



Quality Report Card

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HEART CARE

Advanced Cardiac Imaging at LMH

Coronary artery disease (CAD) is a common condition that occurs when plaque builds up in the arteries of the heart, reducing blood flow to the heart muscle. CAD is the leading cause of death in the United States and accounts for over 30 percent of fatalities globally each year. People may be asymptomatic in early stages of CAD; however, as plaque continues to build, it causes the arteries to narrow and stiffen, leading to chest pain and shortness of breath. CAD can also weaken the heart muscle over time, which can contribute to heart failure and arrhythmias.

Early identification of CAD is important for reducing the mortality and morbidity of coronary heart disease. Previously, early detection and treatment of CAD was limited due to the decreased sensitivity of older diagnostic methods. In 2022, Licking Memorial Hospital began offering coronary computed tomography angiography (CCTA) and coronary calcium scoring (CCS) services to asymptomatic patients who were at an intermediate or borderline risk for atherosclerotic cardiovascular disease.

Coronary computed tomography angiography (CCTA) is a noninvasive diagnostic test that produces detailed 3-dimensional images of the arteries in the heart to detect abnormalities in blood flow through the heart and to diagnose CAD. Coronary calcium scoring (CCS) is a means of early detection and a visible measure of coronary atherosclerosis. This noninvasive procedure is a quick and convenient way to determine the amount of calcified plaque in the coronary arteries and help

further refine a patient's risk factors for future cardiovascular events.

These tests are recommended for patients who are 45 to 75 years of age and have more than one traditional risk factor for CAD. Risk factors include high blood cholesterol levels, hypertension, tobacco use, age, family history of premature CAD, and – with no known history of CAD – diabetes mellitus (DM) and prior cardiac interventions.

The CCS exam takes an average of 10 minutes to complete and does not require any IV or oral contrast. Patients are instructed to avoid caffeinated products and tobacco for a minimum of four hours prior to the study. During the procedure, the patient is positioned on the exam table of the CT scanner, and electrodes are attached to the patient's chest for electrocardiogram (EKG) monitoring. A non-contrast image of the heart and coronary arteries will be obtained using an EKG-gated protocol, which acquires data during a specific phase of the cardiac cycle, allowing for stop-motion imaging of the heart. The images will be further analyzed using a 3D workstation to determine the presence or absence of coronary calcification and quantification of the coronary calcium using standard scoring methods.

The Licking Memorial Radiology Department provides this service for patients; however, the testing may not be covered by the patient's medical insurance. To ensure those who are concerned about the risk of heart attack or stroke can receive a CT calcium score,

Licking Memorial Health Systems (LMHS) offers a self-pay option. Patients can pay a reduced cost of \$350 for the testing.

The addition of the Licking Memorial Cardiac Electrophysiology (EP) practice expanded access to cardiovascular services within the community. EP studies are tests that evaluate the heart's electrical system to diagnose and treat abnormal heart rhythms, such as atrial fibrillation (AFib) and atrial flutter. Ablation therapy is a new treatment offered at Licking Memorial Hospital (LMH), and Licking Memorial Cardiology recently introduced a cardiac CT service with pulmonary vein study, which uses CT to map a detailed anatomy of the left atrium and pulmonary veins in the heart. The test helps physicians evaluate the structure of these areas before performing ablation procedures. It allows for precise placement of the catheter during the ablation and can assist in assessing the risk of complications during the procedure.

Individuals can reduce their risk for CAD by making healthy lifestyle changes. Choose a heart-healthy diet that is low in saturated fat, salt, and added sugars and high in fruits, vegetables, and whole grains. Exercising regularly, maintaining a healthy weight, reducing stress, and quitting smoking will also help lower the risk of heart attack and heart disease. Medications that control blood pressure and cholesterol can help manage and reduce the risk of CAD. Individuals can discuss concerns about their heart health with their primary care physician who can facilitate a referral to a cardiologist if necessary.

Patient Story



Ronald "Bren" Henderson

Ronald "Bren" Henderson's passion is coaching. In 2022, he was inducted into the Utica Athletic Hall of Fame for his work with the high school baseball team from 2007 to 2019. He was named coach of the year five times, and the team won 193 games and four Mid-Buckeye Conference championships during his tenure. Utica had 10 players earn all-state honors, and 33 players earn all-district honors under Bren's leadership. He now coaches football and baseball at Licking Valley.

At a football camp in the summer of 2024, Bren began experiencing an odd sensation as though his heart had sped up. He was concerned about the issue and made an appointment with his primary care physician. The physician suggested that Bren wear a heart monitor for a time in order to better understand what was happening. After wearing the monitor, he was contacted by Licking Memorial Cardiology. Bren met with Eesha Maiodna, M.D., who explained that the testing revealed a heart rhythm abnormality called an arrhythmia.

"Dr. Maiodna and her nurse, Melissa McMillan, were extremely helpful," Bren said. "While Dr. Maiodna explained my condition, Missy helped me understand and navigate through the electronic health record, MyChart."

