



NEWTON-WELLESLEY NEWS

FALL 2020

Welcome to the latest issue of *Newton-Wellesley News*, which is intended to keep you abreast of exciting advances in care.

Despite the unique health challenges presented by COVID-19, we hope you enjoyed a restful and relaxing summer. At Newton-Wellesley, we focused on recovery, welcomed patients back for elective services and recharged for the fall season. We remain safe and ready to serve the community's needs, as we have since 1885.

One change occurred at NWH over the summer: on July 1, I began my tenure as President. I am thrilled and humbled by this opportunity. I believe we are on the cusp of a changing paradigm in healthcare, where more care—and more complex care—will be delivered in community-based hospitals.

In this issue you'll find articles that include:

- Q&A in which I discuss my global experiences, first impressions of NWH and vision for its future;
- How patients are benefiting from a new procedure designed to prevent stroke;
- Our innovative Resilience Project, which provides behavioral health programs at middle and high schools in area towns; and
- Sophisticated treatment that Joanne Borg-Stein, MD, Chief of Physical Medicine and Rehabilitation, and her team provide to heal musculoskeletal injuries and pain.

Be sure to check out our Upcoming Events Calendar. We hope you'll join in (virtually!) on Sunday, October 4, for Hope Walks, our annual cancer care fundraising event.

We are proud of all we are accomplishing at NWH—and we couldn't do it without you, our generous community. You allow Newton-Wellesley the opportunity to continue to serve our patients, their families and our community. Thank you.

Errol Norwitz, MD, PhD, MBA
President and CEO



A Conversation with Errol Norwitz, MD, PhD, MBA

President and CEO of Newton-Wellesley Hospital

ERROL NORWITZ, MD, PHD, MBA, arrived in July to serve as President and CEO of Newton-Wellesley Hospital. After growing up in Cape Town, South Africa, he went from Oxford University in England to the Boston area, where he continued his training in obstetrics and gynecology at Brigham and Women's Hospital and Massachusetts General Hospital. Errol settled down in Newton, where he and his wife, Ann, raised their three children. He was a member of the NWH medical staff from 1997-2002 and considers his new position "a homecoming."

When did you first consider becoming a physician?

In high school, I leaned heavily toward the sciences, and biology in particular. When I was growing up in South Africa, schools were not allowed to teach evolution, but I

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had a biology teacher who had a copy of “On the Origin of Species” by Charles Darwin—a banned book at the time. A couple of us read it surreptitiously in his office, and it forever changed the way I view my place in the world and the impact and legacy that I want to leave behind.

I knew from an early age that I wanted to go into medicine. I was the first person in my family to get a university education, let alone go to medical school. In the European system, which South Africa follows, you go directly from high school to university, so I started medical school at the age of 16. I was incredibly young and naïve, but you learn to grow up—and become responsible—very quickly.

From there, why did you decide to specialize in obstetrics and gynecology?

After two years of foundational courses—biochemistry, anatomy, physiology, microbiology, etc.—I headed into my clinical work at Groote Schuur Hospital in Cape Town. My first day on rotation, I volunteered to cover labor & delivery and assisted in my first delivery under the watchful eye of the head midwife. From that moment, I knew I wanted to go into obstetrics and gynecology. In South Africa, ob/gyn is run mostly by midwives and is not highly regarded as an academic specialty. But I loved it.

South Africa has one of the highest preterm birth rates in the world, so we delivered a lot of premies. Sadly, when we tracked these babies after discharge from the neonatal intensive care unit, many of them died. I knew even then that, if those kids had been born in Boston, the vast majority would have survived. This led to my lifelong research interest in the molecular mechanisms underlying preterm labor in order to prevent preterm birth. Despite our best efforts, however, around one in ten pregnancies in the United States still ends in preterm birth.

You attended Oxford University as a Rhodes Scholar. What was the focus of your studies?

At Oxford, I read for a PhD in Biochemistry, with a focus on labor and childbirth. I worked under the auspices of Professor Sir Alexander Turnbull, Chairman of the Nuffield Department of Ob/Gyn, and a highly regarded scientist. Our philosophy was that, if we could understand the molecular mechanisms responsible for birth at term, then we would understand what causes preterm birth. As it turns out, we were wrong. Preterm labor is a completely different problem, and we have yet to find an effective way to prevent preterm birth.

During my four years at Oxford, I also played rugby for the “Blues” team. I started playing rugby in South Africa at the age of five and really enjoyed it, but it is a physical and brutal game. I am pleased that none of my kids chose to play rugby.

