

Cardiac Care and the NIH Heart Center at Suburban Hospital

Illustrating the Future of Cardiac Surgery



SUBURBAN HOSPITAL

JOHNS HOPKINS MEDICINE



Dear Colleague,



Dr. Keith Horvath

If geography is indeed destiny, then ours was forged five years ago when we began to collaborate with the National Institutes of Health (NIH), across the street from Suburban Hospital. Together with our research partner, the NIH's National Heart, Lung, and Blood Institute (NHLBI), we are participating in advanced laboratory and clinical studies that may enable us to bring breakthroughs more quickly to many of our patients. In fact, nearly half of the patients that comprise the outcomes data described in this brochure enrolled in a research study through the NIH Heart Center, an exceptionally encouraging statistic.

And now that Suburban is a member of Johns Hopkins Medicine, the Heart Center is better able to blend the critical aspects of medicine—advanced technology and

highly personalized patient-focused care—resulting in exceptional patient outcomes.

The cardiothoracic team at the Heart Center is vitally important to these patient outcomes. The team combines decades of experience caring for complex cases at a level of quality that consistently exceeds national standards, including those of other tertiary centers in the region.

On behalf of Dr. Phil Corcoran, Dr. Mike Siegenthaler, and the staff of the NIH Heart Center at Suburban Hospital, we appreciate the time you are taking to learn more about our cardiac care and research program. We are committed to meaningful collaboration with you in providing excellent care to your patients.

Keith Horvath, MD

Chief, Cardiothoracic Surgery

NIH Heart Center at Suburban Hospital

Cardiac Care and the NIH Heart Center at Suburban Hospital

The NIH Heart Center at Suburban Hospital merges the cardiac, thoracic, and vascular surgery expertise of Suburban Hospital and Johns Hopkins Medicine with the state-of-the-art research capability of the National Heart, Lung, and Blood Institute (NHLBI) of the National Institutes of Health (NIH).

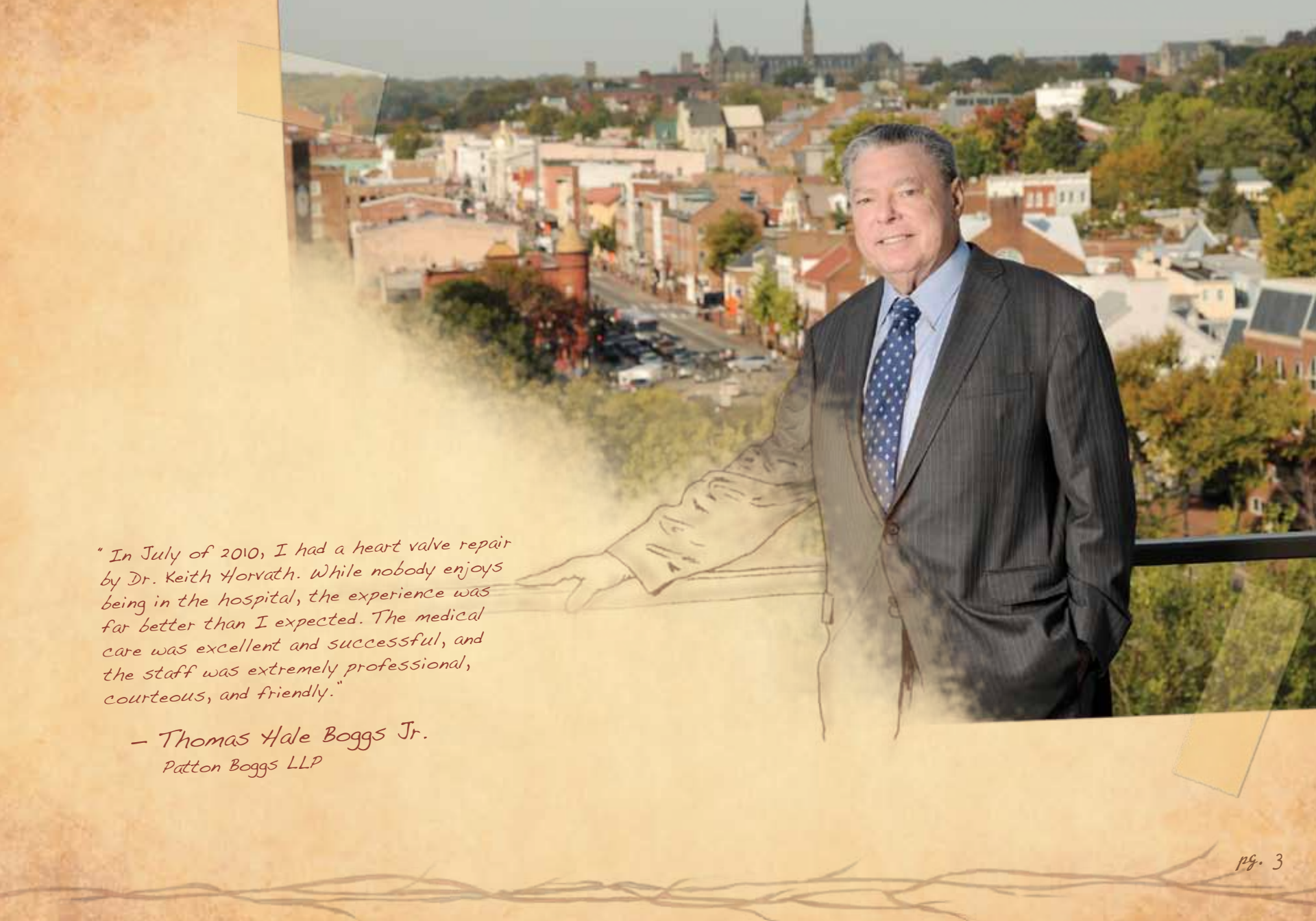
With these collaborations, the NIH Heart Center at Suburban Hospital provides comprehensive, patient-centric services in the advanced, cutting-edge facilities that comprise the hospital's cardiac care program. In addition, patients who agree to participate in clinical research studies may receive innovative treatments and diagnostic methods not otherwise available in most other health-care institutions.

