FULFILLING OUR DUTY TO SERVE...
...WITH HEART

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The purpose of this book is to provide insight into some of the unexpected tasks that Covid-19 brought, as well as to provide a transparent look into the cardiovascular care provided by The Heart Hospital teams during the pandemic. Cardiovascular disease did not take a holiday during the pandemic and our care providers were required to manage both with safety and compassion. Open heart surgery is heavily scrutinized, and rightly so. But as you will see, The Heart Hospital performed the highest volume of open heart surgeries in North Texas. Many of these patients were predicted to be at high risk, but in fact the mortality rate was much lower than the national average. We report our outcomes based on the January 2020 to December 2020 time frame to allow the reader to follow our progress as medical care has moved in the direction of normal. We are proud and grateful for the dedication to the principles of excellence and humanity exhibited by the BSWH Care Teams during this difficult and unique time.

Mark A. Valentine  
President  
Baylor Scott & White The Heart Hospital – Denton  
Baylor Scott & White The Heart Hospital – McKinney  
Baylor Scott & White The Heart Hospital – Plano

David L. Brown, MD  
President of Medical Staff Affairs  
Baylor Scott & White The Heart Hospital – Denton  
Baylor Scott & White The Heart Hospital – McKinney  
Baylor Scott & White The Heart Hospital – Plano

They and we are thankful for the collaboration of the multi-disciplinary team, including all staff on 6 CUB where these guests were cared for, Respiratory Therapy (RT), Occupational Therapy (OT), Speech Therapy (ST) and those who made up the entire Heart Hospital team that supported this mission, giving their dedication and energy to save these patients in such dire need.

The fight continues.
“I’m a living testament that miracles do happen.”

Joe Bohling

“Joe was on ECMO for 94 days—a record,” says his wife Tammy. “Oh, my gosh. The staff, the team, they were so supportive emotionally. When I was not there, they really helped Joe through it all mentally, emotionally; they kept him motivated.”

“Because they knew how important it was to get him up and doing physical therapy as quickly as possible.”

“I can’t say enough about the team of doctors, nurses, therapists, the whole staff at The Heart Hospital,” says Tammy.

January 2021

The entire Bohling family came down with Covid the weekend of January 23rd,” Tammy says. “Everybody was fine until that Saturday. Then Joe got up and didn’t feel well. His temperature was 104 and we soon found out his oxygen was in the 80s.”

Joe was rushed to a local ER. Tammy admits they never imagined it would be six months before he’d be home again. It was at the other hospital—“a very scary time” says Tammy—when Joe was put on a ventilator. “We read everything. We knew the outcome might not be good.”

“A specialist had worked with the doctors of the hospital where Joe was and together with them decided Joe should come to The Heart Hospital for ECMO.” He told Tammy he believed it was Joe’s best shot.

Joe adds, “What I think is it’s their methodology. I call it multi-dimensional. They truly find a balance between physical, mental, emotional, spiritual, and then how those dimensions react to us. Well, me but also my family. Quite frankly, amazing.”


“It has made what was the most horrible experience of my life really into an opportunity to grow, from a spiritual standpoint in terms of my walk with God and building my faith and then coupled with that faith was the strengthening of my relationships with my wife and family and what’s really important in life.”

“I’m thankful and blessed to be alive.”

Joe Bohling
During the Covid-19 shutdown, we acted only on urgent and emergent cases, setting up a workflow to allow a core group of physicians to handle these cases. This was done for uniform patient care. As one could imagine, the logistics and rules changed frequently. Today, we continue to monitor patient flow with the addition of Covid-19 testing prior to all procedures and more frequent discussions about proper care of patients. Volumes were low but all indications are we will be back to previous volume soon.

“We improved our PCI quality by forming a team that is available 24/7 for second opinions and discussion concerning high-risk cases.”

Srinivasa P. Potluri, M.D.
Medical Director, Invasive Cardiology
SAFETY OF CATHETER-BASED AND OPEN PROCEDURES FOR CORONARY ARTERY DISEASE IS BETTER THAN THE NATIONAL AVERAGES.

THE HEART HOSPITAL ENABLES PATIENTS TO UNDERGO REHABILITATION AT THE SAME FACILITY WHERE THEY HAD THEIR PROCEDURE.

