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Diabetes Management at LMH

Nearly 1 in 10 Licking County residents has been diagnosed with diabetes. Licking Memorial Health Systems (LMHS) provides comprehensive diabetes care and education through the Medication Therapy Clinic, the Diabetes Education Center and two Wellness Center locations – all of which collaborate to ensure that patients access the resources they need.

The importance of managing diabetes cannot be overstated. Unmanaged diabetes significantly increases the risk for a variety of health concerns, including cardiovascular disease and stroke, as well as damage to the nerves, kidneys and eyes. Diabetes care at LMHS features education, training and careful monitoring, in order to empower patients and encourage proactive selfmanagement. A variety of health professionals - including pharmacists, dietitians, registered nurses, personal trainers and social workers – help to ensure a multifaceted approach to diabetes management, with an emphasis on healthy lifestyle improvements.

These LMHS care providers work to improve the daily lives of Licking County patients, with a focus on patient comfort and satisfaction. This means that, in addition to receiving proper medication therapy, patients also have the opportunity to improve their understanding of their condition and to learn about healthy diet and exercise habits in a judgment-free setting. Providers also work to address indirect factors - such as a lack of transportation – which may prevent patients from accessing diabetes care.

The Medication Therapy Clinic at Licking Memorial Hospital (LMH) is designed to

educate patients and their family members regarding proper dosage and signs of complications, monitor patient progress and recommend medication adjustments as needed. Insulin management at the Medication Therapy Clinic is directed by I-Tsyr Shaw, M.D., of Licking Memorial Endocrinology, with the support of clinical pharmacists, registered nurses and dietitians - all of whom have demonstrated competency in insulin management.

During each visit, patients have the opportunity for one-on-one conversations with the providers regarding their diabetes care. Pharmacists provide education on diabetes medications and blood glucose monitoring. Dietitians provide education regarding meal planning and counting carbohydrates, in addition to reviewing the dietary needs of each patient and making personalized recommendations for improvements. Each patient of the Medication Therapy Clinic also may use their smart phone to enter information about their diet and physical activity, which can be sent to the Clinic electronically along with their glucometer readings. Pharmacists at LMH then review the results and make insulin adjustments as needed.

The closely-monitored patient care provided by the LMH Medication Therapy Clinic has had a significant and positive impact on patients with diabetes. On average, patients experience a 0.8 percent reduction in HbA1c (glycated hemoglobin) levels over a three-month period. Studies have indicated that such a reduction is associated with a 45 percent decrease in the risk of cardiovascular death.

The Diabetes Education Center also offers a variety of one-on-one services for individuals with diabetes, including selfmanagement skills, insulin instruction, and education regarding carbohydrate counting, healthy food options and nutritional label reading. Diabetes educators also encourage patients to visit the Medication Therapy Clinic and the Wellness Center in order to further improve their diabetes management.

In addition, diabetes education classes are offered in a group setting, and provided by a pharmacist, a dietitian and a nurse. The comprehensive series of four classes helps patients to understand how diabetes effects their bodies. The benefits of blood glucose monitoring are discussed, and patients learn how various diabetes medications work. The curriculum is focused on the seven Self-Care Behaviors[™] of the American Association of Diabetes Educators: healthy eating, being active, monitoring, taking medication, problem solving, reducing risks and healthy coping.

Individuals with diabetes also are encouraged to take advantage of the Licking Memorial Wellness Centers, located at C-TEC and on Tamarack Road in Newark. Both locations offer treadmills, ellipticals, NuSteps, stationary bicycles and arm bicycles, in addition to a variety of free weights and other weightlifting equipment. Patients appreciate the safety and security of exercising at the Wellness Center. In addition, they may ask questions regarding their diabetes management rather than waiting for a scheduled appointment. Wellness Center staff can consult with pharmacists, dieticians and social workers as needed.

