

news & views

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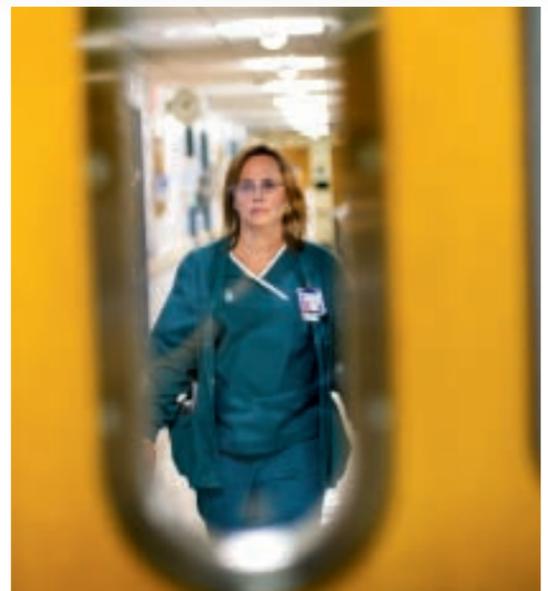


NYU Langone after Dark *A Night in the Life of Nurse Administrator Debra Grice-Swenson, RN*

Lynn Saville

From dusk till dawn, a hush descends over NYU Langone Medical Center, and the staff grows sparse. Debra Grice-Swenson, RN, however, is in high gear. One of nine nurse administrators who are in charge when the hospital's leadership team is off duty, she splits responsibilities with a counterpart to watch over some 400 inpatients. Nearly always on the move, she touches base with assistant nurse managers and other supervisors to ensure that all is well, and takes action to remedy problems that demand swift intervention. Three nights a week, from 8:00 p.m. to 6:30 a.m., Grice-Swenson logs serious mileage—not only from the 100-mile round trip to her home in Long Island, but also from her rounds to more than a dozen units throughout Tisch Hospital. Part traffic controller, part troubleshooter-on-call, part guardian angel, she relies on adrenaline and 21 years of experience. On a recent Friday, with a half-moon aglow, this mother of four, who is pursuing a doctorate degree on her days off—her dissertation, fittingly, will examine the subculture of night nurses—once again took the hospital's pulse. "I have to see the big picture," says Grice-Swenson, who works at night but is never one to be left in the dark. To commemorate National Nurses Week—May 6 through May 12, the birthday of Florence Nightingale, the founder of modern nursing—news & views spotlights the behind-the-scenes work of these unsung administrators.

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Joshua Bright

Debra Grice-Swenson, RN, makes her overnight rounds at Tisch.

A Ticking Time Bomb—and the Surgeons Who Disarmed It



Brian and Sara Paul

Nancy Levine

With Four Hands, and in Twice as Many Hours, Experts from NYU Langone's New Aortic Disease Center Give Their Patient a New Lease on Life

A few weeks before the birth of his first child, Jane, in October 2011, Brian Paul received some distressing news. He had an abdominal aortic aneurysm, a bulge in the large vessel that supplies blood to his lower body and several vital organs. If it were not repaired, it could burst and kill him. The 37-year-old Staten Islander knew what he was up against, for his body bore the scars of two prior surgeries for the same problem.

The risks of the operation were high—paralysis and kidney damage—but Paul faced them with quiet courage and confidence. The courage came from half a lifetime of fighting a chronic disease, Marfan syndrome, a disorder of the body's connective tissue. "I have to deal with it," he says calmly, "so I keep a positive outlook." The confidence came from knowing that his surgeons at NYU Langone Medical Center's Aortic Disease Center were uniquely qualified to help him.

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From the Dean & CEO

With our ever-expanding weekend options, NYU Langone continues to move in the direction of seven-day-a-week services. While much has been said about the “7” part of our 24/7 availability, the “24” part is equally important. In “NYU Langone after Dark,” we get a fascinating glimpse of what goes on here when most of us are fast asleep. At Tisch and Rusk, those on overnight duty include several attending physicians, dozens of residents, 172 nurses, 80 patient care technicians, 5 radiologists, 21 radiology technicians, 16 pharmacists, 40 building services workers, and many others in clinical and nonclinical areas. In “The Dawn Patrol,” you’ll learn that NYU Langone is the only hospital in Manhattan with intensivists on duty 24/7 in its medical ICU, and the first hospital in the city to add a second intensivist 24/7 in its surgical ICU. All these employees are here for one

purpose: to ensure the safety, well-being, and comfort of our overnight patients—some 400 inpatients and 50 visitors to our Emergency Department. Caring for the sick is a round-the-clock responsibility. Even in the wee hours, our Medical Center is totally committed to fulfilling that obligation.

Robert I. Grossman, MD



Nina Setia, NYU Langone’s recently appointed chief patient experience officer, joins Dr. Herbert Lepor, chair of Urology, on afternoon rounds at Tisch Hospital.

For Patient Experience Officer, Goal Is Satisfaction Guaranteed

The sight of a smartly dressed woman in a business suit and latex gloves bending down to pick a napkin off the floor of a patient unit at NYU Langone Medical Center may strike some as curious. For Nina Setia, though, it’s not only the right thing to do, but emblematic of her new role in a newly created position: chief patient experience officer. “Cleaning is the job of our housekeepers, but cleanliness is every employee’s responsibility,” says Setia, who oversees a wide range of inpatient programs. “It’s one more way to demonstrate how committed our staff is to delivering an exceptional patient experience.”

That effort began in earnest three years ago, when NYU Langone created the Department of Patient-Centered Care to reinforce the message “It’s all about the patient.” The naming of a patient experience officer raises the bar even higher. “Nina has the background to motivate all of our staff to really see the experience here through the eyes of the patient, and to turn that empathy into improving the ways we interact with patients and their families,” explains Amy Horrocks, vice president for hospital operations. Setia was previously at Hackensack University Medical Center, where inpatient satisfaction achieved the 90th percentile nationally in 2011.

Brimming with energy and ideas, she has hit the ground running at NYU Langone. For one thing, she’s helping to reinvigorate a nurse rounding program requiring nurse managers on each unit to visit every patient daily to ask them firsthand how their hospital experience is going. Hourly nursing rounds were instituted several years ago, explains Setia, but daily rounding by nursing supervisors is another reality check on how well our promise to deliver world-class care and service to patients is being met. Moreover, it provides an opportunity to identify and recognize nurses and staff members whose performance patients consider exemplary.

