

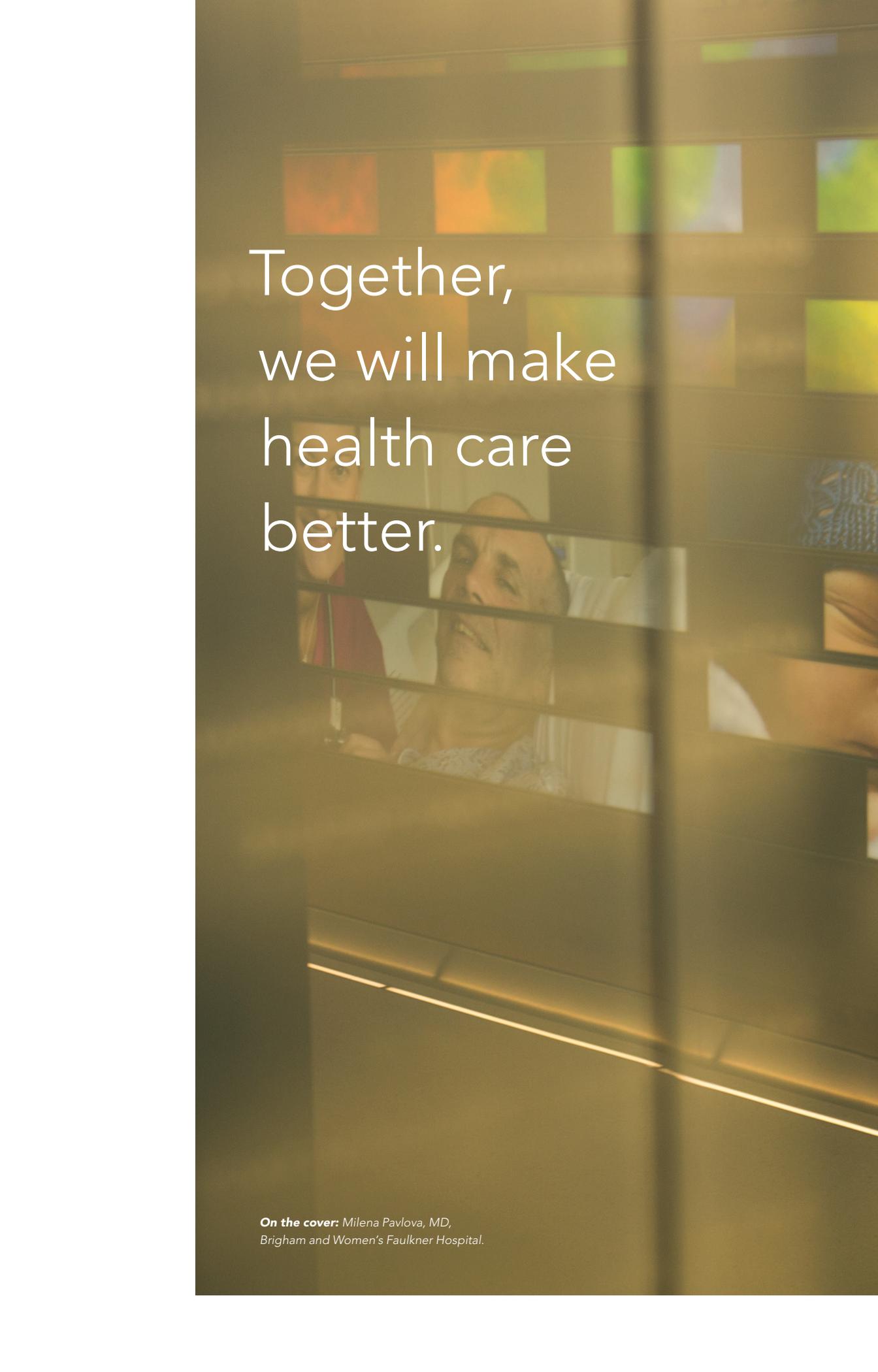


IMPACT

Annual Report 2017



FOUNDED BY BRIGHAM AND WOMEN'S HOSPITAL
AND MASSACHUSETTS GENERAL HOSPITAL

A photograph of a hospital room, viewed through window blinds. The blinds are partially open, creating horizontal lines across the scene. In the center, a patient is lying in a hospital bed, looking towards the camera with a slight smile. To the left, a doctor in a white coat and red tie is partially visible. The room is dimly lit, with light coming from the window, creating a warm, golden glow. The background shows other hospital beds and colorful wall panels.

Together,
we will make
health care
better.

On the cover: Milena Pavlova, MD,
Brigham and Women's Faulkner Hospital.



IMPACT

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*Mona Joseph, Community Health Worker,
MGH Chelsea HealthCare Center.*

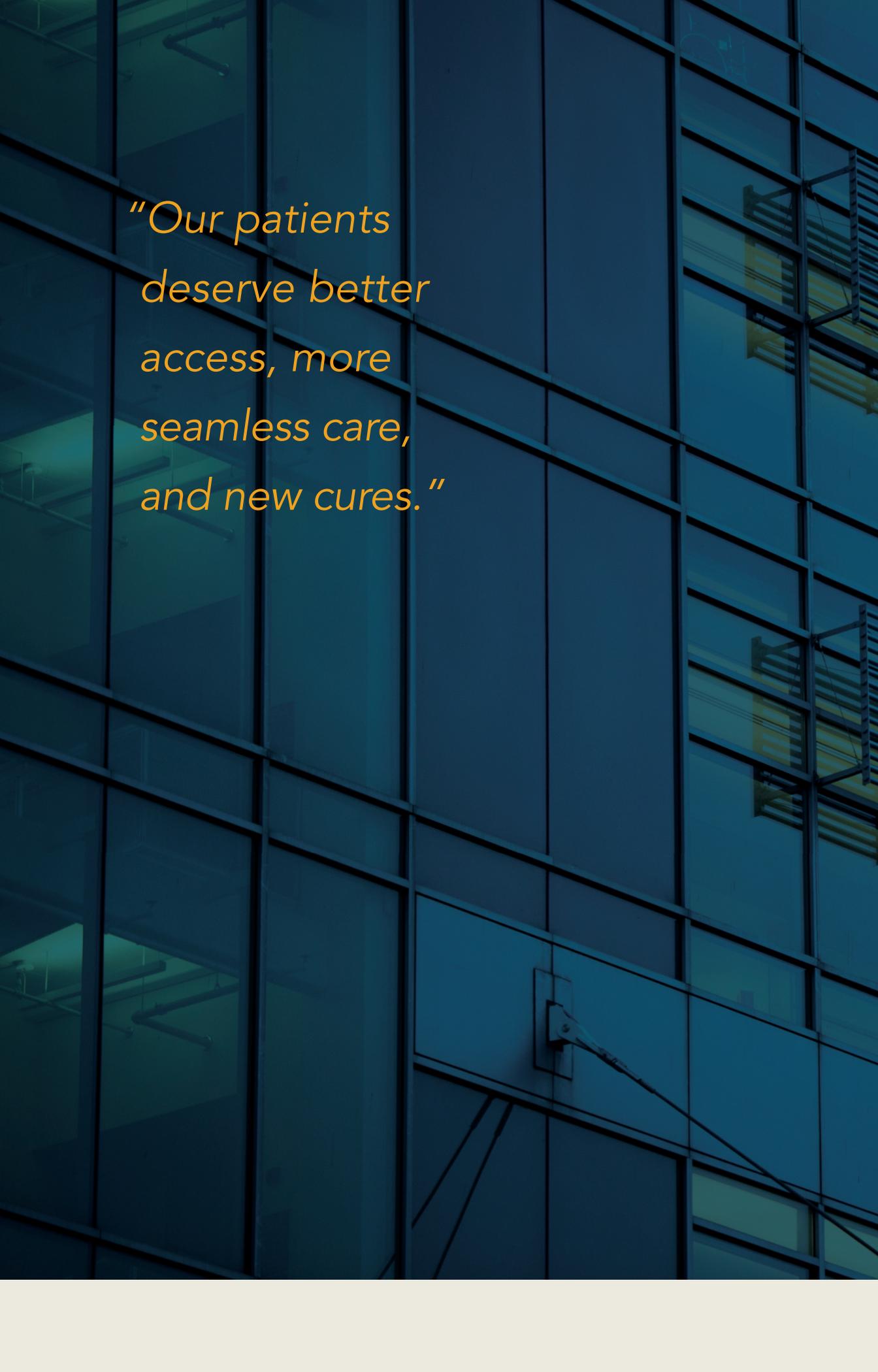
PARTNERS

This is the Partners HealthCare system at work.

- Practitioners engage with patients.
- Researchers explore and discover.
- Specialists diagnose.
- Colleagues share data and insights.
- Leaders instill mission-guided core values.
- Hospitals put knowledge into action.
- Communities advance.
- Care improves. Every day.

Each one of Partners HealthCare's research and care centers is an essential part of a greater whole – a system of discovery, development, prevention, and treatment. Guided by our reinvented Partners 2.0 strategy, we're strengthening and streamlining that system in order to meet the unprecedented challenges – and opportunities – ahead of us. Much of our work happens in New England, where our system weaves into a broader ecosystem of top teaching hospitals, universities, entrepreneurs, investors, and biotechnology companies, driving economic growth and opportunity in the region. But our impact is felt worldwide. The scientific advances we foster benefit patients everywhere.

Our system thrives only with the continued nurturing of our most valuable resources, the sharing of our knowledge and assets, and an unrelenting emphasis on innovation – to ultimately cure disease, and unlock economic and human potential. We are motivated every day to work together to enhance communication and collaboration across the care continuum, bringing forth more unified health care teams, modernized educational opportunities, and a better understanding of clinical treatment. That is the mission that drives our evolving system forward. And the stories behind our efforts are told in these pages.



*"Our patients
deserve better
access, more
seamless care,
and new cures."*

Dear Colleagues,

An annual report is a place to celebrate successes and highlight achievements that happened over the past year. A potential risk to this ritual is that complacent organizations bask in these accomplishments and become satisfied with the present. There is no place for complacency in health care today and Partners HealthCare cannot stand still. Our patients need and deserve better access, more seamless care, and new cures. Our payers – both government and employers – are determined to hold the line on costs. Our clinicians are struggling with administrative burden and our state and federal regulators are relentlessly applying more pressure.

