

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.

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- 1** 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 2011	LMH 2012	LMH 2013	National ⁽¹⁾
Stroke education	95%	96%	98%	85%

- 2** 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 2011	LMH 2012	LMH 2013	National ⁽¹⁾
Patients evaluated for rehabilitation services	97%	99%	100%	97%

- 3** Ideal management of a patient who has suffered a stroke includes starting the patient on a blood-thinning medication (such as aspirin) while in the hospital. These medications also should be continued after the patient is sent home from the hospital. These medications can help prevent another stroke; however, in some cases, they may pose a higher risk for patients and should not be used. Stroke patients also are at higher risk for developing blood clots, also known as venous thromboembolism (VTE). To help prevent this from happening, stroke patients also should receive protective medications, known as prophylaxis, to reduce the potential of blood clot formation.

	LMH 2011	LMH 2012	LMH 2013	National ⁽¹⁾
Eligible patients receiving blood-thinning medication	98%	99%	98%	97%
Patients with blood-thinning medication at discharge	99%	100%	100%	99%
Patients with VTE prophylaxis by second day	99%	98%	97%	92%

- 4** Patients with atrial fibrillation are at elevated 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 clots from forming. LMH tracks the percentage of patients with atrial fibrillation who were discharged on a blood-thinner, as appropriate.

Another significant risk factor for stroke is high cholesterol. 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 2011	LMH 2012	LMH 2013	National ⁽¹⁾
Atrial fibrillation patients on anticoagulation therapy	100%	100%	100%	95%
Patients with statin medication	97%	100%	97%	93%

- 5** 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 2011	LMHP 2012	LMHP 2013	National ⁽²⁾	Goal
LMHP coronary artery disease patients seen, and are receiving blood-thinning medication	93%	93%	93%	greater than 80%	greater than 90%
LMHP coronary artery disease patients seen who have had an annual LDL test	92%	93%	92%	greater than 80%	greater than 90%

Data Footnotes: (1) Comparative data from www.hospitalcompare.hhs.gov. (2) American Heart Association/American Stroke Association/National Committee for Quality Assurance Heart/Stroke Recognition Program.

Patient Story – Deacon Steve DeMers

Theresa DeMers called out into the darkness, “Are you alright?” There was no response, and she repeated the question two times, waiting for her husband’s reply.

Steve DeMers had already arisen from bed a couple of times in the early morning hours of October 2, 2013 – that was not very unusual. However, when he awoke again at 5:30 a.m., he felt that something was wrong – he just could not tell exactly what the problem was. He stood up and walked to the bathroom. Steve said, “I had trouble walking because my balance was so bad, and my right arm was limp. I made it back to the bed and sat down.” He could hear Theresa, but could not summon the words to answer her. “All I could do was groan,” he said. Theresa looked closely at Steve and said, “Oh, honey, I think you are having a stroke.”

Theresa called 9-1-1, and the emergency medical technicians (EMTs) arrived within minutes. “At the Hospital, Steve was quickly taken to a patient room in the Emergency Department. Terrill D. Burnworth, D.O., ordered an MRI (magnetic resonance imaging) which confirmed that Steve was having a stroke.

“Our pastor met us in the Emergency Department to give Steve the Sacrament of the Anointing of the Sick,” Theresa said. “We knew that Steve had the potential for a stroke because of his heart issues. We had studied the signs and symptoms, and they were very easily recognizable when it happened. He could not talk, his balance was unsteady, his right arm was weak, and one side of his mouth drooped.”

Steve has been treated for heart issues since childhood. He had an atrial septal defect, an opening between the heart’s upper chambers that did not close properly after birth. At the age of 10, Steve weighed just 60 pounds and was much smaller than other boys in his class. He underwent open-heart surgery to close the opening, which was considered an innovative procedure in 1959. The surgery was mostly successful, but Steve continued to have a heart murmur that indicated there was some heart valve leakage. Still, Steve’s overall health improved, and he quickly caught up to his classmates in size by the time that he was in high school.