The cardiac care program at Suburban Hospital provides a range of cardiac, thoracic, and vascular services, including:

- Coronary artery bypass graft (CABG) surgery
- Valve repair or replacement
- Combination CABG/valve surgery
- Thoracic surgery
- Vascular surgery (complex aortic disease)
- Endovascular surgery
- Ablation
- Robotic surgery

The operating suites at Suburban Hospital are fully equipped with advanced technology for cardiac surgery, including 3-D echocardiography. The operating rooms have multiple high-definition monitors to display EKG, blood pressure, and other physiologic data; angiography, cardiac echo, and other diagnostic images; and streaming video from a head-cam worn by the surgeon so the entire team can observe the procedure in real time.



A man in a dark pinstriped suit, light blue shirt, and blue polka-dot tie stands on a balcony. He is smiling and looking towards the camera. The background is a panoramic view of a city with many buildings, trees, and a church spire in the distance. The scene is captured in a bright, sunny light. The image is overlaid on a light beige background that has a faint, sketch-like outline of the man's arm and hand pointing towards the text.

" In July of 2010, I had a heart valve repair by Dr. Keith Horvath. While nobody enjoys being in the hospital, the experience was far better than I expected. The medical care was excellent and successful, and the staff was extremely professional, courteous, and friendly."

*— Thomas Hale Boggs Jr.
Patton Boggs LLP*



Clinical Care

Suburban Hospital's Cardiac Care Program features an innovative **universal bed model** of inpatient cardiothoracic and vascular care that is a unique approach in the nation.

Unlike most medical centers, where patients are transferred from a recovery room to the ICU to a telemetry unit during their hospitalization, cardiac care patients at Suburban Hospital stay in one room that is adapted to their changing needs during each phase of care, from pre-operative to discharge.

The entire cardiothoracic care team supports the universal bed model because it leads to higher-quality patient outcomes, eliminates patient safety concerns as a result of multiple patient transfers, reduces the nurse-to-patient ratios, and provides an environment of privacy and comfort. The care team is consistent from day to day, promoting healing and greater patient satisfaction.

"What I really appreciated was the universal model of care they use at Suburban. It meant I could stay in the same room and have the same care team for my entire stay. It gave me peace of mind in terms of protecting me from infection. I really got to know my care team, but more importantly, my care team really got to know me."

*— Judge Durke G. Thompson
Montgomery County Circuit Court*



Suburban Hospital has a dedicated staff of award-winning nurses and allied health personnel who are specially trained in cardiothoracic care. The cardiac care nurses were named “Best Nursing Team” by *ADVANCE for Nurses* magazine.

Rounds are conducted twice a day with a multidisciplinary team to design and implement a comprehensive plan of care. Rounds include surgeons, intensivists, nurse practitioners, pharmacists, and nutritionists and are led by patients’ bedside nurses.

