



Quality Report Card

Depression and Heart Disease

The relationship between depression and heart disease has been studied by scientists for many years, and the correlation between the two is complex. However, there is strong evidence that the two conditions can influence each other and contribute to harmful health outcomes. According to the World Health Organization (WHO), 350 million people suffer from depression, and 17.3 million people die of heart disease each year, making heart disease the number one cause of death in the world.

Depression is a common mood disorder that affects how an individual thinks, feels, and behaves. When a person experiences depression, the body undergoes various biological changes, including increased heart rate and blood pressure, reduced blood flow to the heart, and heightened levels of the stress hormone, cortisol. Such changes can damage blood vessels, increase inflammation, and lead to calcium buildup in the arteries, which can contribute to the development of heart disease.

People who have existing mental health disorders are more likely to suffer from depression after they have experienced a heart attack or been diagnosed with heart disease. The emotional toll a person may suffer after a heart attack can include anxiety, depression, and post traumatic stress disorder (PTSD). Survivors may feel fear and uncertainty about their future health and not feel confident about their ability to live and work independently. They also may worry about the impact that their health may have on loved ones and coworkers.

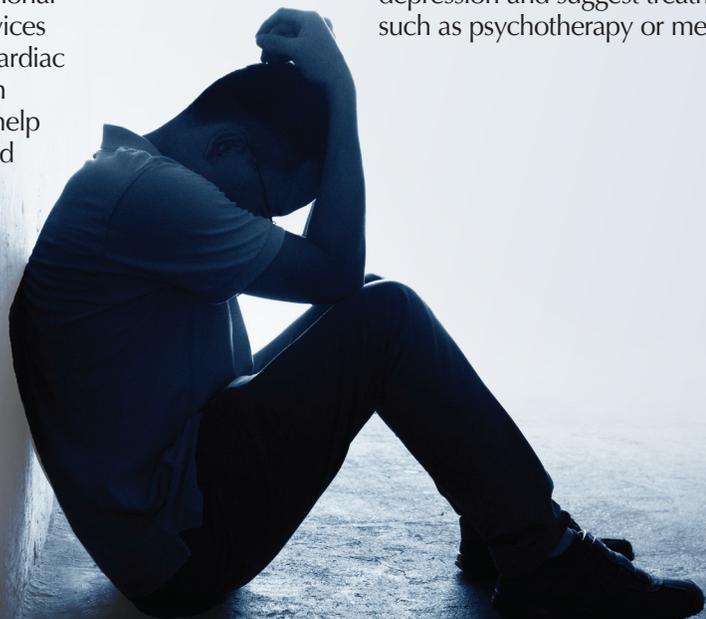
Feelings of sadness, hopelessness, and loss of control may surface due to physical limitations caused by the disease. People may also feel angry or frustrated because of their diagnosis, treatment regimen, or potential loss of independence. These feelings can lead to depression, which can cause people to make unhealthy lifestyle choices, such as not exercising, eating poorly, failing to take prescribed medications, continued smoking, and substance use.

The psychological impact of heart disease varies with each individual, depending on the severity of their condition, coping mechanisms, and social and emotional support. There are numerous resources available to help people who have experienced a heart attack or heart disease, such as cardiac rehabilitation, social groups, and counseling.

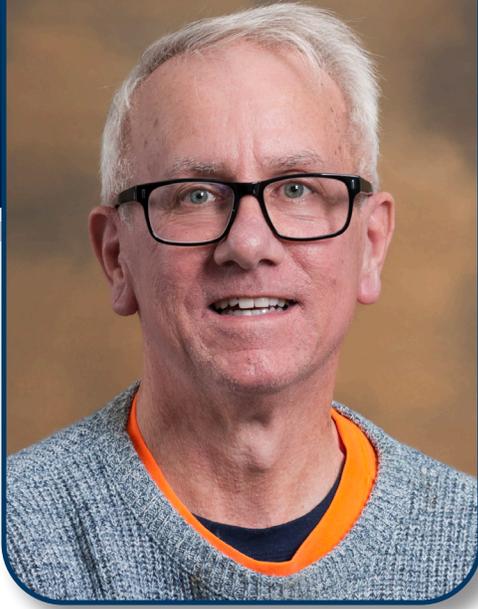
Licking Memorial Cardiac Services provides a cardiac rehabilitation program to help to restore and enhance the physical and

