



# INhealth

INOVA FAIRFAX MEDICAL CAMPUS



## A SOLDIER *at Ease*

U.S. Army specialist recovers from harrowing health issue

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Soldier Charles Furstenberg, who was stationed in the Balkans, received treatment for a heart infection at Inova.

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# FOLLOW THE LEADER

## We Have Heart

Welcome to the fall edition of *InHealth*. Our military deserves our very best, and our cover story on a U.S. Army officer who recovered from a nearly fatal heart condition reflects just that. I would like to take a moment to highlight the multiple accolades Inova Heart and Vascular Institute (IHVI) has received recently: The team once again has received recognition at the highest level of performance from the American College of Cardiology as well as from the American Heart Association. We are also proud to announce that we recently implanted the world's smallest pacemaker — the first such case in Northern Virginia.

Being prepared in an emergency is a very important part of living in a city like ours, and Inova Fairfax Medical Campus' (IFMC's) trauma team has partnered with local schools and institutions to lead the way in educating people about the national "Stop the Bleed" campaign. Another component of emergency preparedness is donating blood, which helps save lives every day.

Appreciation of the care that is provided here at IFMC is reflected in the great patient scores that we have received. Thank you for your feedback. We look forward to serving you in the future!



**PATRICK CHRISTIANSEN, PhD**

CEO, Inova Fairfax Medical Campus  
Executive Vice President, Inova



### HEART AND VASCULAR

# Keeping PACE

## IHVI installs miniaturized pacemaker

A pacemaker is a small device whose main purpose is to prevent the heart from beating too slowly. Recently, electrophysiologist Aysha Arshad, MD, and a team of experts at Inova Heart and Vascular Institute (IHVI), implanted what is believed to be the world's smallest pacemaker. Inova is the first to implant such a device in the Northern Virginia region.

The miniature pacemaker (called the Micra) is 93 percent smaller than traditional pacemakers. It is delivered via catheter into the right ventricle of the heart, leaving no chest scar, no bump and fewer complications than traditional pacemakers. Conventional pacemakers consist of a pulse generator, which is attached to one to three leads — or wires — that are inserted within the heart. The generator depends on a microchip and a battery that has a life span of six to 10 years, depending on its use. The Micra is

Inova is the first in the region to implant the Micra, a pacemaker that is 93 percent smaller than traditional pacemakers.

completely self-contained within the heart and offers up to 12 years of battery life.

In related news, IHVI recently earned accreditation in Clinical Cardiac Electrophysiology from the Intersocietal Accreditation Commission. Inova is the only hospital in the DC metro area to receive this distinction. Such recognition is a testament to the training and qualifications of Inova's cardiac electrophysiologists and staff, and the quality and safety provided to Inova's patients, says Christopher O'Connor, MD, Chief Executive Officer of IHVI.

*IHVI recently earned accreditation in Clinical Cardiac Electrophysiology from the Intersocietal Accreditation Commission.*



Image courtesy of Medtronic.

# The OTHER First Responders

Campaign strives to teach bleeding control techniques to regular citizens

After the Sandy Hook Elementary School shooting in 2012, the Hartford Consensus was formed to evaluate emergency response processes and recommend changes in how quickly victims are treated. Recommendations call on those present at the time of an event to render care to stop life-threatening blood loss until help from police and first responders can arrive. To help teach members of the community proper bleeding control techniques, Inova Trauma Center, the only level 1 trauma center in Northern Virginia, is holding free, educational workshops throughout the Northern Virginia and Washington, DC, areas.

The workshops are part of the national “Stop the Bleed” campaign. Stop the Bleed was initiated by national health

committees such as the American College of Surgeons and is supported by the White House. The campaign aims to teach non-medical citizens proper bleeding control techniques after a man-made or natural disaster, or an emergency event. The education includes how to apply dressings and tourniquets to stop life-threatening bleeding.