The unifying effects of a successfully implemented electronic health record, a common population health strategy, and a singular drive to reinvent our system have yielded new strengths. Over the last year we have engaged in an intensive program of performance enhancement and expense reduction that we call Partners 2.0. While the results to date have been gratifying and have helped stabilize our declining financial health, this activity is just beginning.

The most important theme is how we are recalibrating our tradition of working as independent parts and beginning to take advantage of the many opportunities to limit duplication and coordinate our actions across institutions. This means planning together and stewarding all of our resources to maximize their impact. It means always optimizing, so that patients are cared for in the most cost-effective and convenient site whenever possible, and simultaneously creating capacity at our in-demand academic medical centers. What makes this theme of working together so easy to get behind is that it is not only the right thing to do, but is also our obligation to society.

I enormously appreciate the support and counsel of Ed Lawrence, who stepped down as Partners board chair in January of this year. I look forward to continuing to pursue Partners' future with our new chairman, Scott Sperling.

There are more than 73,000 people who work for Partners or one of our institutions. Through their collective efforts – together – we will make health care better.



Dr. David F. Torchiana
President and CEO
Partners HealthCare



YIELD IMM

*Peter Libby, MD, Brigham
and Women's Hospital.*

DINDING PACT

INNOVATION

Landmark Study Yields New Approaches to Heart Disease, Cancer

Last fall, more than two decades of work by Brigham and Women's Hospital (BWH) researchers culminated in a discovery that could fundamentally change the way we treat the two leading causes of death in the United States. The anti-inflammatory drug the researchers studied proved effective in reducing the risk of both cardiac events and cancer.

The study, known as CANTOS (Canakinumab Anti-inflammatory Thrombosis Outcomes Study) and led by Paul M. Ridker, MD, Director of the BWH Center for Cardiovascular Disease Prevention, represented the collective efforts of 1,000 physicians worldwide. Together, they collected data from more than 10,000 patients with a history of heart attack and high levels of C-reactive protein (hs-CRP), an inflammation marker.

“By leveraging an entirely new way to treat patients – targeting inflammation – we may be able to significantly improve outcomes for certain very high-risk populations,” says Dr. Ridker.

Though half of heart attacks occur in people without high cholesterol, no study was previously designed to lower inflammation without also targeting cholesterol. Dr. Ridker and colleagues sought to test whether lowering inflammation alone could reduce the risk of recurrent cardiac events and death. Their hypothesis was built on research from many investigators worldwide including Peter Libby, MD, a BWH cardiovascular specialist who was among the first to tie atherosclerosis to the pro-inflammatory mediator Interleukin-1 and helped launch the CANTOS trial. Robert Glynn, PhD, Senior Biostatistician at BWH, served as the trial’s independent academic statistician, writing and presenting quarterly monitoring

reports to the trial’s independent data and safety monitoring board throughout the six years of double-blind randomized treatment, as well as directing the final analyses of trial publications.

The results were strongly positive: Canakinumab significantly lowered the risk – by up to a third – of future heart attack, stroke, or cardiac death among those patients with the largest reductions in hs-CRP. The drug also reduced the need for interventional procedures such as bypass or angioplasty. Adding another dimension to the data, the highest dose of Canakinumab also cut the risk of lung cancer mortality in half. Together, the findings will enable researchers to approach cardiovascular disease and cancer treatment in a way that promises new hope and possibilities for patients.

Below: Paul Ridker, MD, Peter Libby, MD, and Robert Glynn, PhD.

The anti-inflammatory drug they studied proved effective in reducing the risk of both cardiac events and cancer.



RESEARCH BRINGS NEW CANCER TREATMENT – AND NEW HOPE FOR PATIENTS

Immunotherapy treatments, which channel the body's own cells to attack cancer, are growing in ubiquity and proving their effectiveness among oncology patients. Massachusetts General Hospital (MGH) is at the leading edge of this research for treating – and even curing – notoriously deadly blood cancers.

Marcela Maus, MD, Director of the Cellular Immunotherapy Program, leads the MGH team developing an immune cell treatment approach called CAR T-cell therapy, giving new hope to adult patients with relapsed or refractory large B-cell lymphoma – a condition with a remission rate of just five percent using traditional therapies.

CAR T-cell therapy works by extracting and genetically engineering T-cells with copies of a protein called CAR (chimeric antigen receptor). The modified CAR T-cells are then multiplied in a lab; millions of these cells are then infused back into the patient where they attack and destroy the patient's own cancer cells.

In a landmark study called Zuma-1 published in late 2017, researchers demonstrated that among patients with advanced B-cell lymphoma who received CAR T-cells, a striking 82% of patients saw their cancers retreat – and more than half experienced complete remission. As



Above: Marcela Maus, MD.

Photo credit: Mass General Cancer Center.

the research team recently reported to *The New England Journal of Medicine*, sustained remission has occurred in one patient whose cancer had spread to the brain, a condition that is usually terminal.

“It’s a tremendously exciting time to be in cancer research right now, with immunotherapy undergoing a renaissance,” says Dr. Maus. “As we find new strategies to surpass hostile tumor environments, we believe that cures for many cancers lie within our reach.”

The research provided the basis for FDA approval of Yescarta, CAR T-cell therapy for adults with B-cell lymphoma, and the Mass General Cancer Center is one of the few authorized treatment centers in the country where patients can receive the therapy. Though significant immune system side effects remain a challenge, researchers are hopeful that the CAR T-cell approach will unlock new treatments for patients with blood and solid-tumor cancers.

Immunotherapy – channeling the body's own cells to attack cancer – continues to show promise.

ONE COLLABORATIVE SURGERY, TWO SUCCESSFUL PROCEDURES

Advances in medical imaging are enabling unprecedented surgical collaborations that significantly improve patient outcomes. A team of Brigham and Women's Hospital surgeons recently took that collaboration to the next level in a pioneering, multi-step procedure for one patient with metastatic breast cancer.

The procedure, performed in the hospital's Advanced Multimodality Image Guided Operating (AMIGO) Suite, brought together the surgical expertise of Alexandra Golby, MD, Director of Image-Guided Neurosurgery, and Jessica Erdmann-Sager, MD, Breast Reconstructive Specialist, along with a cross-disciplinary medical team. Their challenge: perform multiple procedures across different surgical sites in one operation, targeting a 55-year-old patient's cancer that had metastasized from her breast to her brain.

First, the surgeons removed an MRI-incompatible breast tissue expander to enable diagnostic visualization of the brain metastasis. They then replaced the expander with a silicone breast implant. Once Dr. Erdmann-Sager completed her



Above: Jessica Erdmann-Sager, MD, and Alexandra Golby, MD.

work, Dr. Golby used the MRI to identify and surgically remove the patient's brain lesions. Without leaving the operating room, the surgeons had successfully performed two complex surgical procedures and one advanced imaging study. For the patient, this was more than a medical feat; it meant only a single exposure to anesthesia and its accompanying risks.

"Working within the framework of this hospital and the broader Partners Health-Care network trains our eyes toward those opportunities when partnership can better serve patients," notes Dr. Erdmann-Sager. "Surgical innovation expands what we can achieve together, within a single operating room," adds Dr. Golby.

For the patient, this was more than a medical feat; it meant only a single exposure to anesthesia and its accompanying risks.

\$1.6

billion in research funding
to discover new treatments
and cures.

WATSON
NO
MNO

INNOVATION

Moving Data From Devices to the Doctor's Office



A new online platform promises to make wearable technology more than a trendy gadget. The Connected Health Integration Pathway (CHIP) harnesses the capabilities of Part-

ners Connected Health, Partners eCare, Information Systems, and Patient Gateway to help make health care more proactive, population-based, and patient-centered. This service allows patients to easily and securely share personal health data with their care team, using their own consumer health devices, including activity trackers, wearables, sensors, and remote monitoring devices. The CHIP platform has already demonstrated promise in helping clinicians to personalize care through positive outcomes in blood pressure and weight-monitoring pilots at the Massachusetts General Hospital Revere HealthCare Center.

Partners in Industry

Every day, innovators across Partners HealthCare are uncovering new medical breakthroughs, with approximately 500 new inventions in 2017 alone. Through a groundbreaking, 10-year collaboration, Partners and GE Healthcare have committed to furthering innovation by investigating and integrating artificial intelligence (AI) into every aspect of patient care. Through the partnership, centered at the Massachusetts General Hospital and Brigham and Women's Hospital Center for Clinical Data Science, teams will create new business models for applying AI to health care, develop specialty medical products, and enhance diagnostic imaging procedures. Ultimately, the goal is to bring the benefits of these advances to patients, clinicians, and communities worldwide – shaping the future of health care.



*The Neil and Elise Wallace
STRATUS Center for Medical
Simulation.*

Empowering clinicians to advance the future of health care.

Sensor Stays a Step Ahead of ALS

With a little help from Hollywood, a new facial movement sensor under investigation by MGH Institute of Health Professions Speech-Language Pathologist Jordan R. Green, PhD, could bring new hope to patients with amyotrophic lateral sclerosis (ALS). One of the neurodegenerative disorder's greatest challenges is the rapid progression of muscle degeneration; patients can lose as much as 30 percent of motor skills prior to diagnosis. The sensor, developed in Hollywood for on-screen animation, creates a three-dimensional computer image, enabling Dr. Green's team to study millimeter-sized facial movements. By identifying otherwise unobservable changes in facial movement and using machine learning algorithms to analyze the data, Dr. Green hopes his findings can more rapidly identify ALS and help clinicians stay a step ahead of the disease.

30%

of motor skills can be lost before a patient is diagnosed with ALS. Sensor technology could lead to earlier detection.

Measuring What Matters

The Partners HealthCare team is always committed to delivering high-quality patient care, but it can sometimes be difficult to quantify patient outcomes. To tackle this challenge, a single electronic medical record across our network of hospitals and outpatient clinics now enables us to capture real-time progress patients make in their care through the thousands of interactions that occur every day throughout our system. The new Ambulatory Quality website delivers an unprecedented level of transparency by providing a portal for best practices and areas for clinical improvement, while putting forward tools to inform care choices and guide subsequent conversations between patients and their Partners physicians.