CARDIAC REHAB PHASE 2 VISITS / JAN–DEC 2020

2020 PUBLISHED REPORT / PLANO
Both open heart surgery and catheter-based interventional procedures are used to replace or repair heart valves. The surgeons and interventional cardiologists on our medical staff are experienced with both strategies and work together to choose the best technique for each patient. Because we have experience with all procedures and perform them well, the highest levels of quality and safety have been achieved. We have been recognized by the Society of Thoracic Surgeons with a three star rating in Aortic Valve Replacement and Aortic Valve Replacement combined with bypass grafting. Fewer than 5% of hospitals in America achieve this rating.
OUR SURGEONS ARE FOCUSED ON REPAIRING THE MITRAL VALVE BOTH BY OPEN PROCEDURES AND TRANSCATHETER PROCEDURES WHENEVER POSSIBLE. THIS ACHIEVES CONTINUOUS SUCCESS.

“Our team simply continued to forge ahead following the most recent Covid-19 protocols, thus providing the quality care for our patients despite dire circumstances.”

Bruce Lytle, MD
Chairman of Cardiovascular Strategic Development and Planning for Cardiovascular Medicine and Surgery
Elec\textbf{tive aortic surgeries are extremely safe. However, when an aortic catastrophe dose occur, such as an aortic dissection, the risk increases. At The Heart Hospitals, our safety record shows better than the national average for mortalities regardless of whether the aortic surgery is elective or emergent. In short, with aortic surgery, experience counts.}

\textbf{2020 AORTIC VOLUMES AND MORTALITIES}

\textbf{OPEN VS ENDOVASCULAR REPAIR}

\textbf{AORTIC SURGICAL PROCEDURES / VALVE OR VALVE SPARING}

\textbf{“Whether it’s elective valve sparing aortic root surgery or urgent aortic dissection cases, our team is available 24/7 to deliver innovative care.”}

\textbf{William T. Brinkman, MD}

Medical Director, Thoracic Aortic Surgery
From 2010 - 2018, Baylor Scott & White The Heart Hospital-Plano implanted 31 LVAD devices. In two years, 2019 and 2020, The Heart Hospital implanted 45 devices. With our continued strong commitment, The Heart Hospital believes we will see additional strong growth in the future.

In two years, we have made strides toward becoming one of the largest destination therapy LVAD centers in the country.

We continue to improve outcomes, particularly decreasing length of stay by developing systems for earlier referrals.

We remain an active thought leader in mechanical circulatory support.

**LEADING THE WAY IN LVAD**

**SEVERAL YEARS AGO, WE MADE A CONSCIOUS DECISION TO REINVIGORATE AND GROW OUR LVAD PROGRAM. ALTHOUGH THE HEART HOSPITAL HAS ALWAYS MAINTAINED A PROGRAM, WE RECOGNIZED THE HISTORIC VOLUME WAS INADEQUATE TO PRODUCE THE EXCELLENT OUTCOMES FOR WHICH THE HOSPITAL IS SO WELL KNOWN.**

LVAD (Left Ventricular Assist Device)

1. Control unit
2. Percutaneous lead exiting body
3. LVAD
4. Blood pumped to aorta
5. Battery (backup)
6. Battery

Controller and two batteries are worn outside the body.

Blood is pumped to the aorta and then to the body.
SEVERE CARDIO HEART FAILURE

We ranked as the sixth largest Destination Therapy LVAD Center in the country in 2020 with our strong programs growth. We currently rank as the second largest Destination Therapy LVAD Center in the country (2021). This increase in volume has allowed us to achieve reproducibly excellent outcomes, participate in major research trials, and most importantly, provide exceptional care to patients throughout North Texas.

ADVANCED HEART FAILURE CLINIC VISITS / PLANO 2020

“End stage heart failure remains an under-treated problem. We plan to grow our program in order to meet this need.”

Timothy George, MD
Medical Director, Mechanical Circulatory System

We continue to grow the mechanical circulatory support service line by increasing LVAD volume, expanding our cardiogenic shock program, and growing our heart failure footprint throughout Texas and beyond.
Merinda Mulhollen had about a year left in nursing school. Up until that time, she had always thought she would be a labor and delivery nurse. Then her dad got sick. “He’s as tough as they come,” says Merinda. “Just not the greatest or easiest patient.”

But a patient he was at Baylor Scott & White The Heart Hospital. That’s when Merinda’s new dream began to take shape. She tells us, “I’m over at the heart hospital watching my dad go through his cardiac diagnosis. He’s about to receive a pacemaker along with a defibrillator. Right there, I fell in love with the field. And then I fell in love with this hospital.”

Confirmation came when “not the easiest patient” who had coded twice, been through a major operation and was headed toward a rather long recovery awakened with his first words being, “you gotta work here.” He was so enthralled with The Heart Hospital, he designed his own Baylor Heart Ring, a tribute to his wife’s steadfast determination to see him through this crisis as well as to commemorate Baylor Scott & White The Heart Hospital.

