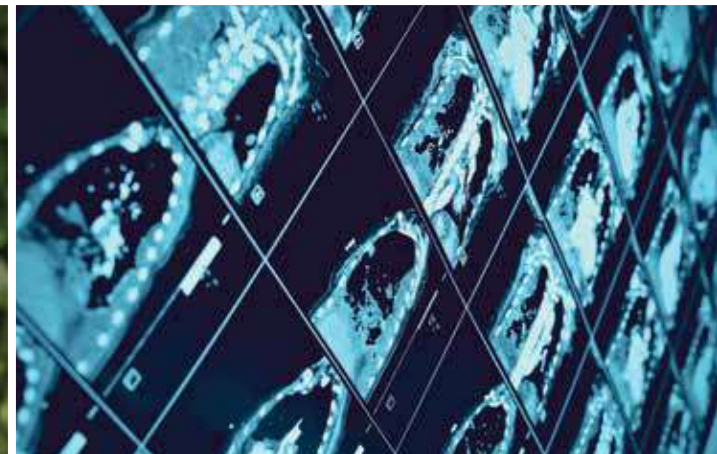
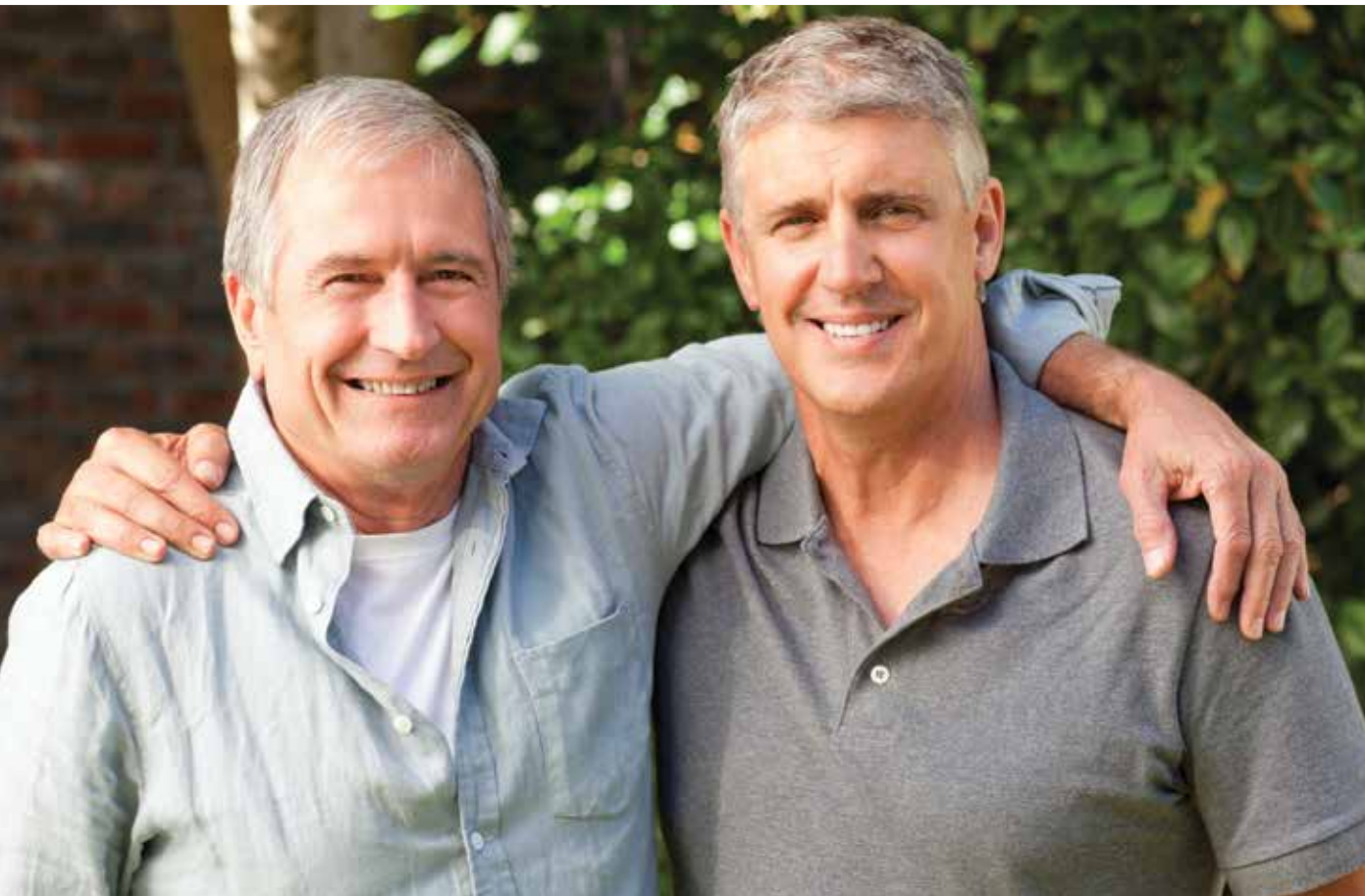


Cardiovascular and Surgical Outcomes | 2014



Mease Countryside Hospital
Morton Plant Hospital
Morton Plant North Bay Hospital

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Dear Colleague,

We are honored to share the 2014 cardiovascular and thoracic services outcomes for Mease Countryside Hospital, Morton Plant Hospital and Morton Plant North Bay Hospital. Where applicable, these results are verified by the Society of Thoracic Surgeons (STS), which was established in 1989 as an initiative for quality improvement and patient safety among cardiothoracic surgeons. For the first time, we are also sharing nonsurgical cardiology outcomes with you. As you will see, our outcomes and innovation truly distinguish our comprehensive heart program as a pioneer in the field and as the area's premier program for quality.

In addition to our outcomes data, we are excited to share information about some of our important programs, including our new heart failure clinic, our many clinical research trials and our fast-growing Center for Advanced Valve and Structural Heart Care. As community hospitals, we are committed to being the area's leader in providing superior heart care and top quality life-saving care.

We hope that you can utilize the data in this outcomes booklet to help with patient care. If you would like more information about our programs, please call (727) 461-8799.

Sincerely,

John C. Ofenloch, MD, FACS
Chief
Morton Plant Hospital Cardiothoracic Surgery
Medical Director
Morgan 3 OR/CVICU

Mahesh Amin, MD, FACC
Medical Director
Morton Plant Mease Cardiovascular Services



Our Heart Centers: A General Overview



Mease Countryside Hospital

Mease Countryside Hospital established an ST Elevation Myocardial Infarction (STEMI) program in September 2007. Thanks to its centralized location, Mease Countryside serves Pinellas, Pasco and Hillsborough counties, and is one of the busiest STEMI locations in the area. Today, the cardiac catheterization laboratory consists of two imaging rooms that provide a multitude of services including coronary angiography, percutaneous coronary intervention, peripheral angiography and intervention, cardioversions, pacemaker insertion, implantable cardiac defibrillators and loop recorder implants. Mease Countryside Hospital is a nonsurgical Level I Percutaneous Coronary Intervention Center.

