THE ZEN MASTER, THE BOY AND HEALTH CARE

A long time ago in a small village, a little boy received a horse as a gift. The villagers all said: “Isn’t that wonderful? What a delightful gift.” The village Zen master said, “We’ll see.”

A few years later, the boy fell off the horse and broke his leg. The villagers said: “Isn’t that terrible? The horse is a curse!” The Zen master said: “We’ll see.”

A few years after that, the country went to war. All males were forced to join the army, but because of his damaged leg, the boy didn’t have to go. The villagers said, “Isn’t that wonderful?” The Zen master said: “We’ll see.”

Northwell Health adopted electronic health records (EHRs) 10 years ago. A decade is a digital eternity, yet EHR often vexes our practices as we await full realization of its potential (see page 5). Is it a blessing or a curse? We’ll see.

Despite sophisticated development and structure that enhances patient care, health care computer systems and wireless medical devices and implants remain vulnerable. There are no enforceable legal standards to guarantee privacy and protection, so Northwell’s health care security team collaborates to protect against hackers (page 8). Will providers continue to bear the burden of safeguarding these tools? We’ll see.

Equipped with cameras and the capacity to live-stream, smartphones democratize communication but may expose protected health information, even inadvertently (page 12). Is the selfie age a permanent risk to patient privacy? We’ll see.

And sometimes, too much of a good thing is bad for you. Digital data overload can leave doctors with “alert fatigue” that contradicts the purpose of our advanced tools (page 10). Northwell is refining our digital systems to make them more user-friendly and effective. Will we know when enough data is enough? We’ll see.

While our field is ever-changing, our commitment to improving care remains. This edition of Doctoring illustrates how that one constant plays out throughout Northwell. Whether it is through a resident who’s searching for a way to overcome the blood/brain barrier to treat malignant tumors (page 28), a physician’s long-term commitment to compassion in action (page 30) or a former MLB player who’s now pursuing medicine (29), doctoring is a gift that keeps giving in unexpected ways.

Lawrence Smith, MD
PHYSICIAN-IN-CHIEF, NORTHWELL HEALTH
DEAN, HOFSTRA NORTHWELL SCHOOL OF MEDICINE
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AMPLIFIED AUSCULTATION
Thinklabs has reimagined an essential tool with the One digital stethoscope. It comes with in-ear headphones that amplify sound up to 100 times, or you can use other headphones via its 3.5mm jack. Multiple filter choices let you select the optimal frequency for the structure you want to hear. Particularly useful for teaching and telemedicine, the Thinklink accessory creates digital sound files for storage and playback. A rechargeable lithium ion battery accommodates up to 125 exams.

RUNNER, KNOW THYSELF
Sensoria smart socks help you make the connection between your running form and any arch or heel pain. The footwear can also help you optimize your running style in real time. Sensors embedded in the soles transmit information about foot pressure to a lightweight anklet via conductive fibers. The anklets connect to the socks magnetically. Bluetooth connects to the Sensoria Fitness app, which can monitor foot-strike pattern, cadence and step count. The Sensoria Virtual Coach provides tips and feedback on form during runs. The anklets have a six-hour battery life.

BY THOMAS CROCKER
The Paradoxical Promise of EHR

By Thomas Crocker
ELECTRONIC HEALTH RECORDS CAN EMPOWER AND IMPEDE DOCTORS — OFTEN DURING THE SAME PATIENT ENCOUNTER. FIVE CLINICAL LEADERS AT NORTHWELL HEALTH WEIGHED IN ON THE AGONY AND THE ECSTASY.

A decade into implementing electronic health records (EHR), Northwell Health uses two primary systems plus several legacy systems that are gradually being phased out. Several physician executives share what they value about the technology, and their vision for making it more effective and user-friendly.

THE GOOD

» John D’Angelo, MD:

On the positive side, EHRs are more comprehensive and provide legible documentation and more efficient management of test results and other clinical information. You can watch the progress of your orders in the system in real time. There is earlier recognition of when results are available so you can decide on next steps in care. EHR also gives us greater ability to gather robust data. As a result, I can know the door-to-provider time for all patients each month instead of sampling 100 charts out of 3,000 and drawing conclusions from them.

» Mark Jarrett, MD:

Ease of access to information from multiple sources and ready availability of data to help drive clinical improvement are key advantages of EHR, as is clinical decision support. For example, the system can alert you if you prescribe a medication that could interact with another one the patient is taking.

» Ira Nash, MD:

EHR never loses anything. Like many other physicians, I had an “aha” moment when I got past the frustrations of the system and realized, “Oh, I no longer have to worry about not being able to find that X-ray or letter from another physician.” There’s something liberating about that. EHR allows me to have conversations with patients that were much more difficult previously because I had to rely on my powers of recall.

THE BAD

» Dr. Jarrett:

EHR systems were promoted and certified on the basis of meaningful use, not usability. Inputting a set of orders might require 50 to 150 clicks, and that’s not what we need. EHR can be burdensome for physicians because the interface isn’t intuitive.

» Michael Oppenheim, MD:

EHR user interfaces haven’t evolved nearly as fast as in other industries, such as banking. They feel old and clunky by comparison. EHR encourages documentation of data in ways that insurers and regulators want, but feels unnatural to clinicians.

» Nicholas Sgaglione, MD:

My biggest pet peeve is that during patient encounters, EHR can cause physicians to focus more on the keyboard and monitor than the person in front of them.
A workaround for a chief complaint about EHR — the tedium of inputting information — that is gaining traction throughout Northwell Health is the use of scribes. These individuals, often employed by a vendor, record data in the EHR during or after patient encounters either in person or via a remote audio or visual connection, which frees physicians to focus their attention on patients. Scribes work in some Northwell Health Physician Partners specialty offices and about half of Northwell emergency departments during peak hours.

However, cost-effectiveness remains an issue.

“I anticipate we’ll use more scribes in the future, but I doubt we’ll get to the point where every physician uses one,” said Dr. Nash. “For certain practices and patient loads, scribes make sense. For example, someone with a full schedule could see more patients if she didn’t have to devote so much time per patient to EHR tasks. Investing in relieving that physician from some EHR tasks could be worthwhile.”

THE POTENTIAL FIXES

» Dr. D’Angelo:

I hope for better integration among various EHR products. If a patient visits a Northwell Health emergency department, a Northwell Health ambulatory clinic and a hospital that is not part of the health system, all of the information from their various encounters should be available on any EHR. Being able to see information from different EHR systems is critical to streamlining care, controlling costs, and reducing redundant testing and medical errors. This is especially important in emergency medicine, because clinicians must often act as detectives in each encounter to determine what’s wrong. The more information we can access, the better.

» Dr. Oppenheim:

We are scrutinizing all of the documentation templates and order sets we’ve built to minimize the impact of regulatory and reimbursement requirements. We want the elements of EHR to be as focused as possible on the clinical components of care in ways that make sense and feel right to clinicians.

» Dr. Sgaglione:

The whole process has to become more efficient. For example, certain information needs to be entered in the EHR with every encounter, but other information doesn’t. Perhaps patients could input select information into the system at kiosks similar to those at airports before seeing their physicians or even from home prior to their visit. Documentation needs to be more specific to clinical disciplines — an orthopedist and a pulmonologist shouldn’t use the same templates. In the future, I think patients will carry their health records with them on something similar to a chip or credit card that would be easily updated and uploaded with user-friendly interfaces.

Solutions for a More Seamless Future

Northwell Health is taking several steps to improve the usability of its EHR products, including:

• adoption of a health information exchange to facilitate data-sharing between EHR products and outpatient and inpatient care settings
• implementation of a web viewer to allow clinicians to see patient data from both EHR products in the health information exchange with a single click
• piloting solutions to give physicians EHR access on secure mobile devices, which will allow them to e-prescribe from anywhere
• reducing delays in EHR access using tap-and-go solutions

A JOB FOR SCRIBES?

