2020 Annual Report Heart & Vascular Center AdventHealth Sebring



# Advent Health Sebring Heart & Vascular Center

ANTIGERAL STREET

AdventHealth exists to serve our consumers' wholistic health care needs, and we place them at the front of our aspirations.

Dear Colleagues, Patients and Community Members,

On behalf of the board of directors, foundation, administrative leadership, medical staff and employees of AdventHealth Sebring, we are pleased to present the 2020 Annual Report of the Heart & Vascular Center. The past year was historic for our health care system, hospital and cardiovascular program. In January 2019, as one of the nation's largest faith-based health systems, with over 80,000 employees, working in our 50 hospital campuses in 9 states, we became known as AdventHealth. This system-wide brand transformation was designed to allow us to become a more consumer-centric, connected and identifiable system of care. This initiative will allow consumers to more easily distinguish our service locations across our vast network of care, which serves more than 5 million patients annually. As part of this brand strategy, we introduced a unique culture and service initiative called the "Whole Care Experience," which aligned over 60,000 skilled and compassionate health care team members to deliver consistently on our mission, vision, values and service standards.

The Heart & Vascular Center of AdventHealth Sebring achieved unprecedented growth in services and outcome measures in 2019, allowing us to become the leading cardiovascular center in our region of Central Florida and places us in the top 1% of programs nationally. This report summarizes the clinical features of our programs, volume trends, procedural outcomes and quality initiatives for 2019.

We are committed to providing contemporary, comprehensive cardiovascular care each day, for every patient. We strive to provide the "best practice" of care and achieve the highest level of patient satisfaction. Our ability to accomplish these goals requires the constant commitment of the administrative leadership, health care providers and hospital employees. We are pleased and proud to present the 2020 Annual Report of the Heart & Vascular Center of AdventHealth Sebring.



Randy Surber President/CEO AdventHealth Sebring



Thomas M. Shimshak, MD Interventional Cardiologist Medical Director Heart & Vascular Center AdventHealth Sebring

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## **Emergency Room Visits**

## AdventHealth Sebring, Lake Placid and Wauchula Campuses

	Sebring	Lake Placid	Wauchula
Emergency Room Visits and Observation	32,423	11,337	14,745
Emergency Room Admissions	11,337	1,542	83
Total	39,140	12,879	14,828





# **Arlene and Patricia**

"Thank you for saving my friend Patricia. Our friendship is a joy and blessing to me. We enjoy our girl time and look forward to many more to come."



# Department of Cardiology Advent Health Sebring

## Department of Cardiology AdventHealth Sebring

### Cardiology

Rey Arcenas, MD Deepti Bhandare, MD William Cook, MD Alexandra Joseph, MD Chandrakant Patel, MD Deo Sankar, MD Ramon Torres, MD Steven Wade, PA-C Cho Mya Mon Win, MD

#### Interventional Cardiology

Phillip Jones, MD Shahnaz Punjani, MD Thomas Shimshak, MD

Nurse Practitioners Maria Theresa Espiritu, APRN Marikit Masigla, APRN



Deepti Bhandare, MD

We will fulfill promises that build unique team member experience to engage mind and heart, while inspiring all team members to reach their full potential in the delivery of whole care for our consumers.

Cardiovascular Laboratory Team Heart & Vascular Center

PHILIPS

#### Cardiology and Interventional Radiology Procedures Heart & Vascular Center 2018 and 2019

Interventional Radiology Procedures (n)	2018	2019
Diagnostic	276	214
Interventional	561	562
Total	837	776
Cardiology and Interventional Radiology Procedures (n)		
Outpatients	2,212	1,779
Inpatients	1,179	1,696
Total	3,391	3,475

#### Echo and Stress Testing

AdventHealth Sebring, Lake Placid and Wauchula Campuses 2018 and 2019

	2018	2019
Echo - Heart & Vascular Center - Sebring	5,370	5168
Echo - Lake Placid	770	737
Echo - Wauchula	164	101
Echo Stress	81	31
Echo Contrast	50	81
Exercise/Lexiscan Stress Test	76	111
Total	6,832	6,803