Diabetes Management at LMH (continued on back)



In the spring of 2015, Joe Joyce started having migraines. To ensure maximum enjoyment with his family's upcoming trip to Disney World, he began taking migraine medication and felt relief. During their vacation, Florida temperatures soared; therefore, Joe did not consider his unquenchable thirst and dry mouth unusual. He reasoned that it was just the heat or perhaps the migraine medicine, and disregarded the symptoms. What he did find unusual was his frequent urge to urinate, which actually became a running joke among his family who lightheartedly teased him, noting that he should get checked out after vacation. About three weeks after returning home, he experienced yet another unusual symptom that convinced him to visit a physician. He began using a new pair of contacts and his vision was blurry. Thinking that he had accidentally mixed up the two boxes and put the wrong prescription contact in the wrong eye, he visited his eye doctor who asked him when he had last received a blood glucose level test. Joe could not remember and admitted that he did not frequent the doctor's office as much as he should. After talking with a friend – an Emergency Department physician – who also suggested the test, Joe decided it was time.

"I went to the Granville Urgent Care where they performed a fasting blood glucose test. My blood sugar was 301 and my A1C was 13.3 percent," said Joe. A normal fasting (no food for eight hours) blood sugar level is between 70 and 99 mg/dL. A normal A1C test is equal to or less than 6.4 percent. "The Urgent Care staff kept asking me how I felt and I thought I felt just fine. When I later learned that an A1C level of 14 percent is dangerously high, I understood why they kept asking me how I felt. Months after,

Patient Story – Joe Joyce

when my numbers began to return closer to normal, I realized how badly I really had been feeling," he explained.

Joe was referred to I-Tsyr Shaw, M.D., of Licking Memorial Endocrinology, who immediately helped him begin to control his diabetes with medication. He was diagnosed with Type 2 diabetes, the most common form of the disease, affecting 90 to 95 percent of people with diabetes. In Type 2 diabetes, the body is resistant to the action of insulin, meaning it cannot use insulin properly, so it cannot carry sugar into the cells. Although the body produces some insulin, it is not enough to overcome this resistance.

Diabetes in and of itself causes no symptoms - the health conditions caused by diabetes, such as high blood sugar levels, are the primary cause. Diabetes often can go unnoticed because affected individuals, such as loe, are not aware of the changes associated with the condition. The radical vision change proved to be the most challenging symptom that Joe experienced. "It was unbelievable how my sight would change from day to day. For a period of time, it actually improved. I have been basically blind since I was 10 and at one point, I didn't even need to wear a contact in one eye," he described. For two months, he adapted daily to his varying sight. "My eye doctor is a super guy. He was so accommodating and provided me with numerous trial pairs of contacts to support my daily changes," he added.

Joe received a consultation from Licking Memorial Hospital Community Case Management dietitian Annmarie Thacker. "She was fantastic!" said Joe. "She totally changed the way I thought about eating and was the biggest help to me in this process. When they told me I was diabetic, my first thought was that I could never eat anything with sugar ever again. I did what most people probably do and bought diet pop and sugar-free items," he explained. "Annmarie helped me understand that it is not really what you eat, but how much you eat," Joe continued. "She helped me learn what I was allowed to eat, as well as how to

count carbohydrates," he said. Those with diabetes are allowed 60-75 carbohydrates per meal. "I have been a pop drinker for a long time and there are 45-50 carbs in one can. Simply eliminating soda from my diet, made a huge difference," Joe said. In the first three to four months, he lost 35 pounds and has been able to keep it off. "I had never really paid attention to what I ate before. Now that I study the labels and ingredients, it is surprising to learn what we put into our bodies," he noted. Joe also was provided a booklet that included meal preparation information and healthy recipes.

Next, he took a four-week diabetic class with other patients. Joe learned that incorporating a healthy diet and an active lifestyle would start him on the road to recovery and help control his symptoms. Topics included additional diabetes signs and proper foot care. Joe admits he was very fortunate that his diabetes was diagnosed when it was, despite the glaring symptoms he overlooked. "I was astounded at how many people are diabetic and don't even realize it," Joe commented. Like many, his lifestyle did not reveal evidence of risk factors. An estimated 26 million Americans have diabetes, and about 7 million of them have not yet been diagnosed.