Morgan Heart Hospital at Morton Plant

Morgan Heart Hospital at Morton Plant is a Level II cardiac surgery program and a leading heart hospital in the community. Currently, three cardiac catheterization labs perform a variety of procedures including coronary angiography, percutaneous coronary intervention, peripheral angiography, peripheral intervention, carotid angiography and

stenting, Impella insertion, balloon valvuloplasty, chronic total occlusion and laser therapy. Three electrophysiology laboratories offer diagnostic EP studies, ablations and tilt table testing, as well as pacemaker, defibrillator and loop recorder implantation. An 18-bed nursing unit provides pre/post-procedural nursing care.

Morgan Heart Hospital maintains four cardiovascular surgical operating rooms and a state-of-the-art cardiac hybrid operative suite. Procedures performed include complex aortic surgery, endovascular therapy, CABG, surgical valve repair and replacement, and transcatheter aortic valve replacement (TAVR). Morton Plant Hospital performed the first TAVR procedure in Tampa Bay in February 2012, and has been a national leader for valve procedures and outcomes. Physicians have now performed more than 400 TAVR procedures at the Morgan Heart Hospital. The first MitraClip® treatment for mitral valve repair was performed at the Morgan Heart Hospital in 2014. Postoperatively, patients are cared for by the multidisciplinary team, which includes cardiovascular surgeons and assistants, critical care physicians and nursing, and ancillary staff such as social services and pharmacy.



Morton Plant physicians participate in top national research studies such as TEVA, in which mesenchymal stem cells are injected into the weak heart muscle to regenerate it, Absorb I.V. trial for dissolvable coronary drug-eluting stents and the SENTINEL study which utilizes embolic protection devices during transcatheter aortic valve replacement to reduce the risk of stroke. Additional TAVR investigational studies including PARTNER II, REPRIS, SURTAVI and Direct Flow, allowing patients access to all available options for TAVR.

Morton Plant North Bay Hospital

Morton Plant North Bay Hospital built a new cath lab in October 2011. The new lab includes two imaging rooms and a nine-bed pre/post area. Services offered include coronary angiography, percutaneous coronary intervention, peripheral angiography and intervention, cardioversions, pacemaker insertion, implantable cardiac defibrillators and loop recorder implants. Morton Plant North Bay Hospital is a nonsurgical Level I Percutaneous Coronary Intervention Center.



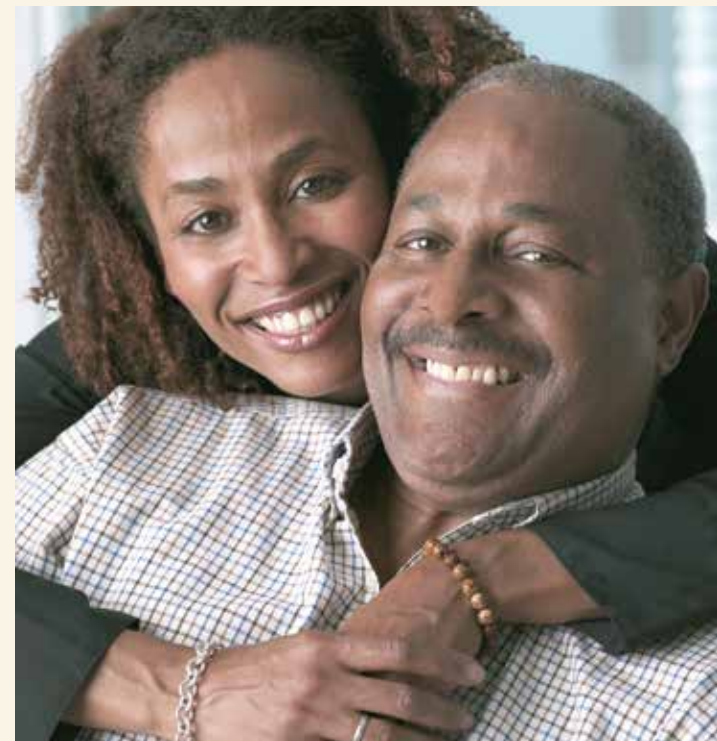


Cardiac Surgery at Morgan Heart Hospital at Morton Plant

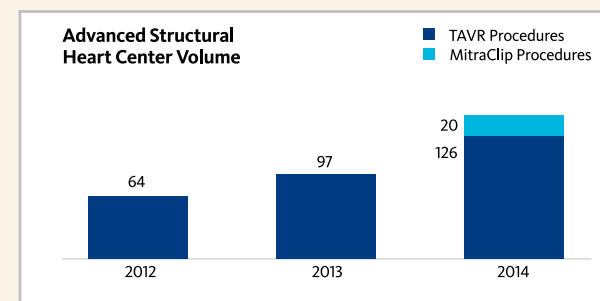
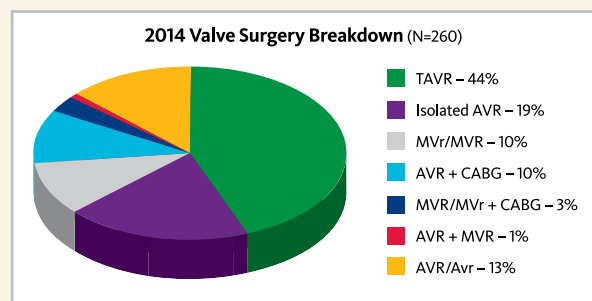
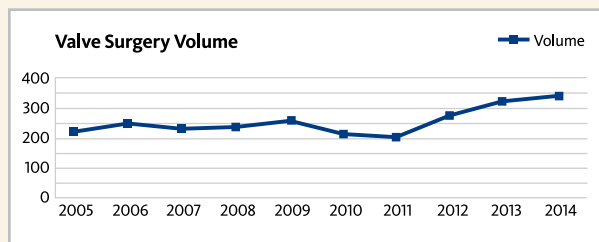
When it comes to your patients' care, we realize that quality, outcome and cost are of the utmost importance. Morton Plant Hospital is a member of the Society of Thoracic Surgeons (STS) whose mission is to enhance the ability of cardiothoracic surgeons to provide the highest quality patient care. Morton Plant Hospital was awarded an overall 3-star rating in 2013. Because we place emphasis on outcomes, we are sharing our latest heart surgery results. Please note that we include the STS benchmark where possible.

