

INOVA

MAGAZINE

JOIN THE FUTURE OF HEALTH

PUMP IT UP

FALL
2015

*Inova Heart and
Vascular Institute's
bold new vision to
save more lives*

Brian Stevens, a fitness trainer,
underwent a heart transplant at
Inova in October 2012.

 INOVA®

Pump It Up
Inova Heart and Vascular Institute has a five-year plan to become one of the nation's top cardiac programs.



What We Can Predict We Can Prevent
Campus plans are under way for the Inova Center for Personalized Health.



HEADLINES

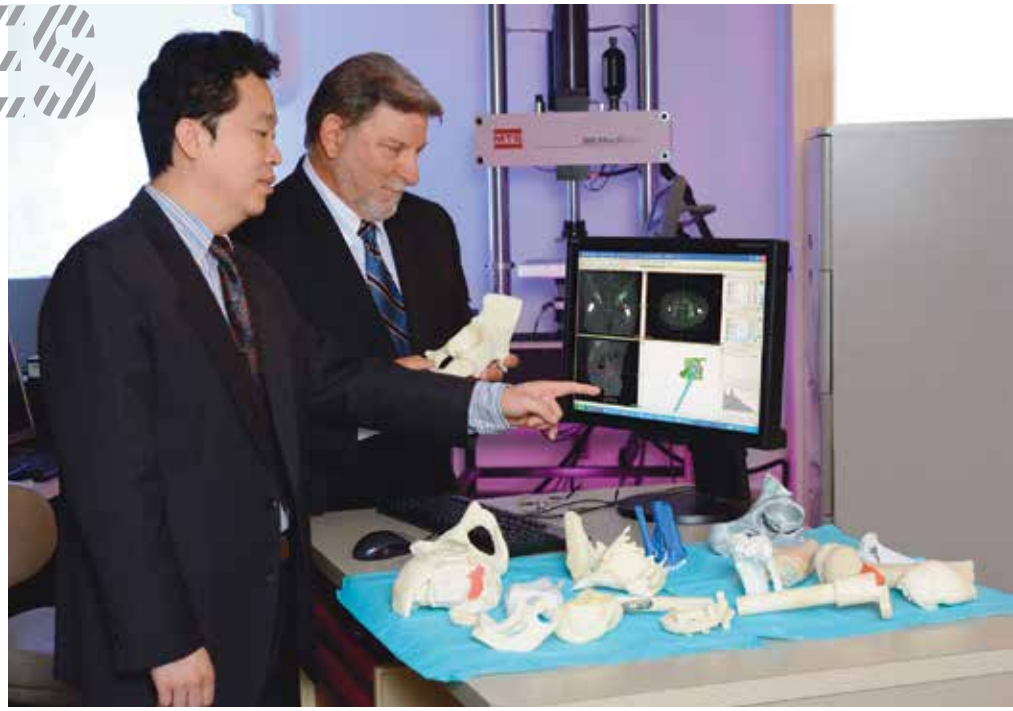
TEST DRIVE

Doctors practice surgical simulations in Biomechanics Research Lab

Surgery and healthcare at Inova are more personalized than ever, thanks to new technologies. Since 2007, Inova's Biomechanics Research Lab has allowed doctors to assess prospective approaches for surgical procedures on orthopedic patients before patients even set foot in the operating room.

"Our model is patient-specific," says Jihui Li, PhD, Director of the lab. "We have software that can read the model, and simulate the surgical procedure, evaluating various approaches to create the best outcome for the patient."

The lab's technology includes: CASPS (Computer Aided Surgical Planning Services), a program that can interpret a patient's MRI and create a three-dimensional model of the patient's bone, producing a physical, tangible replica for doctors to use as a model. The lab also has a machine called an MTS that performs stress tests on cadaveric bones, testing implants under conditions specific to the patient by simulating his or her weight and activity level.



The simulations are well-suited to many orthopedic treatments and conditions, including: joint replacements, traumatic bone injuries, bone cancer, chronic back and joint pain, and pediatric orthopedic problems. While 3-D printing techniques are often used for hip and knee revisions, the applications extend beyond those procedures. "You can really use it on any reconstruction that is bony, including shoulders, knees or anything beyond," says Mark Theiss, MD, Chairman for the Department of Orthopedic Surgery.

And it's always personal. Doctors are tailoring the surgery around patients' bones, and the technology in the Biomechanics Research Lab makes the surgery quicker, safer and more efficient. "If someone has a unique anatomic problem, we can use the 3-D models," says Dr. Theiss. "With the technology, you know you will have implants that will fit the individual patient."

No Bones About It
Jihui Li, PhD, Director of the Biomechanics Research Lab (left) and Mark Theiss, MD, Chairman for the Department of Orthopedic Surgery (right), show off the MTS machine, which performs stress tests on cadaveric bones.

EDITOR'S NOTE

Inova is a pioneer in the field of medicine, exploring the science of genomics and leading the way in the new era of predictive medicine. Through a network of wellness services, Inova Medical Group physicians, healthcare facilities and hospitals located throughout Northern Virginia, Inova is the largest healthcare provider in the Washington, DC, area. *U.S. News & World Report* has once again named Inova Fairfax Hospital the No. 1 hospital in the DC area, and has recognized all five of Inova's hospitals with either regional or national achievement in at least one specialty or common core ranking. Inova is leading the future of health. With the area's only Level 1 Trauma Center and Level 4 Neonatal Intensive Care Unit, Inova is home to the nationally and internationally recognized Inova Heart and Vascular Institute (IHVI), Inova Translational Medicine Institute (ITMI) on genomics, Inova Neuroscience Institute, Inova Dwight and Martha Schar Cancer Institute (ISCI) and Inova Children's Hospital. Inova's mission is to improve the health of the diverse community it serves through excellence in patient care, education and research.