During the hourlong workshop, attendees learn how to use tourniquets, pack wounds and apply pressure bandages. Recent workshops have been held at Inova Fairfax Medical Campus, the WMATA Alexandria Metrorail Yard, and at a local Boy Scout and Boy Scout leader troop meeting. Inova Trauma Center is



also working to obtain grants that will enable it to provide individuals, large organizations and local schools with five to eight bleeding control kits. As Fairfax County Public Schools (FCPS) is the fifth-largest school district in the nation, Inova Trauma Center’s goal is to provide education to all FCPS teachers and staff. The center encourages everyone in the community to learn these skills.

## TAKE ACTION

For more information about the Stop the Bleed campaign, visit [bleedingcontrol.org](http://bleedingcontrol.org). To register or find a workshop, call 703.776.2274 or visit Twitter [@InovaFFXTrauma1](https://twitter.com/InovaFFXTrauma1).

# The Most PRECIOUS GIFT

Donating blood **saves lives**

*“My sister is a transplant survivor — I do it in her honor.”*  
*“Someone donated and helped my husband. Pay it forward.”*

These are just a couple of reasons Inova blood donors say they chose to donate. While most of us know that donating blood is a critical aspect of saving lives, we may not know exactly how. Inova Blood Donor Services is trying to change that, one message at a time.

“Everybody has different reasons why they need blood,” says Julia Ward, Marketing Manager, Inova Blood Donor Services. “You don’t hear so often about who receives the blood. We’re relating back to people how blood donation is used in the community, so more people can see what an impact it makes and how it really makes a difference in not only our patients’ lives, but also in their families’ lives.”

One blood donation takes less than an hour and can save up to three lives because it is separated into three different components — red cells, plasma and platelets. Each is used to treat patients in a variety of ways, including

*One blood donation takes less than an hour and can save up to three lives.*

blood transfusions, severe burn treatment and control of active bleeding. “We depend on generous volunteer blood donors to take the time out of their busy schedules to donate the lifesaving blood products our patients need,” Ward says.

## WANT TO GIVE?

Almost 40 percent of the U.S. population is eligible to donate, but less than 5 percent actually do. Visit [inova.org/donateblood](http://inova.org/donateblood) or call 1.866.bloodsaves to learn about your eligibility and to schedule a donation.

# THE NEXT LEVEL IN EPILEPSY CARE

Level 4 certification ensures that epilepsy patients have more options

**A**lthough Leila Ait Abdedaim was diagnosed with epilepsy at age 20, she'd already had a lifetime of struggles with the condition. Her symptoms began when she was just 3 months old.

In her home country of Morocco, epilepsy is often left untreated, so it wasn't until she came to the United States that all of her challenges were given a name.

"I didn't know what was wrong with me," so it was a relief to finally have a diagnosis, Leila says through her friend, Thoraia Hussein, who translates for her from Arabic to English. But treatment came with its own difficulties. She was put on several medications, and when they didn't work, her prescriptions were changed. But those didn't help, either.

"My epilepsy is resistant to medications, no matter what they are," she says. "I tried everything doctors suggested, but my seizures got worse."

But a few years ago, Leila came to Inova Fairfax Medical Campus (IFMC), a level 4 epilepsy center. This meant that surgery was an option — one that Leila did not have before. Mohan Kurukumbi, MD, Medical Director for Epilepsy, says that patients like Leila who don't respond to medications should be considered for epilepsy surgery, which can

## Features of a Level 4 Epilepsy Center

- 1 Advanced surgical care
- 2 Intensive neurodiagnostic monitoring
- 3 Extensive medical, neuropsychological and psychosocial treatment
- 4 Complete evaluation for epilepsy surgery, including intercranial electrodes

cure seizures for about 60 to 80 percent of patients.

After a resection surgery was recommended, Leila opted to have this procedure, which involved inserting a small medical device in the brain that changes its electrical activity. This neurostimulation basically "shorts out" a seizure before it can happen.

"To many people, it may sound extreme because this is brain surgery," says Dr. Kurukumbi. "But it's a proven procedure that provides a very good option for those who don't do well with medication. We are proud to have level 4 certification, which represents the



Leila Ait Abdedaim believes that her quality of life has improved since she received treatment for epilepsy at Inova.

highest possible care level and advanced treatment, including many surgical options like vagal nerve simulator, responsive neurostimulation and intercranial electrode monitoring."

