

ARKANSAS
HEART
HOSPITAL®

2018

YEAR IN REVIEW





CONTENTS

VOL. 2 | OFFICIAL 2018 YEAR IN REVIEW

- 04 | REFLECTION
- 06 | BOARD OF DIRECTORS
- 08 | MEDICAL STAFF
- 12 | QUALITY
- 14 | SPOTLIGHTS

BREAKING GROUND IN BRYANT
A NEW APPROACH TO INTERVENTIONS
PQ BYPASS PREMIERES AT AHH
CARDIAC REHAB BRANCHES OUT
CONFRONTING CHILDHOOD OBESITY
ERASING ARRHYTHMIAS WITH ABLATIONS
A DECADE OF HEALING
HONORING A LIFESAVING LEGACY

FEATURES

30 A CUT ABOVE THE REST

INSIDE THE OPERATING ROOM WITH OUR AWARD-WINNING CARDIOVASCULAR SURGEONS.

40 FARM-TO-HOSPITAL

REVERSING THE STIGMA OF HOSPITAL FOOD: AN INSIDE LOOK AT AHH CULINARY SERVICES.

50 PIONEERS OF PREHAB

BUILDING STRENGTH FOR SURGICAL SUCCESS: MEET SOME OF OUR FIRST RESILIENT HEARTS PREHABILITATION PATIENTS.

58 THE FUTURE IS NOW

HOW EMERGING TECHNOLOGY IS HELPING PATIENTS AT ARKANSAS HEART HOSPITAL.

WELCOME TO ARKANSAS HEART HOSPITAL'S 2018 YEAR IN REVIEW.

Dear Arkansans,

We are pleased to write a review of what the many teams at Arkansas Heart Hospital accomplished in 2018. This small book is meant to highlight a few of our proudest and favorite moments. You will note it is not just a rendition of the number of procedures, patients seen or lives touched, but a display of what it's like to be in our culture. Culture is a commonly over-used word; what I really mean is our family. We prize our family approach to medicine, life and doing the right thing for everyone we encounter.

Arkansas Heart Hospital also values a community approach which is evident with our various events each year. The major ones are the fabulous Cardiac Classic bike ride, the unbelievably exciting Heart Summit and our sponsorship of the Festival of Wines. We're also proud of our employee focused events such as our spring picnic at Dickey-Stephens Park and the fun, playful and inspiring Arkansas Heart Hospital Christmas party.

Our list of disruptions in medicine continues. The biggest stars for 2018 are our new cardiac center and intensive cardiac rehab clinic in Russellville and breaking ground on our new hospital in Bryant, Encore Medical Center (currently under construction). Other favorites include our new Arkansas Heart Hospital garden and master gardener, our food truck and our continued emphasis on the focus of exercise and food as medicine.

Our values haven't changed and our mission is the same. However, our vision is expanding into new products for our family of patients, broader availability to our core abilities and an increase in our coverage of reach in Arkansas and beyond.

Thanks goes to the brilliant physicians and staff who continue to implement use of their vast talents and make Arkansas a healthier place to be.

All my best,



Bruce E. Murphy, MD, PhD, FACC
Chief Executive Officer


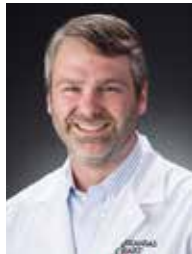
























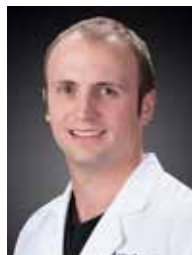




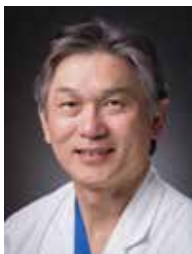




BOARD OF DIRECTORS


FRONT ROW FROM LEFT
Chris Dent and Kim Leverett

BACK ROW FROM LEFT
Dr. Scott Beau, Jim Guy Tucker,
Charlie Smith, Dr. CD Williams,
Bob J. Nash, Dr. James Kane and
Dr. Bruce Murphy

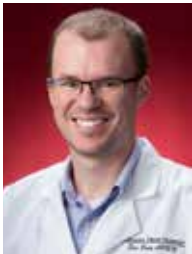
 <p>Scott Archer MD ER Physician</p>	 <p>Brian Baird MD ER Physician</p>	 <p>Scott L. Beau MD, FACC Medical Director Electrophysiology</p>	 <p>Greg Bledsoe MD ER Physician</p>	 <p>Sam Bledsoe MD, FACS, FASMB Bariatric Surgery</p>	 <p>Jim Box MD ER Physician</p>	 <p>Bruce Burton MD Internal Medicine</p>	 <p>Peyton Card MD Strong Hearts Rehab Center Internal Medicine</p>	 <p>Ian M. Cawich MD Interventional Cardiology</p>	 <p>Mehmet Cilingiroglu MD, FSCAI, FACC, FESC Interventional Cardiology</p>
 <p>Scott Darnell MD ER Physician</p>	 <p>Loretta DePalo MD Hyperbaric / Wound Care / ER Physician</p>	 <p>Jerry Dixon MD General Surgery</p>	 <p>Earl Feurtado MD Hyperbaric / Wound Care</p>	 <p>Patrick J. Flaherty III DO, FACC Interventional Cardiology</p>	 <p>Joe Forney MD, FACC General Cardiology</p>	 <p>Kristofer Freeland MD Cardiothoracic Surgery</p>	 <p>JD Fuller MD Bariatric Surgery</p>	 <p>D. Andrew Henry MD, FACC Interventional Cardiology</p>	 <p>Michael David Huber MD, FACC General Cardiology</p>
 <p>James J. Kane Jr. MD, FACC General Cardiology</p>	 <p>Carl Leding MD, FACC Interventional Cardiology</p>	 <p>Irina Lendel MD Endocrinology</p>	 <p>Vasili Lendel MD, FACC Interventional Cardiology</p>	 <p>Monica Lo MD, FACC, FHRS Electrophysiology</p>	 <p>Greg Loyd MD Strong Hearts Rehab Center</p>	 <p>David Mego MD, FACC, FACP, FSCAI Interventional Cardiology</p>	 <p>Mark Myers MD Hyperbaric / Wound Care</p>	 <p>Gary Nash MD Interventional Cardiology</p>	 <p>Michael T. Nolen MD Cardiothoracic Surgery</p>
 <p>Andre Paixao MD Interventional Cardiology</p>	 <p>David Pennywell MD Cardiothoracic Surgery</p>	 <p>Dan Pritchett MD ER Physician</p>	 <p>Vijay Raja MD Interventional Cardiology</p>	 <p>Paulo A. Ribeiro MD, Ph.D., FACC, FESC Interventional Cardiology</p>	 <p>William Rollefson MD, FACC Interventional Cardiology</p>	 <p>Daniel Sherbet MD Interventional Cardiology</p>	 <p>Dylan Thaxton MD General Practice</p>	 <p>Sudarone Thihalolipavan MD Electrophysiology</p>	 <p>James Thomas MD Neurology</p>
 <p>Justin White MD ER Physician</p>	 <p>CD Williams MD, FACC Cardiothoracic Surgery</p>	 <p>Wilson Wong MD, FACC Electrophysiology</p>	<p>NOT PICTURED</p> <p>Carter Dalton MD, ER Physician</p> <p>Gary McCallum MD, ER Physician</p> <p>Amy Pittman MD, ER Physician</p>						

OUR VISION STATEMENT


TO BE A GLOBAL INNOVATOR THAT IMPROVES THE HEALTHCARE LANDSCAPE AND DELIVERY FOR THE GOOD OF OUR PATIENTS, FAMILY AND FRIENDS.