Our Surgical Offerings

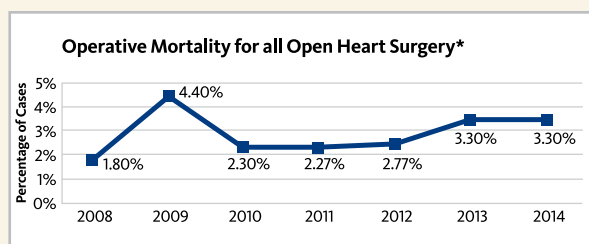
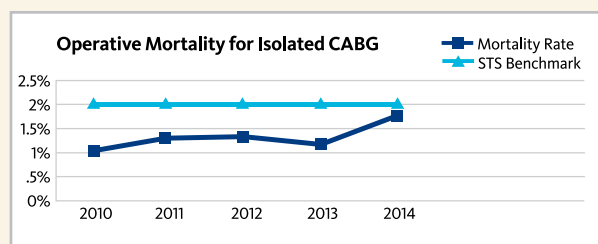
- Aortic aneurysm repair
- Endovascular aneurysm repair (EVAR)
- Aortic valve repair and replacement
- Carotid endarterectomy
- Coronary artery bypass (CABG)
- Implantable defibrillator insertion
- Maze treatment for atrial fibrillation
- Minimally invasive valve replacement
- Mitral valve repair and replacement
- Transcatheter aortic valve replacement (TAVR)
- MitraClip
- Redo cardiac surgery



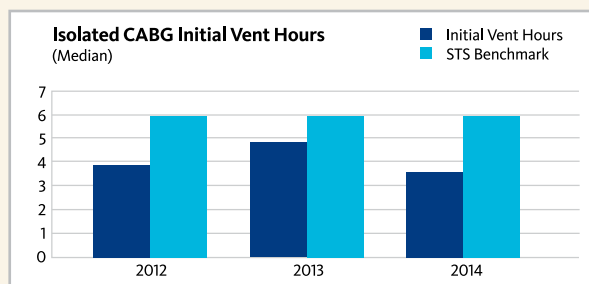
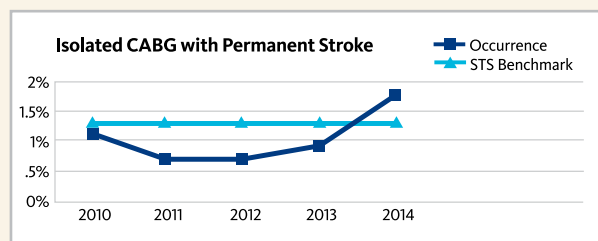
A Look at Volume



A Look at Quality

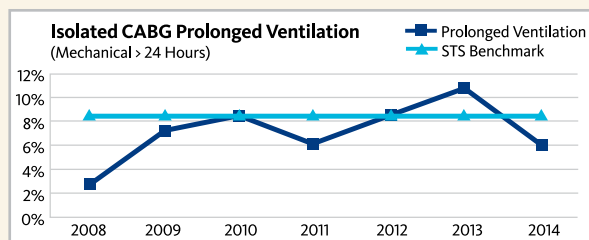


*Includes transcatheter aortic valve replacement (TAVR) cases



Numbers to Know

- Zero Percent Mortality Rate for Mitral Valve Repair (2012, 2013 and 2014)
- In 2013 and 2014, Morton Plant Hospital was under the STS benchmark (2.00%) for new postoperative renal failure for isolated CABG.



In 2013, Morton Plant launched a focused effort to reduce prolonged ventilation hours. Working in partnership with intensivists and our critical care nursing teams, we were successful in achieving less than 24 hours of prolonged ventilation in 94 percent of our CABG patients.



Advanced Structural Heart

Structural Heart and Valve Disease Treatment

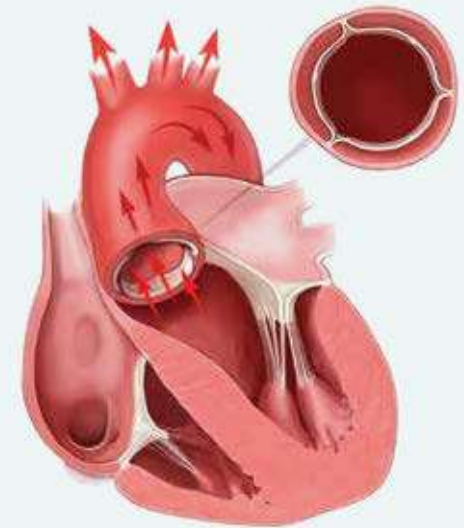
Team-based advanced treatment for structural heart and valve disease is available within BayCare. Several hospital facilities in Pinellas and Hillsborough counties have developed dedicated structural heart teams who specialize in the medical and surgical care of these problems. The Morton Plant Hospital Structural Heart and Valve Team is comprised of physicians and health care providers from multiple heart and vascular specialties, who have interest and expertise in the treatment of complex cardiac conditions. These specialists include cardiovascular surgery, interventional cardiology, cardiac imaging and cardiac anesthesia. These physicians work together to provide innovative heart treatment solutions and the best possible outcomes for patients with structural heart abnormalities. A large number of affiliated health care providers participate on the dedicated team as well, including nurses, physician assistants, advanced nurse practitioners and cardiac sonographers.

Structural heart disease may affect the heart muscle and the valves that regulate blood flow within the heart. Some structural heart abnormalities are congenital, meaning that you are born with them; others are the result of acquired heart disease that develops as you age. Some of the most common conditions are described below:

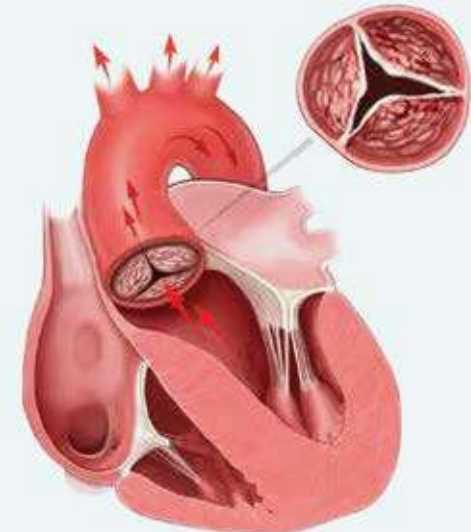
Aortic regurgitation or insufficiency is a condition in which the aortic valve allows blood to leak backward into the heart. Aortic regurgitation may also lead to symptoms similar to heart failure.

Aortic stenosis: A build up of calcium deposits on the aortic valve. The aortic valve is the main valve between the heart and the body. Aortic stenosis is a condition in which the aortic valve is so heavily calcified that it is unable to open or close completely. This limits the blood flow from the heart to the brain and body. The heart must then work harder to push blood through the body, which can cause fatigue, shortness of breath and worsening heart function. Declining heart function and the associated symptoms are termed congestive heart failure.