Leila was the first to undergo the procedure at Inova, in 2014. She's been seizure-free ever since.

"I feel amazing," she says. "I got my life back. I can do anything I want without fear of having a seizure and waking up in the hospital with an injury. I feel free."

## ACTIVE BRAINS

Learn more about the Inova Epilepsy Center. Call **703.845.1500** or visit **inova.org/epilepsy**. Watch a video of Leila Ait Abdedaim at **inova.org/seizurefree**.

# TELL US HOW WE'RE DOING



## Hospital surveys lead to positive changes in patient care

**P**atients are pleased with the care they receive at Inova Fairfax Medical Campus (IFMC), according to the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) surveys.

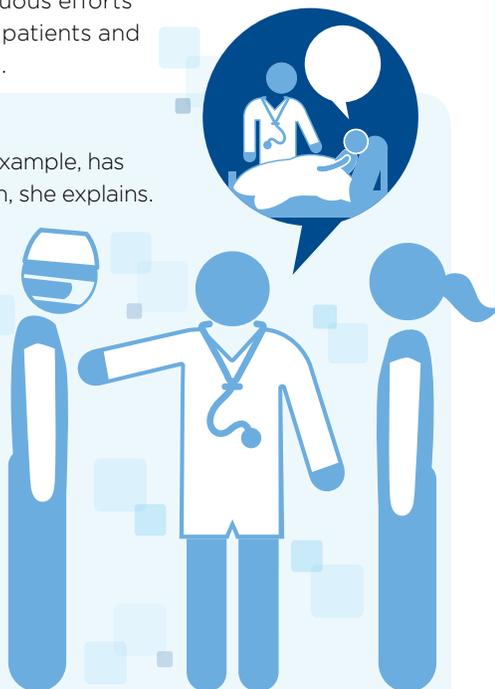
Hospitals, such as IFMC, routinely send out HCAHPS surveys to both inpatient and outpatient populations to ensure that they are meeting patient needs every step of the way. These surveys cover various areas of the patient experience, including nurse and physician communication, pain management and discharge instructions.

IFMC's scores are the highest they have been since 2012, when IFMC began tracking them, says Heather Hunn, Director of Patient Experience at IFMC. She credits this success to the hospital staff's continuous efforts to communicate with patients and anticipate their needs.

### LEADER ROUNDING

Leader rounding, for example, has helped communication, she explains.

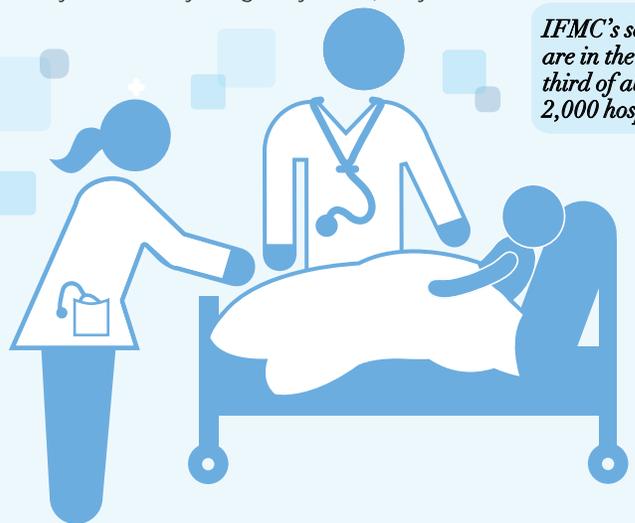
This occurs when a nurse or physician leader enters a patient's room, talks with them about their experience and care, and answers any questions. The leader then conveys the patient's comments to managers of those areas of the hospital involved with the patient.



### BEDSIDE HANDOFF

Another safety and communication initiative is the bedside handoff — when nurses changing shifts enter a patient's room together, so the nurse leaving can say goodbye and introduce the new nurse. In general, nurses also are checking on patients more frequently. "We're doing everything we can to make sure they don't have to push the call button, because they already have everything they need," says Hunn.

