

# 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 them to benchmark measures. Then, we publish them so you can draw your own conclusions regarding your healthcare choices.

Check out our Quality Report Cards online at [www.LMHealth.org](http://www.LMHealth.org).

**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 851,183 doses of medication in 2012.

|                   | LMH 2011 | LMH 2012 | LMH 2013 | National <sup>(1)</sup> |
|-------------------|----------|----------|----------|-------------------------|
| Medication errors | 0.013%   | 0.011%   | 0.011%   | 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 how many infections occurred during 1,000 patient days compared to the national benchmarks.

|                                                                           | LMH 2011 | LMH 2012 | LMH 2013 | National <sup>(2)</sup> |
|---------------------------------------------------------------------------|----------|----------|----------|-------------------------|
| Pneumonia infection rate of ICU patients on ventilators                   | 1.5      | 0.0      | 0.0      | 1.1                     |
| Urinary tract infection rate for ICU patients with urinary catheters      | 0.9      | 0.8      | 1.8*     | 1.0                     |
| Bloodstream infection rate for ICU patients with central venous catheters | 0.0      | 0.0      | 2.6**    | 0.8                     |

\*Throughout a period of 1,000 patient days, two urinary tract infections were recorded in LMH's ICU.

\*\* Throughout a period of 1,000 patient days, one bloodstream infection was recorded in LMH's ICU among patients with central venous catheters.

**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 2011 | LMH 2012 | LMH 2013 | Goal           |
|-----------------|----------|----------|----------|----------------|
| Inpatient falls | 0.30     | 0.24     | 0.29     | less than 0.30 |

**4** Venous thromboembolism (VTE) is a serious condition that results when a blood clot forms within a vein. These clots can travel to the lungs and cause serious harm or even death. In fact, VTE is the most preventable cause of death and accounts for more annual deaths than those from breast cancer, AIDS, and traffic accidents combined. VTE is 100 times more common in hospitalized patients compared with the community at large. Without prophylaxis, up to 20 percent of high-risk surgical patients develop DVT and up to 26 percent of all medical patients are affected. High-risk groups include: up to 34 percent of heart attack patients and up to 40 percent of patients with heart failure. Cancer and stroke patients are particularly at risk with VTE complicating as many as 75 percent of these hospitalizations. Often, patients will have no symptoms when a clot has formed. By using preventive measures, such as blood thinners or mechanical devices, the risk for developing a clot can be significantly reduced. Due to the great risk of blood clots for patients, LMH has adopted a prevention protocol that applies to nearly all patients admitted to the Hospital to reduce their risk.

|                                                                     | LMH 2011 | LMH 2012 | LMH 2013 | National <sup>(3)</sup> |
|---------------------------------------------------------------------|----------|----------|----------|-------------------------|
| Medical patients receiving VTE prophylaxis by end of Hospital day 2 | 94%      | 94%      | 94%      | 85%                     |

**5** LMHS recognizes the importance of keeping our staff healthy and lessening the likelihood that they will infect our patients with influenza while under their care. The Health Systems is committed to providing and encouraging free, easily accessible flu vaccines to all employees.

|                                                         | LMHS 2011 | LMHS 2012 | LMHS 2013 | LMHS Goal        | National <sup>(4)</sup> |
|---------------------------------------------------------|-----------|-----------|-----------|------------------|-------------------------|
| LMHS employees receiving the seasonal influenza vaccine | 86%       | 84%       | 85%       | greater than 80% | 62%                     |

6

Warfarin (trade name 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.

|                                                                                 |                  |                  |                  |                          |
|---------------------------------------------------------------------------------|------------------|------------------|------------------|--------------------------|
| LMHP patients on warfarin having a current PT/INR within recommended guidelines | LMHP 2011<br>95% | LMHP 2012<br>93% | LMHP 2013<br>91% | Goal<br>greater than 90% |
|---------------------------------------------------------------------------------|------------------|------------------|------------------|--------------------------|

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. Licking Memorial Health Professionals (LMHP) has adopted this recommendation as a safety measure.