5 Minutes With...
Deborah Addo, CEO, Inova Mount Vernon Hospital



The Gift of Knowledge
Dwight and Martha Schar have given big to personalized cancer care research.



Win/Win
Newbie health insurer Innovation Health is already boasting major successes.



Made for Women and Children

New Inova Women's and Children's Hospitals to deliver personalized care



Built Sound
The two expanded Inova hospitals will open next year.

The newly expanded Inova Women's Hospital and Inova Children's Hospital, which are set to open their doors this January, will be geared toward the unique treatment of these populations.

"Whether a woman is giving birth to her first baby or being treated for a complex gynecological issue, she will find the best care and treatment in a calming, healing

environment," says Patrick Christiansen, CEO of Inova Fairfax Medical Campus. "Children will also receive top-notch services in a setting where they can feel comfortable."

Adds Erin Hodson, Vice President and Administrator of Inova Children's Hospital: "We want to make sure all children and their parents feel treated with the best possible care, whether it's a routine emergency service or a complex procedure."

The Women's Hospital will offer private, individualized birthing experiences for new moms. It will also meet a rising demand for gynecologic services in the community.

Inova Children's Hospital will continue to offer the highest level of pediatric care in Northern Virginia. This will include dedicated pediatric units, programs and services. Among them: 118 all-private pediatric rooms; a specialized cardiac

intensive care unit; child and family support space, including three indoor playrooms and an outdoor park; and a 48-bed Medical/Surgical Unit. A Level 4 Neonatal Intensive Care Unit will be the largest in the mid-Atlantic region.



KEY PATIENTS

Learn more at inova.org/women and inova.org/children.

BRAIN WAVES

Two new docs join neurological program

For the first time, Inova has two movement disorder specialists. Sean Rogers, MD, PhD, and Drew Falconer, MD, both board-certified in neurology, started this summer.

Drs. Rogers and Falconer join Mahesh Shenai, MD, MBA, and James Leiphart, MD, PhD, FACS, as part of the fellowship-trained team that represents an expansion of the Movement Disorders Program. The program, which is part of Inova Neuroscience and Spine Institute, provides care and treatment for

patients with Parkinson's, essential tremor, dystonia, Huntington's disease, tic disorders and other related issues.

One advanced treatment in the Movement Disorders Program is deep brain stimulation (DBS). DBS, which acts like a pacemaker for the brain, delivers a carefully controlled stimulation of electricity to precisely targeted areas. The electric stimulation, which puts a part of the brain to sleep, is not permanent. It interrupts the brain's faulty signals and provides measurable relief to symptoms, allowing for a significant reduction in medications and an improvement in quality of life. "As we learn more about the specific locations and functions within the brain, our ability to modulate specific areas in a reversible and non-destructible manner will give us the ability to improve the function of so many people in the future," says James Ecklund, MD, FACS, Chairman, Inova Neuroscience and Spine Institute. "This area is ripe for advancement, and I'm glad Inova is on the cutting-edge to provide the best possible care."



Sean Rogers, MD, PhD



Drew Falconer, MD



GONE MOBILE
Inova Magazine is available as a free app for your iPhone, iPad or iPod Touch. Go to iTunes and search "Inova Magazine," or click on the link at inova.org/magazine.



MAKE YOUR MOVE

Learn more about the Movement Disorders Program at inova.org/move.

Inova Heart and Vascular Institute's bold new vision to save more lives

PUMP IT

PHOTO BY
ADAM AUDEL

Ten years ago, fitness trainer Brian Stevens was taking a routine walk around a track with some clients and suddenly had so much trouble breathing that he had to stop several times to complete the lap. Doctors at his local hospital diagnosed the 36-year-old from Bowie, Maryland with congestive heart failure, a serious condition where the heart cannot pump enough blood to meet the body's needs. A cardiologist at another hospital discovered he had sarcoidosis, an inflammatory disease affecting the heart, and gave him a pacemaker. "I lived with a pacemaker for five years and it was replaced in 2010, but soon after that, I took a turn for the worse," Brian says.

Finally, he was referred to Shashank Desai, MD, Medical Director of the Heart Failure/Transplant Program at Inova Heart and Vascular Institute (IHVI) who

delivered the shocking news: Brian had severe heart failure and needed a transplant, but his heart was too weak keep him alive until a donor heart could be found. The cardiovascular team at Inova Fairfax Hospital implanted two ventricular assist devices (VADs), one on each side of his heart. The VADs kept Brian alive for 11 months until he received a heart transplant in October 2012.

Brian was in good hands because IHVI is one of only a few centers in the country that can implant two VADs in one procedure and also performs the highest number of heart transplants in the mid-Atlantic Region. "IHVI is well-known for the high-quality, high-quantity VAD work we've been doing over the last 10 years. Inova Fairfax Hospital has been involved in ventricular assist devices since the early days of the technology," Dr. Desai says.

Healthy Strides
Brian Stevens, a fitness expert, just a few years ago relied on ventricular assist devices (VADs) to stay alive.

