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Detecting Lung Diseases

The lungs are vital organs, part of a complex respiratory system that oxygenates blood to transport oxygen to all parts of the body. The lungs expand and relax thousands of times each day to bring in air and expel the waste product, carbon dioxide. These spongy, air-filled organs are vulnerable to disease and to some of the most common medical conditions in the world. For this reason, Licking Memorial Health Systems (LMHS) offers the most up-to-date technologies and testing to detect and diagnose lung diseases, such as pneumonia, chronic obstructive pulmonary disease (COPD) and lung cancer. With the use of minimally invasive methods, such as pulmonary function tests and endobronchial ultrasound (EBUS), the staff at LMHS can develop the best treatment plan for patients diagnosed with a lung ailment.

Early detection of lung diseases, including cancer is vital for successful treatment. The warning signs for an infection or other illness in the lungs include:

- Chronic cough
- Shortness of breath
- Chronic mucus production
- Wheezing
- Chest pain
- Coughing up blood

It is important to pay attention to even mild symptoms which could be the first signs of lung disease. If a patient is exhibiting symptoms of lung problems, a pulmonary function test can be used to determine how well the lungs are working. The tests also may be ordered if a person regularly is exposed to certain substances in the environment or workplace. There are several types of function tests available

that offer different ways to measure lung function. Depending on the area of concern, a physician may want to measure lung size, air flow, lung volume, or the lungs ability to transfer oxygen to the blood. One of the most common pulmonary function tests is spirometry, which measures air flow. During the test, a patient is asked to breathe into a tube attached to a spirometer that records the rate of air taken in and out of the lungs over a period of time. The process generally takes approximately 15 minutes to complete. With the results of the test, the pulmonologist can diagnose different types of chronic lung disease and develop a treatment plan. The physician may continue performing function tests to monitor the course of chronic lung disease, such as COPD.

Another important tool for diagnosing lung disease is the EBUS. If a nodule or other irregularity is found on a patient's chest X-ray or computed tomography (CT) scan, the EBUS procedure can be used to view the areas of the lungs and nearby lymph nodes using a scope equipped with a video camera and ultrasound probe. The device can be inserted through the mouth - no incision is necessary. Using the camera and the ultrasound, a physician receives real-time images of the surface of the airways, blood vessels, lungs and lymph nodes. The improved images allow the physician to view difficult to reach areas. The images then can be used to guide a needle to the site to obtain a biopsy or fluid sample from the lung tissue. With the accuracy and speed of the EBUS procedure, a pathologist can process and examine the biopsy samples immediately if needed. The samples can be used for diagnosing and staging cancer, detecting infections, and

identifying inflammatory diseases. EBUS is an outpatient procedure using moderate sedation or general anesthesia and takes approximately 45 minutes. Patients who have the EBUS procedure or a pulmonary function test typically are released to return home the same day as the procedure. Receiving the results from the testing may take up to five days, but generally is completed as quickly as possible.

Once all the information is gathered, the physician can make a diagnosis and then begin the treatment plan. Treatments may include medications, oxygen therapy, pulmonary rehabilitation, lifestyle changes, and alternative therapies. LMH does offer pulmonary rehabilitation for lung disease patients. Again, early detection and continued monitoring are vital to successful treatments, which is why it is recommended to talk to a physician about even the mildest breathing issues.





After receiving a chronic obstructive pulmonary disease (COPD) diagnosis four years ago, John Blaisdell stopped smoking and attended the Pulmonary Rehabilitation program at Licking Memorial Hospital. His family physician of 13 years, Colleen Smith, M.D., Licking Memorial Family Practice, referred him to the program, as well as specialist, Eric Pacht, M.D., Licking Memorial Pulmonology.

Patients with chronic respiratory illnesses attend the rehabilitation program twice per week for exercise and education. Breathing training in addition to stress and relaxation techniques for pulmonary patients also are offered. Pulmonary Rehabilitation provides an opportunity for camaraderie and friendship among participants while helping them to lead active, productive lives.

Members of the LMH Respiratory Therapy Department, who are respiratory care professionals licensed by the State of Ohio, oversee pulmonary rehabilitation and create individualized goals and treatment plans for every patient. Each session typically lasts at least one hour and gradually increases in length, featuring an exercise regimen designed to keep the heart and lungs in optimal condition. Participants gradually progress through the closely-monitored exercises to increase endurance and strength while learning to minimize and control shortness of breath. Offered year-round, the 16-session course also provides key information that helps participants successfully live with chronic lung diseases.

John successfully completed the program and began seeing Emilia Anigbo, M.D., Licking Memorial Pulmonology, upon Dr. Pacht's retirement. Dr. Anigbo continues to manage his COPD in order to improve his quality of life. "I loved the program and how

Patient Story – Jayne & John Blaisdell

it changed my life. Dr. Anigbo really turned me around and I am very grateful for her," John explained.