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AN EVOLVING SOLUTION

For many emergency medicine physicians, scribes have been welcome additions.

“We haven’t seen universal improvement in efficiency or enjoyed return on investment through better coding and billing by using scribes, but I can’t think of anything in my career that’s satisfied physicians more, because it allows them to make patient encounters more personal,” said Dr. D’Angelo. “At sites where we’ve re-engineered our workflow to use a provider intake model, physicians are seeing patients much more rapidly, and scribes seem to be critical to that. I’ve seen some scribes evolve into a kind of personal assistant. Having assistance with nonclinical tasks, such as paging colleagues or getting a blanket for a patient, can help physicians focus on the critical things they need to do.”
ETHICAL “WHITE HAT” HACKERS HAVE JOINED FORCES WITH MEDICAL DEVICE MANUFACTURERS AND HEALTH CARE SYSTEMS TO IDENTIFY AND CORRECT DATA VULNERABILITIES.

As tech health solutions multiply, so do opportunities for criminals to exploit them.

“Digital security is a very real concern for health care organizations, medical device manufacturers, patients and their families,” said Kathy Hughes, vice president and chief information security officer at Northwell Health. “It is not a problem that will go away or solve itself. The stakes will only rise over time, so it’s essential to develop strategies now to address the issue.”

DECODING THE ISSUE

Electronic vulnerabilities can affect medical data and devices. For several days in February 2016, hackers took the computer system at Hollywood Presbyterian Medical Center in California hostage with ransomware, a type of virus that locks digital files and makes them impossible to access without a decryption key. The hospital ultimately paid the hackers $17,000 in Bitcoin to unlock the system.
A 2015 database hack at health insurer Anthem exposed the personal data of 78.8 million individuals. Hackers sell patient information, which may be used for identity theft, illegally procuring medication or treatments, or submitting false claims to insurance companies.

Former Vice President Dick Cheney had the wireless functionality of his implanted defibrillator deactivated in 2007. For him, the risk of hacking or potential misuse was not worth the added functionality.

So far, there are no reports of widespread medical device hacking. Firms sometimes hire hackers to dig out possible security flaws. White hats have hacked wireless devices like insulin pumps and implantable cardiovascular defibrillators in controlled settings and reported the potential hazards to manufacturers and medical leaders.

**STEPPING UP CYBER SECURITY**

The vulnerabilities of electronic health records, wireless medical devices and other connected equipment are real, but who is responsible for addressing security concerns?

To keep patient information safe, Northwell Health has established a security strategy Ms. Hughes called "defense in depth." A system-wide team collaborates to protect against hacks and keep data private.

"Medical device manufacturers focus on delivering clinical functionality, not on preventing products from being hacked or used to launch cyber attacks," Ms. Hughes said. "They aren’t legally required to prove their devices are safe from digital attacks, so health care systems and clinicians must establish clear requirements with medical device manufacturers. Northwell’s IT security and IT risk management teams work closely with procurement, compliance, legal affairs, biomed services and the rest of the Information Services Department to make sure security is considered in every step of the life cycle for technology solutions and medical devices. We require frequent software updates and patches and work with providers and patients to ensure processes and devices are as airtight as possible.”

Although there is not yet an enforceable legal standard for manufacturers, the American Medical Association recently released guidelines outlining best practices for the creation and utilization of digital health devices. The plan stresses an evidence-based approach to device management and educating patients and providers about potential risks.

Northwell’s Risk Assessment Program identifies and evaluates vulnerabilities before they are exploited. The program includes hiring outside firms of white hat hackers to test the health system’s security measures.

“We have only seen the tip of the iceberg,” Ms. Hughes said. “Hackers’ interest in health care will grow. Physicians who keep security in mind when deploying medical devices do their patients a great service.”

**A Historic Attack**

In October 2016, Europe and North America experienced one of the largest cyber attacks to date. The distributed denial of service (DDOS) attack prevented users from accessing major web sites including CNN, Netflix and others. The botnet behind the attack used the internet of things (wireless devices and equipment such as crockpots, video cameras and DVR systems that users usually enable through smartphones) to overload the servers of Dyn – a company that is influential in much of the internet’s domain name infrastructure. The sheer size and scale of the attack has highlighted the further need to secure all devices connected to the internet.
DIGITAL HEALTH TOOLS: TOO MUCH OF A GOOD THING?

By Brittain Whiteside-Galloway

HEALTH INFORMATION TECHNOLOGY STREAMLINES CARE, YET IT PRESENTS PHYSICIANS WITH NEW CHALLENGES.
The health care field became like a car accelerating from zero to 60 mph in 4.5 seconds with the implementation of digital tools, according to Mark Jarrett, MD, senior vice president and associate chief medical officer at Northwell Health. He added that this was especially true for electronic health records (EHRs).

“Just 10 years ago, only 10 to 15 percent of health care practices used EHRs. Now, 90 percent of hospitals and health systems have them,” he said. Automated, digital information transfer expedites patient care whereas earlier systems — paper files and distribution of records and results by hand — could delay it.

Health care automation made gradual inroads into non-patient-facing services, according to Michael Oppenheim, MD, vice president and chief medical informatics officer for Northwell.

“Laboratories were early adopters,” he said. “That meant you no longer had to wait an extended period to get patients’ results — you could easily look them up on a computer.” Electronic ordering of prescriptions and lab tests followed. Then automation spread to EHRs and digital imaging.

“Processes that used to take days can now take a matter of hours, so the pace and quality of health care has greatly improved,” Dr. Oppenheim said.

VYING FOR ATTENTION
Yet digital tools can be a pipeline for information overload, with EHRs, electronic libraries, mobile devices and email notifications all competing for attention.

“Many physicians are getting ‘alert fatigue,’” Dr. Jarrett said. “Too many alerts — for example, drug interaction warnings built into EHRs — are overwhelming, so clinicians may begin to ignore or override them.”

Like other major health systems, Northwell Health is still optimizing its EHR. “We’re working to mitigate alert overloads,” Dr. Jarrett said, “but it will take some time.”

Even so, the numerous pros of electronic tools benefit clinicians and patients.

“Digital tools like EHRs provide evidence-based guidelines to enhance clinical decision-making and alert clinicians if their decisions and practices — prescribing or test-ordering, for example — deviate from commonly accepted standards of care,” said Jeffrey Kraut, executive vice president of strategy at Northwell Health.

Case in point: overprescribing antibiotics. About a third of antibiotic prescriptions each year — roughly 47 million — are unnecessary or inappropriately prescribed, according to a recent PEW Charitable Trusts report.

A study published in the February 2016 Journal of the American Medical Association tested three behavioral interventions to prevent over-prescription. The 18-month study followed nearly 250 doctors in 47 Boston and Los Angeles primary care practices. The results were telling: EHR prompts with alternatives to antibiotic prescriptions did not change physicians’ prescribing practices. On the other hand, unnecessary antibiotic prescriptions dropped significantly when the EHR prompted clinicians to type in explanations for the script. The most effective intervention was a peer comparison. After typing a rationale into the EHR, doctors received emails comparing their prescribing rates to those of their peers. This intervention reduced unnecessary antibiotic prescriptions from 20 to 4 percent.

“Feedback is important for doctors,” Dr. Jarrett said about the study. “If they see they aren’t doing as well as their peers in a certain area, they’ll change their pattern.”

Northwell is continuing to refine digital tools to make them more user-friendly and effective, to encourage physician buy-in.

“This is a challenging transition, but it’s getting better,” Dr. Jarrett said. “These tools are the future of medicine, and the key to providing even better patient care.”
M

ublic devices provide boundless access to information, but they can compromise patient privacy. Any device that can receive, transmit or store patient health information must keep that data secure, mandates the Health Insurance Portability and Accountability Act (HIPAA).

