

In the age of managed care and  
the information explosion, how do you train a doctor?

# The Making of a Doctor, 2005

**T**he Institute of Medicine (IOM)—the nation’s highest authority on issues of biomedical science, medicine, and health—issued a scathing report in 2001 on the state of healthcare in America, noting that quality problems pervaded the system. “Between the care we have and the care we could have,” the report noted, “lies not just a gap, but a chasm.” The report called for “fundamental change” in the healthcare system, including the way doctors are trained. • In response to the IOM report—and in light of its own vision of the ideal doctor of the 21st century—NYU School of Medicine has recast its approach to teaching, harnessed the power of computer technology, and redoubled its emphasis on humanism and professionalism. The overall intent of these changes is to produce a physician who is not only a caregiver but a scientist, humanist, information specialist, and lifelong learner as well. • On the following pages we tell this story through the views of various members of the NYU Medical Center community, as well as through glimpses of a typical third-year student, Oren Erlichman, as he learns the skills of doctoring at Bellevue Hospital Center, the School’s primary teaching affiliate.

*Oren Erlichman, Sara Barton, and Benjamin E. Young II, all members of the Class of '06, in the lobby of Bellevue's new Ambulatory Care Pavilion.*

By Gary Goldenberg | Photography by Leo Sorel and Ren Perez





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— Dean Robert M. Glickman, M.D.

**W**hen Oren Erlichman ('06) is on the wards of Bellevue and needs instant access to vital data, such as the latest FDA warning on a medication, he pulls out his Palm Pilot or, if need be, walks a few steps to a computer, where the world's repository of medical wisdom is just a mouse-click away. Just a decade ago, his only recourse would have been to turn to his pocket-size reference guide supplemented with pages of crib notes—a standard resource that had been used by doctors-in-training for generations.

The practice of medicine has clearly undergone a sea change. Since 1980, medical knowledge has doubled—and doubled again. Technologies such as CT scans and minimally invasive surgery, which were in their infancy then, are now commonplace. Organ transplantation has become routine. Cardiologists can pick and choose from a host of interventions to lessen the enormous toll of heart disease. AIDS, once a leading killer in the United States, is now a manageable chronic disease.

And yet, our healthcare system is in a state of crisis. Tens of thousands of Americans die each year from medical errors. Tens of millions have no health insurance and only limited access to care. Untold numbers of people, dissatisfied with mainstream medicine,

turn instead to alternative therapies. Proven therapies are routinely underutilized. Health services are heavily skewed toward acute care, with little emphasis on prevention.

To bridge the chasm in care, the IOM recommended a host of changes, including extensive curricular reform. Medical schools and residency programs, the institute concluded, need to place more emphasis on evidence-based medicine, informatics, team care, quality improvement, patient-centered care, communication skills, and cultural sensitivity, among other corrective measures.

"The Institute of Medicine's report was a much-needed wake-up call for the entire profession," says Robert M. Glickman, M.D., (Hon. '99), Dean of NYU School of Medicine and CEO of NYU Medical Center. "The practice of medicine has changed so much in recent years, and only now is medical education starting to catch up. With our various curriculum reforms, we are giving students a new set of skills that are essential for practicing in today's environment."

Even before the IOM issued its report, NYU had begun to reinvent itself, instituting reforms to reshape what is taught in the classroom and the very classroom itself. In the last five years, the large lecture hall has given

way to the virtual classroom, self-directed learning, and small-group case-based seminars. In classrooms and on the wards, students are taught an approach to clinical practice that puts more weight on scientific evidence than in the past. Equally important, the intangible skills of doctoring—communication, humanism, and professionalism—which were once a minor part of the syllabus, are now infused into courses throughout the curriculum.

**March 27, 7:30 a.m.** After four weeks at Tisch Hospital, Oren, a 28-year-old native of Israel, returns to Bellevue to complete the second half of his eight-week clerkship in medicine. Although he has done rotations in psychiatry and pediatrics there, he still marvels at the energy and diversity of the place. "It reminds me of an open-air market in a third-world country—so busy, so bustling. I thought to myself, 'This will be a great place to study medicine. Most other hospitals are so quiet and low key. Here, I'll get to see a lot and do a lot.'"

As in decades past, students in the first two years are compelled to learn the basics of human biology, progressing from molecules and cells to tissues and organs and, finally, to organisms and disease processes. Bedside instruction is the basic element of the final two years, when theory is put into

practice. Through a series of clinical rotations (at Bellevue, Tisch Hospital, the VA, and other sites) and advanced seminars, students learn how to diagnose and treat disease and work as members of an interdisciplinary team.