The **integrative medicine** services provided include pre-operative relaxation training and post-surgical music, healing touch, and massage. Complementary therapies such as these have been shown to alleviate pain, improve hemodynamics, and increase overall patient satisfaction.

Access

BEAT Line. Suburban Hospital maintains 24/7 access for referring physicians and interventionalists. BEAT Line staff will quickly deploy cardiac catheterization staff for STEMI patients, help facilitate inter-facility patient transport, and arrange for timely cardiac surgery consults.

The BEAT Line staff is available to assist physicians with scheduling cardiac

procedures, including cardiac catheterization, placement of pacemakers or implantable cardiac defibrillators, cardioversions, TEEs, stress echocardiograms, and dobutamine stress tests.

The BEAT Line—301-896-BEAT or 1-866-596-BEAT—is answered by trained clinical personnel 24 hours a day, seven days a week. In emergent cases or inter-facility

transfers, the BEAT Line provides access to rapid transport by dedicated air and ground specialty care transport (SCT) staffed by Advanced Cardiac Life Support (ACLS)-trained personnel.

Suburban Hospital has been designated as a Cardiac Interventional Center by the Maryland Institute of Emergency Medical Services Systems.

DOOR TO BALLOON

Calling the BEAT Line activates a response designed to provide definitive therapy in the shortest possible time, preparing staff and the cardiac catheterization lab for the patient's arrival. The goal is to transition STEMI patients into the cardiac catheterization lab to open the closed coronary artery within a total time of 90 minutes from the patient's arrival time in the emergency department.



"Everyone made me feel comfortable because I was scared. Dr. Horvath took care of my son a month before my surgery and I knew he would take care of me too."

— Marga Hauptman

"I am still amazed at how quickly the process went. I had an angiogram on a Friday, on Monday I had surgery, and the following Friday I was home."

*— Gregory B. Hauptman
Venable, LLP
(Marga Hauptman's son)*



Comprehensive Program



INTERVENTIONAL CARDIOLOGY

Cardiologists perform diagnostic cardiac catheterization and interventional cardiology procedures, including balloon angioplasty, stent placement, and atherectomy.

PERIPHERAL VASCULAR

Patients have access to peripheral vascular (PV) services such as diagnostic PV angiogram; PV angioplasty or stent placement for peripheral arterial disease (PAD) or peripheral venous disease (PVD); carotid endarterectomies and stenting; renal artery angiogram; and closed abdominal aorta artery repair with stents.

ELECTROPHYSIOLOGY

A comprehensive range of electrophysiology procedures and services are performed at Suburban Hospital. These include diagnostic EP studies, the placement of pacemakers, ICDs, generator change, lead removal via laser, tilt table, mapping, and cardiac ablation for the treatment of complex cardiac arrhythmias, including Afib, SVT, and VT. Many of the electrophysiology procedures may require only moderate sedation and are performed on an outpatient basis.

NONINVASIVE CARDIOLOGY

Noninvasive cardiology services include EKG, 3-D echocardiography, stress echocardiography, dobutamine stress echocardiography, TEEs, high definition coronary CT, and rest and stress cardiac MRI.

CARDIAC REHABILITATION

Cardiac rehabilitation services are offered to help patients get back to their daily lives, physically and psychologically, after a heart attack, open heart surgery, or an interventional cardiology procedure.

Exercise is performed in a structured and clinically supervised setting. Patients are given a physical activity regimen individually designed by exercise physiologists and cardiac nurses to meet their needs and goals. The regimen is adjusted to the patient's growing strength and endurance.

Cardiac rehabilitation services also help people at risk for cardiovascular disorders follow a heart-healthy diet, manage stress, and adopt other healthful lifestyle habits. Nutritionists are available for one-on-one counseling.

COMMUNITY SERVICES

Since the MobileMed/NIH Heart Clinic at Suburban Hospital opened its doors in October 2007, doctors, nurses, and administrators from Suburban Hospital, the NHLBI, and Mobile Medical Care, Inc., have provided more than 1,000 uninsured patients access to cardiologists, specialty diagnostic screenings, and open heart surgery at no cost.

Suburban Hospital and the NIH Heart Center provide screening and education for patients who have experienced stroke, have vascular or valve conditions, or have diabetes.