A heart arrhythmia is an irregular heartbeat that occurs when the electrical signals are disrupted or change from the normal sequence of electrical impulses. The heart may beat too fast or too slow, or the pattern of the heartbeat may be inconsistent. An

arrhythmia can lead to serious health complications, including heart failure or blood clots that may lead to a stroke. Symptoms include lightheadedness or dizziness, weakness, shortness of breath, or chest pain and discomfort.

During week two of the football season, Bren's arrhythmia became more concerning. His heart was racing and he felt ill. After the game, he went to Licking Memorial Hospital's Emergency Department. He was admitted and kept overnight to monitor his heart. Hassan Rajjoub, M.D., among other LMH cardiologists conferred and spoke with Bren about his choices to correct the arrhythmia including medications or surgery. Bren felt very strongly against taking medication for the rest of his life to control the issue. Dr. Rajjoub explained that Bren was a good candidate for heart ablation, a procedure in which heat or cold energy is utilized to create tiny scars in the heart to block faulty heart signals and restore a typical heartbeat. Since the incident at the football game, Dr. Rajjoub assisted in expediting a meeting with an electrophysiologist.

In August 2024, LMHS added Licking Memorial Cardiac Electrophysiology as a specialty physician practice to expand access to cardiovascular services within the community. Electrophysiologist John J. Keller, M.D., joined the practice, and has been offering a range of procedures, including heart ablations, to Licking County residents. In addition, new equipment was installed at LMH that allows Dr. Keller to perform safer and more efficient heart procedures.

Soon after meeting with Dr. Keller, Bren was scheduled for a heart ablation for an atrial flutter to control his symptoms. An atrial flutter produces a relatively regular, fast heartbeat. The first ablation procedure was performed as outpatient surgery, meaning Bren received the procedure and

was released to go home the same day, a Wednesday. By Friday, he felt well enough to return to work and was able to coach the varsity football game that night.

"Dr. Keller took time to explain everything to me in plain language," Bren shared. "He made it very easy to understand the procedure, the benefits, and the possible side effects. His team also was very involved in the process, and they were kind and supportive."

After his first procedure, Bren continued to experience the arrhythmia and was then diagnosed with atrial fibrillation (AFib). During atrial fibrillation, the heart's upper chambers, called the atria, beat chaotically, irregularly, and out of sync with the lower heart chambers, called the ventricles. On November 20, Dr. Keller and his team performed the first AFib ablation at LMH on Bren. Due to the complexity of the surgery, Bren was kept overnight for monitoring.

"Throughout the process, the LMHS staff including Amanda Betts and Seth Montgomery, were extremely helpful and offered amazing care," Bren expressed. "Everyone from the surgical technicians to the nurses checked on me to see if I was comfortable and treated me very well. My wife, Robin, is a certified surgical technologist, and she too was impressed with my care team and how well the procedure went."

Currently, Bren is still taking medication to assist with his recovery; however, he hopes that after further follow-up visits he will no longer need it. Dr. Keller assured him the procedure was successful, and that after scarring the heart muscle during the procedure that Bren needed to be patient and allow time for healing. He expressed his gratitude to everyone who cared for him and that he is able to continue coaching.

Heart Care – *How do we compare?*

At Licking Memorial Health Systems (LMHS), we take pride in the care we provide. To monitor the quality of that care, we track specific quality measures and compare to benchmark measures. Then, we publish the information so you can draw your own conclusions regarding your healthcare choices.

- 1.** The first step in heart attack treatment is to confirm that the patient is truly experiencing the symptoms of a heart attack upon arrival to the Emergency Department (ED). An electrocardiogram (EKG) measures the electrical activity of the heart and is one diagnostic tool used to determine if a heart attack is occurring. Performing the test promptly is critical.

| | LMH 2021 | LMH 2022 | LMH 2023 | National Average ⁽¹⁾ |
|---|-----------|-----------|-------------|---------------------------------|
| Median time from arrival to completion of EKG | 3 minutes | 2 minutes | 2.5 minutes | 7 minutes |

- 2.** In patients having a heart attack, emergency angioplasty restores blood flow to the heart muscle by re-opening blocked or clogged arteries. This is completed by inserting a catheter into the artery that feeds the heart, inflating a balloon and placing a stent inside the artery to keep it open. This procedure can help reduce damage to the heart muscle, and has the best results when performed within 90 minutes after arriving in the Emergency Department (ED). Licking Memorial Hospital (LMH) began performing this procedure in 2008.

| | LMH 2021 | LMH 2022 | LMH 2023 | National Goal ⁽²⁾ |
|---|------------|------------|------------|------------------------------|
| Average time from arrival until balloon angioplasty performed | 65 minutes | 66 minutes | 66 minutes | 90 minutes |
| Time to balloon within 90 minutes | 98% | 100% | 100% | 95% |

- 3.** Emergency Medical Services (EMS) are often the first to evaluate and treat patients experiencing heart attack symptoms. EMS acquires a baseline EKG to wirelessly transmit to the LMH ED physician for interpretation and early identification, so that the Catheterization Lab team can be alerted quickly. Medical contact to reperfusion refers to the time it takes in minutes from the first medical contact by EMS with a patient experiencing heart attack symptoms, to the opening of the artery to allow blood flow to return to the heart muscle.