As they learn the language of medicine, students are expected to absorb a multiplicity of concepts and theories, straining the boundaries of human memory. And in the years ahead, they will be asked to absorb even more. “We are doubling biomedical information every 10 years or so,” notes Richard I. Levin, M.D. ('74), Vice Dean for Education, Faculty, and Academic Affairs, and Professor of Medicine.

Here, then, is the quandary: While the science of medicine is forever expanding, the human brain is not. How, then, can students keep abreast of everything they need to learn now, as well as everything they'll need to learn throughout their careers? The answer, NYU educators believe, is not to ask students to learn more, but to learn better—through technology.

NYU is, in effect, building a cyber medical school. Through its Advanced Educational Systems (AES) laboratory, the School is reinventing the classroom experience, wedding computers and communication tools in novel ways to bring the vast resources of biomedical knowledge to students' fingertips. While other medical schools have also embraced virtual learning, what distinguishes NYU's approach is that it pervades the curriculum, from the teaching of theory and clinical skills to the imparting of professional values.

Perhaps the most powerful teaching tool to emerge from the School is the Surgical Interactive Multimedia Module, or SIMM. An amalgam of digital video, three-dimensional simulations, and hypertext links, the SIMM enables students to explore a specific surgical problem in depth, from diagnosis to surgery to postoperative follow-up, capturing vividly the richness



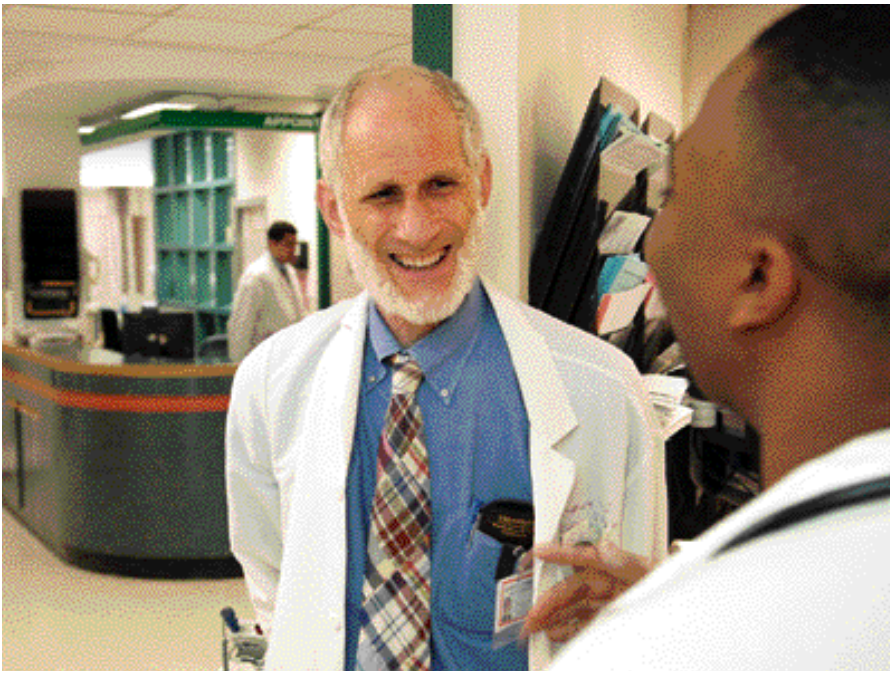
of an actual doctor-patient encounter.

The benefits of the SIMMs are already becoming apparent. “Students who come into the OR after using the tutorials are able to engage in a discussion at about three levels above where it would have been before,” says Thomas S. Riles, M.D., (Res. '71, '76), the George David Stewart Professor of Surgery and Chairman of the Depart-

ment, one of the masterminds behind the SIMM. Modules have also been developed for teaching the skills of physical diagnosis, which students then put to the test with “simulated” patient encounters (*see page 24*).

NYU's computer gurus have also added a technological twist to the time-honored ritual whereby students and teachers linger after class, exchanging





The humanistic side of medicine comes naturally to some students, but not to all. NYU no longer leaves this aspect of doctoring to chance.

thoughts on the day's lesson. Now, those discussions can continue as long as necessary via the Cyber Classroom, which is essentially an electronic chat room, accessible anytime, anywhere. "Students appear to be less intimidated and more likely to open up in this electronic environment," says Dr. Riles. "They have more time to think about their answers."

Importantly, the switch to cyber learning has not simply piled more hours of study onto an already crowded educational program. In fact, because of increasing reliance on self-directed learning and additional curriculum changes, students spend only 20 hours a week in the formal classroom—half the number of just a few years ago. This allows them ample time to pursue NYU's rich extracurricular offerings in urban and global health, research, and other areas.