THE SHIFTING DIGITAL LANDSCAPE

Smartphone cameras and live-streaming are clear risks to safeguarding protected health information (PHI). In 2016, a different “player” became a new threat: mobile gaming. That summer, dozens of hospitals nationwide began to report HIPAA concerns related to Pokémon GO.

“Pokémon GO encouraged players to scout public and private locations, which included hospitals, to access game points,” said Kimberly White, assistant vice president and corporate privacy officer at Northwell Health.

“The game’s camera feature could expose PHI if a Pokémon happened to show up somewhere that PHI was visible. Hospitals need to keep an eye out for new trends like these.”

Selfies, photos and videos have the potential to go viral quickly. Limiting in-hospital phone use by patients and staff and securing PHI properly can prevent private information from appearing online without patients’ consent.

“The opportunities for mobile phone misuse are fairly extensive because it’s so easy to transmit information and images,” Ms. White said. “Everything from phone calls to texts and photographs has the potential to put private information at risk.”

CURBING MISUSE

Posting “No Mobile Devices, Please” signs in hospitals and open treatment areas, like rehab settings, can prevent inadvertent recording or broadcasting of background PHI.

“If there is any risk that mobile devices can compromise patient privacy or care, they should be prohibited,” Ms. White said. “Where mobile phones are permitted, there should be guidelines to prevent any risk to care and protect privacy.”

Some Northwell departments ban mobile use by staff or patients altogether. Others limit device use to specific locations, away from patient treatment areas.

Northwell Health’s policy does not ban selfies, but it does prohibit audio or video recording of conversations with clinicians or discussions of clinical subjects. Northwell also restricts photographing or recording other patients or their information. Additional guidelines are in place based on department and location circumstances.
Despite the complexity of secure communications, patients often prefer to use mobile phones. Here are ways to guard privacy.

**Minimize your risk by:**
- Using only encrypted devices
- Using passwords to prevent unwanted access and hacking
- Allowing only Northwell-authorized individuals to use assigned devices
- Locking devices in drawers or cabinets overnight or when not in use

**Use approved email systems.**
Northwell’s email servers use HIPAA-standard encryption. Do not share PHI through unprotected, personal email.

**Call, don’t text.**
Texting is not secure. The safest way to transmit PHI via mobile phone is by calling the patient or guardian directly. Be mindful of your surroundings so nearby parties can’t overhear your conversation.

**Keep devices secure.**
Portability makes mobile devices and laptops easy to steal, so never leave them unattended.

**Immediately report**
Loss or theft of a device to the Information Security Help Desk: (718/516/631) 470-7272.

**To learn more about Northwell’s commitment to patient privacy, visit bit.ly/2017ppp.**

**Protect PHI**

Depending on the complexity of secure communications, patients often prefer to use mobile phones. Here are ways to guard privacy.

- Using approved email systems
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**Awareness and education are crucial to protecting PHI.**
Northwell Health provides annual and ongoing training to support a culture of compliance and reinforce the importance of protecting PHI from getting into the wrong hands.
We know that the Medicaid population has a high risk for poor health outcomes and has historically faced many barriers in access to care,” said Ariel Hayes, director of program operations at Northwell Health Solutions. “DSRIP is a great opportunity to remove those barriers and improve the health of the Medicaid population.”

**DSRIP 101**

In 2014, New York State received $8 billion in federal funding from the Centers for Medicare and Medicaid Services to invest in substantial Medicaid reform. The bulk of this funding, $6.42 billion, supports DSRIP efforts to reduce avoidable hospitalizations, readmissions and emergency department visits by 25 percent by 2020.

Participation in the program requires health systems, such as Northwell Health, individual hospitals and community-based organizations to create collaborative care networks called performing provider systems (PPSs). There are 25 in the state, and Northwell participates in four: the Staten Island PPS, Advocate Community Providers, the Suffolk Care Collaborative and the Nassau Queens PPS. Through them, Northwell is working to improve care transitions, integrate behavioral health services into the primary care setting and help local primary care practices achieve National Committee for Quality Assurance Patient-Centered Medical Home (PCMH) designation. The DSRIP program launched in April 2015 and ends March 31, 2020.

**IMPROVING PRIMARY CARE AND BEHAVIORAL HEALTH SERVICES**

Avoidable hospitalizations and readmissions, as well as inappropriate emergency department visits, often stem from a lack of access to primary care and related preventive health services. That’s why New York State has incentivized
all primary care practices to achieve PCMH designation by March 2018. Designation entails implementing team-based care models and investing in electronic health records and other IT infrastructure. The standards are complex, so Northwell is helping community physicians achieve the designation.

“Physicians, project managers and administrators are working with practices locally to assist with the application and the IT updates required to meet PCMH standards,” said Kristofer Smith, MD, medical director of Northwell Health Solutions and Northwell Health’s senior vice president of population health management. He added that the health system has also tapped specialized consultants to help practices transform.

Rajvee Vora, MD, is medical director of behavioral health for Northwell Health Solutions, which oversees DSRIP throughout the health system. If patients screen positive for behavioral health problems, such as major depression, primary care providers can refer patients to an on-site behavioral health clinician or provide patients with contact information for a behavioral health clinician so the patient can schedule a follow-up appointment. Pairing the two disciplines can destigmatize mental health conditions and ensure people get help before a crisis occurs.

CONTINUITY OF CARE

Critical in preventing hospital readmissions is enhancing care transitions, such as that from hospital to home. Educating patients about their medical conditions should become a standard part of the discharge process, along with scheduling follow-up appointments with the patient’s primary care physician. Patients identified as potentially at high risk of readmission will be paired with a transitional care manager who will provide support for 30 days post-hospitalization. In addition, Northwell Health is collaborating with skilled nursing programs in Nassau and Queens to implement evidence-based practices that identify and manage any patient changes to reduce the need for potentially disorienting hospital transfers.

“Giving more access to evidence-based care, enhancing the reliability of transition from hospital to home, and meeting the behavioral health needs of our communities are achievable for all of our patients, not just Medicaid beneficiaries,” Dr. Smith said.
BEHAVIORAL HEALTH IS CRUCIAL TO OVERALL WELL-BEING, AND PRIMARY CARE PROVIDERS PLAY AN IMPORTANT ROLE IN SPOTTING POTENTIAL ISSUES. YET MANY HESITATE TO BROACH THE SUBJECT.

"Often, behavioral health disorders can exaggerate other medical concerns and interfere with their treatment. That can then lead to greater problems and increased cost," said Blaine Greenwald, MD, Northwell Health executive director of behavioral health services. “Primary care providers have a unique opportunity to catch behavioral health issues early and put patients on the path to effective treatment.”

"Anxiety and depression make up substantial percentages of patients' concerns during primary care visits. Yet evaluations are not consistently happening," said Rajvee Vora, MD, psychiatrist and medical director for behavioral health at Northwell Health Solutions. Dr. Vora is spearheading collaborative care — the integration of behavioral health and primary care — for the health system.

A disconnect between primary care and behavioral health care leads not only to psychological distress and its many consequences, but also to socio-economic problems, like missing work and compromising quality of life, according to Dr. Vora. "For many patients, by the time a mental health issue is recognized, it's reached a level of crisis that brings the patient to an emergency department [ED],” she added.

Undiagnosed mental health conditions can also lead to noncompliance with medical care, which may precipitate more ED visits and potentially avoidable hospitalizations. (Page 14 details Northwell Health’s efforts to reduce avoidable hospitalizations and ED visits.)

OVERCOMING BARRIERS
Patients may also present obstacles to integrating behavioral health and primary care. They may avoid the subject due to societal stigma, for example, or consider it inappropriate to discuss outside of a mental health provider’s office.

“It's important for primary care providers to take the initiative,” Dr. Greenwald said. “A brief standardized screening instrument or checklist, which can be completed in just a few minutes, may identify a problem that can then be pursued more thoroughly.”