Six months after his first visit, Joe returned to Dr. Shaw. His A1C was 5.7 percent, which he had lowered by more than half. "I felt so much better, my mood had improved and I was more energetic," Joe said. "I drastically had changed my daily meals and was working hard at my exercise routine. I was walking previously, but not as much as I should have been. My goal now is to walk a mile a day, 6 times a week." At his most recent visit, Joe's A1C had lowered again to 5.4 percent and Dr. Shaw was able to reduce his medication.

Fortunately for Joe, his diabetes has not affected his work life too much. He is a guitar teacher and part-owner of Guitar Guys in Heath. "It is really scary to think about how high my blood glucose levels were and that I could have been headed

Diabetes 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.

Much of the care diabetes patients receive takes place in the outpatient or physician office setting. The physician offices of Licking Memorial Health Professionals (LMHP) measure the most critical indicators for diabetes.

| | LMHP 2013 | LMHP 2014 | LMHP 2015 | National |
|--|-----------|-----------|-----------|---------------------------|
| LMHP diabetes patients receiving eye exam | 67% | 66% | 63% | 58% ⁽¹⁾ |
| LMHP diabetes patients having HbA1c test | 96% | 96% | 96% | 88% ⁽¹⁾ |
| LMHP diabetes patients having lipid profile | 95% | 93% | 93% | 83% ⁽¹⁾ |
| LMHP diabetes patients having microalbuminuria test | 90% | 90% | 88% | 84% ⁽¹⁾ |
| LMHP diabetes patients having foot exam | 90% | 90% | 89% | 80% ⁽²⁾ |

While having the testing done is important, the test results (or outcomes) indicate how well the physician, in collaboration with the patient, is managing the diabetes. The hemoglobin A1c (HbA1c) test is a simple lab test that shows the average amount of sugar (also called glucose) that has been in a person's blood over an extended period of time.

| | LMHP 2013 | LMHP 2014 | LMHP 2015 | National ⁽¹⁾ |
|---|-----------|-----------|-----------|-------------------------|
| LMHP diabetes patients with HbA1c less than or equal to 7% | 59% | 58% | 59% | 38% |
| LMHP diabetes patients with HbA1c less than or equal to 8% | 79% | 75% | 78% | 59% |

People with diabetes are at high risk for heart disease. An elevated LDL ("bad") cholesterol test reveals if an individual has unhealthy fat levels, which increase the risk for heart disease, a very serious complication of diabetes.

| | LMHP 2013 | LMHP 2014 | LMHP 2015 | National ⁽¹⁾ |
|--|-----------|-----------|-----------|-------------------------|
| LMHP diabetes patients with LDL less than or equal to 100 mg/dL | 67% | 69% | 67% | 48% |

The Community Case Management (CCM) program at Licking Memorial Hospital (LMH) provides services to people in the community with diabetes. The American Diabetes Association recommends that a person with diabetes should have an HbA1c blood test at least every six months to monitor glucose levels. LMH staff members work closely with patients and their physicians to ensure that this test is performed as recommended in order to manage each patient's condition better.

| | LMH 2013 | LMH 2014 | LMH 2015 | Goal |
|---|----------|----------|----------|------------------|
| CCM diabetes patients who obtained an HbA1c test | 100% | 99% | 100% | Greater than 80% |

5.