John's wife, Jayne also smoked for numerous years and was beginning to have respiratory difficulties. About two years ago, while suffering from a recurring case of bronchitis, she was transported by the emergency squad due to extremely labored breathing. Jayne was admitted to the Hospital and received breathing and additional treatments during her three-day stay. Tobacco Cessation Counselor and Respiratory Therapist Stephanie Coyle and Registered Nurse Liz Nye met with Jayne and discussed the COPD Home Visit program that would be available after discharge. They also encouraged her to participate in the Quit for Your Health Tobacco Cessation Program. John reiterated to Jayne his positive experiences with the Pulmonary Rehabilitation program, also in the hope that she would stop smoking.

Jayne was still smoking when she began to receive care from Dr. Anigbo, but she was trying to quit. "She is a very good physician. She listens and explains things so that we can understand, sometimes multiple times, if necessary," said Jayne. "This is very helpful as we are supporting each other in this journey." John and Jayne use oxygen constantly and have nebulizers and medication to help them control their COPD. Each has experienced exacerbations, or flare-ups, of symptoms and Dr. Anigbo and her office staff have been quick to assist with adjustments in medication and treatment.

Both Jayne and John benefitted from the COPD Home Visit program. As part of the program, Stephanie and Liz made weekly visits to their home to help them develop better management of their symptoms and reduce the need for hospital re-admissions. They offered one-on-one education to understand symptoms and medications, as well as dietary recommendations and breathing and relaxation techniques. "The home visit is a good opportunity to monitor details that affect the patient's well-being," explained Liz. "Together, we review the patient's prescriptions, ensure that there is an adequate supply, and that the medications are being taken correctly. Sometimes, patients need help in making an appointment or understanding their insurance coverage," she continued. Staff assist individuals in becoming an active advocate in their own health care, often connecting them with additional resources such as Meals on Wheels, the Licking County Aging Program, transportation assistance and palliative care. "Overall, we identify what is needed for our patients to be successful in managing their COPD at home," Liz summarized. "Then we cheer them on when they find that success."

Jayne began the Quit for Your Health Tobacco Cessation Program in the summer of 2017 and graduated this past winter. "The one-on-one time in the home is a key component of the Quit for Your Health program," Stephanie said. "Support and education is offered without judgment and the program is tailored to each individual. We help them determine who their support system is and what may be preventing them from recovery. We provide options and try to make it fun." Quit for Your Health uses nicotine replacement therapy and relapse prevention strategies to help individuals prepare to stop using tobacco and keep patients tobacco-free. "The patches, lozenges and gum they gave me were very helpful," said Jayne. Stephanie designed a visual plan to help Jayne stay on track with her doses and patches and also offered ideas to help curb cravings.

"Stephanie and Liz are like friends. They are so kind, understanding and supportive," Jayne commented. "They are the ones who really helped her quit," John noted. "I know it was not easy, and I am very proud of Jayne for quitting."

The Licking Memorial Hospital Quit for Your Health Tobacco Cessation Program is a free resource. Visit LMHealth.org for more information or call (220) 564 (QUIT) 7848. A physician's order is required to attend the LMH Pulmonary Rehabilitation program. For more information about Pulmonary Rehabilitation services at LMH, please call (220) 564-4189.

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

Tobacco use has been linked to many serious and life-threatening conditions, such as cancer, heart disease, cardiopulmonary disease and diabetes. An estimated 25 percent of Licking County adults smoke.⁽¹⁾ LMHS offers free Quit For Your Health tobacco cessation education, counseling, and nicotine-replacement products. A similar program, Quit for You, Quit for Your Baby, adds incentives to help pregnant women stop using tobacco products. Altogether, 389 patients received referrals to LMHS' tobacco cessation programs in 2017.

	LMH 2015	LMH 2016	LMH 2017	LMH Goal	
Six-month success rate for patients	(10)	5.40/	1001		
Note: Due to program restructuring, no Quit for Y	61% our Health patients were s	54% een in October and Nover	40% nber 2014: therefore. n	greater than 25% to six-month follow-up information	
was collected in April and May 2015. This figure reflects 10 months' partial-year data for the months that the program was fully operational.					

Chronic obstructive pulmonary disease (COPD) is a serious lung condition that includes two life-threatening diagnoses, chronic bronchitis and emphysema. According to the American Lung Association, COPD is the third leading cause of death in the U.S. There is no cure for COPD, but with careful management, patients can enjoy longer and healthier lives. To monitor the quality of COPD patients' care, the Centers for Medicare/Medicaid Services tracks the death rate nationally for patients who died (for any reason, including reasons not related to COPD) within 30 days of a hospital admission.