Rose Alfano
APRN



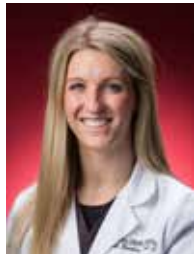
Eric Bain
APRN




Sarah Baker
APRN



Marissa Boggs
APRN




Karli Bradley
PA-C



Lindsay Chalmers
DNP, APRN




Beth Crowder
Ph.D., APRN



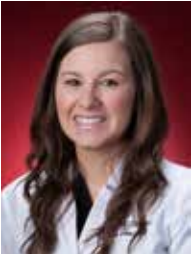
Donna Davis
APRN




Callie Davidson
APRN




Cassidy Estes
DNP, APRN




Jessica Fite
PA-C




Susan Griffeth
APRN




Bernard (Barry) Hall
PA-C




Kelly Hall
APRN




Annabeth Hazlewood
APRN




Susan Hernandez
APRN




Lisa Ivy
APRN




Sarah Jones
APRN




Cassandra Love
APRN




Hannah Mitchell
APRN




Sydnie Moix
APRN




Amanda Mullins
APRN




Shea Oxford
APRN




Krysten Pilkington
APRN




Julia Ponder
APRN




Janine Rutherford
APRN




Angela Simmons
APRN



Shelbi Sloan
APRN



Patrick Stage
APRN




Sara Thompson
APRN




Brandi Tucker
APRN



Jared Umland
PA-C



Dee White
DNP, APRN



Rebecca Young
APRN

NOT PICTURED

Giny Draper APRN

Lauren McBride APRN

Crystal Mizere APRN

WE ARE A FAMILY HOSPITAL

ARKANSAS HEART HOSPITAL IS A WORLD-CLASS FACILITY BUILT FOR PATIENT-FOCUSED CARE. WE ARE A FAMILY OF PROFESSIONALS WHO TREAT EACH OTHER – AND OUR PATIENTS – AS FAMILY.

AHH AT A GLANCE

NEWS & NOTES FROM AROUND THE HEART



CARDIAC CLASSIC KEEPS ROLLING

The 2018 Cardiac Classic was a huge success, thanks to the riders who participated from Arkansas and surrounding states.

WE HAD 340 TOTAL RIDERS AND RAISED OVER \$22,000 FOR CHAMPIONS FOR HEALTH.

BARIATRIC BELIEVERS

The Bariatric & Metabolic Institute at Arkansas Heart Hospital has seen extensive progress in 2018 and welcomed Dr. JD Fuller to the team.

BARIATRIC SURGERIES UP 214%



AHH introduced “At the Heart,” our weekly podcast devoted to heart health, featuring interviews and discussions with AHH experts.

LISTEN OR SUBSCRIBE TODAY

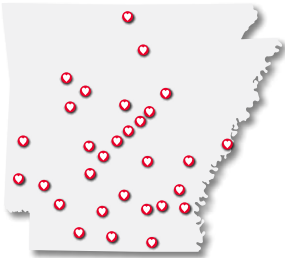


NEW AHH PROGRAM IS DEDICATED TO DIABETES MANAGEMENT & EDUCATION

At Arkansas Heart Hospital, we believe successfully managing a chronic disease begins with education. Our new Diabetes & Endocrinology program, which opened in August, uses quality education to empower individuals with diabetes, helping them become dedicated, encouraged and accountable to – and for – themselves.



BETH CROWDER, PH.D., APRN | IRINA LENDEL, MD | MARISSA BOGGS, APRN | SHELBY PIERCEALL, MS, RDN, LD



WE MAKE CARDIOLOGY CONVENIENT

We're the only hospital in the state dedicated to cardiac care. But we know convenience matters, too! That's why we have 30 clinics in local communities throughout Arkansas – making the best in heart health easier on you.

HEART SUMMIT GETS HI-TECH

The 2018 Heart Summit was all about the future of health care, with special guests Dr. Shafi Ahmed and Dr. Daniel Kraft speaking on topics like 5G, virtual reality, augmented reality and exponential medicine.

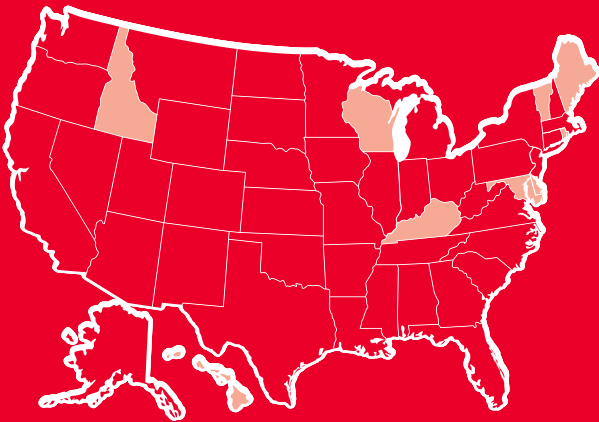


DR. DANIEL KRAFT

2018 BY THE NUMBERS

We are accustomed to monitoring vitals. But it's also important to check our own numbers from time to time. So, are we a healthy hospital? Yes! This year marked continued progress in areas ranging from visits to valves, with a double-digit increase in the number of new patients we welcome through our doors. It all points to the trusted, world-class care our professionals provide every day.

WE TREATED PATIENTS FROM
40 STATES
AT OUR HOSPITAL & CLINICS



WE'RE SERVING MORE HEART PATIENTS THAN EVER BEFORE.

OVER 116,000 OFFICE VISITS



UP 18%
VALVES

UP 10%
ER VISITS

UP 6%
ADMITS & DISCHARGES

STRUCTURAL HEART CASES UP 28%

COMPLEX ABLATIONS UP 14%

11% NEW PATIENT GROWTH

BREAKING GROUND IN BRYANT

AHH BEGINS CONSTRUCTION ON NEW
HOSPITAL IN SALINE COUNTY.



NOVEMBER 13, 2018
AHH administrators,
physicians and special guests
break ground on the Encore
Medical Center in Bryant.

All hospitals are built to help people who have illness, and giving patients a second chance – or sometimes a third or fourth chance – is why many doctors and nurses go into medicine in the first place. Patients need those second chances now more than ever. In Arkansas, multiple diseases are at near-epidemic proportions. The Arkansas Heart Hospital Encore Medical Center was conceived to focus on two conditions: adult obesity with diabetes and severe peripheral vessel

disease. Our goal is to serve patients whose problems are not solved with medications and give them a second chance. An encore, so to speak. On November 13, AHH officially broke ground on the Encore Medical Center in Bryant, Arkansas. This new medical center will include a full-service emergency department, state-of-the-art imaging and an attached medical facility with multiple specialties. Construction is underway with a projected opening date in the latter part of 2020.



