strongly associated with suicide in old age.)

The cost of the intervention—including antidepressants—was $400 to $500 per patient.

"The treatment works. The science is there," says Reynolds. "Now we need social justice." He points out that Medicare pays 50 percent of the customary cost of treating mental illnesses, while it pays 80 percent of the customary cost of treating other illnesses.

"Medicare discriminates against the mentally ill elderly," says Reynolds.

The program's stance affects not only the mental health of older Americans, but also their overall health, says Reynolds.

"Depression makes it more difficult for older people to comply with medical treatments." It amplifies the disability of other illnesses, says Reynolds, noting: "The mind/brain is indissolubly linked to the body." (To learn more about the power depression can have over other medical conditions, see p. 29 story.)

For Brown, who participated in Reynolds' study, treatment with antidepressant medication and IPT reduced her symptoms of depression. And though her lung capacity isn't what it used to be, she has started to sing once again in her church choir. ■



AFTER ALL WE'VE LEARNED ABOUT TREATING MENTAL HEALTH, TOO MANY PATIENTS FALL THROUGH THE CRACKS AND NEVER GET HELP | BY ROBIN MEJIA

BLINDSIDED BY THE SYSTEM



GETTY IMAGES

Gwen Johnson was at the casino this spring, enjoying a bit of fun, when chest pains struck her. An unlucky event, yes, but she knows she was fortunate. The heart attack was serious, but prompt treatment and bypass surgery mean she's on her way to recovery.

Seven days after her surgery, Johnson was getting ready to transfer from the hospital to a rehabilitation center in Squirrel Hill. She was still in her hospital gown but sitting up in a chair next to the bed, with her black hair pulled up. And she was talking to

her grown son Alonzo and daughter Lavon, about clothing options for the transfer—she intended to be well-covered. The oxygen tube still ran to her nose, but she looked and sounded well, if upset with her body's inability to jump up and leave.

"I haven't been in a hospital since she was born," said Johnson, 69, looking over at Lavon Johnson, who quickly concurred.

"My mother has never been sick. She walks all the time. She's a very health-conscious person."

You could say the surgery has given her a new lease on life, and Johnson would agree. It's a lease the normally active grandmother fully intends to take advantage of. Yet, the role of recovering patient has proved more difficult than she expected. Johnson is used to taking care of others, used to plowing forward in the face of illness or difficulty, and the slow pace of recovery has been difficult for her.

Nurse Carol Mitchell, who also visited Johnson that day, reminded her that recovery from a major surgery takes time, that she would need to let people help *her* for a change. Looking over at Johnson's son and daughter, she reminded Johnson that she's fortunate to have such a wonderful family waiting to help. In another two weeks, you'll notice a big difference, she said. In four weeks, even more. It's normal for an active person, especially someone so used to taking care of others, to have a hard time adjusting to being in the position of needing help, Mitchell noted.

Mitchell, a friendly, petite woman, is a research nurse at the University of Pittsburgh. She sat on the bed next to Johnson's chair and began to explain a research project. Not only have studies shown that there is a link between heart disease and depression, she said, but people who show symptoms of depression after a heart attack are likely to have a longer recovery. They are even more likely to become a "repeat offender," that is, to suffer another heart attack.

This came as a surprise to Johnson and her family. Even more of a surprise was that, according to the questionnaire that Mitchell gave her the day before, Johnson tested positive for indicators of depression. The questionnaire was just an initial screening—Mitchell would follow up with her in two weeks to see if the symptoms were still there. Like most people, Johnson had never heard of a link between her heart health and mental health. She knew that she was feeling a bit down, but she hadn't even considered depression. "She's someone who always keeps moving forward," noted Lavon Johnson.

Gwen Johnson agreed. When her sister was alive, she used to call her occasionally if she needed a pick-me-up. Nowadays, she keeps herself busy helping others.

After grilling Mitchell about the use of her personal information—and being reassured about the University's policies—Johnson agreed to participate in the study.

Like Johnson, many of the patients Mitchell sees are surprised by their reaction to bypass surgery. The nurse explains that if you took a poll of the patients she talks to, about 80 to 90 percent of them would probably tell you they were blindsided by the heart attack. Even if a person knows he or she has high blood pressure or another risk factor, most people don't really expect the heart attack itself. And, like Johnson, most have little if any time to prepare themselves for bypass surgery or the long and painful recovery that follows it.

When it's put like that, it seems almost intuitive that a life-changing event like coronary bypass surgery could trigger a depressive episode or, conversely, that a depressive episode could make for a more difficult recovery.

Treatment for mental health conditions, such as depression, anxiety, and bipolar disorder, has come a long way in the past few decades. As basic and clinical research have advanced, doctors now have at their disposal well-studied, effective treatments for many psychiatric conditions—what are known as evidence-based guidelines. Yet many patients still aren't being diagnosed and treated effectively. Johnson nearly fell into this amorphous realm.

In 2000, a national study of 3,000-plus Americans published in the *Journal of General Internal Medicine* found that nearly half of those with mental illness received no treatment, and only about one-seventh received evidence-based treatment.

In part, this is because of the societal stigma attached to seeking mental health care. Many people still see depression and anxiety as personal problems or failings, not medical conditions that warrant treatment. Or, like Gwen Johnson, they simply don't realize the possibility that their symptoms are something they ought to discuss with a doctor. At the same time, doctors don't systematically screen for mental health disorders. Certainly, such screening is generally considered beyond the scope of specialists like the surgeon who repaired Johnson's heart.

Certainly, screening for mental health disorders is generally considered beyond the scope of specialists like the surgeon who repaired Johnson's heart.

"It takes a lot of time—it's not your 15-minute visit," says Grant Shevchik (Res '81), a primary care doctor with three Pittsburgh- area offices. And time is at a premium among doctors, be they specialists or family practitioners. For example, at Shevchik's nine-doctor primary care practice in the suburbs of Pittsburgh, there are 45,000 "doctor-patient contacts" every year. That's 45,000 actual meetings. Add to that appointments handled by nurses or advice given over the phone.

"Physicians can only do so much. They need help from other people," Shevchik says.

University of Pittsburgh Associate Professor of Medicine Bruce Rollman sits in a small conference room near his office at 230 McKee Place. Even sitting, the man projects an aura of momentum. Armed with a set of surprisingly interesting PowerPoint presentations, he explains his current passion—identifying hurdles to effective mental healthcare delivery and devising ways to overcome them. The first presentation describes a study his team recently completed in which they improved the quality of treatment for panic and generalized anxiety disorder. The second set of slides is an introduction to the study for which Gwen Johnson was screened, called Bypassing the Blues. The anxiety study was so successful that Rollman has been able to hit the ground running with Bypassing the Blues, adapting the same model to depression treatment. He

seems a bit amazed by how well things are going. In addition to receiving a recent vote of tenure, he was asked to speak at the opening plenary session at the Society of General Internal Medicine's 2004 annual meeting. And now, he's leading nearly $8 million worth of National Institutes of Health–funded studies.

The anxiety study seems to have been a catalyst. He broke the blind on it last year, and he and his colleagues, including Katherine Shear and Charles Reynolds, coprimary investigators and professors of psychiatry, are still flush with the results. The study compared patients who were assigned a telephone-based "care manager" to patients who received their doctor's usual care. It turns out anxiety symptoms of the patients paired with a care manager improved measurably; that group also experienced a generally improved mental-health-related quality of life.

"To me, this [degree of improvement] was very surprising. This was a very impaired group," says Rollman. The patients who paired with care managers also functioned measurably better in their work lives. Of those assigned a care manager, 94 percent were working a year after they started treatment; 79 percent were working in the usual care group. The care-manager group also worked significantly more hours, had less absenteeism, and used fewer expensive healthcare resources.

"This was really striking. Nobody's ever reported findings like this before," he says.

Rollman came to Pittsburgh from Johns Hopkins University in 1995. It was here that he met Herbert Schulberg, former Pitt professor of psychiatry. Schulberg, who is now at Cornell University, is the author of several books on mental health treatment. He turned Rollman on to the issues of mental healthcare delivery, issues Rollman took to and quickly made his own.