UP TO SPEED
Dr. Vora suggests the following techniques to quickly evaluate patients for underlying mental illness:

- **Use the PHQ-2.** This short questionnaire can be completed while checking vital signs. It measures the frequency of depressed moods and loss of interest or enjoyment during the previous two weeks. (Visit [bit.ly/phq2guide](bit.ly/phq2guide) to find the PHQ-2).
- **Evaluate sleep habits.** Too little or too much sleep can signify depression.
- **Monitor weight.** Meaningful weight gain or loss may both be signs of underlying mental illness.
- **Ask about home life.** Domestic violence and other issues can be missed easily. Simply asking, “How are things going at home?” can provide insight.

Numerous studies have demonstrated that one of the best methods to recognize and diagnose mental illness early is for primary care practices to integrate behavioral health care managers. Northwell Health primary care offices are participating in this national trend. Until the practice is universal, Hitesite.org can help physicians quickly identify mental health resources by zip code.
RESPONDING TO THE EPIDEMIC OF OPIOID ADDICTION AND OVERDOSE, SOME MEDICAL PRACTITIONERS ARE REFRAMING THEIR VIEWS ON PAIN MANAGEMENT AND WORKING TO IDENTIFY AND ADDRESS SUBSTANCE ABUSE.

By Valerie Lauer
Drug overdose is a growing public health crisis, according to the Centers for Disease Control and Prevention. Opioids stand out for their ubiquity. Rampant narcotic misuse presents a quandary to physicians whose patients need relief.

“Our instinct is to do something to alleviate our patients’ pain,” said Diana Martins-Welch, MD, an attending physician in Northwell Health’s Department of Geriatrics and Palliative Medicine who specializes in supportive oncology. “For many patients, including those I work with who have advanced cancer, opioids are appropriate.

“But it is impossible to measure pain objectively,” she added. “Some patients may report false symptoms to get an opioid prescription when an alternative would suffice. It falls on physicians to prescribe these medications appropriately and instruct patients and caregivers on how to handle them safely.”

**SYSTEMIC SOLUTIONS, FRONTLINE INTERVENTIONS**

“Opioid use and abuse are complex issues. They require a multidimensional approach to reduce misuse,” said Jay Enden, MD, medical director of Northwell’s Eastern Region. Dr. Enden leads Northwell’s opioid task force, which comprises specialists in emergency medicine, internal medicine and psychiatry. Facility subgroups have initiated reforms like creating standardized practices, educating clinical staff members and patients, and promoting the increased use of pain management alternatives, screening, intervention and community outreach. Training and outreach to health care providers helps create a culture of awareness with the aim of stemming the tide.

Northwell’s prescribing guidelines for emergency departments (EDs) reduce opportunities for abuse. Established in 2013, they stipulate that ED physicians prescribe only three- or five-day courses of opioid painkillers. Furthermore, a multimillion-dollar federal grant helped Northwell launch SBIRT (Screening, Brief Intervention and Referral to Treatment) at select EDs and primary care clinics in 2014. The program’s intake queries and educational resources help identify narcotic abusers.

“In three years, we have performed 175,000 SBIRT screenings, conducted more than 6,000 brief interventions and referred nearly 1,300 individuals for treatment,” said John D’Angelo, MD, Northwell’s senior vice president and executive director of emergency medicine. “It has been extremely successful, so we are expanding it to other practices and EDs.”

**SPOTTING RISKS**

Dr. Martins-Welch screens patients with the Opioid Risk Tool — an assessment developed by Lynn Webster, MD, former president of the American Academy of Pain Medicine — to gauge a patient’s likelihood to misuse medication based on family and personal history of substance abuse, age, history of preadolescent sexual abuse and psychological condition. Those identified as high-risk are offered access to supportive services such as behavioral therapy as needed and receive alternate therapies, such as multimodal pain management with additional analgesics. These therapies can reduce the need for opioids in those most likely to develop addiction.

“For patients with chronic pain, nonmedicinal solutions, such as spinal cord stimulators, can help maintain pain control without opening up the possibility of abuse,” said Mitchell Levine, MD, director of spine surgery at Lenox Hill Hospital. “Intrathecal pain pumps provide a well-controlled noneuphoric use of narcotic with a fixed dosage. When appropriate, these approaches help prevent patients from developing a pill-popping psychology while addressing pain management.”

Between **1991** and **2011**, the number of opioid prescriptions filled each year rose from **76 million** to **219 million**. As changing policies started addressing the problem, that number began to drop. In **2013**, **207 million** opioid prescriptions were filled.
The support of an addiction psychiatrist can also help.

“If it’s possible that a patient is taking medications inappropriately, the addiction specialist can clarify the situation by identifying an addictive mind-set and offering additional support,” said John Stamatos, MD, director of Syosset Hospital’s Interventional Pain Management Center. Dr. Stamatos welcomed an addiction specialist to the center’s care team last year. “Adding that expertise to patient care can help determine whether you are giving the right medications to the right patients.”

The Internet System for Tracking Over-Prescribing (I-STOP) is the New York State Department of Health’s searchable, central database to track opioid prescriptions. Maria Torroella Carney, MD, chief of geriatric and palliative medicine, served on the I-STOP workforce committee.

“I-STOP lets us see if a patient has received multiple prescriptions,” she said. “It’s a safety mechanism that allows us to feel confident prescribing medications to patients who need them. It also facilitates conversations about appropriate medication use and provide additional resources and support to those who may be struggling with substance misuse and abuse.”

Northwell Health is collaborating with the University of Pennsylvania and Mayo Clinic on a study to evaluate the efficacy of ED interventions. Researchers hope to determine the effectiveness of the Opioid Risk Tool versus an assessment combined with showing the patient a brief video about someone who became addicted to opioids after a hospital stay. The study will conclude in 2019.

Karin Rhodes, MD, vice president of care management design and evaluation for Northwell, is spearheading the study locally. “Narrative communication can be an easily scalable, low-cost, sustainable method for disseminating health information and encouraging patient engagement,” she said. “Individualized prevention may be the key to addressing the opioid epidemic.”


A total of 7,081 people died from opioid overdose in New York metropolitan area from 2003-2014.

55,403
lethal drug overdoses in 2015

Source: American Society of Addiction Medicine
THE EVOLUTION OF EMERGENCY DEPARTMENTS

A wave of hospitals and health care facilities has been redefining emergency medicine delivery — building new EDs and trauma centers and remodeling current ones — to maintain or decrease costs and increase patient capacity without compromising quality of care.

Seventy-five percent of 2,099 emergency medicine doctors reported increased patient volumes in their EDs during the previous year, according to a 2015 survey by the American College of Emergency Physicians. More than two-thirds also reported that they felt their EDs were not equipped to handle the influx.

Lean manufacturing methods that provide flexibility for expansion and integrating new tools and technology are influencing new ED designs and remodels to handle increased patient volume. Many EDs make these concepts a reality via a split-flow care model, which directs incoming patients into separate streams based on their level of acuity. By default, this approach provides a framework for better positioning appropriate providers in each patient stream.

NEW PATIENT FLOW MODEL

“In a traditional ED workflow, a nurse completes a comprehensive evaluation in a single triage room, creating a bottleneck all patients go through,” said John D’Angelo, MD, senior vice president and executive director of emergency medicine services at Northwell Health. “The split-flow model positions a pivot nurse at the front door, who uses a quick, visual assessment and clinical acumen to determine if patients need immediate care. If they do, they see a physician immediately. If they don’t, they are directed to an intake room, where a provider and scribe make a more comprehensive assessment. This process ensures we get the order entry into the computer right at the front door. From there, patients are moved into low, moderate or high acuity, and vertical or horizontal tracks.”