Medical Simulation Reaches New Frontiers with NASA Partnership

Health care simulation has reached new heights at Brigham and Women's Hospital (BWH), with a NASA partnership designed to help astronauts effectively manage medical emergencies in space. Researchers from the BWH Neil and Elise Wallace STRATUS Center for Medical Simulation collaborated with experts from McMaster University and Northern Ontario School of Medicine in Canada to design and construct a simulated spacecraft medical bay based on the one found in the International Space Station. Inside the simulator, BWH researchers will implement a non-technical skills training program they developed for astronauts on prospective missions to Mars, near-Earth asteroids, or the moon. The researchers will create scenarios to test the astronauts' situational awareness, decision-making, communication, leadership, and teamwork in the unique space environment, with the goal of helping NASA determine the medical capabilities needed for future space missions.

JOIN TOGETHER

*Ali Abdullahi, Manager, Complex
Patient Populations, MGH Chelsea
HealthCare Center.*

WINNING TOGETHER

COMMUNITY

Overcoming Barriers to Community Health

The social determinants of health – factors that impact how we live, work, and age – can play a significant role in people’s well-being. Community Health Workers (CHWs) have proven to help patients effectively address these social determinants. A newly launched Partners HealthCare program provides CHWs with the tools they need to support the

most vulnerable patients in overcoming the factors that often diminish their access to quality health care.

Spearheaded by Eric Weil, MD, Chief Medical Officer for Primary Care, Center for Population Health, the Community Health Worker Collaborative aims to increase the potential of CHWs to

improve patient outcomes across the Partners system. Developed in concert with Massachusetts General Hospital (MGH) and Brigham and Women's Hospital (BWH), the Collaborative is building upon successful, established programs at both institutions and is designed to spread these best practices across the system.

Uniquely positioned to bridge the various cultural, language, and social barriers that restrict health care access, CHWs can be critical to improving the health outcomes of at-risk populations – and helping to manage costs and raise the overall quality of care in the community. As the Partners Medicaid Accountable Care Organization (ACO) enters the marketplace this spring, requiring coordinated screening for social determinants of health, CHWs will play an even more vital role in population health.

“Knowing that CHWs are often the key ingredient to accessing health care for underserved patients, this Collaborative aims to better recognize and support the CHW profession,” says Sarah Oo, MSW, Director of Community Health Improvement at MGH Chelsea HealthCare Center, who was tasked to co-lead the Collaborative. “We are honored to be sharing our experience and learning from our colleagues across the Partners system in this exciting and important endeavor.”

The Collaborative will train current CHWs while additional workers are hired to support the ACO. A toolkit will standardize CHW policies and procedures across the entire Partners system. Led by Oo and Rose Kakoza, MD, BWH primary care physician, the program will draw on experiences and recommendations of frontline managers to help CHWs most effectively reach the community populations who tend to experience poor health outcomes.

CHWs are uniquely positioned to bridge the various cultural, language, and social barriers that restrict health care access.



BETTER CARE FOR A VULNERABLE POPULATION

Beginning in December 2016, Partners HealthCare ran a MassHealth Accountable Care Organization (ACO) pilot, which aimed to improve services for a subset of our Medicaid patients to prepare for the launch of the full statewide program. In March 2018, we joined with the state of Massachusetts to launch Partners HealthCare Choice, which includes nearly 100,000 patients in 140 primary care practices across the Partners system. Programs developed during the pilot were expanded and made available for the first time to many more Medicaid patients in our system.

“By taking these programs full-scale to our larger Medicaid population, we can be more responsible stewards of health

Partners HealthCare Choice includes nearly 100,000 Medicaid patients in 140 primary care practices across the Partners system.

care costs while reaching these patients where they are,” notes Eric Weil, MD, Chief Medical Officer for Primary Care, Center for Population Health, and lead of the Partners MassHealth ACO pilot.

Our ACO pilot program engaged Medicaid patients through several interventions, many focused on behavioral health. The full ACO interventions include a high-risk management program, a home-based ambulatory intensive care unit, an Emergency Department navigator program, recovery coaches for substance use disorders, and the Community Health Worker Collaborative (see page 15). The ACO also adds a system-wide screening program for social determinants of health, which identifies patients whose social, financial, and geographic circumstances warrant referral to other resources.

Neighborhood Health Plan stepped in to support the Partners HealthCare Choice ACO, lending resources, and member relations, contracting, and technical infrastructure expertise to a program that cuts across many Partners divisions and institutions. The program is already showing signs of positive impact. “The interventions have already begun to demonstrate financial savings by helping us better care for this vulnerable population,” says Weil.





EXPANDING OUR FACILITIES – AND OUR IMPACT IN THE COMMUNITY

The expansion of a MGH Institute of Health Professions program promises to improve hands-on interprofessional education and make health and rehabilitation services more accessible to the community.

The new IMPACT Practice Center, a 15,000 square foot, state-of-the-art facility, triples the Institute's previous space for the program and allows for a significant expansion of the 10,000 hours of free services (valued at more than \$1 million) that it already provides to Boston-area residents. The new Center enables student teams from across health professions to deliver integrated services as part of their clinical education to clients with a range of needs stemming from speech disorders, stroke, brain injury, and other chronic conditions. In addition, students are now able to offer a wide variety of wellness and educational

programming. The new facility features adult and pediatric treatment rooms, consultation spaces, a rehabilitation gym, exam rooms, a pediatric sensory room, and a community room for continuing care – care that is often limited by the lack of insurance benefits and available services.

By providing this free care under the supervision of the Institute's practicing clinician faculty, students enrolled in the nursing, occupational therapy, physical therapy, physician assistant studies, and speech-language pathology programs receive a priceless benefit: real-life experience.

"The Center gives the Institute a space where students can learn from each other and faculty experts while providing more comprehensive care to our clients," says Alex Johnson, Institute Provost and Vice President for Academic Affairs. "It represents one more significant step forward in preparing students for the future of health care, where most care delivery will be carried out by teams of professionals."

The program has improved the frequency and quality of conversations, reducing patients' anxiety and depression.

POPULATION HEALTH PROGRAMS HELP SERIOUSLY ILL PATIENTS EXPLORE WHAT MATTERS MOST

Less than one-third of patients with advancing serious illness discuss their goals and preferences with their clinicians, and if they do, it happens late and focuses on medical details rather than the patient's goals and values. The Serious Illness Care Program, created by palliative care experts at Ariadne Labs, is now in effect across the Partners HealthCare system. Implemented at Brigham and Women's Hospital (BWH) and supported by the Center for Population Health, the program includes training on digital infrastructure and a Serious Illness Conversation Guide, enabling interprofessional clinical teams to have meaningful conversations with their patients. The program has improved the frequency and quality of conversations, reduced patients' anxiety and depression, and is associated with more efficient use of resources. "Our goal is to shift our culture to focus on what matters most to our seriously ill patients, giving clinicians and patients the tools they need to express and act upon their wishes," says Josh Lakin, MD, Palliative Care Specialist at BWH and Dana Farber Cancer Institute, and Lead Palliative Care Consultant for the BWH iCMP team.

A DIFFERENT KIND OF CARE FOR PATIENTS IN NEED

Last year, a Newton-Wellesley Hospital (NWH) patient care assistant noticed a troubling trend: underserved and homeless men and women were often discharged with nothing to wear but the clothes they wore into the hospital. Scott Hornby, whose job is to support patients' day-to-day activities, found it impossible to ignore this pressing need. That is why he created Hornby's Closet, an ongoing effort to collect and distribute clothing items, from shirts and pants to winter coats and gloves.

With the help of NWH hospitalist Lien Le, MD, close to 30 hospital volunteers, and community partners, Hornby's Closet now provides needed clothing to aid these patients. Reflecting NWH's concern for patient dignity, Hornby's Closet distributes clothing only in opaque bags. "Very often," says Hornby, "these patients are enormously grateful and deeply touched."

Below: Scott Hornby.



A GLOBAL PERSPECTIVE

Finding Community in Natural Disasters

For health care providers trained to save lives, images of disaster-torn communities in 2017 were too heart-breaking to ignore. So Partners HealthCare physicians, nurses, and staff did what they are trained to do: they mobilized.

Across South Texas, Florida, and Puerto Rico, Partners engaged in multifaceted disaster relief efforts. A group of five Newton-Wellesley Hospital nurses answered Houston's call for health care providers, traveling to the Bay Area Regional Medical Center (BARMC), just outside the center of Hurricane Harvey's devastation. Working in 12-hour shifts, they delivered much-needed relief for overburdened local nurses and volunteered alongside a community church to clear out belongings from homes at risk of mold. Four Brigham and Women's Hospital (BWH) nurses also joined the relief team at BARMC.

In Puerto Rico, a 26-person Massachusetts General Hospital (MGH) medical team assumed care of 33 patients in a Federal Medical Station (FMS) in Ponce, the island's second-largest city, which was left without water, food, or supplies in the wake of Hurricane Maria. In a generator-powered facility, the MGH team successfully managed the patients' needs while helping them transition out of the FMS to more permanent destinations with appropriate medical care and services. Additionally, more than 20 MGH staff members traveled

to both Texas and Florida in response to Hurricanes Harvey and Irma to work with Project Hope and Americares.

In a separate trip, Ana Colcord, RN, a North Shore Medical Center nurse, traveled to Ponce, where she contributed two skills in high demand: life-sustaining dialysis treatments and patient communication in Spanish.

Back home, additional Partners relief efforts came in the form of donations. BWH Intensive Care Unit nurse Mary Hardiman, RN, solicited community contributions of clothing and food for Hurricane Harvey survivors. And a benefit concert by The Big 6, a band made up of BWH physicians and staff, raised needed humanitarian relief funds that will continue to support all hurricane-affected areas as they rebuild.