Setia, whose parents and sister are all physicians, is also launching floor rounds with hospital administrators and support-service leaders responsible for ensuring that TVs work and rooms are kept clean. She also sees her role as one of helping to create more collaboration among departments—she’s currently focusing on nursing and support services—with the goal of finding better ways to serve our patients and their families. “There’s always room for improvement, but our scores show that our patient-centered efforts are definitely having an impact,” notes Horrocks. “That’s very rewarding, and it encourages us to work even harder toward our ultimate goal.”

Melanoma Survivors, Joined by Physicians and Researchers, Dress for Success

A recent photo exhibit in the Smilow Gallery featured a series of portraits by Sasha Nialla of 12 patients treated for melanoma at NYU Langone Medical Center. Last October, they gathered at the NYU Clinical Cancer Center, where they were joined by the physicians and researchers of NYU Langone’s Interdisciplinary Melanoma Cooperative Group (IMCG), some of them members of the Ronald O. Perleman Department of Dermatology, who helped make their recoveries possible. Participants wore “Protect the Skin You’re In” T-shirts, designed and produced by Marc Jacobs, and had their portraits taken for a special book, *Thank You, Marc and Robert*. The book, conceived by Richard Shapiro, MD, associate professor of surgery, and produced by the Office of Development and Alumni Affairs, was a gift to Marc Jacobs and his business partner, Robert Duffy, for their generosity. Five years ago, they created, with photographer Brian Bowen Smith, a brilliant series of best-selling T-shirts that have brought attention to the rising incidence of melanoma. This year alone, melanoma will strike an estimated 68,720 Americans and kill 8,650, according to the National Cancer Institute. Through a long-term partnership with NYU Langone, Jacobs and Duffy have donated every sales dollar from the T-shirts to melanoma research at the NYU Cancer Institute—over \$3 million to date.



Members of the IMCG (left to right): Dr. Michelle Krogsgaard, Dr. Nina Bhardwaj, Dr. David Polsky, Dr. Iman Osman, Dr. Richard Shapiro, Dr. Anna Pavlick, Dr. Eva Hernando-Monge, Dr. Yongzhao Shao, Dr. Jennifer Stein, Dr. Russell Berman, and Dr. Patrick Ott.



Governor Andrew Cuomo (right) appointed Dr. Nirav Shah New York State Commissioner of Health in 2011.

From New York to Albany, and Back

For New York State Commissioner of Health Nirav Shah, MD, MPH, it was a homecoming of sorts. Only a year ago, before he was tapped for his current post by Governor Andrew Cuomo, Dr. Shah was assistant professor of medicine at NYU School of Medicine and an attending physician at Bellevue Hospital Center. On a recent afternoon, he visited NYU Langone Medical Center to present a grand rounds lecture titled “Advancing Quality and Safety in Health Care: a Patient-Centered Perspective.”

An honors graduate of Harvard College and Yale School of Medicine, Dr. Shah heads up one of the nation’s leading public health agencies, with a budget of more than \$50 billion, and administers the state’s public health insurance programs, which cover 5 million New Yorkers. His department also regulates hospitals and other healthcare facilities, conducts research in a premier biomedical laboratory, and supports public health and prevention initiatives. Dr. Shah emphasized that his department is making quality and safety “a priority” as it strategically reviews programs and policies.

“Institutions like NYU Langone that are already focusing on these issues are going to do well,” he predicted. He cited the huge challenge that the state’s Medicaid program, which he administers, represents: despite having the second-highest expenditure per enrollee in the nation, it ranks 21st for overall health system quality and last in avoidable hospital use and costs. “The current system,” he said, “is not providing high-quality care, nor is it achieving acceptable outcomes in the prevention and treatment of illness and chronic disease.”

That failure has prompted Dr. Shah and his department to undertake a sweeping redesign of Medicaid, investing in patient-centered medical and health facilities to promote continuous, coordinated care around the patient. “If you’re in a health facility, your care will be coordinated across the hospital, the nursing home, school-based clinics, and the whole continuum of care,” Dr. Shah explained.

A passionate advocate of electronic medical records, Dr. Shah cited the pivotal role of data in “transforming our healthcare system.” Robust data, he declared, will usher in an era of information-based medicine, where the benefits accrue not only to individual patients, but entire populations. That macro approach is consistent with NYU Langone’s recent creation of a Department of Population Health to promote health and prolong life across entire communities. Asked about the new department, Dr. Shah replied: “I think NYU Langone has hit a home run. It’s an opportunity for the Medical Center to understand the community in ways that have never before been explored, and to align it with healthcare reform, as well as population and public health, for the next century.”

The Opinionator

In the Tug of War between Right and Wrong, Dr. Arthur Caplan Is a Revered Referee

Whether it's a debate over embryonic stem cells or genetic testing, one voice stands out: Arthur Caplan, PhD. Dr. Caplan has joined NYU Langone Medical Center as director of the new Division of Medical Ethics in the new Department of Population Health. A pioneer in bioethics and one of the field's seminal thinkers and most prolific writers, he enjoys reading, traveling and watching movies with his wife, and being a fan of the Philadelphia Eagles and the Flyers. But it's lofty topics and deep moral dilemmas that fuel his passion for inquiry, which requires, as he puts it, "the ability to be open and available to the feelings and sentiments around you."

You battled polio when you were seven. How did that affect you?

It sensitized me to the importance of not deceiving patients. I distinctly remember thinking: "They're not telling us the truth. Kids are dying here, and the doctors are telling us they went home." I didn't like that at all. I also remember being paralyzed and what it's like to feel helpless. Those things stick with you.

Did that experience influence your career choice?

A little bit. Exploring issues like women's rights, the Vietnam War, and civil rights in college got me interested in ethics in a more direct way. It was a very invigorating time, and it compelled me to think about where I stood.

If you weren't a bioethicist, what would you be?

Probably a journalist. I've always had an interest in writing and telling stories. Maybe a lawyer. I wouldn't be a doctor—that requires a kind of selflessness that I respect and admire, but I selfishly like to think in my own way. I had the chance to go to medical school, but I didn't. My mother still grieves.