#### Heart & Vascular Center Summary of Cardiac Procedures 2018 and 2019

	2018	2019
Diagnostic Cardiac Catheterization	1,332	1,322
Percutaneous Coronary Intervention (PCI)	1,095	1,289
STEMI	69	66
ICD/CRTD	61	58
SVT, AVN, Atrial Fibrillation/Flutter Ablation	19	20
EP Study/DFT	65	37
Permanent/Temporary Pacemaker Insertion	94	68
Lead/Device Removal & Loop Recorder Implant	26	38
Total	2,761	2,908





## 2018 & 2019 Cardiovascular Laboratory Procedures Heart & Vascular Center



PVD Int and Invasive – Peripheral Vascular Intervention and Diagnostic Procedures PCI – Percutaneous Coronary Intervention EP – Electro-Physiology Procedures Diagnostic – Diagnostic Cardiac Catheterization and Coronary Angiography

# Trends in Annual Number of PCI Procedures 2009 - 2019



### Percutaneous Coronary Intervention (PCI)

Percutaneous Coronary Intervention (PCI) refers to minimally invasive, catheter-based treatment of atherosclerotic coronary artery disease. This procedure is performed by direct puncture of a wrist (radial) or leg (femoral) artery in the consciously sedated patient. The procedure consists of direct visualization of the coronary arteries and surgical bypass grafts by injecting iodinated contrast medium with x-ray guidance through pre-shaped catheters to identify the presence, location and severity of obstructive plaque formation. The critically narrowed coronary artery (-ies) typically causes significant symptoms and adversely affects a patient's prognosis.

After the diagnostic portion of the procedure is completed, in selected patients, the interventional treatment is initiated. Following instrumentation of the artery with a guide catheter, a small .014" guide wire is advanced across the atherosclerotic plaque. A balloon catheter is then advanced over the guide wire and to the targeted stenosis where it is inflated. The balloon size selected corresponds to the size of the treated artery. Following balloon angioplasty, in most patients, a balloon-expandable stent is deployed inside the artery. Multiple stents may be required to treat a patient with advanced and diffuse disease. The stent type deployed is typically drug-coated. The drug on the stent is designed to minimize excessive healing of the artery and thereby maintain long-term patency.

## Percutaneous Coronary Intervention (PCI)

Selected patients may have prohibitively complex and/or advanced disease and are not judged to be appropriate candidates for angioplasty and stenting. These high risk patients may be better served by coronary artery bypass surgery to improve heart blood supply.

Emergent PCI is recognized as the "standard of care" for patients experiencing an ST Elevation Myocardial Infarction (STEMI) (heart attack). Prompt restoration of blood flow to the occluded coronary artery causing the heart attack through balloon angioplasty and stenting quickly alleviates chest pain, limits permanent heart muscle damage, reduces complications and improves patient's prognosis and survival.

PCI is a catheter-based, non-surgical treatment for obstructive coronary artery disease. A small guidewire is introduced across the blockage, followed by insertion of a balloon catheter to dilate and open the artery.

Typically, a stent is deployed using similar techniques, and provides a permanent scaffold to open the artery, improve blood flow to the heart and reduce the likelihood of re-narrowing of the artery compared to balloon dilation alone.



# PCI Patient Characteristics and Co-Morbidities - 2019

#### 1,289 PCI Procedures



## Heart & Vascular Center PCI Procedures – 2019



**Elective versus Emergent Procedures** 

*Emergent procedures includes patients with PCI during a STEMI* 

### Heart & Vascular Center PCI Procedures - 2019 Elective vs. Emergent

The vast majority of PCI procedures in 2019 were performed on a non-emergent, elective basis, including both inpatient and outpatients. Patients undergoing elective PCI presented with stable or unstable symptoms, but were not experiencing a heart attack (myocardial infarction) (STEMI).

Emergent PCI for patients experiencing a myocardial infarction is recognized world-wide as the "standard of care" and is associated with improvement in patient outcomes, including limitation of heart muscle damage, reduced complication rates, improved recovery and survival. Emergent PCI for patients with a heart attack (STEMI) is statistically associated with higher procedure risk and complications.



# Heart & Vascular Center Leadership

Front row (L-R) Frank Hernandez Nina Beaudry Roy Butler

Back Row (L-R) Scott Pepper Dr. Thomas Shimshak Frankie Hernandez

#### Heart & Vascular Center PCI Patient Characteristics Among 1,289 Procedures – 2019 Age, Unstable Angina/NSTEMI and Multi-Vessel Disease



## PCI-Related Major Adverse Events

PCI-related Major Adverse Events (MAE) are tracked for each patient undergoing PCI and are collated in a national outcomes database (NCDR) sponsored by the American College of Cardiology.