“My doctors continued to monitor me closely, and in 2004, my cardiologist in Columbus advised me to have an ablation procedure to treat atrial fibrillation. (Ablation corrects the heart rhythm by destroying small amounts of abnormal tissue.) Shortly after the procedure, I had a TIA (transient ischemic



Steve DeMers

attack – often called a ‘mini stroke’), and then I had another TIA one week later,” Steven said.

Steve recovered well from the TIAs with minor speech and balance impairment. His physicians advised him that the mini strokes increased his risk for another stroke in the future.

In 2011, Steve suffered a minor heart attack and had a stent implanted in his lower artery at LMH. He completed LMH’s 12-week cardiac rehabilitation program and returned to his work in dual roles as Business Manager at *Catholic Times* in Columbus, and Deacon at St. Francis de Sales Church in Newark.

“When the stroke occurred last fall, I was not frightened,” Steve recalled. “Everyone at LMH took good care of me – I knew that I was more than just a number to them.” Steve was admitted to the Intensive Care Unit (ICU) at LMH for several days. The stroke had occurred in the speech and language center of his brain’s frontal lobe. With this stroke, his speech, reading and balance impairments were much more pronounced than from his TIAs.

Fortunately, the Acute Inpatient Rehab Unit (ARU) opened in early 2013, so when Steve recovered enough to be dismissed from the ICU on the second floor, he was admitted to the ARU on the sixth floor. “The Rehab unit gave me a jump start in all areas,” Steve said. “We focused on a combination of physical and speech therapies. When I first arrived, my right hand was limp. By the time I left one week later, I was able to eat with my right hand. For several hours every day, the staff coached me with activities to improve dexterity and strength. They also helped me walk in the hallways and up steps to improve my balance. I had short periods of rest, and then I was up and active again. The staff was really upbeat, and it rubbed off on the patients. Those who were able would gather in the social room. One patient played the harmonica for us, and it turned out to be a wonderful experience. We were even encouraged to wear regular street clothes which made it feel more like a comfortable home setting.”

Steve retired from *Catholic Times* due to significant difficulty with speech and reading, but is pleased that his impairments are improving. “I found that I can read much better if I read aloud. The text makes more sense if I can actually hear the words,” he explained. Steve continues to perform many of his duties at St. Francis de Sales Catholic Church, and hopes to be able to resume his full Deacon responsibilities soon.

Many Medical Conditions Increase Risk of Stroke

Stroke is the fourth leading cause of death in Ohio, striking individuals of all ages. A stroke (or “brain attack”) occurs when blood flow to the brain has been disrupted due to a blood clot or blood vessel rupture, and brain cells begin to die from the lack of oxygen. Most patients who survive a stroke experience some

amount of disability, depending on the part of the brain that was affected and the duration and severity of oxygen deprivation to the brain cells. Fortunately, individuals can lower their risk of stroke by making their overall health a priority throughout their lives.

Many Medical Conditions Increase Risk of Stroke (continued on next page)



Mourad
Abdelmessih, M.D.

“Some significant risk factors for stroke are lifestyle-related,” stated Mourad Abdelmessih, M.D., of Mid-Ohio Neurology. “Tobacco smoking, being overweight, consuming a high-fat diet and being sedentary are major contributors to stroke, and they also are among the most easily modifiable. Some risk factors, such as advancing age and a family history of stroke, cannot be changed, but I tell my patients that they can greatly improve their chances of living stroke-free if they quit smoking, lose excess weight, choose healthy foods and increase their physical activity.”

In addition, an individual’s overall health affects the likelihood of a stroke occurring. Many health conditions, especially those that are untreated or poorly managed, have been linked to an increased risk of stroke. These conditions include:

- Irregular heart rhythm (atrial fibrillation)
- High blood pressure
- Diabetes
- Heart attack
- Heart failure
- Peripheral artery disease
- Carotid stenosis
- Arterial embolism and venous thromboembolism
- Heavy alcohol consumption
- Illicit drug use
- Retinal occlusion
- Chronic systemic inflammation
- Hemophilia
- Sickle cell anemia
- Migraines