UP

HEART FAILURE BY THE NUMBERS

The number of Americans currently living with heart failure:



The number of new heart failure cases diagnosed in the U.S. each year:

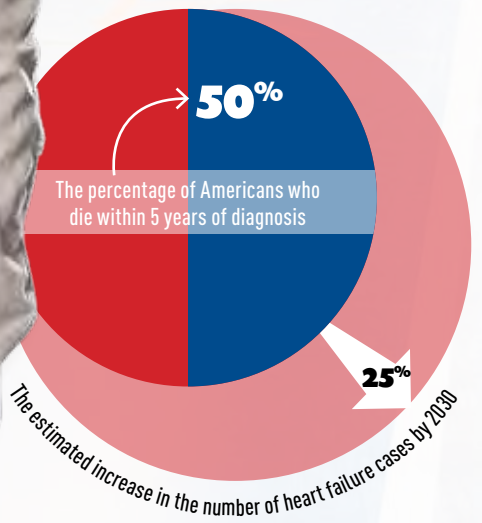
670,000

55,583 new cases per month

1,836 new cases per day

76 new cases per minute

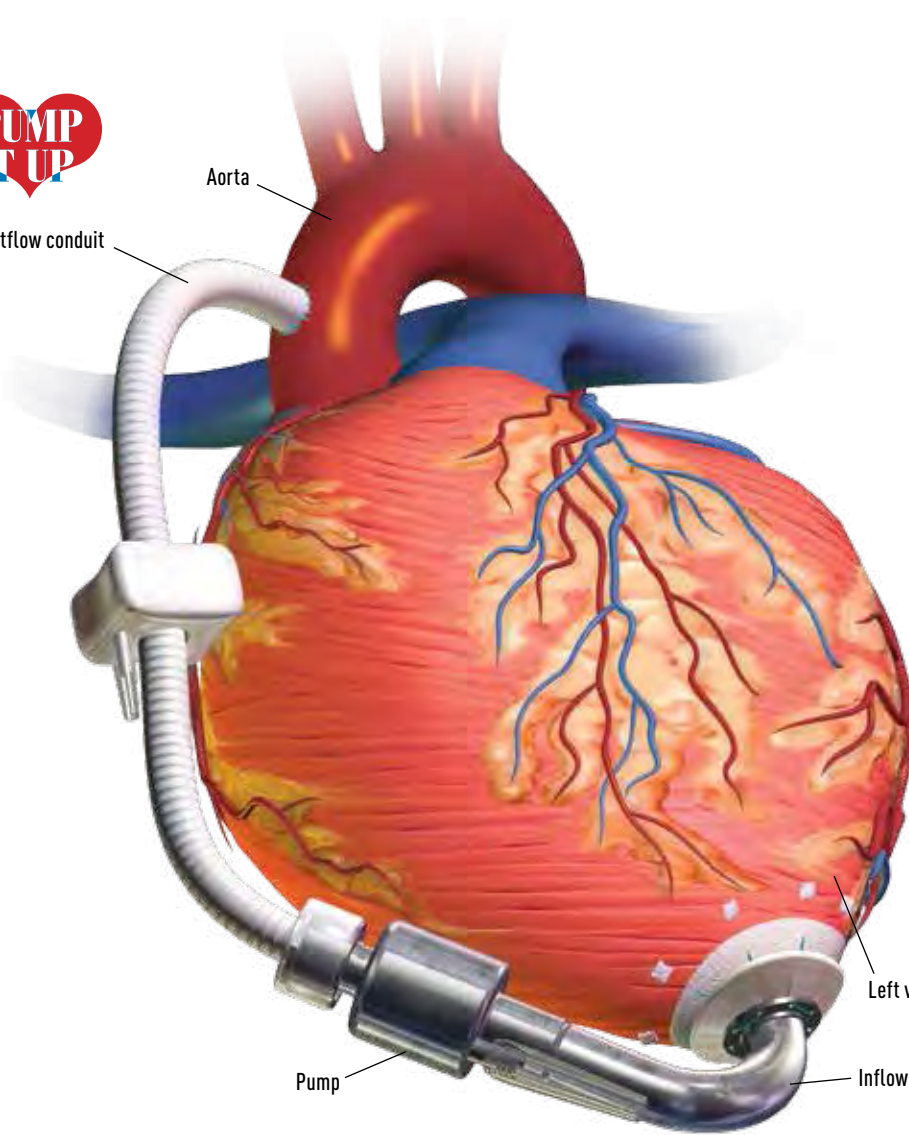
Heart failure is responsible for more **hospitalizations** than all forms of cancer combined.





Outflow conduit

Aorta



Left ventricle

Pump

Inflow conduit

ALTERNATE ROUTE

Today, about 5.1 million Americans are living with heart failure. There is no cure for heart failure, but ventricular assist devices (VADs) can help heart failure patients live longer with a higher quality of life. For those with advanced heart failure, the left ventricle of the heart does not pump with enough force to keep the body's organs alive. Until VADs were developed, patients had limited options. Initially, VADs were implanted as a stop-gap measure to help patients survive until heart transplantation, but more recently, they are used as a long-term permanent support for patients who are not candidates for heart transplants.

The VAD consists of a small mechanical pump implanted in the chest and connected to the heart with tubes. A controller unit and a battery pack worn outside the body manage blood flow. Advances in design mean that VADs are now much smaller than even a few years ago. In the future, they may be fully implantable. Inova will continue to offer patients leading-edge VAD technologies.

Blaesen Medical Communications, Inc.

GIVE FROM THE HEART

For more information on philanthropic opportunities for IHVI, please contact Mary Myers, Executive Director of Development, Inova Fairfax Medical Campus, at mary.myers@inova.org or 703.776.3682.