Major adverse events associated with PCI include procedure-related heart attacks (MI), stroke (CVA), emergent coronary bypass surgery (CABG) and death. Our PCI outcomes are statistically adjusted for each patients' predicted procedure risk. The complete PCI procedure experience is then compared to risk-adjusted data from NCDR as a national performance benchmark.



#### Heart & Vascular Center vs NCDR PCI Outcomes – 2019 Risk-Adjusted Cumulative Major Adverse Event Rate (%) 1,289 PCI Procedures



Major Adverse Events includes MI, CVA, Emergent CABG and Death

*MI* = *Myocardial Infarction; CVA* = *Cerebral Vascular Accident (stroke); EmCABG* = *Emergent Coronary Artery Bypass Surger* 

#### Heart & Vascular Center PCI Mortality – 2019 Total, Elective & Emergent/STEMI





## Heart & Vascular Center Emergent PCI Mortality - 2019

Subset Analysis and Patient Characteristics of Emergent PCI



*This analysis demonstrates the critical condition of patients undergoing Emergent PCI.* <u>The predicted mortality when presenting with cardiogenic shock is roughly 80%.</u>

#### Heart & Vascular Center Emergent PCI Mortality - 2019 Subset Analysis and Patient Characteristics

Emergent PCI is associated with a higher procedure-related mortality compared to elective PCI. This is based on the critical condition of the patient, severity of disease, status of the left ventricular function and other co-morbidities.

We observed a cumulative mortality rate of 10.4% for patients undergoing emergent PCI. However, a subset analysis demonstrated that roughly <u>80% of patients presented with cardiogenic shock</u> (hemodynamic collapse), which by itself is associated with a predicted mortality of 80%. In addition, 22% of patients presented with concomitant respiratory failure requiring mechanical ventilation or use of a left ventricular assist device to augment cardiac function. Finally, use of a blood clot removing catheter was required in 33% of patients.

#### Heart & Vascular Center PCI-Related Outcomes – 2019 Risk-Adjusted Cumulative Major Adverse Event Rate (%) 1,289 PCI Procedures

The Heart & Vascular Center's 2019 PCI risk-adjusted Major Adverse Events (MAEs), among 1,289 PCI procedures when compared to the national NCDR standard, demonstrated a *significantly better outcome* (53% absolute reduction in MAEs).

This favorable outcome was achieved despite the inclusion of a high-risk patient group, including advanced age (mean age 70.8 years; 35% older than 70 years and 19% older than 80 years), diabetes (42%), prior MI (23%) multi-vessel disease (47%), and a high risk clinical presentation (unstable angina, NSTEMI) (83%).

#### Heart & Vascular Center PCI-Related Major Adverse Events (MAEs) – 2019 Outcomes Among 1,289 PCI Procedures



*MI* = *Myocardial Infarction; CVA* = *Cerebral Vascular Accident (Stroke); EmCABG* = *Emergent Coronary Artery Bypass Surgery* 

#### PCI-Related Minor Adverse Events – 2019 Outcomes Among 1,289 PCI Procedure

Minor PCI-related complications are also systematically tracked. These complications include clinical and technical events that occur during the procedure, including excessive radiation or iodinated contrast exposure, vascular access, cardiac tamponade, respiratory or kidney failure, guide-wire induced perforation or dissection of the coronary artery or loss of a side branch. When clinically relevant, these technical complications are treated during the procedure. In 2019, no patient sustaining a major or minor cardiac complication was referred for emergent cardiac surgery. Surgical repair of an access complication occurred in 0.16% of PCI patients.

#### Heart & Vascular Center PCI-Related Minor Adverse Events – 2019 Outcomes Among 1,289 PCI Procedures



#### Heart & Vascular Center PCI Outcomes – 2019 Compliance with Core Measures Data for Elective and STEMI PCI



**Discharge Medications Post PCI** 

NCDR-ACC Core Measures for discharge medications following elective or emergent (STEMI) PCI includes medications that are part of the evidence-based "best practice" guidelines. These medications improve prognosis and reduce major adverse events post PCI.