Meet the Surgeons



DR. KEITH A. HORVATH

The chief of Cardiothoracic Surgery for the NIH Heart Center at Suburban Hospital, Dr. Horvath is a graduate of University of Chicago's Pritzker School of Medicine. He performed his internship and residency in general surgery and his residency and chief residency in cardiothoracic surgery at Brigham and Women's Hospital. Dr. Horvath also served

as chief resident of cardiothoracic surgery at the Children's Hospital in Boston and completed his research fellowship at the Wellman Laboratories of Photomedicine at Massachusetts General Hospital.

Dr. Horvath is also director of the Cardiothoracic Surgery Research Program at the NHLBI.

A pioneer of innovative techniques such as transmyocardial laser revascularization, Dr. Horvath is also skilled in valve repair in addition to the more common replacement.

Dr. Horvath's areas of expertise include:

- Valve repair and replacement
- Minimally invasive cardiac surgery
- Coronary artery bypass
- Transmyocardial laser revascularization
- Ablation for atrial fibrillation
- Surgery for adults with congenital heart defects

Dr. Horvath is Board Certified and a faculty member of the Johns Hopkins School of Medicine.



DR. PHILLIP C. CORCORAN

A native of Boston, Dr. Corcoran received an undergraduate degree magna cum laude from Harvard and completed his medical education and training at Georgetown University. After completing his cardiothoracic surgery residency at Walter Reed Army Medical Center, he remained with the institution for 11 years.

As chief of the Cardiothoracic Surgery Service at Walter Reed, Dr. Corcoran expanded and improved the facility's clinical services, training opportunities, and research activities.

Dr. Corcoran has served as program director of the National Capital Consortium Cardiothoracic Surgery Residency Program and as an assistant professor of surgery at the Uniformed Services University of the Health Sciences and the George Washington University.

Dr. Corcoran is Board Certified.
His areas of expertise include:

- Coronary bypass graft surgery
- Valve repair and replacement
- Combination CABG/valve surgery
- Aortic surgery and reconstruction
- General thoracic surgery
- Thoracic oncology
- Robotic surgery
- Esophageal surgery



DR. MICHAEL P. SIEGENTHALER

Following medical school at University of Bern, Switzerland, Dr. Siegenthaler completed his surgical residency at University of Connecticut School of Medicine and his cardiothoracic surgery residency with Denton A. Cooley, MD, at Texas Heart Institute in Houston.

He also served as associate professor of surgery and as staff surgeon in the

Department of Cardiovascular Surgery at University of Freiburg Medical Center in Germany.

Prior to joining the NIH Heart Center at Suburban Hospital, Dr. Siegenthaler was appointed associate director of the artificial heart program, director of thoracic endovascular therapy and associate professor of surgery at the University of Pittsburgh School of Medicine. He also serves as a clinic volunteer at the NHLBI.

Dr. Siegenthaler is Board Certified.
His areas of expertise include:

- Minimally invasive endovascular treatment of aortic aneurysms/dissections
- Coronary artery bypass
- Valve repair and replacement
- Hybrid surgery for aortic arch repair
- Thoracoabdominal aortic stent grafting
- Carotid surgery
- Heart failure surgery

Clinical and Laboratory Research

Through its partnership with the NHLBI, the NIH Heart Center at Suburban Hospital conducts clinical and laboratory research on the diagnosis and treatment of cardiac disease, bringing discoveries from the bench to the bedside.

Participation in clinical research offers many patients access to the latest innovative treatments and diagnostic methods available at few health-care institutions in the world. And participants and family members can feel proud that they are contributing to advancing medical science and care for generations to come.

Working with the NHLBI, the NIH Heart Center at Suburban Hospital has become a leader in research participation: 97 percent of all patients, including those profiled in this brochure, were screened for clinical trial eligibility, and 44 percent participated in a research trial.

For more information about clinical trials at NIH, visit www.clinicaltrials.gov.

MRI RESEARCH

Since 1999, the NHLBI and Suburban Hospital have collaborated on a research program studying various clinical applications for magnetic resonance imaging technology (MRI), including the use of MRI as a more rapid and cost-effective method of diagnosis for heart attack, coronary artery disease, and stroke. MRI can be used to see heart attacks more clearly than any other imaging test, measure blood flow in the heart muscle, find areas of the heart that were injured recently, and characterize heart tissue in many other ways. These methods are available to patients at Suburban Hospital and the local community as part of the research agreements with the NIH.