In what could be interpreted as a vote of confidence in virtual learning, New York University's Distinguished Teaching Medal (*see page 40*) was recently awarded to Martin S. Nachbar, M.D. ('62), Associate Professor of Microbiology and Medicine, who is the chief navigator of NYU's journey into the digital universe. What's more, 12

other medical schools, including Harvard, Johns Hopkins, and Tufts, have joined NYU in creating COMET (Consortium on Medical Education and Technology), which is working to foster innovations like the SIMM.

"The days of simply pushing third- and fourth-year medical students out onto the wards and expecting them to learn are over," declares William C. Mackey, M.D., Chairman of the Department of Surgery at Tufts University School of Medicine. "NYU and a few other schools have pioneered creative programs that ensure students will have the most complete possible clinical exposure."

April 5, 4 p.m. It's a delightfully sunny spring day in New York City, the first in a long while, but Oren wouldn't know it if the storm of the century were raging outside. He's been ensconced on 17 North since sunrise, monitoring four different patients, chasing down test results, updating charts, and conferring with senior staffers. Late in the afternoon, he is called to assist in the admission of Hector *vila\**, a Dominican immigrant who underwent a colostomy months earlier and is now experiencing a host of problems, including chest pains. After Hector is settled into the Emergency

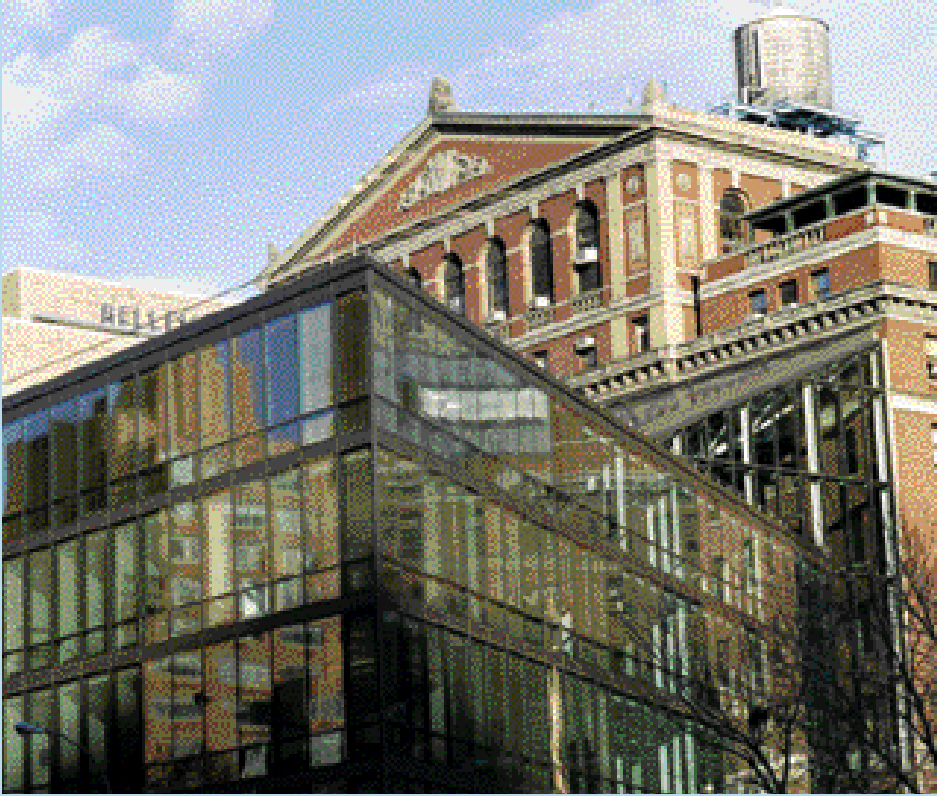
Ward (the ER's ICU), Oren spends an hour and a half with him—more time than any other member of the medical staff—compiling a detailed history. Before leaving at 10:30 p.m., capping off a 16-hour day, he will spend another hour or so mining the Web for clues to "his" patient's diagnosis.

Not surprisingly, Oren and his 166 classmates—a generation raised on all things "e" and "i," from e-mails to iPods—are comfortable with the new information technologies. "We don't use textbooks any more," explains Oren, with only slight exaggeration. "We go to the computer and read the review article about the disease process, because it's the most up-to-date source."

Benjamin E. Young II ('06) is equally adept in cyberspace, but he does have reservations. "The SIMMs are a great idea," he says. "The ones I've used so far are very accurate and help reinforce the material. But it's not necessarily the best way for everybody. I've realized that I learn best by reading."