One of the expectations of my scholarship was that I would return to South Africa to practice and teach. This was indeed my intention when I started. But I met my wife, Ann, at Oxford. She is from Buffalo, New York, and was an American Marshall Scholar reading for a PhD in History. The two best decisions I ever made were to marry Ann and to come to the United States. Ann was a medical student at Harvard, so I had to figure out a way to get into the U.S.—and particularly Boston.

You arrived in Boston to complete your training. Did you think you would remain in the area?

I was very fortunate to get into the four-year combined ob/gyn training program at Brigham and Women’s Hospital/Massachusetts General Hospital and Harvard Medical School. I started in 1992 and absolutely loved it.

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“This is my family’s hospital. We live in Newton and have come to Newton-Wellesley Hospital for our healthcare for more than 20 years. We’ve received exceptional care and haven’t felt the need to go to one of the academic medical centers.”

– Errol Norwitz, MD, PhD, MBA

I found Boston to be cosmopolitan with a European flavor that made me feel comfortable. I had figured that, since Americans speak English, the culture would be similar to that of England and South Africa. But the culture here is very different; it took me a while to recognize it and make the adjustments.

Ann and I have grown to love Boston. We went to New Haven for a few years and, although we liked it there, we really missed Red Sox nation. There is something very special about the culture here in Boston, although I still haven’t gotten used to the cold weather. I spent my youth in Cape Town, which has a temperate climate, much like Miami or Los Angeles.

You were recruited by Tufts Medical Center to serve as Chairman of Obstetrics and Gynecology. Why did you decide to go for your MBA?

When I accepted the Chair of Ob/Gyn at Tufts Medical Center, I realized that I had just been put in charge of a \$22 million business—and I couldn’t balance my checkbook at home. I had never taken a single finance course in my life. I knew that, to be a good steward of my department, I needed to dig into finance, operations and marketing, so I made the MBA a requirement of my recruitment package. After two years, the department was moving in the right direction, and I started the MBA program at Boston University’s Questrom School of Business. It’s a smaller program—there were only 24 people in the class—and I was one of only two physicians. Taking courses with sitting CEOs and CFOs, I was completely out of my depth, and I loved it.

The course work was challenging and predominantly case-based. The workload was enormous, which forced us to work in teams. That’s ultimately what running an organization is all about: working with individuals and developing relationships. It’s about motivating people, engaging people, building teams and trying to bring out the best in everyone around you. To move an organization forward, you need to work with all stakeholders and create a shared vision.

You’ve said that serving as President and CEO of Newton-Wellesley Hospital is your “dream job.” Can you explain why?

This is my family’s hospital. We live in Newton and have come to Newton-Wellesley Hospital for our healthcare needs for more than 20 years. We’ve received exceptional care and haven’t felt the need to go to one of the academic medical centers. We get the care we need and the experience we are looking for right here, a mile from our house.

I believe the healthcare of the future in the U.S. is going to look quite different from what we see around us today. We spend way too much on healthcare, and our health outcome metrics are average at best. To be cost-effective, more care will occur in the community—at hospitals like Newton-Wellesley—including by providers who may not be physicians. Some care will occur in the home.

We’ll engage people earlier in their lives, so we’re not trying to prevent metabolic and cardiac disease 30 years too late, after someone is overweight, diabetic and has been smoking for years. If we are going to put the “health” back into healthcare, we need to provide education much earlier in people’s lives and encourage them to engage and take responsibility for their long-term health. It’s my job to show how community hospitals like Newton-Wellesley can add value to the larger Mass General Brigham system and the health of the population and communities we serve.

What are your observations of Newton-Wellesley Hospital, based on your first three months?

People have been very open and transparent; as a result, I believe that I have a good understanding of what the opportunities and challenges are going forward. We have a very engaged faculty and staff who keep the patient at the center of everything they do. That is paramount when it comes to healthcare. What’s important is the patient, their family, and our community.

The COVID-19 pandemic has been devastating on many levels. All of us have had friends and family who’ve

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been sick, and some have died. If you can find a silver lining in a global pandemic such as the one we have just experienced, I believe it has helped us come together as healthcare providers. It reminds us of why we do what we do. We're mission-driven, and there are times when we need to put our own health and potentially even that of our families on the line. Everyone has stepped up. One particular program that has taken off as a result of COVID-19 is the expanded use of telehealth. The current pandemic has allowed us to accelerate by many years its utilization and incorporation into routine care.