*IFMC's scores are in the top third of about 2,000 hospitals.*



IFMC's survey scores are part of a third-party database, with scores from about 2,000 other hospitals. IFMC's scores are in the top third, according to Hunn. The IFMC Emergency Department in particular is doing well compared to other level one trauma and high-volume emergency departments. When the ED is doing well, so is the rest of the hospital, Hunn says. "As a nurse, I want my patients to feel safe and to know that they were communicated with well, that everybody who took care of them did so to the best of their ability, and that they got a quality outcome," Hunn says.

# VICTORY



## Soldier receives lifesaving ECMO treatment at Inova

As Charles Furstenberg trekked along a 12-mile trail in the early Kosovo dawn one day last April, a 35-pound rucksack digging into his shoulders, he kept pace with his fellow soldiers as they marched the hilly path through the darkness. The 3 a.m. drill, designed to test his strength and endurance, was routine for the U.S. Army specialist, who was accustomed to pushing his physical limits.

But later that night, the 25-year-old Texan faced another battle. As if his body had come under fire by an unseen enemy, Charles was hit by a wave of nausea, vomiting and endless bouts of shivering. He was quickly placed under close medical supervision, but over the next few days, his health spiraled downward and his body convulsed with seizures.

Charles was flown by medevac to a civilian hospital in Macedonia where an echocardiogram revealed his heart wasn't functioning at full capacity. To combat his abnormally low blood pressure, doctors prescribed inotropes, a medication to strengthen the force of his heartbeat. But when his condition worsened, he was transported to Lanstuhl Regional Medical Center in Germany, where doctors implanted a temporary pacemaker to keep his heart beating. As Charles' heart began to fail, he was transported to Walter Reed National Military Medical Center, near the nation's capital. Within an hour, he was rushed in an ambulance to Inova Heart and Vascular Institute (IHVI) at Inova Fairfax Medical Campus (IFMC), where a team of cardiac specialists was



Charles Furstenberg enjoys the streets of Bethesda, Maryland, while he resides at Walter Reed National Military Medical Center. He is completing cardiac rehab there.

ready to provide him with urgent, lifesaving care.

"When Charles arrived at Inova, he was in acute cardiogenic shock caused by viral myocarditis, an infection of the heart. His heart was failing and unable to pump blood to the rest of his body. He was also experiencing kidney and liver failure and had poor blood flow to the brain," says Charles Murphy, MD, Director of the Cardiovascular Intensive Care Unit (CVICU) at IFMC.

### BRAVE HEART

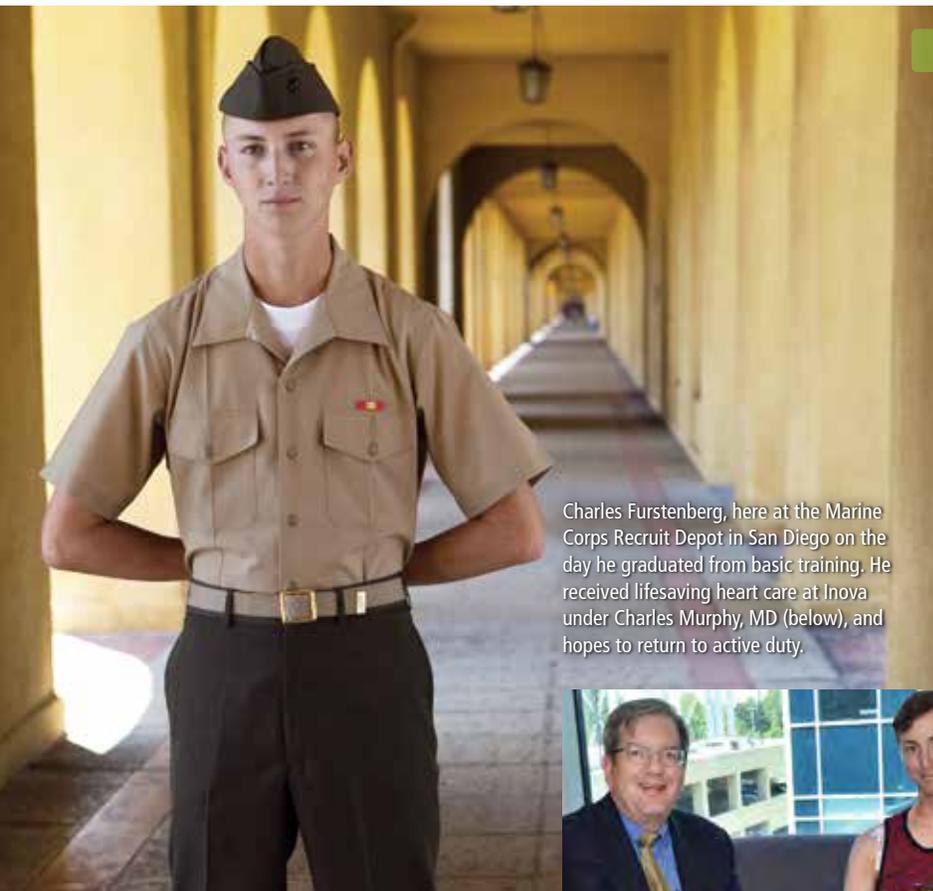
Despite Charles' condition when he arrived at Inova, Dr. Murphy was confident his team could give Charles the care he needed to restore his failing heart. Within minutes, the team placed Charles on