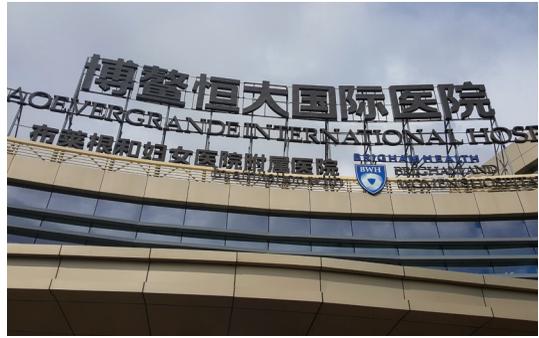
Diane Miller, RN, a member of the BWH nursing team who traveled to Houston, says that delivering on-the-ground disaster relief came naturally to the team. "Being able to help others who are in need really gets to the heart of nursing," Miller said.



*The MGH Chester M. Pierce, MD
Division of Global Psychiatry, Ethiopia.
Photo credit: Kristina Korte, MD.*

Building Capacity for Care: Training Brain Doctors in Africa

The Republic of Somaliland in the Horn of Africa faces a critical problem as it cares for patients with brain disorders: there are no trained neurologists or psychiatrists in the country. Ready to meet this challenge, the Massachusetts General Hospital (MGH) Chester M. Pierce, MD Division of Global Psychiatry received a grant to sponsor a neuropsychiatry residency program with the country's University of Hargeisa. Recently, the program's first three residents began their training at St. Paul's Medical School and Hospital in Addis Ababa, Ethiopia, supported by a curriculum developed by Zeina El-Chemali, MD, a MGH psychiatrist, neurologist, and Director of the Neuropsychiatry Fellowship; Greg Fricchione, MD, Director of the Chester M. Pierce Division of Global Psychiatry; and David Henderson, MD, formerly of MGH, and now Chair of Psychiatry at Boston Medical Center. Once this first wave of residents completes training, they will return to Hargeisa, where they will extend their new expertise to physicians-in-training there – and continue the cycle that Partners HealthCare has set in motion within the developing nation.



Bringing World-Class Cancer Treatment to China

Partners HealthCare has long been committed to improving care beyond our own borders. For the past two years, Brigham Health senior leaders and medical experts have delivered on that commitment with strategic guidance to a Chinese company building a nationwide health care system. The first major undertaking of this effort is the development of the Boao Evergrande International Hospital in affiliation with Brigham and Women's Hospital (BWH) in China's Hainan province. The hospital will deliver world-class cancer care when it formally opens this year, thanks to the operational and clinical advice provided by an expert BWH team working in collaboration with the Dana-Farber/Brigham and Women's Cancer Center. From hospital planning to information technology, the Brigham Health team has involved almost 20 clinical and administrative departments – all to help their counterparts in China to deliver integrated, multidisciplinary care. Once open, the hospital will maintain a partnership with BWH via telemedicine services and refer patients to Boston as needed. This effort builds on the long-term partnership between Partners and the Jiahui International Hospital in Shanghai, which involved designing and building a new hospital with support from both BWH and Massachusetts General Hospital.

Above: Boao Evergrande International Hospital in affiliation with Brigham and Women's Hospital.



Coaching Toward Recovery

As the opioid crisis continues to devastate local families and communities, North Shore Medical Center (NSMC) is working outside of the hospital to provide critical, long-term support for patients impacted by substance use disorders.

NSMC and Bridgewell, a Peabody-based nonprofit social services agency, have teamed up to provide recovery coaches to every individual treated for an overdose in the Emergency Department at NSMC Union Hospital in Lynn. The coaches, who have overcome their own addictions and have completed state certification and training, can relate firsthand to the struggles surrounding overdose. The coaches provide contact and support for patients throughout the weeks and months that follow their hospital stays, offering crucial insight into the recovery process.

"The shared experience of the coaches enhances the lives of our patients in ways that complement the expertise and efforts of our Emergency Department staff," says Jane Clarke, RN, Executive Director of Emergency Services at NSMC. "We are delighted to be working together."

Above: Jimmy Billings, recovery coach.
Photo credit: The Salem News.

POWERING THE FIGHT AGAINST THE OPIOID EPIDEMIC

This past December, six local community organizations working on the frontlines of the battle against opioid use disorders received much-needed reinforcements through RIZE Massachusetts, a statewide philanthropic initiative co-founded by Partners Health-Care and chaired by President and CEO David Torchiana, MD. The goal of RIZE is to raise \$50 million to fund programs throughout Massachusetts that are rigorous, evidence-based, grounded in science, and are able to be replicated. RIZE awarded \$50,000 design grants to the Boston Health Care for the Homeless Program, Brockton Neighborhood Health Center, Cambridge Health Alliance, Center for Human Development, Community Healthlink, and Lynn Community Health Center. These grants will be used to create programs that support at-risk individuals with strategies including medication-assisted treatment. "It's quite clear there is enormous potential and energy in Massachusetts to address the opioid epidemic in a thoughtful, innovative, and evidence-generating manner," says Dr. Torchiana. "This first round of design grant recipients all have proven track records of taking on tough health care challenges with creativity, compassion, and rigor."

RIZE's work dovetails with Partners' ongoing statewide efforts to help the estimated four percent of Massachusetts residents battling opioid use disorders. These include the Substance Use Disorder Strategic Initiative, which provides support in Charlestown, Chelsea, and Revere, and the Partners Opioid Steering Committee, aimed at standardizing safe opioid prescribing practices in coordination with state legislation.



“Our care
extends
well
beyond
the
hospital
walls.”

— DR. DAVID TORCHIANA
PRESIDENT AND CEO, PARTNERS HEALTHCARE

COMMUNITY

COMMUNITY

A New Vision for Island Care



As the new President and CEO of Martha's Vineyard Hospital, Denise Schepici is now poised to serve the island community she's loved for decades. To this role, Schepici brings more than 30 years

of health care management experience across settings including academic medical centers, integrated health systems, and community hospitals. A dynamic leader, she is known for her collaborative approach, helping organizations achieve business objectives while enhancing cultural and organizational change. With these skills, Schepici also hopes to engage with the community on significant issues including substance use disorders, care of the aging island population, and affordable housing for employees. Schepici will begin her leadership by working closely with staff and physicians to understand the hospital's issues and priorities, with the goal of leveraging the hospital's considerable assets including its partnership with Massachusetts General Hospital.

Setting the Pace for Inclusion

Partners HealthCare's commitment to advancing diversity has taken another step forward, thanks to a partnership with the Greater Boston Chamber of Commerce and nine community organizations. As an inaugural member of the Pacesetters Initiative, Partners will increase contracts with minority-owned businesses as suppliers of its goods and services. Building on our existing Supplier Diversity Program, we are committed to setting and reporting on new targets for minority-owned business spending, and sharing best practices with other Pacesetters. While enhancing inclusion, the program will extend the region's economic growth. "It's another way to improve the well-being of the communities we serve," says David Torchiana, MD, Partners HealthCare President and CEO.

Partners HealthCare is committed to advancing diversity and inclusion.

Sharing in Patient Care

When local hospitals work together, patients benefit from shorter wait times and faster care. As top academic medical centers, Brigham and Women's Hospital (BWH) and Massachusetts General Hospital (MGH) attract a high volume of Emergency Department patients, which can sometimes lead to lengthy wait times for admittance to inpatient beds. Fifteen minutes away, Newton-Wellesley Hospital (NWH) has pitched in to help through a new Direct Admit process. Patients at BWH and MGH are offered the opportunity to be transferred to NWH, where they are quickly admitted to a nursing unit for care. The response from patients has been highly positive, and in the last year more than 200 patients have benefited from this service.

*Steven B. Pestka, MD,
Newton-Wellesley Hospital.*



Building an environment of great care across the system.

Breast Care, Close By

A new Breast Center at Cooley Dickinson Hospital now provides Pioneer Valley patients with comprehensive, personalized breast care in one state-of-the-art facility. Opened in 2017, the Center brings together advanced diagnostic capabilities and skilled, compassionate caregivers to deliver a multidisciplinary approach to breast health. Starting this year, the Center will have on-site surgeons to consult, diagnose, and provide treatment. Equipped with advanced 3D mammography first introduced by colleagues at Massachusetts General Hospital, the Center will obtain clearer, more accurate views for screening and diagnosis, with less patient discomfort, exam time, and radiation exposure. "Breast cancer comprises 28% of all cancers diagnosed and/or treated at Cooley Dickinson Hospital," says Nancy King, Director of Imaging Services. "The new Breast Center provides the best multidisciplinary care in one location, under one roof."

Finding a Better Way

Over the past year, Newton-Wellesley Hospital (NWH) has explored and analyzed what makes it an essential pillar in the local community, by gathering extensive input from staff, physicians, leadership, stakeholders, and patients. The research and conversations highlighted the challenges and frustrations patients experience with health care and how important direct, transparent communication is to build trust. *Finding A Better Way*, NWH's new brand identity launched through this input in October 2017, focuses on redefining health care delivery through innovation and commits to ensuring NWH is the best place for patients, families, employees, and providers.

Stronger, Together

Spaulding Rehabilitation Hospital (Spaulding) was proud to be closely involved in the filming of the movie *Stronger*, the inspiring true story of Jeff Bauman, a 27-year-old Boston man who lost both legs in the 2013 Boston Marathon bombing. The film, starring Jake Gyllenhaal as Bauman, chronicles Jeff's difficult journey toward recovery under the intense media spotlight. The movie's U.S. premiere was held in September 2017 at Spaulding, in the same gym where much of the filming occurred and where Bauman and 31 other critically injured Marathon survivors experienced the vital role of rehabilitation medicine in helping people of all abilities find their strength.

"Spaulding has been such a large part of my life for the past four years, and that's why having the U.S. premiere of Stronger there feels so right to me."

— JEFF BAUMAN
SPAULDING PATIENT



FORWARD STR



*Alicia Capone, DPT, Spaulding
Outpatient Center Malden.*

WARD SIDES

INTEGRATED CARE

An Integrated Approach to Faster Rehabilitation

For patients who receive a total knee replacement, the road to recovery can be long, arduous, and costly. The orthopedic surgery team at Brigham and Women's Hospital (BWH) had a theory: bundling best-practice rehabilitation approaches in a "fast-track" patient model could streamline – and even shorten – post-knee replacement rehabilitation care. If

they were right, it meant that they could deliver the same functional gains for patients with less rehabilitation effort.

