



Licking Memorial Health Systems

1320 West Main Street
Newark, Ohio 43055

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

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

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Health Tips – Reducing Your Risk of Stroke

Although some strokes are caused by modifiable factors, others result from poorly managed medical conditions and unhealthy lifestyle choices. Good management of chronic medical conditions and lifestyle modifications will reduce your risk of stroke. The National Stroke Association offers these tips to help you reduce your risk of stroke at any age:

1. Know your blood pressure.
2. Find out whether you have atrial fibrillation.
3. If you smoke, stop.
4. Find out if you have high cholesterol.
5. If you have diabetes, follow recommendations to control your blood sugar levels.
6. Include exercise in your daily routine.
7. Enjoy a lower-sodium, lower-fat diet.

Act FAST and call 9-1-1 immediately at any sign of a stroke!

F FACE: Ask the person to smile. Does one side of the face droop?

A ARMS: Ask the person to raise both arms. Does one arm drift downward?

S SPEECH: Ask the person to repeat a simple phrase. Is their speech slurred or strange?

T TIME: If you observe any of these signs, call 9-1-1 immediately!

Stroke 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.

Check out
our Quality
Report Cards online
at www.LMHealth.org.

1 A person who has symptoms of a stroke needs to seek medical attention immediately. Special “clot-busting” medications may be used to treat a stroke if administered soon after the onset of symptoms. Clot-busters are high-risk medications and can have significant side effects, so a complete evaluation is necessary before a patient can be determined to be a candidate for them.

Although the American Heart Association/American Stroke Association recommendations have expanded to allow for clot-busting medications to be used up to 4.5 hours after the onset of stroke symptoms, the drugs are most effective when given within three hours after symptoms first appear. Licking Memorial Hospital (LMH) tracks the percentage of patients who were appropriate candidates for clot-busters and received them within three hours of the time their symptoms began.

	LMH 2009	LMH 2010	LMH 2011	National ⁽¹⁾
Received drug within three hours of time last known to be well	67%	91%	83%	57%

2 Patients who suffer a stroke may be at risk for repeat strokes in the future. It is important that while patients are hospitalized, they receive education about reducing their risk and responding to another stroke in the future. This indicator shows the percentage of patients who had this education noted in their records as being completed.

	LMH 2009	LMH 2010	LMH 2011	National ⁽¹⁾
Stroke education	73%	90%	95%	72%

3 Beginning rehabilitation as soon as it can be done safely can help improve recovery for stroke patients. Rehabilitation may include physical therapy, occupational therapy and/or speech therapy.

	LMH 2009	LMH 2010	LMH 2011	National ⁽¹⁾
Patients evaluated for rehabilitation services	92%	88%	97%	95%

4 Evidence-based medicine supports quality by giving a blood-thinning medication (such as aspirin) by the second day of hospitalization after a stroke and ordering the medication at discharge. Blood-thinning medication prevents clots from forming and improves blood flow. While nearly all LMH medical patients are evaluated upon admission for the risk of developing a blood clot, called a venous thromboembolism (VTE), in some cases the use of drugs or mechanical devices, may not be appropriate. It is important to document the reason that the use of either drugs or mechanical devices is contraindicated.

	LMH 2009	LMH 2010	LMH 2011	National ⁽¹⁾
Eligible patients receiving blood-thinning medication	99%	97%	98%	97%
Patients with blood-thinning medication at discharge	99%	99%	99%	98%
Patients with VTE prophylaxis by second day	86%	90%	99%	87%

5 Patients with atrial fibrillation are at higher risk for suffering strokes. Due to an inefficient heartbeat, blood clots can form in the heart and then travel to the brain, leading to stroke. These patients should receive long-term blood-thinning medication to help prevent these clots from forming. LMH tracks the percentage of patients with atrial fibrillation who were discharged on a blood-thinner, as appropriate.

