Redefining Academic Medicine

Integrating research, education and clinical care at one of America’s largest nonprofit health systems

North Shore-LIJ Health System
Hofstra North Shore-LIJ School of Medicine
A progress report on our journey.
Change doesn’t happen in committee meetings. It lives in countless moments of decision on floors, in classrooms, and patients’ homes. We asked our photographers to document some of these moments during a typical day.

A DAY IN THE LIFE OF THE DEPARTMENT OF MEDICINE

6:47 AM

Research meets practice. Department of Medicine investigators are pioneering a system that integrates clinical prediction rules into electronic health records to put evidence-based guidelines in doctors’ lines of sight as they deal with patients.
This is an era of unprecedented advances in the science of medicine – and unprecedented demands on our nation’s health systems.

Powerful new technologies and deeper understanding of physiology and genetics have not made us a healthier society. Hospitalizations still consume a disproportionate share of resources, and, for most Americans, healthcare is fragmented.

We can do better.

That is our charter as physicians, and as leaders of the Department of Medicine in one of the nation’s largest nonprofit health systems. The department is growing rapidly with over 500 faculty members. We are establishing practices and services covering every discipline across the New York metropolitan region. We are developing a new, comprehensive model of care and integrating our educational and research programs as never before.

We are redefining academic medicine to meet the challenges of a changing healthcare landscape, and accelerating the application of evidence in every aspect of patient care.

One by one, we are prying open the boxes that 20th century healthcare came in and creating a new 21st century system that takes care of people in a comprehensive and coordinated way.

This book is a progress report.
Our tradition of clinical excellence has provided a unique foundation for a different kind of research enterprise. I’m proud of our integral role in North Shore-LIJ’s world-renowned Feinstein Institute for Medical Research. In addition to the traditional bench-to-bedside paradigm, our researchers are breaking new ground by looking at – and changing – how care is delivered, how new ideas reach front-line clinicians, and how new doctors design their future.

North Shore-LIJ has unparalleled resources for preparing tomorrow’s physicians for the continuing transformation of our nation’s healthcare system. The diversity, scale, and quality of our clinical care are critical assets of our outstanding training and education programs. Additionally, the Hofstra North Shore-LIJ School of Medicine is transforming the landscape of medical education, with ground-breaking academic course content that integrates basic science with hands-on clinical experience throughout all four years.

At the North Shore-LIJ Department of Medicine, we are playing an active role in the transformation of academic medicine: How we teach it, how we develop new insights about it, and how we practice it as we heal patients, families, and communities.

Thomas McGinn, MD, MPH
Chair, Department of Medicine
David Greene Professor of Medicine, Hofstra North Shore-LIJ School of Medicine

“We are turning the classic research paradigm on its head, launching new discoveries from the bedside and sending lessons learned back to the lab.”

In academic medicine, the standards are high and the challenges complex: Provide top-quality care, prepare tomorrow’s clinicians, and solve medicine’s pressing puzzles. As the heart and soul of one of the nation’s largest nonprofit health systems, the Department of Medicine is playing a critical role in addressing each of these challenges, redefining academic medicine as we go.

Clinical care has always been the department’s strong suit. With an extraordinarily large and diverse patient population, the department’s culture has always placed great value on clinical expertise that is creative and current. For example, our nationally renowned nephrology team recently created and implemented an innovative system-wide program for early detection of kidney disease. Our patient-centered medical home is pioneering the model, with unprecedented emphasis on proactive partnership building and multidisciplinary care that includes on-site mental health care. Our award-winning diabetes team brings care and education to communities throughout the region.

“from the chair”
“In academic medicine, research often starts when people become interested in a particular molecular pathway, and only then look for the disease in which it might be important. Researchers come to North Shore-LIJ because there is a disease they hope to ameliorate in some way; they study the molecular pathways they think are important in that disease.”
Dr. Betty Diamond has been called “the most creative, most important figure in lupus research in our generation” by her peers. Her work on autoimmune and musculoskeletal disorders is unparalleled, including several paradigm-shattering discoveries that paved the way for other researchers to change the lives of countless patients, especially those with systemic lupus erythematosus (SLE). A professor in the Department of Medicine, she played a leading role in identifying the genetic basis for antibody production and showed that anti-DNA antibodies can arise by somatic mutation during the course of an immune response.
“I think the Department of Medicine is changing in a wonderful way, with a deepening academic mission, from bench research to outcomes research.”