To put this theory to the test, the BWH team joined with clinical and administrative staff from Partners Continuing Care to create a cross-section of physical therapists, nurses, case managers, liaisons, and

administrative managers from BWH, the Spaulding Rehabilitation Network, and Partners HealthCare at Home. As one integrated team, they met weekly to solve patient problems, track progress, and carve a more efficient, less costly care path with defined services. Patients in the program underwent physical and occupational therapy first in their own homes and then at Spaulding outpatient clinics. This targeted approach enabled therapists to identify patients' daily struggles and create specialized treatments to address them.

The team's initial patient data showed encouraging results: a reduction in total medical spend with improved functional outcomes achieved in a shorter-than-average period of time. The pilot knee program's success led to the creation of a similar program for hip replacements, which began in October 2017. Clinicians in the program are currently working together to streamline communication and create similar efficiencies and cost reductions as achieved in the knee program, all with the same shared goal: exceptional clinical and functional outcomes.

The pilot knee program's success led to the creation of a similar program for hip replacements, which began in October 2017.



ADVANCING VASCULAR CARE IN THE NORTH SHORE

Over the past few years, North Shore Medical Center (NSMC) has implemented an ambitious expansion and development plan that provides high-quality, integrated, accessible care to families north of Boston.

Most recently, NSMC expanded its Vascular Center to enhance state-of-the-art care for patients with complex circulatory conditions. The Center brings together experts in vascular surgery, interventional radiology, and advanced wound care, including hyperbaric oxygen therapy – all core elements of comprehensive vascular care – with a suite of innovations that will benefit North Shore residents for years to come. A new “hybrid” operating room integrates modern, three-dimensional imaging into a surgical setting and enables NSMC specialists to perform stent placement, arterial revascularization, real-time graft sizing for limb preservation, and other advanced, life-saving procedures.

The Center’s capabilities represent a significant step forward for NSMC – and for the vascular care of the entire North Shore community. In the coming months, NSMC will also add a robotic surgery program in collaboration with Massachusetts General Hospital and will continue with its \$207 million building project to expand emergency, inpatient, and behavioral health services on the Salem Campus, which is due to open in October of 2019.



Above: North Shore Medical Center Vascular Center.
Photo courtesy of Siemens.

*A suite of innovations that
will benefit North Shore
residents for years to come.*

Bringing Hospital Services Home

Reducing hospital utilization is one key to controlling health care costs and enhancing care quality. That’s why a new Partners HealthCare at Home (PHH) program is bringing more options for patients in need of hospital-level care. In 2016, Home Hospital programs were piloted at both Brigham and Women’s Hospital and Massachusetts General Hospital (MGH). This year, the new MGH/PHH Home Hospital Program launched as a full-time program to offer an alternative to inpatient admission for patients evaluated at the MGH Emergency Department (ED) who need continued care. The new Program’s advanced home care team – including a MGH physician, PHH nurse practitioner, and PHH registered nurse – delivers intensive hospital-level care directly in patients’ homes, while an alternative pathways navigator in the ED helps to identify more patients who can benefit. Within seven months of the program’s official launch in April 2017, 123 patients had been enrolled, saving MGH 425 hospital bed days and preventing a dozen 30-day readmissions – marking a significant contribution to our efforts to reduce costs.

A PHARMACY THAT DELIVERS INTEGRATED CARE

Patients facing certain chronic and complicated conditions often end up dealing with confusing treatment plans and costly, difficult-to-source specialty medication. The patient's care team needs to stay focused on complex monitoring protocols, often leaving it up to the patient to manage the costs and logistics of their treatment course.

The Partners HealthCare Specialty Pharmacy was created to address these related challenges. Based in Burlington, MA, the Pharmacy is an essential part of the care team, improving care while reducing the burden on physicians and practices. With full access to Partners electronic medical records, it provides assessment, monitoring, and management to educate patients on medication regimens. By replacing third-party pharmacies, the Specialty Pharmacy also lowers costs for patients whenever possible, delivering free and accessible medical supplies, guidance, and financial assistance services.

"We are an integral part of the care team, coordinating directly with patients and practice staff," says Michael Carter, RPh, Corporate Director of the Specialty Pharmacy.

After a successful pilot program at the Massachusetts General Hospital (MGH) Department of Rheumatology, the Pharmacy's services will be expanded to other specialties at MGH and Brigham and Women's Hospital throughout 2018.

MAKING THE BEST CHOICES IN ANTIBIOTICS

Using powerful broad spectrum antibiotics for routine conditions can lead to complications, including antibiotic resistance and dangerous *Clostridium difficile* infections. For the 15 percent of hospital patients with sensitivities to penicillin and cephalosporin antibiotics, however, it's difficult to identify narrow-spectrum alternatives. To address the problem, multidisciplinary teams from five Partners HealthCare hospitals collaborated to create a shared treatment pathway for the evaluation and management of penicillin allergies. Through electronic, mobile-friendly guidelines integrated with Partners eCare, the electronic health record system, the program now guides care providers through best practice antibiotic approaches based on each patient's unique history and needs. The guideline system is expected to help Partners avoid 1,000 adverse drug events each year – increasing patient safety, and reducing costs.

The antibiotics guideline system is expected to help Partners patients avoid 1,000 adverse drug events each year.



With access to the right patients at their fingertips, these researchers can now more easily identify potential study subjects in real time with unprecedented precision.

CONNECTING PATIENTS WITH RESEARCH

Partners eCare is living up to its promise of streamlining care while improving our ability to reach the right patients with the right interventions. With the help of the Partners eCare Research Core (PeRC) team, the electronic health record system is also helping us identify the right patients for important clinical research studies. Directly within the Partners eCare platform, the team builds algorithms that identify patients for appropriate studies based on demographics such as age, gender, and other health conditions.

Using the Partners Patient Gateway, PeRC then facilitates communication between authorized researchers and qualified subjects, sending personalized electronic messages from the study's primary investigator to the patient's care team. With access to the right patients at their fingertips, these researchers can now more easily identify potential study subjects in real time with unprecedented precision, bringing the opportunity of advanced treatment to those who need it most.



A PARTNERSHIP THAT PUTS PATIENT CARE FIRST

When Brigham and Women's Faulkner Hospital (BWFH) merged with Brigham and Women's Hospital (BWH) in 1998, the plan was to create an institution that could deliver world-class care in a community hospital setting. Twenty years later, the merger has changed the history of both institutions while serving their communities with the same quality and safety of the Brigham brand.

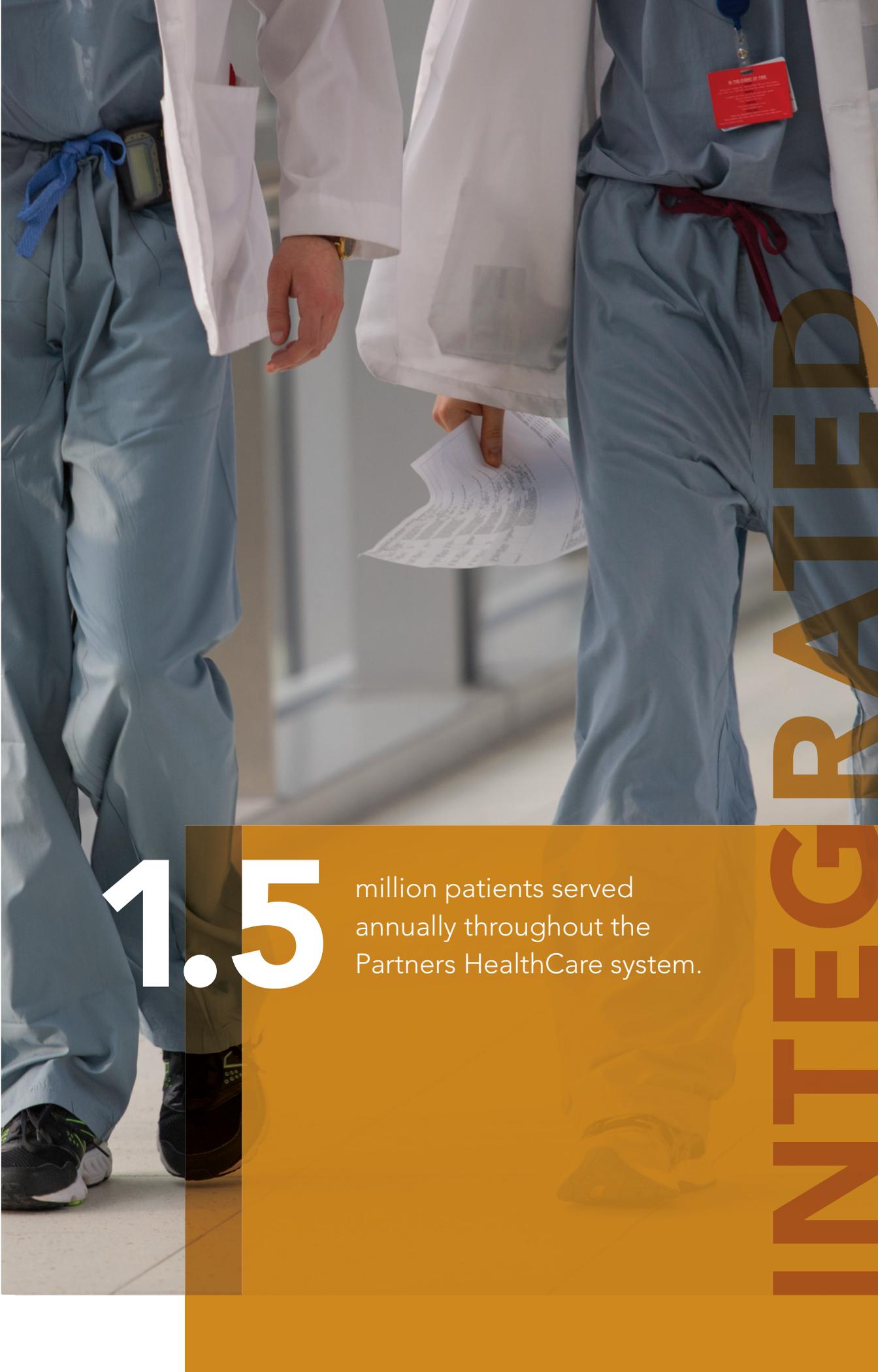
Today, BWFH provides diagnosis and treatment, both surgical and nonsurgical, for a significant number of Brigham Health patients through its comprehensive orthopedic, spine, men's health, breast, and other clinical specialty programs. For instance, nearly half of all Brigham Health orthopedic surgical cases are performed at BWFH. As further evidence of the level of integration, the departments of Anesthesia, Emergency Medicine, Neurology, Pathology, Psychiatry, and Radiology at BWFH are fully integrated with BWH providers.