Today, Merinda is one of two LVAD Coordinators here and in charge of an ever-changing roster of guests. And to say she knows it top to bottom is an understatement since she was even a patient once, having had an ablation performed a few years back.

As Merinda says, “I absolutely love it here. Back before I worked here, I would say the nurses here were different, but different in the best way.”

**THEY STILL ARE.**
The worldwide pandemic meant we had to adapt yet get back to business as normal as quickly as possible. Which we did. What we have seen is continued development of the Robotics program with esophageal and foregut cases. Our thoracic Robotics cases increased about 25%. We’re about to launch into a new arena—a robotic platform for bronchoscopy; it’s a new platform, not being used many places, to diagnose and treat pulmonary nodules. We’ve continued to expand our national exposure and finally we’re about to celebrate our 10th anniversary for the Robotics program.

“\textit{It’s been a mutually beneficial experience for us to have people come and train because we can help them develop a program and provide a service that’s really needed elsewhere, but the more complex cases will come back to us.}”

G. Kimble Jett, MD
Medical Director, Thoracic Surgery

\begin{center}
\textbf{VOLUME BREAKDOWN THORACIC SURGERY}
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\begin{tikzpicture}
\pie{233/Open Thoracic, 177/Robotic Thoracic}
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\textbf{MEDIAN LENGTH OF STAY THORACIC (DAYS)}
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Amid the challenges of Covid-19, we maintained a fairly normal volume of patients. What’s more, for most vascular procedures, no mortality occurred. We are still the only center in the region with a formal program like it. As you can imagine, we are constantly taking transfers from other hospitals. Even more gratifying is that our work is being recognized nationally as we are one of only two centers in the U.S. to be awarded with the Vascular Verification Program, an honor bestowed by The Society of Vascular Surgery and American College of Surgeons.

The Society for Vascular Surgery’s Highest Star Rating awarded by VQI

ZERO MORTALITY IN THESE VASCULAR PROCEDURES / PLANO

PULMONARY EMBOLISM RESPONSE TEAM (PERT). THIS IS A MULTIDISCIPLINARY GROUP (INTENSIVISTS, CARDIOLOGISTS, VASCULAR AND CARDIAC SURGEONS) THAT GIVES US THE CAPABILITY OF NOT ONLY ASSESSING PATIENTS BUT OF TREATING THEM IMMEDIATELY AS WELL.
Reggie Cobb

Reggie Cobb and his fiancée, Sally, were to be married the first week of June. The ceremony was going to be on the rooftop of El Fenix restaurant, then off to Hawaii for a honeymoon. Friends and family were committed. It was a go.

A few weeks before the big day, Reggie and Sally enjoy a Saturday of shopping. They get home. They go to sleep. Then.

“Next thing I know, I wake up and there’s paramedics in my room,” says Reggie. Sally adds, “you were writhing in your sleep. Foam coming out of your mouth.”

They head to the ER. Even though there was one closer, Reggie says, “probably the best decision I’ve ever made, we decide to go to The Heart Hospital.” A battery of tests ensues. What was once a heart condition that should be monitored was now a here’s the situation, here’s what we can and should do and it needs to happen, well, immediately.

“Can I still go to Hawaii and get married?” Reggie asked. “A prompt ‘no’ followed.

Instead, two days before he was to be wed, Reggie was getting prepped for bypass surgery. It was during this prep time that Reggie also began to know the The Heart Hospital team. “We’d talk about music, Al Green, how I was supposed to be getting married. Everything. But they were all, well they just made you feel like family.”

So, when a 45-minute window opened up in the almost always-full schedule of The Heart Hospital chapel, Reggie and Sally grabbed it, inviting as many friends and family as possible. Although wheeled down to the chapel, Reggie emphasizes, “I stood for all of it, had a jacket on over my gown. Fluids going into my system. But I stood up.”

“You know your wedding day is emotional anyway. I’m sure there are plenty of photos of me crying. We come back up on the third floor and all the staff, everyone, row after row, like I’d just come back from a war zone and they’re all standing and clapping. I turn the corner and there are more. I get to the room and I’m a puddle. Just a puddle.”

Reggie is currently a very happy husband, continuing his rehab.

“They redecorated the entire room like it’s a tropical island. There’s plastic grass hanging down. There are balloons. It’s like a Hawaiian-themed room. It’s just incredible.”