ARKANSAS
HEART
HOSPITAL®

Encore MEDICAL
CENTER

A NEW APPROACH TO INTERVENTIONS

TREATING PERIPHERAL VASCULAR CASES
THROUGH THE WRIST WITH DR. BILL ROLLEFSON.

For most patients with a peripheral vascular case, radial access is a safe option, with minimal downtime and quicker recovery.

Radial access for coronary cases is one of our specialties. In fact, 2018 marked the 10-year anniversary for radial access for coronary cases. It also marked the beginning of a new era: Dr. Bill Rollefson realizing the dream of being able to treat peripheral vascular cases the same way, through the wrist rather than the groin. “There’s no downtime and people get to go home in two hours,” he said. “We have now done about 100 cases in this manner.” Naturally, once patients find out their procedure will be performed through the wrist, they are elated. “It’s not for everybody, but in most cases we can do it,” Dr. Rollefson said. “The success rates have been as good as doing it from the groin.” Arkansas Heart Hospital was one of about a dozen testing sites in the entire country for this procedure. “That’s part of our credo, that innovation is very, very important for us.”

100

PERIPHERAL VASCULAR CASES
PERFORMED BY RADIAL ACCESS
THROUGH THE WRIST
RATHER THAN THE GROIN

PQ BYPASS PREMIERES AT AHH

DR. ANDRE PAIXAO AND DR. VASILI LENDEL
PERFORM FIRST DETOUR II TRIAL IN THE U.S.

FEBRUARY 21, 2018
In the AHH cath lab, Dr. Andre Paixao & Dr. Vasili Lendel perform the first DETOUR II trial in the U.S. They would perform the procedure twice on this day.



In 2018, Dr. Vasili Lendel and Dr. Andre Paixao performed the first percutaneous femoral-popliteal bypass procedure in the country – part of a trial for patients who suffer from femoral artery blockages associated with peripheral artery disease. The study is called DETOUR II and the procedure is performed in the leg where an occlusion has taken place. Using this procedure, doctors are able to bypass the occlusion using a surrounding non-occluded vein and artery to restore flow, pro-

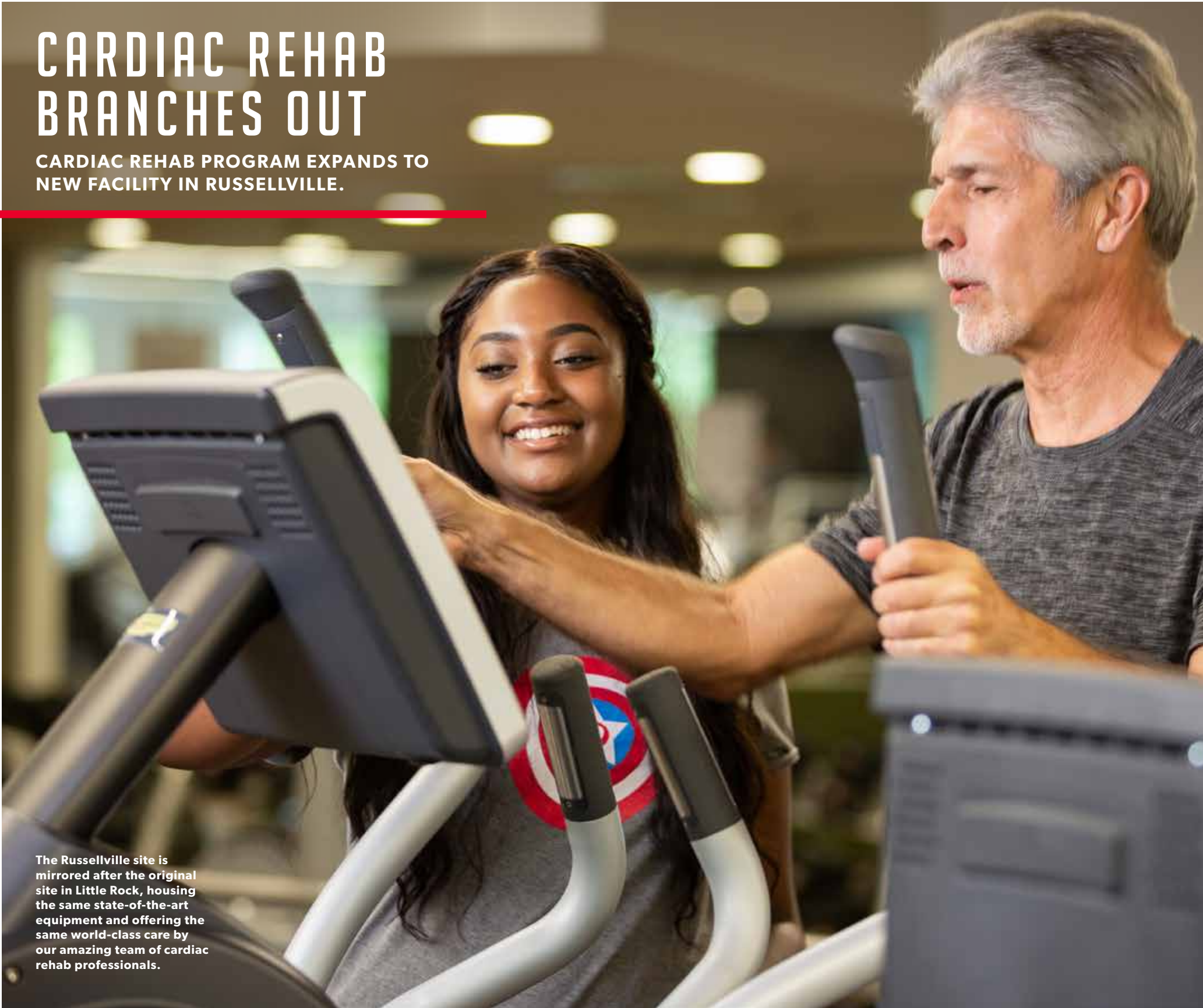
viding an option for patients who do not want to have major surgery. This is an excellent example of the dedication our research department has to providing innovative offerings, procedures and methods for our family of patients. “Arkansas Heart Hospital is one of the top enrolling sites in the U.S.,” said Mary Catherine Faulkner, director of research. “Being part of this study has been rewarding because we have been able to offer something very few hospitals can.”

“OUR RESEARCH DEPARTMENT HAS BEEN AT THE FOREFRONT OF MEDICAL RESEARCH, AND WE WERE ABLE TO RECRUIT PATIENTS FIRST. IT WAS QUITE THE COMPETITION HERE IN THE UNITED STATES. WHO WILL BE THE FIRST TO BE ABLE TO PERFORM THE SURGERY? THAT’S WHY WE ARE SO PROUD AND HAPPY TO BE THE FIRST ONE.”

VASILI LENDEL, MD

1ST

IN THE UNITED STATES
TO SUCCESSFULLY PERFORM
THE DETOUR PROCEDURE
PQ BYPASS



CARDIAC REHAB BRANCHES OUT

CARDIAC REHAB PROGRAM EXPANDS TO
NEW FACILITY IN RUSSELLVILLE.

The Russellville site is mirrored after the original site in Little Rock, housing the same state-of-the-art equipment and offering the same world-class care by our amazing team of cardiac rehab professionals.