Today, IHVI is setting a bold new course to save more lives. Nationally renowned cardiologist and heart failure specialist Christopher O'Connor, MD, became the new CEO of IHVI in April 2015, and is directing a five-year strategic plan to transform IHVI's heart program from a top regional program to a top-10 national program. His vision focuses on building programs of distinction in the areas of heart failure and interventional cardiac services, and recruiting more clinicians and researchers across a number of disciplines to accelerate the discovery of leading-edge treatments.

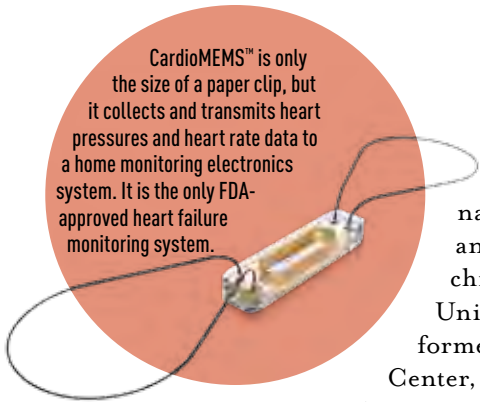
"My five-year plan is to really drive quality, drive strategic growth, drive an outstanding patient experience and bring innovation and clinical research in a greater capacity to the institute," Dr. O'Connor says. "There are 150 cardiovascular specialists who practice at the institute, and my goal is to bring everyone under one vision with a unified set of goals to accomplish the objective of becoming a nationally and internationally recognized heart institute."

HEART FAILURE NETWORK

IHVI continues to offer state-of-the-art devices, advanced therapies and surgical expertise for patients needing VADs and heart transplants. However, saving more people like Brian will require providing earlier identification and intervention. "The number of heart failure specialists is infinitesimally small compared to the number of patients," Dr. Desai says. "It is important that patients with heart failure are identified and treated early and aggressively at their first point of contact with the healthcare system. In order to accomplish this and bring heart failure expertise and therapies locally into the community, Dr. O'Connor and I are committed to building a heart failure network that extends into every community in our region. We want to involve local cardiologists and primary care physicians in advanced diagnostics and therapeutics available to heart failure patients nationwide."

As of this fall, IHVI is one of the first few hospital programs implementing the only

FDA-approved heart failure monitoring system called CardioMEMS™. The size of a paper clip, the small device is placed in the pulmonary artery of patients with severe heart failure during a minimally invasive procedure. It collects and transmits heart pressures and heart rate data to a home monitoring electronics system, which sends the information directly to the heart failure doctor managing the patient. Studies show that remote monitoring with CardioMEMS reduces the number of hospitalizations by 43 percent and reduces deaths by 57 percent. The ultimate objective for Inova's future is to create a comprehensive heart failure technology center, where a team of nurses and technicians will remotely monitor a large number of patients across the mid-Atlantic states and improve their quality and quantity of life.



CardioMEMS™ is only the size of a paper clip, but it collects and transmits heart pressures and heart rate data to a home monitoring electronics system. It is the only FDA-approved heart failure monitoring system.

INTERVENTIONAL CARDIAC INNOVATIONS

IHVI provides a range of specialized cardiac services for patients needing heart valve replacements, atrial fibrillation treatments, high-risk pacemaker extractions and non-surgical procedures to open chronically and completely blocked coronary arteries.

“With our new strategic plan, there is a greater commitment to offering state-of-the-art care to become a quaternary center, one where very complex patients benefit from an enhanced multidisciplinary approach,” says interventional cardiologist Harvey Sherber, MD, FACC, Medical Director of IHVI.

For example, Inova is one of the first hospital systems to offer a new option for patients with atrial fibrillation (AFib) who cannot take anticoagulation medication long term. The WATCHMAN™ is a small, parachute-shaped device that closes a small pouch in the left atrium where 90 percent of stroke-causing blood clots can form. Studies show that this device allows many patients to discontinue anticoagulation therapy altogether, while providing a meaningful reduction in the risk of stroke.

“There are 150 cardiovascular specialists who practice at the institute, and my goal is to bring everyone under one vision.”

—CHRISTOPHER O’CONNOR, MD

CARDIAC DREAM TEAM
Dr. O’Connor is an internationally recognized clinician and researcher. As the former chief of cardiology at Duke University Medical Center and former director of the Duke Heart Center, he brings more than 25 years of experience to Inova. Leaders at IHVI are confident that he will be able to attract the best talent as he accelerates efforts to expand the current team of cardiovascular specialists and researchers. “We are undergoing a seismic shift to bring in new sub-specialists to further broaden the cardiovascular offerings already here at Inova,” Dr. Desai says. “With Dr. O’Connor, we can attract and maintain a world-class physician roster, putting us on the national stage of clinical care and innovative investigations.”

Dr. Sherber agrees: “With Dr. O’Connor, we anticipate doing more first-in-human trials and utilizing our clinical research to accelerate the delivery of cutting-edge treatments and enhance our educational outreach.”

Many top specialists are interested in moving to Inova and several have already joined, including a critical care cardiovascular surgeon with patient safety expertise, and a nationally-recognized interventional cardiologist/antiplatelet researcher who is creating a new unit for phase I drug trials. Other doctors interviewing have special expertise in sports medicine, cardio-oncology, population health, personalized medicine and genomics.

With a strong strategic plan in place, IHVI is poised to save many more lives throughout the mid-Atlantic States, helping more people like Brian. “When I had my VADs, Inova gave me so much confidence, making it that much easier to transition back to life after transplant,” he says. “Today, three years post-transplant, I am fitter and stronger than ever. I have no restrictions and I’m actually doing more now than when I thought I was in my best shape. I pinch myself and count my blessings every day.” ■



Four guiding principles form IHVI's commitment to research:

1

Every patient will have an opportunity to participate in research.