# ST Elevation Myocardial Infarctions (STEMI) Program STEMI Procedure Outcomes and Quality Performance Measures

We celebrate the diverse backgrounds, cultures and experiences of our patients, visitors and colleagues, and embrace opportunities to learn and grow from new perspectives.

#### Heart & Vascular Center STEMI Program

Patients presenting with an ST Elevation Myocardial Infarction (STEMI) (heart attack) typically have a closed artery supplying blood to the heart. This is an emergent and life-threatening condition. The prognosis and survival of a patient with a STEMI is dependent on rapid restoration of blood flow through the heart attack artery. Emergent PCI is the "gold standard" of treatment for STEMI patients.

The STEMI Program constitutes a truly life-saving program and benefits patients within our community and region. It represents a major commitment by the hospital and cardiovascular staff to be able to provide uninterrupted care 24 hours per day, 7 days a week. The success of the program requires continued integration of "best practice" from EMS, emergency room physicians and staff, interventionists and cardiologists, cardiac catheterization laboratory staff, nursing, respiratory therapy, hospitalists and hospital support staff. We are continuously analyzing our treatment results and initiating more effective strategies to improve patient outcomes.

In 2019, we treated 64 patients with a STEMI. Our Door To Balloon (DTB) times were significantly better than the NCDR ACC national benchmark for patients presenting to our hospital (our DTB time of 55 minutes versus national average of 94 minutes). Similar trends were observed for patients who were transferred from another hospital to AdventHealth Sebring for emergent PCI (DTB time of 70 minutes versus national average of 126 minutes).

#### Heart & Vascular Center STEMI Program **Emergent PCI During a STEMI**

- Access is gained through artery in the wrist or groin area
- An .014" guide wire is advanced to cross the blocked artery
- A balloon catheter is advanced over the wire with x-ray guidance
- A balloon is advanced over the wire and inflated to open the artery
- Finally, a stent is placed inside the artery to open the "heart attack" artery
- This treatment relieves chest pain, limits heart muscle damage and improves survival.





C.

- b.
- Blocked artery due to a ruptured plaque and blood clot formation a.
- Inflated balloon over a wire to open the blockage b.
- c. Final image of artery following balloon inflation and stenting

### Heart & Vascular Center Trends in Annual STEMI Door To Balloon Times 2014-2019



#### Heart & Vascular Center STEMI Program Proportion of STEMI Patients Receiving PCI within 90 Minutes Annually





NCDR-American College of Cardiology national performance benchmark is emergent STEMI PCI within 90 minutes

Heart & Vascular Center STEMI Door To Balloon Times – 2019 Results of 64 In-hospital and Transferred Patients



In-hospital includes patients with STEMI presenting to AdventHealth Sebring Emergency Room (ER) or already hospitalized. Transferred includes patients transferred to AdventHealth Sebring from a different hospital ER.

# **Peripheral Vascular Disease Program**

AdventHealth delivers world-class whole-person care with uncommon compassion.



#### Heart & Vascular Center Peripheral Vascular Disease Program

The Heart & Vascular Center team of specialists collaborates routinely to optimize treatment for patients with Peripheral Arterial Disease (PAD).

Interventional cardiologists, vascular surgeons, interventional radiologists, and specialists in infectious disease, nephrology, podiatry, wound care, and diabetes work together in the acute and long-term care of patients with advanced peripheral arterial disease. This multi-specialty treatment strategy is particularly important for the patients with the most advanced form of PAD (critical limb ischemia) who present life-threatening conditions that can lead to amputation and death. Our team of specialists is able to intervene with strategies to improve blood supply to threatened limbs, thereby facilitating wound healing, reducing the risk of amputation, and improving survival and quality of life.

As a leading national vascular center, we are able to provide the most innovative and advanced treatment for patients with complex vascular disorders.

Peripheral arterial disease (PAD) affects 8 to 12 million people in the United States, especially individuals older than 50 years of age. PAD adversely impacts quality of life, increases the risk of amputation and leads to a higher risk of major cardiovascular events (heart attack, stroke) and a significant increase in mortality.

The recognition, evaluation and treatment of patients with PAD can reverse these trends and lead to improved quality of life, lower rates of amputation and improved survival.