Of all of the issues you've grappled with, which ones are the toughest?

How to manage seriously ill newborns. Should you treat

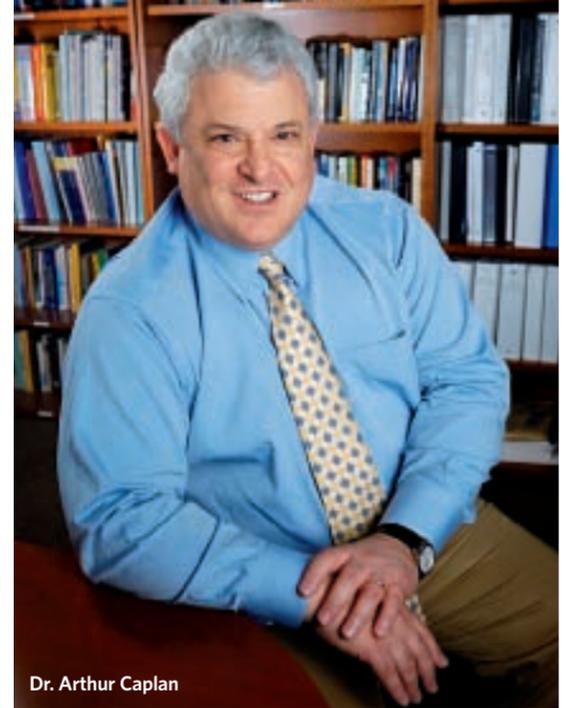
them aggressively or not? They often fool you in terms of surviving when you don't think they will. Caring for very sick, elderly people who are unable to communicate and have no one to speak for them is another one. My inclination is to not treat them aggressively, and instead try to control their pain and make them comfortable. But it's hard because you don't have a lot of information and you don't know which way to err.

Where do you get the confidence and conviction to act as moral judge?

You get some tools, such as a mastery of ethical theories and an understanding of legal consensus. You have a lot of experience. You can be modest and say, "I'm going to give you advice or opinion, but that's all it is." Sometimes, a doctor will get mad at me and say, "Who made you king of the universe?" I'll say, "Nobody. If you don't like what I say, ignore it."

What should people consider when they need to make a difficult medical decision?

First, get the facts straight. Bad ethics frequently flows from poor facts. Second, identify all the ethical issues and make sure you're discussing the same one. Third, figure out what's causing the ethical dilemma. Is it because you have trust issues? Because you don't like the



Dr. Arthur Caplan

John Abbott

doctor? What may look like an ethical dilemma is often a matter of emotion, the need for counseling or mediation.

Do bioethicists agree on most major issues?

It bothers me when people say, "You guys just talk, and you never get anywhere." We have lots of areas where we have consensus. We've agreed on brain death and informed consent. It just happens slowly over time.

You've written 30 books and nearly 600 journal articles. You serve on numerous committees. You're launching a new Division of Bioethics. When do you sleep?

I work whenever I get a spare minute. I'm a big writer on a bus, train, airplane, or canoe. It's not a question of working 24 hours a day. It's about efficiency.

Is there a question you'd like to answer?

Rarely does anybody ask me if I think the job is fun. A lot of people think it's got to be grim and miserable because there's often a crisis, or somebody's mad. But I find the job very invigorating and a lot of fun. I'm never bored.

His Guitar Weeps No Longer

For a Young Musician Recently Diagnosed with MS, the Tune Is a Happy and Hopeful One

Words failed Kendrick Lo when he tried to explain to his buddies in the band Little Anchor why he flubbed the first song during rehearsal one day. A guitarist since age 12, Lo couldn't close his grip on the guitar. The fingers of his left hand suddenly didn't work. "I was shocked," he recalls. "I'm looking at my hand, and it just wouldn't do what I wanted it to do." Lo's bandmates watched him walk out of the studio with a pronounced limp. Though he had no way of knowing it on that June day in 2011, the 24-year-old had joined the ranks of an estimated 700,000 Americans with multiple sclerosis (MS), a chronic, progressive, incurable disease of the central nervous system.

As an Asian male, Lo was not the most typical candidate for MS, which more commonly strikes light-skinned Caucasian females. But the sudden onset of coordination problems (or blurry or double vision or sensory symptoms) in an otherwise healthy young person is one of the hallmarks of MS, a potentially debilitating disease. MS triggers the body's immune system to attack myelin, the protective sheath that normally surrounds each nerve fiber, allowing it to conduct electrical signals rapidly. Symptoms typically appear between ages 20 and 40, and can be so subtle at first that they may be ignored or, like Lo's, so intrusive that they bring life to a jarring halt. As his band played without him, Lo went for an MRI.

The imaging showed multiple brain lesions and areas of inflammation, confirming a diagnosis of MS. Lo wondered whether he would ever play guitar again, or whether he would still be able to walk. "All these things I'd taken for granted now seemed miraculous," he remembers. Wistfully, Lo viewed Little Anchor's recent music video, shot months earlier, showing the band running through the snow. Now, he could barely move his leg.

Lo learned of the unpredictable and highly variable nature of the disease. Some go years, even decades, between bouts. Others suffer a gradual decline

with extreme fatigue, tingling, pain, stiffness, and immobility, their legs feeling as heavy as tree trunks.

"The psychological burden is tough because patients don't know what the future will bring," explains Lo's physician, Jonathan Howard, MD, a neurologist and psychiatrist at NYU Langone Medical Center's MS Comprehensive Care Center, one of the largest clinics of its kind in the Northeast. In April, the center became the first occupant of NYU Langone Medical Center's new Ambulatory Care Center, at 240 East 38th Street at Second Avenue.

The MS Care Center follows a multidisciplinary approach that combines physical, emotional, cognitive, and occupational therapies and interventions with the latest drug regimens. "This is a very exciting time to be treating MS," says Joseph Herbert, MD, associate professor of neurology and the center's director. He has known patients with MS since medical school, when he felt deeply affected by the havoc the disease wreaks on young people in their prime. "I've seen the transformation from a completely untreatable disease to one that is eminently treatable. What we are driving toward—very quickly—is complete control of symptoms, a normal lifespan, and a much improved quality of life."