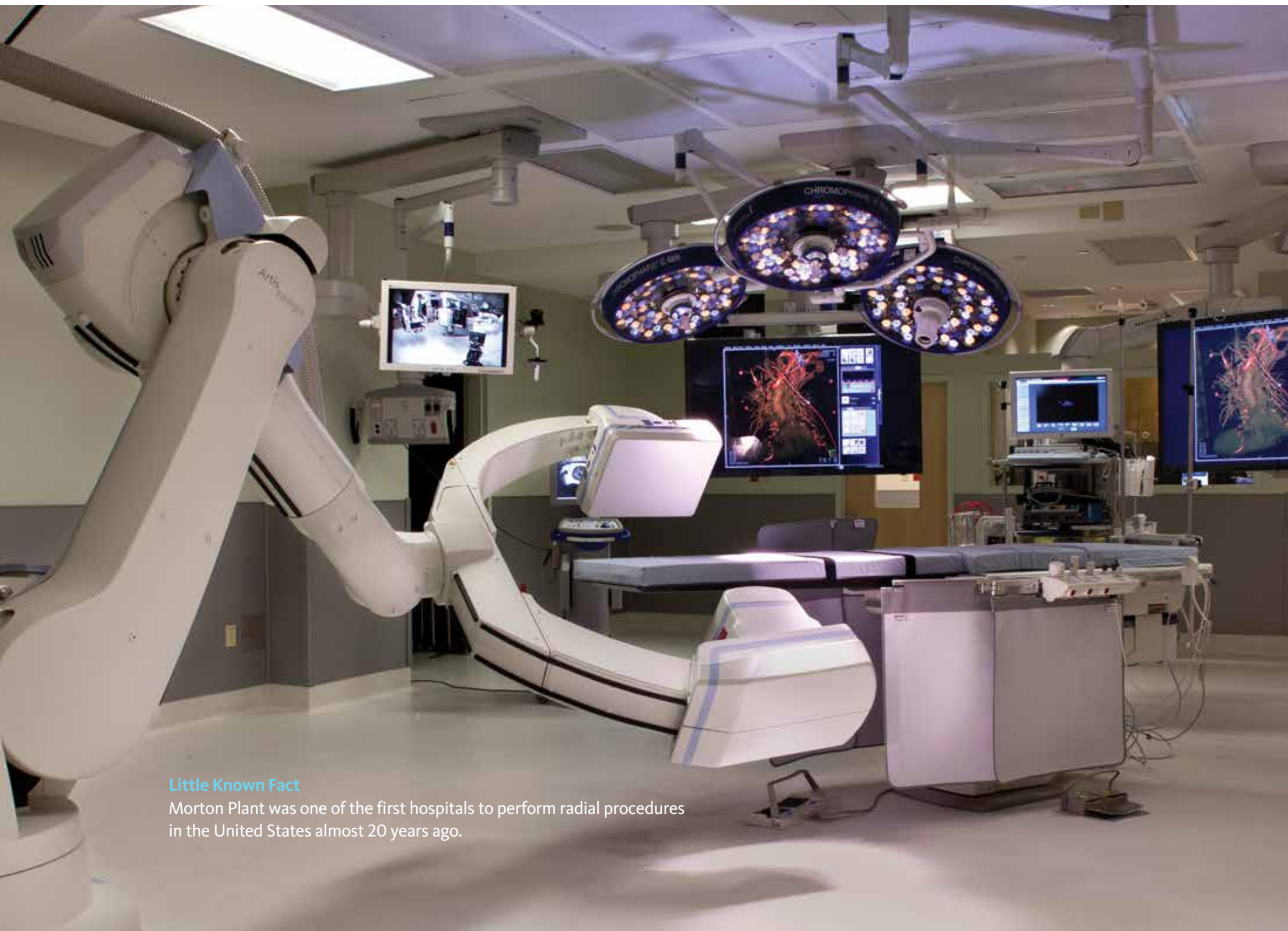
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Aortic Stenosis (Healthy)



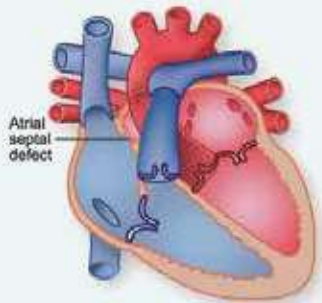
Aortic Stenosis (Diseased)



Little Known Fact

Morton Plant was one of the first hospitals to perform radial procedures in the United States almost 20 years ago.

Atrial septal defect (ASD): An ASD is a hole in the wall (septum) that separates the two upper (atrial) chambers of the heart.



Balloon valvuloplasty: Many patients with degenerative valve disease are ineligible for surgery because of their high-risk status (e.g. advanced age, multiple comorbidities or end-stage disease). For these patients, balloon valvuloplasty may be a viable alternative to TAVR or open-heart surgery to reduce symptoms. In balloon valvuloplasty, a catheter with a small, deflated balloon attached to the tip is threaded through a blood vessel. Once the catheter reaches the damaged valve, the balloon is inflated to stretch the valve opening and allow more blood to flow. The balloon is then deflated and guided out through the vessel and removed. The patient is generally awake during this procedure, and the recovery time is considerably shorter than with traditional surgery. However, balloon valvuloplasty is not a permanent solution and often has to be repeated at a later date. Balloon valvuloplasty can be used to treat aortic and mitral stenosis.

Left atrial appendage closure: The left atrial appendage (LAA) is a small pouch in the left atrium. Patients with atrial fibrillation (abnormal heart rhythm) have a high risk of blood clots forming in the LAA. These clots can dislodge and block blood flow to crucial parts of the body, including the brain (stroke). Oral anticoagulation medications may be used to reduce the risk of clots,

but these medications are not safe or appropriate for some patients. In such cases, LAA occlusion is a viable treatment option. In LAA occlusion, a catheter is used to deliver a closure device to the left atrium. The device is inserted into the LAA and expanded like an umbrella to seal off the entrance to the pouch.

Mitral regurgitation or insufficiency:

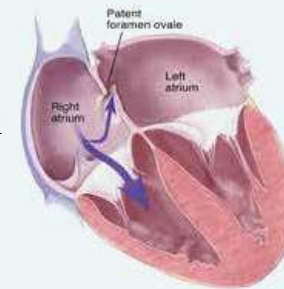
Mitral regurgitation is a condition in which the heart's mitral valve leaflets do not close tightly. When this happens, blood flows backward from the heart's left ventricle into the left atrium. This reduces the effectiveness of the heart to pump blood to the body, which can cause fatigue.



Mitral Valve Regurgitation

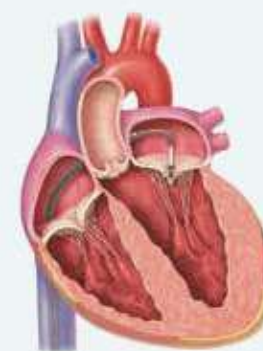
Mitral stenosis: Mitral stenosis is a result of rheumatic fever as a child and leads to calcium deposits on the mitral valve leaflets, preventing them from opening or closing properly. This condition can lead to increased pressure in the lungs, possibly causing permanent damage.

Patent foramen ovale (PFO): A PFO is a condition in which a small opening in the atrial septum fails to seal after birth. Some patients with a PFO can develop stroke when small blood clots cross from the right-sided collecting chamber to the left-sided collecting chamber (atrium), ultimately flowing into the brain.



Percutaneous mitral clip placement for mitral regurgitation: During the mitral valve clip placement procedure, a catheter is used to deliver a small clip into the heart via the femoral vein. Once in place, the clip is attached to the leaflets of the mitral valve to improve their function, and the catheter is removed. Because the procedure is minimally invasive, the recovery time is substantially shorter than with open-heart surgery, the traditional method for treating mitral valve leaks.