The Heart & Vascular Center's Peripheral Vascular Disease Program provides comprehensive, multi-specialty, integrated care to optimize clinical outcomes. The endovascular program provides "state of the art," minimally invasive, catheter-based therapy to improve the arterial and venous circulation and symptoms. Advanced surgical revascularization is available for selected patients who are not candidates for endovascular therapy or for those patients who fail traditional medical or endovascular therapies.

## Critical Limb Ischemia (CLI)

Patients with CLI typically have very advanced, diffuse and multi-level disease. Chronic occlusions (complete arterial blockage) are very common, and present additional technical challenges for revascularization strategies. Fortunately, improvement in arterial circulation using contemporary endovascular and surgical techniques can improve patients' wound healing, avoid or limit amputation and significantly improve prognosis and survival. Minimally invasive, endovascular therapies using devices to cross occlusions, plaque removing catheters, specialty balloons and stents have emerged as "frontline" therapy and the "standard of care" for patients with advanced PAD and CLI. Successful treatment for the CLI patient requires urgent intervention from multiple subspecialties to improve the circulation, facilitate wound healing and address other contributing clinical factors. In the United States, between 1999 and 2006, the number of endovascular procedures far exceed bypass surgery for the PAD patient. This trend has continued more recently and this treatment strategy has been associated with reduced rates of amputation.

Vascular specialists dedicated to the care of the CLI patient have launched a national initiative involving multiple sub-specialties in a coordinated strategy called the CLI Global Society. The objective of this society is to improve quality of life by preventing amputations and death due to CLI. Increasing public and physician awareness of PAD and standardizing appropriate treatment will favorably impact the care and prognosis of this critically ill patient population. The physicians of the Heart & Vascular Center support and participate in the CLI Society as members, physician educators and advocates of this vital care initiative.

## Challenges of PAD and CLI Patients

Peripheral arterial disease (PAD) affects millions of people worldwide. Approximately 8.5 million adults older than 40 years in the United States are affected by PAD. Patients with advanced PAD of the lower extremities present typically with exercise-induced cramping of the legs. Symptoms typically resolve after a brief period of rest and recur with continued walking. As the disease progresses in severity, patients may develop rest pain and ulcer formation, which may predispose to poor wound healing and risk of amputation. This most advanced form of PAD (Critical Limb Ischemia) is associated with increased risk of cardiovascular events, amputation, and death. Increased risk of cardiovascular events (heart attack and stroke) in the CLI patient result in 1 and 5-year mortality rates of 15-40% and more than 50%, respectively. The estimated rate of amputation at 4 years varies between 12-67%.

Approximately 2 million people in the United States are affected by CLI, and the prevalence is likely to increase due to the increasing trends of advanced age, diabetes and smoking, all of which contribute to the development of PAD and CLI.

#### National Trends in Bypass Surgery, Endovascular Intervention and Lower Extremity Amputation for PAD 1996 to 2006



> 80% of procedures were performed by cardiologists and vascular surgeons

#### Elderly Patient with Non-Healing Leg and Foot Ulcers Left Leg Arteriogram Before and After Treatment



Arteriogram demonstrating a long segment of complete blockage of the main knee artery and arteries below the knee Arteriogram after stenting the chronic occlusion of the knee and 2 arteries below the knee restoring normal blood flow

#### Middle Aged Man with Severe Exertion Left Leg Pain

Arteriogram showing chronic complete blockage of major left leg artery

Balloon dilation of artery over guide wire from left side



Blocked artery crossed from right side with . 035" wire and snared from left leg

Final arteriogram after stent placed showing open left leg artery

## Young Woman with Incapacitating Bilateral Leg Pain

Complete chronic blockage of abdominal aorta - main artery of body

Pre-expanded stents positioned at beginning of each leg artery over guide wires





Crossing of blockage with separate guide wires from left arm into each leg

Final arteriogram of abdominal aorta and each major leg artery after stenting showing open arteries





# Advent Health Sebring Stroke Center

Myron St. Louis, MD Vascular Surgeon

#### AdventHealth Sebring National Stroke Center

Certifications







## **Stroke Statistics**

- Stroke is the leading cause of serious, long-term disability in the United States.
- Each year, approximately 795,000 people suffer a stroke. About 600,000 of these are first attacks and 185,000 are recurrent attacks.
- Nearly three-quarters of all strokes occur in people over the age of 65, and 80% of all strokes are ischemic strokes (non-bleeding), usually from carotid artery atherosclerosis.
- Strokes are fatal in 10-20% of cases. Strokes lead to major disabilities, including paralysis, loss of mobility, impaired cognitive function and speech.
- Stroke is the third leading cause of death in the United States and a major cause of disability.