|                                                             |                  |                  |                  |                          |
|-------------------------------------------------------------|------------------|------------------|------------------|--------------------------|
| LMHP patients on Metformin with creatinine within last year | LMHP 2011<br>95% | LMHP 2012<br>95% | LMHP 2013<br>94% | Goal<br>greater than 90% |
|-------------------------------------------------------------|------------------|------------------|------------------|--------------------------|

**Data Footnotes:** (1) *To Err Is Human – Building a Safer Health System*, National Academy Press, Washington D.C., 2000. (2) 2010 CDC National Healthcare Safety Network Summary Report. (3) Comparative data from the Midas Comparative Database. (4) 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.

## Patient Story – Maureen Clark

Every specialty of health care is responsible for ensuring that patients are safe from injuries, medical errors and infection. Maureen Clark, a retired registered nurse from Granville with 50 years' experience in Boston and Columbus, recently noticed that the patient safety culture at Licking Memorial Hospital (LMH) extends into the Physical Therapy services.

Last summer, Maureen was flying back from Maine when her connecting flight was delayed on the tarmac for three hours in Washington, D.C. Maureen has a history of back problems, and the cramped immobility in the airplane aggravated her back condition once again.

“The pain was at its worst when I tried to sit or lie down for more than 10 or 15 minutes at a time. My legs also had tingling and numbness,” Maureen described. “I visited my family physician and family nurse practitioner, and they outlined my options, including pain medication and physical therapy.”

As a retired registered nurse, Maureen knew the importance of daily physical activity, and she preferred to turn to physical therapy rather than pain medication to help her back recover.

With the physician's referral, Maureen called the Licking Memorial Hospital (LMH) Physical Therapy Department. She said, “I was surprised that they were able to see me within a couple of days. My first appointment was with Physical Therapist



Maureen Clark

Matt Mathias, P.T., for an assessment. He asked me questions about which activities were causing pain, and listened very carefully to the details of my regular exercise regimen and lifestyle. I am very active and participate in pilates and yoga classes at the Licking County Family YMCA. I wanted therapy techniques that would complement my normal routine.”

Physical therapy is used to help patients reduce pain and regain strength and mobility following an injury, surgery or illness. “Patients are often at risk of creating more injury during the recovery process due to muscle imbalances and guarding of injured areas. This includes an increased risk of falls. Safety and a return to function are our top priorities,” Matt explained.

During the initial assessment, Matt evaluated Maureen's balance, strength, gait pattern and body positioning. Based on those observations, he recommended specific exercises, and together they created an individualized treatment plan that would improve her symptoms.

Maureen began physical therapy sessions twice a week with Physical Therapy Assistant Tory Worstell. “Tory watched over me very carefully,” Maureen remembered. “I am 4 feet 11 inches tall, and he adjusted the equipment so that I could safely concentrate on my strengthening and flexibility exercises. He continuously

*Patient Story – Maureen Clark (continued from previous page)*

checked with me about any pain I was having and modified my regimen accordingly. There was one day that I was really uncomfortable. I was trying to be brave and push through the pain, but Tory took notice. He suggested that I should change plans for the day. He brought ice packs for my back and encouraged me to relax with the lights dimmed for the remainder of the session. I thought that was very kind and nurturing. The next session, I was able to get back to my normal exercise routine.”

Because of her nursing experience, Maureen noticed another critical patient safety-related practice in the Physical Therapy Department. “They were extremely clean,” she commented. “They were always cleaning the equipment between patients.”

Maureen especially appreciated the convenience of the LMH Physical Therapy's location. “It is located just several minutes from my house, and I could park just outside the door.

How much more convenient can you get? It would have been very painful for me to sit in a car for an additional 20 or 30 minutes to travel to Columbus,” she remarked. “I have been telling everyone that it just makes more sense to go to LMH for their care. The research shows that in many instances, the care is better at a community hospital, and the staff gets to know you.”