Michael L. Freedman, M.D., the

*Lewis R. Goldfrank, M.D., Chairman of NYU's Department of Emergency Medicine, in Bellevue's ED.*



# Bellevue Hospital

## A Clinical Classroom for the Ages

After a decade of renovations and modernizations, Bellevue Hospital is undergoing a renaissance. In April 1996 the hospital completely renovated and expanded its Emergency Department (ED)—one of the biggest in the country, covering half an acre.

Soon after September 11, 2001, Bellevue installed a glass-enclosed outdoor shower system, capable of decontaminating several hundred people per hour in the event of a biochemical or radiological attack.

In March 2004 Bellevue opened a Critical Care Pavilion. The most technologically advanced unit of its kind in the country, it encompasses the entire 10th floor, a full acre.

In February 2005 Bellevue unveiled its Ambulatory Care Pavilion, the first new structure on campus since 1973, when the hospital tower was built.

In addition, the hospital has installed a digital X-ray storage and retrieval system, and has implemented one of the first electronic medical records systems in the nation, linking all 11 acute-care hospitals throughout the New York City Health and Hospitals Corporation (HHC)—a boon for quality improvement activities and epidemiologic research.

All it takes is one step inside Bellevue's weathered front doors to realize that this is no ordinary hospital. Through its clinics, ED, and inpatient facilities, Bellevue treats more than half a million patients annually. This is the Ellis Island of healthcare, a melting pot for the world's diseases and disorders, a refuge of last resort for the down-and-out, as well as New York City's designated emergency receiving center for visiting dignitaries, from the

President to the Pope. "If you don't see it at Bellevue," the saying goes, "it probably doesn't exist."

The nation's first teaching hospital and the birthplace of the modern residency system, Bellevue—which is staffed entirely by NYU physicians—has been the School's primary teaching affiliate since 1847.

Bellevue's value as a teaching resource has never been greater, especially now that HHC sends the toughest cases in its system here. Bellevue is the only hospital in New York City with concurrent designations as a Level I Trauma Center, a Heart Station, a Microsurgical and Reimplantation Center, a Center for Head and Spinal Cord Injury, and a Perinatal Center.

No cases are tougher than those in an ICU, and Bellevue's new Critical Care Pavilion provides the best possible care for the sickest of the sick. Its 56 spacious rooms are equipped with an overhead delivery system—the first major installation of its kind in New York City—that allows medical equipment to swivel 360 degrees around the bed, enhancing safety and efficiency.

The Critical Care Pavilion consolidates four previously separate units. The Ambulatory Care Pavilion, which houses the new Bellevue Cancer Center, consolidates some 90 separate clinics. With more than 400 exam rooms on five floors, it will serve more than 1,000 outpatients daily.

"The new facilities and technology are wonderful," says Eric D. Manheimer, M.D., Medical Director of Bellevue and Clinical Professor of Medicine, "but the culture of Bellevue

*Bellevue's Ambulatory Care Pavilion, designed by the distinguished firm of Pei Cobb Freed & Partners, links the institution's past and future, preserving views of the original Administration Building designed by McKim, Mead & White.*

is even more important.” He is referring not to the hospital’s ethnic mix, but to the staff’s focus on improving quality, reducing risk, instituting best practices, employing evidence-based medicine, and increasing efficiency—all of which have put the institution in the vanguard of public health. The NYU physicians who serve at Bellevue are in fact so committed to knowing and acting on the best and latest scientific evidence that a group of them have produced the *Bellevue Guide to Out-patient Medicine*, an award-winning evidence-based guide to primary care.

Bellevue is also making changes to address a longstanding problem in medical education: medical students generally train apart from other kinds of practitioners, depriving them of the context they need to best coordinate a patient’s care. “Rounds have traditionally been done with doctors or nurses by themselves,” explains Dr. Manheimer. “We are instituting multidisciplinary rounds—with a physician, nurse, social worker, respiratory therapist, pharmacist, and so on—so that whoever is needed will be on hand to transfer information and assign tasks to the appropriate person. This way, care is not delivered in ‘silos,’ where everybody thinks they are doing the right thing, communication failures are common, and an inordinate amount of time is spent catching up.”

What makes Bellevue special, says Lewis R. Goldfrank, M.D., Director of Emergency Medicine at Bellevue and Chairman of the department at NYU, is its heritage of caring for people—all people—and what makes the ED extraordinary is that it is the conscience of the hospital. “No matter what, we give the patient what he needs to get well,” he says. “We give the same to everyone, whether they are covered with jewels or covered with lice. This is what a city hospital should do and what a city should do.”