— BETTY DIAMOND, MD, Head, Center for Autoimmune and Musculoskeletal Diseases

Perhaps most dramatic: her discovery that in people with SLE, certain anti-DNA antibodies cross-react with brain receptors that affect learning and memory. These autoantibodies induce receptor-mediated apoptosis of neurons. This discovery is at the critical interface between the basic science of SLE and the clinical manifestations of the disease. It has opened an entirely new way of thinking about central nervous system lupus and has suggested new ideas for treatment in a critical area where existing treatments have been ineffective.

At North Shore-LIJ’s Feinstein Institute for Medical Research, Dr. Diamond’s lab was recently selected by the American College of Rheumatology and the European League Against Rheumatism to host outstanding trainees. She is also a professor at the Elmezzi Graduate School of Molecular Medicine, and has mentored young stars in basic and clinical research at North Shore-LIJ and nationally.

Opening the clinic. Residents here spend more time in ambulatory care than those in other programs, serving the world’s most diverse patient population. They learn what it’s like to be attending physicians, with their own patient panels, and operate in the context of fully coordinated care. The on-site team includes pharmacy and a health psychologist.

8:21 AM

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He spent months collecting patient histories and analyzing outcomes until he discerned a pattern. The prognostic system he devised – the Rai stages – has provided the pivotal measurement foundation for research and treatment in the decades since. More recently, advances in genetics led Rai and his longtime North Shore-LIJ colleague Dr. Nicholas Chiorazzi, to the discovery of the B-cell receptor on leukemic cells, a crucial piece in the puzzle of CLL prognosis that generated new therapeutic possibilities now under investigation.

Kanti Rai, MD, Director, CLL Research and Treatment Program

Dr. Kanti Rai

As a young leukemia researcher half a century ago, Dr. Kanti R. Rai was intrigued by two patients with the same chronic lymphocytic leukemia (CLL) diagnosis but starkly different outcomes.

He spent months collecting patient histories and analyzing outcomes until he discerned a pattern. The prognostic system he devised – the Rai stages – has provided the pivotal measurement foundation for research and treatment in the decades since. More recently, advances in genetics led Rai and his longtime North Shore-LIJ colleague Dr. Nicholas Chiorazzi, to the discovery of the B-cell receptor on leukemic cells, a crucial piece in the puzzle of CLL prognosis that generated new therapeutic possibilities now under investigation.

Kanti Rai, MD, Director, CLL Research and Treatment Program

North Shore-LIJ scientists are using new strategies and new tools to overcome longstanding barriers to better clinical care.
Dr. Alex Spyropoulos

Dr. Alex C. Spyropoulos has earned an international reputation for his research on blood clots and for promoting advances in the treatment and prevention of deep vein thrombosis (DVT).

These advances include low-molecular-weight heparin and perioperative “bridging” for patients on chronic anticoagulation regimens. He is pioneering the use of alternative anticoagulants for cancer patients and pregnant women. A rigorous focus on outcomes has led Dr. Spyropoulos to timely insights into management of DVT and the ways that improving patient self-management can change the health equation.

Alex Spyropoulos, MD. Director of Anticoagulation, North Shore-LIJ Health System

Dr. Joseph Conigliaro

Dr. Joseph Conigliaro is helping to re-engineer the health delivery system for 21st century academic medicine.

Widely recognized as a leading researcher on implementation and dissemination quality, Dr. Conigliaro has particular expertise in using information systems to drive improvements in quality and patient safety. His unique expertise extends to manipulating large data sets, including Department of Veterans Affairs patient treatment files, clinical trial data, and statewide epidemiologic data. Dr. Conigliaro’s work is accelerating the department’s ongoing transformation of its clinical research enterprise, expanding critical translational capacity.