This turnabout is due to a handful of first-line medications, which include interferons and glatiramer acetate, which decrease the relapse rate, along with a monoclonal antibody (natalizumab) and an oral medication (fingolimod). A number of other oral agents and infusions are expected to gain FDA approval by next year. After his diagnosis, Lo received intravenous steroids to help heal the damage. His hand and leg began to respond. Then he weighed the pros and cons of natalizumab, which stalls the progress of MS but carries serious risks, including a rare but potentially fatal brain infection.

After much research and discussion with his father, an anesthesiologist, Lo chose to start on natalizumab. So

far, he feels "normal." With his hand strength returned, he's back with the band. After six months of treatment, an MRI showed improvement, with no new inflammation. Hoping that his MS will remain in remission, Lo is enjoying the rich social life he's built for himself in downtown Manhattan. "Whenever I go for a run or play guitar," he says, "I remind myself, 'Wow. Remember a few months ago, when you couldn't do this?'"

Web Extra: for an article about an effective treatment for the spasticity brought on by some neuromuscular diseases, see "Running Free and Living Freely" at www.newsandviews-digital.com.



With his hand strength returned, Kendrick Lo is back with the band.

John Abbott

NYU Langone after Dark *(continued from page 1)*

8:55 p.m. In room 195, her command center, Grice-Swenson scans a house report sheet. “I’m looking to get the lay of the land,” she says. She checks who’s on duty in “the house”—typically, about 170 nurses and a large contingent of residents in various specialties—as well as the patient census. She runs the numbers on beds occupied, measuring activity levels and scouring for potential backlogs. Nurse administrator Dora Castillo, RN, ticks off an update. “So far it’s quiet,” says Castillo. “Just little issues here and there.” Even so, one recent night brought five minicrises in as many hours. The calm can end just like that, and Grice-Swenson knows it.

9:35 p.m. Grice-Swenson strides into the Arnold and Marie Schwartz Health Care Center to drop in on the Jean and David Blechman Cardiac & Vascular Center on the 13th floor. It’s busier than usual: all 16 beds are occupied, with six patients scheduled to arrive as soon as beds become vacated and cleaned. “We’re dancing as fast as we can,” explains Eileen Pfreundschuh, RN, senior nurse clinician. At issue is which patients to move to make room and where and when—a virtual game of musical chairs. The check-in, complete with recommended solutions, lasts two minutes.

10:20 p.m. Working her way down, Grice-Swenson visits the inpatient cardiology unit on the 11th floor, the psychiatric unit on the 10th, and the Joan and Joel Smilow Cardiac Rehabilitation and Prevention Center on the 9th. Hearing the good news—no news—she heads down to the main lobby, where she checks the emergency response cart and touches base with the Security supervisor.

10:55 p.m. Fifteen empty gurneys line the hall outside the ground-floor Emergency Department (ED). “A sure sign that it’s slower than usual,” notes Grice-Swenson. The ED, whose visits are up more than 15% since the closing of St. Vincent’s Hospital, has only 13 patients at the moment. “Unheard of,” she says to Veronica Berry, RN, who raps her knuckles three times against the counter of the nurses’ station.

11:05 p.m. Back in room 195, Castillo, again offering extra eyes and ears, gives Grice-Swenson another run-down. A patient deemed to be a suicide risk is now under close observation. An elderly woman who suffered two strokes within a week lies unresponsive and dying, her daughter at her bedside. Grice-Swenson adds both

patients and their family members to her list of people to follow up on later.

11:20 p.m. In the post-anesthesia care unit, Grice-Swenson sits knee to knee with her sister night nurse administrator, who is about to go off duty. She fills in Grice-Swenson during the handoff. Surgeons just completed a 12-hour colon resection. The patient with a subdural hematoma needs a CT scan before heading to the Critical Care Center (see “The Dawn Patrol” on page 5).

12:10 a.m. Come witching hour, Grice-Swenson’s beeper goes off more frequently, chirping five times in 30 minutes. All at once, the night has come alive—not so much with activity, but suspense. On any other night, a celebrity might arrive under cover of darkness for a scheduled surgery. An elderly patient might awaken, confused, agitated, and frightened—a phenomenon called “sundowning”—and try to leave the hospital, triggering a call to Security. A woman might give birth on the sidewalk near the main entrance. It’s all happened before. So far tonight, though, the hospital is pretty quiet. Then again, Grice-Swenson still has six hours to go. . . .



All photos: Joshua Bright



Dr. Ronald Simon, chief of the Division of Trauma, Emergency Surgery, and Surgical Critical Care, checks on a patient in the Surgical Intensive Care Unit.

residents and physician assistants, as well. They have fewer complications and shorter hospital stays—shorter by 2.5 days, on average. The Society of Critical Care Medicine recommends 24/7 intensivists as the model for an ICU, yet fewer than 4% of American hospitals provide such staffing. In Manhattan, NYU Langone is the only hospital with intensivists on duty 24/7 in its medical ICU. Last year, a second intensivist was added to the surgical ICU, making NYU Langone the first hospital in the city to be so staffed 24/7. The Medical Center's cardiac arrest teams and rapid response teams are also led 24/7 by attending intensivists, board certified in critical care medicine.

In a hospital, any patient can suddenly turn acutely ill at any time. As Kevin Felner, MD, assistant professor of medicine, an intensivist and six-year veteran of the overnight shift, raced from the medical ICU to the Schwartz Health Care Center on a recent Saturday night for a "rapid response" call to reach a 22-year-old patient in the midst of an epileptic seizure, he weighed his options. Critical care is often more art than science, with pluses and minuses for each intervention. Heavy sedation would probably end the seizing, Dr. Felner knew, but would also require breathing support with a ventilator. As he discussed the process with the patient's

At NYU Langone, more than 4,000 gravely ill patients each year are watched over 24/7 by senior attending physicians.

mother, the young woman grew calm. Her seizures stopped, and no intervention was necessary.

Just before dawn, the halls filled with yawning residents and medical students on morning rounds. The intensivists, and the nurses and nurse practitioners who help them care for the sickest of the sick, were no longer so alone. For Dr. Felner, it was a "dizzy" night, leaving him exhausted yet surprisingly invigorated. For Dr. Simon, whose 7 p.m. to 7 a.m. shift proved less eventful, satisfaction came during his final tour. In the gray morning light, nearly all of his 15 surgical patients seemed to have improved, and two more came off their ventilators. "Hey, you are out of bed," he said to Marlene, who sat in a chair. In a hoarse voice, she asked for coffee. The crisis behind her, she'd leave the ICU later that day. "How about decaf?" Dr. Simon asked.