Regarding diversity, we've seen how underserved communities have been disproportionately affected by COVID-19. Social distancing is in large part a luxury;

"We need to develop a blueprint for how community hospitals can meet the needs of the communities we serve and add value to a larger healthcare system. For the second year in a row, Newton-Wellesley Hospital was ranked as the best community-based hospital in Massachusetts according to the *U.S. News & World Report* ranking for 2020-21."

– Errol Norwitz, MD, PhD, MBA

if you live in a crowded apartment, you can't practice effective social distancing, regardless of how responsible you are trying to be. This pandemic has amplified issues related to inequity, which is something I am particularly sensitive to having been born and raised in South Africa during the height of the apartheid regime.

What's ahead for Newton-Wellesley Hospital?



I left the world of academic medical centers after 25 years because I think Newton-Wellesley Hospital is perfectly situated for where healthcare is heading. We need to develop a blueprint for how community hospitals can meet the needs of the communities we serve and

add value to a larger healthcare system. For the second year in a row, Newton-Wellesley Hospital was ranked as the best community-based hospital in Massachusetts according to the *U.S. News & World Report* ranking for 2020-21. We're located in a community that is engaged, highly educated, knows what high-quality care is and where people are willing to drive to get it. We're also a member of Mass General Brigham (formerly Partners), one of the best healthcare systems in the country.

Having worked and received my care at Newton-Wellesley Hospital, I understand the value of a strong community hospital. All hospitals rely on the latest technology, which is constantly evolving, so we will need to make strategic investments. COVID-19 has had—and will continue to have—a major financial impact on healthcare organizations for the foreseeable future. This means that important capital investments will need to be delayed. But we will get through this pandemic, we will upgrade our technology and infrastructure, and we will launch and grow new clinical programs. Most importantly, we will invest in our faculty and staff by identifying leaders of the future and helping to mentor and develop them. Giving from our generous donors is going to be more important than ever.

Finally, I'm here to stay. Serving as President and CEO of Newton-Wellesley Hospital truly is a dream job, as well as a homecoming, for me. I'm not going anywhere anytime soon. My family and I have deep roots in the community, and I am committed to doing all I can to establishing Newton-Wellesley Hospital not only as the best community-based hospital in Massachusetts, but in the entire country. ■

Preventing Stroke—the Safest Way Possible

At Newton-Wellesley, a New Technique for Clearing Blocked Arteries



Christopher Kwolek, MD, vascular surgeon, discusses a case with Zareh Melkonian, a technician who works in the Elfers Cardiovascular Center.

THOSE WHO ARE INFORMED that they have a blockage in one or both carotid arteries—the large blood vessels leading to the brain—quickly understand they are at an increased risk for a stroke. In fact, they may have experienced symptoms, such as numbness or vision disturbance.

Such individuals also learn what could potentially happen during surgery or insertion of a stent to clear the blockage. “Working inside the carotid artery, near a blockage, there is a chance for plaque to break off and cause a stroke, when we are trying to prevent one,” says Christopher Kwolek, MD, a vascular surgeon at Newton-Wellesley Hospital.

Dr. Kwolek was the lead investigator for the Roadster Study, a 2013

clinical trial whose goal was to find a safer way to work inside carotid arteries. For the past seven years, he and national colleagues have been performing transcatheter carotid artery revascularization (TCAR), an ingenious way to insert a carotid stent with far lower risk of causing a stroke. Dr. Kwolek’s patients at Newton-Wellesley are benefitting from this new technique.

“We protect the brain by reversing the blood flow in the carotid artery,” Dr. Kwolek explains, noting that the brain receives an adequate blood supply from the other blood vessels. “Part of this flow reversal includes filtering the blood of any loosened debris. After being cleaned, it is reinfused through a small catheter in the patient’s vein.”

Instead of going through the patient’s groin, the surgeon makes a one-inch incision just above the collarbone. “We work below the blockage in an isolated area, through a straw-like sheath. This approach, along with reversing the blood flow in that artery, has produced impressive results. The overall stroke rate is 1.4 percent—the lowest reported for carotid stenting.”

The Risk for Stroke Is a Growing Concern

That statistic is important, because stroke is a growing concern. Common public health problems, including obesity and sedentary lifestyle, often lead to high blood pressure.

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When not under control, high blood pressure can result in a stroke. Meanwhile, the aging population (10,000 Americans turn 65 each day) is increasingly at risk for atrial fibrillation, a heart rhythm disorder that is also associated with stroke. Fortunately, stroke care has steadily improved; TCAR is one of the latest advances.