"Through Dr. Schulberg, I learned that doctors were poorly adherent with guidelines, and patients were poorly adherent with the treatments," he says.

"You have all these people at Western Psych who are developing these great treatments. We're trying to test new ways of taking these discoveries to typical patients so that they can take advantage of these treatments."

Rollman's is a pretty simple model. The idea is to bring in someone besides the doctor—for example, Carol Mitchell—to perform screenings and monitor care. The nurse (a.k.a., care manager) meets and screens patients. (In the anxiety study, care managers screened patients at the doctor's office; in the ongoing depression study, they're screening patients in the surgical wards.) Then every couple of weeks, the care manager calls to check in on patients who qualify for and enroll in the study. During these calls, the care manager asks about progress, discovering problems and facilitating communication between the patients and their doctors. A specialist is on call to assist with emergencies. The care managers don't treat patients themselves, they just make sure patient needs—for therapy or medication for instance—don't fall through the cracks. They ask patients questions like, *Did you keep your therapist appointment this week?*

It's a relatively simple and cheap intervention—by design. Rollman wants to keep this intervention affordable. Cost-benefit analysis was on his mind when he decided to examine factors like workplace absenteeism, hours worked, and use of health services.

"[Business owners] want to know, 'Are my employees going to be at work tomorrow?'" he says. "And, 'Am I getting value out of my healthcare premium?'"

As it turns out, Johnson screened into the Bypassing the Blues study, which meant she still showed indicators of depression two weeks after meeting Mitchell. As we went to press, we learned she was back home and managing well.

Doctors believe that the link between heart disease and depression is a physical one. "The relationship is bidirectional," says Reynolds, who directs Pitt's late-life depression evaluation and treatment center in the School of Medicine. That is, depression triggers changes in the body that can leave it more vulnerable to a heart attack and vice versa. For the Bypassing the Blues study, researchers will also monitor patients' physical recovery from the heart attack and surgery.

MINORITY BLUES

It's the first Saturday in May. The doors outside the Kingsley Association's new building in Pittsburgh's Larimer neighborhood are bordered by balloons, and there's a Monster Wheels bouncy house in the parking lot. Next to the building, a Ronald McDonald Care Mobile and a UPMC Health Van are parked on the street. Inside, University of Pittsburgh Philip Hallen Professor of Community Health and Social Justice Stephen Thomas is explaining the importance of outreach efforts to improve care in African American communities in Pittsburgh. This event, which focuses on mental health, is hosted by the Graduate School of Public Health's Center for Minority Health, which Thomas directs. Outreach like this is needed because "there's been a terrible history of the mental health profession stigmatizing the Black community," says Thomas. Not only are minorities less likely to get treatment for mental illness, studies show that even in treatment, African Americans are less likely to get evidence-based care. Other studies have shown that "African Americans are misdiagnosed with schizophrenia when they really have something else," explains Thomas. The result has been a stigmatization of mental health conditions within the community, as well.

It's a multilayered problem. Research shows that treatment received by African Americans for mental health disorders is not as effective, overall, as that received by other groups. This may be partly due to the fact that most studies of interventions have not involved many African American participants. So the center conducts outreach year-round, developing relationships with institutions within targeted communities, from church groups to barbershops. And Thomas assists faculty members like Bruce Rollman (see story above) who want to improve minority recruitment. "They come to us because they don't have a relationship in the Black community," Thomas explains. "You don't just go into the Black community after you get one grant."

Mario Cruz, Pitt assistant professor of psychiatry, will present today as well. Thomas introduces Cruz in the main hall, and afterward, community members pull Cruz off to the side for private discussions.

Events like this one, at Kingsley—with snow cones, fruit platters, and events for kids—offer a nonthreatening environment in which experts can lead workshops and open conversations. Just before Cruz's seminar on African American men and mental health, volunteers scour the building, directing all the men present into the room. This way, no one needs to feel conspicuous about having sought out the session. *—RM*

"I think Bruce's work is really innovative," says Reynolds, a senior member of the faculty and recognized expert in geriatric psychiatry. Reynolds provided financial backing for some of Rollman's early work at the University and agreed to team up on the anxiety study and Bypassing the Blues. "We can successfully translate evidence-based guidelines into practice with a care manager," he says. "And I think this will be shown to be a cost-effective measure."

The antecedents of this kind of innovation showed up early in Rollman's career. Before there were care managers there were inventions. There was his anatomically designed bicycle seat—an inspiration during his first year at Jefferson Medical College in Philadelphia. Then, while he was still in school, he watched his dad come home from a hospitalization. Amid the stress of his father's illness, his visually impaired mother struggled with a demanding set of drug regimens. Rollman realized that the small-print childproof bottles most prescriptions come in weren't making his parents' lives any easier, so he designed and patented a set of color-coded, easy-to-open bottles and matching large-print wall charts. The idea was to help patients with complicated drug schedules keep their pills straight. He even put together a grant application to study the system. The reviewers told him it sounded like an interesting project, but they thought the principal investigator (him!) needed more research experience.

He took the advice to heart and pursued a research fellowship at Hopkins, where he earned a master's degree in public health. Soon he had his first *New England Journal of Medicine* paper: "Medical Specialty and the Incidence of Divorce." (In case you're curious, psychiatrists and surgeons are most likely to see their marriages end in divorce). In his office at Pitt, along with his degrees, patents, and many photos of his family, hangs a gift from his wife: a framed collection of newspaper articles that covered those findings, including one from the *Wall Street Journal*.

He kept inventing while at Hopkins. That's where he wrote a business plan with his wife to promote Rollman Product Number Three—an improved device to read electrocardiograms. He moonlighted weekends in an emergency department to finance his business plans and put in $20,000 of his own money before the project stalled.

Devising interventions to improve mental health treatment calls on all those research and business skills Rollman began cultivating in medical school and further developed at Hopkins.

"Anybody can do a prototype," says Rollman. He explains his point: His prototype bicycle seat worked great, you see, but when he took the design to manufacturers, they determined that it would be too complex to mass-produce at a reasonable cost. He has taken that lesson to heart as a researcher. He's not trying to add to the literature of novel treatments; he's finding a way to get good treatment to those who need it. "I think a lot of people do things in research that, outside of grant support, would fall down in the real world." Getting his intervention model to last past his research grant is a goal that's influenced every aspect of Rollman's studies. He knows who's likely to be making decisions about payment: insurance plan managers already wary of the costs of mental health care. Although Rollman, Shear, and Reynolds have not actually codified a plan to get their research in front of major insurers, they clearly consider that to be the audience to convince.

Right now, psychiatric treatment is commonly "carved out" of health insurance plans. What this means is that the insurance company subcontracts psychiatric care to another provider, paying a set per-patient fee and letting the secondary provider manage the care.

Shevchik, whose primary care practice took part in the anxiety study, has a number of patients with mental health issues. He explains that carve outs hurt his ability to make sure these patients get well.

With nonpsychiatric referrals, Shevchik can choose a specialist to recommend to a patient. For mental health conditions, he would like to do the same. But carve outs don't allow him to refer a patient at his discretion to, say, someone who works well with depressed patients or who has a background in marriage counseling. Right now, Shevchik can only tell his patients to call the 800 number on their insurance cards for psychiatric referrals and hope things work out. Because he doesn't know which doctor or therapist a patient will end up with, follow-up is difficult to manage.

Shevchik was very pleased about the successes of his patients in the anxiety study: "It really was a great thing. Our patients really appreciate it." And he appreciated the collaborative nature of the undertaking as much as anything else—especially the discussions he was able to have with the other doctors. It seems straightforward to assume that communication between doctors treating the same patient is necessary for good care, but it's something that has been largely eliminated by the way insurance companies manage mental health treatment.

During the anxiety study, one of Shevchik's patients became suicidal. Even though the care manager was not in the office, she, Shear, and Shevchik were all in contact as they managed the crisis. The patient came through fine. Psychiatric carve outs have pretty much eliminated this kind of interaction from his normal practice. However, he says his future patients will benefit from what he has learned.