It wasn't long after the Strong Hearts Rehabilitation Center opened its doors in 2016 that we began to realize the overwhelming impact the intensive cardiac rehab program was having on patients' lives. Every patient story was one of success – improved quality of life and positive clinical outcomes, such as blood pressure improvement, diabetes control, weight loss and medication reduction. It quickly became obvious that we needed to make the program accessible to every heart patient in Central Arkansas. Located 80 miles Northwest of Little Rock, Russellville is our highest-volume community clinic, making it a natural choice for the first expansion. In April 2018, construction was completed on the second floor of our new clinic on Portland Avenue. It was perfect timing. The clinic had outgrown its quaint building off of Main Street, and the move allowed for a more spacious facility with the first (and only) Intensive Cardiac Rehab in the area.

94

CARDIAC REHAB GRADS
AT RUSSELLVILLE LOCATION
SINCE OPENING IN
APRIL OF 2018

CONFRONTING CHILDHOOD OBESITY

FOUNDATION'S NEW VISION IGNITES A K-12 HEALTH REVOLUTION.

Sue Owens, executive director for Champions for Health, speaks with Tommy Smith and David Bazzel of 103.7 The Buzz about the childhood obesity epidemic in Arkansas and the Champions for Health pilot program with Morrilton Intermediate School.



Arkansas Heart Foundation, the 3-year-old nonprofit founded by Arkansas Heart Hospital, identified a new mission and purpose in 2018. Last January, Dr. Bruce Murphy and the foundation's board of directors made the strategic decision to focus solely on helping Arkansas youth learn how to plan for health in their lives. The foundation adopted a new name, Champions for Health, and went to work educating, motivating and empowering youth. During the 2018-19 school year, Cham-

pions for Health is adopting Morrilton Intermediate School – an elementary school with 500 students in fourth through sixth grade and more than 50 adults on campus – for an exciting pilot program. The program is designed to create an environment of wellness that infuses health, nutrition education and fitness strategies throughout the entire campus. The ultimate goal? Create a replicable model for all K-12 schools across Arkansas as we fight to reverse the obesity epidemic.



"WE PLAN TO CREATE A HEALTH REVOLUTION BY TEACHING KIDS THAT FOOD CAN CREATE HEALTH OR DISEASE, AND THAT EXERCISE IS MEDICINE."

SUE OWENS, EXECUTIVE DIRECTOR

39%

ARKANSAS K-12 STUDENTS

CLASSIFIED AS OVERWEIGHT OR OBESE DURING THE 2016-17 SCHOOL YEAR



ERASING ARRHYTHMIAS WITH ABLATIONS

RESTORING HEART RHYTHMS WITH DR. MONICA LO AND DR. SUDARONE THIMALOLIPAVAN.

Our electrophysiologists are breaking ground with ablations, using new techniques that address arrhythmias both inside and on the surface of the heart.

Complex ablations didn't exist five years ago. Today, Arkansas Heart Hospital is one of the top centers in the country performing such procedures, and new techniques and trials were featured in the electrophysiology lab in 2018. Dr. Monica Lo participated in a global trial that tests ablation catheters, and was the top enroller. "The TactiSense SE catheter has easy maneuverability and also provides accurate mapping, as well as the contact force sensing so that you're exerting the right amount of force for the ablation," she said. "We have great outcomes and no major adverse events or complications." Another new technique, introduced by Dr. Sudarone Thimalolipavan, is epicardial VT ablations. Dr. Lo explained that when electrophysiologists ablate, they do so inside the heart. However, some arrhythmias come from the surface of the heart and cannot be addressed from inside. "With the epicardial technique, we can do ablations on the surface," Dr. Lo said. "Dr. Thimalolipavan has done three successful procedures, and the patients have done well."

14%

INCREASE

IN COMPLEX ABLATIONS
AT ARKANSAS HEART HOSPITAL
2017 VS 2018

A DECADE OF HEALING

WOUND CARE & HYPERBARIC CENTER CELEBRATES 10-YEAR ANNIVERSARY.

To reach more patients across the state, our Wound Care Center has expanded to multiple locations, including Little Rock, Conway and Hot Springs.



Contrary to the old saying, time does not heal all wounds. That’s why we have a comprehensive outpatient facility offering advanced therapy for treating chronic, non-healing and complex wounds. Our team is committed to working together for the advancement of wound healing needs, providing individualized treatment plans for patients in a quick, efficient manner. We do that with state-of-the-art facilities that enable prompt physician and nurse evaluations, comprehensive medical screenings and conve-

nient, designated parking for our patients. Advanced techniques and treatments – including hyperbaric medicine, bioengineered skin substitutes and vacuum-assisted closures – help our patients’ wounds heal faster, allowing them to return to their normal lives. September 13 marked 10 years of hope and healing for our patients, and that first decade has brought us many things to celebrate. We proudly offered care to more than 4,000 patients, with 270 of those patients participating in more than 16,000 HBO dives.



“WE’RE PROUD TO OFFER CUTTING-EDGE TECHNOLOGY TO HEAL WHAT TIME DOES NOT.”
LAURA WALTERS, WOUND CARE DIRECTOR

>4K

TOTAL PATIENTS
IN THE 10-YEAR HISTORY
OF THE WOUND CARE
& HYPERBARIC CENTER

HONORING A LIFESAVING LEGACY

DR. CD WILLIAMS RECEIVES UAMS DEAN’S DISTINGUISHED ALUMNI AWARD.



AUGUST 18, 2018
Dr. Williams attends the UAMS Alumni Weekend Luncheon where he was recognized with the Dean's Distinguished Alumni Award.

The University of Arkansas for Medical Sciences’ medical faculty and its’ dean select a distinguished alumnus every year. This goes to an alumnus who graduated from UAMS and has distinguished himself as being excellent in the field of medicine. This year one of our founding physicians, Dr. Charles David Williams, a cardiovascular surgeon, was awarded this distinction. Dr. Williams is noted for bringing modern heart surgery to Little Rock over forty years ago. He is a native of Booneville, Arkansas and graduated from UAMS as his medical school in 1965. Before he returned to Little Rock to begin his practice in 1976, local patients who had severe coronary disease generally travelled to Houston, Texas to Dr. Denton Cooley for their heart surgery. Because of Dr. Williams’ record and quality, those patients then began to stay in Little Rock receiving the same or better care. During his career, he has begun heart surgery programs at St. Vincent’s, Baptist, and at Arkansas Heart Hospital. In his career at Arkansas Heart Hospital, he has performed 6,115 coronary artery bypass grafts, 1,786 vascular surgeries, 1,629 valves and 1,226 general surgeries.

He is renowned for his bedside manner, witty remarks and his near perfect memory. His patients insist that he operate on their family members when the need arises. AHH CEO, Dr. Bruce Murphy, practiced cardiology for 28 years in Arkansas and referred thousands of patients to Dr. Williams for heart surgery. Over the years, Dr. Murphy has stated many times that when patients asked him “Who would you have operate on me?”, that he would reply, “If you were my father, then I would have Dr. Williams operate on you.” 12 years ago, Dr. Murphy’s father needed heart surgery and, true to his word, he sent his father, Fred Bruce Murphy, to Dr. Williams for heart surgery. Now at age 90, Dr. Murphy’s father is thriving and is a testimony to Dr. Williams’ skill and care.