The Dawn Patrol

The Sickest of the Sick Deserve the Best of the Best, and at NYU Langone, That's What They Get—24/7

Despite her age, 77, Marlene had no reason to expect that her minor abdominal surgery would be anything but routine. The operation went smoothly, in fact, but afterward, she struggled to breathe, perhaps due to lingering anesthesia. Placed back on a ventilator, she was taken to the surgical intensive care unit of NYU Langone Medical Center's Critical Care Center on the 15th floor of Tisch Hospital. At midnight on a recent Saturday, Ronald Simon, MD, professor of surgery and chief of the Division of Trauma, Emergency Surgery, and Surgical Critical Care, stood at her bedside. Alert, though uncomfortable and unable to speak, Marlene gestured that she wanted the tube out of her throat.

Seeing no point in leaving Marlene on a ventilator any longer than necessary, Dr. Simon directed the physician assistant to remove the breathing tube. He watched closely as she took increasingly deeper breaths on her own, with the nurse's prompting, reaching a safe oxygen saturation. "Well done!" Dr. Simon said to Marlene, who, though breathing heavily with wide eyes, looked visibly relieved.

If Marlene were a patient at any other hospital in the city, chances are that her breathing tube would have remained in place until Monday morning, the soonest that an attending physician would have been on duty to authorize its removal. But at NYU Langone, more than 4,000 gravely ill patients each year are watched over 24/7 by senior attending physicians. Each shift in the medical intensive care unit is overseen by a senior attending physician, as is each in the surgical intensive care unit,

and every one of those attendings is a fellowship-trained intensivist specializing in critical care medicine. "Since we're here day and night, we can usually prevent bad things from happening," explains Dr. Simon. "We can try to put out the smoking ember before it causes a fire." A high potassium level, for example, can be treated before it becomes a fatal arrhythmia, and bronchial congestion can be cleared before it causes respiratory failure.

Nationwide, more than 2 million patients are admitted to urban intensive care units (ICUs) annually. Typically, a patient is moved to intensive care following a life-threatening crisis. Respiratory distress is the leading cause, which explains why critical care and pulmonary medicine go hand in hand as specialties. Other conditions that require close attention and multidisciplinary care are stroke, uncontrolled bleeding, end-stage cancer, heart attack, coronary surgery, and severe infections, such as sepsis, meningitis, and flu. Constant vigilance is vitally important, so the ratio of specially trained nurses to patients is one to two. Critically ill patients are also vulnerable because they often suffer from one or more underlying chronic conditions and problems with multiple organs. On average, they are on 10 or more medications (including some of the rarest and most expensive drugs in any pharmaceutical arsenal), remain in critical care for four days, and face a mortality rate of 10 to 20%.

Studies have shown that patients fare much better when their care is supervised around-the-clock by on-site intensivists who monitor not only patients, but

A Ticking Time Bomb—and the Surgeons Who Disarmed It *(continued from page 1)*

One was Thomas Maldonado, MD, associate professor of vascular surgery, who had performed Paul's second aortic repair and knew his case history well. The other was Abe DeAnda, MD, associate professor of cardiothoracic surgery, who, with Dr. Maldonado, is the center's co-director. Dr. DeAnda has years of experience with Marfan syndrome, which afflicts 1 in every 5,000 people. A genetic mutation affects tissue growth, creating problems with joints, vision, and blood vessels. Typically, people with Marfan syndrome are very tall, with disproportionately long limbs, hands, and feet. At 6'8", Brian Paul was a classic case. Internally, the disorder can cause the wall of the aorta to expand to the point where it can split. Unfortunately, Paul had that trait as well.

Left untreated, persons with Marfan syndrome rarely live beyond their 40s, but with proper monitoring and care, a normal lifespan is possible. Paul and an older brother inherited the gene from their father—three out of four Marfan cases are inherited. Their dad, who was diagnosed late, died at 42. Paul has been monitored since he was 16, periodically receiving MRIs and angiograms to look for changes in the diameter of

his aorta. In 2002, a curved section of his aorta called the aortic root required surgery. Then, in the spring of 2011, just five days after his wedding, Paul had another section replaced by Dr. Maldonado. Now, a bulge appeared in a third location.

Fixing it, however, was not going to be easy. Connected to the bulge were four arteries, two leading to the intestines and two to the kidneys. In addition to making the repair, Dr. Maldonado and Dr. DeAnda had to carefully disconnect and reconnect all four vessels. Says Dr. Maldonado: "I don't think it gets any more complicated than that."

The surgeons devised a two-part strategy. First, Dr. DeAnda would use his expertise with the cardiopulmonary bypass machine to keep blood flowing to the kidneys and intestines while the defective section of the aorta was replaced, buying time. Then, they would tackle the complex surgery as a team. "When you have two pairs of hands that know the anatomy," says Dr. DeAnda, "everything can get done quicker."

After rerouting blood to the four arteries, the surgeons clamped off the aorta above and below the

repair site, removed the faulty aorta, sewed in place a stent made of Dacron, reattached the four arteries to it, and wrapped tissue from the aneurysm around the graft to protect the intestines from the abrasive Dacron. Dr. DeAnda and Dr. Maldonado worked nonstop for nearly eight hours. In December 2011, Brian Paul returned home to his new wife and daughter with a new lease on life.

The National Marfan Foundation has designated NYU Langone as the site of a Marfan clinic, giving patients access to specialists in cardiothoracic and vascular surgery, orthopaedics, ophthalmology, and genetics who are knowledgeable about the disorder. One is John Pappas, MD, assistant professor of pediatrics and director of the Division of Human Genetics. Marfan syndrome is difficult to diagnose, so genetic testing can provide valuable clues. "People use me as a diagnostician," says Dr. Pappas, "when an individual or family does not meet other criteria." Since the children of Marfan patients have a 50% chance of developing the disease, this could one day benefit Paul's daughter.