Joseph Conigliaro, MD, MPH. Chief, General Internal Medicine
Dr. Sherry Farzan is intrigued by the relationship between two burgeoning epidemics in the United States: asthma and obesity.

Obesity increases the risk of incident asthma, while making it more difficult to control with standard therapies. Dr. Farzan has been exploring this phenomenon for years, with support from a wide variety of private and public funders. She served as principal investigator on an investigator-initiated study of the role of controller medications in obese asthmatics. Today, she is studying whether some asthma therapies may be more effective than others in obese individuals.

Sherry Farzan, MD. Attending Physician, Division of Allergy and Immunology

Little Victories. Advanced informatics guide management decisions for populations that span multiple service areas: diabetics and the complex geriatric patient. Active disease surveillance and coordinated care are steadily improving outcomes and reducing waste: an effective prescription for a changing healthcare landscape.
Dr. Peter K. Gregersen has identified more than 50 genes associated with risk for autoimmune disorders. Perhaps most critical: his groundbreaking definition of the “shared epitope” that connects the human leukocyte antigen (HLA) to rheumatoid arthritis.
Dr. Gregersen notes that the original definition of this shared epitope “sat for 30 years,” while researchers continued to identify other genes. That all changed about 10 years ago with the finding that smoking affects HLA, altering immune response.

Dr. Gregersen’s work has emphasized the importance of broad scientific collaboration at Feinstein and internationally in carrying out research on the genetics of autoimmune diseases. He has spearheaded the development of innovative population genetics and a genetic registry that makes possible the study of the function of new risk genes, in both normal and disease-affected subjects.

In January 2013, the Royal Swedish Academy of Sciences announced that Dr. Gregersen and two colleagues, Dr. Lars Klareskog of the Karolinska Institutet and Dr. Robert J. Winchester of Columbia University, will share the Crafoord Prize for their work on the genetic basis for rheumatoid arthritis. This prestigious award is considered the global equivalent of the Nobel Prize; it is presented by the King of Sweden and brings significant support for future research.
Repeated thousands of times a year around the U.S., this scenario has resulted in today’s rising epidemic of antibiotic overuse and antimicrobial resistance, with billions of dollars wasted on unnecessary treatments.

Over the last several decades, substantial investments of intellect, energy, and funding have yielded groundbreaking insights and discoveries in biomedicine— which are not reflected in the vast majority of clinical care. Put simply, we know how to improve healthcare, but it’s not getting done. Addressing this bottleneck could transform the nation’s healthcare for decades to come. North Shore-LIJ researchers are leading the response to this complex challenge with an ingenious, inexpensive strategy for bringing innovative tools and research to the point of care.

In a recent study, our team integrated two clinical prediction rules into the electronic health records (EHR) that physicians use in day-to-day ambulatory practice. Developing an integrated clinical prediction rule platform (iCPR) required extensive collaboration among leaders in informatics, in software and systems design, and in organizational psychology as well as in medicine. Because usability is a critical factor in adoption of EHR tools, the investigators embarked on an iterative cycle of usability development, training, and testing with over 150 providers.

It’s a classic scenario: In the midst of flu season, another patient complains of a sore throat. Pressed for time and unsure of the diagnostic criteria for cold versus strep throat, the harried internist reluctantly writes an order for antibiotics.
The prototype decision-support solution incorporated two well-validated diagnostic tools into an outpatient electronic health record that is now used by 40 percent of the nation’s ambulatory practices.

A nudge, not a confrontation. The barrier issue isn’t simply what’s right; it’s how seamlessly the evidence and suggestions are presented. Early studies underscored the need to blend decision support into the user’s workflow rather than disrupt it—a tall order, given the variety of practitioners and settings. The team has recently been funded to develop strategies that allow customization of EHR-based decision support for different clinical settings and patient populations.

Seizing the moment. Like other digital technology platforms, EHR systems are proliferating and evolving at the same time. This is the moment to make evidence-based decision support a fundamental component of the platform that all providers will soon be using.

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Now is the time to bring evidence to providers at the point of care—as EHRs are being rolled out across the nation and ‘meaningful use’ is motivating the development of clinical decision-support tools.”