One of the most recent services to move to BWFH, the Sleep Medicine and Endocrinology Center is another example of how far the level of integration has come. This clinic sees many patients with diabetes and sleep apnea as a result of obesity. A patient with diabetes can see the experts at the Diabetes Program or a general endocrinologist, and, if they are also overweight, they can be seamlessly referred to the Center for Weight Management and Metabolic Surgery. Since obesity is a contributing factor to sleep apnea, a patient may need to see a sleep specialist. The unique setup of the clinic allows for a patient-centered model of care across several specialties in one convenient location.

According to Milena Pavlova, MD, Medical Director for the Sleep Testing Center at BWFH, this enhanced model of care is helping both hospitals deliver more efficient services while reducing patient wait times.

"The Sleep Medicine and Endocrinology Center is an example of how we, as part of Brigham Health, are able to maximize value for patients by providing the right care at the right time, within the right cost structure," says Michael Gustafson, MD, BWFH President.

The unique setup of the clinic allows for a patient-centered model of care across several specialties.



1.5

million patients served annually throughout the Partners HealthCare system.

INTEGRATED

INTEGRATED CARE

Triaging Patient Transfers

Continuity of care is crucial to quality, safety, efficiency, and affordability – and that begins with the identification of the most appropriate treatment location for each patient. To streamline the process for patient transfers, and ensure Brigham Health patients receive the proper care, the Brigham Health Access Center was created. Now, with just one phone call, care teams can direct patients to the most appropriate institution – whether that’s Brigham and Women’s Hospital, the Brigham and Women’s Faulkner Hospital Emergency Department or an inpatient unit, or Newton-Wellesley Hospital – based on their condition.

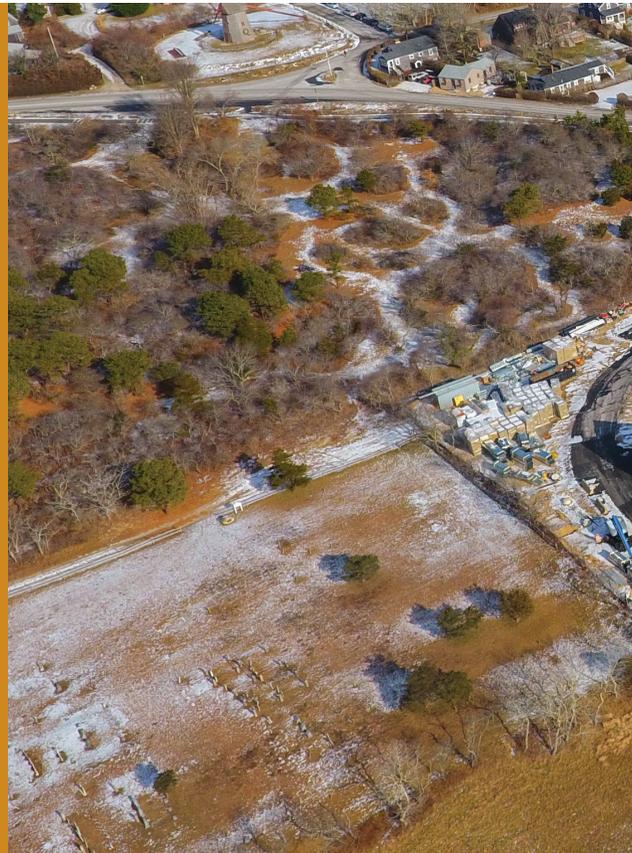
Continuity of care is crucial to quality, safety, efficiency, and affordability.

Putting Members at the Center of Health Care

Neighborhood Health Plan (NHP) is building on its commitment to members and employers through two innovative programs. The first-of-its-kind Care Complement initiative helps NHP members stay healthy, and also provides new options for members who may be managing chronic conditions by eliminating copays for 11 common prescriptions. NHP additionally offers affordable alternatives to opioids (such as physical therapy and acupuncture) for pain management. At the same time, through its Customer Service Performance Guarantees program, NHP is the only health plan in the market to link a financial benefit to its promise to deliver the highest level of member service to large- and mid-sized employers. These two programs demonstrate NHP’s ongoing commitment to providing valuable health care resources and outstanding customer experiences.

A New Standard for Nantucket Patients

An exciting 100,000 square foot building project underway on Nantucket will help bring the island’s health care into the future. Construction of the new Nantucket Cottage Hospital building broke ground in the summer of 2017, with late 2018 targeted for completion of the main hospital building. In addition to optimizing facilities performance and expanding patient services, the hospital’s capital campaign will also support flexible-design housing units able to serve a range of hospital employees. With convenient on-campus housing, the hospital will be better positioned to attract top provider talent best able to serve the wide-ranging care needs of Nantucket’s year-round and summer residents.



Putting our system to work for our patients' well-being.

Blazing a New Trail for OCD Treatment

In February 1997, McLean Hospital and Massachusetts General Hospital together launched the nation's first intensive treatment program for Obsessive Compulsive Disorder (OCD), a mental illness that affects millions. The OCD Institute, which celebrated its 20th anniversary last year and has expanded three times since its founding, has done much to make the disorder a household name. In addition to clinically treating more than 10,000 adults with OCD worldwide, the Institute has fostered a wealth of new research aimed at understanding the brain circuitry behind OCD, as well as improving cognitive treatment and other approaches. Together, these achievements have served as a model for the development of similar OCD treatment programs across the country.

10,000+

*adults with OCD from around
the world have been treated
at the Institute.*

Filling a Workforce Need, from Within



A new initiative between North Shore Medical Center (NSMC) and Partners HealthCare promises to more

efficiently fill a pressing need for care providers while providing professional development opportunities for employees. The Upskilling Program, funded by a \$15,000 Partners Workforce Development grant, identifies and trains 10 NSMC employees to become certified nursing assistants (CNAs), a needed workforce role that presents a persistent hiring challenge. With courses taught by North Shore Community College, instructors at NSMC Salem Hospital, and additional clinical sessions, employees are guided through training and state certification, then transitioned into better-paying CNA positions – where their new skills help NSMC better serve patients.





LEAD THE

*Mario Rodas, Chairperson, MGH
LGBT Employee Resource Group.*

DIVING THE WAY

LEADERSHIP

Charting the Course on Gender Inclusion

As gender identity comes to the forefront of our national conversations about diversity and equality, Partners HealthCare is making sure that we're leading the way as an organization inclusive of all individuals.

Beginning in the summer of 2016, a passionate group of employee leaders from the Massachusetts General Hospital

LGBT Employee Resource Group, Brigham Health LGBT & Allies Employee Resource Groups, and Partners Corporate – including employee assistance consultants and attorneys – approached the Partners Diversity and Inclusion Office and Human Resources Department with an important initiative. Their shared goal: to develop a Partners-wide

policy that would direct the institution's resources on issues of gender identity and expression, while making Partners a more inclusive organization overall.

The development process of the policy was itself inclusive, incorporating the points of view and personal experiences of a wide range of employees and advisors to ensure that it not only adhered to state and federal law, but was also thoughtful and sensitive in its approach. The final policy, officially launched in June 2017 during Pride Month, aims to reduce discrimination in all its forms, covering everything from confidentiality and privacy to practical issues such as restroom and locker room use. A companion toolkit and self-instructed educational experience provides a roadmap for transitioning and transitioned individuals and their colleagues, and helps them manage professional and personal relationships.

"I was impressed by the compassion, openness, and willingness to learn that was expressed by our straight allies in leadership," says Pothik Chatterjee, Chair of the Brigham Health LGBT & Allies Employee Resource Group. "I'm equally proud of the policy and the toolkit, and the training that will make this a continuous dialogue and bring the policy to life at Partners."

The result is a pioneering approach – Partners is among the few medical institutions with a gender identity policy – that not only supports our organization's position on the Human Rights Campaign Healthcare Equality Index, but contributes to an environment of safety and support for employees, patients, and visitors, across every gender identity.

Partners is among the few medical institutions with a gender identity policy.



HISTORIC STEP FORWARD FOR PRECISION MEDICINE

Precision medicine, an emerging approach to research and treatment that considers patients' genetic and molecular profiles, as well as environmental and lifestyle factors, aims to change the way we think about health care for the better. Now, supported by a competitive grant from the National Institutes of Health's Precision Medicine Initiative (PMI), Partners HealthCare institutions have come to the forefront of this evolution. The New England Precision Medicine Consortium, led in partnership with Partners HealthCare and Boston Medical Center, has launched at Massachusetts General Hospital (MGH), Brigham and Women's Hospital, Newton-Wellesley Hospital, and Partners-associated community health centers and primary and specialty practices. The Consortium will help the PMI's *All of Us* Research Program achieve its goal to build a million-patient-strong data cohort that truly represents America's ethnic, socioeconomic, and health diversity.

"At the institutional level, participating in *All of Us* will give MGH and Partners an integral role in the next generation of precision medicine research and clinical care," says Jordan Smoller, MD, Co-Director of the Partners Biobank and a leader of the New England Precision Medicine Consortium.



Above: Dean C. Xerras, MD, Program Leader of Community Engagement; Medical Director, MGH Chelsea HealthCare Center; and *All of Us* enrollee.

All of Us is expected to help investigators learn why patients respond differently to certain therapies.

