

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 2012	LMH 2013	LMH 2014	Goal ⁽³⁾
Stopped smoking	68%*	75%*	74%*	greater than 75%
Improved weight	69%*	57%*	68%*	greater than 75%
Increased exercise time	100%*	99%*	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 2012	LMH 2013	LMH 2014	National Average ⁽¹⁾
LVF assessment completed	100%	100%	100%	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 2012	LMH 2013	LMH 2014	National Average ⁽¹⁾
CHF patients on ACE or ARB at discharge	100%	99%	98%	97%

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 2012	LMH 2013	LMH 2014	National Average ⁽¹⁾
All discharge instructions given	98%	98%	99%	94%

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 2012	LMHP 2013	LMHP 2014	LMHP Goal ⁽³⁾
LMHP CAD patients with aspirin and/or antithrombotic prescribed	93%	93%	92%	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 MI, but is reversible through medication, diet and exercise.

	LMHP 2012	LMHP 2013	LMHP 2014	LMHP Goal ⁽⁴⁾
LMHP CAD patients with LDL less than or equal to 100 mg/dl	66%	67%	68%	greater than 53%

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



Visit us at www.LMHealth.org.

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!

The Quality Report Card is a publication of the LMHS Public Relations Department. Please contact the Public Relations Department at (740) 348-1572 to receive future mailings.

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Quality Report Card

Licking Memorial Health Systems

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HEART CARE

CPR Could Save the Life of Someone You Love

The American Heart Association (AHA) advises that everyone should learn basic cardiopulmonary resuscitation (CPR). CPR is most effective when initiated immediately after cardiac arrest occurs; however, studies have shown that many individuals hesitate to attempt CPR because they are unsure of the technique, or afraid of causing injury to the victim. The AHA assures no serious injury will result from attempting CPR, and furthermore – without CPR (even CPR that is incorrectly performed), the victim will most likely die within a few minutes.

CPR should be performed on an individual who:

- Is unconscious and does not respond to taps on the shoulder
- Is not breathing, or does not have a heart beat

The AHA used to recommend a combination of chest compressions and rescue breaths for CPR; however, studies have shown that "hands-only" CPR is just as effective for adults and teens and may remove obstacles for those who are reluctant to perform mouth-to-mouth breathing, especially on a stranger. Hands-only CPR has just two main steps to remember: call 911, and with one hand locked on top of the other, press hard and quickly on the middle of the victim's chest.

The American Red Cross offers CPR instruction. For more information about CPR classes, call 1-800-RedCross, or visit online at www.redcross.org to register.



Health Tips – Hands-Only CPR: Two Easy Steps That Can Save a Life

When individuals experience a heart attack in a location that is not a hospital, 90 percent of them will die, according to the American Heart Association. The reason for this high mortality rate is that all too often, no action is taken to circulate the victims' blood until the emergency medical squad arrives. Many lives could be saved if cardiopulmonary resuscitation (CPR) is initiated immediately by someone who is already on the scene.

Studies have shown that hands-only CPR is just as effective in saving teen and adult heart attack victims as conventional compression-and-breaths CPR that was taught in past decades. Hands-only CPR requires only two simple steps:

Step 1 – Call 911 (or send someone else to call 911 while you begin CPR).

Step 2 – With the victim lying on his/her back, push hard and fast (a minimum of 100 beats per minute) in the center of the chest.

Important note

Even if you are unsure how to perform CPR, any attempt you make to circulate oxygenated blood is preferable to taking no action. Immediate CPR doubles or triples the victim's chances of survival.

Measurably Different ... for Your Health!

Patient Story – Jim Abbott



Jim Abbott (front) is attended by (left to right) Anita Nethers, Terri McConnell and Marilyn Klingler in LMH's Cardiology Rehabilitation Center.

stops when you're in that moment, and someone is dying in front of you."

The Newark EMS arrived in less than six minutes after the 911 call. The paramedics found that Jim had resumed breathing on his own, but his heart began to beat erratically, and his breathing stopped again. The medics used their automated external defibrillator (AED) to deliver three shocks to bring Jim's heart beat back into synchronization, and Jim's breathing resumed. The medics loaded him into the ambulance and drove immediately to Licking Memorial Hospital (LMH), already transmitting Jim's heart rhythm and other vital signs to the Hospital via a 12-lead electrocardiogram (EKG) system.

By the time that Jim, still unconscious, was guided through LMH's Emergency Department doors, his heart blockage already had been diagnosed, and the Catheterization Lab team was ready to perform a life-saving procedure. Three of Jim's coronary arteries were 100 percent blocked, and a fourth one was 50 percent blocked. Interventional Cardiologist Hassan Rajjoub, M.D., inserted an intra-aortic balloon pump in a minimally invasive procedure to assist in the blood flow to the heart.