“Probably the best decision I’ve ever made, we decide to go to The Heart Hospital.”
Trials and investigative studies continued apace of previous years, even showing growth in this admittedly disruptive time. As always, with patient-centric care as our ultimate guide, we pressed on, diligently making progress whether the treatment required specialized medicines, implanted devices, catheter-based procedures—or in some cases a combination of one or more. Perhaps most gratifying, though, is the reputation we have garnered that makes us a sought-after resource in heart rhythm disorders.

“"If there is one word that captured the rapid growth of our excellence in electrophysiology, it’s simply collaboration.””

Brian DeVille, MD
Co-Medical Director, Electrophysiology

Quality and safety have always been the watchwords within the Electrophysiology Laboratory here at The Heart Hospital. Every member of our team strives to uphold high standards by closely monitoring safety metrics, especially in this time of Covid-19. Even during this disruption, we perform our daily reviews of case outcomes with an active electrophysiology physician, allied health professional, and administrative team; meeting regularly to ensure our standards are maintained as always.
“The most up-to-date mapping systems, patient protection devices, ultrasound imaging, catheter ablation tools, and CIED devices are available for our physicians on our medical staff to use for the benefit of our patients.”

Adam R. Shapiro, MD
Medical Director, Electrophysiology
Where we began. Where we continue to grow. Baylor Scott & White The Heart Hospital – Plano has and continues to set the standard for cardiovascular care. What’s more, we constantly strive to exceed that standard—in Plano, in Denton and in our latest location in McKinney. A staff of thousands works tirelessly each and every day so that each of our hospitals is renowned for being a go-to center for cardiovascular needs. Our hospitals offer an ever-expanding roster of new treatments and procedures—among the many key reasons why we are ranked by U.S. News & World Report as the 27th Best in America in Cardiology & Heart Surgery.

LOCATIONS

A world-renowned reputation for quality heart and vascular care, award-winning patient care and a relentless pursuit to expand cardiovascular knowledge to a new generation. One vision. Three locations. We are Baylor Scott & White The Heart Hospital – Plano, Denton and McKinney.

PLANO

STS STAR RATING FY21 – PLANO

Isolated CABG

Isolated AVR

AVR + CABG

MVRR*

MVRR + CABG*

*Combined Category

3 Stars is the Highest Star Rating awarded by The Society of Thoracic Surgeons (STS)

OVERVIEW / CY2020

EXPERTISE IN ALL CARDIOVASCULAR PROCEDURES – PLANO

PROCEDURALLY AND MEDICALLY MANAGED 43,577

29,951 Patient Visits

5,060 Admissions

105 Beds

3,425 – Surgical Procedures

Open Heart Procedures – 1,648

Thoracic – 410

Open Vascular – 1,072

Other – 295

MVRR**

MVRR + CABG**

7,753 – Cardiovascular Procedures

Interventional and Non-Interventional – 5,031

Coronary Diagnostic – 2,564

Coronary Interventional – 1,507

Peripheral Diagnostic – 299

Peripheral Interventional – 543

Structural Heart – 154

Other – 34

Electrophysiology Procedures – 2,722

EP Diagnostic – 125

EP Interventional – 1,062

Pacemaker – 699

Implantable Cardioverter Defibrillator – 406

Other – 430
DENTON

While the North Texas region continues to grow exponentially (even amidst a global pandemic), Baylor Scott & White The Heart Hospital - Denton expands its medical expertise and cardiovascular services as well—in patients treated and procedures completed.

OVERVIEW / CY2020

EXPERTISE IN ALL CARDIOVASCULAR PROCEDURES – DENTON

PROCEDURALLY AND MEDICALLY MANAGED 8,882

3,060 Patient Visits
703 Admissions
22 Beds

406 – Surgical Procedures
Open Heart Procedures – 304
   Thoracic – 26
   Open Vascular – 47
   Other – 29
Open Vascular Surgery – 47
   Thoracic – 26
   Open – 17
   Other – 29

1,571 – Cardiovascular Procedures
Interventional and Non-Interventional – 979
   Coronary Diagnostic – 545
   Coronary Interventional – 337
   Peripheral Diagnostic – 26
   Peripheral Interventional – 49
   Other – 22
Electrophysiology Procedures – 592
   EP Diagnostic – 16
   EP Interventional – 306
   Pacemaker – 155
   Implantable Cardioverter Defibrillator – 57
   Other – 58

STS STAR RATING FY21 – DENTON

Isolated CABG

Isolated AVR

AVR + CABG

3 Stars is the Highest Star Rating awarded by The Society of Thoracic Surgeons (STS)
As you might expect, we at The Heart Hospital have fellowship programs in all aspects of cardiology. Ours are extremely successful in the fact that not only do we have a General Cardiology Fellowship, but we also have matched Interventional Cardiology as well as Advanced Cardiac Imaging and EP to go along with the structural valve program. These new fellowships have been introduced within the last three years, which is almost unheard of because we had them come and do a site visit two years early, so we could indeed add them. Finally, we have installed new Cardiovascular, Thoracic and Vascular Programs with fellows here at The Heart Hospital.