psychological health of a patient following a cardiac event. Patients receive support from their cardiology team while in the Hospital and after discharge. Patients perform various forms of supervised exercise, receive education, and meet with a registered dietitian on how to maintain a healthy lifestyle. Their progress is closely monitored by trained staff throughout their recovery.

Sadness is a normal emotion that everyone experiences at certain events in their life, and people usually feel better after crying, venting, or talking about their frustrations. Sadness can be an indication of depression, and other symptoms may include feelings of hopelessness, a lack of motivation, or a loss of interest in people or activities they used to enjoy. Individuals should seek professional help if symptoms last for more than two weeks. A healthcare provider can diagnose depression and suggest treatment options, such as psychotherapy or medication.



Patient Story – Timothy Welsh



Timothy Welsh was born and raised in Newark and has been working in the grocery business since he was 16. Though he has a family history of heart disease, he believed his job kept him active enough to remain healthy. Unfortunately, Timothy felt a great deal of stress from his job and did not follow healthy eating habits. Earlier this year, Timothy experienced a cardiac event.

A few days before the heart attack, Timothy had been experiencing heartburn. He did not believe the episode was serious enough to be concerned since the sensation subsided and did not return the following day. However, on a Saturday while at work, the heartburn returned. Timothy had worked several hours and was ready to take a break. In addition to the heartburn, he began to feel very hot, unsteady, and confused.

"I felt some pain, but not terrible. I could manage it," Timothy said. "It was the sweaty feeling and haziness that concerned me most. I told the store manager I did not feel well, and he called for an ambulance."

Licking Memorial Health Systems (LMHS) has partnered with local emergency medical services (EMS) for quite sometime to quickly respond to possible heart attack situations. LMHS donates portable electrocardiogram (EKG) machines to the EMS teams. The technicians are able to place the electrodes on the chest while in route to the Hospital or on-site to record the heart's electrical signals, which cause the heart to beat. They can transmit the information to LMHS to be read and determine the condition of the heart.

When the information from the EMS crew is received, the Licking Memorial Hospital Emergency Department determines the type of heart attack, notifies the cardiologist, and sends an alert to the Cardiac Catheterization Team to respond within 30 minutes. Reading the electronic signals, a cardiologist can determine if there is a partial obstruction of blood flow referred to as a non-ST-segment elevation myocardial infarction (NSTEMI) or an ST-segment elevation myocardial infarction (STEMI). An NSTEMI is a milder form of heart attack and accounts for around two-thirds of all cases. A STEMI occurs when ruptured plaque completely blocks a major coronary artery, resulting in heart damage. The team can then prepare the Cardiac Catheterization Laboratory for the necessary procedure to clear the affected artery.

In Tim's case, the EMS crew followed procedure and alerted LMHS of the situation. He was immediately taken to the Cath Lab for a cardiac catheterization. The cardiologist inserts a long, thin, flexible tube called a catheter into a blood vessel and threads it through to the heart. During the examination, the team located two blocked arteries and were able to perform coronary angioplasty to open the clogged arteries and place three stents.

"As soon as the stents were placed and the blood flowing again, I immediately began to feel better," Tim shared. "I was up and walking the next day, and was released Tuesday. The staff was very good to me. They explained what was happening and what needed to be done."

After his release from the Hospital, Tim met with Cardiologist Hassan Rajjoub, M.D. Dr. Rajjoub suggested that Tim visit the Cardiac Rehabilitation Program certified by the American Association of Cardiovascular and Pulmonary Rehabilitation. Tim then met with a Cardiac Rehabilitation nurse to begin developing a plan for recovery. He started

slowly with a safe exercise program to help become stronger and attended weekly education classes. Typically, Cardiac Rehabilitation sessions take place three times a week; however, a customized program is based on the individual's specific needs. During the session, patients exercise using a variety of equipment, are monitored by a nurse and certified exercise physiologist, and have their heart rate and blood pressure checked. A registered dietitian also met with Tim during the program to discuss heart-healthy eating and answer any questions.