—THOMAS MCGINN, MD, MPH
Chair, Department of Medicine
David Greene Professor of Medicine, Hofstra North Shore-LIJ School of Medicine

A DAY IN THE LIFE

1:12 PM

Tomorrow’s clinicians. Today’s care. Assistant Professor of Medicine Michael Gitman, MD, leads residents in a discussion on hypertension. A new system-wide program for early detection of kidney disease includes a daily alert system to track hypertension.
The Department of Medicine has 101 fellows, 139 residents, and a longstanding tradition of strong graduate medical education. Two years ago, the Hofstra North Shore-LIJ School of Medicine opened, and in 2013 its medical students will be welcomed into the department’s clinical family.

Not many medical schools open their doors with 500 faculty members and one of the nation’s premier research facilities. This is a startup on an epic scale, engineered for the rapid changes we see every day in science and healthcare. At the Department of Medicine, a new generation of physicians is being trained as they manage one of the world’s most diverse patient populations, providing students, residents, and fellows with a world of experience in clinical care.

The Hofstra North Shore-LIJ School of Medicine is one of the nation’s most innovative schools, offering early clinical exposure across the continuum of care. In their first year, students meet patients whom they’ll see throughout all four years of medical school, gaining invaluable insight into launching and sustaining productive doctor–patient relationships and seeing progression of diseases.
With four weeks on floors and one week in the outpatient clinic, residents are less stressed and better rested. Inpatient and outpatient training both benefit and – for the first time – doing significant clinical research becomes a real option.

Our innovative continuity model of housestaff education is based on the “Four Plus One” system, an increasingly popular strategy for compliance with Accreditation Council for Graduate Medical Education (ACGME) duty-hour rules. Each four-week block of inpatient duty is followed by a week devoted to ambulatory education. This strategy reduces fragmentation of education and clinical care. It separates the dual and often conflicting responsibilities associated with inpatient and ambulatory patient care while optimizing the educational experience in both environments. Training in both settings benefits from the continuity, and research becomes a real option. North Shore-LIJ’s program has pioneered this model, which is now being adopted by other leading academic medical centers around the nation.

Transformation. In a 2011 study, internal medicine residency program director Dr. Saima Chaudhry and colleagues assessed the continuity model’s impact. Their finding: The model enhances resident well-being as well as clinical care. Under the traditional system, 90 percent of residents reported that fragmentation of inpatient care was problematic, often resulting in poor clinical care, miscommunication among providers, and poor documentation. With the continuity model, fewer than 3 percent of respondents found fragmentation an issue. Residents’ sense of “ownership” of patients, and continuity in their own precepting experience – as well as in patient care – all increased significantly. According to Dr. Chaudhry, potential residents see this system as an indicator of the program’s humanistic approach and drive to innovate.

Shorter hospital stays start here. Over 300 nurses, nutritionists, pharmacists and other professionals have been trained as “diabetes champions” on their units, spreading best practices at nine of the system’s hospitals. An expanding array of metrics—ophthalmology exam results, blood pressure, glucose and lipid levels—provides inputs for a “diabetes dashboard” that has helped shorten inpatient stays and reduce readmissions.
Dr. Sunil Singh

At 25, Dr. Sunil Singh took a year off from medical school to co-found a lab with Dr. Jason Spector. Dr. Singh’s focus: ischemia reperfusion injury protection using hydrogen sulfide as a metabolic inhibitor. He equipped the lab, wrote the proposals, designed the experiments, and trained lab staff. Now he’s a third-year resident in internal medicine at North Shore-LIJ.

“Five years ago, this place was attracting the clinically oriented doctor. You came here to get strong clinical training because it’s a high-volume center with a lot of resources…. Now you still get the strong clinical training, but there’s a concentration on training the physician scientist, the clinician investigator.”