“Vertical or horizontal tracks” are new ED seating arrangements. Patients who need to lie down are moved to a traditional bed space. Those with lower-acuity illnesses may be moved to a special chair or recliner, allowing more patients to sit in treatment areas instead of waiting rooms.

Northwell incorporated split flow while creating remodeling plans for the Bohlsen Family ED at Southside Hospital and Huntington Hospital’s ED.

“Both EDs were originally built a long time ago and designed to receive high-acuity patients from ambulances,” Dr. D’Angelo said. “But modern EDs provide far more than just critical care, so the Southside and Huntington EDs were just not designed to handle the increased patient volume they’ve been experiencing for years. The new designs enhance capacity and prevent bottlenecks, too.”
New Frontiers in the ED Enterprise

Vocera, a tool that seems inspired by sci-fi, is expediting patient care at Southside Hospital’s Bohlsen Family ED.

Southside recently implemented the technology, which integrates voice communication with clinical systems. Wearable, lightweight badges let clinicians and staff communicate by tapping a button and saying the name of whomever they want to reach.

“This communication platform is almost Star Trek-like,” said Benson Yeh, MD, chair of emergency medicine at Southside. “It helps us to communicate effectively and efficiently, with less downtime from providers who previously had to walk to another zone to see if someone was available. And since we use the overhead calling system less frequently, noise in the ED is significantly reduced.”

Another high-tech feature of Southside’s ED is an advanced lighting system for intake rooms that enhances quick, efficient, nonverbal communication between staff and providers.

“Different lights indicate different stages of patient care,” Dr. Yeh said. “There’s no need for discussion or tracking down the appropriate caregiver — the light system queues our movements, further optimizing our patient flow.”

Visit bit.ly/ssh-ed for a tour of the Bohlsen Family ED at Southside Hospital.

NEW SOUTH SIDE HOSPITAL ED DESIGN

Southside’s new ED design features a clinical greeter and multiple intake rooms to speed triage and reduce patient flow bottlenecks. Super track bays are used for treatment of lower acuity patients, who are then moved to an internal results waiting area that features recliners. This enhanced patient flow model allows the ED to see more patients more quickly. In addition, super track rooms are equipped for mixed use, allowing them to serve critically acute or less acute cases.
To develop effective treatments, clinical trials must enroll participants from many backgrounds. Unfortunately, barriers to ensuring research studies reflect the general population still exist.

Adequate representation from many populations helps ensure effective translation of research evidence into clinical practice. On the other hand, ineffective (or even harmful) treatments can enter the marketplace when real-world patients look very little like clinical trial subjects.

According to a Food and Drug Administration report presented at the 2011 “Dialogues on Diversifying Clinical Trials” conference, Caucasians have long been overly represented in clinical trials, a trend still evident despite 1993’s National Institute of Health (NIH) Revitalization Act. [See “Room to Improve.”] As recently as 2015, a review of more than 10,000 cancer trials funded by the National Cancer Institute revealed that fewer than two percent met the NIH diversity objectives.

“Biologic diversity often follows racial, ethnic and socioeconomic divisions,” said Betty Diamond, MD, head of the Center for Autoimmune Disease at the Feinstein Institute for Medical Research. “If noninclusive clinical trials are the basis for making decisions and determining treatments for everybody, it is a disservice to many patients.”

The landmark 2015 PLoS Medicine article about diversity in clinical trials identified several examples illustrating this point:

- The antiplatelet drug clopidogrel works as a placebo in up to 75 percent of Pacific Islanders.
- Carbamezpine, a standard epilepsy medication, can damage the skin and internal organs of patients of Asian descent. Subsequent research has identified HLA-B*1502 as the antigen that puts this specific population more at risk of developing a dangerous rash called Stevens-Johnson syndrome.
- Childhood asthma prevalence is highest among Puerto Ricans (18.4 percent) and African-Americans (14.6 percent) in this country, yet less than five percent of federally funded research of lung diseases included any racial/ethnic minorities. One recent study designed to explore why these populations do not respond well to common asthma medications is the Asthma Collaboratory’s Study of African Americans, Asthma, Genes and Environments (SAGE). As published in the June 2016 issue of Immunogenetics, the SAGE researchers found 95 percent genetic variants

By Melissa Moore
between the African-American children in their cohort and the participants in prior research.

**OVERCOMING BARRIERS TO PARTICIPATION**

“A history of unethical behavior by medical professionals has resulted in a great deal of suspicion toward medical trials within the African-American community,” said Peter Gregersen, MD, director for the Center for Genomics and Human Genetics at the Feinstein Institute.

Dr. Gregersen added that in the National Poll on Clinical Research conducted in 2013 by Zogby Analytics for Research!America, 61 percent of African-American respondents cited “lack of trust” to explain why they would not participate in clinical trials or support family members doing so. Most people familiar with the history of racial issues in America are aware of the country’s notorious case of unethical research conducted on a minority community. In the Tuskegee Study of Untreated Syphilis in the Negro Male, conducted by the US Public Health Service, researchers followed the progress of unchecked syphilis symptoms in an infected population between 1932 and 1972 without ever informing the subjects that they had the disease or offering penicillin after the antibiotic had been proven to be an effective treatment. Another event, the creation of the first human immortal cell line from unwitting donor Henrietta Lacks in the 1950s, involved scientific decision-making that contributes to a legacy of suspicion largely unmitigated by institutional review and ethics boards.

**ADDRESSING PRACTICAL ROADBLOCKS**

Lack of access to information about opportunities, participant/staff language and culture gaps, and financial constraints can hinder enrollment or full participation in clinical trials. However, according to the Zogby Analytics poll, 80 percent of respondents said they would be more likely to take part in a clinical trial if the recommendation came from a trusted physician. Northwell Health physicians are reaching across cultural, racial or gender divides to build trust with programs and outreach by the Division of Diversity, Inclusion and Health Literacy.

“If the physician and patient have a relationship built on mutual trust and respect, it’s no more difficult to enroll minority patients in clinical research and trials than the population as a whole,” Dr. Diamond said. “It’s an opportunity everyone should have, and data suggests there are advantages for all of us when we reach out.”

**Room to Improve**

In recent years, the Food and Drug Administration has taken additional steps to help ensure research populations represent the patients who will use the medical product under investigation. One example is the Drug Trials Snapshot, an online resource that reveals the demographic profiles of clinical trial participants in newly approved medications.

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<th>ETHNIC GROUP</th>
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<th>% CLINICAL TRIALS REPRESENTATION</th>
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Underrepresented clinical trial participants also include Asian/Pacific Islanders, Native Americans, and other minority ethnic groups; women; seniors and children; people of low socioeconomic status; and rural residents.

Sources: census.gov, fda.gov
Alzheimer’s disease can begin years, or even decades, before patients become symptomatic. Once symptoms manifest, a patient’s life expectancy is approximately four to eight years, though survival can be as long as 20 years, according to the Alzheimer’s Association.

“As the disease evolves, areas of the brain contiguous to the mesial temporal lobe and hippocampus become more involved, and we see symptoms such as language impairment and difficulty retrieving words,” said Marc Gordon, MD, chief of neurology at Zucker Hillside Hospital.

While Alzheimer’s typically cannot be diagnosed before a patient presents with symptoms, some red flags may indicate changes in the brain.

“Biomarker evidence — such as amyloid deposits in the brain, decreased amyloid presence in spinal fluid and thinning cerebral cortex — suggests damage or change that could ultimately devolve into Alzheimer’s or dementia,” Dr. Gordon said.

Memory impairment that disrupts a patient’s daily life is typically the first presenting symptom. Other standout symptoms include confusion, particularly involving the passage of time, and trouble speaking or writing.
“When I started research in this area 40 years ago, we knew almost nothing about Alzheimer’s disease,” said Dr. Davies. “Now, thanks to a research boom prompted by a rise in funding and awareness of the disease, we understand a great deal about what, exactly, Alzheimer’s does to the brain.”