Dr. James J. Kane and Dr. Williams actually trained together at UAMS and have practiced together for over forty years. They presently practice at the hospital and have had a combined effect of bringing old fashioned bedside manner and good quality cardiology and cardiovascular surgery to our hospital. Dr. Williams was one of the founding fathers of Arkansas Heart Hospital, and we are thrilled he received this award as the distinguished alumnus of the University of Arkansas for Medical Sciences for 2018.

Arkansas Heart Hospital has also received a gift from Leslie Williams, Dr. CD Williams’ wife, of a portrait of his hands. These are the hands that have successfully operated on so many Arkansans and saved so many lives. We graciously plan to display this in a prominent place in the hospital.



>10K

TOTAL SURGICAL CASES
PERFORMED BY DR. WILLIAMS
DURING HIS TENURE AT
ARKANSAS HEART HOSPITAL

A CUT ABOVE THE REST

INSIDE THE O.R. WITH OUR
AWARD-WINNING
CARDIOVASCULAR SURGEONS.



IT'S NO WONDER ARKANSANS CONSISTENTLY CHOOSE ARKANSAS HEART HOSPITAL FOR THEIR SURGERIES.

Our cardiovascular surgery team boasts the triple talents of Dr. CD Williams, Dr. Michael Nolen and Dr. Kristofer Freeland, with 60 years of combined experience. The team performed more than 2000 surgeries last year, and all three doctors agree that 2018 was their best year yet.

As new technologies emerge, our surgeons are able to bring them into the operating room, making the surgery experience easier on patients. Dr. Nolen, who is a part of the structural heart program, says heart valve surgery seems to be increasing because of a new minimally invasive surgery.

“Both the minimally invasive mitral and aortic valve surgeries are done through a small incision on the right side of the chest, about the length of my pinky finger,” he said. “I can do everything I would do during an open sternotomy AVR or MVR through these smaller incisions. To obtain bypass, I also make a small incision in the groin. This approach gives the patients the benefits of a surgical valve replacement or a mitral valve repair, which are more durable, through a smaller incision. The results speak for themselves: the length of stay is less, they are able to get up and move around

more quickly and efficiently, ultimately back to work quicker. Since I do not have to crack any ribs or break any bones, there is less healing time for the patients.”

But the advancements – and patient benefits – don’t stop there. “New technologies have really changed how patients are doing in their hospital stay, and how they do post-operative,” said Dr. Freeland. “Streamlining the process and new innovation in procedures decreases not only their stay but also significantly decreases the amount of pain medicine the patient needs after surgery.



AN INSIDE LOOK AT THE AHH OPERATING ROOM

The image below is a 360° view of Dr. CD Williams performing a surgery in the AHH operating room. Earlier this year, Arkansas Heart Hospital joined with Medical Realities to film procedures for surgical training purposes. The procedures are available to view in 360° VR on the Medical Realities Platform, giving viewers an inside look at the AHH operating room. For more info, visit medicalrealities.com.



Patients get out of the hospital quicker and are back to functioning faster.”

This year has brought an increase in patients needing heart bypass surgery and heart valve surgery, and our extraordinary team continues to grow and find innovative ways to work around operating room challenges. “Some efforts are being made to put on a late afternoon shift,” Dr. Williams explained, “which could help a lot since we continue to grow in numbers with only three operating rooms. More late afternoon, night and possibly weekend surgeries are to come.” Yet

managing these challenges has made the team even stronger. Dr. Nolen said, “It has made us become more efficient using the resources we have.”

All three physicians credit the department’s success to the people who surround them. “When the team gets better my job gets easier,” said Dr. Williams.

In early 2019, Arkansas Heart Hospital welcomed Dr. David Pennywell as the latest surgeon to join this exceptionally talented team. ●



CD WILLIAMS, MD

Dr. Williams was born in Fort Smith and raised in Booneville, Arkansas. He graduated from the University of Arkansas for Medical Sciences in Little Rock before finishing his internship at Parkland Memorial Hospital in Dallas, Texas. He then completed three residencies – internal medicine at UAMS; general surgery at Parkland Memorial Hospital; and cardiovascular surgery at New York University Medical Center in New York, NY. Dr. Williams is board-certified in thoracic and general surgery. He is the director of surgery at Arkansas Heart Hospital and is president of Arkansas Cardiovascular Surgery Associates. He started cardiovascular surgery programs at several hospitals in Arkansas and in Texas, and serves as associate clinical professor of surgery at UAMS. Recognized as a leader in his field, Dr. Williams has been published in many articles for medical journals and has been in two films demonstrating innovative cardiovascular techniques.

WILLIAMS



MICHAEL NOLEN, MD

Dr. Nolen received a bachelor's degree in chemistry from Arkansas Tech University in 1993. He then completed his medical degree (1997) and general surgery internship and residency (2002) at the University of Arkansas for Medical Sciences. Dr. Nolen subsequently completed cardiovascular and thoracic fellowship (2004) at the Texas Heart Institute in Houston under the direction of Dr. Denton A. Cool-ey. He is certified by the American Board of Thoracic Surgery and the American Board of Surgery. His interests include minimally invasive surgery, coronary bypass and valve surgery, aortic aneurysm repairs and peripheral vascular surgery.

IT WAS A GOOD YEAR FOR
HEART SURGERY. OUR SURGICAL
PROGRAM IS EXPANDING,
EVOLVING AND WE STAY BUSY.
WE'VE BECOME MORE EFFICIENT
WITH THE RESOURCES THAT WE
HAVE AVAILABLE.

“ MN ”



KRISTOFER FREELAND, MD

Dr. Freeland is originally from Fordyce, Arkansas. He attended medical school at the University of Arkansas for Medical Sciences and completed his general surgery residency at Louisiana State University in Shreveport. His cardiothoracic training is from the University of Alabama at Birmingham. Dr. Freeland is a cardiothoracic surgeon with an interest in coronary vascularization and structural heart disease, including the TAVR procedure, as well as aortic pathology. In 2004, Dr. Freeland was a patient care partner before continuing on with his education.

NEW TECHNOLOGIES HAVE REALLY CHANGED HOW PATIENTS ARE DOING IN THEIR HOSPITAL STAY, AND HOW THEY DO POST-OPERATIVE. PATIENTS GET OUT OF THE HOSPITAL QUICKER AND ARE BACK TO FUNCTIONING FASTER AND WITH LESS PAIN.

“ KF ”

FREELAND




The AHH garden provides fresh, seasonal produce for our cafe and patient menu items, while also serving as an educational tool on the importance of growing food organically and locally.

FARM»»TO

HOSPITAL

**REVERSING THE STIGMA OF HOSPITAL FOOD:
AN INSIDE LOOK AT AHH CULINARY SERVICES.**



DR. MURPHY

ONCE TOLD A REPORTER, “THERE ARE TWO THINGS FOR CERTAIN: BAD AIRPLANE FOOD AND BAD HOSPITAL FOOD.” ARKANSAS HEART HOSPITAL SHATTERS THAT THINKING.