2

Every physician and staff member will be part of IHVI's research team.

3

IHVI's research network will be a highly efficient, high volume, site-based research network across the health system and its cardiovascular affiliates.

4

Translation of research activities will be accelerated in both directions, from clinical trials to patient care, and from personalized patient care research back to clinical practice.



HEART WORK

Learn more about Inova Heart and Vascular Institute at inovaheart.org.

what we can

Inova Center
for Personalized
Health realizes Inova's
vision as a hub for
genomic science

we can
prevent

predict



When Todd Stottlemeyer last worked at Inova,

he co-chaired an effort to develop and build a translational research and personalized medicine strategy and plan for Inova. This would lead to the creation of Inova Translational Medicine Institute (ITMI), a program devoted to genomic research, now in its fifth year. In his return to Inova in July as CEO of the newly announced Inova Center for Personalized Health (ICPH), Stottlemeyer is seeing the fruits of the health system's effort to develop a program around personalized health. This concept involves using the genomic makeup of patients to apply personalized approaches to predicting, preventing and treating diseases.

"I can't think of anything more exciting than this in terms of the impact on the health of our community and the human condition," says Stottlemeyer, who most recently served as CEO of Acentia LLC, a provider of software and information technology solutions. "In the end, it comes down to helping our neighbors, our friends and our citizens live longer, healthier lives. Inova has put a stake in the ground; plans are in place to lead the way in the areas of research, discovery, big data and personalized health. It's a real privilege to be back and working with a great team to build, plan and execute on this exciting vision."

VISION TO REALITY

Inova is still in the early stages of conceptualization of the existing footprint and borders of the Center for Personalized Health, which Inova CEO Knox Singleton and Virginia Gov. Terry McAuliffe announced publicly in February. One of the most exciting prospects is the myriad possibilities for use of the land — 117 acres adjacent to Inova Fairfax Hospital — on which the Center for Personalized Health will flourish. Inova took possession of the land on Oct. 1, and, at that point, strategy started to transform into brick-and-mortar reality. "The vision is to build a fully integrated campus that is focused on personalized health," Stottlemeyer says.

Plans are currently being developed for the five existing buildings on the campus. These buildings include: a research tower where Inova's research programs will reside; a technology tower; a tower for Inova Dwight and Martha Schar Cancer Institute

Back to Business

Todd Stottlemeyer has returned to Inova to head the new Inova Center for Personalized Health, which is devoted to the study and application of predictive medicine.

PHOTO: ADAM AUER

WHAT WE CAN PREDICT WE CAN PREVENT

(ISCI) (see more on Dwight and Martha Schar in this issue on page 12); and a clinical tower that includes specialists, subspecialists, and will house the concierge medicine program called Inova VIP 360. The fifth building is slated to be a futuristic conferencing facility devoted to collaboration with other institutions and outside clinical professionals, and continuing medical education. Thanks to an additional 92 acres of undeveloped land on the site, more development is to come.

ONLY AT INOVA

How unique is such a concept? Other organizations are focusing on genomics, research, specialty and subspecialty care, and wellness, Stottemyer notes. “What will be unique is how we design and integrate all of this and use data to accelerate and drive the learning loop and clinical application so we can better predict, prevent and treat disease,” he says.

Inova has been on a journey over the last half-decade to become a new kind of health system. Evolving to a system focused on personalized medicine is a key aspect of Inova’s strategy. This entails shifting from treating patients with generalized treatment to precise treatment based on an individual’s molecular makeup.

John Niederhuber, MD, former director of the National Cancer Institute, who came to Inova to lead ITMI in late 2010, has overseen studies in genomics, proteomics and pharmacogenomics. Such research provides knowledge to treat people as individuals, he says. “It’s my personal belief that the more we know about how our genome is an instruction book that we have in each of our cells, the more we will know about how the genome changes or alters,” he says. “We will then be able to learn more about how we develop heart failure or hypertension or diabetes or rheumatoid arthritis or all of the things that happen as we age.”

As much as the campus is about treating disease, it is also about staying well, he and others say. “Wellness is a big focus area for us, and that’s

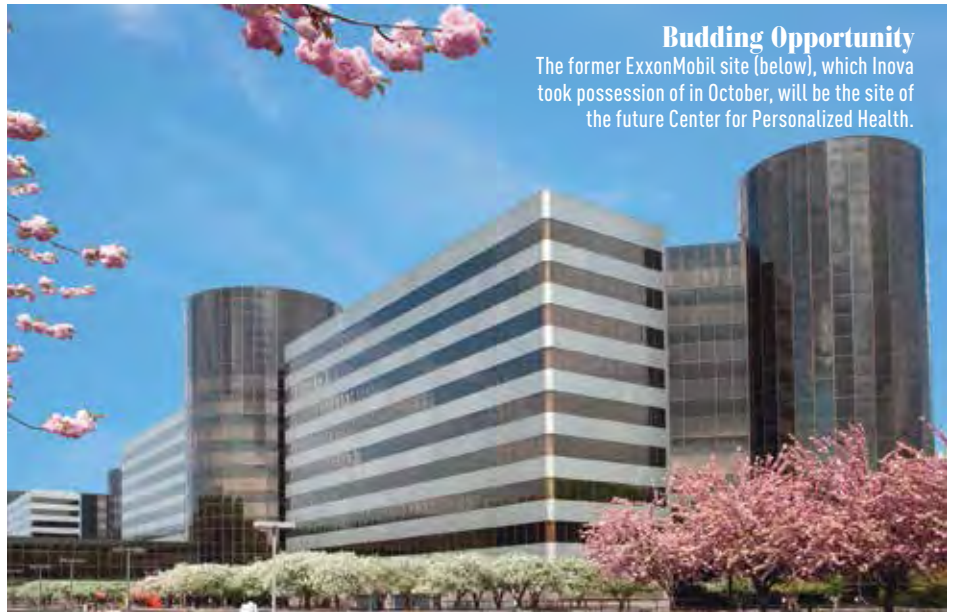


PHOTO: JAMES DESCH

Budding Opportunity

The former ExxonMobil site (below), which Inova took possession of in October, will be the site of the future Center for Personalized Health.