— SUNIL SINGH, MD, THIRD-YEAR RESIDENT

Dr. Singh’s journey exemplifies the Department of Medicine’s drive to expand the classic transfer of knowledge from lab bench to bedside. The department’s commitment to provide dedicated time for research was a top attractor for Dr. Singh, who now is translating his work on ischemia reperfusion injury protection with hydrogen sulfide into the cardiac catheterization laboratory for patients undergoing percutaneous coronary interventions. He is also investigating how glycine supplementation can reduce systemic inflammation and cardiac mortality in diabetic patients with coronary artery disease. Mentored by Dr. Rajiv Jauhar, he is investigating possible causes of the increased prevalence of coronary artery disease in patients of South Asian descent, using an extensive database of angioplasties at North Shore-LIJ.
“Students in the digital age learn differently than we did. We have to cater to what the learner is, not what the teacher is. That’s what this school is focusing on.”

— KENAR JHAVERI, MD, INTERNAL MEDICINE CLERKSHIP DIRECTOR, HOFSTRA NORTH SHORE-LIJ SCHOOL OF MEDICINE

Dr. Jhaveri’s extensive studies of social media’s role in nephrology and internal medicine education have been published in journals like the American Journal of Kidney Diseases, Kidney International and the American Journal of Medicine.

Besides social media, medical education can be enhanced with other innovative teaching tools. To supplement the traditional lecture format, Dr. Jhaveri came up with the case-based debate, gaining national recognition when published in the journal Renal Failure. The November 2012 annual meeting of the American Society of Nephrology included a plenary session featuring a case-based debate. “This approach can be applied to practically every field of medicine,” says Dr. Jhaveri. “It can be used to teach medical students, residents, fellows – even physicians seeking refresher courses.”

While a strong advocate for using social media in medicine, Dr. Jhaveri is also fascinated by narrative medicine, a way of practicing that emphasizes listening and reflecting on the coordination of care, patient-provider communication, and physician burnout. As a 2012 Gold Humanism Scholar, Dr. Jhaveri is one of only six faculty nationwide to receive scholarships for the Harvard Macy Institute Program for Educators. He’s using what he learned there to explore how narrative medicine can enhance communication in dialysis units.

Dr. Kenar Jhaveri

Researcher. Clinician. Teacher. Blogger. Dr. Kenar Jhaveri launched the first blog for a nephrology journal, aggregating significant advances in the field for busy practitioners, and is now using social media as a teaching tool for fellows.
Dr. Larry Miller is advancing the science of gastroenterology with new methods and new tools. At the same time, he is transforming training and practice in his division with new talent, stronger academic programs, and innovations in care.

In his first five months as head of the Division of Gastroenterology, Dr. Miller brought aboard a new head of therapeutic endoscopy, new research faculty, a cancer geneticist, and dedicated hospitalists to support inpatient care. Along with a new, system-wide endoscopy service line, Dr. Miller is leading the creation of a center of excellence in motility, and launching patient care centered on gastrointestinal cancers, cancer genetics, treatment of inflammatory bowel disease, and women’s health. The revamped fellowship program emphasizes research, preparing fellows for careers in academic medicine as well as training them to perform advanced endoscopy procedures.
A leader in research and creativity. Dr. Miller holds a number of patents for endoscopic methods and devices and is a well-funded NIH investigator. He invented a method to study the anatomy and physiology of gastrointestinal motility simultaneously, using high-resolution endoluminal ultrasound and manometry. This work has led to improved understanding of a range of disorders, including achalasia, Barrett’s esophagus, fecal incontinence, and gastroesophageal reflux disease (GERD), also the focus of his current research. His research lab at The Feinstein Institute for Medical Research focuses on the mechanism of gastro-esophageal reflux. Recently, Dr. Miller and his colleagues isolated the muscle groups that allow acid to enter the esophagus, and those that act to prevent it.

“We’re training the next generation of great physicians. And whenever we teach our fellows, we also learn from our fellows. It’s a two-way street. It keeps us fresh. It keeps us energized. It keeps us on our toes. Our product is not just the fellows’ education and our research. Our product is the quality of care that we give to our patients.”