In its first year, the Consortium is expected to collect a vast array of data, electronic health records, surveys, mobile sensors, and biospecimens among them, from 20,000 volunteers. Ultimately, the data uncovered through *All of Us* is expected to help investigators learn why patients respond differently to certain therapies, and reveal new disease biomarkers that could lead to better treatments that are more precise and effective.

FROM COLLABORATION, LEADERSHIP IN CARE EMERGES

Physicians from Wentworth-Douglass Hospital (WDH) and Massachusetts General Hospital (MGH) have come together to study a newly understood disease that may affect millions worldwide. Khosro Farhad, MD, a neurologist at WDH, and Anne Louise Oaklander, MD, Director of the Nerve Unit at MGH, are working to improve diagnosis and treatment of small-fiber polyneuropathy (SFPN), a disorder marked by dysfunction in peripheral nerve cells that leads to chronic pain, fatigue, and digestive problems. Long interested in understanding the root causes of this mix of symptoms, these clinicians are now among the few in the nation specializing in a disorder that is notoriously difficult to diagnose. The pair developed a research partnership that has produced enhanced diagnostics and effective immunotherapies, as well as raised awareness of the disease among physicians. They also consult together on SFPN cases; Dr. Oaklander frequently refers patients to Dr. Farhad's Coastal Neurology Services office in Dover, New Hampshire.

It's one example of a wide range of collaborations launched by WDH and MGH since their affiliation – the first outside of Massachusetts for Partners HealthCare – began with the stroke program in 2008.

"Our SFPN program is a perfect example of what our affiliation with MGH is all about," says Paul Cass, DO, Vice



President of Clinical Integration and Chief Medical Officer, WDH. "We can attract and retain physicians seeking access to the robust research and educational opportunities within MGH – and ultimately better serve our patients."

Mass. Eye and Ear will build on its longtime alliance with Partners.

Sunil Eappen, MD, Chief Medical Officer and Chief of Anesthesia.

BETTER EYE AND EAR CARE, TOGETHER

Now a part of the Partners HealthCare system, Massachusetts Eye and Ear (Mass. Eye and Ear) has a new outlook on the future. When our partnership formally begins this spring, the 193-year-old institution will build on its longtime alliance with Partners to ensure that patients in and beyond New England continue to have access to the highest quality eye, ear, nose, and throat care, while benefiting from leading-edge research and renowned medical professionals. With

our resources and expertise combined, Partners hospitals and Mass. Eye and Ear are poised to improve the way we manage the vision and hearing care of an aging population, while making new discoveries that lead to cures for blindness, deafness, and diseases of the head and neck. "Mass. Eye and Ear made a promise to patients around the world that we would find cures for blindness and deafness," says Wycliffe "Wyc" Grousbeck, Chairman of the Mass. Eye and Ear Board of Directors. "Joining Partners will give our physicians and scientists the best path to keep delivering on that promise as quickly as possible."



SHEDDING A NEW LIGHT ON CHILDHOOD TRAUMA

Research at McLean Hospital is tackling important questions about the cognitive, clinical, and neurobiological effects of childhood trauma on women, to answer questions such as: how are post-traumatic stress disorder (PTSD) and related conditions expressed in the brain? What factors determine whether trauma leads to PTSD and dissociative symptoms? And how do we tailor treatments to match patients' needs along the trauma disorder spectrum?

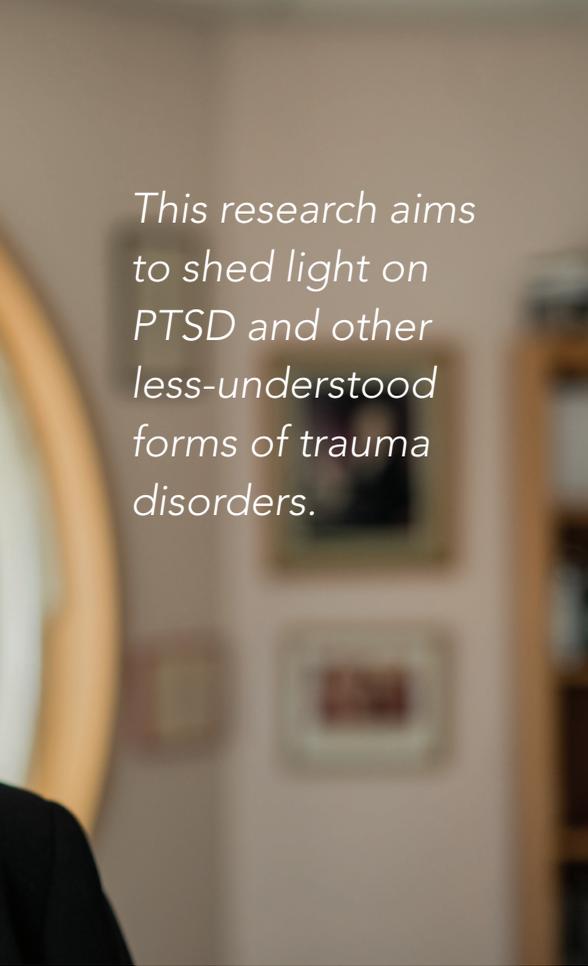
Beyond uncovering the neurobiology of PTSD dysfunction and recovery, this research also aims to shed light on other less-understood forms of trauma disorders. These studies are led by Milissa Kaufman, PhD, Medical Director of the Hill Center for Women at McLean Hospital, and post-doctoral research fellow Lauren A.M. Lebois, PhD. Working with colleagues across McLean, the Broad Institute, and Massachusetts General Hospital, Drs. Kaufman and Lebois are using advanced analytical, neuroimaging, and genetic approaches to reveal why and how dissociative symptoms – feelings of detachment from one's thoughts, memories, emotions, or environment – impact childhood trauma victims, immediately and over the long term.



"We think it's critical to lead the charge toward destigmatizing these disorders which often happen as a result of abuse and neglect," says Dr. Kaufman. "By identifying trauma's risk factors, we hope to open the door to better-targeted treatments for our patients."

The program joins a host of others at McLean that target common yet poorly understood areas of psychiatry and brain science – groundbreaking research that has contributed to the hospital's number-one ranking for psychiatry in *U.S. News & World Report*.

Above: Milissa Kaufman, PhD.



This research aims to shed light on PTSD and other less-understood forms of trauma disorders.

I AM MGH: A NEW CAMPAIGN

At Massachusetts General Hospital (MGH), inclusion is a core value: as a community, MGH is committed to treating all patients and colleagues with respect, regardless of what they look like, where they come from, what they believe, or who they love. In January 2017, MGH put that commitment in writing with a new Diversity and Inclusion Statement, which asserts that diverse skills, perspectives, and backgrounds are critical to the hospital's ability to serve, heal, educate, and innovate. To mark the statement's introduction, MGH launched the *I am MGH* campaign, which shares the personal stories of MGH staff, highlighting how their differences make their contributions more valuable to hospital

colleagues, patients, and visitors. The campaign is one of several new initiatives under implementation as part of the hospital's strategic plan to increase the diversity of the MGH community, foster an inclusive environment, and embed the principles of diversity, inclusion, and equity as standard practice across all aspects of the organization.

IMPROVING TRANSITIONS FOR BETTER CARE

Transitions in care, such as moving a patient from a hospital to an outside skilled nursing facility, can be as critical to patient outcomes as the in-hospital treatment they receive. To improve these care transitions and inform the decision-making process for patients and providers, North Shore Medical Center (NSMC) implemented the naviHealth program in 2015. This online tool evaluates patients against baseline data and estimates how long they should be expected to remain at current care levels. The pilot program at NSMC focused on high-risk patients enrolled in the Partners HealthCare Center for Population Health's Integrated Care Management Program and was able to more accurately determine the level and amount of care needed to treat the patients effectively. With this tool, NSMC reduced the number of days patients stay in skilled nursing facilities by 33 percent. Inspired by these results, Partners has now implemented the naviHealth program across our entire system, fostering collaboration and outcomes-oriented evaluation of skilled nursing facilities as part of the care continuum.



RECOGNIZING A CHAMPION FOR PATIENTS AND NURSES

Even as Jeanette Ives Erickson, DNP, steps out of her current role as Chief Nurse and Senior Vice President for Patient Care at Massachusetts General Hospital (MGH), her legacy of extraordinary patient care carries on through her former colleagues and patients.

Ives Erickson's 21-year MGH tenure is encapsulated in the simple philosophy that's guided her practice: "If you keep your eye on the patient, you will always be headed in the right direction." Relying on compassion and collaboration, Ives Erickson has tapped best practices and keen insights to solve problems and enhance patient outcomes. The results of her dedication are measurable: Ives Erickson's vision led to the establishment of the Maxwell & Eleanor Blum Patient and Family Learning Center, the Norman Knight Center for Clinical & Professional Development, the Yvonne L. Munn

Center for Nursing Research, the Center for Innovation in Care Delivery, and the creation of four endowed chairs in nursing. In 2003, under her guidance, MGH became Massachusetts' first hospital to achieve Magnet status – the highest recognition of nursing excellence – with redesignation three times since.

A champion of nursing education and development as a member of multiple boards, Ives Erickson's ties to Partners HealthCare will continue as she assumes the role of Board Chair of MGH Institute of Health Professions, and through the ongoing impact of her work with colleagues on Partners 2.0, and on initiatives throughout MGH.

"If you keep your eye on the patient, you will always be headed in the right direction."

“Partners
HealthCare
has been and
continues to
be an advocate
for diversity
and equal
employment
opportunities.”

— DANI MONROE

CHIEF DIVERSITY AND INCLUSION OFFICER, PARTNERS HEALTHCARE

LEADERSHIP

FINANCIAL OVERVIEW

For 2017, Partners HealthCare reported income from operations of \$53 million (0.4% margin) compared to a loss from operations of \$108 million (-0.9% margin) for 2016.

Excess (deficit) of revenues over expenses was \$659 million in 2017 compared to (\$249 million) in 2016, a change of \$908 million. Approximately \$321 million of the increase in 2017 represents the unrestricted net impact of adding Wentworth-Douglass Health System (Wentworth-Douglass) to the Partners system on January 1, 2017.