WHERE RESEARCH AND PATIENT CARE MEET

The Inova Center for Personalized Health (ICPH) is poised to become a major center of personalized medical research. Inova plans to partner with local academic medical institutions, and bring in start-up biotech companies and those with a research and development focus as tenants. “We want to do a lot more translational research work,” says Brian Hays, Program Director for ICPH. “That means taking an invention and developing it to the point of becoming part of the standard care of treatment for patients.”

One of the hallmarks of the new campus will be the integration of research and care. Specialists at Inova Dwight and Martha Schar Cancer Institute, for example, will be recruited from university environments; they will have an established interest in clinical translational research, drug discovery and outstanding patient care. The aim is for medical oncologists, surgical oncologists and radiation oncologists to work cooperatively on patients’ cases.

because of one of the transitions we’re going through — redefining the role of the healthcare system so that it keeps track of our citizens their entire lifespan and tries to keep people as healthy as possible,” says Brian Hays, Program Director, ICPH. “But, clearly, when they do need treatment, we want to treat them based upon their genetic makeup, so that we specifically target and tailor the treatments to who they are as individuals.”

TALENT MAGNET

The sheer amount of space on the new campus — 1.2 million square feet — is a game-changer. “It is a reality that buildings and space are a major attractor for talent when you are looking to recruit top-flight clinicians and scientists,” says Donald Trump, MD, the new CEO of ISCI. “We are working hard to recruit talented individuals with well-developed expertise in cancer and translational research to complement the already outstanding care that’s provided, and to develop opportunities to further enhance that care, so we become a destination site for care and research.” ■



PERSONAL VENTURE

Learn more about the Center for Personalized Health at inova.org/icph.



PHOTOS: MIKE MORGAN

DEBORAH ADDO

CEO, Inova Mount Vernon Hospital

Deborah Addo's tenure as CEO of Inova Mount Vernon Hospital has coincided with an auspicious period for the facility. Since she started in June 2014, the hospital has opened the Mark and Brenda Moore Patient Tower, broken ground on a new Emergency Department, and taken a major leap in the *U.S. News & World Report* rankings to No. 6 in the Washington, DC, area. Addo, formerly chief operating officer for Meritus Health in Hagerstown, MD, looks at what's ahead.

HOW WILL IMVH'S WELL-KNOWN JOINT REPLACEMENT AND REHAB PROGRAMS BE GROWING AND CHANGING?

IMVH caters to an older patient population, so the need for these services will continue to grow. We are working with our physicians to assist in recruiting and retaining these specialists. We are also beginning to align risks and rewards through a bundled payment system that we are piloting with our orthopedic surgeons. Lastly, we submitted a COPN for 25 additional rehabilitation beds that was recently approved. We will be collaborating with Inova Fairfax Hospital to bring those beds on line.

IN YOUR VIEW, HOW IS HEALTHCARE CHANGING?

I think the lines are becoming more blurred. In the past, everyone knew the differences and roles of a hospital, insurer, inpatient and outpatient. Today, healthcare systems are insurers; inpatient beds are classified as observation; we have clinically integrated networks; and there are fewer individual hospitals and many larger healthcare systems. Rewards and penalties are more value-based. The equations are rapidly shifting.

THERE ARE STILL NOT MANY AFRICAN-AMERICAN CEOS AND EVEN FEWER FEMALE CEOS OF COLOR. DO YOU FEEL A RESPONSIBILITY TO BE A ROLE MODEL?

I consistently get phone calls, correspondence and visits from women of color who tell me how much I inspire them. It's a humbling experience. Early in my tenure here, an Inova employee said she saw my story and wanted to meet me. She shared that she has two daughters and told me, "Every night, when we say our grace, we say God bless the new CEO at Inova Mount Vernon." Our boardrooms and C-suites need to reflect those we serve. Yes, I feel a sense of responsibility and accountability to our patients, staff and community and often to people I've never met. ■

JUST ONE QUESTION...

DID YOU ALWAYS WANT TO BE A CEO?

I always knew that I wanted to work in healthcare. I was pre-med in college [at Georgetown University]. Once I began my career and was given an opportunity to work in a management role, I knew I wanted to move forward.



JOINT EXCELLENCE

Learn more about the Inova Joint Replacement Center at Inova Mount Vernon Hospital at inova.org/joint_replacement.

the gift of KNOWLEDGE

Dwight and Martha Schar's donation to transform cancer care

Dwight and Martha Schar recently donated an unprecedented \$50 million to Inova, the largest single gift ever for a health organization in the mid-Atlantic states.

The endowment will significantly accelerate cancer research, diagnoses, treatment and prevention approaches across the whole Inova system. In honor of the Schar's gift, Inova Comprehensive Cancer and Research Institute has been renamed Inova Dwight and Martha Schar Cancer Institute (ISCI).