“Even through the disruptions that Covid-19 has caused, our fellows have presented at all the major cardiology programs.”

Molly A. Szerlip, MD
Fellowship Program Director
During one of the most impactful large-scale public health challenges ever, a team of health care professionals stepped up to the task admirably and yes, courageously. The efforts of our nurses throughout this historic pandemic have been nothing short of remarkable. It appears others have noticed as well since The Heart Hospital received the distinction of being in the Top 1% of 100 Safe Care Hospitals of 2021.

We applaud our team.

While certainly Covid-19 presented the occasional impediment, we maintained a robust portfolio of cardiovascular studies and trials. We continued to publish in the major scientific journals as well as presented our findings in conferences and meetings around the globe.

**2020**

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**PLANO PUBLICATIONS**

"It’s rewarding that the work we do, the research and studies we so often initiate, makes its way into better care for patients across the country and truly, around the world."

Michael DiMaio, MD
Medical Director, Residency Fellowship Program, Public Relations and Postgraduate Cardiovascular Training
PHYSICIAN PARTNERS
THORACIC AND CARDIOVASCULAR SURGERY

Tea E. Azouf, MD
Richard T. Brown, MD
William T. Brinkman, MD
Tung H. Cai, MD
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Medical Director, Thoracic Surgery Program, Denton
Medical Director, Inpatient/Outpatient TVAR Services
Medical Director, Thoracic Surgery

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Medical Director, Thoracic Surgery
Medical Director, Biologic Aortic Valve Program
Medical Director, Physician Champion in Patient Safety
Chairman, Cardiovascular Surgical Services

Justin M. Schaffer, MD
Robert L. Smith II, MD
Minh P. Tran, MD
Vice Chairman, Cardiovascular Surgical Services


Fibrillation with Heart Failure and Reduced Ejection Fraction. March 2020 European journal of heart failure.


Packer, M. Do most patients with obesity or type 2 diabetes, and atrial fibrillation, also have undiagnosed heart failure? A critical conceptual framework for understanding mechanisms and improving diagnosis and treatment. February 2020 European journal of heart failure.

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Packer, M. Mitigation of the Adverse Consequences of Nutrient Excess on the Kidney: A Unified Hypothesis to Explain the Renoprotective Effects of Sodium-Glucose Cotransporter 2 Inhibitors. April 2020 American Journal of nephrology.


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DATA SOURCES/APPENDIX

THE NCDR®
An initiative of the American College of Cardiology Foundation®, the National Cardiovascular Data Registry (NCDR) began in 1997 to help healthcare provider groups and institutions respond to increasing requirements to document their processes and outcomes of care in the cath lab setting. Today, the NCDR is the most comprehensive outcomes-based quality improvement program in the United States, encompassing both hospital-based registries and a practice-based program.

FOR HOSPITAL-BASED CARDIOVASCULAR REGISTRIES:

- Chest Pain – MI Registry™
  For acute coronary syndrome patients

- CathPCI Registry®
  For diagnostic cardiac catheterizations and percutaneous coronary interventions

- LAAO (Left Atrial Appendage Occlusion) Registry™
  For implantable cardioverter defibrillators

- STS/ACC TVT Registry™
  For transcatheter aortic valve replacement

THE SOCIETY OF THORACIC SURGEONS (STS) NATIONAL DATABASE

The Society of Thoracic Surgeons is a not-for-profit organization representing more than 5,800 surgeons, researchers and allied health professionals worldwide who are dedicated to ensuring the best possible heart, lung, esophageal and other surgical procedures for the chest. The Society of Thoracic Surgeons offers outcome programs in the areas of adult cardiac, general thoracic and congenital surgery. By committing to collecting outcomes data for the STS National Database, surgeons are helping to improve the quality of care that their cardiothoracic surgery patients receive. Since 1994, more than 40 publications have come from the STS National Database. These studies have been published in a variety of professional journals and textbooks. The STS National Database has recently served as the basis for a federally funded national quality improvement randomized trial, as well as research in targeted areas of cardiac surgery.

PATHWAYS POWERED BY M2S THROUGH VQI

The Vascular Quality Initiative (VQI) is a collaborative of regional quality groups collecting and analyzing data in an effort to improve patient care.