extracorporeal membrane oxygenation (ECMO), a machine that would take the burden off his heart and lungs, ultimately saving his life.

"Our team placed Charles on veno-arterial ECMO," says Dr. Murphy. "This involves taking blood from a vein and running it through an oxygenator that restores oxygen and removes carbon dioxide. The blood is then pumped back into an artery. ECMO takes over the function of the heart and lungs."

As Charles faded in and out of consciousness, surrounded by family and a highly specialized, caring medical staff, he sensed he had come to the right place. "I knew I was in good hands," says Charles. "Every time the nurses and doctors came in they answered any questions my mom

# HOME FRONT



Charles Furstenberg, here at the Marine Corps Recruit Depot in San Diego on the day he graduated from basic training. He received lifesaving heart care at Inova under Charles Murphy, MD (below), and hopes to return to active duty.



## Bridge to Recovery

For patients with heart or lung failure, extracorporeal membrane oxygenation (ECMO) takes over the work of pumping blood through the body. Candidates for ECMO include patients with acute heart failure caused by a virus or a heart attack; chronic heart failure caused by coronary artery disease or non-ischemic cardiomyopathy; or lung failure caused by cystic fibrosis or a respiratory disease such as pneumonia. It can also be used as a bridge to recovery for patients with heart or lung transplants.

Inova Fairfax Medical Campus expanded the ECMO program over the last two years and now offers a full range of ECMO services to adults and children. The team of cardiac specialists includes heart surgeons, cardiologists, intensivists, ICU nurses, OR nurses, respiratory therapists, ECMO specialists, advanced practice providers and perfusionists. “We serve patients as young as the neonatal age group to adults, and we’ve had multiple successes,” says Charles Murphy, MD.

or I had, and they would always tell us what was going on, how my heart was recovering and what kind of shape I was in. They were very helpful.”

About a week later, Charles was taken off ECMO, and the doctors at IHVI implanted an Impella heart pump in his chest, a small device that would maintain his heart function for the next 10 days as he began to recover. After two more weeks, Charles was transferred back to Walter Reed where he joined the Warrior Transition Unit.

### FAST TRACK TO RECOVERY

These days, Charles is back to taking long treks; only now it’s to sightsee with his family. Over the next year, while he completes cardiac rehab at Walter Reed, he

plans to pursue an academic degree and an internship. Once his heart function is restored, he aspires to return to active duty with his battalion stationed in Kentucky. He also hopes to pursue ice hockey again, a favorite hobby.

“Charles’ prognosis is excellent,” says Dr. Murphy. “My expectation is he should have a normal life moving forward. He was in peak fitness so this could set him back in terms of the timeline, but I hope he will accomplish anything he wants to in the military.”

For right now, Charles is happy to be near home, surrounded by family and friends. “The whole experience was scary

at first, but I trusted the military to get me where I needed to be; I trusted all the medical teams that I met; and I had my family to help me through it,” says Charles.

Dr. Murphy couldn’t be more pleased with his outcome.