— LARRY MILLER, MD, Chief, Division of Gastroenterology

Making it real for students. Problem-based learning in small groups is a hallmark of the Hofstra North Shore-LIJ School of Medicine. Students benefit from early clinical exposure across the continuum of care, guided by over 500 faculty.
Clinical Care

AN EXPANDED ROLE FOR PRIMARY CARE

Primary care is the Department of Medicine’s front line, where we are advancing the optimal model for delivering care with our patient-centered medical home.

As our population ages, the older complex patient with chronic medical problems is becoming ubiquitous, increasingly exposed to multiple care providers in multiple locations, miscommunication, lack of integration of care information, and duplication of costly services. The patient-centered medical home (PCMH) is transforming this pattern by centralizing and integrating a patient’s healthcare in a single setting. With a customized team, a personal physician is responsible for all aspects of care, communication, and coordination among specialists, hospitals, nursing homes, and others. This model leads to a smooth exchange of information, consultations, and referrals and creates a seamless web of support and care for patients and families.

With our strong tradition of clinical excellence and our growing emphasis on outcomes and healthcare delivery research, North Shore-LIJ is well positioned to both benefit from the PCMH model and move it forward. The Internal Medicine Practice in the Department of Medicine is building the relationships that are the foundation of a patient-centered medical neighborhood. The practice integrates preventive services with specialized, acute, chronic, and end-of-life care, supported by a robust data infrastructure. The on-site team includes a social worker, health psychologist, pharmacist, nurse health coach, nutritionist, and diabetes educator. Patients can reach the team around the clock, 365 days a year.

Innovative. Integrated. Wired. This is the model that the Department of Medicine is now rolling out to primary care practices throughout the health system. Over the last 24 months, the majority of our medical divisions have welcomed new leaders and the department has incorporated 100 new physicians, widening the reach of our standards at the same time that we’re raising them. Our physician practices are implementing the model with support from the department.

Joanne Gottridge, MD, Executive Vice Chair

39 | NORTH SHORE-LIJ DEPARTMENT OF MEDICINE

Volume One | 40
Mental and medical health are intricately related. Up to half of all people referred for mental health services never get to their first appointment, creating a critical gap in support that some patients may never overcome on their own. Integrated mental health services are especially helpful for the complex older patients who stand to benefit the most from the patient-centered medical home. At the Internal Medicine Practice at the Goldman Family Care Center, the mental health team works with patients and providers to boost adherence to medication and other regimens, helps patients cope with pain creatively, prepares them for life-changing procedures like gastric bypass, and provides support and input on medical decision making and capacity assessment.
Intensive care medicine often requires immediate assessment and intervention. Minute-by-minute monitoring is a cornerstone of effective intensive care, and tools that can be used at the bedside are especially valuable. Ultrasonic imaging can be invaluable to the intensivist and Dr. Paul Mayo, at left in photo, is leading the charge to add bedside ultrasonography to the toolkit of every critical care physician.
Dr. Mayo’s research mission is to detail the applications for critical care ultrasonography and demonstrate that people other than radiologists and cardiologists can be proficient. Over the last six years, Dr. Mayo and his team have spearheaded the development of national ultrasonography courses and organized training for most of New York City’s first-year pulmonary and critical care fellows – helping raise the level of proficiency in ICUs across the city. At North Shore-LIJ, critical care ultrasonography training for housestaff as well as fellows includes transesophageal echocardiography.

Rugged, portable, and cheap. Dr. Mayo has catalogued applications for ultrasonic imaging in underserved areas where CT and MRI scanners are impractical. In India, Dr. Mayo taught providers how an ultrasound station can help a trauma unit rule out long-bone fractures in mass casualty situations, speeding care to those who need it most. During a dengue fever outbreak, 18,000 patients inundated one New Delhi hospital. Ultrasound was used to risk-stratify the dengue patients: Five-minute scans enabled the hospital to identify the 900 victims who needed beds and send the others home.

By identifying more uses for ultrasonography, Dr. Mayo and his collaborators have significantly reduced CT scan use – and imaging costs.

“The goal is to have every critical care fellowship in the United States provide comprehensive training in critical care ultrasonography so that every graduate of every program comes out really competent in the field.”