Stomach Bacterium May Increase Risk for Diabetes

The idea may be hard to swallow, but evidence is building that the stomach ulcer-inducing bacterium *Helicobacter pylori* (*H. pylori*) may also contribute to high blood glucose levels, a harbinger of diabetes. The link seems to be strongest in older, obese people who harbor *H. pylori* in their stomach lining, according to a study of data of more than 13,000 participants in two large National Health and Nutrition Examination Surveys.

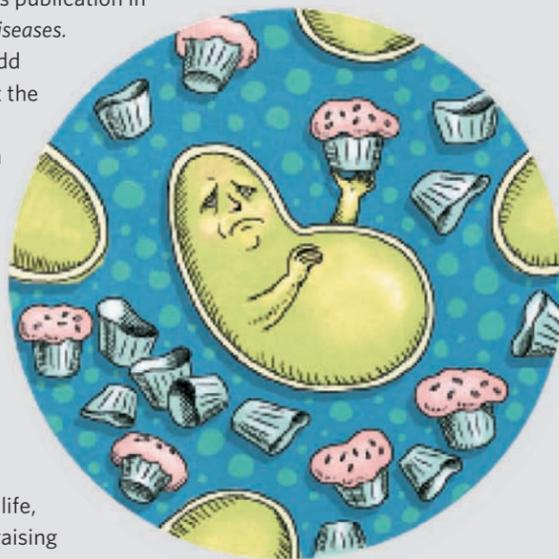
“There is growing interest in the relationship between microbes, obesity, and diabetes,” says Yu Chen, PhD, MPH, associate professor of medicine and environmental medicine. “Ours is the first large study to associate the presence of *H. pylori* with HbA1c, an objective marker for long-term elevated blood glucose levels.”

When blood sugar levels reach a sustained high level, some of the hemoglobin inside red blood cells becomes sugarcoated. This glycated hemoglobin, or HbA1c, is a warning sign of increased risk for diabetes. Examining HbA1c levels among people of all ages, Dr. Chen and collaborator Martin Blaser, MD, the Frederick H. King Professor of Internal Medicine, chair of the Department of Medicine, and professor of microbiology, found *H. pylori* infection and obesity in older people had an unexpected synergistic effect, raising HbA1c levels disproportionately.

“If other studies confirm *H. pylori*’s impact on blood sugar level, clinical testing in older people may be indicated, particularly if they’re obese” says Chen. It may even be worth considering eradicating the bacterium with antibiotics in some older, obese individuals to reduce the risk for developing diabetes, according to Daniel Cohen, MD, MPH, of Tel Aviv University, who wrote an editorial accompanying the study’s publication in the *Journal of Infectious Diseases*.

The findings also add more fuel to the idea that the microbes inhabiting our bodies can enhance or, in this case, detract from good health. Dr. Blaser, who has studied *H. pylori* for more than 20 years, has shown that carrying the organism is beneficial in childhood, reducing the risk of developing such diseases as asthma and allergies. But later in life, it becomes detrimental, raising the risk of developing ulcers and stomach cancer, among other diseases. Recently, the researchers have turned their attention to *H. pylori*’s role in regulating appetite and body weight.

“Over the last decade, it has become clear that the stomach has a variety of functions,” Dr. Blaser explains. It produces the hormones leptin and ghrelin, which regulate energy balance and the feeling of fullness after eating. Until the 20th century, virtually all people also harbored the *H. pylori* bacterium as a lifelong resident of the stomach lining. Modern changes, including antibiotic use in developed countries has virtually eradicated *H. pylori* in younger people. Concurrently, the rate of obesity has skyrocketed. Dr. Blaser, whose work is supported by the Diane Belfer Program for Human Microbial Ecology, and his colleagues have now shown that the presence of *H. pylori* helps control these crucial metabolism-regulating hormones, providing a potential explanation for how the organism can affect HbA1c levels. Though many factors certainly contribute to the current obesity epidemic, Dr. Blaser says that altering our microbiome, the sum total of organisms that inhabit our bodies, has important health consequences. Now, diabetes can be added to that growing list.



“No Sweat.” Sure, Easy for Some to Say.

Women don’t sweat, as we all know—they perspire. But try telling that to Jennifer Franco. The teenager loved to write, but the sweat trickling off her hands would drench the paper. When she played the clarinet, sweat streamed down the instrument, drawing incredulous stares. Meeting a new person meant shaking hands—her ultimate dread. “My hands were always clammy,” she explains, “and meeting someone new would make me sweat even more.”

One day, Franco googled: “What does it mean if your hands sweat a lot?” She discovered she wasn’t alone. An estimated 3% of the population suffers from hyperhidrosis, a condition characterized by excessive sweating. Her parents contacted Noel Perin, MD, associate professor of neurosurgery and director of minimally invasive spinal surgery at the NYU Langone Medical Center, who specializes in a minimally invasive procedure called an endoscopic thoracic sympathectomy (ETS). In 99% of all cases, it turns off the faucet.

Sweating is the body’s natural cooling mechanism. Heat triggers the nervous system to stimulate the sweat glands to release water, which cools the body as it evaporates from the surface of the skin. But for patients like Franco, “the nervous system is revved up,” explains Dr. Perin. The nerves overstimulate the sweat glands, causing uncontrollable sweating on the hands, feet, armpits, and less often, the head and face.

“It’s very embarrassing,” says Dr. Perin. “This isn’t just a little bit of sweat. These patients can hold up their hand, and the water dripping off will actually create a puddle.” One of Dr. Perin’s patients always carried a towel to mop up pools of sweat on his desk and to wipe his hands frequently to prevent the computer keyboard from flooding. It’s a debilitating condition because patients often withdraw from social situations. Moreover, they’re in constant danger of dehydration.

Some patients control the sweating with prescription antiperspirants or a daily 30-minute hand-soaking procedure, but this can irritate the skin. For those with excessive armpit sweating, Botox injections can be effective, but they must be repeated every six to nine months. Botox injections in the hands can lead to muscle wasting and weakness.

At 16, Franco underwent the ETS procedure. After making two one-centimeter-long incisions under each armpit, Dr. Perin severed the overactive nerves. As soon as Franco came to, she knew the surgery was a success. “I felt different,” she recalls. “My hands felt different. For the first time in my life, they felt warm and dry.”

