



Licking Memorial Health Systems

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

You'll soon discover why Licking Memorial Hospital is measurably different ... for your health!
Visit us at www.LMHealth.org.

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Quality Report Card

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Health Tips - Children Affected by Secondhand Smoke

Secondhand smoke contains more than 250 toxic or cancer-causing chemicals. The American Lung Association reports infants and children are the most susceptible to the dangers of secondhand smoke and offers the following information:

- Children who breathe secondhand smoke are more likely to suffer from coughing and wheezing and are more likely to develop pneumonia and bronchitis.
- More than 202,000 children's asthma episodes are attributed each year in the U.S. to secondhand smoke exposure.
- The Surgeon General's Report states there is no risk-free level of secondhand smoke exposure.
- Secondhand smoke exposure can cause a buildup of fluid in the middle ear, leading to ear infections.
- Secondhand smoke exposure is associated with sudden infant death syndrome.
- Babies are 20 percent more likely to be born at low-birth weight if their mothers are exposed to secondhand smoke during pregnancy.

Respiratory Care – How do we compare?

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

At Licking Memorial Hospital (LMH), 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 Respiratory patients who are admitted to LMH receive a consistent, thorough assessment of their conditions. To initiate prompt and appropriate care, patient assessments need to be completed in a timely manner.

	LMH 2006	LMH 2007	LMH 2008	Goal
Respiratory assessments conducted within four hours of admission	91%	95%	94%	greater than 95%

2 When a patient is suspected of having respiratory failure, an arterial blood gas (ABG) test is performed to see how well the lungs are functioning. The test primarily measures how well the body is taking in oxygen and ridding itself of carbon dioxide. Any result from an arterial blood gas that has a critical value is reported directly to a responsible licensed caregiver within 15 minutes. Critical values are those results that fall outside the normal range for that value and usually require immediate medical intervention.

	LMH 2006	LMH 2007	LMH 2008	Goal
Turnaround time for emergency ABGs	10 min.	12 min.	11 min.	less than 12 min.
Critical results are called on ABG results	100%	100%	100%	100%

3 Pulmonary rehabilitation is a comprehensive program that helps people with respiratory problems improve their respiratory health. LMH tracks the percentage of program participants who reach their personal goals and increase their activity levels.

	LMH 2006	LMH 2007	LMH 2008	Goal
Met their personal goals	100%	93%	100%	100%
Increased activity	100%	100%	100%	100%
Increased activities of daily living	100%	100%	100%	100%

4 LMH uses a clinical practice guideline to make sure asthma patients receive all appropriate care for their condition. One quality measure on the guideline is the use of a peak flow meter to help determine the severity of and improvements in a patient's breathing problem.

	LMH 2006	LMH 2007	LMH 2008	Goal
Asthma protocol followed in ED	100%	94%	95%	greater than 90%

Sleep Apnea Can Affect Health All Day Long

An estimated 12 million Americans are struggling to muster enough energy to meet life's daily challenges, often unaware that sleep apnea is draining their health. The National Heart Lung and Blood Institute reports that in addition to causing general fatigue, sleep apnea also increases the risk of high blood pressure, heart attack, heart failure, irregular heartbeats, stroke, obesity, diabetes, and in extreme cases, death.

"There are different types of sleep apnea, but the most prevalent form is obstructive sleep apnea, also known as OSA," explained Licking Memorial Pulmonologist Eric Pacht, M.D. "OSA is characterized by a blockage that interrupts breathing during sleep for more than 10 seconds at a time. Even though the patient may not even know sleep apnea is taking place, it can have devastating consequences on the patient's health."

OSA is commonly caused by a collapse of the soft tissue in the back of the throat during sleep. Air has to squeeze past the collapsed area, and breathing may become very shallow or stop altogether. After a period of time, which can last from 10 seconds to a couple of minutes, the patient will usually rouse, begin breathing normally again, and then fall back to sleep. This pattern can be repeated many times throughout the night.

"Patients with undiagnosed OSA are often unaware that they have a pattern of breath cessation and awakening since they may not fully waken during the event," Dr. Pacht said. "However, their bed partner or family members may be extremely aware of what is happening. The patient often snores very loudly and awakens with a loud snort or choking sound."

Very loud snoring is one of the main symptoms of sleep apnea. Other symptoms that may indicate OSA include:

- Sleepiness throughout the day due to frequently interrupted sleep
- Morning headaches
- Memory loss or an inability to concentrate
- Irritability or personality changes
- Needing to urinate during the night
- A dry mouth or throat in the morning

Dr. Pacht added, "It is important to note that not all snoring is an indication of sleep apnea. It is one indicator that needs to be evaluated by a physician when combined with other symptoms."

Although OSA can affect any group of people of any age, certain characteristics increase the risk. Some characteristics that indicate that people have a higher risk for sleep apnea are:

- Snoring loudly

- Being male
- Being overweight
- Having a large-sized neck (more than 17-inch diameter for men; more than 16-inch diameter for women)
- Having a recessed chin
- Being over the age of 65 years
- Being African American, Hispanic or Pacific Islander
- Smoking
- Drinking alcohol
- Using narcotic pain medications
- Having a family history of sleep apnea

To diagnose OSA, the physician will first examine the patient's mouth and nasal tissues to check for enlargements. If a form of sleep apnea is suspected, the physician can refer the patient to an overnight study in a sleep lab, such as Licking Memorial Hospital's Sleep Laboratory. There, the patient will be closely monitored while sleeping in a comfortable, hotel-like room, and vital signs such as respiratory rate, blood oxygen levels and blood pressure will be recorded. Patients often pack a change of clothes and go directly to work the morning after their Sleep Laboratory study.