RESEARCH HIGHLIGHTS

- 20 ongoing clinical trials
- 124 publications to date
- 23 NHLBI scientists/staff
- Improving myocardial blood flow with revascularization and mesenchymal stem cell therapy
- Treatment of moderate or severe mitral valve regurgitation with repair or replacement
- Combination arrhythmia surgery with mitral valve repairs for atrial fibrillation
- Advanced treatment for heart failure experimental studies in cross species xenotransplantation
- Reduction of infections after cardiac surgery
- The use of MRI in the diagnosis of heart attack, coronary artery disease, and stroke

CARDIOTHORACIC SURGERY NETWORK

The NIH Heart Center at Suburban Hospital is part of a cooperative network of academic centers whose cardiothoracic surgeons and their colleagues in allied specialties are interested in the use of evidence-based medicine in surgical practice. The National Heart, Lung, and Blood Institute and the Canadian Institute of Health Research created the Cardiothoracic Surgical Trials Network in 2007. Research teams led by cardiac surgeons evaluate newer therapies and techniques as they move from laboratory science to broad clinical use.

Today, the network comprises 10 clinical centers and a Data Coordinating Center:

- Cleveland Clinic
- Columbia University
- Duke University
- Eastern Carolina Heart Institute
- Emory University
- Montefiore Medical Center
- Montreal Heart Institute
- NIH Heart Center at Suburban Hospital
- University of Pennsylvania
- University of Virginia

For a list of clinical trials currently enrolling participants, visit www.ctsurgery.net.org.

"I chose Suburban Hospital to have mitral valve repair surgery because I had confidence in the doctors, agreed with their recovery philosophy, and I liked the hospital's association with NIH."

*— Penelope Friedman, MD
National Institutes of Health*



Statistics

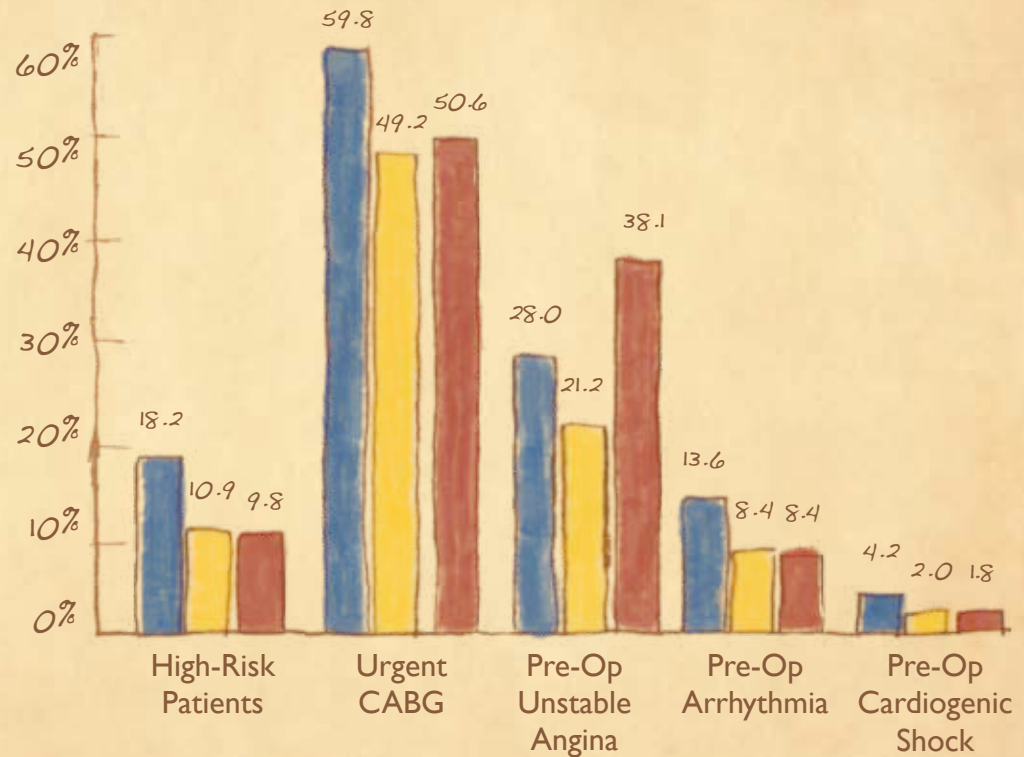
Challenging Patient Illnesses

Suburban Hospital's Cardiac Care Program and the NIH Heart Center at Suburban Hospital care for patients that, on average, tend to have a higher severity of illness compared to the national average and peer institutions in the region.