He'd love to continue using the model. But then he turns to the question that plagues Rollman: "Who's going to pay for it? There's no question that it works." ■

FROM THE TOP

The fact that some of their workers struggle with depression is not news to most business leaders. Nikki Nordenberg regularly talks with CEOs about depression in her role as vice chair of LEAD Pittsburgh, a nonprofit organization that builds workplace awareness about the condition. "We have not had a conversation where people aren't struggling with [the issue of] depression. We don't have to explain the problem to them," she says. "They know it's there, but they don't know what to do about it." What's news to many CEOs is the large body of research into successful treatments, and the fact that those treatments are not consistently available to their employees.

Nordenberg also shares studies on the financial value of addressing depression in workforces. "Employers haven't understood that it hurts the bottom line," she says. "They're beginning to see that dealing with depression as a condition might actually save money."

LEAD's outreach extends to healthcare professionals, including students in the School of Medicine. LEAD is sponsoring the school's first annual essay competition on depression, which asks first- and second-year students to delve into topics like generational differences toward consuming psychiatric services. The prize is $1,000 for each winning essay, to be awarded this summer. *—RM*



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A COURT JESTER

DOC CARLSON WAS REMEMBERED MOST FOR HIS ANTICS AS BASKETBALL COACH, YET ALL PITT MEN WERE UNDER HIS CARE | BY EDWIN KIESTER JR.

They called him "The Clown Prince of Basketball" and with good reason. "Doc" Carlson (MD '20) was the University of Pittsburgh basketball coach from 1922 to 1953. The Hall of Famer once had 5-foot, 8-inch guard Bimbo Cecconi perch on 6-foot, 3-inch center Ted Geremsky's shoulders and shoot from there. Nothing in the rule book prohibited his stepladder, Carlson reasoned.

To protest Penn State's newfangled zone defense, which he hated, Carlson had his team remain at their end of the court, dribbling, passing, sitting on the ball, and even dealing cards while Carlson distributed

ABOVE: Doc Carlson and team members pose for a "fatigue curve" demonstration shot.

peanuts to the booing, bored spectators. To some, such antics weren't funny. A Washington & Jefferson rooter once belted him with a furled umbrella.

But Carlson's wild-man image eclipsed his other contributions. As director of the University of Pittsburgh Men's Student Health Service from 1931 to 1963, Coach Carlson always thought of himself as a physician first. He routinely examined sore throats, dispensed aspirin, and sent students back to class with a reassuring pat. But woe to the student who smoked in his presence; he would furiously snatch the cigarette away and stomp on it.

Even some of his stunts carried a health message. Carlson fed his teams ice cream at halftime and during practice. He started the ice-cream diet during the Depression, when he thought some of his players might not be getting enough nutrition at home. He kept it up when it attracted press coverage.

Among his legacies is the "fatigue curve," which is still widely consulted. In this exercise, he taught players to take their own pulses, run all-out in place for 10 seconds, counting the number of steps taken, rest for 10 seconds, run,



COURTESY ZERNICH

The Zernich brothers with their coach. Newly graduated is Mickey Zernich (MD '57). Steve Zernich (MD '46) is shown left; Wallace Zernich (MD '51) is on the right.

rest, and so on for 10 "innings." As the player ran, he took fewer steps, his pulse rate quickened, but each rest rejuvenated him. Basically the fatigue curve showed that the more you did, in the long term, the more you could do.

When the polio vaccine was developed at Pitt, Carlson insisted that athletes be vaccinated, paying for it out of his own pocket. Then he wrote to the administration, proposing that the whole student body be next—"to be held up as an example." In the winter of 1957, 13,695 members of the student body, faculty, staff, and their families were vaccinated. Carlson was among those administering the shots.

Henry Clifford Carlson was born in Murray City, Ohio, in 1894, and entered Pitt as a premed student in 1914. He was an All-American end and football captain. He earned nine letters in football, basketball, and baseball. After earning his medical degree, he became a company physician for U.S. Steel, but by 1922 he was back at Pitt, coaching both basketball and baseball. (He was tired of watching his patients die, he said.)

From the first, he invented new ways to play basketball. He developed the "figure eight" and "continuity" offenses, intricate patterns that kept both players and the ball in continuous motion until a designated player could take a shot. Carlson's teams sometimes passed the ball a bewildering 40 times in the first 30 seconds of a game. "Ninety-five percent of basketball offenses derive from the figure eight," said Clair Bee, a legendary coach at Long Island University.

For 30 years, Carlson's war cry in basketball was "Win 'em all!" but he achieved it only once, in the 1927–28 season. Two of his teams were national champions. As president of the National Association of Basketball Coaches ("They elected me because I could say in 10,000 words what anyone else could say in 200," he said), he helped develop a stable rule book and the forerunner of the Final Four.

Eventually the times caught up with Carlson. He was eased out as coach. Carlson had never liked recruiting and searching out and signing up top prospects had become more and more important. He preferred to take ordinary students from local families, even undersize kids, and mold them, not just into players, but into successful men. One year his whole starting lineup was medical students, all of whom earned their degrees. "He would have been appalled that less than half of basketball players today get a diploma," says Wallace Zernich (MD '51), one of three Pitt med brothers who played for Carlson. (The coach's son, Henry Clifford Carlson Jr., also graduated from the medical school and played basketball for Pitt.)

Carlson stepped down as men's health director in 1963, when the men's and women's services were combined under a new director. It was whispered that his medical skills, too, were out of date. For all those decades, he had been an unmistakable white-coated figure on campus. He made it a point to know every male student—if not by name, by hometown. "Hi, Turtle Creek!" he would address me. (Once this writer and two sniffling friends visited Carlson, hoping for a sympathetic medical excuse from an upcoming exam. He looked at us with a skeptical eye: "If we had you three and two more clowns, we could have a circus. Now get outta here.")

By the '60s, however, students were coming from places like Great Neck and Los Angeles and Bangladesh. It wasn't Carlson's cozy world anymore. A farewell banquet, appropriately, featured six different flavors of ice cream. A few months afterward, Carlson stepped outside his weekend cottage near Ligonier "for some fresh air," toppled over, and died.

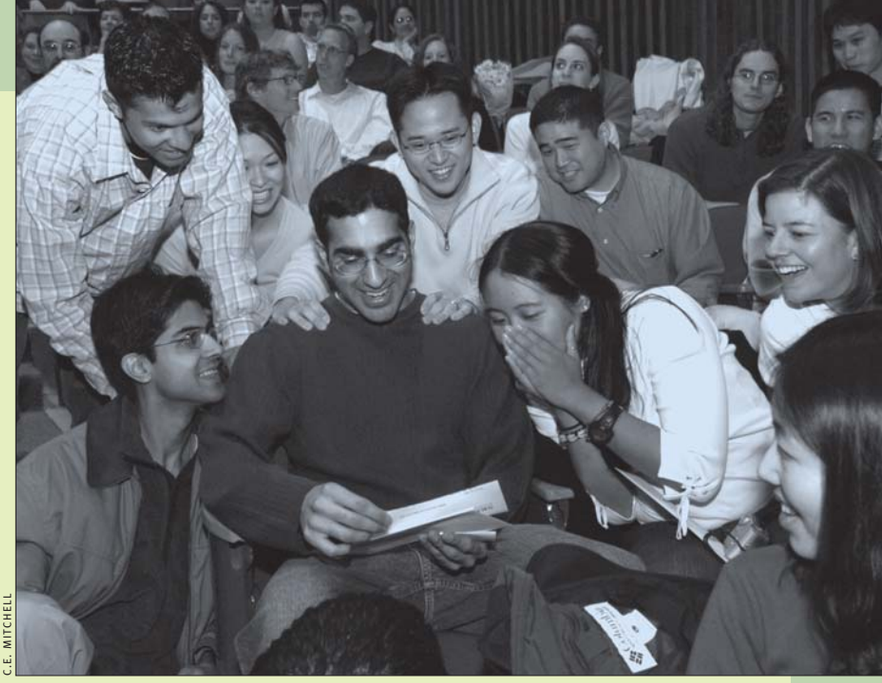
When the three Zernich brothers set up a practice in their hometown of Aliquippa, they were guided, Wallace Zernich says, by what Carlson taught them: "He never had individual stars, didn't want one man to stand out. Our practice was built on Doc's principles. Steve [MD '46] was the general surgeon, I was the family physician, Mickey [Michael Zernich, MD '57] was the orthopaedic surgeon. We worked as a team. Just like on the basketball court."