Total assets increased by \$988 million (6%) to \$16.9 billion at September 30, 2017 while total net assets (assets minus liabilities) increased by \$2.0 billion (36%) to \$7.5 billion.

REVENUE

Operating revenue increased by \$853 million (7%) to \$13.4 billion from \$12.5 billion in 2016. Net patient service revenue increased by \$753 million (10%) to \$8.4 billion in 2017 of which \$264 million (3%) was related to the addition of Wentworth-Douglass. Premium revenue decreased \$22 million (-0.9%) to \$2.5 billion. Other revenue, which includes management services and other non-patient revenue sources, increased \$25 million (4%) to \$673 million.

NET UNCOMPENSATED CARE COSTS

For 2017, Partners' hospitals, community health centers, and physicians experienced a 10% increase in Medicare, Medicaid, and Health Safety Net shortfalls to \$1.4 billion, due to government reimbursements that failed to pay the full cost of providing care to Medicare, low-income, and uninsured patients. Government payers represent approximately 52% of gross patient service revenue.

EXPENSES

Operating expenses for 2017 increased by \$693 million (5%) to \$13.3 billion. Labor costs rose by \$404 million (7%) to \$6.4 billion of which \$156 million (3%) was related to the addition of Wentworth-Douglass. Medical claims insurance expense decreased \$127 million (-6%) to \$1.9 billion. Supplies and other expenses increased by \$223 million (9%) to \$2.8 billion. Interest expense was \$182 million, an increase of \$47 million (35%).

RESEARCH

Partners' total research expenditures in 2017 were \$1.6 billion, an increase of \$86 million (6%) from 2016. Approximately \$990 million (60%) of Partners 2017 activity was funded directly or indirectly by the National Institutes of Health and other federal agencies. Direct research revenue increased \$66 million to \$1.3 billion, while indirect research revenue (recovery of overhead expenses) increased \$20 million to \$369 million.

The overhead recovery rate increased slightly to 29.3% compared to 29.2% in 2016. As of September 30, 2017, Partners had approximately \$3.1 billion in committed future research funding.

PHILANTHROPY

Partners depends on private fundraising to support its mission of excellence in patient care, research, education, and community programs. Total gifts and pledges for Partners were \$538 million in 2017 – a 15% increase over 2016. These gifts and pledges include philanthropic research grants and other funding of \$187 million.

LIQUIDITY AND CAPITAL RESOURCES

Partners' sources of liquidity are cash flow from operations, cash and equivalents, investments, and a credit facility. Cash flow from operating activities for 2017 was \$303 million compared with \$270 million in 2016. Unrestricted cash and investments at September 30, 2017 totaled \$6.5 billion. Additionally, Partners maintains a \$150 million credit facility.

Investing activities used \$456 million in 2017 compared to \$782 million in 2016. Capital expenditures were \$747 million and \$1.1 billion in 2017 and 2016, respectively.

For 2017, net cash provided by financing activities was \$65 million compared with \$718 million in 2016. In 2016, Partners issued revenue bonds with proceeds of \$524 million to refinance certain existing debt and to finance certain capital projects. In addition, Partners issued taxable notes with proceeds of \$225 million in 2016, the proceeds of which were used to make a voluntary contribution to Partners' pension plans. Total debt outstanding amounted to \$5.1 billion as of September 30, 2017.

Partners believes it has the necessary financial resources, operating cash flow, and borrowing capacity to fund working capital needs, capital expenditures, and other business requirements for the near term.

Consolidated Balance Sheets

Excerpts from financial statements (in thousands of dollars) as of September 30, 2017 and 2016

	2017	2016
Current assets:		
Cash and equivalents	\$ 739,117	\$ 827,683
Investments	1,506,524	1,069,006
Current portion of investments limited as to use	1,367,172	1,588,787
Patient accounts receivable	977,294	881,993
Other current assets	654,516	633,921
Total current assets	5,244,623	5,001,390
Investments limited as to use, less current portion	3,320,230	3,069,175
Long-term investments	1,266,697	1,136,528
Property and equipment	6,226,382	5,881,927
Other assets	813,826	794,459
Total assets	\$ 16,871,758	\$ 15,883,479
Current liabilities:		
Current portion of long-term obligations	\$ 615,151	\$ 441,018
Accounts payable and accrued expenses	1,982,954	2,001,150
Current portion of accrual for settlements with third-party payers	52,348	63,195
Total current liabilities	2,650,453	2,505,363
Long-term obligations, less current portion	4,441,786	4,578,721
Accrual for settlements with third-party payers, less current portion	20,231	7,443
Interest rate swaps liability	367,830	510,172
Other long-term liabilities	1,927,349	2,807,423
Total liabilities	9,407,649	10,409,122
Net assets:		
Unrestricted	5,889,170	4,060,285
Temporarily restricted	887,531	790,886
Permanently restricted	687,408	623,186
Total net assets	7,464,109	5,474,357
Total liabilities and net assets	\$ 16,871,758	\$ 15,883,479

Complete financial statements available upon request.

Consolidated Statements of Operations

Excerpts from financial statements (in thousands of dollars) for the fiscal years ended September 30, 2017 and 2016

	2017	2016
Operating revenue:		
Net patient service revenue, net of provision for bad debts	\$ 8,382,683	\$ 7,629,304
Premium revenue	2,487,100	2,508,924
Academic and research revenue	1,828,057	1,731,772
Other revenue	673,223	647,887
Total operating revenue	13,371,063	12,517,887
Operating expenses:		
Compensation and benefit expenses	6,391,589	5,987,168
Supplies and other expenses	2,789,579	2,566,386
Medical claims and related expenses	1,890,368	2,017,773
Direct academic and research expenses	1,438,226	1,363,580
Depreciation and amortization expenses	626,383	555,814
Interest expense	182,348	135,045
Total operating expenses	13,318,493	12,625,766
Income (loss) from operations	52,570	(107,879)
Nonoperating gains (expenses):		
Income from investments	223,363	61,102
Change in fair value of nonhedging interest rate swaps	144,860	(106,110)
Gifts and other, net of expenses	(83,085)	(96,124)
Contribution income - affiliates	321,389	-
Total nonoperating gains (expenses), net	606,527	(141,132)
Excess (deficit) of revenues over expenses	659,097	(249,011)
Other changes in net assets:		
Change in net unrealized appreciation on marketable investments	209,260	200,042
Funds utilized for property and equipment and other	45,119	48,772
Change in funded status of defined benefit plans	915,409	(647,180)
Increase (decrease) in unrestricted net assets	\$ 1,828,885	\$ (647,377)

Complete financial statements available upon request.

Consolidated Statements of Changes in Net Assets

Excerpts from financial statements (in thousands of dollars) for the fiscal years ended September 30, 2017 and 2016

	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Net assets at October 1, 2015	\$ 4,707,662	\$ 765,562	\$ 579,578	\$ 6,052,802
Increases (decreases):				
Loss from operations	(107,879)	–	–	(107,879)
Income (loss) from investments	61,102	(21,616)	37	39,523
Change in fair value of interest rate swaps	(106,110)	–	–	(106,110)
Gifts and other	(96,124)	39,875	44,093	(12,156)
Change in net unrealized appreciation on marketable investments	200,042	30,170	(340)	229,872
Funds utilized for property and equipment and other	48,772	(23,105)	(182)	25,485
Change in funded status of defined benefit plans	(647,180)	–	–	(647,180)
Change in net assets	(647,377)	25,324	43,608	(578,445)
Net assets at September 30, 2016	4,060,285	790,886	623,186	5,474,357
Increases (decreases):				
Income from operations	52,570	–	–	52,570
Income from investments	223,363	20,245	39	243,647
Change in fair value of interest rate swaps	144,860	–	–	144,860
Gifts and other	(83,085)	31,539	60,496	8,950
Contribution income - affiliates	321,389	2,120	2,399	325,908
Change in net unrealized appreciation on marketable investments	209,260	59,522	322	269,104
Funds utilized for property and equipment and other	45,119	(16,781)	966	29,304
Change in funded status of defined benefit plans	915,409	–	–	915,409
Change in net assets	1,828,885	96,645	64,222	1,989,752
Net assets at September 30, 2017	\$ 5,889,170	\$ 887,531	\$ 687,408	\$ 7,464,109

Complete financial statements available upon request.

Consolidated Statements of Cash Flows

Excerpts from financial statements (in thousands of dollars) for the fiscal years ended September 30, 2017 and 2016

	2017	2016
Cash flows from operating activities:		
Change in net assets	\$ 1,989,752	\$ (578,445)
<i>Adjustments to reconcile change in net assets to net cash provided by operating activities:</i>		
Contribution income - affiliates	(325,908)	–
Change in funded status of defined benefit plans	(915,409)	647,180
Change in fair value of interest rate swaps	(144,860)	106,110
Depreciation and amortization	626,383	555,814
Provision for bad debts	139,554	127,798
Net realized and change in unrealized appreciation on investments	(641,801)	(344,727)
Restricted contributions and investment income	(132,714)	(129,649)
Other	(8,214)	65,861
<i>Increase (decrease) in cash resulting from a change in:</i>		
Patient accounts receivable	(200,945)	(131,758)
Other assets	20,054	(46,306)
Accounts payable and accrued expenses	(50,590)	28,712
Settlements with third-party payers	(52,525)	(30,561)
Net cash provided by operating activities	302,777	270,029
Cash flows from investing activities:		
Purchase of property and equipment	(747,001)	(1,102,280)
Proceeds from sales of investments, net	251,455	319,990
Cash acquired through affiliations	39,244	–
Net cash used for investing activities	(456,302)	(782,290)
Cash flows from financing activities:		
Payments on long-term obligations	(67,755)	(70,499)
Proceeds from long-term obligations	–	745,258
Deposits into refunding trusts	–	(86,032)
Restricted contributions and investment income	132,714	129,649
Net cash provided by financing activities	64,959	718,376
Net (decrease) increase in cash and equivalents	(88,566)	206,115
Cash and equivalents at beginning of year	827,683	621,568
Cash and equivalents at end of year	\$ 739,117	\$ 827,683

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