– PAUL MAYO, MD, Professor, Division of Pulmonary, Critical Care, and Sleep Medicine
The human and financial costs of kidney disease expand exponentially. In the first six months of dialysis, hospitalizations double and the risk of death nearly triples. Dialysis patients constitute 8.6 percent of Medicare beneficiaries and now account for 22.4 percent of all Medicare spending. Even so, U.S. dialysis patients live shorter lives than those in some European and Asian countries. The solution isn’t another lab. It’s in the health system itself.
Dr. Steven Fishbane, the Chief of the Division of Nephrology, is aligning every resource in the North Shore-LIJ Health System to flatten the distorted cost curve of kidney disease. Dr. Fishbane’s extended North Shore-LIJ team is addressing the challenge with improved coordination, proactive education, and smoother navigation of a complex health system for patients, families, and staff.

**A web of care.** Called Healthy Transitions, this approach has as its foundation a series of service intensity guidelines that match nurse interventions to patient risk levels. A nurse case manager checks that protocols are followed by patients, their families, and physicians. Communication is another key component: Patients are never out of touch. A daily alert system tracks hypertension and automatically feeds the data to the monitoring team. Dietary counseling helps prevent fluid overload. Intensive screening catches early signs of depression and other factors that could impinge on compliance. Therapeutic regimens are continuously fine-tuned as outcomes data are analyzed. One result: stringent protocols to initiate dialysis and to reduce excessive use of catheters.

A Professor at Hofstra North Shore-LIJ School of Medicine, Dr. Fishbane also serves as the director of clinical research for the Department of Medicine. He has published over 130 articles and chapters, including a recent lead article in the *New England Journal of Medicine* on a novel peptide-based erythropoietic agent. His current research explores the possibility that U.S. dialysis techniques thicken the blood, putting stress on vessels and exacerbating the effects of hypertension.

**Discoveries at the bedside.** Department of Medicine investigators are integrating new science at the point of care, putting new therapies and technologies into the hands of providers and patients. We are turning the classic research paradigm on its head, launching new discoveries from the bedside and sending lessons learned back to the lab.
Department of Medicine clinicians are reengineering healthcare for a changing landscape.

Dr. Joseph McGowan

For more than 25 years, Dr. Joseph McGowan has been caring for people living with HIV and AIDS – by providing clinical care and by teaching colleagues and students how to do that work with compassion and skill.

Dr. McGowan heads the North Shore-LIJ Center for AIDS Research and Treatment, Long Island’s largest New York State AIDS Institute - Designated Center of Excellence. He helps the New York State Department of Health set standards for HIV care and serves on the American Academy of HIV Medicine committee that sets benchmarks for quality of HIV care nationwide. He has been the principal investigator for 50 clinical trials on HIV treatment and management and has published over 30 original papers and reviews.

Joseph McGowan, MD, Medical Director, North Shore-LIJ Center for AIDS Research and Treatment
Dr. Maria Torroella Carney

The older patient with multiple chronic illnesses and other acute issues superimposed presents one of the greatest challenges confronting the nation’s healthcare system. Dr. Maria Torroella Carney is ready.

Dr. Carney is bringing the system’s abundant data resources to bear on the coordination of care, and expanding academic and research support for the students, residents and fellows who will treat an aging population. Dr. Carney was trained as an internist and geriatrician and went on to become commissioner of the Nassau County Department of Health. She has published on dementia, advance directives, palliative medicine, and emergency response for vulnerable populations. She also played a leading role in North Shore-LIJ’s mobile response to Hurricane Sandy and its devastating effects on many Long Island communities.

Maria Carney, MD, Director, Community-Based Geriatrics, North Shore-LIJ Health System

Dr. Harry Steinberg

Dr. Harry Steinberg is a master clinician whose extraordinarily varied career has centered on a profound interest in the education of internists and subspecialists.

Dr. Steinberg has served in many roles: Army doctor, American Lung Association-funded researcher, founding chief of the Division of Pulmonary Medicine, former vice chair of medicine, and program director of the internal medicine training program. Most recently, Dr. Steinberg has returned as chief of the Division of Pulmonary, Critical Care, and Sleep Medicine, and the Edward Meilman Professor of Clinical Medicine. His research interests focus on erythropoietin response to hypoxia in normal and obese subjects and patients with obstructive sleep apnea.