At the close of Freshman Week, an orientation during which throngs of somewhat scared teenage boys from small towns or industrial neighborhoods had been subjected to the terrors of class registration then exhorted to study hard, make their parents proud, and be gentlemanly with coeds, it was time for Carlson's speech. The once wide-eyed undergrads, now senior citizens, who experienced his oratory can recount its ribald parts today. Carlson's podium time was eventually discontinued, because, as Carlson put it, "They decided the old sonofabitch was too vulgar and too profane."

Carlson had a more gentle, avuncular side, too. Once, in the '30s, he had a choice between either buying 10 shares of stock in a growing company at $8 a share, or eight overcoats for his players at $10 each. Carlson unhesitatingly opted for the overcoats. The stock boomed, yet Carlson figured his reward was greater.

And when Steve Zernich was a med student, he practiced basketball until 6 p.m., then waited until 9 for a train home to Aliquippa, studying medical texts in the rail station. His coach boasted of Steve's dedication in speeches, but, Steve Zernich says with a laugh, "He still never excused me early from practice." ■

MATCH RESULTS CLASS OF 2004



C.E. MITCHELL

ANESTHESIOLOGY

Celechovsky, Chris
University of Pittsburgh Medical Center
Colaizzi, Ivan
University of Pittsburgh Medical Center
Dooley, Joshua
Duke University Medical Center, N.C.
He, Michael
Hospital of the University of Pennsylvania
Huffmyer, Julie
University of Virginia
Sachse, Kathleen
University of Pittsburgh Medical Center
Schmitt, Erica
University of Virginia

DERMATOLOGY

Kingston, Adean
University of Texas SW Medical School–Dallas
Spencer, Lori
University of Pittsburgh Medical Center

EMERGENCY MEDICINE

Campbell, Ronna
Mayo Graduate School of Medicine, Rochester, Minn.
Carmody, Sharon
Hennepin County Medical Center, Minn.
Chang, Jason
Yale–New Haven Hospital, Conn.
Cole, Christopher
University of Pittsburgh Medical Center
D'Cruz, Brian
University of Pittsburgh Medical Center
Daugherty, Erin
Geisinger Health System, Pa.
Johnston, Bradford
University of Pittsburgh Medical Center
Kubert, Jason
Orlando Regional Healthcare, Fla.
Lovallo, Amanda
University of Pittsburgh Medical Center
Lynch, Michael
University of Pittsburgh Medical Center
Min, Alice
University of Arizona Affiliated Hospitals
Norris, Rachel
McGaw Medical Center–Northwestern University, Ill.
Pereira, Jayson
Beth Israel Deaconess Medical Center, Mass.
Ramos, Ramiro
SUNY Upstate Medical University, N.Y.
Rest, Michael
Yale–New Haven Hospital, Conn.
Sever, Adrianne
Emory University School of Medicine, Ga.
Yen, May
Lincoln Medical Center, N.C.

FAMILY PRACTICE

Algier, Leah
University of Wisconsin Medical School
Ashton, Susan
Palmetto Richland Memorial, S.C.
Cho, Karis
Swedish Medical Center, Wash.
Eash-Scott, Rachel (December graduate)
Lancaster General Hospital, Pa.
Hounshell, Jennie
University of Wisconsin Medical School
Ladapo, Jumoke
UPMC St. Margaret
McDevit, Lindsay
Washington Hospital, Pa.
Miller, Michael
Memorial Family Practice Residency, Texas
Udoh, Emmanuel
UPMC St. Margaret
Walter, Stacey
Duluth Graduate Medical Education, Minn.

INTERNAL MEDICINE

Chou, Jeffrey
University of Washington Affiliated Hospitals
Gupta, Pavan
University of Michigan Hospitals–Ann Arbor
Heist, Brian
University of Rochester/Strong Memorial, N.Y.
Iwunze, Rosemary
University of Texas Medical School–Houston
Lam, Anh
University of Rochester/Strong Memorial, N.Y.
Lee, Jefferson
University of Maryland Medical Center
Lovelock, Joshua
University of Chicago Hospitals, Ill.
Madder, Ryan
Barnes-Jewish Hospital, Mo.
Olstein, Joshua
NYU School of Medicine
Ouyang, Daniel
Stanford University Program, Calif.
Pitt, Allyson
Thomas Jefferson University, Pa.
Puswella, Amal
Virginia Mason Hospital, Wash.
Rittenhouse, Jennifer
Emory University School of Medicine, Ga.
Sadler, James
UPMC Shadyside
Thomas, Leslie
Mayo Graduate School of Medicine, Rochester, Minn.

INTERNAL MEDICINE — PEDIATRICS

Weinkle, Jonathan
University of Pittsburgh Medical Center

INTERNAL MEDICINE — PRELIMINARY

Baker, Janna
University of Pittsburgh Medical Center

INTERNAL MEDICINE — PRIMARY

Brandt, Lynsey
Hospital of the University of Pennsylvania
Watkins, Bradley
Johns Hopkins Bayview, Md.

INTERNAL MEDICINE — WOMEN'S HEALTH

Au, Karen
University of Pittsburgh Medical Center
Dorra, Helen
University of Pittsburgh Medical Center
Kwiatkowski, Katherine
University of Pittsburgh Medical Center

MAXILLOFACIAL SURGERY

DeMarco, Sarah
University of Pittsburgh Medical Center
Stevenson, Michael Shane
University of Pittsburgh Medical Center

NEUROLOGICAL SURGERY

Kostov, Dean
University of Pittsburgh Medical Center
Lin, Jessica
Oregon Health & Science University

NEUROLOGY

Ngo, Tawny
Harbor-UCLA Medical Center, Calif.

OBSTETRICS/GYNECOLOGY

Bazella, Corinne
Ohio State University Medical Center
Carroll, Kathleen
University of Pittsburgh Medical Center
Cotter, Kristen
Women & Infants Hospital, R.I.
Escobar, Julian
McGaw Medical Center–Northwestern University, Ill.
Kane, Amy
University of California, San Diego Medical Center
Larkin, Jacob
Hospital of the University of Pennsylvania
Malina, Amanda
University of Pittsburgh Medical Center
Navarro, Jennifer
University of Florida Program–Shands Hospital
Rossi, Brooke
University of Rochester/Strong Memorial, N.Y.
Sellers, Jeffrey
Abington Memorial Hospital, Pa.
Sherman, Melissa
Womens & Infants Hospital, R.I.
Trivedi, Neha
University of California, San Diego Medical Center
Walton, Janelle
Ohio State University Medical Center

OPHTHALMOLOGY

Cronin, Tara
University of Pittsburgh Medical Center
Ho, Lawrence
University of Pittsburgh Medical Center
Soni, Ajay
University of Maryland

ORTHOPAEDIC SURGERY

Allaire, Robert
University of Pittsburgh Medical Center
Buber, Robert
Stony Brook Teaching Hospitals, N.Y.
Chandler, Justin
University of North Carolina Hospitals
Cheung, Sunny
UCI Medical Center, Calif.
Gates, Charley
University of Pittsburgh Medical Center
Haemmerle, Marcus
William Beaumont Hospitals, Royal Oak, Mich.
Mauro, Craig
University of Pittsburgh Medical Center
Park, Samuel
UCLA Medical Center, Calif.
Young, Brett
University of Rochester/Strong Memorial, N.Y.