* From Society of Thoracic Surgery National Database

Pre-Operative Comorbidities




Better Survival

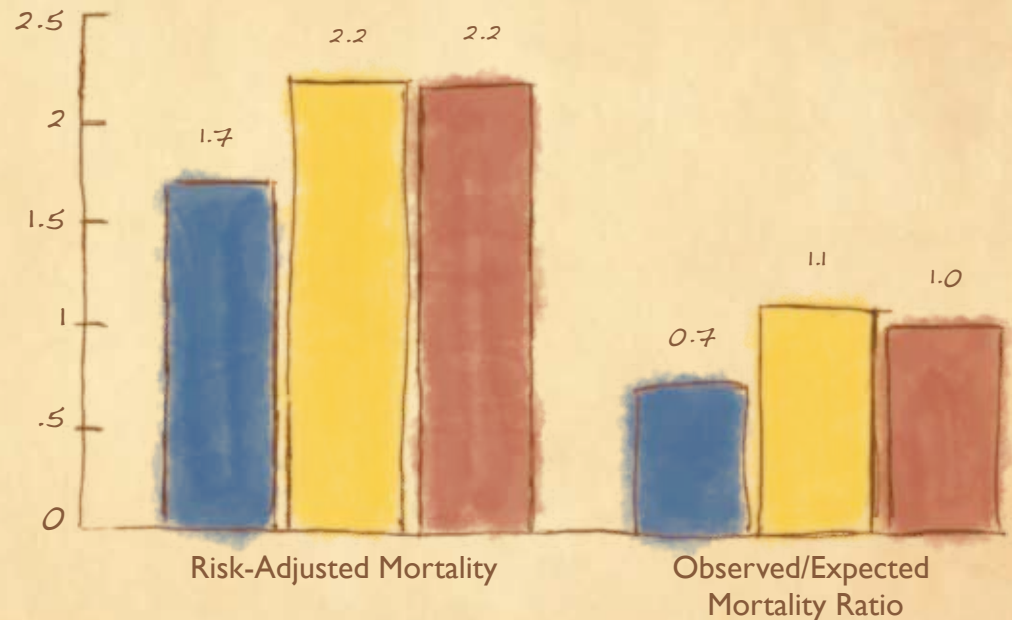
Despite the complexity of the cases, postoperative survival was better for all patients undergoing cardiac surgery at Suburban Hospital compared to the national and regional averages. Most importantly, the survival rates observed were significantly better than what was expected.


 **Suburban Hospital**

 **Regional**

 **National**

Observed Mortality



 The Society of Thoracic Surgeons (STS) awarded its highest designation—**3 stars**—to Suburban Hospital for meeting and exceeding national quality standards for cardiac surgery.

Statistics

Better Outcomes

Patients cared for at Suburban Hospital experience better outcomes and fewer complications compared to the national average and metrics reported by peer institutions in the region.



Fewer Complications





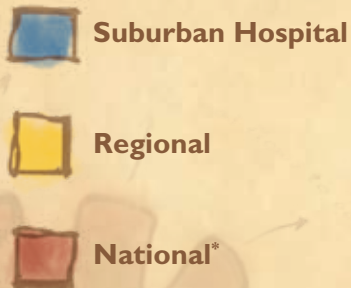
" I feel very fortunate to have been able to have the surgery I desperately needed so that I can continue to work and to take care of my family."