"I had a massive heart attack. The cath lab team prayed with me. I now have a second chance to live my best life."

**Crystal Gail** 





#### Heart & Vascular Center Program for Cardiac Rhythm Disorders

A cardiac rhythm disorder or "arrhythmia" refers to any change from the normal sequence of electrical impulses within the heart and its conduction system. Normally, electrical impulses generated within the heart are transmitted in a defined anatomic electrical pathway within the heart (the conduction system) resulting in a coordinated, synchronous contraction of the heart, producing a single mechanical event and heart beat. This regulated automatic system assures an adequate heart rate and blood pressure.

Disorders of impulse generation or transmission can occur, however, and result in heart rates that are either excessively slow or fast. In addition, the regularity of the impulse generation may occur, leading to additional symptoms and impaired efficiency of cardiac function.

#### Cardiac Rhythm Disorders

The Rhythm Disorder Program of the Heart & Vascular Center specializes in the detection, diagnosis and treatment of cardiac rhythm disorders. An electrophysiologist, a highly-trained cardiology sub-specialist, relies on clinical assessment and invasive catheter-based procedures to determine the location and mechanism of aberrant rhythm disorders. Depending on the nature of the rhythm disorder, appropriate therapies are initiated including medications, catheter-based radiofrequency ablation and/or implantation of a permanent pacemaker or an Automatic Implantable CardioDefibrillator (AICD). These procedures have significantly improved the prognosis and survival of patients with very advanced cardiac disease and rhythm disorders. Patients with advanced congestive heart failure may benefit from Cardiac Resynchronization Therapy (CRT), a procedure and device to reestablish synchronous cardiac contraction. This therapy can improve symptoms and prognosis and reduce the risk of ventricular arrhythmias in patients with advanced heart failure.

An AICD is a unique, implantable device that is used to treat patients who are at risk for sudden death due to complex ventricular arrhythmias, including ventricular tachycardia and fibrillation. The device includes a lead system and generator that is capable of detecting specific rhythm disorders and treating life-threatening rhythm disorders by the generator-dependent discharge of high levels of energy to terminate the arrhythmia.



# **Wellness and Cardiac Rehabilitation Programs**

We believe health should be measured in terms of the whole person – body, mind and spirit.













#### AdventHealth Sebring

#### Cardiac Rehabilitation and Wellness Center Patient Encounters 2018 & 2019

	2018	2019
AdventHealth Wauchula	NA	829
AdventHealth Lake Placid	1,300	1,460
AdventHealth Sebring	5,414	5,909
Total	6,714	8,196





AdventHealth Sebring Cardiovascular Lab Team

#### Heart & Vascular Center Clinical Research Program

The Heart & Vascular Center allows us to engage in prospective, clinical research trials that are investigating new and advanced cardiovascular therapies.

Many of these investigational studies examine new devices for PCI or peripheral vascular intervention, or new uses of previous FDA-approved devices. Through our participation in these trials, we are able to offer the most current and innovative cardiovascular therapies to our patients.



#### Heart & Vascular Center Clinical Research Team

Front Row (L-R) Tabitha Walker James Leicht

Back Row (L-R) Carol Byrum James Paul

#### Heart & Vascular Center

#### **Clinical Research Trials**

#### • EVOLVE DAPT (Enrollment and late follow up completed)

• An FDA-sponsored, multi-center registry examining the effect of early discontinuation of Dual Anti-Platelet Therapy (DAPT) following use of drug eluting coronary stent

#### JETSTREAM In-Stent Restenosis (Enrollment completed)

• A multi-center, FDA and industry sponsored clinical trial evaluating the use of the JETSTREAM atherectomy system combined with balloon angioplasty compared to balloon angipolasty for treating re-narrowing (restenosis) of stents used in peripheral arterial disease.

#### Ranger SFA (Enrollment completed)

• A multi-center, FDA and industry sponsored clinical trial comparing the effect of drug-coated balloon angioplasty to traditional, conventional balloon angioplasty on long term vessel patency when used to treat peripheral arterial disease.