“The ideal candidates for TCAR are individuals who are at risk for complications because they received prior surgery—such as a carotid endarterectomy or neck surgery for cancer—and have developed scar tissue,” says Dr. Kwolek.

Some individuals are at an increased medical risk for surgery due to their history of heart or lung disease, he adds. “We try to avoid surgery when someone is older with an existing medical condition that could lead to a complication or when there is an anatomical challenge: namely, the blockage is hard to reach with standard surgery.”

Polly Baxter was an ideal candidate for TCAR. “I had a carotid endarterectomy, which caused my artery to fill with scar tissue,” says the Hopkinton resident. Routine screening had determined her carotid artery was almost completely blocked, and the surgery, performed at another hospital, did its job—until distressing symptoms appeared in late 2019.

“First I experienced numbness on my right side, and then my vision was affected,” Ms. Baxter recalls. She knew she was facing another



Polly Baxter, who lives in Hopkinton, was relieved to learn she could have transcatheter artery revascularization (TCAR) at Newton-Wellesley.

procedure. “But I didn’t want another endarterectomy.” She was relieved when Dr. Kwolek appeared and told her about TCAR.

“He described the procedure and explained why I was a good candidate. I’ve had cardiac bypass surgery, I have an arrhythmia and heart failure. I was impressed with Dr. Kwolek.”

He performed Ms. Baxter’s TCAR on December 31—New Year’s Eve. “I received exceptional care at Newton-Wellesley,” she says. “My nurse came in at midnight, and we toasted each other with ginger ale. It was memorable.”

Ms. Baxter had another reason to celebrate. “The recovery after TCAR was much easier than for a carotid endarterectomy. After TCAR, I had little pain and just took Tylenol.” In June 2020, monitoring of her left carotid artery revealed that it was more than 80 percent blocked, and Ms. Baxter returned to Newton-Wellesley.

“I was relieved to know I could again have TCAR performed—and by Dr. Kwolek,” she says. “Newton-Wellesley is my hospital of choice.”

Dr. Kwolek observes that many patients choose to come to Newton-Wellesley. “They like the setting, and they appreciate the nursing care,” he says, noting that the hybrid operating room—a facility that can be used for surgery and non-surgical procedures—has the most current imaging, which is something he appreciates.

Kathleen Dagle came to Newton-Wellesley from Topsfield when her vascular surgeon suggested she have TCAR performed because she developed excessive scar tissue. “I had a carotid endarterectomy ten years ago, followed by a second surgery last year, and my surgeon has done regular ultrasound exams since then. I’d never heard of TCAR.”

But once Dr. Kwolek described the procedure, she was on board. “He told me how the blood goes through a filter, making it safer than a typical stent procedure. Dr. Kwolek has an awesome bedside manner.”

Dr. Kwolek performed her TCAR in June, and after a quick overnight stay at Newton-Wellesley—and no need for pain medication, not even Tylenol—Ms. Dagle says she is a fan. “There’s no comparison with having a carotid endarterectomy. I’d go back to Dr. Kwolek in a minute.”

“We are seeing that TCAR has several advantages, including that most patients can have just sedation and local anesthesia.”

– Christopher Kwolek, MD, Vascular Surgeon

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In the Elfers Cardiovascular Center, First-Rate Stroke Care

Surgery to repair blocked carotid arteries still has a role to play, says Dr. Kwolek. “But we are seeing that TCAR has several advantages, including that most patients can have just sedation and local anesthesia. As we continue to study carotid stenting, it’s clear that it is durable. Safe placement, using TCAR for the right candidates, represents a long-term solution to stroke prevention.”

Today’s cardiovascular care, whether focused on the heart or the blood vessels, is largely about prevention, notes George Philippides, MD, Chief of Cardiovascular Medicine. “Patients who are at risk for stroke or receiving treatment after a stroke come to the Elfers Cardiovascular Center,” he notes. “Our neurologists see them at the center, where we collaborate on treatment plans. We even have a dedicated cardiovascular pharmacist.

The result is a well-coordinated, cohesive service for our patients.

“It is very important to understand why someone had a stroke, because that will allow us to recommend the best treatment plan in order to reduce the risk of a second stroke,” Dr. Philippides adds. One important and common cause of stroke is atrial fibrillation, an irregular heart rhythm that is common in elderly patients and those who have suffered a stroke.

“At Newton-Wellesley, we routinely monitor stroke patients for arrhythmias, including atrial fibrillation,” he explains. “In the Elfers Cardiovascular Center, we employ a novel heart-monitoring system—an implantable loop recorder—a small device that is inserted just beneath the skin in the chest. It records one’s heart rhythm better than an EKG or external monitor and may remain in place for up to three years.