*- Arturo Garcia Arrecis
Construction Worker*

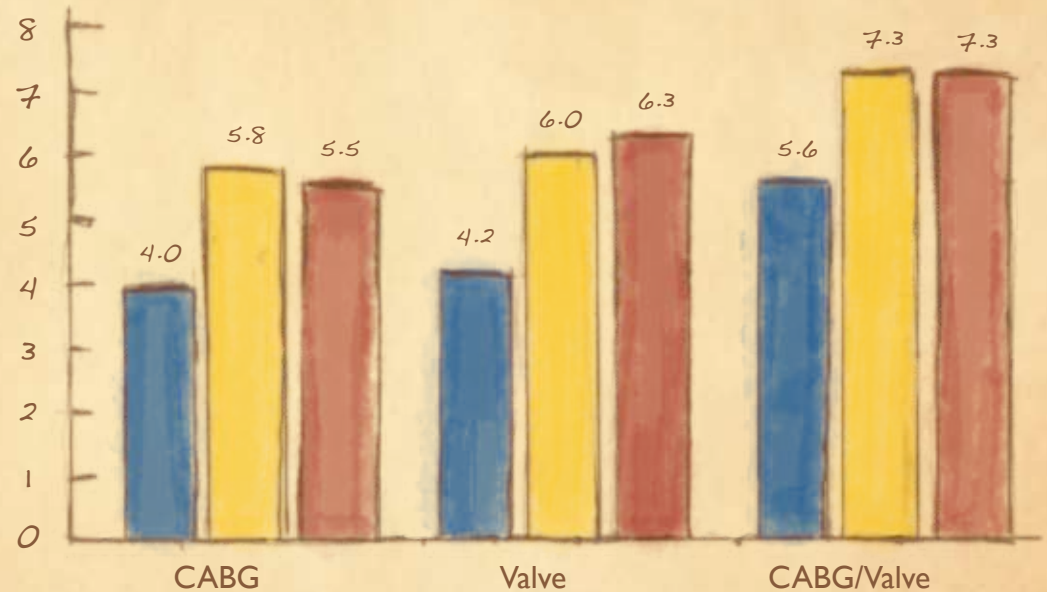
Statistics

Shorter Hospitalization

Despite having higher severity of illness and receiving a wide range of cardiac surgery procedures, our patients have a shorter hospital stay.



Length of Stay

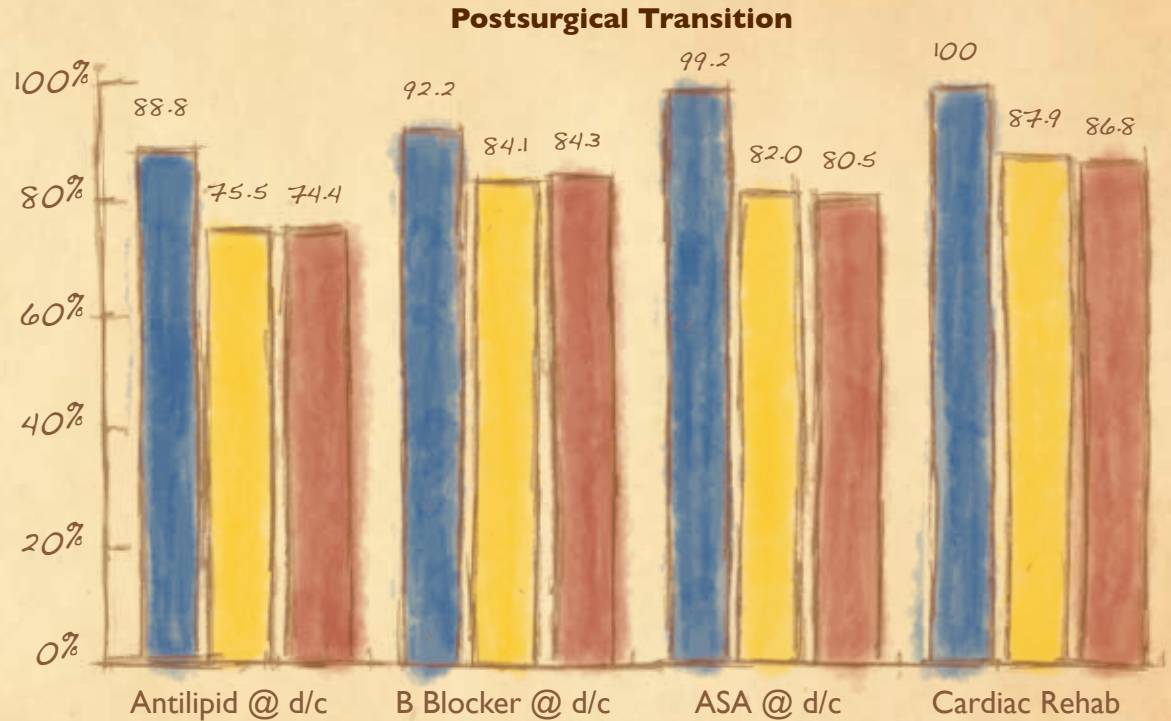
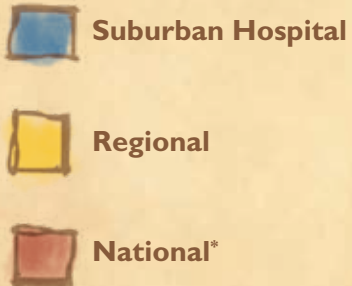


Low Readmission Rate

The readmission rate is 25 percent lower at 7.6 percent, compared to 9.9 percent nationally and 10.8 percent regionally.

