



## Licking Memorial Health Systems

1320 West Main Street  
Newark, Ohio 43055

Please take a few minutes to read this month's report on **Heart Care**.

You'll soon discover why Licking Memorial Hospital is measurably different ... for your health!

Visit us at [www.LMHealth.org](http://www.LMHealth.org).

The Quality Report Card is a publication of the LMHS Public Relations Department.

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### Health Tips – Less Common Signs and Symptoms of a Heart Attack

Nearly 1 million Americans have a heart attack each year, and approximately 15 percent will die as a consequence, according to the Centers for Disease Control and Prevention. Patients are much more likely to survive and recover from a heart attack if they receive medical treatment immediately after signs and symptoms begin.

The most common symptom of a heart attack is chest pain or discomfort in the middle or left side of the chest that lasts for more than five minutes. In some cases, the chest pain may stop and come back. All chest pain that lasts longer than five minutes should be checked immediately by a physician.

However, not all heart attack patients have typical symptoms. The National Institutes of Health reports that approximately one-third of women and one-fourth of men who have heart attacks do not experience any chest pain. Some patients, especially women, senior citizens, and patients with diabetes, experience less common signs and symptoms of heart attack, such as:

- Pain in one or both arms, the back, neck, jaw or stomach
- Shortness of breath
- Lightheadedness or dizziness
- Breaking out in a cold sweat
- Heart palpitations
- Weakness or fatigue
- Loss of appetite
- Indigestion
- Nausea/vomiting
- Cough
- Fainting

Anyone who experiences these symptoms and suspects that a heart attack may be occurring is urged to call 9-1-1 for emergency assistance. The emergency medical squad is equipped with life-saving tools to begin evaluation and treatment immediately.

# Heart Care – How do we compare?

Check out  
our Quality  
Report Cards online  
at [www.LMHealth.org](http://www.LMHealth.org).

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 them to benchmark measures. Then, we publish them so you can draw your own conclusions regarding your healthcare choices.

**1** Angiotensin-converting enzyme (ACE) inhibitors reduce the risk for mortality in patients with left ventricular systolic dysfunction (LVSD) after heart attack. LVSD refers to the reduced squeezing ability of the left ventricle that can occur after heart attack. Additionally, the likelihood of the patient having another heart attack can be reduced if an ACE inhibitor is administered.

	LMH 2009	LMH 2010	LMH 2011	National Average <sup>(1)</sup>
ACE/ARB at discharge for LVSD	100%	100%	100%	97%

**2** The first step in heart attack treatment is to confirm that the patient is truly experiencing the symptoms of an attack. An electrocardiogram (EKG) measures the electrical activity of the heart and can determine if a heart attack is occurring.

	LMH 2009	LMH 2010	LMH 2011	National Average <sup>(2)</sup>
Median time from arrival to completion of EKG	4.9 minutes	4.9 minutes	2.5 minutes	7.3 minutes

**3** In patients having a heart attack, emergency angioplasty restores blood flow to the heart muscle by re-opening blocked or clogged arteries. This is done 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. Licking Memorial Hospital began performing this procedure in 2008.

	LMH 2009	LMH 2010	LMH 2011	National Average
Mean time from arrival until balloon angioplasty performed			51 minutes	63.6 minutes <sup>(2)</sup>
Time to balloon within 90 minutes			100%	94% <sup>(1)</sup>

**4** During a heart attack, the heart is severely stressed. Beta blocker medications help decrease this stress by reducing heart rate, blood pressure and the heart's demand for oxygen. Additionally, aspirin has been shown to prevent further blood clotting in heart attack patients.

	LMH 2009	LMH 2010	LMH 2011	National Average <sup>(1)</sup>
Aspirin within 24 hours of patient arrival	100%	100%	99%	99%
Aspirin ordered at hospital discharge	90%	93%	99%	99%
Beta blocker ordered at hospital discharge	100%	100%	100%	99%

**5** Cardiac rehabilitation programs aid people who have experienced heart attacks. LMH's program provides medical oversight and heart monitoring for individuals as they exercise and strengthen their hearts. LMH also measures participants' progress in improving certain indicators of heart health. The following results were reported by cardiac rehabilitation patients.

Health Indicator	LMH 2009	LMH 2010	LMH 2011	Goal <sup>(3)</sup>
Stopped smoking	48%	78%	66%*	greater than 75%
Improved weight	58%	57%	55%*	greater than 75%
Increased exercise time	100%	100%	100%*	100%

\*The cardiac rehabilitation goals are customized for each individual patient. LMH offers nutritional counseling, supervised wellness sessions and an incentive program to reinforce the importance of making healthy lifestyle choices, but it is the individual patient's efforts to attain these goals that achieve the highest rates of success.