Diane and Arthur Belfer Professor of Geriatric Medicine, has a different concern. “What I’m worried about is that too much learning is going on in the virtual environment,” he says, echoing the sentiments of other faculty members. “There are only so many hours in the day, so there’s the danger that it might cut time from interacting with honest-to-goodness patients. I hope it remains just a supplement to real-world training.”

In fact, students still get the majority of their clinical experience with flesh-and-blood patients. “The idea behind virtual learning is not to replace hands-on experiences, but to reinforce and enrich them,” says Veronica M. Catanese, M.D. (’79), Senior Associate Dean for Medical Education and Associate Professor of Medicine and Cell Biology. “In essence, we’re creating a ‘cognitive apprenticeship’ to complement the traditional clinical apprenticeship, which no longer meets all our educational needs.”

A major impetus behind SIMM and other innovations is to replace what has been lost as healthcare has evolved. Between the financial pressures of managed care and such advances as minimally invasive surgery, patients today rarely spend much time in hospitals.

“The human classroom that was the hospital is largely gone,” says Dr. Levin. “A generation ago, patients were admitted for their diagnostic workups, and two-, three-, or even six-week hospitalizations were not uncommon. Students and residents were able to observe the full continuum of care for an acute illness. They came to know the patients and their families well. Now, the preliminaries are done in ambulatory care. Indeed, even the definitive procedure may well be ambulatory. If the patient is admitted, his stay must be as brief as possible for the economies to work.”

This shift has wreaked havoc on teaching. “Continuity of care is a very important principle of medicine,”

explains Martin J. Blaser, M.D. (’73), the Frederick H. King Professor of Internal Medicine and Chairman of the Department of Medicine. “You learn a lot by following the patient over time, and you provide better care as a result. But so many things are completely antithetical to this whole idea—well-meaning measures like reducing length of stay and restricting the number of hours that medical students and residents can work. Continuity is disappearing, so we have to develop new strategies.”

**April 6, 10:50 a.m.** Hector vila, the patient admitted to the Emergency Ward the night before, is the topic of discussion when Oren and his teammates—an attending physician, two residents, a fourth-year student, and another third-year student—assemble in the conference room on 17 North, as they do several mornings each week. From the harsh fluorescent lighting to the drab, dingy white walls, the room is a decorator’s nightmare and a medical student’s dream, a place where everything one has learned during the previous years can finally be put to use.

The attending physician leads the discussion, letting the residents and students present the case and do most of the clinical reasoning, offering hints to guide them toward a diagnosis. None of the clues they have thus far point to a definitive explanation for Hector’s chest pain, nausea, and vomiting. The team considers the possibilities—HIV, Crohn’s disease, depression, anorexia, an endocrine disorder—methodically ruling each of them out.

For most students, case conferences are one of the rewards for having to put up with the hassles of apprenticing in a large public hospital. “This is the time when you distill all the teaching,” says Oren. “This is what academic medicine is about. At times, I can’t believe I have to run around to fax paperwork and deliver blood samples to the lab. But with all these frustrations, you still feel compelled to put up



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United States for college, he served in the Israeli Defense Forces, first in a combat training unit and then in a logistics unit.

"Working in any institution—the army or a big hospital—you learn what you have to deal with, what you are able to put up with, and what you would be happy doing," he says. But what truly changed his life was a volunteer stint with the ambulance corps in Israel. "We were called to the aftermath of a suicide bombing," he recalls. "It was a defining moment when I knew I wanted to do something in the medical field."

Even as a third-year clerk, Oren is starting to make a difference in the lives of his patients. One reason is that he's training at Bellevue Hospital, where clerks are given an unusual amount of responsibility. Another is the vast store of medical information that he can bring to bear on patient care just by turning on his Palm Pilot or booting up a computer.

Of course, a laptop and an Internet connection do not make a doctor. "Today's students are technologically very savvy," Dr. Catanese points out. "But they are not necessarily savvy at

the critical evaluation of information. So, in journal clubs and various classes, we look closely at studies—not only to discuss the results, but to judge the validity of the methods and how to evaluate the data."

What's more, teachers are putting far less emphasis on the prevailing therapeutic dogma or on anecdotal clinical experiences than in the past. Instead, they consistently press students to consult the literature in order to consider the latest evidence for treating a particular disease in a particular way. This approach to clinical decision-making, known as evidence-based medicine, has become a mainstay of the curriculum.