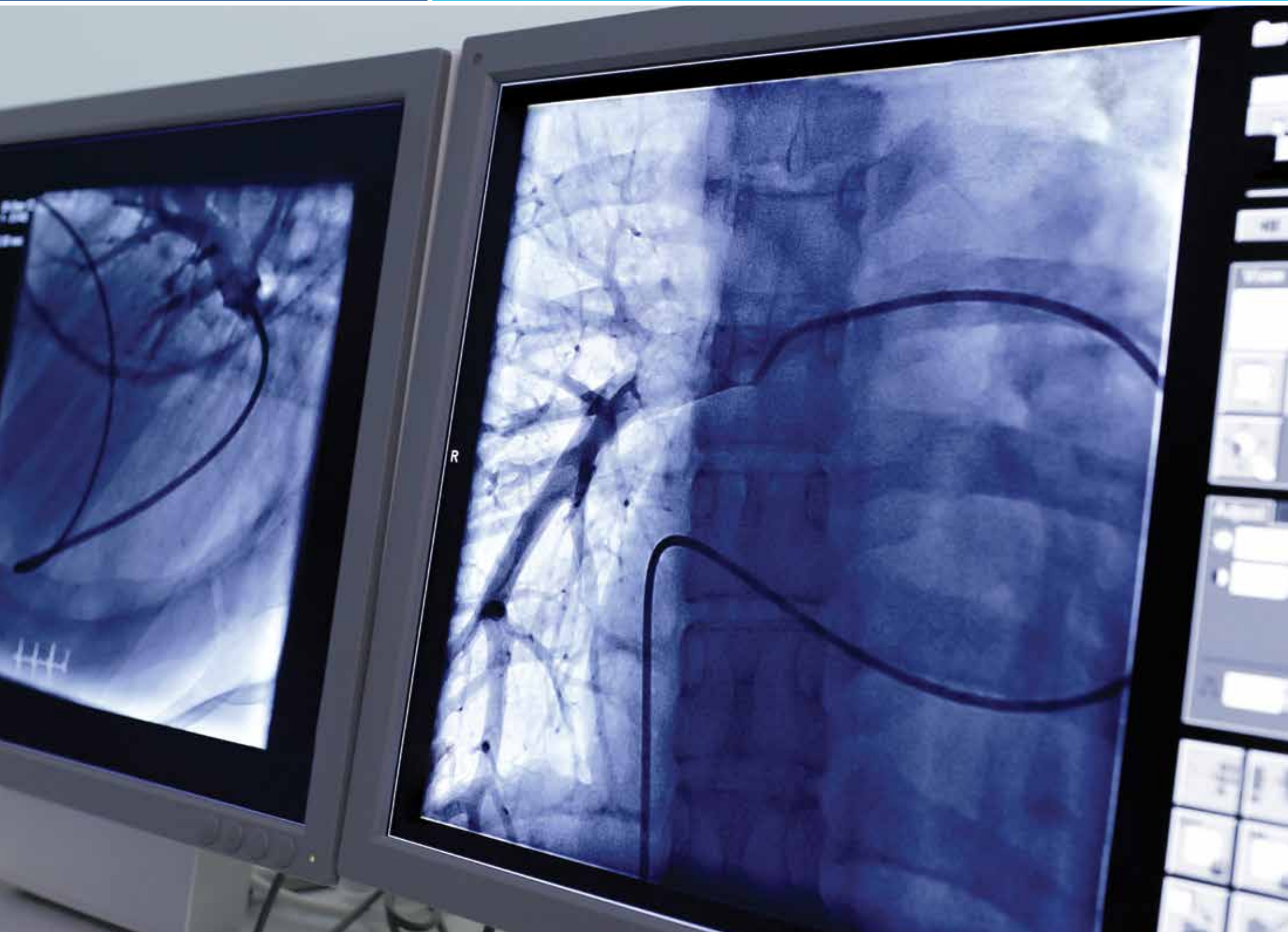
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MitraClip deployment



MitraClip - Post procedure

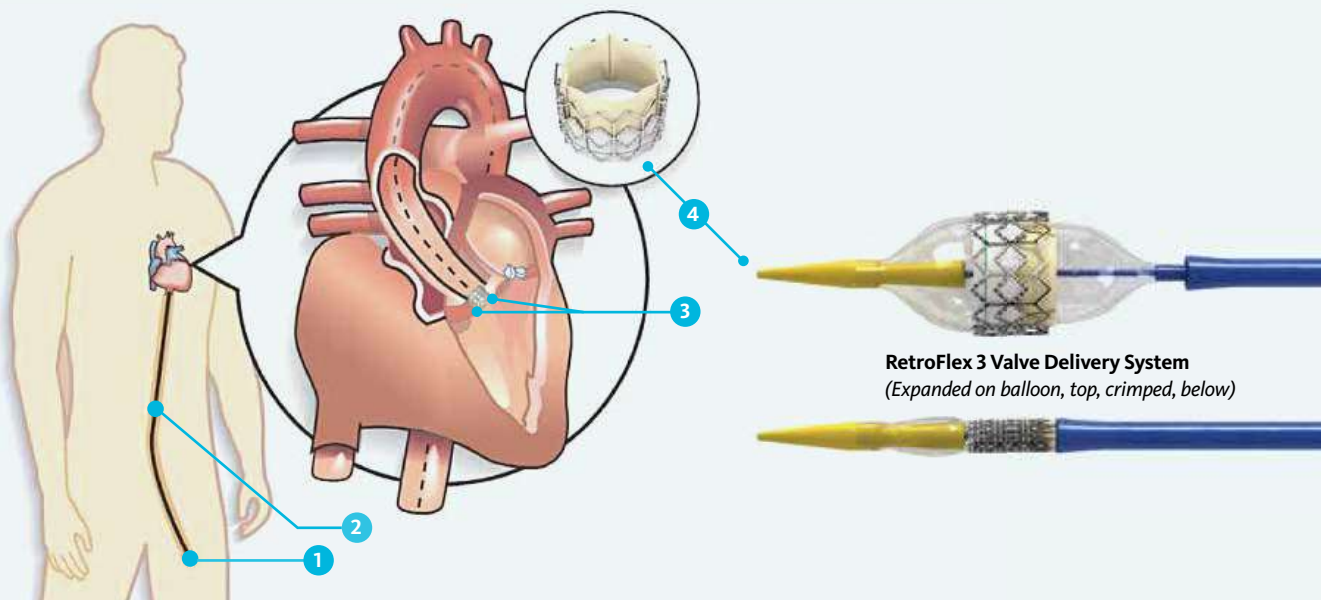


Septal defect and patent foramen ovale closure:

In the past, people with holes in their hearts could face a lifetime of anticoagulant therapy or even open-heart surgery in order to reduce their high risk of stroke. Some BayCare facilities now offer a minimally invasive option to close a variety of cardiac holes, including atrial and ventricular septal defects and patent foramen ovals. During these procedures, a hollow catheter is threaded through a blood vessel and guided to the site of the defect. Once in place, it is used to deliver a collapsed mesh closure device and place it inside the defect. The device is then activated, expanding to block the opening and hold the device in place, and the catheter is removed. Recovery time following placement is considerably shorter compared with traditional surgery.

Transcatheter aortic valve replacement (TAVR):

Transcatheter aortic valve replacement is a minimally invasive procedure for people with severe aortic stenosis who may be unable to undergo traditional open-heart surgery. BayCare physicians offer minimally invasive treatment options for patients with severe aortic stenosis, a narrowing of the aortic valve opening that affects tens of thousands of people each year. The FDA has approved this treatment for high-risk and inoperable patients. Recently, physicians at Morton Plant Hospital received approval to perform TAVR procedures for intermediate risk for patients who want to participate in a research protocol. During TAVR, cardiovascular surgeons and interventional cardiologists place a new valve inside the heart without stopping the heart or opening the chest. Patients often recover more quickly from this minimally invasive approach.