“Our cardiologists and neurologists use the results from loop recorders to guide treatment with blood-thinning medication [anticoagulation therapy]



Plus and Target: Stroke Honor Role Elite Plus Quality Achievement Award.

Dr. Kwolek is optimistic about TCAR, which he and his colleagues continue to perfect. “When we first offered TCAR, only a few hundred procedures had been performed globally,” he says. “Now more than 10,000 patients worldwide have benefitted from this safe, effective procedure, and vascular surgeons are eager to attend our training courses.

“TCAR has come a long way, and we continue to work on methods to improve the results for our patients everywhere.” ■

to prevent another stroke.” Newton-Wellesley has won numerous awards for its stroke care, including the American Heart Association Stroke Gold-



The Elfers Cardiovascular Center features a hybrid operating room—a facility that can be used for surgery and non-surgical procedures and has the most current imaging.

Innovative Program Reaches Into Schools and the Community

The Resilience Project Is Committed to Childhood Mental Health

Many parents wonder if what they observe is normal behavior: is this just an episode of teenage angst, or does my kid have an anxiety disorder? The Resilience Project, launched in 2015 and recently expanded, was designed to help kids, parents and school staff when such concerns arise.



RESILIENCE IS THE ABILITY to bend but not break—to bounce back in the face of difficulty. Today resilience is considered an essential component of emotional wellbeing. When it is cultivated throughout someone's childhood and into adulthood, the result is better mental health and the ability to face life's disappointments and challenges.

During the past decade, an increasing number of children and adolescents have been diagnosed with anxiety and depression, and the teenage suicide rate continues to climb. Newton-Wellesley is the only community hospital in the region to offer comprehensive child psychiatry services, and the hospital has steadily expanded the scope of those services.

"Childhood mental illness is treatable," says Elizabeth Booma, MD, Chief of Child and Adolescent Psychiatry. "The goal is to intervene as early as possible and provide treatment that will get kids back on a healthy developmental trajectory."

Thanks to funding from The Manton Foundation (see sidebar) and other generous donors, staff at Newton-Wellesley began working with high schools in six area

towns (Natick, Needham, Newton, Waltham, Wellesley and Weston) to provide a dedicated clinical support team and direct access to NWH services.

But The Resilience Project goes further, providing professional development to school staff, a highly regarded annual Education Summit for school personnel and community outreach in the form of useful presentations and panel discussions. With Newton-Wellesley pediatric psychiatrists, psychologists and social workers making the rounds in the six towns served by The Resilience Project, more parents and school staff are gaining tools and knowledge to promote better emotional health for children. With increased access to Newton-Wellesley child psychiatry services, children and teens are receiving the evaluations and treatment they need.

"Each time we deliver a Resilience Project presentation to a local school community, we receive a flood of calls from parents who are desperate to find help because they are concerned about their child but were unable to access treatment or support," notes Dr. Booma. "We are raising awareness that help is nearby and available."

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Resilience Project

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The result is striking growth in the NWH Outpatient Clinic, where patients are evaluated and receive treatment. There were 2,355 clinic visits in 2017; 4,000 visits are projected for 2020, along with a welcome drop in Emergency Department visits. The Division of Child and Adolescent Psychiatry works hard to prevent families from feeling their only option is to bring their child to the ED. The goal is to prevent the crisis from happening.

Building Resilience Begins with Parents

It didn't take long for The Resilience Project to offer a Parents Program that quickly proved invaluable. Parents need guidance and help in managing their own distress and a place to share their thoughts with other parents—whether it is about their child's behavior or coping with life during the COVID-19 pandemic, a sudden occurrence for which few parents were prepared. The Parents Program provides specific educational tools and a popular six-session workshop, "Raising Resilient Teens."

Chris West recalls hearing about a lecture at Wellesley High School. "I was in uncharted territory at the time," he says. "I was recently divorced with two teenage sons. They were acting out a bit, and I needed to understand the difference between normal teenage behavior and a more severe condition."

He was impressed by his introduction to The Resilience Project Parents Program. "It was a very comfortable

environment where people were open, willing to share and were never critical," he explains. "Some people were in tears as they described life and death issues. We have all felt the same thing."

Mr. West has continued to attend Parent Program educational outreach sessions, including on Zoom, because he gains valuable advice. "There are two fantastic doctors who provide education on topics like how to keep control of your emotions and how to handle screen addiction in your kids," he says, referring to Juliana Chen, MD, and Tai Katzenstein, PhD.

