

A New Paradigm for the Treatment of Valvular Heart Disease in New Jersey

Gary J. Rogal, MD, Chief of Cardiology, Saint Barnabas Health Care System

Craig R. Saunders, MD, Chairman of Cardiothoracic Surgery, Saint Barnabas Health Care System

"Surgery of the heart has probably reached the limits set by nature, no new methods and no new discovery can overcome the natural difficulties that attend a wound of the heart."

Stephen Padget, MD
SURGERY OF THE CHEST
July, 1896

Introduction

As in life, change is the only constant in surgery of the heart. Improved non-surgical treatments, most notably stents and statins, along with an aging population, have changed the practice of heart surgery in New Jersey and across the United States.

Increased clinical understanding of the disease process, improved imaging and refined surgical techniques have, over the past few years, played an increasingly important role in the treatment of valvular heart disease. These advances have influenced changes in the American College of Cardiology (ACC) and the American Heart Association (AHA) treatment guidelines and contributed to the expanding applications of valve surgery.

As valve treatment options increase, it is clear that collaboration among cardiac subspecialists and dedication to the multidisciplinary approach of the ACC and AHA guidelines offer the best quality care to patients. The Saint Barnabas Valve Center was designed to address these very issues. The development of heart valve treatment centers in the United States is a relatively new and rare concept yet, we are confident it will be the model for a changing paradigm in cardiac care.

Trends in Valve Surgery

The clinical value of performing a valve repair instead of a valve replacement cannot be overstated.

Early detection and treatment of valve disease, before the patient is symptomatic, can mean a complete return to normal activities in a short span of time and with no recurrence. Combining the appropriate and latest technology with the correct timing of the procedure allows the cardiac team to make successful repairs before permanent damage is done to the heart.

Mitral valve repair involves lower risk to the patient, requires no anticoagulation, and studies confirm it improves outcomes and survival rates. Cardiac Roundtable data reports that between 50 and 60 percent of mitral valves are repaired nationally, with valve centers of excellence reporting 85 to 90 percent repair rates in selected populations. In New Jersey, the mitral valve repair rate is only 34.7 percent, but this data clearly includes some patients for whom repair was never an option. At the Valve Center at Newark Beth Israel Medical Center, 85 percent of all patients considered for valve repair undergo valve repair.

As the nation's population ages, cardiologists can expect to see an increase in the incidence of valve disease, including aortic stenosis in patients over age 85. Stiffening of the aortic valve can have serious implications for lifestyle and longevity if left untreated. Early evaluation and treatment ensures the best outcome. At the Valve Center, age does not exclude a patient from consideration.

Minimally invasive surgical approaches to valve repair/replacement may provide reduced mortality, shorter length of stay and decreased health care costs. The small scar, only a few centimeters long, is often completely hidden and many patients can return to full activities within two weeks. There are many different approaches to minimally invasive surgery, depending upon the valve in question and surgeon preferences. Whatever approach is used, be it robotic, endoscopic or direct-vision minimally invasive surgery, the most important factors are the tools and experience to ensure the treatment is tailored to safely meet the patient's individual needs. To put it another way, the tool must fit the job; don't change the job to fit the tool.

Cardiologists referring patients for valve surgery should be aware that **only a fraction of cardiothoracic surgeons routinely repair mitral valves and even fewer do so minimally invasively.** Since each reduction in the size of the incision has the potential to make the patient's recovery quicker and easier, it is no surprise that informed patients are actively seeking minimally invasive surgery.

For patients who are not candidates for open surgery, experimental percutaneous valve implantation is being studied as a treatment option. Development and research for this technology is still in its early stages. This treatment option is not expected to have substantial clinical impact for patients in New Jersey before 2010 or later.