Edwards SAPIEN Transcatheter Heart Valve

- 1 During the procedure, the valve is crimped down to the approximate diameter of a pencil and then delivered into the body via the RetroFlex 3 delivery system, a catheter that is inserted into the femoral artery in the upper thigh.
- 2 Imaging guidance is used to help with visualization during the procedure to ensure optimal delivery via the femoral artery, as well as placement of the valve.
- 3 Diseased (calcified) native aortic valve.
- 4 Once delivered to the site of the patient's diseased native valve, the Edwards SAPIEN Valve is expanded with a balloon and begins to work immediately.

Transcatheter paravalvular leak closure:

Paravalvular leaks can occur when a suture holding an artificial valve to the heart tissue breaks, or when the heart tissues around the artificial valve weaken. This defect causes a leak around the valve. Re-operation to repair a paravalvular leak may be a very risky procedure for some patients. This minimally invasive technique uses a catheter to deliver and deploy a closure device at the site of the leak.

Ventricular septal defect (VSD): VSD is a hole in the septum that separates the two lower (ventricular) chambers of the heart.



The Valve Center Team

Left to right: Gregory Girgenti, MD, Mary Curtis, ARNP, John Ofenloch, MD, Wayne Cheng, MD, Joshua Rovin, MD, Michael Barry, MD, Douglas Spriggs, MD, Lang Lin, MD, Saul Tuchman, MD, Jasmina Katinic, NP-C, Jorge Navas, MD, and Todd Kovach, MD

The Valve Center at Morton Plant Hospital

Morton Plant Hospital opened its Valve Center in late 2011 in preparation for its new transcatheter aortic valve replacement (TAVR) program. The Valve Center was established by a collaborative team of cardiologists, interventional cardiologists, cardiac anesthesiologists, cardiothoracic surgeons and a cardiac nurse to provide a structured, multidisciplinary approach to evaluating and treating patients.

Beginning in December 2011, when the Valve Center opened, through 2014, more than 750 new patients visited the center for evaluation. Of those, 376 had the TAVR procedure, and 30 qualified for open-heart surgery. The Valve Center has also participated in numerous national clinical research trials, including PARTNER II – XT and S3, REPRISE III and SENTINEL. Ninety-eight patients were enrolled in a research trial. While TAVR was first approved to provide a minimally invasive treatment option to patients with severe aortic stenosis who were deemed inoperable, Morton Plant is now able to offer TAVR as an option to patients who are at moderate risk as a result of its leadership in valve research.

In 2014, the Valve Center team added the MitraClip procedure to its offerings for percutaneous mitral valve repair. The MitraClip Delivery System is for use in patients with significant, symptomatic degenerative mitral regurgitation who are at prohibitive risk for mitral valve surgery.

MitraClip Procedure Characteristics	
Characteristics	N=29(%)
Median Age	83
Discharge Home	19 (66)
Discharge Rehab	9 (31)
Discharge Day 1	12 (41)
Discharge Day 2	7 (24)
Discharge Day 3	3 (10)
Discharge Day 4	6 (21)
Median LOS	2

MitraClip 30-Day Outcomes	
30-Day Outcome	N=29(%)
24-Hour Mortality	0 (0)
Mortality Any Cause	0 (0)
Cardiovascular Mortality	2 (6.9)
Total Death	2 (6.9)
Conversion to SMVR	0 (0)
Post-Procedure Mitral Regurgitation Severity	
None	2
Trace	4
Mild	15
Mild-Moderate	1
Moderate	7

TAVR 30-Day Outcomes	
30-Day Outcome	N= 342(%)
24-Hour Mortality	1 (0.3)
Mortality Any Cause	1 (0.3)
Cardiovascular Mortality	9 (2.6)
Total Death	10 (2.9)
Conversion to SAVR*	4 (1.2)
Stroke	10 (2.9)
Vascular Complications	1 (0.3)
PPM	47 (13.7)
Post-Procedure Paravalvular Leak Rate	
None	136
Trace	63
Mild	112
Mild-Moderate	17
Moderate	10

*Standard Aortic Valve Replacement

TAVR Procedure Characteristics	
Characteristics	N= 342(%)
Median Age	83
90 years and older	43 (13)
Discharge Home	158 (46)
Discharge Rehab	178 (52)
Discharge Day 1	4 (1)
Discharge Day 2	48 (14)
Discharge Day 3	126 (37)
Discharge Day 4	41 (12)
Median LOS	3



Rhythm

Morton Plant Hospital's electrophysiology program is a full-service rhythm program consisting of electrophysiology studies and intracardiac ablation for diagnosis and treatment of any type of arrhythmia, including atrial fibrillation, ventricular tachycardia, superaventricular tachycardia, A-flutter, and A-tachycardia. Our program includes:

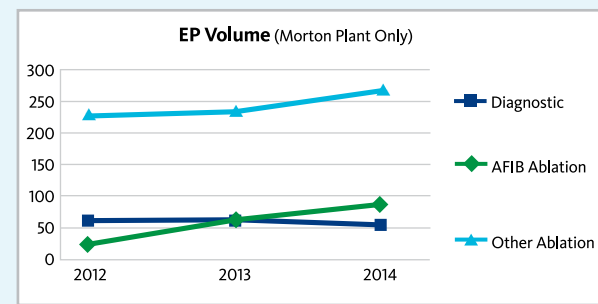
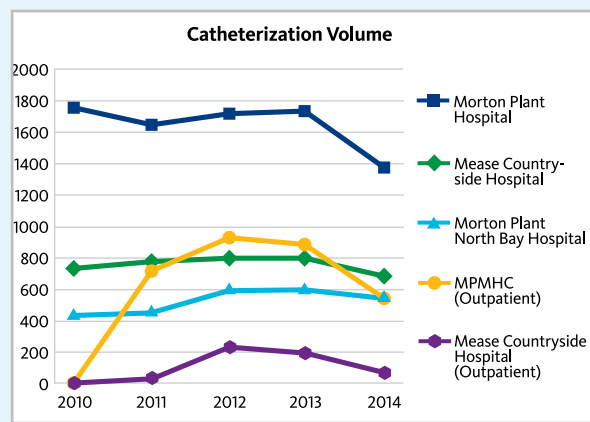
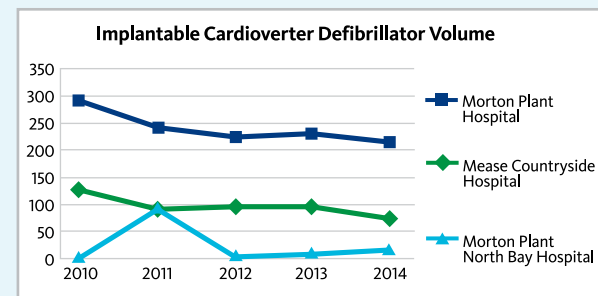
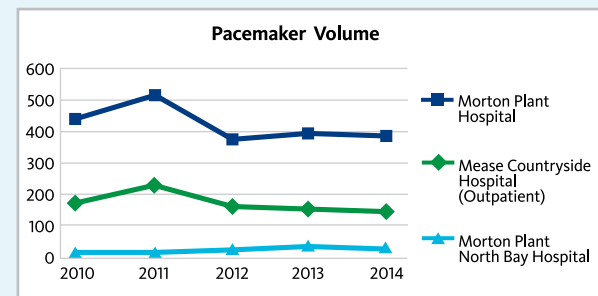
- High-tech 3-D mapping for ablations
- Three EP labs
- State-of-the-art fluoroscopy system with big screen monitor able to display six screens
- Great pre-op/post-op area for patient comfort
- Ablation of pre-excitation syndrome