"Thanks to The Resilience Project, I've learned to pick my battles, rather than just get angry. I step back from situations now. I want to be a good parent. This program couldn't have come at a better time. It was a lifeline that I am grateful to have found."

Laurie Kelley didn't have specific concerns regarding her own four children, but as a former pediatric nurse practitioner who worked with adolescents, she enrolled in the Parents Program and is glad she did. "Tai and Juliana provided so many nuggets of great, sound advice," says the Wellesley resident. "They reoriented everyone and reminded each parent there what their priority is."

Every family can benefit from the wisdom shared at Parents Program sessions, Ms. Kelley adds. "I've encouraged parents I know to attend the program. I tell them it's about resilient parenting."

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Elizabeth Booma, MD (left), Chief of Child and Adolescent Psychiatry, discusses the expansion of The Resilience Project to area middle schools with Jennifer DelRey, PhD, child and adolescent psychologist, who serves as Program Manager.

Resilience Project

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This Fall, Middle Schools Are Benefitting

Fueled by success since it was launched five years ago, and thanks to additional funding by The Manton Foundation, The Resilience Project was able to expand into 11 middle schools in Fall 2020. Jennifer DelRey, PhD, child and adolescent psychologist, was recruited to serve as Program Manager. Aimee Lataille, MSW, LICSW, social worker, joined Newton-Wellesley in March and immediately began providing referrals and resources to families in distress, along with clinical virtual visits. She has also partnered with middle schools and high schools to provide much-needed guidance, support and education during the COVID-19 school shutdown.

Staff at area middle schools welcomed the news that The Resilience Project was coming. Dr. Booma received an enthusiastic call from Todd Harrison, Principal at the Bigelow Middle School in Newton. “We talked for about an hour about the various programs we will offer the school,” she says. “He felt The Resilience Project mission matched the vision for what he wants for their students and families.”

Chelsea d’Hemecourt, EdS, NCSP, School Psychologist at Natick High School, is not surprised at the enthusiasm among those whose focus is middle school kids. “I’ve had many parents say to me ‘When my child was only ten, I knew they could use more support,’” says Ms. d’Hemecourt. The National Mental Health Institute has reported that 50 percent of all lifetime cases of mental illness begin by age 14. “The important thing is to support students and families through treatment. I’ve seen many students accept treatment and improve.”

She recalls when The Resilience Project debuted at Natick High School and saw the impact it had. “My colleagues and I really appreciate everything the Newton-Wellesley staff have given us. They’ve brought a clinical lens to our work by advising us on individual cases and providing counsel on useful strategies. Then there’s the annual Education Summit, which I look forward to every year.”

Dr. DelRey is aware that she has joined a unique enterprise—one that many feel should broadly serve as a model for intervening early to help kids. “I’m excited that we can serve the community in this way, especially with the expansion into middle schools,” she says. “The middle school years are such important years for learning resilience.” ■

The Manton Foundation Answers the Call

Newton-Wellesley pediatric psychiatry staff saw the growing need to reach into the community to help kids and families—but what would it look like? According to Michael Jellinek, MD, a renowned child psychiatrist and Professor of Psychiatry and Pediatrics at Harvard Medical School, the idea for The Resilience Project began in the 1990s, when he was asked by the Newton Public Schools to provide consultation services.

“I spent a few hours each week, mainly in the high schools,” he recalls. “Each school had a different need, from supporting guidance staff to substance use to depression. The idea for The Resilience Project came from that experience.” That idea—to identify kids early, whether by a parent, teacher or guidance counselor—was about prevention. As a seasoned pediatric psychiatrist, Dr. Jellinek understands the importance of early intervention.

Several years later, thanks to the generosity of The Manton Foundation, Dr. Jellinek and his NWH pediatric psychiatry colleagues were able to launch a completely new initiative to bring education and support—and make strong connections—to area high schools. The Resilience Council, comprised of community members and Newton-Wellesley staff, soon formed. It has played a key role in creating awareness and providing ideas, as well as financial support, and its members serve as enthusiastic ambassadors.

From there, Dr. Jellinek was asked to lead the Collaborative for Healthy Families and Communities, Newton-Wellesley’s vital organization of eight councils addressing every stage of life that are woven into the community served by Newton-Wellesley. The Resilience Project led the way, thanks to support from The Manton Foundation, which saw the need and answered the call.