"The staff in the rehabilitation program were great and so nice. They knew when to be serious and when to joke to put me at ease," Tim said. "I enjoyed cutting-up with them. They told me what I had to do to keep my heart healthy, and I have taken their advice seriously. I take my medications every day and try to walk or exercise daily as well. Watching my diet has been somewhat challenging, but I am consuming healthy options about 90 percent of the time now, which is better than how I used to eat."

"I am so grateful for our community Hospital. Everyone truly cares about the patients. I even got to reconnect with an old friend from high school, Renardo "Renny" Bare, who works security at the front desk."

Tim will continue to have follow-up visits with Dr. Rajjoub. He is working part-time now and enjoys going to the mall to walk. He looks forward to the spring when he can walk outside instead.

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. An electrocardiogram (EKG) measures the electrical activity of the heart and is one diagnostic tool used to determine if a heart attack is occurring.

	LMH 2020	LMH 2021	LMH 2022	National Average ⁽¹⁾
Median time from arrival to completion of EKG	3 minutes	3 minutes	2 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 2020	LMH 2021	LMH 2022	National Goal ⁽²⁾
Mean time from arrival until balloon angioplasty performed	58 minutes	65 minutes	66 minutes	90 minutes
Time to balloon within 90 minutes	99%	98%	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 back to the heart muscle.

	LMH 2020	LMH 2021	LMH 2022	National Goal ⁽²⁾
Medical contact to reperfusion	78 minutes	82 minutes	87 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 acute coronary syndrome-related 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 2020	LMH 2021	LMH 2022	LMH Goal
Heart catheterization procedures	550	556	554	
Percentage of radial access	91%	88%	98%	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)	National Rate
AMI 30-day mortality rate	12.4%	12.4%

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)	National Rate
AMI 30-day readmission rate	15.1%	15%

7. Licking Memorial Health Professionals (LMHP) physicians also 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 myocardial infarction (MI) or death in patients with CAD.

	LMHP 2020	LMHP 2021	LMHP 2022	LMHP Goal ⁽³⁾
LMHP CAD patients with aspirin and/or antithrombotic prescribed	93%	90%	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 MI, but is reversible through medication, diet and exercise.

	LMHP 2020	LMHP 2021	LMHP 2022	LMHP Goal ⁽³⁾
LMHP CAD patients with LDL less than or equal to 100 mg/dl	84%	61%	71%	Greater than 50%

Data Footnotes: (1) *Hospitalcompare.hhs.gov national benchmarks.* (2) *American Heart Association website* (3) *Benchmark indicates LMHP Goal.*



Call 911 for Heart Attack Symptoms

A heart attack is a life-threatening emergency, and medical attention should be sought immediately when someone is experiencing symptoms. By calling 911, emergency medical services (EMS) providers can begin evaluating, monitoring, and treating the individual upon arrival and transport the patient to the Hospital in the shortest amount of time. EMS is equipped with technology that can transmit an electrocardiogram (EKG) reading to the Emergency Department, allowing the cardiac team to prepare for life-saving interventions before the patient arrives.

Common symptoms of a heart attack include:

- Chest pain or pressure that lasts for more than a few minutes
- Pain in other areas of the body including the arms, back, neck, jaw, or stomach
- Shortness of breath
- Sweating
- Nausea
- Light-headedness

Although chest pain or pressure is a common symptom in both men and women, women are more likely to experience other heart attack symptoms, such as shortness of breath, nausea, and back or jaw pain. Individuals who suspect they are having a heart attack should call 911 immediately. While waiting for help to arrive, remain on the phone and follow any instructions given by the dispatcher. Individuals experiencing heart attack symptoms should never drive themselves to the hospital.



Licking Memorial Health Systems

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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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