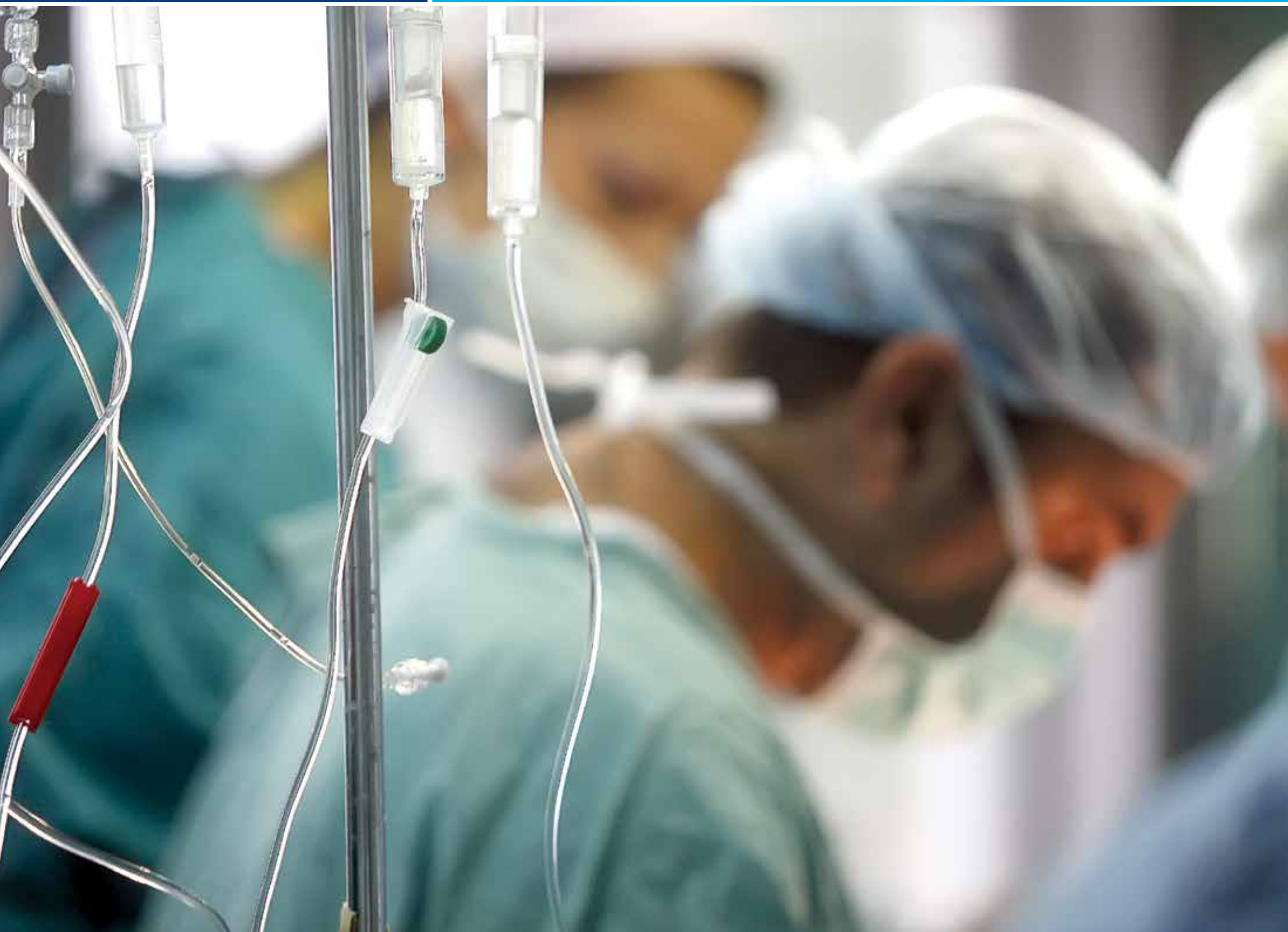
All cardiac rhythm management (CRM) device implants, including:

- Permanent pacemaker (PPM)
- Implantable cardioverter defibrillator (ICD)
- Bi-ventricular PPMs and ICDs

The program also includes an injectable loop recorder for continuous heart rhythm monitoring and diagnosis of arrhythmias and syncope, and tilt table testing for diagnosis of syncope.

2014 EP Volume	
EPS and ablation (other than AFIB)	380
PPM	363
Tilt table testing	160
ICD	137
Bi-V PPM or Bi-V ICD	115
AFIB ablations	> 120
Loop recorder	> 100



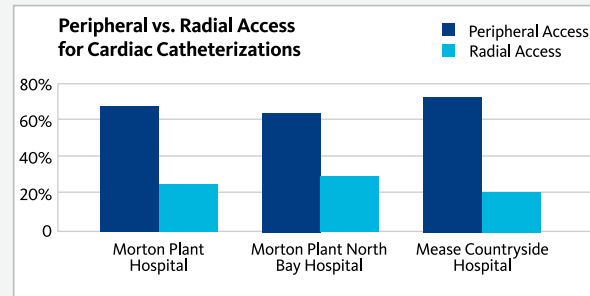


Percutaneous Coronary Intervention

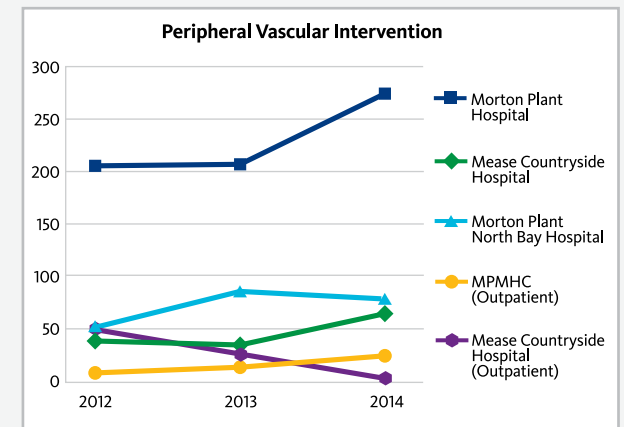
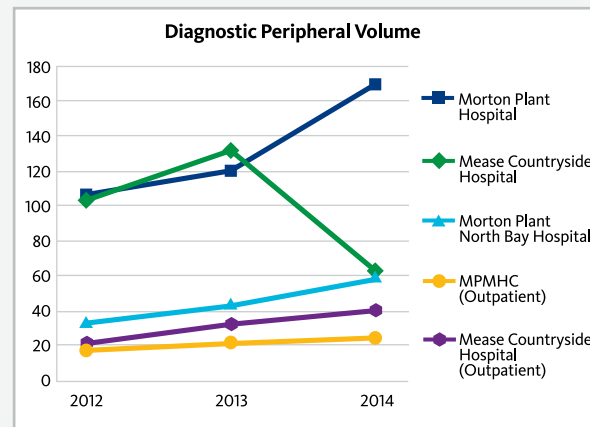
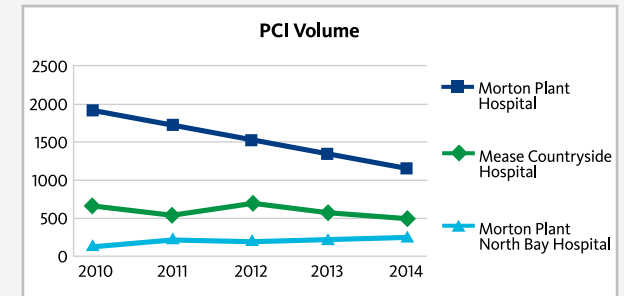
Angioplasty, or percutaneous coronary intervention (PCI), is performed at Morton Plant Hospital, Morton Plant North Bay Hospital and Mease Countryside Hospital. All three hospitals are also STEMI receiving centers.