In 2019, foundation trustees provided a second large gift that allowed The Resilience Project to expand into area middle schools. “Childhood mental illness affects families from all walks of life, and it is not unusual to know someone whose child is struggling with anxiety, depression, an eating disorder or suicide,” says Sandra Niles, a Manton Foundation trustee. “We were motivated to support Newton-Wellesley and its work with schools because we knew it was going to be unique.”

Tapping into the Body's Innate Ability to Heal

Joanne Borg-Stein, MD, Is Refining Orthobiologic Therapy

It's not easy for someone who is used to running 30-40 miles a week to stop. It's even tougher when months pass by with no specific diagnosis or effective treatment. That was Brian Howard's situation after he participated in a relay race and woke up the next morning with foot pain. After three years of searching for an answer, Mr. Howard met Joanne Borg-Stein, MD, Chief of Physical Medicine and Rehabilitation at Newton-Wellesley Hospital. That is when the healing process began.

"I SAW MANY DOCTORS, including a number of orthopedic surgeons," says the Cambridge resident, who is 38. "One doctor said I appeared to have metatarsalgia, which means pain in the ball of one's foot. I was told to rest, I had a cortisone shot, and I wore an air-cast. Nothing helped, including physical therapy."

Mr. Howard was used to being active, but that wasn't possible with his painful big toe and forefoot. "I had to discontinue yoga and couldn't lift weights," he says. "I was able to do some light Pilates." He was ready for anything—even surgery, but there was no apparent surgery to repair his foot.

Things looked up when he was referred to Lauren Elson, MD, a physiatrist at Newton-Wellesley. "I was impressed with the holistic way she examined me," Mr. Howard recalls. "Dr. Elson assessed where I was strong and where I was weak, and she observed that the muscles in my calves and hips were very tight. She suggested I make an appointment to see Dr. Borg-Stein."

In November 2019, Mr. Howard met with Dr. Borg-Stein and Dr. Elson. "They spent three hours studying my foot with ultrasound imaging," he says. "Dr. Borg-Stein suggested prolotherapy—six treatments over six months. I had the first injection that day. I watched how the two physicians used imaging to be sure the needle was in the precise location."

Dr. Borg-Stein explained that he would experience some initial



Brian Howard's injured foot didn't begin to heal until he began orthobiologic treatment with Joanne Borg-Stein, MD, last fall.

inflammation—a sign that the body's natural healing process was occurring. "Prolotherapy techniques vary, but they typically include dextrose, which is shown to increase the production of growth factors," she explains.

Progress was on the way. "After the second treatment, my foot started to steadily improve," says Mr. Howard, who began a new course of physical therapy, under Dr. Borg-Stein's guidance, with Gail Monaghan, PT, ScD, at Spaulding Rehab in Cambridge, near his home. "Pretty soon I was walking comfortably again. Now I walk 1.5 miles to work and home—three miles a day. That would have been unthinkable last fall. I made more progress in the nine months since I began treatment with Dr. Borg-Stein than I did in the prior three years."

Will he run again? "I hope to get back to running, because I miss it. I realize that relay race was the straw that broke the camel's back. But it seems like the underlying issues have been resolved, and I'm building back the intrinsic strength in my foot. With Dr. Borg-Stein's help, my body hit the reset button."

The goal: signal the body to initiate healing

The reset button: Dr. Borg-Stein understands it at the cellular level where healing occurs. She has established an impressive track record of conducting and publishing research on the most promising orthobiologic therapies—techniques that are being refined for treating a range of musculoskeletal disorders, from sports injuries to hip, knee,

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Orthobiologic Therapy

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shoulder and spine pain. Potential treatment targets include joint, cartilage, tendon, ligament, muscle and bone.

“Although these therapies require continued, high-level research, athletes and, increasingly the public, are asking for them,” she says. “We know they can be effective, including in chronic conditions such as Brian’s, and as an alternative for individuals who don’t clearly require surgery. What is the right dose and timing of rehab, and how fast do we push people? We continue to work on these questions.”

Dr. Borg-Stein says there are a few myths surrounding orthobiologic therapy. “Patients who have been told their pain is due to cartilage that has worn out often assume it can be restored, but we can’t do that,” she notes. “However, we can reduce inflammation, and we can signal the body to direct cells that will initiate healing.”

Another common belief is that these treatments involve stem cells. “Today’s orthobiologic therapies are more likely to be a mix of cells, such as platelets, bone marrow or fat cells,” she says. “The other thing I emphasize to patients is that successful healing requires work on

“It seems like the underlying issues have been resolved, and I’m building back the intrinsic strength in my foot. With Dr. Borg-Stein’s help, my body hit the reset button.”