Dwight and Martha Schar chose Inova for their generous endowment after identifying where there is a great need, which organization is doing the best work and where their support would help those making a difference achieve even more. "I am passionate about supporting causes in healthcare and education," Dwight says. "Inova has one of the world's largest sequenced human genome databases and a formidable combination of researchers and physicians who are exploring new therapies and treatment procedures using genomics to develop personalized cancer care. All of this will come together on one transformative campus, the Inova Center for Personalized Health, that will emerge on Exxon-Mobil's former property."

"It's hard to overstate the importance of the Schar endowment," adds Donald Trump, MD, FACP, CEO and Executive Director of ISCI.

"Inova has committed substantial resources for the bricks-and-mortar portion of a destination cancer center, and with this gift in place, we will have the ability to recruit nationally renowned

What a Pair

Thanks to Dwight and Martha Schar, Inova will have the ability to build a destination cancer program.



Big Announcement

The audience for the disclosure of the Schar's \$50 million gift included (from left) Jennifer Lee, MD, deputy secretary of Health and Human Resources; U.S. Sen. Tim Kaine; Alan Dabbieri, Chairman, Inova Health Foundation Board of Trustees; Knox Singleton, Inova CEO; Governor Terry McAuliffe; Martha Schar; and Dwight Schar.

experts in clinical and translational cancer research and care to establish a destination cancer program.”

NEW CAMPUS OF CARE

The Inova Center for Personalized Health, home of the new ISCI, will be located on a beautifully landscaped, 117-acre parcel of land across the street from Inova Fairfax Hospital. A new facility adjacent to the proposed location of ISCI will house imaging and radiation oncology technologies, while existing high-quality office space will be converted to a friendly and embracing patient care center.

ISCI encompasses the entire Inova system. “Use of the Fairfax location will be for initial treatment planning, complicated diagnoses, provision of highly specialized treatments and access to highly specialized clinical trials that need to be done in one location,” says Dr. Trump. “Where possible, ambulatory care will be delivered at Inova hospitals close to patients’ homes, so it’s convenient for family and patients.”

EXPANDED EXPERTISE

Dr. Trump’s vision focuses on the whole spectrum of cancer care, from treatment and diagnosis to risk assessment and prevention, to ensure Inova can meet the growing number of cancer patients, estimated to grow by about 25 percent over the next 20 years.

“We often think of a cancer center as a place for cancer treatment, and while that is true, the direction we are pursuing includes appropriate diagnosis and new approaches to understanding risk factors for developing cancer so we can intervene before cancer happens. We need to be prepared to care for local patients, as well as those coming from outside our area, with leading-edge approaches and new treatments available first at Inova,” says Dr. Trump.

One of his top priorities is to recruit 12 to 15 clinical investigators and scientists. “We have



nationally visible expertise in skin cancer and melanoma, genitourinary cancer, head and neck cancer, radiation oncology, gynecologic oncology, and genomics. We will add to those areas by recruiting specialists with complementary and new expertise that will allow us to care for every kind of patient with any kind of cancer or its complications,” says Dr. Trump.

ACCELERATING DISCOVERIES

Collaboration across a team of cancer specialists will mean accelerated timelines for developing new cancer treatments and approaches to prevention. The drug discovery program includes targeted chemotherapy drugs, exciting new approaches to immunotherapies that will help patients’ own immune systems identify and destroy cancer cells, drugs that can make radiation treatment more powerful while protecting normal tissue, and therapies that may be able to prevent cancer altogether.

The drug discovery initiative will intersect with Inova’s existing genomics program led by John Niederhuber, MD, CEO of Inova Translational Medicine Institute (ITMI) and former director of the National Cancer Institute at the National Institutes of Health, and Benjamin Solomon, MD, Chief of the Division of Medical Genomics, ITMI.

“The pieces are in place to make a game-changing difference in the way cancer is treated. My philanthropic investment in Inova will provide the momentum to propel the application of cancer research and care to new heights while improving and saving countless lives,” says Dwight Schar. ■

KEY WORDS

Below is an excerpt from a blog post written in July by Donald Trump, MD:

Dwight and Martha Schar donated \$50 million toward building a destination cancer center at Inova. How can you not be exhilarated by the commitment of the Schar's? Their gift, combined with the previous \$10 million donation from Milt and Carolyn Peterson, provides a transformative foundation of philanthropy on which to build a destination center.

These gifts enable us to recruit outstanding clinical leaders and translational scientists (scientists who specialize in extending scientific research into clinical applications).

EXPERT OPINION

Read the full post at inovanewsroom.org/the-inova-dwight-and-martha-schar-cancer-institute-a-destination-cancer-center.



ASSISTANCE WELCOMED

To learn more about philanthropic opportunities for Inova Schar Cancer Institute, please contact Jennie McGihon, Institutional Giving Director, at [703.776.3422](tel:703.776.3422) or at jennifer.mcgihon@inova.org.



WIN WIN

Unique partnership between Inova and Aetna results in better care, lower costs

For consumers and employers in Northern Virginia, a unique partnership is breaking new ground in the health insurance market. Innovation Health, a 50-50 partnership between two industry leaders, Inova and Aetna, was launched in 2013 to deliver the best healthcare solutions at the most affordable costs.

A total of 170,000 members have signed onto this insurance coverage, which offers coordinated clinical care and sophisticated, user-friendly technology that aims to simplify healthcare for members.

“Our insurance plans have been very successful in all segments of the market, from large national employers to individuals buying on the exchanges,” says David Notari, CEO of Innovation Health. “In just two years, we have signed up over 1,500 customers that include small and large employers, in addition to approximately 39,000 individuals who have bought on the health insurance exchange.”