Jim's wife, Vickie, arrived at LMH, and Dr. Rajjoub explained everything that had happened. Dr. Rajjoub told Vickie that Jim was stabilized and needed to be transported to Columbus for open heart surgery. A MedFlight helicopter landed outside the Emergency Department, and Jim was flown to Riverside Methodist Hospital.

At Riverside, Jim remained under a medically induced coma for several days. He recalled, "When I woke up, I looked around and saw the monitor beside my bed. The date on it read 'July 6.' My first thought was 'Damn, I missed the Fourth of July!' Then I looked at my wife and asked, 'What happened, and where am I?'"

On July 10, Jim underwent quadruple bypass surgery at Riverside. The surgery was successful, and he was discharged to go home on July 14. Five weeks later, he

was able to return to light duty at work and was cleared to begin cardiac rehabilitation at LMH.

LMH's Cardiac Rehabilitation program allows patients who have experienced a cardiac event to exercise at their own pace while under constant heart monitoring. Trained staff members are present to track the readings for signs of cardiac stress.

"Cardiac Rehab is great, first of all, because of the great staff," Jim said. "They encourage you to work hard, but you don't know you're working hard because they make it fun. I felt more confident about exercising while I was hooked up to the EKG, and the staff was nearby. They would not let something bad happen to me. I felt so much better after going through the program."

Jim has made important lifestyle changes since his sudden cardiac arrest. "I watch my diet and walk two miles every other day. I also gave up smoking. They threw away my cigarettes in the Cath Lab, and I haven't had one since," he said.

By the end of November, Jim had celebrated his 53rd birthday, graduated from Cardiac Rehabilitation, and started a new season of refereeing high school basketball. He feels fortunate that many individuals were in the right place at the right time with the skills to keep him alive. "CPR made all the difference for me – I would not be alive without it. In fact, my boss at work made everyone in my department become CPR certified. Even I am CPR certified now," Jim said. "Also, I am so grateful that Dr. Rajjoub and the Cath Lab team at LMH had such advanced knowledge and skills. I undoubtedly would not have lived long enough to make it to Columbus if I had not been taken to LMH first."

According to the American Heart Association, 90 percent of sudden cardiac arrests that occur outside of a hospital setting result in death. In an effort to improve this grim mortality rate, Licking Memorial Health Systems (LMHS) has constructed a network of life-saving measures throughout the community.

In 2007, the Health Systems invested more than \$300,000 to provide Licking County's EMS vehicles with 12-lead EKG systems and cardiac monitoring devices that transmit recordings directly to LMH's Emergency Department. LMHS spent \$50,000 to update the equipment in 2009, and more than \$600,000 for a more extensive upgrade in 2014. In 2008, LMHS donated approximately \$155,000 for AED equipment and training for law enforcement departments and schools. That same year, LMHS added free EKG testing to the pre-participation sports screening program to reduce the risk of sudden cardiac deaths

among the county's high school and middle school students during strenuous school activities.

Captain Brandon Metzger, EMS Officer for the Newark Division of Fire, said that these measures are helping to protect residents on a daily basis. "LMHS' donations absolutely have saved lives in our community," Captain Metzger stated. "We are using the 12-lead EKG systems and cardiac monitoring devices many times every day. These devices are the standard of care, but not all EMS departments in Ohio are able to purchase them. We are extremely fortunate that LMHS enabled us to obtain them."

LMHS consistently surpasses the American Heart Association (AHA) standards for care of patients who have suffered a cardiac event. In 2015, the AHA awarded LMH the Mission: Lifeline Receiving Center Gold Level Recognition Award for exceptional care of heart attack patients. In addition, LMH received the Platinum Performance Achievement Award through the American College of Cardiology – National Cardiovascular Data Registry for sustaining performance measure scores of 90 percent or more in the treatment of heart attack patients.

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 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 a heart attack. LVSD refers to the reduced squeezing ability of the left ventricle that can occur after a heart attack. Additionally, the likelihood of the patient having another heart attack can be reduced if an ACE inhibitor is administered.

	LMH 2012	LMH 2013	LMH 2014	National Average ⁽¹⁾
ACE/ARB at discharge for LVSD	100%	100%	98%	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 2012	LMH 2013	LMH 2014	National Average ⁽¹⁾
Median time from arrival to completion of EKG	3.0 minutes	2.0 minutes	1.0 minute	7.0 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 (LMH) began performing this procedure in 2008.

	LMH 2012	LMH 2013	LMH 2014	LMH Goal
Mean time from arrival until balloon angioplasty performed	56 minutes	55 minutes	58 minutes	61 minutes ⁽²⁾
Time to balloon within 90 minutes	96%	98%	100%	96% ⁽¹⁾

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 2012	LMH 2013	LMH 2014	National Average ⁽²⁾
Aspirin within 24 hours of patient arrival	100%	100%	100%	100%
Aspirin ordered at hospital discharge	99%	99%	99%	99% ⁽¹⁾
Beta blocker ordered at hospital discharge	99%	100%	99%	100% ⁽²⁾

Heart Care – How do we compare? (continued on back)



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