"I wish I had paid more attention to what we were taught about evidence-based medicine in the first two years," says Ben Young, "because it comes into play pretty much on a day-to-day basis. It's gotten so that every state-

*Veronica M. Catanese, M.D., Senior Associate Dean for Medical Education, with Thomas S. Riles, M.D., Chairman of the Department of Surgery, and Martin J. Blaser, M.D., Chairman of the Department of Medicine.*

with this because of the strong connections with your patients."

One senses that Oren seems weary of bureaucracies and ready to assume even more responsibility for patient care. He's slightly older and perhaps more worldly than the average student of a generation ago and many of his classmates. Before coming to the





*The patient is an actor, but Sarabeth Broder Fingert ('08) is the one expected to perform.*

# Playing Doctor

**I**t was a typically busy morning at the doctor's office: first, a patient with blurry vision, then a woman with a possible drinking problem, followed by a young man complaining of headaches and a child with stomach flu—all told, seven patients in two hours.

The doctor got just four of the seven diagnoses right—not the most comforting statistic. But in this instance, it didn't matter. The “doctor” in this office was a medical student and the “patients” were actors, part of a choreographed exercise in doctoring staged by NYU School of Medicine.

For the last seven years, NYU has been using simulated patient encounters—known as Objective Structured Clinical Examinations, or OSCEs—to introduce students to the doctor-patient relationship and let them flex their diagnostic muscles.

Because the performances are scripted and rehearsed—i.e., standardized—OSCEs also provide an objective measure of the students' clinical

progress. Indeed, OSCEs have proved to be so valuable that, starting this year, they have been incorporated into Step 2 of the U.S. Medical Licensing Examination.

For first-year medical students, OSCEs are employed to get them comfortable talking with patients. By practicing with actors, they learn to take histories, conduct physicals, make diagnoses, and broach difficult subjects. As students progress through school, expectations are raised and the cases become more nuanced and complex.

“Initially, I thought all this pretending would be a bit contrived,” says Mary Ann Hopkins, M.D., M. Phil., Assistant Professor of Surgery and Director of the surgical clerkship. “But it's great for developing communication skills and learning how to build rapport with patients.”

For example, in one typical scenario, the student is presented with an inconsolable mother who is unduly worried about her child's minor medical problem. The student is expected

to recognize that something else is amiss and to probe deeper for underlying troubles such as alcohol or drug abuse or postpartum depression.

“These are difficult things to ask about,” says Adina Kalet, M.D., Associate Professor of Medicine and Director of Medical Education in Primary Care. “We've found that many students don't push hard enough. Once they decide the medical issue is minor and manageable, they say, ‘OK, I'm done.’ Either they don't recognize that something is going on or they aren't willing.”

The actors, culled from New York City's bottomless pool of acting talent, can be quite compelling. Professional performers, explains Dr. Kalet, are particularly good at “emotional fidelity.”

“I had the most amazing actress,” says Alison Kitay ('07). “She was playing a cancer patient who had undergone several rounds of chemotherapy. I was completely wrapped up in her story. She was really crying, and she looked the part, too. I was working hard to fight back tears.”

Not everyone gets so absorbed. “I was always aware that this was an artificial environment,” says Don Tavakoli ('05). Still, he found the experience valuable, particularly when he missed diagnoses. “It can highlight weaknesses and refine one's skills.”

The OSCE process culminates in the third year, when students are presented with seven cases in the span of two hours. This final test allows faculty to gauge how far the students have come, and it also serves as a dry run for the national licensing exam.

Although the students eventually learn on real patients, the use of actors provides earlier interaction without risk. “You can miss something really important, and the worst thing that can happen is you get the feedback and never do it again,” says Dr. Kalet. The bottom line, she adds, is that “We're sending students into the clinical environment as more experienced clinicians.”



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— Eric D. Manheimer, M.D.  
Medical Director of Bellevue Hospital



*Eric D. Manheimer, M.D., Medical Director of Bellevue Hospital*

ment you make has to be backed up by something in the literature."

"Evidence-based medicine is especially advantageous at our stage," adds Sara Barton ('06), "because we don't have 20 or 30 years of clinical experience to draw upon. It's important that we prove to ourselves why we're doing something and what the benefits are going to be. We also need to be able to relay a realistic view of the risks and benefits to our patients."

Students also hear from those who

believe that evidence-based medicine is not a panacea. One such skeptic is Jerome Lowenstein, M.D. ('57), Professor of Medicine, one of NYU's most prominent teachers and most vocal critics of this increasingly pervasive paradigm. Dr. Lowenstein notes that multicenter trials—the gold standard in the advancement of clinical care—tend to address narrow questions about singular conditions. Thus they eliminate as many confounding variables as possible. Reality, he says,

is not so tidy. Most hospital patients suffer from a host of ailments, requiring a cocktail of drugs. In many of these cases, he reminds his students, pure data is a poor substitute for wisdom, experience, and common sense.