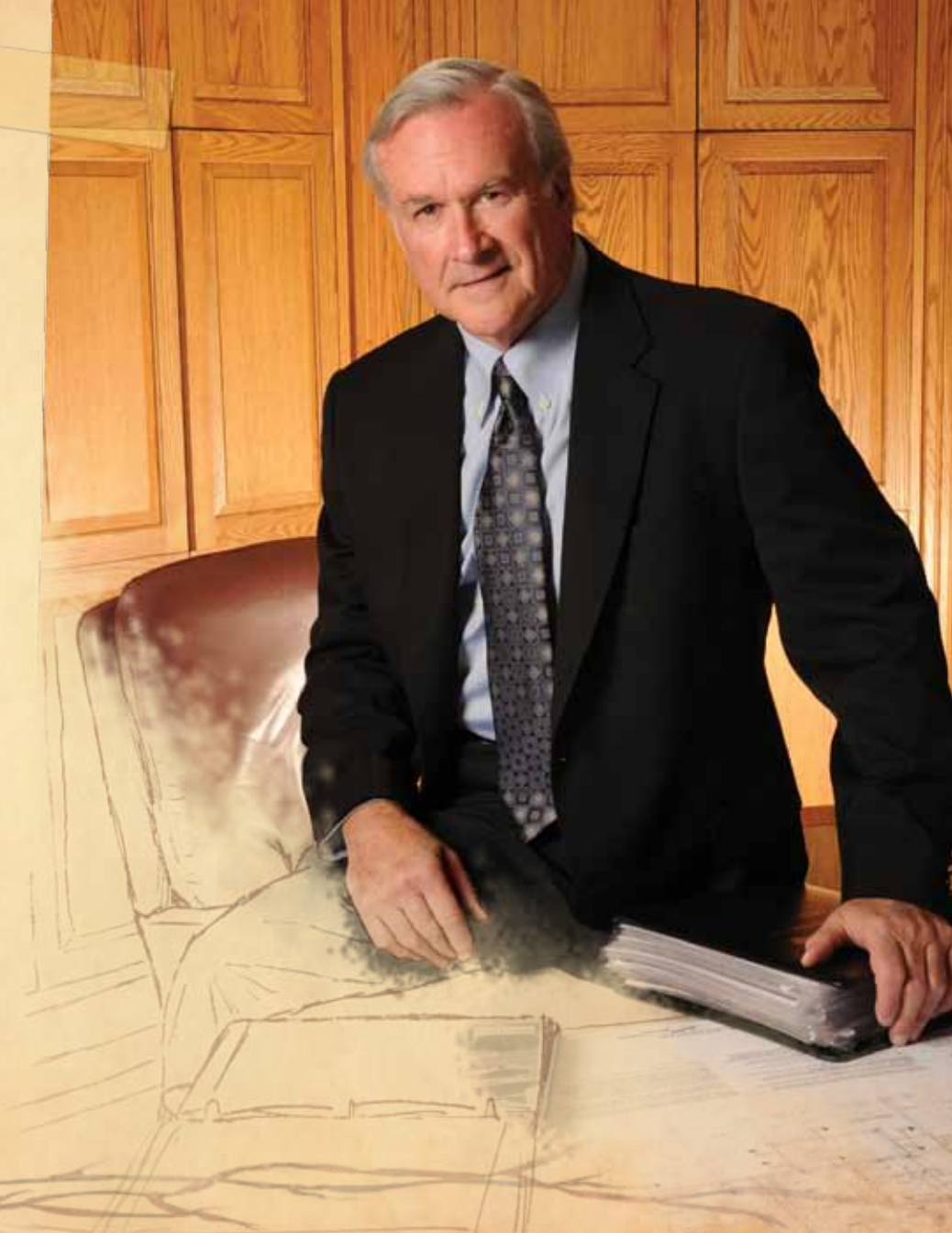
Better Postsurgical Care

Patients cared for at Suburban Hospital receive better postsurgical management compared to the national average and rates reported by peer institutions in the region.



"As a businessman, I marveled at how timely and efficient the staff at Suburban Hospital was in reacting to my heart attack. I would not have made it if it weren't for the split-second decision making the nurses and doctors had to make to get me through my emergency. Saving seconds saved my life."

*— John M. McMahon
Miller & Long*



CT SURGERY OFFICE | 301-896-7610

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