

Quality Report Card

Licking Memorial Health Systems



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PATIENT SAFETY

COVID-19 and Sepsis

The immune system protects the body against illnesses by fighting bacteria, viruses and other dangerous microorganisms that may cause harm. Sometimes, a person's immune system can go into overdrive as it tries to fight an infection. The condition is known as sepsis, which is a life-threatening organ dysfunction that occurs when an infection triggers an extreme reaction throughout the body. It can be caused by bacterial, fungal, protozoal or viral infections, including the virus that causes COVID-19. Left untreated, sepsis can rapidly lead to tissue damage, organ failure and death. Early recognition and treatment of sepsis are required for survival.

Sepsis affects 1.7 million adults in the U.S. and results in nearly 270,000 fatalities in the United States each year. Individuals who are at a higher risk of sepsis include adults 65 or older, people with weakened immune systems or who have chronic medical conditions such as diabetes, lung disease, cancer or kidney disease, individuals with recent severe illness or hospitalization, and sepsis survivors. Sepsis is most often a result of infections that start in the lungs, urinary tract, skin or gastrointestinal tract.

COVID-19 is a virus that affects the respiratory system, and it also can impact multiple organs, including lungs, brain, kidneys, heart and liver. Symptoms of COVID-19 include fever and chills, shortness of breath or difficulty breathing, which are similar to the early signs of sepsis, making it difficult to diagnose. Other symptoms of sepsis include confusion or disorientation, rapid heart

rate or low blood pressure, and extreme pain or discomfort. Individuals who do not seek treatment for severe symptoms of COVID-19 are at risk for sepsis. Because severe COVID-19 is characterized by the body's extreme reaction to the infection, it could be considered viral sepsis which requires immediate medical attention.

Unlike bacterial sepsis that can be treated with antibiotics to stop the progression, there are limited treatments for COVID-19 sepsis. Therapies used to treat patients hospitalized with COVID-19, including corticosteroids, antivirals such as remdesivir, anticoagulation and monoclonal antibodies, have been shown to decrease morbidity or improve patient outcomes, as well as help to reduce the risk or slow the progression of sepsis.

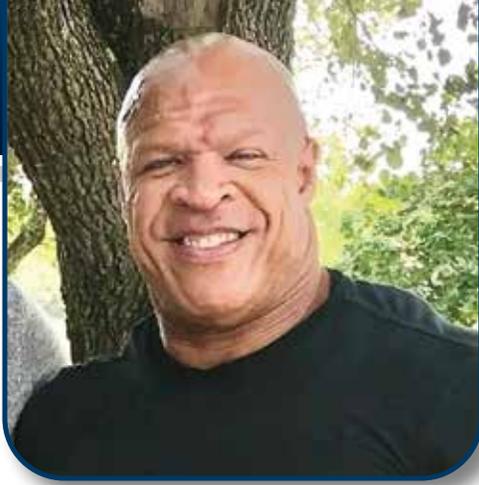
Individuals who suspect that they or another person may have sepsis should seek medical care immediately. The national public awareness campaign, "It's About TIME" was an initiative launched in 2018 by Sepsis Alliance to help people recognize the most common symptoms of sepsis and provide people with knowledge to suggest sepsis to their physician when they arrive at the emergency department.

The acronym TIME stands for:

- Temperature – higher or lower than normal
- Infection – individual may have signs and symptoms of infection
- Mental decline – patient is confused, sleepy or difficult to rouse
- Extremely ill – severe pain or discomfort

Preventing infection is the best way to reduce the risk of sepsis. Layered interventions, such as wearing masks when proper social distancing cannot be obtained, thorough hand washing with soap and water or hand sanitizer, avoiding people who are sick, and staying home when ill are effective practices for preventing COVID-19 and other infectious diseases. Managing chronic health conditions such as diabetes and getting recommended vaccines aid in maintaining a strong immune system. It also is important to seek medical care for infections that worsen or do not improve over time.





Patient Story – Earl Crosswhite Jr.

As co-owner and fitness director of Maximum Fitness Center in Newark, staying healthy is a top priority for Earl Crosswhite Jr. As a bodybuilding champion with three decades of fitness experience, he promotes optimal wellbeing through regular exercise routines and healthy nutrition. When he began feeling tired and lethargic around Thanksgiving in 2020, Earl did not think it was a serious illness; however, he soon began experiencing migraines, loss of appetite and breathing issues.

Using a home pulse oximeter, Earl discovered his oxygen level was around 90 percent. A normal level of oxygen is usually 95 percent or higher. He became concerned when the level began to drop drastically, but was nervous about visiting a physician or other medical facility due to the ongoing COVID-19 pandemic. Finally, his fiancée, Stacy, convinced him to go to Licking Memorial Hospital Emergency Department (ED). A COVID-19 test was administered and Earl was told the results were positive. Immediately after being admitted, Earl's health rapidly deteriorated.

"I was so shocked. I have always felt strong and healthy," Earl recalled. "I have never felt so out of tune with my body."