**April 6, 12 noon.** The case conference focusing on Hector vila continues, and an hour slips by, unnoticed. This case won't be solved today. The attending and the team conclude that Hector's most immediate need is to be rehydrated. It's time for them to head down to the Emergency Ward on Bellevue's first floor to check on the patient in question.

Oren and his teammates encircle Hector vila's bed in the Emergency Ward. A short walk from the controlled chaos of the ER, the ward is relatively calm and quiet. Approximately the size of a tennis court, it has about 10 beds, including several glass-enclosed isolation rooms, arranged in a horseshoe around a central nursing station. One team member explains to Hector that they would like to examine the drainage tubes under his gown, while another pulls the curtain closed, simple gestures showing respect for the man's dignity.

The humanistic side of medicine comes naturally to some students, but not to all. NYU no longer leaves this aspect of doctoring to chance. The School's first foray into the softer side of healing began in the 1980s, with a series of seminars created and led by Dr. Low-

enstein. Since then, teachings related to medical humanism have been woven into courses throughout the curriculum. In *The Physician, the Patient, and Society*, for instance, a course that spans the entire four years, students explore ethics, cultural diversity, behavioral medicine, prevention, and health policy. Another four-year-long offering, the Master Scholars Program, involves students in mentored “societies” that focus on medical informatics, human rights, arts and humanities in medicine, and other wide-ranging topics.

One of the newest additions to the curriculum is the Professionalism Portfolio, an online program designed to help instill core professional values, such as integrity and accountability, and to teach students how to deal with the conflicts that often arise between professional ideals and the daily pressures of practicing medicine. Medical

schools around the country are now following NYU’s lead in creating their own courses that stress humanism and professionalism.

“The Master Scholars Program and other initiatives are our attempt to make this a *university* of medicine, a place where one can learn medical science as well as related topics,” says Mariano J. Rey, M.D. (’76), Senior Associate Dean for Student Affairs and Assistant Professor of Medicine and Physiology and Neuroscience.

Whether students fully appreciate this broad perspective is another matter, consumed as they are with absorbing all they need to know just to pass their exams. As Ben Young says, humanism and professionalism “are important to teach, but at the same time, they’re impossible to teach. If you asked people what those things are, you would get a different answer from every person. But I agree it’s

something that has to be put out there. I’ve definitely been in situations where I’ve sat back and thought, ‘Was that professional?’ or, ‘Am I acting in the best interest of the patient?’ ”

“These courses are valuable simply because they remind you why you went into medicine,” adds Sara. “The first two years you can get sort of detached, because most of your learning is from books.”

**April 15, 1:50 p.m.** After an hour writing up discharge notes, Oren starts checking on the six patients he’s now juggling, an unusual number for a third-year clerk. Hector vila, now on 17 North awaiting surgery to reverse his colostomy, is one of them. Oren is also assisting in the care of a man from Ecuador who has chest pains and a possible subdural hematoma; a homeless man with an abnormal EKG, who also suffers from schizophrenia, diabetes, and multiple substance abuse; and a young obese woman who is acutely ill with diabetes, asthma, and sarcoidosis.

It’s barely mid-afternoon and Oren is exhausted and hungry, having had little time for sleeping or eating over the past few weeks. (By the time his clerkship ends, he will have lost 17 pounds.) Aside from Oren’s clinical responsibilities, he still has course write-ups, presentations, and exams to worry about—but those tasks will have to wait until later tonight. “There isn’t a lot of time to sit back and reflect and take a breath,” he says.

Every medical student who has passed through Bellevue, the nation’s oldest public hospital and arguably its most progressive and diverse, will certainly recall the range of emotions that Oren is experiencing—from the thrill of being a vital member of the healthcare team to the anxiety of sharing responsibility for another person’s life.

At Bellevue (*see page 20*) students do as much as they can to help and to heal, under the ever-watchful eye of a resident or attending physician. At the



PHOTOGRAPHY BY LEO SORELL



While the science of medicine is forever expanding, the human brain is not. How, then, can students keep abreast of everything they need to learn now, as well as everything they'll need to learn throughout their careers?

same time, these doctors-in-training are expected to assume more than their fair share of scutwork, the mundane hospital tasks that inevitably fall to third-year clerks, the lowliest layer in the medical staff food chain. The experience is by turns exhilarating and exasperating—and life-altering.