“This is a great success story,” he says. “Our team is very thrilled to be able to help out someone on active duty. Our military deserves our very best health-care, and to be able to participate in that is very gratifying for us.”

### HEART HEALING

To learn more about the Inova Heart and Vascular Institute, visit [inovaheart.org](http://inovaheart.org) or call 703.776.4003.

Inova is a not-for-profit healthcare system located in Northern Virginia in the Washington, DC, metropolitan area, serving over 2 million people with over 1,700 licensed beds. It consists of five hospitals including the area's only Level 1 Trauma Center and Level 4 Neonatal Intensive Care Unit. Inova encompasses many health services including the internationally recognized Inova Heart and Vascular Institute (IHVI), Inova Translational Medicine Institute (ITMI), Inova Neuroscience Institute, Inova Schar Cancer Institute 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. More information about Inova is at [inova.org](http://inova.org).

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[inova.org](http://inova.org)

IHS-072-IFH



# WELCOME, NEW PROVIDERS!

Here are new healthcare professionals who have joined the Inova Fairfax Medical Campus staff in recent months:

DEPARTMENT	NAME
Anesthesiology	Arthur Bergh, MD; Jeremy Gold, MD
Emergency Department	Sade A. McKenzie, MD; Sakib M. Motalib, MD
Emergency Medicine	Jamiee Afeld, MD; Stanislaw C. Haciski, MD
Family Medicine	Martina Peri, MD
Medicine/ Cardiology	Mitchell Psotka, MD
Medicine/Critical Care	Mohit Kapoor, MBBS
Medicine/ Endocrinology	Ishita Singh, MD
Medicine/Internal	Syed Ashraf, MD; Shant Ayanian, MD; Phuong Nam Giang, MD; Nishant Kumar, DO; Cameron Locklear, MD; Jean-Paul Pinzon, DO
Medicine/ Nephrology	M. Sanaei Ardekani, MD; Eugene H. Kim, MD; Rashida Rahman, MD
Medicine/Pulm/ Critical Care	Kareem Ahmad, MD; Pouya Tahsili Fahadan, MD
Medicine/ Pulmonary Disease	Shambhu Aryal, MBBS
Medicine/ Rheumatology	Mala Mehta, MD
Neurosciences/ Neurology	Richard Jacobson, MD; Jacqueline Washington, MD
Obstetrics and Gynecology	Andrea Avondstondt, MD; Tammy L. Benjamin, MD; Dana Block, DO;

DEPARTMENT	NAME
Obstetrics and Gynecology	Scott Cole, MD; Adeline Coleman, MD; Leah Foster, MD; Luis Gomez, MD; Michael Lempel, DO; Joelle Mays, MD; Rachel McCarter, MD; Alicia Odum, MD; Khaled Sakhel, MD; Jenny Q. Wang, MD
Orthopedic Surgery	Sohail Mirza, MD
Pediatric/ Pulmonology	Dagnachew Assefa, MD
Pediatrics	Kiran Kalra, MD; Farah Khan, MD; Candyce Greene, MD
Pediatrics/Critical Care	Darren Klugman, MD
Pediatrics/General	Dana Barry, DO; Jessica Berenson, MD; Nadia Majid, DO; Lauren Morea, DO; Zyra O'Connor, MD
Pediatrics/ Pulmonology	Dinesh Pillai, MD
Psychiatry	Patricia McEntire, MD; Sulman Mirza, MD; Michael Moore, MD; Khin Myint, MBBS; Sheraz Riaz, MBBS
Radiology	Hilary Brazeal, MD; Edmund Hong, MD; Mustafa Syed, DO
Surgery/Cardiac	Vaidyanathan Ramakrishnan, MD
Surgery/General	Sonya Krolik, MD
Surgery/ Ophthalmology	Sundeeep Kasi, MD; Guadalupe Villarreal, MD
Surgery/ Otolaryngology	Gabriel Santiago, MD
Surgery/Vascular	Joseph Babrowicz, MD

**Inova Fairfax Medical Campus • 3300 Gallows Road, Falls Church, VA 22042 • 703.776.4001**

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