One possible side effect of ETS is compensatory sweating in another body area that didn’t sweat excessively before—the abdomen, back, thighs, or buttocks. “Unfortunately, we can’t predict who will experience this,” notes Dr. Perin. Franco says she’s noticed a little extra sweat around her thighs during hot weather, but no other side effects. She says she feels more confident and has become very social. When a new member of the school’s marching band arrives, “now I’m the first one to introduce myself and shake their hand,” Franco says proudly.

The Sounds of Silence

As evening descended and her home grew quiet, an overwhelming feeling of dread would swell inside Caroline Leavitt. The chirping cricketlike sound in her head would grow louder, crowding out her other thoughts. Leavitt’s greatest fear was that someday, the chorus would morph into a high-pitched scream that would drive her mad.

Leavitt, 59, a best-selling novelist, was diagnosed in 2006 with tinnitus, defined as the perception of sound when no external sound is present. For many afflicted with the disorder, the problem intensifies as the day’s stimuli die down. Although Leavitt’s tinnitus didn’t usually interfere with her sleep or work, it haunted her nonetheless. “I’d read about how tinnitus sounds sometimes transform into screams, leading some people to commit suicide because they can’t stand it anymore,” says Leavitt. “I felt panicked.”

Tinnitus, often triggered by noise trauma, is commonly referred to as “ringing in the ears,” although the same person can hear various kinds of sounds at different times—rumbling, roaring, chirping, clicking, hissing, whistling, and yes, screaming. According to the American Tinnitus Association, 50 million Americans suffer from tinnitus to some degree. Of these, 16 million seek medical treatment, and 2 million are debilitated by the incurable condition.

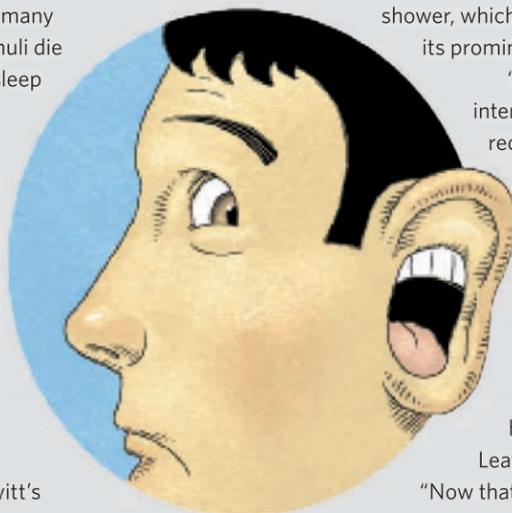
Leavitt has moderate hearing loss, possibly from past medications, that is irreversible. When her tinnitus worsened, Leavitt’s otolaryngologist referred her to Theresa Shaw, AuD, an audiologist at NYU Langone Medical Center, who had recently developed a novel way to treat tinnitus. In 2008, Dr. Shaw fitted Leavitt with a device designed to filter out distracting sounds and retrain her brain to ignore the internal noise. Resembling a portable music

player, the device provides a customized treatment, delivering soothing baroque or new age music with frequencies and loudness levels adjusted to compensate for any hearing loss the patient might have. Invented by Paul Davis, an Australian audiologist, it was introduced in the US in 2006, but not all patients with tinnitus are suitable candidates. The device also emits a soft white noise, similar to the sound of a shower, which first masks the internal sound, then gradually diminishes its prominence.

“We’re attempting to train the brain to filter out the internal noise,” explains Dr. Shaw. “The process actually reconfigures the brain by creating alternative neural pathways.” Moreover, she adds, it calms the limbic system, the part of the brain that controls our emotions. “Tinnitus causes fear, which creates more tinnitus.” With this device, she says, “we can break that cycle.”

Leavitt’s phantom noise has evolved into mostly soft whooshing sounds, often layered with what she describes as keyboard clicks. What about the sound she’d feared most? “Occasionally, on quiet evenings, I hear screaming, but honestly, it doesn’t bother me,” says Leavitt, who continues to use the device on a weekly basis.

“Now that I have the ability to tune it out, I feel more in control. It’s like a mosquito. When I hear it, I just swat it away.” Best of all, Leavitt notices that on most days, the sounds stop entirely for several minutes at a time. “I thought I’d never enjoy silence again,” she says. “I grab onto that because it gives me hope.”



Illustrations by Wes Bedrosian

A More Perfect Union

When Fractures Are Slow to Mend, the Experts at HJD's Bone Healing Center Reach into Their Toolbox



Living up to Dr. Kenneth Egol's promise, Ari and Amanda Steinfeld walk up the aisle five months after the final operation on Ari's leg.

Only days earlier, Ari Steinfeld's right leg had been crushed by a speeding car that hurtled over a curb and plowed into him and his fiancée, Amanda, as they were walking in Park Slope, Brooklyn. Now, the 34-year-old technology project manager at Goldman Sachs was lying in a bed at NYU Langone Medical Center's Hospital for Joint Diseases (HJD), making a plea that seemed as outlandish as it was hopeful. "I just want to be able to walk down the aisle in eight months at my wedding," he told Kenneth Egol, MD, chief of the Trauma Division and director of HJD's Bone Healing Center. Dr. Egol smiled and reassured his patient, secure in the knowledge that he and his team have a greater than 90% success rate in getting balky bones to fall into line. It's why he's the surgeon consulted by many patients with complex fractures and histories of poor bone healing.

Steinfeld had been rushed to Bellevue Hospital Center, a Level I Trauma Center, with a damaged leg and other non-life-threatening injuries. His fiancée, who suffered a less severe leg injury, was transported to a closer hospital in Brooklyn. "In the ambulance, I wondered what it was going to feel like not having a leg," he recalls. Once the bleeding was stopped and the open fracture of his tibia was stabilized, Steinfeld was transferred to HJD, where he was cared for by a dedicated team of orthopaedic surgeons, metabolic bone specialists, radiologists, and plastic surgeons—known collectively as the Bone Healing Center.

Created two years ago to increase the options available to fracture patients, this center without walls treats the 2 to 3% of patients with fractures that mend too slowly or not at all (so-called "nonunions"). These are most common in bones such as the tibia, femur,

hip, and wrist. "They may be a small percentage of cases, but when they occur, they are very debilitating and can result in a great deal of time out of work," explains Dr. Egol, professor of orthopaedic surgery.