#### Future Clinical Research Trials

#### • STAND Trial (Initiation of trial and enrollment of patients beginning March 2020)

• FDA sponsored-clinical trial comparing a novel, self-expanding drug-eluting stent in below-the-knee arterial circulation for patients with complex peripheral arterial disease.

#### • JET-Ranger (Planned initiation of trial in 2nd quarter 2020)

• An FDA and industry sponsored randomized clinical trial examining the effectiveness on long term artery patency of combination therapy of JETSTREAM atherectomy combined with drugcoated balloon compared to JETSTEAM atherectomy combined with conventional balloon angioplasty for patients with symptomatic peripheral arterial disease.

#### Heart & Vascular Center Clinical Research Outcomes Program

The Clinical Research Outcomes Program provides a detailed and systematic review of procedures performed in the cardiovascular laboratories of the Heart & Vascular Center. This comprehensive database includes all pertinent clinical and procedure-related information. This includes patient's demographics, risk factors, diagnostic testing results (e.g. stress testing) pre-procedure, as well as all procedural and technical factors. Our data for PCI and peripheral vascular procedures is then entered into a national database sponsored by the American College of Cardiology. This allows us to evaluate not only all of our procedure outcomes, but also to compare our data to other centers throughout the United States.

By continuously examining our outcomes, we can objectively assess our practice patterns and improve procedural results and patient care.



#### Heart & Vascular Center Clinical Research Outcomes – STEMI Program

In 2019, the Heart & Vascular Center created an in-hospital, multi-disciplinary team to systematically track processes and care pathways affecting patients presenting with a ST Elevation Myocardial Infarction (STEMI). The STEMI committee comprehensively evaluates and tracks all of the essential steps of patient care, including;

- The evaluation and transportation of the patient by EMS to the emergency room
- Time of arrival in ER
- Time of physician assessment and first EKG
- Time STEMI code is called by hospital operator
- Response time of on-call interventional cardiologist and cath lab staff
- Time patient arrives in the cardiovascular laboratory and the blocked coronary artery is opened
- Procedure-related outcomes and any potential complications
- Patient's in-hospital outcome

#### Clinical Research Outcomes – STEMI Program

Through this important quality initiative, we are able to characterize and quantify our outcomes and identify and improve any potential obstacles in this life-saving clinical pathway. The STEMI Committee meets quarterly to systematically evaluate the program and patient outcomes. It consists of all participating care providers and support staff essential in the care of the STEMI patient, including Emergency staff and physicians, cardiologists, hospitalists, nursing and administrative leaders, EMS representatives, and support staff from the Clinical Research Unit.

This process has contributed greatly to the continued success of our STEMI program. By implementing standardized, comprehensive and integrated care of patients presenting with this life-threatening condition, we are able to improve patient's quality of life and survival.

# **Hospital Awards & Recognition in 2019**

Our vision calls for clinical excellence across an affordable, easy-to-navigate, connected network of care that responds holistically to our consumers.



## Awards and Recognition AdventHealth Sebring

AdventHealth Sebring received the Women's Choice Award in 2019 and was designated as one of the **BEST Hospitals** in America for Patient Safety, Heart Care and Orthopedics.



## AdventHealth Sebring 2019 LEAPFROG 'A' Rating for Patient Safety



AdventHealth West Florida Division earned the highest marks possible for patient safety and quality. The prestigious Leapfrog Group, a national nonprofit health care ratings organization, announced the Top Hospitals in the country and **AdventHealth Sebring** received the Top General Hospital award. **Additionally, AdventHealth Sebring** received the **Top General Hospital** award. **Additionally, AdventHealth Sebring** received the **Top General Hospital** award.

'Top General Hospital' is an elite designation with only 37 hospitals in the country and 21 hospitals in Florida receiving the recognition from the Leapfrog safety group. Only the highest performing hospitals on the Leapfrog Hospital Survey, earning an 'A' rating, are eligible to be recognized annually with this award. Top Hospitals have better systems in place to prevent medication errors, higher quality on maternity care and lower infection rates.



Health

#Bitting a

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NUNIVAR 98

PHILIPS

Assistant Director Heart & Vascular Center

# **Physician & Community Educational Programs**

We celebrate the diverse backgrounds, cultures and experiences of our patients, visitors and colleagues, and embrace opportunities to learn and grow from new perspectives.