REASONS FOR ACHIEVEMENT

Notari attributes Innovation Health’s success to three major drivers:

- ➔ **Coordinated care.** Better communication and coordination — both among the various providers, and between provider and insurer. It has reduced waste and improved outcomes.
- ➔ **Lower costs.** Aggressive price negotiation lowers the members’ eventual costs.

- ➔ **New technology.** Technology is being deployed that empowers consumers to control their own healthcare purchases.

One example of the intersection of these initiatives is the Member Payment Estimator tool. In the past, patients rarely knew in advance the price tags for medical tests or surgical procedures because insurance often covered the entire cost. However, now that more consumers are buying high-deductible health plans to reduce their premiums, consumers want to know the actual costs in advance because they may be paying for them out-of-pocket.

“So, we put technology in our members’ hands,” says Notari. “The Member Payment Estimator tool provides each member’s plan details built right in. From there, the member can go ‘comparison shopping’ for medical services. For example, if members need an MRI, they can comparison shop between imaging centers. In Falls Church alone, MRIs range between \$350 to almost \$1800. With these tools, our members can choose their providers and know the cost of care before they access the care.”

392,340

Total number of Virginians determined eligible to enroll in a marketplace plan as of April 2014.

“The Member Payment Estimator tool provides each member’s plan details built right in. From there, the member can go ‘comparison shopping’ for medical services.”

—DAVID NOTARI, CEO, INNOVATION HEALTH

wellness, improving patient outcomes through better care coordination, and streamlining access to patient information. Aetna supports Inova with technology that makes it easier for physicians to exchange information and track patients’ care across all settings.

“The Affordable Care Act (ACA) has given us new opportunities to modernize the health system, but one clear factor that drove the creation of Innovation Health is the escalated costs,” acknowledges Notari. “As health insurance evolves, both providers and payers are looking for new business models like Innovation Health to better serve the market.”

MEASURING OUTCOMES

In terms of improving health outcomes and lowering costs, Innovation Health has already demonstrated progress in both metrics. “Since we launched, we’ve been measuring our members’ engagement in case management programs for complex diseases, because keeping members actively engaged with their ongoing care leads to better outcomes and quality of life,” explains Amy Turner, Executive Director of Innovation Health. “We have a 68 percent rate in keeping those identified members engaged in those programs, which is up from a 20 percent starting point engagement rate.” Case management programs for 39 different diseases include conditions such as diabetes, COPD, asthma and behavioral health issues.

Innovation Health has also lowered C-section rates. C-sections performed before 39 weeks increase the risk of complications, so C-sections should be performed only when necessary. Since Innovation Health started monitoring this statistic, it has documented a 27 percent decrease in C-section rates, says Turner.

Another major health outcome measurement that is central to the ACA is the 30-day hospital readmission rate for the same diagnosis. Thanks to assistance from Inova’s Transitional Care Program, one of Innovation Health’s largest customers has seen a 21 percent reduction in 30-day readmission rates.

“As to cost, we’ve seen a 3–5 percent cost savings on our plans as compared to best-in-market network plans,” says Turner. “Bringing together our medical management programs and our network strategies allow us to deliver on that cost savings year-over-year.”

“The No. 1 priority for Innovation Health in Northern Virginia is improving health outcomes and lowering overall cost,” emphasizes Notari. “We’ve taken the best capabilities from Aetna and Inova, and leveraged them into better choices to meet our members’ needs. We believe collaboration between a health delivery system and an insurance company can solve some of the problems of healthcare.” ■



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HOUSE CALL

ADVANCES IN BREAST CANCER TREATMENT

Exciting developments are happening in the area of radiation treatments for breast cancer patients. Inova Fairfax and Alexandria hospitals, for example, recently implemented a new advancement called intraoperative radiation therapy (IORT).

This alternative to conventional radiation treatment takes place in the surgery room. Breast cancer patients undergoing IORT receive just one treatment during the lumpectomy, the surgical removal of the tumor. This compares to the traditional radiation protocol, which involves five days of treatment a week over a period as long as six weeks.

“It’s very promising, as an alternative option for the appropriate patient, to provide more efficient and convenient radiation treatment without having the patient go through several weeks of therapy,” explains radiation oncologist Ashish Chawla, MD.

A patient’s age, the size of her tumor and her stage of breast cancer factor into her eligibility for IORT. The reduced treatment protocol can provide a number of benefits. “An elderly woman, for example, with transportation limitations, only needs to come in one time for treatment, and then she’s done,” says Peter Dritschilo, Director of Cancer Services at Inova Fairfax Hospital. “By receiving their treatment in one day, versus daily treatments for up to six weeks, patients can maintain their normal quality of life.”

NEW TREATMENTS

While the treatment has been available in Europe over the last few years, it is still relatively new in the United States, notes Dr. Chawla. Inova is one of several institutions offering the treatment as part of a TARGIT (TARGeted Intraoperative radioTherapy) study.

IORT represents a move in radiation therapy toward targeted, shorter, and more effective and convenient treatments. Besides IORT, Inova offers partial breast irradiation using catheters in a five-day treatment approach following surgery. In addition, even the standard course of radiation has been shortened, Dr. Chawla notes. Now a majority of patients receive standard radiation in 3.5 weeks instead of six or seven because of better techniques and technology.

Another major step in breast radiation therapy at Inova is Deep Inspiration Breath Hold (DIBH). This technique helps to reduce the long-term cardiac side effects of radiation for people who have breast cancer on their left sides.

CANCER CARE ADVANCES

Learn more about breast care at inova.org/breastcancer.

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