Casey Atwood became the director of culinary services at the beginning of 2018. Within a few short months, a bright red, shiny new food truck came rolling into the parking lot. Food From the Heart debuted in the spring and quickly had a long list of festivals, corporate friends, nonprofits and schools requesting the truck at their events – which is exactly what we wanted. That’s because the purpose of the truck is not only to provide excellent food, but also to be part of the community. “During the summer, Food From the Heart provided healthy snacks to the community by stopping by the Girls and Boys Clubs, fire stations and police stations,” said Atwood. Buzz circulated around town anytime the truck was spotted. Food From the Heart also logged plenty of miles visiting our clinics throughout the year.

As the hospital adopted the mantra Food is Medicine, a fresh, organic garden was the next order of business. On land west of the Little Rock clinic, ground was cleared, fencing went up and fruits, vegetables and flowers were soon growing. Gardener Jon Bierman was hired to cultivate and nurture the project. By summer, fresh herbs and vegetables were spotted on the salad bar, in ramen, in crepes and on patient trays.

Not only does the garden provide food for the hospital, but we also use the garden as a teaching tool to educate practitioners, chefs, dietitians, patients and students on the importance of growing food organ-

ically and locally. Soon, the garden will be home to a new greenhouse, expanding what we can do in the garden year-round.

In May, we added some resident honeybees into the mix. The bees play a vital role in our environment and can be an important teaching tool. “It’s fun to see all this life in the garden and what it’s providing to the ecosystem,” Atwood said. “The bees provide a great talking point to help educate about our food system. Hopefully, honey will be available in 2019.”

With the incredible success of our ramen on Mondays, Wednesdays and Fridays, the search was on for a unique culinary experience for Tuesdays and Thursdays. Why not crepes? “We offer both a savory and sweet crepe,” Atwood said. “You can generally find something from the garden being used in them.” The crepes are sold in the morning, often attracting a line of friends and staff ready to eat.

Also new for 2018 was the revamp of patient menus and the addition of healthier options in the cafe. We cut out a lot of the breads and added in more fruits and veggies. “That’s been a big change,” Atwood said. “Dinner rolls and dessert are still on the menu, so patients can order it. We aren’t trying to dictate everything, but we want to show healthy options, too.” In the evening, dessert is replaced by a small dark chocolate heart. We also added in more local options like a local grass-fed hamburger steak replacing the previous hamburger steak on the menu. Vegetarian chili and black bean burgers were also added to make more vegetarian options, as well as offering locally made gluten-free breads from Dempsey Bakery.

Finally, new technology is finding its way into patient rooms. “We are piloting a project where eventually the patients or nurses will be able to take a picture of the patient’s food and it’ll be able to tell how many calories, proteins, sodium they got from that meal.” This is a new way of tracking what patients are eating so nurses, doctors and dietitians can monitor the process even better. ●



AHH Gardener Jon Bierman tends to our resident honeybees. Two hives were added to the garden in May of 2018, providing a unique, important teaching tool about our environment and ecosystem. We expect to have honey available in the cafe and for purchase in 2019.

"WE AREN'T TRYING TO DICTATE EVERYTHING, BUT WE WANT TO SHOW HEALTHY OPTIONS, TOO."
CASEY ATWOOD, DIRECTOR OF CULINARY SERVICES



Proper nutrition plays an important role in the healing and recovery process. Our room service dining offers patients a restaurant-style menu filled with delicious, nutritious foods crafted by our talented chefs and registered dietitian nutritionists.



FOOD FROM THE HEART

It's no secret that our ramen is popular in Central Arkansas. So popular, in fact, that in 2018 we had to take it on the road. Meet Food From the Heart, the AHH food truck. We believe we have the only dedicated hospital food truck in Arkansas, and possibly the nation. With a staff of two, our food truck is on the road three or four days per week hitting local food truck stops, special events and surprise pop-ups around Central Arkansas. We also visit one of our AHH satellite clinics about twice a month to surprise clinic employees and patients with a meal. Although Food From the Heart does offer other culinary options, ramen bowls remain our primary menu item. We feature the freshest ingredients, often using produce from the AHH garden, and the broth is our carefully crafted homemade bone broth. We typically serve a different ramen at each stop. In October alone, we served 580 bowls from the food truck!

11

ARKANSAS CITIES

VISITED BY FOOD FROM THE HEART FOOD TRUCK SINCE IT HIT THE ROAD IN APRIL 2018



AHH GARDEN & HONEY BEES

On land just west of our Little Rock Clinic, we're growing something special. The AHH garden was introduced in 2018 and has blossomed into a consistent source of fresh produce for our cafe and patient room menu items. It's also providing a unique educational tool for staff, patients and students. With 1680 square feet of growing space, we needed a dedicated expert on the ground to nurture the project. Our resident gardener, Jon Bierman, spends his days propagating seeds, planting, cultivating and educating our patients, guests and practitioners. Our menus now change with the seasons, highlighting produce that is seasonally appropriate. In the spring and fall we produced a lot of greens that made their way into cooking demos and cafe menu items. In the summer months, we produced delicious organic cucumbers, tomatoes, okra, squash, peas, herbs and eggplant. We also have two hives of honeybees with honey expected to be available in 2019.

1680

SQUARE FEET

OF GROWING SPACE,
ACROSS SEVEN 4FT X 60FT
BEDS IN THE AHH GARDEN



MURPHY'S CAFE

Our cafe is a popular lunch spot for hospital employees and visitors, and has also earned a reputation as a hot lunch spot for local foodies. Our famous ramen regularly draws large crowds on Mondays, Wednesdays and Fridays. We serve around 200-300 bowls on ramen days and have served over 28,000 bowls in the past year! But it's not just about the ramen. In 2018, we made a concerted effort to introduce healthier options and create a more well-rounded cafe experience. With the addition of the AHH garden, we are incorporating fresh organic items grown in our garden every day. You'll find those items in our daily specials, sandwiches and on our salad bar. We're also offering healthier options like un-sandwiches and gluten-free bread. Behind the scenes, our chefs work together to create our daily cafe menu, along with patient meals and menu items. It's a team effort and our proud culinary services professionals always deliver.

28K

RAMEN BOWLS

SERVED IN THE LAST YEAR
AT MURPHY'S CAFE
IN ARKANSAS HEART HOSPITAL



Prehab patients work out at the Strong Hearts gym located on the fourth floor of our Little Rock Clinic. In addition to the physical component, prehab patients are prepared mentally and emotionally for their upcoming surgeries.

PIONEERS OF PREHAB |

**BUILDING STRENGTH
FOR SURGICAL SUCCESS:
MEET SOME OF OUR
FIRST RESILIENT HEARTS
PREHABILITATION PATIENTS.**

IN THE SPIRIT OF INNOVATION ESTABLISHED BY DR. MURPHY, ARKANSAS HEART HOSPITAL IS PREPARING PATIENTS FOR SUCCESS.

He recognized that no other institution in the United States offered cardiac prehabilitation – an intuitive concept of preparing cardiac patients mentally, physically and emotionally for surgery. The concept originated in Canada and some European countries, where patients have extended wait times for surgery. Research shows that frail and/or deconditioned individuals going into a major cardiovascular surgery do not do well post-operatively. Why not make those patients stronger prior to surgery, increase their chances of a better post-operative outcome and perhaps offer a faster recovery? And with that, Resilient Hearts Intensive Cardiac Prehabilitation became a reality.