Door-to-balloon time is as follows:

- Morton Plant Hospital: Completed in less than 90 minutes, 95 percent of the time
 - Average time: 71 minutes
- Morton Plant North Bay Hospital: Completed in less than 90 minutes, 90 percent of the time
 - Average time: 64 minutes
- Mease Countryside Hospital: Completed in less than 90 minutes, 90 percent of the time
 - Average time: 72 minutes



Cardiac catheterization procedures can be done by advancing catheters through the radial artery in the wrist as well as the femoral artery in the peripheral groin area. Radial procedures have been linked to decrease in ambulation, length of stay and bleeding risks. Many of the physicians within these three hospitals are able to perform radial procedures when appropriate.





Heart Failure

Morton Plant Hospital opened its Heart Function Clinic for the evaluation and treatment of congestive heart failure (CHF) in 2014. The clinic serves as a resource for primary care physicians who have high needs CHF patients who would benefit from the close and continuous oversight of a dedicated heart function clinic.

The Heart Function Clinic specializes in the medical management of heart failure at all stages. The staff is committed to working hand-in-hand with their patients' primary care physicians and cardiologists to best understand what each individual patient's needs are.

Additional services offered are:

- Treatment for hypertensive heart disease
- Evaluation of cardiomyopathy
- Clinical care and research on athletic heart disease
- Coordination of home heart failure monitoring
- Inpatient continuity of care
- Hospital readmission risk management
- Emergency room follow up
- Opportunity to participate in clinical trials

The Heart Function Clinic is located on the Morton Plant Hospital campus in the Cheek-Powell Heart and Vascular Pavilion at 455 Pinellas Street in Clearwater.





Cardiac Rehabilitation

For patients needing cardiac rehabilitation, there are inpatient and outpatient programs at Mease Countryside Hospital and on the Morton Plant Hospital campus. Established over a quarter of a century ago, Morton Plant Hospital has the largest cardiac rehabilitation program in the area at its Cheek-Powell Heart and Vascular Pavilion. The programs are nationally certified by the American Association of Cardiovascular Pulmonary Rehab (AACVPR) and have maintained certification for 12 years. Staff members at the cardiac rehab programs are certified as Certified Cardiac Rehabilitation Professionals.

Every cardiac rehab patient is assessed by the Cardiac Rehab registered nurse prior to starting the exercise session. In 2014, 129 patients had angina symptoms and 169 had ECG rhythm abnormalities. Of these patients, 76 required a physician office visit and four were admitted to a hospital.

Because patients are monitored closely by our cardiac rehab nurses during the program, we are able to identify issues. When issues are identified, the cardiac rehab team can work in partnership with the referring physician to help patients get back on track. In 2014, issues included:

- **Congestive heart failure symptoms:** 29 patients
- **Hypertension:** 72 patients
- **Hypotension:** 38 patients
- **Not taking medication correctly:** 32 patients
- **Hypoxic:** 2 patients
- **Abnormal blood sugar:** 41 patients
- **Screened positive for depression:** 4 patients

To refer a patient for cardiac rehabilitation:

Mease Countryside Hospital:
(727) 725-6603

Morton Plant Hospital:
(727) 461-8295



Clinical Trials

I. COAPT (Mitral Clip)

- The purpose of the Cardiovascular Outcomes Assessment of the MitraClip Percutaneous Therapy for heart failure patients with functional mitral regurgitation (COAPT) trial is to confirm the safety and effectiveness of the MitraClip System for the treatment of moderate-to-severe or severe functional mitral regurgitation (FMR) in symptomatic heart failure subjects who are treated per standard of care and who have been determined by the site's local heart team as not appropriate for mitral valve surgery. This randomized controlled trial will provide the opportunity to strengthen or add add labeling claims regarding safety and clinical benefits of the MitraClip System for symptomatic heart failure patients with moderate-to-severe or severe functional mitral regurgitation.

II. PARTNER II: SAPIEN 3i: Placement of Aortic Transcatheter Valves

- The purpose of this trial is to determine the safety and effectiveness of the Edwards SAPIEN XT and the Edwards SAPIEN 3 transcatheter heart valve and delivery systems which are intended for use in patients with symptomatic, calcific, severe aortic stenosis.

III. REPRISE III: Safety and Efficacy Study of Lotus Valve for Transcatheter Aortic Valve Replacement

- The objective of this study is to evaluate the safety and effectiveness of the Lotus™ Valve System for transcatheter aortic valve replacement (TAVR) in symptomatic subjects with calcific, severe native aortic stenosis who are considered at extreme or high risk for surgical valve replacement.

IV. SALUS: Transcatheter Aortic Valve Replacement System—A U.S. Pivotal Trial

- A study to assess the safety and effectiveness of the Direct Flow Medical aortic valve system. This is for people with severe aortic stenosis who are not well enough to undergo a surgical repair.

V. SENTINEL: Cerebral Protection in Transcatheter Aortic Valve Replacement

- The Sentinel System will be a safe and effective method for capturing and removing embolic material (thrombus/debris) during transcatheter aortic valve replacement in order to reduce the ischemic burden in the cerebral anterior circulation.

VI. STS/ACC TVT Registry Mitral Module (TMVR)

- The TVT Registry™ is a benchmarking tool developed to track patient safety and real-world outcomes related to the transcatheter mitral valve repair and replacement (TMVR) procedure. Created by The Society of Thoracic Surgeons (STS) and the American College of Cardiology (ACC), the TVT Registry is designed to monitor the safety and efficacy of this new procedure for the treatment of mitral valve disease.

VII. SURTAVI: Placement of Transcatheter Valves in Intermediate-Risk Patients

- A study to investigate the safety and efficacy of transcatheter aortic valve implantation in patients with severe, symptomatic aortic stenosis at intermediate surgical risk.



Mease Countryside Hospital

3231 McMullen Booth Road | Safety Harbor, FL 34695

MeaseCountryside.org

Morton Plant Hospital

300 Pinellas St. | Clearwater, FL 33756

MortonPlant.org

Morton Plant North Bay Hospital

6600 Madison St. | New Port Richey, FL 34652

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