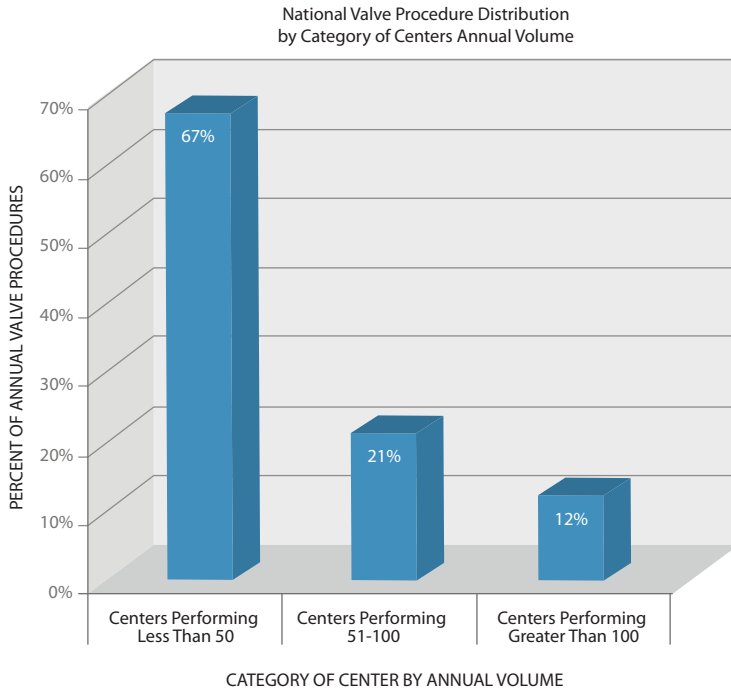
Cardiovascular Imaging

Incorporating advanced cardiovascular imaging is critical not only to the accurate and complete analysis of valve disease, but also for the assessment of treatment results. This requires keeping pace with the expanding imaging capabilities and maintaining a team of dedicated non-invasive cardiac imaging specialists. Important modalities utilized in the diagnosis of valve disease include 3-D echocardiography, transesophageal echocardiography, and high-end non-invasive imaging such as cardiac MRI/MRA and multi-slice cardiac CT.

Experience is the Best Predictor of Outcomes

Research studies have shown that heart valve repairs and replacements are much more likely to be accomplished successfully and patients quickly returned to normal daily activities with fewer complications, if the valve center has a long and stellar history of performing these procedures.

Cardiac Roundtable research of national data shows 67 percent of all valve surgery is done in hospitals performing less than 50 valve procedures a year. Only 12 percent of valve repairs or replacements are currently done in hospitals that perform 100 or more such procedures each year.



For the benefit of the patient, and the piece of mind of the referring physician, all valve procedures should be performed in a highly experienced center with expert physicians, nurses and staff who can provide the full spectrum of clinical care and maximize the chances for complete recovery.

Multidisciplinary Approach and High Volume Define a Quality Valve Center

The Valve Center, with locations at Newark Beth Israel Medical Center and Saint Barnabas Medical Center in Livingston, combine the expertise of referring cardiologists, attending cardiologists, cardiothoracic surgeons and cardiac imaging specialists. This sophisticated approach precisely identifies the pathology for optimal surgical planning, provides the most appropriate and minimally invasive treatment options, and allows the surgeon to test repairs while the patient is still in the operating room.

The Heart Centers' outstanding success rate, comparable to any national benchmark, can be attributed to this new paradigm in mitral and aortic valve surgery. A team of more than 40 staff is involved in the care of each patient and has streamlined the process to create a reproducible and effective experience with an extraordinarily high rate of success and full recovery.

Gathering More Data

Our cardiothoracic surgeons are among the country's most experienced in heart valve repair and replacement, performing more valve procedures than any other center in New Jersey. The Valve Center conducts monthly meetings at which cardiologists, surgeons and referring physicians discuss pending cases, plan optimal treatments, and review past results and outcomes. A custom database tracks multiple aspects of patient care and outcomes from initial consultation through the six-month follow-up. The Valve Center is the only program in the region to offer referring physicians the opportunity to tap into this multi-disciplinary and collaborative approach, as well as the utilize reliable long-term clinical data for their patients.



Gary J. Rogal, MD, Chief of Cardiology for the Saint Barnabas Health Care System, joined Saint Barnabas Medical Center in 1986 and has a special interest in valvular disease, preventative cardiology and non-invasive imaging. Dr. Rogal co-founded the Integrative Medicine Program for cardiovascular disease at Saint Barnabas Medical Center and Newark Beth Israel Medical Center, one of the largest integrative medicine programs for cardiac patients in the United States. He has published several journal articles and serves as a board member of the Heritage Affiliate of The American Heart Association.

Craig R. Saunders, MD, Chairman of Cardiothoracic Surgery for the Saint Barnabas Health Care System for more than 10 years, is a distinguished cardiothoracic surgeon who continues to pioneer innovative surgical techniques for the treatment of heart disease. Former Head of Affiliate Programs for the Cleveland Clinic Department of Cardiothoracic Surgery, Dr. Saunders has served on the editorial and advisory board of national medical journals. He has published, lectured and performed surgery worldwide.

To learn more about the Valve Center at Newark Beth Israel Medical Center and Saint Barnabas Medical Center or to refer a patient, please contact **Dr. Saunders at 973.926.7904** or **Dr. Rogal at 973.322.5227**.

1.888.NJVALV1 or 1.888.658.2581

**SAINT BARNABAS
HEART CENTERS**