**– Brian Howard,
Cambridge resident**



their part. They need to commit to good nutrition, adequate rest and a specific exercise program. We work with outstanding physical therapists at Newton-Wellesley and Spaulding Rehabilitation.”

She and her Division of Physical Medicine and Rehabilitation colleagues see difficult cases, including overlap syndromes that are not easily diagnosed. “For example, we might need to determine if the source of the patient’s problem is the hip, the spine or an underlying autoimmune condition,” she notes. “Our division is unique in its comprehensive, highly specialized approach to musculoskeletal problems.”

Several division physicians serve as core faculty for the Harvard Medical School Department of Physical Medicine and Rehabilitation, as well as for Spaulding Rehabilitation Hospital. They publish widely, serve on editorial boards and have received numerous awards and honors.

While Dr. Borg-Stein and division physicians attract a steady stream of patients who may be difficult to diagnose, other cases are straightforward. That was true of Eric

“We know [these therapies] can be effective, including in chronic conditions such as Brian’s, and as an alternative for individuals who don’t clearly require surgery.”

**– Joanne Borg-Stein, MD
Chief of Physical Medicine
and Rehabilitation**

Jacobson, PhD, who injured his right shoulder when he fell. A practitioner of the Rolf method of physical manipulation to improve overall body mechanics, he was already acquainted with Dr. Borg-Stein, and his instinct was to see her first. “She used ultrasound to study my shoulder and determined the tendons were frayed. During manual therapy sessions with clients, I bear down on both arms, so I need shoulder strength in order to work.”

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Orthobiologic Therapy

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Orthobiologic Therapies Are Being Refined

Few physicians have as much experience as Joanne Borg-Stein, MD, in using orthobiologic therapy in the treatment of musculoskeletal conditions. The main techniques include:

- **Regenerative cell-based injections** for osteoarthritis and sports injuries.
- **Stromal cells**, delivered via transfer of fat tissue or bone marrow, which have a role in treating joint pain and chronic tendon disorders.
- **Platelet-rich plasma (PRP)**, which is used for treating osteoarthritis and musculoskeletal disorders, notably in sports medicine.
- **Prolotherapy** (proliferative therapy), which is an established treatment with special application in joint pain and hypermobility.

Dr. Borg-Stein's current research includes studying the mechanisms of PRP and how to predict whose platelets will be effective, the use of shock-waves to augment the healing response and studying the outcomes of hip and shoulder treatments.

Dr. Borg-Stein was willing to treat Dr. Jacobson's shoulder, but she suggested that he first see a surgeon. "She's very careful to present her patients with options," he says. "In my case, she identified a bone spur

and wanted the surgeon to decide if it should be removed." He did not think that was necessary, so Dr. Borg-Stein administered platelet-rich plasma. When this had only short-term effect, she suggested adipose

transfer—fat cells harvested from Dr. Jacobson's buttock and then cleansed and prepared to create a suspension that was injected under careful ultrasound guidance.

"The pain went away, and my shoulder became a lot more stable," he says. "I experienced an 80% improvement in eight months. The surgeon I saw told me that I would need as long as five months to recover if I had surgery to repair my shoulder. After being treated by Dr. Borg-Stein, I stopped working for only one week, immediately following the treatment.

Health plans do not yet cover the cost of orthobiologic therapies, but many individuals are happy to proceed—and happy with the outcome. "I would absolutely make the same decision to have treatment with Dr. Borg-Stein," says Dr. Jacobson, who is 73. "She is a terrifically gifted physician. I have suggested to many people that they see her." ■



Joanne Borg-Stein, MD, Chief of Physical Medicine and Rehabilitation, has established an impressive track record of conducting research on the most promising orthobiologic therapies—techniques that are being refined for treating a range of musculoskeletal disorders.



Sunday, October 4

While we won't be walking side-by-side this year, we will still be walking together to support the Mass General Cancer Center at Newton-Wellesley.

What does it mean to go virtual? It means you can walk wherever you like! On Sunday, October 4, walk around your neighborhood, go to the park or walk your dog. We are encouraging walkers to walk two miles, but choose what feels right to you! Just be sure to do it safely and follow social distancing guidelines.

**Donate \$20 at the time of registration to
receive your Hope Walks long-sleeve shirt.**

We hope to virtually see you on Sunday, October 4.



MASS GENERAL
CANCER CENTER
at Newton-Wellesley