OTOLARYNGOLOGY

Bryson, Paul
University of North Carolina Hospitals
Lee, Annie
University of Pittsburgh Medical Center

PATHOLOGY

LaCaria, Teresa
University of Pittsburgh Medical Center
Phan, Phu
Beth Israel Deaconess Medical Center, Mass.
Walls, Andrew
University of Pittsburgh Medical Center

PEDIATRICS

Adeyeye, Oluwatobi
Children's Hospital of Pittsburgh
Bernardi, Ronald
Baylor College of Medicine–Houston, Texas
Bickel, Jonathan
Children's Hospital of Pittsburgh
Candelori, Jaime
Cincinnati Children's Hospital Medical Center, Ohio
Caro, Susan
Naval Medical Center–San Diego, Calif.
Chengelis, Nicole
University of North Carolina Hospitals
Davies, Brian
Children's Hospital of Pittsburgh
DeAngelis, Gina
University of California, San Francisco
Frymoyer, Adam
University of California, San Francisco
Haynie, Holland
Cincinnati Children's Hospital Medical Center, Ohio
Katz, Michelle
Yale–New Haven Hospital, Conn.
King, Dale
Children's Hospital of Pittsburgh
Krejci, Melisha
Children's Memorial Hospital, Ill.
Laquinte, Vanessa
Inova Fairfax Hospital, Va.
McMullen, Laura
Children's Hospital of Pittsburgh
Miller, Benjamin
Children's Hospital of Pittsburgh
Schultz, Susan
Eastern Virginia Medical School
Sobolewski, Brad
Cincinnati Children's Hospital Medical Center, Ohio
Sterrett, Stephanie
Children's Hospital of Pittsburgh
Tam, Bonnie
Kaiser Permanente–LA, Calif.
Tchao, Peggy
Eastern Virginia Medical School
Yim, Robert
Children's National Medical Center, Washington, D.C.

PHYSICAL MEDICINE AND REHABILITATION

Walker, Joseph
Harvard/Spaulding, Mass.

PLASTIC SURGERY

Askari, Morad
University of Southern California LAC+USCM Center
Wachtman, Galen
University of Pittsburgh Medical Center

PSYCHIATRY

Altman, Sharon
University of Pittsburgh Medical Center
DeLuca, Alison
University of Pittsburgh Medical Center
Douglas, Susan
University of Pittsburgh Medical Center
Frank, Joshua
University of Pittsburgh Medical Center
Joo, Jin Hui
Hospital of the University of Pennsylvania
Kaphan, Sansea
University of Pittsburgh Medical Center
Lowry, Timothy
Cambridge Hospital/CHA, Mass.
Morine, Susan
University of Pittsburgh Medical Center
Robrecht, Daniel
Naval Medical Center–San Diego, Calif.
Sipp, Nia
University of Maryland Medical Center
Trettin, Shanthi
Hospital of the University of Pennsylvania
Volk, David
University of Pittsburgh Medical Center

RADIATION ONCOLOGY

Solan, Amy
Mount Sinai Hospital, N.Y.

RADIOLOGY DIAGNOSTIC

Ames, Jennifer
University of Pittsburgh Medical Center
Bryan, Lara
Yale–New Haven Hospital, Conn.
Isom, Corinne
University of Pittsburgh Medical Center
Li, Joyce
Rochester General Hospital, N.Y.

RESEARCH

Li, Karin
University of Pittsburgh Medical Center (Pathology)
Liao, Eric
University of Pittsburgh Medical Center (Neurology)
Miller, Zachary
To be determined (Neuroscience)
Upadhyaya, Ameet
Wayne State University School of Medicine, Mich. (Neuroimaging)

SURGERY — GENERAL

Abrams, Peter
Yale–New Haven Hospital, Conn.
Chen, Martin
University of Chicago Hospitals, Ill.
Doben, Andrew
Maine Medical Center
Fudge Fannon, Mary
Maine Medical Center
Golob, Joseph
University Hospitals of Cleveland, Ohio
Legnard, Elizabeth
Allegheny General Hospital
Raja, Siva
Brigham & Women's Hospital, Mass.
Richardson, Ward
University of Pittsburgh Medical Center

SURGERY — PRELIMINARY GENERAL

Noriega, Rafael
Maricopa Integrated Health Service, Ariz.

TRANSITIONAL

Bozorg, Ali
UPMC Shadyside

UROLOGY

Perlmutter, Mark
NYU Medical Center



CLASS NOTES

'50s

After watching his brother-in-law treat patients, the 9-year-old **Charles Bluestone** (MD '58) decided that he wanted to be an otolaryngologist. He would become a household name in pediatric otolaryngology. Bluestone has been affiliated with Pitt for more than 50 years, first as an undergraduate, then as a medical student, and today, as Eberly Professor of Pediatric Otolaryngology and director of pediatric otolaryngology at Children's Hospital of Pittsburgh. He is a recipient of the Hench award, was the founding chair of the section of pediatric otolaryngology of the American Academy of Pediatrics, and is a past president of the American Society of Pediatric Otolaryngology. Bluestone conducts National Institutes of Health–funded research in the areas of otitis media (middle ear infections), sinusitis, tonsillectomy, and adenoidectomy. In 1980, Bluestone founded the Pittsburgh Otitis Media Research Center, where researchers investigate medical and surgical treatments for otitis media and conduct clinical studies related to the disease.

Richard E. Deitrick (MD '59) got a kick out of reading in the May issue of this magazine about the Pitt med grads on the 1963 Panther football team. He was the team physician that year, and he is a former Panther standout himself. (He captained the 1953 team.) As team physician for the 1963 team, Deitrick ran the first double-blind study of the use of proteolytic enzymes in injured athletes. When a player was injured, he was given pills from a masked jar. Half got the enzymes, and half got a placebo. At the end of the season, Deitrick broke the seals on the labels and found that the players on enzymes were sometimes back on the field in half the time of those who got the blanks. Deitrick is now retired from practice as an ob/gyn and lives in Altoona.

When **Alvin Markovitz** (MD '58) started his private practice in the 1960s, he quickly became overwhelmed with patients. He was working long hours and making a comfortable living, but the internist, who lives in Los Angeles, felt a bit unsatisfied. As he paged through a medical journal, he saw an ad posted by two doctors who were trying to start a free clinic for the needy in Venice Beach, Calif. They were looking for other doctors to staff the clinic. Markovitz joined the duo in the practice's original location in a dentist's office, where they treated patients in dentist chairs. He and his colleagues now provide care to many illegal immigrants and uninsured people who have few places to go for care. Today, the Venice Family Clinic is one of the largest free clinics in the country; the volunteer physicians see 90,000 people a year. Dennis Hopper, Martin Short, and other celebrities have lent their support to the clinic. This past spring, the clinic honored Markovitz for his 30 years of service.

'70s

Pathologists from other countries often visit **Jesse Jenkins** (Surgery Intern '69–'70, Surgery Teaching Fellow '69–'70, Pathology Resident '70–'72, Pediatric Pathology Resident '72–'73, Chief Pediatric Pathology Resident '73–'74, Pathologic Medicine Teaching Fellow '70–'74) at St. Jude Children's Research Hospital in Memphis, Tenn. The pathologists train with him in Memphis to learn the latest diagnostic techniques for cancer, but many have difficulty with English. By the time they finish working with Jenkins as part of St. Jude's international outreach program, they're all speaking "Southern," says Jenkins. He also travels to developing countries to inspect laboratories, evaluate the expertise of pathologists, and conduct educational programs on cancer diagnosis techniques.

As assistant dean for medical education technology, **David Wilks** (MD '76) oversees all aspects of the University of New Mexico in Albuquerque Health Science Center's simulation education center, from mannequins to interactive computer programs. He has even been known to oversee the purchase of pig ribs and feet (for suturing practice), though these items don't fall into the traditional definition of "technology." He values how simulation enhances performance-based education. When the students start performing these procedures on actual patients, they are more confident and capable, he says. Wilks was an associate professor at Pitt before moving to Albuquerque in 1997.

'80s

When **Fred Brancati** (Internal Medicine Resident '85–'88) first started at Johns Hopkins University School of Medicine, he was unsure what he would research. A senior staff member pulled him aside and made a one-word suggestion: diabetes. He is now the principal investigator at Hopkins for the Look AHEAD study. Look AHEAD is a multicenter clinical trial of 5,000 obese people, all of whom are suffering from type 2 dia-

WE KNEW YOU WHEN:
RONALD STEWART

Late one evening, Ronald Stewart entered Lothrop Hall. After finding an abandoned floor, he painted names on the doors and moved unused furniture into the offices. The next day when Paul Paris (MD '76) arrived, the floor was the new Center for Emergency Medicine.