| | LMH 2021 | LMH 2022 | LMH 2023 | National Goal ⁽²⁾ |
|--------------------------------|------------|------------|------------|------------------------------|
| Medical contact to reperfusion | 82 minutes | 87 minutes | 72 minutes | Less than 90 minutes |

- 4.** When performing certain heart procedures, such as a catheterization, a cardiologist may choose to access the heart through the radial artery, located in the wrist, or the femoral artery, located in the upper thigh. Transradial artery access improves outcomes and reduces cost. Accessing the radial artery requires advanced skill; however, radial access offers quicker recovery time and decreases the risk of bleeding. LMHS' cardiologists possess the advanced skills needed for the procedure and offer the safer alternative to patients; however, it may not be an option for some patients due to a risk of spasms or the size of the artery.

| | LMH 2021 | LMH 2022 | LMH 2023 | LMH Goal |
|----------------------------------|----------|----------|----------|----------|
| Heart catheterization procedures | 556 | 554 | 539 | |
| Percentage of radial access | 88% | 98% | 99% | 83% |

- 5.** Hospitals report the rate of patients who died within 30 days of being admitted to the hospital for an acute myocardial infarction (AMI) or heart attack to Centers for Medicare & Medicaid Services. The hospital data is risk-adjusted to the complexity of each hospital's patients to calculate a rate as compared to national averages. Lower rates are better. The data reflects a three year period rather than a year-to-year calculation.

| | LMH 2022 (2018-2021) | LMH 2023 (2020-2023) | National Rate ⁽³⁾ |
|---------------------------|----------------------|----------------------|------------------------------|
| AMI 30-day mortality rate | 12.4% | 12.6% | 12.6% |

- 6.** Hospitals also report the rate of patients with AMI who are discharged and then readmitted back into the hospital within 30 days of discharge for any reason to Centers for Medicare & Medicaid Services. The hospital data is risk-adjusted to the complexity of each hospital's patients to calculate the rate of readmission. Lower rates are better. The data reflects a three year period rather than a year-to-year calculation.

| | LMH 2022 (2018-2021) | LMH 2023 (2020-2023) | National Rate ⁽³⁾ |
|-----------------------------|----------------------|----------------------|------------------------------|
| AMI 30-day readmission rate | 15.1% | 13.7% | 13.7% |

7. Licking Memorial Health Professionals (LMHP) physicians monitor the usage of antiplatelet drugs, such as aspirin or an antithrombotic drug, in patients with coronary artery disease (CAD). The usage of these medications lowers the risk of acute myocardial infarction (AMI) or death in patients with CAD.

| | LMHP 2021 | LMHP 2022 | LMHP 2023 | LMHP Goal |
|---|-----------|-----------|-----------|------------------|
| LMHP CAD patients with aspirin and/or antithrombotic prescribed | 90% | 87% | 87% | Greater than 85% |

8. LMHP physicians monitor the cholesterol levels, specifically the LDL (bad cholesterol) levels of their patients with diagnoses of CAD. Elevated LDL cholesterol level is a risk factor for AMI, but is reversible through medication, diet, and exercise.

| | LMHP 2021 | LMHP 2022 | LMHP 2023 | LMHP Goal |
|--|-----------|-----------|-----------|------------------|
| LMHP CAD patients with LDL less than or equal to 100 mg/dl | 61% | 71% | 79% | Greater than 50% |

Data Footnotes: (1) *Hospitalcompare.hhs.gov national benchmarks.* (2) *American Heart Association website* (3) *National Performance from Hospital Compare Preview Report, Q3 2020 – Q2 2023.*

Licking Memorial Cardiology Receives Certifications and Accreditations

Licking Memorial Health Systems’ (LMHS) top priority is to provide high quality patient care and ensure patient safety. Medical certifications and accreditations demonstrate LMHS’ commitment to continuous improvement to maintain a high standard of excellence. Licking Memorial Cardiology received the following recertifications and accreditations in 2024:

- Chest Pain Program Certification from DNV Healthcare

- 20 Years as an Accredited Facility in Echocardiography from the Intersocietal Accreditation Commission
- Certified with the American Association of Cardiovascular and Pulmonary Rehabilitation
- Listed on the American College of Cardiology National Cardiovascular Data Registry for diagnostic catheterization/percutaneous coronary intervention procedures (CathPCI Registry)

- Silver status for American Heart Association Get with the Guidelines in Coronary Artery Disease NSTEMI, with Type 2 Diabetes Honor Roll
- Silver status for American Heart Association Get with the Guidelines in Coronary Artery Disease STEMI Receiving, with Type 2 Diabetes Honor Roll

DNV GL HEALTHCARE

CHEST PAIN
PROGRAM CERTIFICATION



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Please take a few minutes to read this month’s report on **Heart Care**. You will soon discover why Licking Memorial Hospital is measurably different ... for your health!

The Quality Report Card is a publication of the LMHS Public Relations Department. Please contact the Public Relations Department at (220) 564-1572 to receive future mailings.

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