If a patient is diagnosed with OSA, there are treatment options available. The most innovative and effective treatment is the continuous positive airway pressure (CPAP) device. It is a small, quiet machine that gently pumps positive pressurized air through a flexible hose into a small mask that fits over the patient's nose. In some cases, the physician may recommend surgery, such as a tonsillectomy or a corrective procedure, to repair a malformation.

Increasingly, physicians are screening patients for sleep apnea before surgical procedures that require general anesthesia. Anesthesia and pain medications have been shown to relax throat tissues more than usual, and may exacerbate the effects of undiagnosed sleep apnea.

Dr. Pacht said, "People who suspect they may be experiencing sleep apnea, or who are concerned that a loved one may be affected, are encouraged to speak to their family physician. Everyone in the family will sleep a little easier knowing that any sleep apnea problems have been identified and treated."

For more information about OSA or other sleep apnea conditions, call the Licking Memorial Pulmonology office at (740) 348-1805. More information is also available on Licking Memorial Health Systems' Web site, www.LMHealth.org.

Patient Story – Lynn Stuart

Lynn Stuart knew she was feeling much more tired than normal, but she rationalized that with six children at home, she was just feeling the effects of nonstop parenthood. “I did not know what was ‘tired’ as opposed to normal ‘chaos.’ I was getting through the day with caffeine and naps,” she remembered. Today, Lynn’s life has been re-energized with a simple treatment to address her recent diagnosis of obstructive sleep apnea (OSA), a dangerous condition that causes breathing during sleep to become shallow or even stop temporarily.

Lynn met her husband, Scott, while she was at Gordon College near Boston, Massachusetts. Now married 20 years and living in Heath, Scott is employed as Director of Purchasing at Licking Memorial Hospital (LMH), and Lynn is a stay-at-home mom and home-schools their children. Her days are filled with textbook lessons, trips to museums, nature walks and arts enrichment. “As long as I kept active, I was okay, but the moment I stopped moving, I fell asleep,” she said.

“About 12 years ago, I had a sleep study done when we lived in Columbus,” she continued. “I had been snoring for a long time and thought I should get it checked. The doctors there said I had large tonsils, but no signs of sleep apnea.” More than a decade later, Lynn realized the symptoms had worsened and brought up the issue during a visit with Family Practice Physician David Walker, D.O. Lynn said, “I told Dr. Walker that I was beyond being exhausted – I was living in a fog. I would sleep eight hours and still feel as though I needed another three hours of sleep. On the weekends when Scott was home to take care of the kids, I’d sleep 11 hours, but I still could not catch up on my sleep. I tried to make changes on my own. I went to bed on time, and I eliminated any caffeine, but it made no difference. It was to the point that it was debilitating.” After the consultation, Dr. Walker referred Lynn to Licking Memorial Pulmonologist Eric Pacht, M.D., for evaluation.

Dr. Pacht examined Lynn and recommended a new sleep study after hearing her story of extreme fatigue. The study, conducted at LMH’s Sleep Lab, revealed that although Lynn’s breathing was not stopping completely, it was very shallow at many points throughout the night. “Many times during the night, my brain would ‘nudge’ me awake so I could change positions even though I was snoring in every position,” she explained.



Lynn Stuart (center) needs all her energy to home-school her six children (shown left to right): Owen, Alix, Devin, Keilan, Kayleigh and Meaghan.

Based on the frequent episodes of shallow breathing that were recorded on the first night in the Sleep Lab, Lynn was advised to return for a second night to judge whether a continuous positive air pressure (CPAP) device would be beneficial to her. “My first concern was that I did not want to look like Darth Vader,” she recalled.

Lynn’s fears were quickly dispelled when she saw how small the mask was. “The

cradle cushion I use rests just under my nose, and it is really not that intrusive at all. The machine itself is about the size of a shoe box, and it sits on the night stand next to my side of the bed,” she described. “When I am going to sleep, I cannot tell any difference. The CPAP gently pumps warm, humidified room air, and it is so quiet that Scott says he does not hear it at all.”

The CPAP device has such an impact on Lynn’s well-being that she packs it everywhere she goes. “We went to London last year, and I took it along. With the CPAP, I sleep six to seven hours straight, and I feel so much more alert and energetic. It even helped me to recover from jet lag much more quickly. I also use it during short naps, and I keep a battery pack for it, just in case the power ever goes off.”

Use of the CPAP device is the only treatment Lynn is using for OSA – she does not require any medication for the condition. She plans to follow up with Dr. Pacht through annual visits to monitor her symptoms, and is keeping a close eye on her children’s sleep patterns since sleep apnea tends to run in families.

Although some amount of snoring is usually harmless, very loud snoring or breathing cessations are symptoms that could indicate dangerous sleep apnea and should not be ignored. For more information about sleep apnea, consult a family physician, or login to Licking Memorial’s Web site at www.LMHealth.org and click on “Hospital Services” and then “Sleep Laboratory.”