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Please take a few minutes to read this month's Report on **Stroke Care**.  
You'll soon discover why Licking Memorial Hospital is measurably different ... for your health!

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# Stroke Care ...

a community report on patient care quality.

## HEALTH FACTS

Everyone has some stroke risks. A few stroke risk factors are beyond your control, such as being over age 55, being a male, being an African-American, having diabetes, and having a family history of stroke. If you have one of these risk factors, it is even more important that you learn about the lifestyle and medical changes you can make to prevent a stroke.

Medical stroke risk factors include: Previous stroke, previous episode of transient ischemic attack or TIA, high cholesterol, high blood pressure, heart disease, atrial fibrillation and carotid artery disease. These medical risk factors can be controlled.

Lifestyle stroke risk factors include: Smoking, being overweight and drinking too much alcohol. You can control these lifestyle risk factors by quitting smoking, exercising regularly, watching what and how much you eat and limiting alcohol consumption.



# Stroke Care

# How Do WE COMPARE?

Licking Memorial Hospital, 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 health care choices.

**1** A person who has symptoms of a stroke needs to seek emergency medical care immediately. A thrombolytic, or “clot-busting,” drug must be given within three hours after the initial onset of symptoms. Much like a heart attack, in which “time is muscle,” with a stroke, “time is brain cells.” To determine if a patient is a candidate for a thrombolytic drug, it is vital that a CT scan be performed before the drug is given. Therefore, Licking Memorial Hospital (LMH) tracks both the time from “door to CT scan” and from “door to drug.”

	LMH 2002	LMH 2003	LMH 2004	LMH Goal <sup>(1)</sup>
Median time from door to doctor	20 minutes	16 minutes	18 minutes	less than 10 minutes
Median time from door to CT scan	53 minutes	50 minutes	60 minutes	less than 25 minutes
Median time from door to drug	62 minutes	84 minutes	66 minutes	less than 60 minutes

**2** A follow-up CT scan or MRI scan while a patient is hospitalized can help determine if the stroke has progressed (become worse).

	LMH 2002	LMH 2003	LMH 2004	Benchmark <sup>(2)</sup>
% Received follow-up CT/MRI during hospitalization	87%	86%	90%	97%

**3** Since a stroke can affect a person’s ability to swallow, stroke patients should receive a swallowing evaluation to make sure they can swallow well enough to eat or take oral medication.

	LMH 2002	LMH 2003	LMH 2004	Benchmark <sup>(2)</sup>
% Received a swallowing evaluation before eating	83%	80%	74%	45%

**4** Beginning rehabilitation as soon as it can be done safely can help improve recovery for stroke patients. Therefore, it is important that physicians order appropriate rehabilitation for these patients quickly. Rehabilitation may include physical therapy, occupational therapy and/or speech therapy.

	LMH 2002	LMH 2003	LMH 2004	LMH Goal
% Received appropriate therapy	87%	91%	99%	100%

**5** LMH uses a clinical practice guideline to make sure stroke patients receive all care appropriate for their condition. One quality measure on the guideline is the prescription of a blood-thinning medication by the second day of hospitalization after a stroke and another is the prescription of the medication at discharge. Blood-thinning medication prevents clots from forming and improves blood flow.

	LMH 2002	LMH 2003	LMH 2004	Benchmark <sup>(2)</sup>
% Eligible patient receiving blood-thinning medication	97%	96%	100%	93%
% With blood-thinning medication at discharge	95%	99%	96%	91%

**6** LMH tracks how often standard orders are used by physicians in the treatment of stroke. Although physicians evaluate and treat each patient individually, following standard orders for a specific disease helps ensure that physicians provide appropriate care for that disease.

	LMH 2002	LMH 2003	LMH 2004	LMH Goal
Standard orders used by physician	89%	82%	87%	greater than 95%

**7** It is often beneficial for a stroke patient to have a consultation with a neurologist to confirm the diagnosis because many other diseases can mimic a stroke. These include seizures with paralysis, confusion, muscle disease, and peripheral nerve injuries. Neurologists also have unique training and experience in neurological diseases and can offer stroke patients comprehensive care that is tailored to their specific needs.

	LMH 2003	LMH 2004	LMH Goal
% Received a neurology consult	95%	93%	greater than 75%

## Data Footnotes:

(1) Institute for Clinical Systems Improvement. Diagnosis and Initial Treatment of Ischemic Stroke; 2003 Oct., 65 p (2) Most recent benchmark from VHA Central Key Clinical Indicator Project.

# A Patient's Story



It was a typical nice day in March 2004, Marilyn Bragg and her daughter were going to the bank and the grocery store. On her way to the bank, Marilyn's left arm went numb. "I didn't really think too much about it," said Marilyn. Then, while in the grocery store, her arm went numb again; she finished her

shopping before returning home. "While my daughter was driving home, I began to feel worse," said Marilyn. When she arrived home, Marilyn couldn't get out of the car. When her son came outside to help her, "he thought I was having a heart attack and got me to the Hospital," said Marilyn. Even though Marilyn had had two previous light strokes, she didn't realize that she was having a stroke.

Her symptoms were very subtle – numbness in her left arm. Other symptoms of a stroke may include: loss of vision, loss of speech or difficulty talking or understanding what others are saying, sudden or severe headache, or loss of balance or unstable walking. If any of these symptoms come on suddenly – it is a possible sign of a stroke and immediate medical attention is needed.

"Immediate medical attention can make all the difference to someone showing signs of a stroke," said Rhonda Maddern, R.N., Director of Acute Nursing. Upon arriving at Licking Memorial Hospital (LMH), Marilyn was quickly assessed in the Emergency Room. Within three hours, she was given tPA (tissue plasminogen activator). "Research has shown that when a patient, who is eligible, is given a clot-busting drug, like tPA, they can have significant improvement of symptoms," said Rhonda.