The first FDA-approved drug for the treatment of Alzheimer’s symptoms, tacrine, hit the market in 1993 and was discontinued in 2013. Donepezil was approved in 1996, followed by four additional drugs — galantamine, memantine, rivastigmine, and a donepezil and memantine combination.

However, there is no pharmaceutical agent that effectively reverses functional decline, including memory impairment and confusion. Dr. Davies is hopeful that the boom in Alzheimer’s research will spur a breakthrough.

“There are about 215 active clinical trials involving Alzheimer’s disease in the United States,” Dr. Davies said. “That’s a phenomenal level of activity. With the tremendous commitment we’re seeing from academic research and major pharmaceutical companies, I believe over the next couple of years we’ll see development of a drug that slows the progression of the disease.”

Dr. Davies and the team at Litwin-Zucker Research Center for the Study of Alzheimer’s Disease are working on experimental drug trials — including two designed to slow the progression of the disease — and studying the specific genes that raise Alzheimer’s risk.

“Encourage your patients to participate in clinical trials, because that is how we’re going to improve the care for patients with this disease,” Dr. Davies said. “We’re making great strides, but we need patients’ participation to test therapies our researchers are developing.”

See bit.ly/adrc2017 for more about Dr. Davies and his team.
WHOLE-BODY DONATION
THE ULTIMATE GIFT

DONATING YOUR BODY TO SCIENCE IS A FINAL ACT OF GOOD WILL THAT RIPPLES INDEFINITELY.

Experience working with human anatomy is essential to medical education and training. Whole-body donations let medical students gain crucial hands-on experience. “Medical students become experts of the human body by working with the very biological structures they’ll be treating for years to come,” said Robert Hill, PhD, associate professor of science education and director of the Anatomical Gift Program (AGP) at the Hofstra Northwell School of Medicine. “If we want to improve medical science and health care, whole-body donations are paramount.”

As recently as 2014, many US medical schools experienced a widespread shortage of donated bodies because of a surge in medical school attendance, according to The Economist. However, in August 2016 the Associated Press reported an increase in donations, due largely to rising funeral costs and growing awareness of donation programs. Demand continues to grow, since dissection continues to be a key element of medical education, research and surgical training programs, Dr. Hill noted.

“The number of donations we receive ebbs and flows,” Dr. Hill said. “Many factors influence when people choose to donate and how full registry lists are.”

ANATOMY OF ALTRUISM

“Some people forgo donating because they want to have a viewing, or they want the body to be interred whole,” said Cira Peragine, AGP administrator and structure lab supervisor at the School of Medicine. A licensed funeral director, Ms. Peragine oversees the donation process, counsels grieving families and prepares the cadavers and lab for students’ use.

“Responding to the increased demand for body donations is about spreading awareness that the program is an available option,” she said. “Many people are unfamiliar with body donation and don’t know how to go about it. When they do choose to donate, it’s usually for altruistic reasons, because they want to keep contributing to society even after they’re gone.”
Medical education has traditionally relied on dissection to learn anatomy. Digital 3D cadavers may let medical students perform virtual dissection, but the modern tools do not provide hands-on experience with actual anatomy.

“Our students perform dissections, but we also use the donor body in some innovative ways,” Dr. Hill said. “On any given day, students may be dissecting to investigate a clinical case, examining a body that was previously dissected, or practicing an emergency procedure. We also use ultrasound and X-rays to explore anatomy. Our approach helps students make connections that otherwise would be impossible if they were just using one resource.”

FIRST IMPRESSIONS

Human cadavers not only prepare students for real patients, but also set the tone of their professional development.

“Students think of our donors as their very first patients,” Ms. Peragine said. “We heavily emphasize this and the level of respect we expect from students on their first day.”

When students first encounter the donors they’ll be working with for the next couple of years, many have hesitations, Dr. Hill explained. Some are encountering death for the first time and may feel apprehensive about the idea of working with a donated body.

“We have designed our students’ first experience with the donors with this in mind,” Dr. Hill said. “On the first day in the lab, we allow students a full hour simply to visually observe their donor, writing down notes and talking with fellow classmates about their observations. Faculty members let the students get acquainted with their first patients without interfering. It’s a supremely meaningful experience for both students and faculty.”

From there, students move into dissecting the body in clinically meaningful ways, locating pulse points on the body, making visual observations and performing other parts of initial care.

After the students’ first “meeting” with their donors, the school hosts a special lunch where students meet in small groups with faculty members and reflect on their experiences in a writing prompt.

“Their essays almost always articulate how grateful they are to our donors for this opportunity, which they also get to express to our donors’ families at our annual ceremony,” Dr. Hill said. School of Medicine students host an annual memorial service to honor donors. Donor families are invited and get to meet and share memories.

“Some of the students recite a reading or poem or play a piece of music that’s close to their hearts,” Ms. Peragine said. “Donors’ family members will speak to the class about why their loved one chose to donate. It is a meaningful event for students, donors’ families and our faculty.”

WHOLE-BODY DONATIONS

All body donations must be whole, or intact, for use in Hofstra Northwell School of Medicine’s Whole Body AGP. Donors who have been embalmed, donated organs or undergone an autopsy cannot be accepted for use. Other reasons a donor’s body may not be suitable for donation to the program for educational purposes include, but are not limited to:

- advanced decomposition
- obesity
- history of certain infectious diseases — such as AIDS, hepatitis, tuberculosis or Creutzfeldt-Jakob disease
- significant trauma at the time of death

Donors remain in the care of the AGP for one to three years. Certain pathological specimens may be retained longer because they provide students with unique educational opportunities. Once anatomical studies of a donor’s body have concluded, remains are cremated at the expense of the School of Medicine at a licensed in-state crematory, and then either returned to the family or scattered at sea, depending on the wishes of the donor’s family.

Behind the Scenes of the Donation Process

At the time of death, a phone call to the Anatomical Gift Program (AGP) office begins the donation process. The person does not need to be enrolled in the donor registry before death, but many donors express their intention to donate while they are alive. Persons authorizing the donation must also provide the following documentation:

- consent form, which is the authorization to donate
- statistical information for issuance of a death certificate
- authorization for cremation and disposition

DOCTORING // NORTHWELL.EDU
SHAMIK CHAKRABORTY, MD, NEUROSURGERY RESIDENT OF THE HOFSTRA NORTHWELL SCHOOL OF MEDICINE, IS RESEARCHING HOW TO PENETRATE THE BLOOD/ BRAIN BARRIER FOR SAFE TREATMENT OF MALIGNANT BRAIN TUMORS.

Brain tumors involve a combination of surgery, radiation and chemotherapy, but mortality remains at 95 percent within five years, according to Dr. Chakraborty, who sees patients at North Shore University Hospital, Lenox Hill Hospital and Long Island Jewish Medical Center. Newer treatments include antibody-based drugs, vaccine-like regimens designed to boost the immune system and target the cancer, and helmets that use alternating electrical fields to prevent the growth of tumor cells.

One challenge with traditional treatments is that many chemotherapy drug molecules are too big to penetrate the blood/brain barrier and reach the tumor. That’s where Dr. Chakraborty’s research comes in, under the guidance of his mentors John Boockvar, MD, and Marc Symons, PhD, codirectors of the Northwell Health Cancer Institute’s Brain Tumor Biotech Center.

“The goal of my research was to improve the penetration of cancer drugs into the tumors themselves,” said Dr. Chakraborty. “This improvement can reduce the concentration of drugs elsewhere in the brain and body, reducing side effects for other parts of the body.”

To study paramagnetic nanoparticles — drug delivery agents that can be directed and concentrated by a magnetic field — Dr. Chakraborty used a molecule called LPS to disrupt the blood/brain barrier. He hopes to include nanoparticles in future intra-arterial drug delivery trials, which are now administered intravenously and have successfully treated patients with certain brain cancers.