VELCOM

/ELCOM

RTCAR

Make Every Beat Count 2019









**Annual Women's Education Program 2019** 

#### Heart & Vascular Center Physician Preceptor Training Programs

The Heart & Vascular Center partners with industry to provide quarterly observational training programs for visiting physicians. Through these 2-day demonstration tutorials, contemporary endovascular procedures and techniques are presented in an interactive live case format. Participating physicians learn the "best practice" and appropriate therapies for treating patients with complex peripheral vascular disease, including chronic total occlusions, critical limb ischemia, diffuse disease below-the-knee disease, rotational and laser atherectomy, intravascular ultrasound imaging, distal embolic protection, drug-coated balloon, and advanced stenting techniques.



#### Heart & Vascular Center Physician Leadership and Education



Each year, Dr. Shimshak participates as an invited lecturer, moderator and Course Director for several national vascular educational symposia.

"Thanks for the cath lab team for finding my blockages. Now I'm feeling great and volunteering again."

# John



#### Heart & Vascular Center Live Broadcast Educational Programs



In 2019, for the fourth consecutive year, the Heart & Vascular Center cardiovascular laboratory participated as a live broadcast site for three national, educational symposia, including NCVH – New Cardiovascular Horizons (New Orleans), C3 – Complex Cardiovascular Catheter Therapeutics (Orlando) and CVC – Chicago Vascular Conference.

During these live broadcast transmissions, complex vascular procedures were transmitted via satellite 'real time' to the vascular specialists attending these meetings. The Heart & Vascular Center, physicians and cardiovascular laboratory staff were able to demonstrate 'cutting edge' contemporary endovascular therapies and techniques to improve patient care.

#### Heart & Vascular Center

#### Physician Participation as Invited Faculty in International Vascular Symposia



In November 2019, Dr. Shimshak was an invited faculty member of the 2019 ENDOVASCOLOGY meeting in Shanghai, China and the Peking Union Medical College Hospital – American Endovascular Treatment Forum in Beijing, China.

# AdventHealth Sebring

AdventHealth Sebring is currently a 159 bed hospital located in Sebring, Florida. Affiliated with AdventHealth Lake Placid and AdventHealth Wauchula, the three hospitals provide comprehensive medical care to their communities as well as Highlands, Polk and Hardee counties. AdventHealth Sebring provides comprehensive inpatient and outpatient services, including;

- Emergency and urgent care at the main campus and satellite urgent care facilities
- Laboratory testing and services within the hospital and multiple satellite locations
- Advanced imaging including digital x-ray, nuclear medicine, ultrasound, CT and MR imaging
- Comprehensive heart and vascular medicine with four state-of-the-art cardiac catheterization laboratories, interventional and clinical cardiologists, vascular surgeons, comprehensive cardiac imaging, bed-intensive care unit and progressive care unit
- Cancer care with board certified hematologists/ oncologists and radiation oncologists
- Orthopedic surgery and sports medicine
- General surgery using laparoscopic and robotic surgical techniques
- Mother, baby and children's care
- Diabetic, home and comprehensive wound care
- Specialty care programs for men and women
- Sleep lab
- Cardiac rehabilitation and wellness programs





















## The New Heart & Vascular Center AdventHealth Sebring

In 2019, we began construction of the new AdventHealth Sebring Heart & Vascular Center. Scheduled to be completed in July 2020, this expansion will include new, dedicated, 'state of art' cardiovascular patient rooms, a separate entrance and lobby, and a fourth comprehensive cardiac catheterization laboratory. The fully equipped comprehensive 24-Bed Cardiac Unit will be supported by dedicated, specialty- trained cardiovascular nurses.

When completed, the total number of licensed in-patient beds of AdventHealth Sebring will increase from 159 to nearly 175. This expansion will allow us to provide focused, comprehensive cardiovascular care to a greater number of patients in our community in a dedicated, specialized nursing unit. It will improve not only the patient care experience, but will also increase convenience and ease of access to the Heart & Vascular Center for families of hospitalized patients.

## Advent Health Sebring

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4200 Sun 'n Lake Boulevard Sebring, FL 33872 863-314-4466

# AdventHealthSebring.com