"Sometimes it was almost like we were in a mental institution and he was a pied piper, just convincing people to follow," says Paris, who is now chair of Pitt's Department of Emergency Medicine.

Stewart came to the University of Pittsburgh in 1978 after serving as the medical director of Los Angeles Emergency Medical Services. He'd trained at what was then the only emergency medicine residency in the country—at the University of Southern California. Pittsburgh had been looking for a medical director of its EMS; Stewart was to take on that job and be chief of emergency medicine at Presbyterian Hospital and at the School of Medicine.



ABOVE: Ronald Stewart and Paul Paris at an event in 1985. ABOVE RIGHT: Ronald Stewart today.

betes. Half of the group is put on a special diet and "coaching," while the other group receives traditional diabetes support and care. The investigators will observe these groups for several years to determine the role that weight loss, even moderate, has in diabetes outcomes. Brancati has become somewhat of a historian of fat, tracing genetic and environmental origins of the obesity epidemic. As he searched the Johns Hopkins archives, he learned that the hospital didn't treat a patient with diabetes until six years after the hospital opened (c. 1895)—and during the first half of the hospital's history, its staff treated only a few cases of diabetes annually. Brancati is now professor of medicine and epidemiology and director of general medicine.

In 1982, William DeVries performed the first artificial heart transplantation; it was on a dentist from Seattle. **Ron Shapiro** (Transplantation Fellow '86–'88) remembers this clearly. Although Shapiro had entered medical school with the hopes of becoming a psychiatrist, when the first artificial heart came into use, he knew two things: He would do a fellowship in transplantation, and the only person he could imagine studying with was Thomas Starzl. Shapiro has been at the Starzl Institute since 1986 and has performed hundreds of kidney transplants and more than 200 living kidney donor operations. Today he researches aspects of immunosuppression of kidney and pancreas transplantation and has some patients taking immunosuppressant drugs only weekly, which, according to Shapiro, is pretty close to being drug-free. Shapiro was honored by the Pittsburgh chapter of the Transplant Recipients International Organization in April.

Born and raised in Greece, **Filitsa Bender** (Nephrology Fellow '89–'91) came to the United States after marrying a Greek-American man from Pittsburgh. During her fellowship in 1989, she met Beth Piraino, co-medical director of the peritoneal dialysis program. Peritoneal dialysis is a process in which the abdomen is filled with fluid and blood is filtered and cleansed through diffusion while still inside the body. The two physicians have collaborated for the past five years. With Piraino, Bender keeps track of physical data for peritoneal dialysis patients in her center at West Virginia University in Morgantown. By comparing current and past data, Bender hopes to evaluate factors that affect the prognosis of dialysis patients.

David Keller (Ambulatory Pediatrics/Community Medicine Fellow '89–'91) remembers a teenage boy with muscular dystrophy very clearly. Keller worked with the family for two years to make the boy comfortable and came to feel like part of the family. Keller was there to pronounce the young man dead at age 19, in the family's home. Although the memory of the young man's death stays with Keller to this day, he continues to enjoy the life of a pediatrician. Keller runs a small practice that was among the first in Worcester County, Mass., to computerize its immunization tracking system, have a coordinator for children with special healthcare needs, and screen adolescents for substance abuse. The best part of it all is seeing the results of his efforts: "When you see the kids come out the other side, and they're doing okay, it gives you hope that you're actually making a difference."

'90s

Ever tried distracting a toddler long enough to perform an eye exam? To help overcome that challenge, **Sean Donahue** (Ophthalmology Resident '90–'93) has developed a statewide vision-screening program for children ages 1 to 6 in Tennessee. Doctors use a Polaroid camera to take pictures of the eye and look at the photos to determine whether children might have vision problems. If a picture shows there is a problem, they schedule a follow-up appointment for the youngster. The program has screened the eyes of 125,000 children since its inception in 1997, and it has been adapted for use in other countries as well as a dozen states here. Donahue is very interested in neuromuscular development of the eye, and childhood is the time when the eye changes and develops the most.

After spending a year as chief medical resident, **Gerald Markovitz** (MD '91) realized that he liked teaching. Markovitz, who is board-certified in critical care medicine, pulmonary medicine, and internal medicine, just finished teaching his first med school class at UCLA, where he is an assistant clinical professor of medicine. (He also practices part-time with his father, Alvin Markovitz—see p. 36.) He had been training residents and fellows throughout his career, but finds that teaching medical students is especially challenging and rewarding. Watch for his article in the *British Journal of Sports Medicine* this month; it offers a better understanding of how the body uses oxygen.



***The Hippocratean*, 1990**

When **Amy Brenski** (Pediatric Otolaryngology Fellow '98–'00) talked on the phone to a child she had treated while she was a fellow at the University of Pittsburgh, she almost cried with joy—it was the first time she had heard his voice. The young boy had fractured his larynx in a sledding accident and had been unable to speak while under Brenski's care. Unfortunately, she had to leave before he finished treatment and had been unsure of the outcome. Now an assistant professor of otolaryngology—head and neck surgery at the University of Texas Southwestern Medical Center in Dallas, Brenski researches autoimmune inner ear disease in children, a syndrome of progressive hearing loss and dizziness.

It was the middle of the night when **Brett McFadden** (MD '99) and others in the Air Force's Joint Special Operations Task Force–North landed in Irbil, Iraq. They slept on wet plywood that night in the cold desert, because it was early during the invasion and setting up camp would have revealed their position. When they built the camp, McFadden, just 10 months out of residency, was head of the ICU. His diagnostic skills were tested repeatedly. One time, he treated a young soldier with a severe sinus infection. After admission, the patient suddenly developed paralysis on one side of his body. McFadden thought the infection had eaten through the man's skull, causing a blood clot in the dural veins draining the brain, but he had no CT, MRI, or x-ray technology to confirm his diagnosis and no internists or neurologists to consult. He administered steroids and heparin—which could have hastened the patient's death if his diagnosis of dural vein thrombosis was wrong. McFadden then convinced a brigadier general to have a crew fly the patient at low altitudes (protecting the patient from sinus expansion but making the plane vulnerable to rifle fire) to neurosurgeons in Kuwait. The patient recovered with no neurologic defect. McFadden was later deployed to Kyrgyzstan, where he was director of education for a nine-nation cooperative hospital. He returned to Sheppard Air Force Base in Wichita Falls, Texas, with an Air Force Commendation Medal. *—CB, CS, MD, & MH*





When Paris was considering whether to return to Pitt to direct its new emergency medicine residency, Stewart handed him a bound, color copy of his vision. It included details about the center, the residency program, emergency medicine research, paramedic training, and a helicopter system.

"His vision seemed to face significant barriers. Emergency medicine was an infant 25 years ago," Paris says. "His political savvy led to its acceptance. The entire thing has seemed to be a dream come to fruition."

Stewart's most productive and inspired hours often are after midnight; he's been a night person since he was a child, when he'd wait up late for his coal miner father. He probably needed every hour he could get; creating a new program had its struggles. The biggest battle, he says, was creating the emergency helicopter program when a private helicopter system was already in place. He believes that prehospital care should be a community resource and publicly accountable. Pitt's STAT MedEvac is now one arm of the busiest emergency medicine transport program in the world.

Stewart left Pitt in the late 1980s to return to his birth country of Canada. He was elected minister of health for Nova Scotia in 1993; while there, he once again built an emergency medical system, this time for the province. Today, he directs the medical humanities program at Dalhousie University in Halifax and is an adjunct professor at Pitt. *—Meghan Holohan*

THE WAY WE ARE

CLASS OF '54

Of the 24 members of the Class of 1954 who attended their 50th reunion, a half dozen or so were at the luncheon honoring the graduating Class of 2004. Their table was front and center, and when they stood to be recognized, the newly minted MDs of 2004 gave them such a rousing ovation you would have thought they were cheering the seven original Apollo astronauts.

A lot of stories were revisited around this table and throughout the weekend. **Gilbert Ashor** reminded his classmates that they were "Jonas Salk's guinea pigs." Each was given one of two injections: Salk's experimental polio vaccine or a placebo. Salk's staff then periodically drew blood samples from each student.

"I was placebo," recalled **Russ Anderson**, "then I had to get the vaccine right after I found out it worked."