Dr. Chakraborty has successfully disrupted the blood/brain barrier in mice with the nanoparticle. A focal magnetic field successfully concentrated the nanoparticle at the area of the tumor. Now, he and his research team are working to determine the ideal nanoparticle and the best way to deploy it in people.

“I hope we can administer nanoparticles with chemotherapeutic drugs attached,” he said. “That would concentrate the drug at the area of the tumor, improve results and cause fewer side effects.”
The dream was real for Mark Hamilton, who flexed the tree-like forearms of a lumberjack over the course of a pro baseball career that spanned nine seasons and included 12 big league hits with the St. Louis Cardinals.

Yet he walked away from the game just three days shy of his 30th birthday after 108 minor league home runs — and more playing opportunities ahead — fully aware his destiny lay elsewhere. “I’ve seen people try to chase down the dream some extra years when it’s not going to happen anymore,” Mr. Hamilton said, determined not to be one of them.

Almost immediately after his Triple-A season ended in 2014, the veteran first baseman decided to go back to school. Mr. Hamilton, who went to high school in Texas, is the son of a highly-regarded doctor who instilled a sense of awe with his own career. The younger Hamilton had a clear path forward.

Mr. Hamilton, now 32, is a first-year medical student at the Hofstra Northwell School of Medicine, on the road to a new career after graduating in May with a bachelor of science in neuroscience from Tulane University.

“You can see his experience as a major league ballplayer is paying off on the academic front,” said Dr. David Elkowitz, associate dean at the Hofstra Northwell School of Medicine and one of Mr. Hamilton’s professors. “He has this nice balance between his own path as a ballplayer and a real understanding of what it takes to be a great doctor through his dad.”

Mr. Hamilton’s father, Stanley R. Hamilton, MD, is head of pathology and laboratory medicine at MD Anderson Cancer Center in Houston. And he’s on speed dial now that the younger Hamilton is trying his hand at a medical career.

“My dad always told me, ‘There’s always life after baseball. You don’t want to wake up one day and wish you had done something else,’” Mr. Hamilton recalled.

The siren song of baseball called to Mr. Hamilton and it proved impossible to resist. He played in the College World Series at Tulane and was drafted in the second round of the 2006 Major League Baseball Draft after his junior season. Mr. Hamilton developed into an excellent defensive first baseman. But with future Hall of Famer Albert Pujols a fixture at first base, Mr. Hamilton was never going to be more than a left-handed bat off the bench in St. Louis.

He left baseball after failing to make the big-league roster in Atlanta and toiling in the minors during the summer of 2014. The ex-ballplayer uprooted his family — wife, Lauren, and young daughters, Lillian and Madison — from New Orleans and moved to Queens, NY. Now he’s part of a new team, one of 100 students in the School of Medicine’s Class of 2020.

While Mr. Hamilton has always been fascinated by the sciences — he studied molecular biology during his first stint at Tulane before switching to neuroscience — his future may lie in the adrenaline-fueled emergency department as a surgeon. After all, he’s thrived in pressure situations before.

“Once you’ve played in front of 50,000 people expecting you to perform, you feel like you can handle anything,” said Mr. Hamilton, who played 38 games for the Cardinals during their World Series run in 2011. “It taught me how to focus and maintain my composure.”

Dr. Elkowitz noticed his new student’s work ethic and attention to detail almost immediately. Mr. Hamilton is older than many of his first-year peers, but his approach is also unique. “He has a real healthy respect for the journey,” Dr. Elkowitz said. “How you conduct yourself on that journey is extraordinarily important.”

Mr. Hamilton’s medical journey is just beginning.
**MISSION:** Sustainable Opportunity

By Chris Gasiewski

WARREN LICHT, MD, DOESN’T SHRINK FROM A CHALLENGE.

Climbing Mount Kilimanjaro? Sure.
Crossing the Atacama Desert in Bolivia — the driest place on Earth? No problem.

Fearlessness has taken Dr. Licht around the world, and determination drives his international advocacy. Besides serving as vice chair of ambulatory medicine and director of medical affairs at Lenox Health Greenwich Village, Dr. Licht has provided education and resources to communities in Nicaragua and Kenya via two nonprofit organizations he helped establish.

Crossing Thresholds, one of those nonprofits, connects with grassroots community leaders in Kenya to develop sustainable opportunities for children, particularly in Kibera, a slum just outside Nairobi. About the size of Central Park and home to about 1.1 million people, Kibera is not officially recognized by the government.

"People have been squatting there since before World War I," Dr. Licht said. "Essentially, it’s a community on a garbage heap."

**LIFE EXPECTANCY: 30 YEARS**

Kibera has an open sewer system and no clean water, no legal source of electricity, no government-run schools and no social services. Drug use and crime are rampant. A daily train that runs through the community regularly kills residents, whose overall life expectancy is 30 years. High school graduation is extremely rare.

Crossing Thresholds developed early childhood intervention programs and built three schools. Drug Fighters Primary School serves 300-plus students in 10 classrooms, and has a kitchen, dining hall, dormitory and youth activities center. Facing the Future School serves more than 300 students amid seven classrooms, office space and a water system, plus a newly constructed computer center, health clinic, community outreach space and dining hall. For Drug Fighters graduates, Crossing Thresholds helped build Crossing Thresholds High School, which opened earlier this year. Situated on donated farmland 100 miles north of Nairobi, the school serves local students plus teens from Kibera, who are offered housing. A fourth school will be completed this year.

"There’s almost no chance for kids from the Kibera slum," Dr. Licht said. "We wanted to make a difference by contributing to something that is sustainable."

That’s always been the Crossing Thresholds mission. The organization was born from Dr. Licht’s original brainchild, an international nonprofit that provides health and wellness services in the Dominican Republic and Nicaragua. Dr. Licht was that charity’s medical director for 15 years. He mostly conducted “roaming clinics,” but
soon learned they weren’t a practical solution.

“We would appear in the most rural villages of Nicaragua and run these ambulatory clinics,” he said. “We’d create exam rooms, physician stations and set up a pharmacy with in-country purchased medications. The clinics attracted ‘a very cafeteria-like flow’ of patients,” Dr. Licht added. But there was a problem.

“I soon realized that I’m exposing the local people to the idea of Western medicine, a concept they may never have the opportunity to be exposed to again,” he said. “This is completely unsustainable. Why am I showing someone that I can give them a pill for a condition when they may never have access to that pill again?”

SHIFTING TO SUSTAINABILITY

So Dr. Licht shifted toward providing public health education and promoting natural medicine and holistic therapies.

“What can the community grow in their backyards, and what medicinal plants can they use?” he said. “In addition, what can I teach them from a public health standpoint to prevent disease: how to prevent heartburn; how to prevent headaches; how to prevent sexually transmitted diseases; the benefits of breastfeeding.”

Dr. Licht saved lives with the first nonprofit, yet rapid growth led to unwieldy organizational focus, he said.

“When you build something — an idea from your kitchen table — and it is so successful, that success can blossom into something you never thought possible,” he said. “As a product of that success, the board of directors grew and there were lots of different ideas, which are important for an organization to continue to move forward.

“However, the executive director, myself and a few core board members — especially the original board members — felt that after 15 years of doing that kind of work, it wasn’t having the impact we originally envisioned.”

This core group then established Crossing Thresholds to focus on working with community leaders to identify impact areas. Its progress has provided meaningful opportunities for children in Kibera.

To remain active, Dr. Licht travels to Kenya with fellow board members and donors. Recently, they observed the Nyeri High School operations, plus the region’s mountain gorilla conservation efforts.

“We spent a couple days with the gorillas,” he said. “These mountain gorillas were once endangered and are now being protected. It showed that all of the world’s creatures are equally necessary and connected and deserve the opportunity to contribute to the planet.”