The Bone Healing Center offers such cutting-edge therapies as stem cell treatments, bone morphogenic proteins (genetically engineered proteins that stimulate a patient's cells to make more bone), electronic bone stimulation (inducing a small electrical current at the healing site to signal the bone to begin healing), and platelet-rich plasma therapy. The center is also conducting research on medicines, including commercially available osteoporosis drugs and peptides, which might hold the key to coaxing recalcitrant bones to heal on their own.

Over the course of four operations to treat Steinfeld's extensive injuries, Dr. Egol's team inserted a metal rod across the fracture; transplanted two flaps of muscle from his abdomen to his leg, replacing a severely damaged tibialis anterior muscle and covering the exposed bone; and skin-grafted two-thirds of his lower leg from his right thigh. Steinfeld also needed a bone graft to close the gap between the pulverized ends of his tibia. During that final surgery, Dr. Egol removed a section of bone (and bone marrow) from Steinfeld's hip, reshaped it, and placed it into the nonunion site in his lower leg, along with a bone morphogenic protein. An external bone stimulation device was used postoperatively to speed up the healing process. During months of grueling recovery, Steinfeld made steady progress, moving from wheelchair to crutches to cane.

On May 22, 2011, Steinfeld was finally able to shift his focus from a nonunion to a union. Before some 200 family members and friends, he did what last fall had seemed unimaginable: he walked up the aisle at the Brooklyn Botanic Garden, without any means of support, with his new bride on his arm. At the reception, he spent the entire night on the dance floor with Amanda.

The fact that Dr. Egol is accustomed to such success stories didn't make this one any less sweet. "It's tough when you deal with people whose lives have been turned upside down by traumatic injuries," he muses. "But there's nothing more rewarding than seeing them—six months or a year later—return to what they were doing before and able to enjoy their lives."

KiDS of NYU Gala

On April 3, hundreds gathered at The Plaza Hotel for the 2012 KiDS of NYU Springfling Gala. Attendees—friends and leaders of both the KiDS of NYU Langone Foundation and NYU Langone Medical Center—contributed nearly \$900,000 toward transformations under way in children's healthcare services at the Medical Center. The gala honored Jeffrey Allen, MD, the Otto and Marguerite Manley and Making Headway Foundation Professor of Pediatric Neuro-oncology. Speakers talked about their own commitment to children and related stories of Dr. Allen's

dedication and lifesaving work—as a colleague and, in the case of two young patients, as their physician. Speakers included Maya and Edward Manley; Jeffrey Wisoff, MD, chief of the Division of Pediatric Neurosurgery; KiDS Board Chair and NYU Langone Trustee Alice Tisch; Robert I. Grossman, MD, the Saul J. Farber Dean and CEO of NYU Langone; and Catherine Manno, MD, the Pat and John Rosenwald Professor and Chair of Pediatrics. The Manleys and Dr. Wisoff co-chaired the event, along with Debbie Wisoff and Meg and Guy Geslin. The Wisoffs and Geslins serve on the KiDS board.



Alice Tisch, chair of KiDS of NYU Langone, and Dr. Jeffrey Allen.

The VIOLET BALL

NYU Langone Medical Center held its annual Violet Ball at Cipriani 42nd Street on May 3, raising \$4.2 million. Over 700 guests gathered to honor Marica Vilcek and Jan Vilcek, MD, PhD, professor of microbiology, for their generosity to NYU Langone Medical Center. Dr. Vilcek, co-developer of the drug Remicade, and Mrs. Vilcek have chosen to honor Remicade's success by sharing much of their royalties with NYU Langone. Speakers at the event included NYU Langone Board Chair Kenneth G. Langone; Dean and CEO Robert I. Grossman, MD; NYU President John Sexton; Steven Abramson, MD, vice dean for education, faculty, and academic affairs; Robert Schneider, PhD, the Albert B. Sabin Professor of Microbiology; and medical students Jason Theobald, a Vilcek Merit Scholar, and Sue Boddu, who presented her artwork as a gift for the Vilceks.



Honorees Marica Vilcek and Dr. Jan Vilcek with artwork presented to them by NYU School of Medicine student Sue Boddu.

NEWS & VIEWS

Inside This Issue



NYU Langone after Dark As the sun sets and NYU Langone's leadership team goes off duty, hour-to-hour operation of the Medical Center is turned over to two of nine nurse administrators. Part traffic controller, part troubleshooter-on-call, part guardian angel, they take action to remedy problems that demand swift intervention. [page 1](#)



The Opinionator Whether it's a debate over embryonic stem cells or genetic testing, one voice stands out: Arthur Caplan, PhD. A pioneer in bioethics and a seminal thinker in the field, Dr. Caplan joins NYU Langone as director of the new Division of Medical Ethics in the new Department of Population Health. [page 3](#)



The Dawn Patrol In a hospital, the sickest of the sick—those in the critical care units—deserve the best of the best. That's what they get at NYU Langone, the only hospital in Manhattan with intensivists on duty 24/7 in its medical ICU, and the first hospital in the city to add a second intensivist 24/7 in its surgical ICU. [page 5](#)



A More Perfect Union Ari Steinfeld's right leg had been crushed by a car that plowed into him and his fiancée as they were walking in Park Slope, Brooklyn. Soon after, he made a plea to his surgeon that seemed as outlandish as it was hopeful: "I just want to be able to walk down the aisle in eight months at my wedding." [page 7](#)

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At this year's graduation awards ceremony, held on May 15, two days prior to graduation, the class of 2012 honored several faculty for their excellence in teaching. Melanie Maslow, MD, associate professor of medicine, was named Distinguished Teacher in the Basic Sciences; Martin Kahn, MD, the Joel E. and Joan L. Smilow Professor of Cardiology, was named Distinguished Teacher in the Clinical Sciences; Michael Brabeck, MD, associate professor of medicine, was given the Leonard J. Tow Humanism in Medicine Award; and Robert Nathan Link, MD, associate professor of medicine and chief of service at Bellevue Hospital Center, received New York University's Distinguished Teaching Award. Arthur Caplan, MD (bottom right), newly appointed director of the new Division of Medical Ethics in the Department of Population Health, was the keynote speaker at this year's graduation ceremony. For a Q&A with Dr. Caplan, see page 3.

Graduation 2012