While many experience mild symptoms from COVID-19, more severe presentations include pneumonia and acute respiratory distress syndrome. The heart also may be affected in some patients regardless of whether they had a prior cardiovascular diagnosis. In Earl's case, he had to be treated for respiratory failure, pneumonia and a myocardial infarction – a heart attack caused when one or more areas of the heart muscle do not receive enough oxygen.

In response to the pandemic, LMH implemented a number of new safety policies to protect patients, visitors and staff. Access to LMH was limited to the Main Entrance and the ED where staff members are stationed to take temperatures and screen for possible COVID-19 infection. Mask usage is required to enter LMH. Staff also have increased the frequency of sanitizing and wearing proper personal protective equipment. In addition, visitors for COVID-19 patients were prohibited.

"It was a very frightening time for me," Earl shared. "I was alone with no loved ones to turn to for support, but the LMH staff did an amazing job making me feel comfortable and caring for me."

The staff was able to stabilize Earl's condition using several different treatments including an antiviral medication and antibodies. He recovered quickly and was released from the Hospital within five days. While Earl was beginning to feel better, he experienced a setback due to elevated blood sugar levels and had to spend another few days at LMH.

"It felt like it was just one thing after another," Earl said. "I was thankful for the care I received. Everyone was very supportive and worked to educate me about how the treatments I received were affecting my body. I even had the opportunity to discuss healthy protein intake for bodybuilding with the Hospitalist in charge of my care."

In the first week of January 2021, Earl returned to Maximum Fitness and began leading personal training groups and sessions again. He lost 35 pounds – most of it muscle – during his battle with the illness.

"I work very hard to be in tune with my body, and things still do not feel quite the same as it did before I became ill," said Earl. "I am taking it day by day and just enjoying sharing health and fitness information with others."

Earl was born and raised in Washington Court House where he discovered his love for fitness. He longed to be a professional bodybuilder and began training at the age of 23. He moved to Westerville in order to receive instruction from a man who had already reached the professional level. In 1995, he won the Mr. Ohio Bodybuilding Competition. Even while focusing on his body building career, Earl was determined to share his knowledge and abilities with others and worked to become a personal trainer at the age of 26. After taking a few years off from bodybuilding competitions to spend time with his son, Landon, Earl returned to the sport and obtained Pro status. He last competed in 2018 at the age of 51.

Owning a fitness center was one of Earl's lifelong dreams, and Maximum Fitness Center was opened in 2014. "I believe touching and changing lives is more important than just reaching personal goals," Earl disclosed. "Teaching health and fitness and leading others to a better lifestyle is a wonderful thing."

While not at the gym, Earl enjoys spending time with his fiancée, Stacy, and his family, including his son, Landon, and daughter, Jhera. He and Stacy hope to marry this year.

Patient Safety – 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 to benchmark measures. Then, we publish the information so you can draw your own conclusions regarding your healthcare choices.

1. The Institute of Medicine published a report in 2000 that highlighted the stunning effects of medication errors. The report set forth a national agenda for reducing errors and improving patient safety by designing a safer health system. Although the medication error rate at Licking Memorial Hospital (LMH) is significantly better than the national benchmark, we make continuous efforts to improve the process. LMH dispensed 1,142,514 doses of medication in 2020.

	LMH 2018	LMH 2019	LMH 2020	National ⁽¹⁾
Medication errors per 1,000 doses	0.014%	0.014%	0.010%	0.310%

2. Protecting patients from hospital-acquired infections is a primary patient safety goal. LMH has an ongoing program to prevent and treat infections in patients. Per the Centers for Disease Control and Prevention (CDC) recommendations, LMH tracks high-risk patients, including those with an increased risk of infection due to the presence of an invasive device, such as a ventilator, catheter or central venous line. The following data reflects the number of infections per every 1,000 patient days compared to the national benchmarks.

	LMH 2018	LMH 2019	LMH 2020	National ⁽²⁾
Urinary tract infection rate for ICU patients with urinary catheters, per 1,000 days of usage	0.0	0.4	0.0	0.6
Urinary tract infection rate for patients outside of ICU with urinary catheters, per 1,000 days of usage	0.49	0.78*	0.48	0.48
Bloodstream infection rate for ICU patients with central venous catheters, per 1,000 days of usage	0.0	0.0	1.0	1.1
Bloodstream infection rate for patients outside of ICU with central venous catheters, per 1,000 days of usage	0.0	1.08*	0.0	0.18

*Throughout a period of 1,000 days of device usage in 2019, two individuals were diagnosed with a urinary tract infection, and one individual was diagnosed with a bloodstream infection.

3. LMH conducts a comprehensive assessment to determine if a patient is at risk for a fall at admission and during the Hospital stay. Personal alarms and bed sensors help alert staff to a potential fall.