Dr. Eric Martin, Ph.D. and Dr. Gary Nash head up the only program of its kind in the United States at Arkansas Heart Hospital. “Cardiac prehab has allowed our facility to assist patients with increasing their functional capacity in anticipation of their upcoming surgical procedures, and to improve their overall health-related quality of life,” said Dr. Martin. “We work with patients on the areas of cardiovascular conditioning, muscular strength, range of motion, nutritional therapy, psychological wellbeing, respiratory therapy and physical therapy. An educational program has been administered providing information on cardiovascular



ELEANOR COX HEART PALPITATIONS

Much like prehabilitation, Eleanor is proactive. She has been having heart palpitations and has yet to determine the cause. She's scheduled to see another specialist in January 2019. On the advice of a friend, and after a conversation with her doctor, she signed up to participate in our prehab program. She's been an active participant now for 5-6 weeks. Before she enrolled in the program, Eleanor was living a sedentary lifestyle and wasn't interested in physical activity. Now, she looks forward to it! She's at our gym three days a week and finds ways to keep moving on her days off. Eleanor saw major improvements after just two weeks and moved up a level in the program. The machines are harder and there's more resistance, but she likes it. She even has workouts designed specifically for her. She's also sleeping better, and friends and family are noticing her enthusiasm. Eleanor plans to be here for 11 weeks – and one of her goals is to have arms like Michelle Obama. With her determination and work ethic, we think she'll get there.

physiology, CVD risk factor reduction, surgical procedures, recovery expectations, stress management, diabetes, tobacco and alcohol cessation, and cardiac rehabilitation.”

The cardiac prehab program teaches patients about nutrition and helps them work on implementing an anti-inflammatory diet to address the immediate inflammation associated with surgery. “The stronger our patients are, the better their bodies will be able to handle the insult that occurs with a major opening of the thoracic cavity,” Dr. Martin said. The approach is holistic, including providing patients with an expectation of post-sur-

“THE STRONGER OUR PATIENTS ARE, THEIR BODIES WILL BE ABLE TO HANDLE THE INSULT THAT OCCURS WITH A MAJOR OPENING OF THE THORACIC CAVITY.”

gery life and teaching them about the value of entering a cardiac rehab program. Research shows that even a short time frame, such as two weeks, is beneficial to helping a patient prepare mentally and emotionally for the surgery ahead.

“We’re educating them about stress and how important stress management is to help them with the psychological side of the surgical experience,” Dr. Martin said. “Many cardiovascular patients experience depression. It’s not an abnormal response they are having, but we don’t want them to stay in that place so we give them information to learn to manage their stress. Cardiac prehab helps our patients out mentally by taking an active part in their own treatment. They aren’t just sitting around, they’re actively involved in helping themselves get better.”

With the implementation of the Resilient Hearts



SHEFFIELD NELSON KNEE SURGERY

As an avid outdoorsman and former commissioner for the Arkansas Game & Fish Commission, Sheffield Nelson is not one to be cooped up. However, with an ailing knee, getting to and from the duck blind was becoming an arduous task. His condition required surgery and Dr. CD Williams recommended he enroll in our prehab program to prepare for the procedure and increase his overall quality of life. Sheffield started the program in July and was a participant for four months. In addition to preparing mentally and emotionally for surgery, he also exercised with free weights and our state-of-the-art fitness equipment. As the program progressed, Sheffield gained five pounds of muscle and saw significant improvement in his upper body and leg strength. The result? His mobility has increased by leaps and bounds. Needless to say, less pain and increased strength make hunting and fishing more enjoyable than before. These days, Sheffield is pain-free and back where he loves to be – on the water or in the woods of The Natural State.

Intensive Cardiac Prehab program, the first patient was an elderly woman who needed a heart valve repair, but was considered too frail. At the end of the program, she was feeling so much better she elected not to have the surgery. “She liked her quality of life where it was and with cardiovascular surgery at 83, the quality of life may not be all that great post-surgery, even if surgery goes perfectly well,” said Dr. Martin. “She and her family liked how she had progressed physically and decided not to have the surgery, which was a pretty big surprise.”

Since its inception, Resilient Hearts Intensive Cardiac Prehabilitation has developed into a program for more than just cardiac surgeries. All pre-surgical patients – including cases such as organ transplants, general surgeries and cancer treatments – are welcomed. In addition, the program is used for other cardiac conditions, cancer patients, endocrine and metabolic disorders, pulmonary diseases and frailty.

“Intensive Cardiac Prehabilitation provides the ideal framework for developing a comprehensive exercise therapy and educational program that can address the needs of all of these diagnoses,” Dr. Martin said. “Providing exercise therapy through intensive cardiac prehabilitation is a viable, cost effective and proven method to prevent and attack multiple diseases. Intensive cardiac prehabilitation should be a standard part of cardiac, pulmonary, metabolic, endocrine and oncology care.”

The next goal is to take the data from 2018 and present it to the insurance companies. “At Arkansas Heart Hospital, we are making every effort to achieve the best outcomes possible for each patient,” said Dr. Martin. “Intensive cardiac prehabilitation is the right thing to do for our patients to help achieve those best outcomes. We know this is a valid program and it’s great for our patients.”



CAROLE PROVİN

AFİB & KNEE REPLACEMENT

In April of 2018, Dr. Monica Lo, Arkansas Heart Hospital electrophysiologist, performed an ablation on Carole to treat her irregular heart rhythm. The condition was corrected, but she was encouraged by our physicians to enroll in the Resilient Hearts Prehabilitation program to prepare for her upcoming knee replacement surgery. Wanting to maximize her prehab time, Carole joined the program and has been participating five days a week for nearly two months. In addition to strengthening her core and leg muscles to prepare for surgery, she's also improving her upper body strength with weight training. But Carole's prehab experience isn't just preparing her to be stronger for her surgery, it's also a lifestyle change that's getting her ready for what comes after. Before prehab, Carole's mobility was compromised and she walked with the assistance of a cane. Post-surgery, she looks forward to gardening again, making hospital visits through the Stephen Ministry and volunteering with her church. Hopefully cane-free.

THE FUTURE IS NOW

HOW EMERGING TECHNOLOGY IS HELPING
PATIENTS AT ARKANSAS HEART HOSPITAL.

AHH is currently engaged in a VR pilot program designed to help patients deal with pain, ease anxiety before procedures and speed up recovery times.

AT ARKANSAS HEART HOSPITAL, HIGH TECH IS ALWAYS A HIGH PRIORITY.

Innovation and technology are foundational building blocks of our organization. This year brought new knowledge in the form of machine learning, 5G networks, virtual reality and telemedicine. Director of Management Information Systems Trevor Bates sat down to explain these new technologies and how they're being incorporated at AHH.

Machine learning, or ML for short, is a method of data analysis that looks for patterns and can learn to make decisions with minimal human intervention. "Health care providers are looking to machine learning to potentially supplement the knowledge of a trained physician," said Bates. Tasks that take away time between patients and health care providers are being increasingly automated. In addition, ML may be able to help detect abnormalities that would take longer for the human eye to spot. "For the future, AHH sees ML and artificial intelligence as working hand in hand with our physicians to provide better patient care," Bates said. "These technologies are helping patients be seen more efficiently and are becoming more accessible."