	LMH 2015	LMH 2016	LMH 2017	National ⁽³⁾
Mortality rate of COPD patients within 30 days of hospital admission	7.1%	7.9%	8.2%	8.0%

Protecting patients from hospital-acquired infections is a primary patient safety goal. LMH has many ongoing programs and safety mechanisms in place to help prevent patient infections. In accordance with the Centers for Disease Control and Prevention (CDC) recommendations, LMH monitors patients who are at high risk for infections, including those using invasive devices, such as ventilators (breathing machines). The following data reflect the number of respiratory infections associated with ventilator use, per every 1,000 patient days.

	LMH 2015	LMH 2016	LMH 2017	National ⁽⁵⁾
Pneumonia infection rate of Intensive Care Unit patients on ventilators				
per 1,000 patient days	0.0	0.0	0.0	1.1

Some pneumonia patients who are hospitalized require treatment with a ventilator to assist their breathing. Although the ventilator can be life-saving, it carries the risk of serious complications, such as infections, stomach ulcers, blood clots and extended dependency on the ventilator. To help prevent complications, LMH staff members follow a best-practices protocol for patients on ventilators. Known as the "ventilator bundle," these five steps are carefully documented to ensure each patient receives the best possible care.

	LMH 2015	LMH 2016	LMH 2017	LMH Goal
Head of bed elevated to 30 degrees	100%	100%	100%	greater than 90%
Oral care	98.2%	99.8%	99.9%	greater than 90%
Daily test to reduce sedation	99.6%	99.5%	99.6%	greater than 90%
Stomach ulcer prevention	98.7%	99.3%	99.1%	greater than 90%
Blood clot prevention	99.0%	100%	100%	greater than 90%

Respiratory Care - How do we compare? (continued on back)

Respiratory Care - How do we compare? (continued from inside)

Asthma is a condition in which swelling or inflammation can cause narrowing of the breathing tubes, making it difficult to breathe and sometimes resulting in a medical emergency. By using the correct medications, such as inhaled corticosteroids, asthma can be controlled. Use of these medications can reduce asthma-related emergency room visits, hospital admissions, and missed work/school days. Licking Memorial Pulmonology assesses all asthma patients during their office visits to ensure that they are being treated with the correct long-acting corticosteroid.

	LMHP Pulmonology 2015	LMHP Pulmonology 2016	LMHP Pulmonology 2017	National ⁽⁴⁾
Asthma patients assessed for appropriate inhaled corticosteroid	92%	95%	100%	88%

Licking Memorial Health Professionals (LMHP) office patients who are at high risk for these illnesses also are screened and vaccinated as appropriate. LMHP physicians strongly encourage patients over the age of 65 years to receive a onetime dose of pneumonia vaccine and an annual influenza vaccine during each "flu season," which runs from October to March.

Physician office patients over 65 years	LMHP 2015	LMHP 2016	LMHP 2017	National ⁽¹⁾
receiving the pneumonia vaccine	84%	81%	80%	75%
	LMHP 2014-2015	LMHP 2015-2016	LMHP 2016-2017	National ⁽¹⁾
Physician office patients over 65 years receiving the influenza vaccine	82%	80%	80%	72%

LMHS is committed to providing and encouraging free, easily accessible vaccines to all employees. In order to provide the safest care to our community, LMHS recognizes the importance of keeping the staff healthy.

	LMHS 2015	LMHS 2016	LMHS 2017	LMH Goal	National ⁽³⁾
influenza vaccine	94%	94%	94%	greater than 90%	88%

Data Footnotes:

(1) Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, [2016].

(2) Tobacco-free status is self-reported by patients in a six-month follow-up after completing the Quit for Your Health program.

(3) HospitalCompare.hhs.gov national benchmarks

(4) National Committee for Quality Assurance, "The State of Health Care Quality 2014."

(5) National Healthcare Safety Network Report, Data Summary for 2012, Devices-associated Module (Medical-Surgical ICU <15 beds)

Health Tips - Controlling Asthma Triggers

Asthma is an inflammation and obstruction of the bronchial tubes – the passages that allow air to enter and leave the lungs. During an asthma attack, the muscles that surround the bronchial tubes constrict, narrowing the air passages and make it extremely difficult to breathe. An asthma attack can be triggered by exposure to an allergen. In order to control asthma, it is necessary to identify the allergens that trigger such attacks.

Common allergens include:

- Pollen from trees, grass or weeds
- Dust mites
- Animal dander

Other common triggers are irritants in the air, such as smoke or chemical fumes, or strong odors, such as perfume. Recognizing and avoiding the substances that trigger asthma symptoms is an important step in controlling acute attacks.

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Visit us at www.LMHealth.org.

Please take a few minutes to read this month's report on **Respiratory Care.** You'll soon discover why Licking Memorial Health Systems 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) 564-1572 to receive future mailings.

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