	LMH 2018	LMH 2019	LMH 2020	Goal
Inpatient falls, per 1,000 patient days	2.9	3.8	3.9	less than 3.0

4. Acute care mortality refers to patients who pass away while admitted as inpatients in the hospital. While mortality within the hospital is not uncommon, it can be a valuable indicator in determining how effectively the hospital manages crisis situations as well as its ability to rescue the patient in an emergency. Other factors, such as nurse staffing levels, staff knowledge and experience, and early recognition of patient deterioration all can have an impact on inpatient mortality. Sepsis is a body's overwhelming and life-threatening response to an initial infection of microbes that can be bacterial, viral or fungal. It can be difficult to diagnose. LMHS has safety measures in place to detect early signs of sepsis. Lower rates are preferable.

	LMH 2018	LMH 2019	LMH 2020	National ⁽³⁾
Inpatient mortality	1.34%	1.24%	2.24%*	3.18%
Sepsis mortality rate, per 1,000 patients	10.3%	9.3%	15.1%*	State⁽⁴⁾ 14.9%

*In 2020, the number of patients receiving acute care increased due to the COVID-19 pandemic.

5. During the annual influenza (flu) season, keeping the LMHS employees healthy by providing flu vaccinations can, in turn, protect patients from potential influenza infections. LMHS is committed to encouraging and providing free, easily accessible flu vaccines to all employees.

	LMHS 2018	LMHS 2019	LMHS 2020	LMHS Goal	National ⁽⁵⁾
LMHS employees receiving the seasonal influenza vaccine	95%	95%	94%	greater than 80%	80.6%

6. Warfarin (also known as Coumadin) is a blood thinner, which also is called an anticoagulant. It is used to help prevent and treat blood clots. The most common side effect of warfarin is bleeding in any tissue or organ. It is important for patients to have a prothrombin time (PT) and International Normalized Ratio (INR) blood test regularly to help the physician determine the blood clotting rate and whether the dosage of warfarin should change. The testing is very important and must be accomplished at recommended intervals in order to keep the PT/INR result in the best and safest range for the medical condition. Licking Memorial Health Professionals (LMHP) has adopted this recommendation as a safety measure. Note: Patients who visit the Licking Memorial Medication Therapy Clinic are not included as LMHP patients.

	LMHP 2018	LMHP 2019	LMHP 2020	LMHP Goal
LMHP patients on warfarin having a current PT/INR within recommended guidelines	94%	97%	N/A*	greater than 90%
*An insufficient amount of data was available for comparison.				

7. Metformin (trade name Glucophage) is a medication that is used in the treatment of diabetes mellitus and polycystic ovarian disease. It is an effective medication for treatment of both of these unrelated disease processes, but must be used cautiously in patients with compromised renal (kidney) function. It is recommended to monitor renal function prior to initiation of therapy and at least annually thereafter. LMHP has adopted this recommendation as a safety measure.

	LMHP 2017	LMHP 2018	LMHP 2019	LMHP Goal
LMHP patients on Metformin with a renal function test within last year	93%	92%	89%	greater than 90%

Data Footnotes: (1) *To Err Is Human – Building a Safer Health System*, National Academy Press, Washington D.C., 2000. (2) CDC National Healthcare Safety Network pooled median (ICU only) from January 2006-December 2007, issued November 2008 (3) Comparative Data from the Midas Comparative Database. (4) OHA (5) Centers for Disease Control and Prevention (CDC), Interim Results: Seasonal Influenza Vaccination Coverage Among Health-Care Personnel, *MMWR April 2, 2010 / 59(12): 357-362*.

Increasing Immunity

A person’s immune system defends their body against a variety of illnesses and infections. There are a number of factors that determine how well the immune system functions, many of which are simple lifestyle habits that can help bolster immunity and strengthen the body’s natural defenses to fight harmful pathogens and disease-causing organisms.

- Maintain a healthy diet – fruits, vegetables, legumes, whole grains, lean protein and healthy fats provide the body with energy and sufficient amounts of micronutrients, such as Vitamin C, E and B6, which are needed to maintain a healthy immune system.
- Exercise regularly – 30 minutes of moderate to vigorous exercise every day can help stimulate the immune system. Physical activity

boosts circulation making it easier for immune cells and other infection-fighting molecules to travel more easily throughout the body.

- Stay hydrated – water aids in the movement of lymph, a fluid in the circulatory system that carries infection-fighting immune cells throughout the body. Health experts commonly recommend eight 8-ounce glasses of water each day.
- Get plenty of sleep – during sleep, the immune system releases proteins called cytokines, which stimulate the movement of cells toward areas of inflammation, infection and trauma. Sleep deprivation can decrease the production of cytokines. The optimal amount of sleep for most adults is seven to eight hours each night.

- Manage stress levels – long-term stress promotes inflammation and can cause an imbalance in immune cell function. Activities such as meditation, journaling, yoga and other mindfulness practices can help an individual minimize stress levels.
- Practice good hand hygiene – handwashing is one of the most effective ways to keep from getting sick. It also is important to avoid touching the eyes, nose or mouth with unwashed hands or after touching surfaces.
- Keep current with all recommended vaccines, which prepares a person’s immune system to fight off an infection before it can affect the body.



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Visit us at LMHealth.org.

Please take a few minutes to read this month’s report on **Patient Safety**. You will 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 (220) 564-1561 to receive future mailings.

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