**6** The left ventricle is the chamber of the heart that pumps blood out of the heart and into the body. Measuring left ventricular function (LVF) helps determine how well a chronic heart failure (CHF) patient's left ventricle is working.

	LMH 2009	LMH 2010	LMH 2011	National Average <sup>(1)</sup>
LVF assessment completed	99%	99%	99%	99%

**7** Medications beneficial to many heart failure patients include ACE inhibitors, beta-blockers, and angiotensin-receptor blockers (ARBs). ACE inhibitors and ARBs have been shown to lower mortality and improve functional capacity and quality of life. Beta-blockers can reverse or prevent some of the health effects associated with heart failure. Patients treated with beta-blockers may see significant improvement in heart function after three months.

	LMH 2009	LMH 2010	LMH 2011	National Average
CHF patients on ACE or ARB at discharge	99%	94%	97%	96% <sup>(1)</sup>
CHF patients on beta-blockers at discharge	97%	94%	96%	90% <sup>(3)</sup>

**8** It is vital that heart failure patients be involved in their own care to reduce health complications and improve quality of life. They must monitor their weight, limit their salt intake, and take their medications regularly. Healthcare providers need to give thorough discharge instructions to help these patients effectively manage their condition.

	LMH 2009	LMH 2010	LMH 2011	National Average <sup>(1)</sup>
All discharge instructions given	95%	93%	92%	92%

**9** 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 2009	LMHP 2010	LMHP 2011	Goal <sup>(4)</sup>
LMHP CAD patients with aspirin and/or antithrombotic prescribed	90%	92%	93%	greater than 80%

**10** 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 myocardial infarction (MI), but is reversible through medication, diet and exercise.

	LMHP 2009	LMHP 2010	LMHP 2011	National Average <sup>(5)</sup>
LMHP CAD patients with LDL less than or equal to 100 mg/dl	61%	58%	64%	greater than 53%

**Data Footnotes:** (1) *Hospitalcompare.hhs.gov national benchmarks.* (2) *Midas and CPMS Comparative Database, 2011-2012.* (3) *Benchmark indicates LMH Goal.* (4) *Benchmark indicates LMHP Goal.* (5) *National Committee for Quality Assurance, "State of Health Care Quality 2012."*

## Patient Story – Mary Kay Booher

As Mary Kay Booher drifted in and out of consciousness in the Catheterization Lab at Licking Memorial Hospital (LMH), she silently prayed, “Dear Lord, is this going to be ‘it’? I have more things that I would like to do.”

Mary Kay had been dining at a restaurant in Heath with her husband, Gene, earlier that evening in February 2012. She had not been feeling well for a couple of days, but as a busy real estate agent, she attributed her fatigue and aches to her full schedule.

Suddenly, her symptoms worsened, and she knew that she needed to have immediate medical help.

“I told Gene, ‘I do not feel good.’ I cannot explain it, but I felt as though my body were not my own. Gene offered to take me to a hospital in Columbus, but I said, ‘I will not make it that far. This is really serious.’” Gene then decided to take Mary Kay directly to LMH’s Emergency Department.

“As soon as I arrived at LMH, I was in very good hands,” Mary Kay stated. “Dr. Rajjoub (Interventional Cardiologist Hasson Rajjoub, M.D.) was at my side immediately, and I was taken to the Catheterization Lab. I remember just bits and pieces since I was in and out of consciousness,



Mary Kay Booher

but I was aware that Dr. Rajjoub and the staff worked very efficiently as a team. Everyone was very encouraging. At one point, I heard someone say, ‘Mary Kay, there are a lot of people in the waiting room who are here for you. Do not give up now!’”

Mary Kay had suffered a heart attack. She later learned that she “coded” in the Catheterization Lab, and the LMH team skillfully restored her heartbeat with electrical defibrillation.

Mary Kay also later learned that although she never had the traditional warning signs of a heart attack, such as chest pain, her body had been sending her other signals that are less common. “I did not have any chest pain, tightness, or arm pain, but for two weeks prior to the heart attack, I had pain in the back of my neck. I checked my blood pressure, and it was fine, so I just assumed that the neck pain was from bad posture while using the computer,” she reflected. “The symptoms were easy to ignore, but I know now that I should have made a doctor’s appointment much sooner.”

Following her balloon angioplasty, Mary Kay recuperated in the Hospital for four days. “It was amazing,” she recalled. “I felt so awful on Wednesday, so tired on Thursday, and ready

*Patient Story – Mary Kay Booher (continued on next page)*

to go back to work on Friday.” As an additional bonus, Mary Kay discovered that while she was resting on the second floor, her fifth grandchild, a baby girl, was born on the third floor.