Another significant cause of strokes can be from high cholesterol levels. Stroke patients with high cholesterol should receive cholesterol-lowering medications (called statins) to take after discharge to help lower the risk for more strokes. LMH tracks the percentage of stroke patients with high cholesterol who were receiving statins at discharge.

	LMH 2009	LMH 2010	LMH 2011	National ⁽¹⁾
Atrial fibrillation patients on anticoagulation therapy	93%	100%	100%	93%
Patients with statin medication	93%	91%	97%	89%

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Licking Memorial Health Professionals (LMHP) office-based physicians use evidence-based measures in order to provide excellent, quality care to patients. The American Stroke Association and American Heart Association recommend the use of blood-thinning medication in order to prevent clots from forming and to improve blood flow. It is also recommended to have an annual LDL cholesterol test.

	LMHP 2009	LMHP 2010	LMHP 2011	National ⁽²⁾	Goal
LMHP coronary artery disease patients seen, and are receiving blood-thinning medication	90%	92%	93%	greater than 80%	greater than 90%
LMHP coronary artery disease patients seen who have had an annual LDL test	87%	91%	92%	greater than 80%	greater than 90%

Data Footnotes: (1) Comparative data from the Midas Comparative Database. (2) American Heart Association/American Stroke Association/National Committee for Quality Assurance Heart/Stroke Recognition Program.

Patient Story – Sandra McKnight

On January 30, 2012, Sandra McKnight of Granville knew that something was wrong as she watched a soft drink spill onto her kitchen counter top. She was trying to pour the beverage from an aluminum can into a glass, but her hand was shaking so much that she could not control the liquid flow. Next, Sandra tried to walk down the hallway to her bathroom, but she stumbled over her own leg.

“My left foot was turned outward – almost sideways,” Sandra remembered. “At that point, I told my husband, Larry, that I was having a stroke. However, I was not 100 percent sure, so I did not go to the hospital right away.”

Two days after her symptoms began, Sandra asked Larry to take her to the Emergency Department at Licking Memorial Hospital (LMH). Emergency Medicine Physician Scott D. Jolly, D.O., ordered a CT scan that confirmed Sandra had suffered a stroke, and she was admitted to the intensive care unit. Neurologist Linquan Sun, M.D., was called in to lead her care, and after reviewing results of an ultrasound of the carotid arteries and MRI of the brain, he was able to determine that the stroke had occurred in the right thalamus – the area of the brain that relays motor and sensory functions. The tests also revealed that Sandra had significant blockages in both carotid arteries. She was placed on a new medication regimen that included aspirin, Zocor and Norvasc.

Shortly after being dismissed from LMH, Sandra visited General/Vascular Surgeon David R. Lawrence, D.O., of Surgical Interventions, L.L.C., for a follow-up consultation. Dr. Lawrence recommended that she have surgery to remove the blockages in her carotid arteries to reduce her risk of future strokes. He performed surgery on her right carotid artery in March and her left carotid artery in April.

“At first, I was a little skeptical about having the surgeries at LMH,” Sandra said. “I wanted to go to a hospital that was a little bigger. But then I talked with my husband and daughter. They were going to be with me, and it just made sense to have the surgeries at LMH so we could avoid the traffic and crowds.

I am so glad that we decided to stay close to home. The staff at LMH was so friendly, polite and courteous – they were just terrific!”

Sandra still has some residual symptoms of her stroke, including weakness in her left leg, and numbness in her neck and face, but she is noticing gradual improvement. “If I had it to do over, I would take a couple of aspirin and come to LMH much more quickly,” she said. “Several staff members made a point of educating me that I might have been able to avoid any long-term effects if I had come to the Hospital immediately when I first noticed the symptoms.”