One of the new technologies highlighted at the 2018 Heart Summit is 5G networks. On a 5G network, a two-hour movie in 4K high definition would be able to download in less than 10 seconds. That is 10-20 times faster than current 4G or LTE networks. New 5G will connect smart homes, devices and wearable sensors that monitor health continuously and will be able to send data to your AHH physician. This technology will transform health care as we know it.

Telemedicine is technology that allows health care professionals to evaluate, diagnose and treat patients from a distance. At Arkansas Heart Hospital, we have been involved with telemedicine for many years. Our providers are able to see patients all over the state without leaving the main clinic.

"We are piloting another program that will allow patients to schedule their own telemedicine visits, and allow our providers to take a video call from anywhere," said Bates. "This will save time for everyone involved and hopefully save patients from having to visit the ER." Arkansas Heart Hospital will rely more heavily on telemedicine in the future. Why? Studies have shown that up to 95% of urgent care and primary health care can be provided without in-person visits. This gives our patients another option when connecting to their physician.

Virtual reality is a computer-generated experience that involves being immersed in an environment. Usually, the experience requires a headset that projects the virtual environment. While VR isn't a new technology, most associate it with a gaming experience. But did you know this same technology has big benefits for patients? It can be used to help manage chronic or acute pain, ease anxiety before a procedure and even speed up recovery. "Arkansas Heart Hospital is engaging in a pilot program that will allow our patients to immerse themselves in a peaceful environment in order to cope with acute pain," said Bates. "The technology is meant to distract patients so that they are not entirely focused on their pain. The program also walks patients through guided meditation, using breathing exercises to further distract the patient from their pain." The challenges we are facing in our program are common for anyone who is new to VR: motion sickness or claustrophobia. However, the technological barrier is less of a concern as the technology advances and can be consumed for very little cost. "In the future, I think VR could have a significant impact on the opioid epidemic," said Bates. "There is little to no risk of addiction or overdose and the technology is only becoming more easily available." ♥

AHH is encouraging patients to take full advantage of ECG monitoring on their wearable devices. This new technology gives patients piece of mind and allows them to have more informed conversations with our physicians.



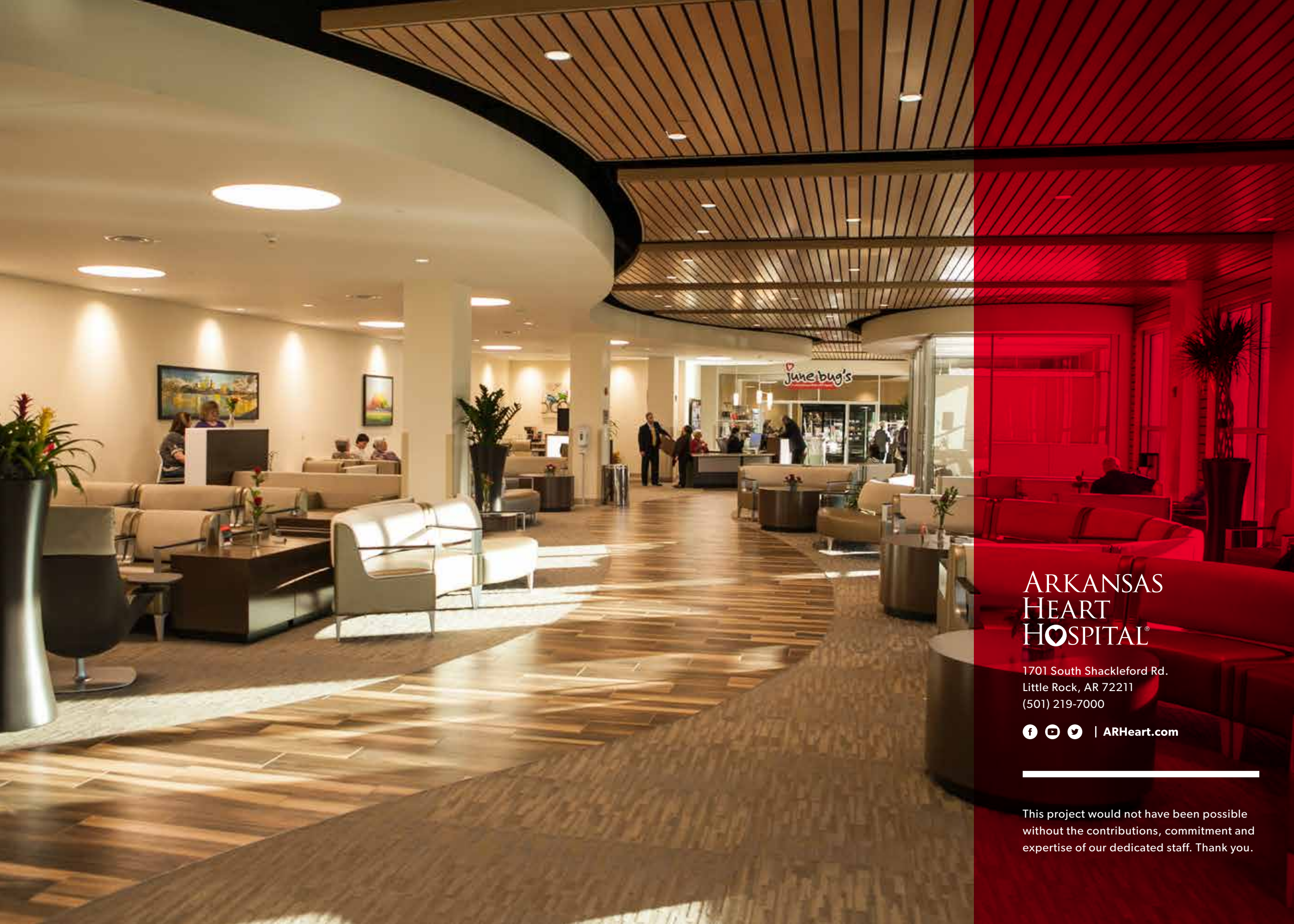
**MICHAEL
HUBER, MD**



TELEMEDICINE HAS BEEN A VERY VALUABLE ASSET TO MY OUTREACH CLINIC IN CROSSETT.


I CAN BETTER SERVE THE PEOPLE OF CROSSETT BY SEEING A TELEMED CLINIC IN ADDITION TO THE TWO CLINICS I HOLD EACH MONTH. MOST PATIENTS ARE QUITE SATISFIED WITH A TELEMED VISIT AS A ROUTINE FOLLOW-UP VISIT, OR FOLLOW-UP VISIT TO GO OVER RESULTS, OR FOR A VISIT FOR A NEW OR WORSENING PROBLEM THAT DEVELOPS IN MY ESTABLISHED PATIENTS. ONE ADVANTAGE OF TELEMED IS THAT THE PATIENT AND I ARE MORE FOCUSED ON EACH OTHER.





ARKANSAS HEART HOSPITAL®

1701 South Shackleford Rd.
Little Rock, AR 72211
(501) 219-7000

   | ARHeart.com

This project would not have been possible without the contributions, commitment and expertise of our dedicated staff. Thank you.



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