After leaving the Hospital, Mary Kay attended the Cardiac Rehabilitation program at LMH. “Dr. Rajjoub stressed how important it was for me to increase my exercise,” she said. “The nurses in Cardiac Rehab were great. They were always compassionate and knowledgeable, and it was reassuring to have monitoring while I regained my strength. I plan to attend the Wellness Center to continue exercising.”

Currently a real estate agent, Mary Kay was a Denison University Summer Theater veteran, one of the founders of Weathervane Playhouse, and she developed the drama program at Newark High School (NHS). She retired as a teacher and director of drama at NHS in 2000. Gene is also a retired NHS teacher and currently is an assistant coach of track at Denison University. The Boothers have lived in Newark since they married in 1965.

Although she is very active in the community, Mary Kay previously believed that a hospital in a bigger city might provide better care. She said, “Now, I tell everyone, ‘Do not bother with going to Columbus for cardiac rehabilitation. It cannot be any better in Columbus than it is at LMH. I also feel so blessed that there is an Interventional Cardiology unit here in Newark. I do not think I would have survived the trip to Columbus during my heart attack.’”

“The important message that I have been telling everyone is that some heart attacks do not have the classic symptoms,” Mary Kay reiterated. “Most people think that a heart attack will cause chest pain, but that is not always true. Anyone who has intense pain in the back or neck should see a doctor right away. I am so grateful to the wonderful staff who saved my life.”

LMH’s Cardiology and Interventional Cardiology Departments are located on the Hospital’s first floor. For more information about available services, please call (740) 348-4189.

## EKGs Transmitted En Route Save Lives at LMH

Immediately after Licking County emergency medical technicians arrive to assist an individual who may be having a life-threatening heart attack, they can send an electrocardiogram (EKG) to the Emergency Department (ED) team at Licking Memorial Hospital (LMH) as an initial assessment to determine if the patient is having a heart attack. The ED staff instantly receives an alert that an EKG is being transmitted, and the ED physician begins to brief a medical team on the patient’s plan of care, based on the EKG’s data.

Interventional Cardiologist Hassan Rajjoub, M.D., explained, “For example, if the EKG suggests that the patient’s coronary artery is blocked, an alert is called, and the STEMI (ST segment elevation myocardial infarction) team begins to prepare for balloon angioplasty prior to the patient’s arrival to the ED. This process allows us to expedite the patient’s care and provide optimal outcomes. Any time that can be reduced from the overall ‘door-to-balloon’ time, even as little as one minute, potentially is saving heart muscle and preserving our patients’ quality of life.”

Dr. Rajjoub added, “We always strongly recommend that anyone who may be having a heart attack should call 9-1-1 for transportation to the nearest Emergency Department instead of arriving by private car. The emergency medical technicians can expedite the diagnostic process by transmitting the EKG, and they can provide life-saving treatment if the patient should go into full cardiac arrest on the way to the hospital.” In 2007, Licking Memorial Health Systems (LMHS) made a \$300,000 investment in the community’s health by purchasing equipment to unify Licking County’s 18 emergency medical departments



Critical heart rhythm information is transmitted to LMH before the patient arrives by emergency medical squad so that the Emergency Department team can prepare for the patient’s arrival.

under a single system for recording and transmitting EKG information to LMH. According to guidelines set by the American Heart Association and the American College of Cardiology, patients’ risk of death can be reduced by 40 percent if they receive balloon angioplasty within 90 minutes of arriving at a hospital.

“Our team carefully studied each step that takes place between the patient’s EKG transmission from the emergency medical squad and the beginning of the balloon angioplasty at LMH to identify

any areas where the timing could be improved,” Dr. Rajjoub said. “Our average door-to-balloon time was reduced to 51 minutes for 2011, which is significantly lower than the national average of 63.6 minutes, and has further dropped to 50 minutes for the first 10 months of 2012.” Also, during the first 10 months of 2012, our ED received more than 1,200 EKGs that were transmitted from emergency medical squads, so our staff members have been operating at a high rate of efficiency. We know that each passing minute may have a strong impact on the patient’s quality of life, based on the extent of damage to the heart, and could even be the difference between life and death in some cases.”

If the patient is determined to be having a heart attack due to arterial blockage, the interventional cardiology team at LMH is often able to use balloon angioplasty and stenting to open and treat the blocked arteries. Balloon angioplasty is minimally invasive and requires less recovery time and a shorter hospital stay.