Licking Memorial Hospital offers special classes and services for people with diabetes. Certified diabetes educators, registered nurses, dietitians and pharmacists provide one-on-one education to patients and work closely with them to set their own meaningful personal goals for improving their health and well-being.

| | LMH July 1, 2012 thru June 30, 2013 | LMH July 1, 2013 thru June 30, 2014 | LMH July 1, 2014 thru June 30, 2015 | Goal |
|--|---|---|---|------------------------------|
| Goals met by diabetes education graduates – within six months | 90% | 91% | 94% ⁽³⁾ | Greater than or equal to 80% |

Data Footnotes: (1) Average of reported Commercial Medicare and Medicaid/HEDIS measures. (2) National Committee for Quality Assurance – NCQA Diabetic Recognition Program. (3) Results reflect feedback from 83% of program participants successfully contacted six months after completing the Diabetes Education program. 17% of patients could not be reached for comment.



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Diabetes Management at LMH (continued from front)

Wellness Center staff monitor each patient's blood glucose, as it must fall between 100 mg/dL and 300 mg/dL in order to exercise safely. Juice and light snacks are available for those whose blood glucose levels are too low. Water also is provided, meaning that patients do not need to bring anything with them to the Wellness Center. In addition, personal trainers are available to recommend alternative exercise options for patients with concerns such as back pain or difficulty balancing.

It is imperative for patients to learn how to achieve and maintain effective diabetes management. By providing comprehensive, coordinated care, LMHS helps to ensure that patients access the resources they need. Individuals who are interested in these diabetes resources should contact their primary care physician.

Patient Story - Joe Joyce (continued from inside)

for a stroke or heart attack. I am very grateful for all the help and support I have received from the LMH staff," Joe said. "This program is well worth it. I have recommended it to a lot of people already and will keep doing so. It is amazing! If you do what they suggest, it works. You will see improvement and be OK. I am proof," he concluded.

The two board-certified physicians at Licking Memorial Endocrinology provide care for patients with glandular disorders, such as diabetes, metabolic disorders, thyroid disease, pituitary and adrenal abnormalities and osteoporosis. Dr. Shaw and Sara J. Healy, M.D., are accepting new patients with a physician's referral. To make an appointment, please call Dr. Shaw at (220) 564-1740, or Dr. Healy at (220) 564-7950.

Health Tips – Reading Food Labels for Good Blood Sugar Control

The U.S. Food and Drug Administration has set standards for the disclosure of nutrition facts on commercially prepared food products. This labelling is vital to helping patients with diabetes make good food choices for optimum blood glucose control, but many individuals are confused by the information. Here are some helpful tips to understanding food label information:

Serving size – Be sure to consider the serving size when calculating the product's nutritional value. The manufacturer's serving size of a food product may not match the amount that you consume. For example, a popular box of stuffing mix reports that a ½ cup serving contains 110 calories, but you will consume 220 calories if you up-size the serving portion to 1 full cup.

Servings per package – Some product packaging is confusing. For example, one brand of condensed chicken with rice soup reports that a serving contains 14g of total carbohydrates; however, the label states that the can holds 2.5 servings. If you eat the entire can's contents, you will be consuming 35g of carbohydrates.

Total carbohydrates – This item is especially important to patients who are counting carbohydrates to control their blood glucose levels. The total carbohydrates calculation includes all types of carbohydrates – sugar, sugar alcohol, complex carbohydrates, and fiber.

Percent daily values (PDV) – This number shows how much a serving of the food product will fulfill your body's nutritional requirements, which are called recommended daily allowances (RDA). For example, a 10-piece chicken nuggets serving from a popular fast food restaurant contains 30g of total fat, which is 23 percent (nearly one-fourth) of the 65g of fat that are recommended for the entire day.

The RDAs are based on a 2,000-calorie diet, so you may need to adjust them if you consume more or less than 2,000 calories per day. You can still use the label's PDV as a guide to determine whether a food product is high or low in specific nutrients. Please note, the RDA and PDV for carbohydrates that are stated on a product's label may not be applicable to patients with diabetes who limit carbohydrates as part of their blood sugar control strategy.

Licking Memorial Health Systems 1320 West Main Street Newark, Ohio 43055

Visit us at www.LMHealth.org.

Please take a few minutes to read this month's report on **Diabetes Care.** You'll 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) 564-1572 to receive future mailings.

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