## Stroke Awareness

Every 45 seconds, someone in America has a stroke. According to the American Heart Association, more than 700,000 Americans will have a stroke this year, and more than 167,000 will die from a stroke. Stroke is our nation's number three killer and a leading cause of severe, long-term disability. The American Stroke Association spends more on stroke-related research and stroke-related programs than any other not-for-profit organization, second only to the federal government.

Learning to recognize the warning signs and acting quickly when they occur can mean the difference in surviving a stroke and minimizing long-term disability, or being physically and mentally devastated or dying from it. Let people know you love them by sharing this important information.

### Symptoms of a stroke, include:

- Sudden numbness or weakness of the face, arm or leg, especially on one side of the body

"But time is crucial with tPA; the drug should be given within three hours of the first signs of stroke." TPA can significantly reduce a stroke's side effects, which include permanent disability.

After being assessed in the Emergency Room and administered the tPA drug, Marilyn was admitted to the Hospital for observation and further testing. According to Rhonda, "In Marilyn's case, she experienced dramatic recovery of her symptoms after being given tPA," said Rhonda. "I was in the Hospital less than a week, and now I am feeling great," said Marilyn. She continued, "I had really good care while at Licking Memorial Hospital. Because of them, I am back to my old self." Marilyn does not have any lasting side effects from her stroke and did not require any rehabilitation. She credits the use of the clot-busting drug – tPA for her speedy recovery.

Marilyn and her husband, George, reside in Buckeye Lake, Ohio. They have three daughters and two sons.

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- Sudden confusion, trouble speaking or understanding
- Sudden trouble seeing in one or both eyes
- Sudden trouble walking, dizziness, loss of balance or coordination
- Sudden, severe headache with no known cause

A person who has symptoms of a stroke needs to seek emergency medical care. Call 9-1-1 immediately if you experience symptoms.

A thrombolytic, or "clot-busting," drug must be given, if appropriate, within three hours after the initial onset of symptoms. For a stroke patient, time is of the essence. To determine if a patient is a candidate for a thrombolytic drug, it is vital that a CT scan be performed before the drug is given. A follow-up CT scan or MRI scan while a patient is hospitalized can help determine if the stroke has progressed (become worse).

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## Stroke Awareness (continued from previous page)

Since a stroke can affect a person's ability to swallow, stroke patients should receive a swallowing evaluation to make sure they can swallow well enough to eat or take oral medication. Beginning rehabilitation as soon as it can be done safely can help improve recovery for stroke patients. Therefore, it is important that physicians order appropriate rehabilitation for these patients quickly. Rehabilitation may include physical therapy, occupational therapy and/or speech therapy.

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orders are used by physicians in the treatment of stroke. Although physicians evaluate and treat each patient individually, following standard orders for a specific disease helps ensure that physicians provide appropriate care for that disease.

It is often beneficial for a stroke patient to have a consultation with a neurologist to confirm the diagnosis, because many other diseases can mimic a stroke. These include seizures with paralysis, confusion, muscle disease, and peripheral nerve injuries. Neurologists also have unique training and experience in neurological diseases and can offer stroke patients comprehensive care tailored to their specific needs.

For more information on strokes and the services available at Licking Memorial Hospital, please visit the health information section on our Web site at [www.LMHealth.org](http://www.LMHealth.org).

# Stroke and High Blood Pressure

## High blood pressure is one of the most common causes of stroke!

According to recent estimates, nearly one in three U.S. adults has high blood pressure, but because they have no symptoms, nearly one-third of these people don't know they have it. In fact, many people have high blood pressure for years without knowing it. Uncontrolled high blood pressure can lead to stroke, heart attack, heart failure or kidney failure. This is why high blood pressure is often called the silent killer. The only way to tell if you have high blood pressure is to have your blood pressure checked.

When the heart beats, it pumps blood to the arteries and creates pressure in them. This pressure (blood pressure) results from two forces. The first force is created as blood pumps into the arteries and through the circulatory system. The second is created as the arteries resist the blood flow.

If you are healthy, your arteries are muscular and elastic. They stretch when your heart pumps blood through them. How much they stretch depends on how much force the blood exerts.

Your heart beats about 60 to 80 times a minute under normal conditions. Your blood pressure rises with each heartbeat and falls when your heart relaxes between beats. Your blood pressure can change from minute to minute, with changes in posture, exercise or sleeping, but it should normally be less than 120/80 for an adult. Blood pressure that stays between 120 to 139 over 80 to 89 is considered pre-hypertensive and above this level (140/90 or higher) is considered high (hypertension). Your doctor may take several readings over time before deciding whether your blood pressure is high.

## What do blood pressure numbers indicate?

- The higher (systolic) number represents the pressure while the heart is beating.
- The lower (diastolic) number represents the pressure when the heart is resting between beats. The systolic pressure is always stated first and the diastolic pressure second.

## How is high blood pressure related to stroke?

Doctors have long called high blood pressure "the silent killer" because you can have high blood pressure and never have any symptoms. If left untreated, high blood pressure can lead to life-threatening medical problems such as stroke, heart attack or kidney failure.

High blood pressure is one of the most common causes of stroke because it puts unnecessary stress on blood vessel walls, causing them to thicken and deteriorate, which can eventually lead to a stroke. It can also speed up several common forms of heart disease.

When blood vessel walls thicken with increased blood pressure, cholesterol or other fat-like substances may break off of artery walls and block a brain artery. In other instances, the increased stress can weaken blood vessel walls, leading to a vessel breakage and a brain hemorrhage.