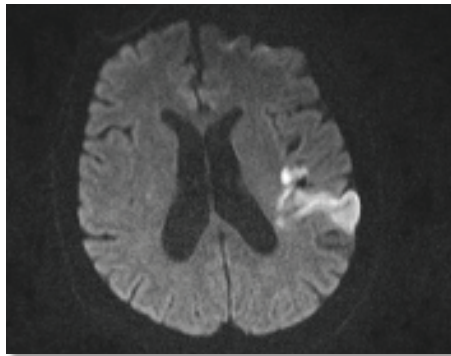
Studies are being conducted to determine whether obstructive sleep apnea, traumatic brain injury, concussion, oral contraceptives, depression and extreme stress also increase the risk for stroke.

Dr. Abdelmessih said, “Strokes seldom happen in a completely healthy patient. Usually, the patient also has other medical conditions that make it more likely for a stroke to occur because they affect the body’s circulation or blood-clotting function. Patients need to be vigilant about managing their chronic conditions, so that they can enjoy better health in later years. I have treated many patients who are struggling with severe disabilities after a stroke – a stroke that probably would not have happened if they had followed their physician’s medical advice and taken their medications as prescribed in their younger years.”

An irregular heart rhythm, high blood pressure, diabetes and a history of any previous strokes are the strongest risk factors for stroke. An irregular heart rhythm causes the upper chambers of the heart to beat erratically, and the inefficient pumping action allows some blood to remain pooled in the heart. The pooled blood can easily begin clotting, and the resulting clots can travel through the bloodstream to the brain, causing a stroke.

Many adults in the U.S. are unaware that they have high blood pressure, also known as hypertension. Although hypertension often has no noticeable symptoms, individuals with uncontrolled high blood pressure have up to six times the risk of having a stroke. Hypertension leads to hardening of the arteries and blockage of small arteries throughout the body, including the brain. It also causes small arteries to weaken and possibly burst.

Diabetes is a major risk factor for stroke because of the damage that blood vessels sustain from high blood sugar levels. Over time, excess sugar in the blood weakens the blood vessels, and also promotes the build-up of fatty deposits that restrict blood flow. In addition, individuals who have a high blood sugar level when a stroke occurs suffer more extensive and severe damage than those who have a stroke when their blood sugar level is well controlled.



The white area on this magnetic resonance imaging (MRI) reveals a stroke that was caused by a blocked blood vessel in the patient’s left parietal lobe of the brain. (Radiologists view MRIs in reverse.)

“Patients’ risk of stroke often can be greatly reduced through careful management of any chronic health conditions they have,” Dr. Abdelmessih emphasized. “It is important for them to understand that following their physicians’ advice now and making lifestyle changes – even though they may feel fine – are critical steps for their future well-being.”

Dr. Abdelmessih added, “Exercise and physical activity are so important in reducing stroke risk. The recommendation is for 40 minutes of brisk walking or other exercise that increases the heart

rate by 150 percent, three times a week. Just working around the house or the farm is not sufficient. Patients who have other medical conditions should consult with their physician for a personalized activity plan.”

Patients who may be experiencing a stroke should be taken immediately to the closest emergency department. The symptoms of stroke include:

- Sudden numbness or weakness in the face, arm or body
- Sudden confusion, trouble speaking or understanding
- Sudden loss of vision on one side
- Sudden difficulty walking, dizziness, loss of balance
- Severe, sudden headache with no known cause (more likely with hemorrhagic stroke)

If an individual experiences symptoms of a stroke, call 9-1-1, or if emergency medical transport is not available, drive the individual to the nearest emergency hospital. Thrombolytic “clot-busting” drugs can improve the outcome from a stroke if they are given as soon as possible before further damage to the brain tissue occurs. After three hours from the onset of a stroke, the thrombolytics become less effective, and at times, may be more dangerous.



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Health Tips – Act FAST for Stroke

The National Stroke Association urges you to learn the warning signs of stroke, and “Act FAST” by calling 9-1-1 immediately if any of the following symptoms are present:

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

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

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

Time: If you observe any of these signs, call 9-1-1 immediately.