Maureen reported significant improvement with her back symptoms following the first week of physical therapy. At the end of her fifth week, Matt re-assessed Maureen's body

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## Antibiotic-resistant Infections a Result of Antibiotic Misuse



Kevin J. Finley, M.D.

Widespread development of the antibiotics

sulfa and penicillin in the 1930s and 1940s was an advancement for healthcare workers and patients who previously had few tools to combat bacterial infections. Penicillin is credited for saving the lives and limbs of countless American soldiers during World War II by treating and preventing infections in battleground wounds.

Penicillin treats a narrow spectrum of microbial infections, so throughout the following decades, medical researchers developed penicillin-related antibiotics, such as ampicillin, flucloxacillin, dicloxacillin and methicillin that were more effective in treating a wider range of infections. However, in 1968, patients at a hospital in Boston experienced an outbreak of staph infections that were resistant to treatment with methicillin. Other bacterial infections

also have developed resistance to the antibiotics that previously were used to treat them. The Centers for Disease Control and Prevention (CDC) reports that each year, at least 2 million patients in the U.S. become infected with bacteria that are resistant to antibiotics, and more than 23,000 patients die each year from those infections. The CDC considers antibiotic-resistant bacteria to be among the world's most pressing public health threats.

One of the most well-known antibiotic-resistant bacterial

infections is methicillin-resistant *Staphylococcus aureus* (MRSA). MRSA infections are difficult to treat because they are resistant to many of the antibiotics that are available. MRSA infections can be contracted through common daily activities or in a hospital setting and can be deadly in some cases.

The emergence of antibiotic-resistant bacteria is largely

attributed to the misuse and overuse of antibiotics. Penicillin was commonly thought of as a “miracle drug” in the 1940s and consequently was used extensively to fight bacterial infections and prescribed for an assortment of inappropriate uses – such as prevention of complications from viral infections. In many cases, patients with bacterial infections felt so much better after a few days of antibiotic doses that they discontinued use instead of taking the full duration. This misuse allowed the stronger bacteria to multiply and develop into antibiotic-resistant strains.

Kevin J. Finley, M.D., of Licking Memorial Hospital's

Emergency Department (ED) commented, “We still have patients today who expect to receive an antibiotic prescription for a cold or other viral infection because that was often the practice in the past. In reality, the antibiotics had no benefit in those cases, and the patients would have recovered just as quickly without the medications. It is in the best interest of the patient and future generations to prescribe antibiotics only when medically indicated. Physicians in LMH's Emergency Department and Urgent Care facilities follow the CDC's guidelines for antibiotic use. This will help to assure that our current antibiotic options remain effective against bacterial infections.”



## Licking Memorial Health Systems

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Please take a few minutes to read this month's report on **Patient Safety**.

You'll soon discover why Licking Memorial Hospital is measurably different ... for your health!

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# Quality Report Card

## Licking Memorial Health Systems

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## Health Tips – Antibiotics Are Not Always the Answer

The Centers for Disease Control and Prevention offers the following facts about appropriate antibiotic use.

- **Antibiotics can be life-saving drugs when used appropriately.** Using antibiotics wisely is the best way to preserve their effectiveness for future bacterial illnesses.
- **Antibiotics are effective in treating only bacterial infections, not viral infections.** For patients with viral infections, such as a cold, a physician or pharmacist will be able to advise about symptom relief, which may include over-the-counter medications, a humidifier, or warm liquids.
- **Some ear infections do not require an antibiotic.** A physician can determine what kind of ear infection a patient has and whether antibiotics will help. The physician may follow guidelines to wait a couple of days before prescribing antibiotics.
- **Most sore throats do not require an antibiotic.** Only 1 in 5 children seen by a physician for a sore throat has strep throat, which should be treated with an antibiotic. The physician can confirm strep throat by performing a test.
- **Green mucus is not a sign that an antibiotic is needed.** As the body's immune system fights off infection, mucus can change color. This is normal.
- **There are potential risks when taking any prescription drug.** Antibiotic use can cause complications, ranging from an upset stomach to a serious allergic reaction. The physician will weigh the risks and benefits before prescribing antibiotics.