“Training at Bellevue bridges the chasm between the idealized version of education in the classroom and the reality of the world,” says Lewis R. Goldfrank, M.D., Director of Emergency Medicine at Bellevue and Professor and Chairman of NYU’s Department of Emergency Medicine. Bellevue’s lessons are magnified many times over for those who choose to rotate through Dr. Goldfrank’s terrain, one of the largest and most storied ERs in the country.

“To bring a young medical student or young doctor into this milieu is overwhelming,” he says. “For many, this is their first exposure to victims of sexual assault or domestic violence, to man’s inhumanity to man. It is reflective of many of the greatest dilemmas in our society. Working at Bellevue makes them distinctively different people. It reaffirms their humanistic principles.”

More than any other reason,

Bellevue is what drew Sara from Iowa. “I remember sitting in the courtyard when I first visited,” she recalls, “feeling as if I was at an international airport—so many different languages and cultures. I called my parents and said, ‘If I get in here, this is it.’”

Three years later, after rotating through the Departments of Emergency Medicine, Psychiatry, and Medicine, Sara is not disappointed. “Bellevue is kind of a love-hate relationship for everybody. To some students, Bellevue is a nuisance because you do all the grunt work, you often can’t understand your patients, and sometimes you’d like more supervision. But Bellevue teaches you how to think creatively, solve problems, and relate to people. You have to be a doctor, a nurse, a social worker, and more. It’s tough, but I think it all works out in the end.”

In the last few years, the School has been working to give students a cultural and professional perspective even broader than Bellevue’s, with the aim of creating what Dr. Rey likes to call “internationalist physicians”—those who are “equipped to practice in a multicultural city like New York or who can step outside the country.” Students who are so inclined can participate in the Institute for Urban and

Global Health, which fosters research and education related to the health needs of foreign-born New Yorkers. NYU has also started the International Health Program, which facilitates student participation in research, public health initiatives, and clinical education in some 20 countries. “Twenty percent of each class does some international study during their time at NYU,” reports Dr. Rey.

**April 15, 2 p.m.** [Oren swings by 17 East to follow up on Alfredo Gutierrez\\*](#), one of his six patients. Alfredo’s is a typically heart-wrenching Bellevue case: he may get better, but he will never be well. Seventeen years ago he suffered a stroke that left him mentally incapacitated. He has been institutionalized ever since.

As frazzled as Oren feels, he takes time out to chat with Alfredo and his wife, establishing an easy rapport, then enlisting her help to lean the patient forward so that he can check his respiration. Oren makes sure they both know what will happen next, says good-bye, and heads for the door, but not before Alfredo calls out, “Thanks, doctor.” It must feel good for a third-year clerk to hear himself called that, but in the hallway, Oren plays it down, knowing full well that he doesn’t deserve that high honor just yet.





"Our attempt is to make this a university of medicine, a place where one can learn medical science as well as related topics."

—Mariano J. Rey, M.D.  
Senior Associate Dean  
for Student Affairs

Nearing the end of his third year, Oren is at a point where he must soon choose which path he will follow for the next stage of his career. He is currently leaning toward critical-care medicine. For him and many of his peers, lifestyle is a major consideration.

"I saw how hard the doctors worked during my rotation in medicine," he says. "I've never seen anything like it, and I've been in the army. If you aren't willing to make those kinds of sacrifices, you won't be happy—that's the bottom line. You have to find a balance between what makes you happy in a career and what makes you happy in your personal life."

Ben says he has found his niche in gastroenterology and has acquired a taste for research, although he's not yet certain whether he will end up in academic medicine or in private practice.

Sara, who spent the summer in Honduras to gain international clinical experience, shares the same uncertainty about where she will practice, though she has decided to pursue obstetrics and gynecology as her speciality.

"Keeping up-to-date with your field is a constant struggle," she says, "particularly for people in private practice. So,

I've thought a lot about staying in an academic environment."

Since doctors tend to reach their full potential a decade or two after graduation, it will be some time before anyone can judge to what extent Oren and his classmates will help bridge the chasm between the care we have and the care we could have.

For now, though, the news is encouraging on two key fronts. One is the result of the most recent national residency match. In 2005, as in past years, two-thirds of NYU graduates were selected for residencies at hospitals ranked among the top 50 by *U.S. News & World Report*. From the other end of the education continuum comes this revealing statistic: Last year, one out of five medical school applicants nationwide applied to NYU. Says Dr. Blaser: "I would say that the medical community is giving us a tremendous vote of confidence."

April 20, 5 p.m. Oren's rotation in medicine has come to an end. Hector Vila, his patient, has moved on, too, and is now recovering on a surgical ward, where every little detail of his case is in the hands of another third-year clerk.