"I remember one thing you may not remember," Ashor said to Anderson. "You didn't like needles, and a technician came and broke off a needle in only one of our classmates: Russ Anderson."

"You've got a good memory. I had forgotten that myself," Anderson said with a laugh.

Ashor, who practiced thoracic and cardiac surgery in California, and **William Menzies**, a retired urologist in Texas, both recalled paying for medical school by working summers in the steel mills. Those days are gone, but Ashor, with his wife, Carol Ashor, has set up a planned gift, which will eventually endow a full scholarship for future Pitt med students.

Anderson may not have liked the needle, but he did fine with the scalpel, practicing orthopaedic surgery at Howard University, Harlem Hospital, and Albert Einstein Yeshiva University in the Bronx. Since retiring four years ago, he has provided pro bono orthopaedic services to the uninsured and indigent at a clinic in West Palm Beach, Fla.—all part of his plan to keep his synapses and neurons in working order, he says.

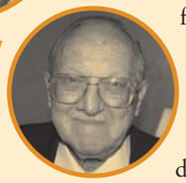
Fred McAlpine left Pitt and started his residency at Massachusetts General in 1955, just in time for the polio epidemic to hit Boston. McAlpine was put to work managing the airway and respiratory needs of patients in iron lungs. He was chair of the Department of Anesthesiology at Lahey Clinic in Boston for a dozen years and president of the Massachusetts Society of Anesthesiologists for one. Along the way, he wrote textbook chapters on the prevention of nerve injuries by proper patient positioning for surgical and anesthesia procedures.



Michelle Leive of the Pitt/UPMC medical and health sciences foundation made certain that members of the Class of '54 had a tour of the campus they left 50 years ago. She's pictured here with (from left) Ashor, Anderson, and McAlpine.



Woolley



Menzies

No one looked forward to the reunion for longer than **Emma Jane Griffith Woolley**, who spent five years compiling a spectacular golden anniversary book for her class. The former chief of anesthesiology and chief of staff at Verdugo Hills Hospital in Glendale, Calif., had her hands full tracking down classmates, but she was diligent. She tracked one unresponsive doctor to his front door in Oregon when she was in town for the Ashland Shakespeare Festival. Most contributed color photographs of themselves and their families. Some sent CVs devoid of personal details. ("Boring," Woolley says.) Others wrote hilarious ones (Hobbies: golf, avoiding erectile dysfunction). Some brought her to tears with heartfelt letters describing health problems, deceased spouses, and even deceased children. All seemed to value their lives in medicine and would do it all over again. —*Chuck Staresinic*



CJDE

At the Minority Reunion, from left to right: Joycelyn Elders, Albert Gordon, Anita Edwards (seated), Sandra Jones-Gordon (MD '85), and Jan Madison (MD '85)



This year, alumni were invited to walk in the commencement ceremony with the Class of '04. Christopher Koman (MD '94) eagerly stepped forward. It seems that Koman's pictures from his own graduation ceremony never turned out, and he'd always wanted a good shot of himself in cap and gown. Ten years later, here it is.

IN MEMORIAM

'50s

CLARENCE H. HAGMEIER (MD '50)
DECEMBER 26, 2003

STANLEY G. HENDRY (MD '51)
APRIL 15, 2004

A. LINN WEIGEL (MD '51)
APRIL 14, 2004

HARRY J. ROSS JR. (MD '52)
MARCH 26, 2004

JOHN PACEK JR. (MD '56)
MARCH 27, 2004

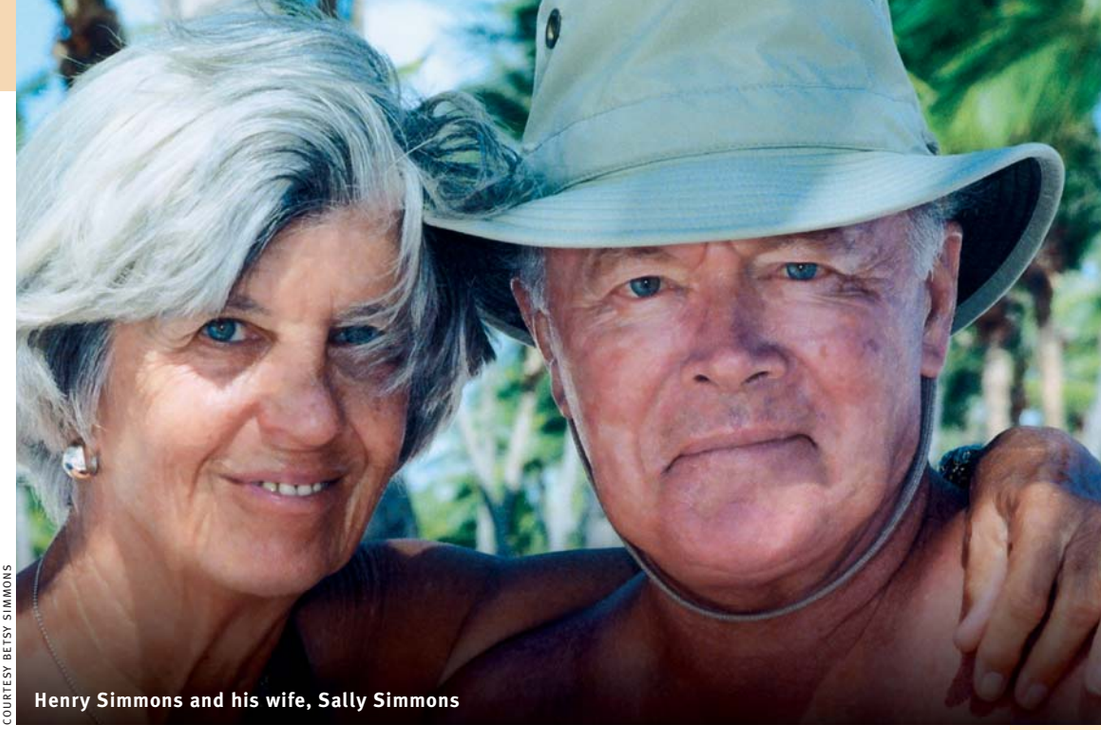
J. PRESTON HOYLE (MD '57)
MARCH 29, 2003

'70s

ROBERT GARLAND KISNER (RES '73)
MARCH 29, 2004

CHANGE AGENT: HENRY SIMMONS

BY MEGHAN HOLOHAN



COURTESY BETSY SIMMONS

Henry Simmons and his wife, Sally Simmons

As her family's convertible drove past house after house in Westport, Conn., the 13-year-old girl realized she didn't really like this place where she was living with her sisters and parents for part of a year. Each house was bigger than the next. And each sat on so much land. It all had begun to seem excessive.

Her father started driving out of town; he drove for a couple of hours. Her dad had said it was only going to take a half hour, like he always did. He loved driving, so it felt like a half hour to him. Finally, run-down high-rises surrounded the car. They were in Harlem.

On Sundays, while his four daughters were still adolescents, Henry Simmons (MD '57) would pack the family in the car for a field trip of sorts. He was intrigued by poverty and wealth. He wanted to show his daughters what life looked like.

"He appreciates trying to see both sides. He's not immediately condemning the rich or putting the poor on a pedestal," says Betsy Simmons, now 47, who remembers those rides as a 13-year-old. "He's got a pretty good sense of balance."

Years later, Henry Simmons is still thinking about the haves and have-nots. As founder and president of the National Coalition on Health Care, a Washington, D.C.–based organization, he lectures, writes, testifies before Congress, and talks with private sector groups about why comprehensive reform and universal health insurance coverage are the only means of fixing the system. He speaks of cost containment and the need for equitable financing. He gives impassioned pleas about why medical schools and physicians need to adopt evidence-based medicine to the extent possible.

"It troubles me that so many people have difficulty getting access and when they do, it's often far less than optimal care," he says.

Simmons started the organization in 1990 after years of working in private practice, government, and as a medical consultant. During the Nixon and Ford administrations, he'd served as deputy assistant secretary for health in the Department of Health, Education, and Welfare; director of the Office of Professional Standards Review; and director of the Bureau of Drugs in the Food and Drug Administration.