Harry Steinberg, MD, Chief, Division of Pulmonary, Critical Care, and Sleep Medicine
Our region’s growing population of patients with liver-related conditions is underserved, and there is a shortage of providers nationwide. We are addressing this challenge at scale: with a new Center for Liver Disease, a new Division of Hepatology led by Dr. David Bernstein, four new hepatologists and an aggressive research agenda.

Liver disease can be insidiously asymptomatic. When symptoms emerge, they’re not always recognized, and treatment is further deferred. To get in front of the disease, Dr. Bernstein’s division is expanding screening and prevention programs, extending care to people who may be at risk. Over 20 clinical trials are in progress, some exploring the margins where diseases of the liver intersect with other diseases.

In 2012, the Department of Medicine created a new Division of Hepatology to advance the field through research and education. This year, we are opening a new Center for Liver Disease to provide comprehensive diagnostic and therapeutic services and serve as the hub for satellite practices throughout our region.
Dr. Bernstein publishes extensively on treatments for chronic viral hepatitis. Recently he was guest editor of "A Practical Approach to the Spectrum of Alcoholic Liver Disease," an issue of Clinics in Liver Disease, and also reported on a clinical trial on the treatment of chronic hepatitis C in The Lancet. He also serves as an advisor to the New York State Department of Health (NYSDOH), serves on the NYSDOH Hepatitis C Advisory Board, and is an advisor to the Community Health Care Association of New York State. Working with state and local health officials, he has set the standard in our region for detecting and treating hepatitis and counseling patients.

“Our team is having a major impact on the field of liver disease and on the lives of our patients. We are quickly becoming a national leader in clinical care, research, and the teaching of future physicians.”

—DAVID BERNSTEIN, MD, Chief, Division of Hepatology and Director, Center for Liver Disease
With an epidemic of obesity and diabetes sweeping our nation, there is a clear need for a broad-based, versatile, creative way to focus our efforts and improve patient care, both inpatient and outpatient.

Diabetes touches every line of service. And whatever the admitting diagnosis, hospital-based care for patients with diabetes is rarely optimal because so many providers are involved. As a result, these patients typically stay longer and are readmitted sooner. Dr. Tracy Breen and her team have deployed initiatives that are systemwide and site specific, and extend seamlessly into the community. Patient self-management classes began in January 2012 and are being rolled out to the first six health system hospitals.

Informatics drive and measure change. Outcome tracking is supported with an expanding array of metrics. Ophthalmology exam results, blood pressure, glucose and lipid levels, and other measurements form a “diabetes dashboard” that spotlights gaps and slips indicating the need for a shift in therapeutics or additional education. The result: Patients with a coexisting diagnosis of diabetes have shorter hospital stays and fewer readmissions.
“Our Division of Endocrinology aims not only to provide outstanding consultative and specialty support to our professional colleagues and patients, but also to work across divisions and departments to improve patient outcomes.”

— TRACY BREEN, MD, Chief, Division of Endocrinology, and Director of Diabetes Care, North Shore-LIJ Health System
THE DEPARTMENT OF MEDICINE AT A GLANCE

EDUCATION
HOFSTRA NORTH SHORE-LIJ SCHOOL OF MEDICINE
ELMEZZI GRADUATE SCHOOL OF MOLECULAR MEDICINE
CENTER FOR LEARNING AND INNOVATION

RESEARCH
THE FEINSTEIN INSTITUTE FOR MEDICAL RESEARCH

TERTIARY HOSPITALS
LENOK HILL HOSPITAL, Manhattan
LONG ISLAND JEWISH MEDICAL CENTER, New Hyde Park
NORTH SHORE UNIVERSITY HOSPITAL, Manhasset
SOUTHSIDE HOSPITAL, Bay Shore
STATEN ISLAND UNIVERSITY HOSPITAL

COMMUNITY HOSPITALS
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