According to Dr. Sun, Sandra’s experience illustrates why stroke awareness is so important in our community. “Fortunately, Sandra survived her stroke with mild residual symptoms, but she took an unnecessary risk by waiting before she sought help,” he said. “Patients cite different reasons for not coming to the Emergency Department at the first sign of stroke. Some say they fear being embarrassed by a ‘false alarm.’ Others say they wanted to wait and see if their symptoms improved on their own. However, a stroke is a serious event that could lead to death and permanent functional impairment, and it is important for a physician to examine anyone immediately when a stroke may be occurring. We have very effective ‘clot-busting’ drugs that can be administered to stop certain kinds of strokes, but those drugs can be used only if the patient arrives at the Emergency Department quickly enough to receive the drugs within 3 hours after symptoms begin. A stroke kills 2 million brain cells every minute, so fast action is needed to save the patient’s life and minimize permanent disability.”

Dr. Sun practices at Licking Memorial Neurology, located at 1272 W. Main Street, Building 2, in Newark. New patients are welcome, and appointments can be made by calling (740) 348-7985.

Recognizing Risk Factors for Stroke

As the third leading cause of death in the United States behind heart disease and cancer, stroke remains a major healthcare problem. It is also the nation's leading cause of functional impairments. In Licking County, stroke is the fifth leading cause of death, according to a report published by the Ohio Department of Health in 2008.

There are two types of stroke – an ischemic stroke (about 90 percent of all strokes) which occurs when a blood vessel to the brain is blocked by a blood clot, and a hemorrhagic stroke (about 10 percent of all strokes) which occurs when a blood vessel to the brain ruptures. In either case, if the blood flow to the brain is disrupted for more than a few minutes, brain tissue begins to die at the rate of 2 million cells per minute. The damage can be debilitating, both physically and emotionally, and can even be fatal.

There are two types of risk factors for stroke, non-modifiable and modifiable. Risk factors for stroke that cannot be modified include:

- Age – The risk doubles every 10 years after 55 years.
- Gender – Men are at higher risk than women up to the age of 75 years.
- Race – African Americans have twice the risk than Caucasians, Hispanics, and Asian/Pacific Americans.
- Family history – If any blood relative in your family has had a stroke, your risk is elevated.

“Despite the advent of treatment of selected patients with acute ischemic stroke with intravenous tissue-type plasminogen activator and the promise of other acute therapies, effective prevention remains the best approach for reducing the burden of stroke,” stated Linquan Sun, M.D., of Licking Memorial Neurology. “The important thing is to prevent stroke.”

Several leading risk factors for stroke can be modified or controlled by the patient to a large extent. They include:

- Tobacco use
- Alcohol use
- Obesity
- Atrial fibrillation
- High blood pressure
- Diabetes
- High cholesterol

“Smoking, alcohol consumption and obesity, are considered to be lifestyle risk factors, and are under the patient's control,” Dr. Sun explained. “Separately, they significantly increase an individual's risk for stroke, and in combination with other risk factors, they create a dangerous scenario in which a stroke is more likely.”



Linquan Sun, M.D., of Licking Memorial Neurology, uses high-tech imaging to diagnose and treat stroke.

Some disorders, such as high blood pressure, high cholesterol and diabetes, are main risk factors that can lead to a stroke.

“These conditions are controllable or modifiable since they usually can be well managed by a combination of diet, medication and exercise,” Dr. Sun explained.

An irregular heart rhythm, called atrial fibrillation (A fib) also has been identified as a major risk factor for stroke. A fib may allow blood to pool in the heart's chambers. Blood clots may form and travel from the heart to the brain, causing a devastating stroke. Patients with untreated A fib have five times the risk of suffering a stroke.

Common symptoms of a stroke include:

- Sudden numbness or weakness of face, arm or leg, especially on one side of the body
- Sudden confusion, trouble speaking or understanding
- Sudden trouble seeing in one or both eyes
- Sudden trouble walking, dizziness, or loss of balance or coordination
- Sudden severe headache with no known cause

Patients are urged to call 9-1-1 immediately if they have any of the above symptoms of stroke. In many cases, “clot-busting” thrombolytic medications can be used to prevent the stroke's progress in order to preserve brain tissue and provide a better outcome. However, the clot-busting medications must be initiated within three hours after any symptoms first begin. Patients are strongly encouraged to err on the side of caution and seek immediate help.