"He feels strongly about wasting—you don't waste resources," Betsy Simmons says.

It was during his government service in the 1970s when Simmons started to think there was a lot of waste and poor quality in health care. For instance, the claims drug manufacturers made about their products being safe and effective too often weren't substantiated by adequate evidence. And it was his job to implement the first national quality assurance system for patient care. "Once you are forced to look closely [at health care], you come away really disturbed," he says.

His coalition has attracted prominent allies. Former Presidents Gerald Ford, Jimmy Carter, and George H.W. Bush are honorary cochairs. Acting cochairs, Bob Ray, former Republican governor of Iowa, and Paul Rogers, a former Democratic U.S. representative from Florida, agree that Simmons is well placed in the national debate.

"He thinks it's most important to stimulate people," says Rogers. "On a matter like this, you need the White House and Congress together. It's no easy task."

Simmons' "rigorously" nonpartisan coalition now consists of more than 90 member organizations, representing about 150 million Americans. Members include the AARP, the American Academy of Family Physicians, Pfizer, and the AFL-CIO.

"I think what's fundamentally different now is that we have never had a problem of this magnitude," Simmons says. "This is unprecedented. There are too many informed people saying we can't continue on this unsustainable course." ■

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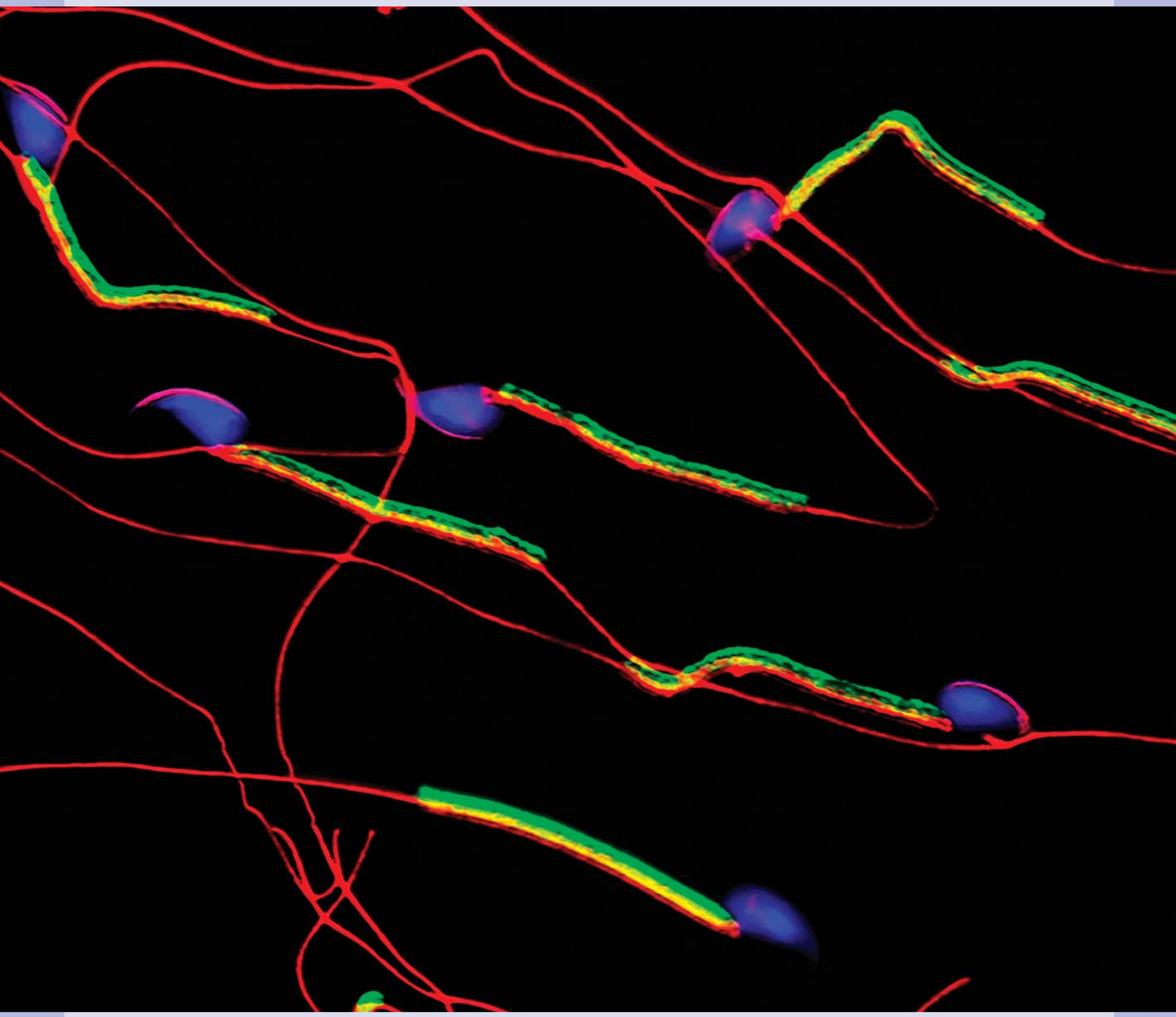
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SAMUEL TISHERMAN (MD '85)

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SUSAN DUNMIRE (MD '85)
Interim Director

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This colorful image, from the lab bench of Pitt postdoctoral fellow Vanesa Rawe of the Pittsburgh Development Center, placed fifth in the Small World photomicrography competition sponsored by Nikon. It's mouse sperm. Green flashes indicate presence of a newly discovered protein called WAVE1, which regulates the sperm's motility and ability to fertilize. The image was the November pin-up for the 2003 Small World calendar.

IMAGE | VANESA RAWE/© NIKON

CALENDAR

OF SPECIAL INTEREST TO ALUMNI AND FRIENDS

CLASS OF 2008 WHITE COAT CEREMONY
AUGUST 15
Scaife Hall, Auditoriums 5 and 6
3 p.m.
For information:
Student Affairs Office
412-648-9040
student_affairs@medschool.pitt.edu

SENIOR VICE CHANCELLOR'S LAUREATE SERIES
SEPTEMBER 22
Noon
Scaife Hall, Auditorium 6
Roger W. Hendrix, PhD, Speaker
"The Protein Ballet of Virus Assembly"
For information:
Andrea Lively
412-383-7768

C.F. REYNOLDS SOCIETY SERIES
SEPTEMBER 23
6 p.m.
Scaife Hall, Auditorium 5
Alan Kraut, PhD, Speaker
"Doctors at the Borders: Immigrants and Public Health – Historical Perspectives"
For information:
Jonathon Erlen
412-648-8927
erlen@pitt.edu

SCIENCE 2004: NO BOUNDARIES
OCTOBER 6–8
Alumni Hall
For information and registration:
www.science2004.pitt.edu

HOMECOMING WEEKEND
OCTOBER 21–24
Pittsburgh vs. Rutgers
Saturday, October 23
For information:
Medical Alumni Association
412-648-9090 or 1-877-MED-ALUM
medalum@medschool.pitt.edu
www.alumni.pitt.edu

ROSS H. MUSGRAVE LECTURESHIP
OCTOBER 29 & 30
Stephen J. Mathes, MD, Speaker
For information:
Medical Alumni Association
412-648-9090 or 1-877-MED-ALUM
medalum@medschool.pitt.edu

SENIOR VICE CHANCELLOR'S LAUREATE SERIES
NOVEMBER 4
Noon
Scaife Hall, Auditorium 6
Ralph M. Steinman, MD, Speaker
"Dendritic Cells: Sentinels for the Control of Immunity and Tolerance"
For information:
Andrea Lively
412-383-7768

C.F. REYNOLDS SOCIETY SERIES
NOVEMBER 4
6 p.m.
Scaife Hall, Auditorium 5
10th Annual Sylvan E. Stool History of Medicine Lecture
John Parascandola, PhD, Speaker
"Quarantining Prostitutes: VD Rapid Treatment Centers in World War II"
For information:
Jonathon Erlen
412-648-8927
erlen@pitt.edu

MEDICAL ALUMNI WEEKEND 2005
MAY 20–23
Classes celebrating: TBA
For information:
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