Few have the mettle or the compassion to face the struggles of the desperately poor. To Dr. Licht, it’s about as insurmountable as Mount Kilimanjaro.

“As long as I can walk, I’m going to keep doing what I am doing,” he said.

Snapshots from Dr. Licht’s service in Nicaragua from 1996 to 1999.
"TRANSPARENCY" MAY BE A BUZZWORD, BUT IT HAS REAL SIGNIFICANCE IN THE REALM OF PATIENT EXPERIENCE.

While physicians pivot between treating patients, coordinating care and updating electronic health records, it can be challenging to provide inpatients with daily, detailed information about what’s happening to them and what they can expect.

Lenox Hill Hospital has extended patient communication beyond test results and status updates with its new Say Goodnight Rounds. Sherri Sandel, DO, Lenox Hill’s chief hospitalist and senior associate director for the Internal Medicine Residency Program, has implemented the program to more deeply engage patients and their families.

The initiative pairs a medical resident and nurse for bedside rounds beginning at 3:30 p.m. each day. The team establishes a care summary and updates the patient on the next day’s treatment plan. They also introduce the overnight doctors and nurses and manage expectations for patients and families.

“Say Goodnight Rounds is a brief, manageable program that helps us achieve goals of safe and effective care,” Dr. Sandel said. “The rounds take fewer than 30 minutes per day and can positively affect the overall Hospital Consumer Assessment of Healthcare Providers and Systems scores.”

She’s right. Say Goodnight Rounds have already improved Lenox Hill Hospital’s physician-patient and nurse-patient communication scores on Press Ganey patient satisfaction surveys. During the program’s trial period of July through November 2015, patient-doctor communication scores increased 24 percent. Scores for communication with nurses improved 15 percent from July 2015 to February 2016. Lenox Hill deployed the program fully in October 2015.

Dr. Sandel believes Say Goodnight Rounds may have helped decrease the incidence of rapid-response bedside critical care, too.

“These simple steps have made a significant impact on our patients,” Dr. Sandel said. “They require that you consider, in advance, what you will tell the patient regarding progress and the next day. It is vital that physicians visit with the attending nurse and tell him or her the plan for tomorrow. If discharge is the plan, it involves reminding the patient that discharge time is 11 a.m. and discussing logistics.

“It’s a pretty simple idea that has had a huge impact,” Dr. Sandel said.
What is your idea of perfect happiness?
Peace of mind.

What is your greatest fear?
Personally, it’s being misunderstood or judged. Socially, it’s the growing problem that poverty has on the life and obstacles for a child.

What is the trait you most deplore in yourself?
Procrastination. I prefer to get things done right away, but sometimes I seem to believe waiting makes it come out better. Makes no sense, I know.

What is the trait you most deplore in others?
Dante covered most of them, but he left out racism and bigotry.

Which living person do you most admire?
Paul Farmer, MD. The guy is amazing. [His accomplishments include cofounding Partners In Health and serving as a special adviser to the UN Secretary-General on community-based medicine and lessons from Haiti. Dr. Farmer’s extensive writing on health, human rights and the consequences of social inequality includes, most recently, In the Company of the Poor, Reimagining Global Health and To Repair the World.]

What is your greatest extravagance?
Fly fishing. Nothing else comes close.

What is your current state of mind?
Reflective. Turning 60 does that to you.

What do you consider the most overrated virtue?
IQ

On what occasion do you lie?
Usually fishing, but everyone knows that. I don’t like to give away those secrets. But seriously, when protecting someone against an injustice.

What do you most dislike about your appearance?
I limp. But not as much as I used to!

Which living person do you most despise?
Bernie Madoff

What is the quality you most like in a man?
Humility

What is the quality you most like in a woman?
Humility

Which words or phrases do you most overuse?
“I am stuck in traffic!”

What or whom is the greatest love of your life?
My children and family.

When and where were you happiest?
At the birth of my children and every holiday with kids.

Which talent would you most like to have?
Musical talents; piano and maybe singing.

If you could change one thing about yourself, what would it be?
I wish I could still play basketball! And I wish I could stop thinking about it.

What do you consider your greatest achievement?
Remaining calm and level-headed when dealing with conflicts and likewise, engaging creative minds to solve problems and maintain a positive attitude.

If you were to die and come back as a person or a thing, what would it be?
A salmon so I could finally understand what they are thinking. Or a sequoia so I could see for miles and live a very long time.
FOR LEN HOROVITZ, MD, A CONGENITAL BIRTH DEFECT SET HIM ON THE PATH TO TWO LIFELONG PASSIONS.

**Dr. Horovitz, internist and pulmonary specialist at Lenox Hill Hospital, spent extensive time in hospitals from an early age. He was born with two thumbs on his right hand. The extra digit was surgically removed when he was two months old. From then until he was 16 years old, Dr. Horovitz repeatedly underwent surgeries to remodel his remaining thumb and connecting structures to give his right hand a normal appearance and function. The procedures left him in a constant state of pain or in a cast.**

“At the time, hand therapy and physical therapy were not options,” Dr. Horovitz said. “When my doctors took off the cast, they simply told me to take it easy. There were no specific instructions.”

Dr. Horovitz elected to design his own brand of hand therapy by playing the piano. As a young boy, he was intrigued by and attracted to the work of Baroque-era composers, such as Johann Sebastian Bach, and Romantic era musicians, including Frédéric Chopin.

He taught himself how to play the instrument by studying his sister’s piano books and listening to recorded compositions. At the age of six, he began formal lessons, learning to recreate the sounds of the musical masters.
“I precociously worked on pieces that were too advanced for me, but my goal was to have a good time and enjoy the process,” Dr. Horovitz recalled. “My teachers loved having me as a student because I was engaged and determined.”

Despite the fact that his right thumb would not bend in the middle at the interphalangeal joint, Dr. Horovitz still had enough range of motion in his other fingers to navigate the keys with prowess. Being left-handed, he had the physiology he needed to master intricate piano compositions.

“Playing music was an escape and a way to transcend the pain. So I would test the waters as soon as possible after each surgery,” Dr. Horovitz said. “When I was focusing on the music, I wasn’t aware of physical sensations. I was concentrating on what I was doing and the sounds I was creating. If the pain became overwhelming, I would take a break.”

Ultimately, Dr. Horovitz used his determination and love of learning to become a physician and help patients through the practice of medicine. But he never abandoned the hobby that nurtured him throughout life.

“My orthopedic surgeon during childhood was a miracle worker and my inspiration to pursue medicine,” Dr. Horovitz said. “But I knew the piano would always be part of my life.”

THE ART OF PERFORMANCE

Dr. Horovitz’s musical talent organically led him to a part-time career in the arts. As a member of the New York Piano Society (NYPS), he performs classical compositions with other musicians at some of New York City’s grandest venues, often playing fundraisers and benefits for philanthropic organizations.

Dr. Horovitz has also been known to play a solo recital. In 2008, he had the opportunity to perform for James Levine, world-renowned pianist, composer, conductor and previous musical director of the Metropolitan Opera. It was not the scenario that Dr. Horovitz envisioned when he organized the public concert at Carnegie Hall to benefit the NYPS.

“I should have known that Mr. Levine would know about the show, but I never dreamed he would attend,” Dr. Horovitz said. “During intermission, he ran down the hall backstage to offer me his compliments. Hearing positive feedback from someone of his stature was absolutely wonderful.”

While music may never be Dr. Horovitz’s profession, it will always play a supporting role. The art inspired him to overcome adversity early in life and to pay close attention to intricate details on and off the stage.

“In the disciplines of both medicine and music, you have to listen very carefully to understand how to respond and enhance each situation,” he said. “Sometimes the simplest adjustments can have the strongest impact.”
It’s the season for Northwell Health physicians to make their voices heard. Your nominations determine the “reputation” component of the U.S. News & World Report’s annual hospital rankings — 27.5 percent of the overall score.

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