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UNPLANNED HOSPITALIZATIONS FOR CONSUMERS – *Can These Be Reduced?* August 2010

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MEORC/IA

I recently attended an in-service program by the Ohio Department of Developmental Disabilities regarding MUI Rule Training and many areas of MUIs were addressed. The training addressed findings of a recent ODJFS report. One, of particular interest to me, (near and dear to my heart) was the subject of unplanned hospitalizations for our consumers. The information identified that there were 3,794 unplanned admissions for our consumers in (all counties) Ohio in 2009.

As a nurse, I truly believe that the best way to reduce hospitalizations is by educating consumers, providers, and caregivers on managing one's care at home and practicing preventative medicine. After all, who can have more of an impact on providing better care than the consumer or his/her caregiver? If we continue to provide information on observation of patient symptoms, causes of illness, and consistency of out-patient medical care, it IS possible to reduce some of our admissions or prevent hospital readmissions. DODD/ODJFS has identified "The Elite 8" as the primary reasons for hospitalizations. Due to limited space, I will address only the top four diagnoses:

1) PNEUMONIA/INFLUENZA CATEGORY:

What is it? Even though this category encompasses influenza (flu), most consumers are not admitted for the flu but for accompanying complications such as dehydration secondary to vomiting or diarrhea. However, pneumonia is the absolute most common diagnosis for admissions. Pneumonia is an inflammation of the lungs, usually due to an infection with bacteria, viruses, or other pathogenic organism. In the U.S. alone, 4,500,000 persons contract pneumonia each year. It can affect one or both lungs or settle in the base of the lungs. Community-acquired pneumonia implies a lung infection that develops in non-institutionalized patients; nosocomial pneumonia develops in hospital or nursing home patients (caused by negative rods or staph. species). Aspiration pneumonia results from inhalation of gastric contents/food/other substances in patients with swallowing issues (dysphagia) or loss of a gag reflex.

Who is at risk? Those at risk for pneumonia are the elderly, infants, diabetics, patients with renal (kidney) failure, those that are malnourished, patients with liver cirrhosis, smokers, patients with AIDS, those in a weakened condition (due to underlying respiratory disease, heart condition, or cancer), and those with immunosuppressive illnesses. Patients having surgery are at risk for pneumonia, due to the process of intubation during general anesthesia (this may result in disease-causing germs entering the lungs).

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What are the symptoms? The symptoms may vary due to different types of pneumonia, but generally you can expect to see some of the following respiratory-related symptoms: persistent cough, productive cough (with mucous), fever (can vary in range), shaking chills, shortness of breath, exhaustion, chest pain, paleness of bluish discoloration of lips/nails/extremities (not enough oxygen circulating), and shallow respirations. Not all patients will experience all of the symptoms. An elderly patient may exhibit confusion or an altered mental status, and not act in their usual manner.

How is it preventable? The first line of defense in preventing ANY infection is.... proper hand-washing (30 seconds with warm, soapy water). This absolutely cannot be stressed enough! Teach children, patients/consumers to cough or sneeze into their upper arm/elbow area (instead of hands); use an alcohol-based hand sanitizer if hand washing is not available. Avoid contact with public surfaces with hands whenever possible (use paper towels on doorknobs/faucets). Use an appropriate respirator (face mask) if you know you will be around those who have been ill. Avoid large crowds if you can.

Ensure that consumers get a pneumonia vaccine (pneumovax), which effectively prevents many forms (not all) of strept. pneumonia. It is recommended for ages 2-64 for patients with chronic respiratory, cardiac, neuromuscular diseases, diabetics, and those with kidney failure. It is recommended for all over the age of 65 (a second dose can be given if the patient has had one before age 65 but not within the past five years). No one should get more than two doses (www.vaccineinformation.org). Its safety has not been determined in pregnant women. When in doubt, consult a physician.

A note on antibiotics: Antibiotics are prescribed for pneumonia and MUST be taken as prescribed. For example, if an antibiotic is prescribed twice daily, this means that it should be taken every 12 hours (around the clock) in order to maintain the serum levels to continue fighting the infection. An example of how NOT to take them is if you would take one at 10 a.m. and the second dose at 7 p.m. – this is NOT effective dosing. If antibiotics are prescribed, take them for the full time period advised; do not save any in case you may need them for a future illness. This can result in a recurrent infection, as the first infection was not treated thoroughly. If a patient is being treated for pneumonia at home and does not have an improvement in symptoms (decreased cough, fever, etc.) after 2-3 days, the physician should be contacted. The antibiotic may need to be changed or the consumer hospitalized to receive IV antibiotics. A viral infection does not require the use of antibiotics.

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Prevention of aspiration pneumonia can be accomplished by adhering strictly to the diet prescribed by the physician (for example, consumers may require an altered consistency in their diet to avoid choking episodes, such as a pureed or ground diet). After meals or drinking, consumers should sit in an upright position (30-45 degree angle) for 30-45 minutes (no lying down) to avoid aspiration (this position is also helpful in reducing acid reflux). Consumers should not be fed or permitted to drink when they are not fully alert, as this may result in aspiration. If a patient/consumer has a seizure, he should be rolled onto his side to prevent aspiration of saliva and to maintain an open airway.

2) INFECTION CATEGORY:

What is it? This is a very broad category and encompasses ALL types of infection. In my experience, our consumers are most often treated for infections related to the urinary tract and I will focus on this. A urinary tract infection (UTI) is an infection of the kidneys, ureters, or bladder by microorganisms that either ascend from the urethra (95% of causes) or spread to the kidney. Any infection will typically result in some type of fever (high or low-grade) and patients may or may not have a white cell count elevation (labwork). Their urinalysis (urine specimen) will appear abnormal prompting the physician to order a “urine culture” to identify the type of bacteria is causing the infection in order to prescribe the appropriate antibiotics.

Who is at risk? It is more common in females due to the length (shorter) of the urethra. Urinary infections commonly occur in otherwise healthy individuals with prostatic hypertrophy [males] or bladder outlet obstruction, children with congenital anatomical abnormalities of the urinary tract, or patients with indwelling catheters. The bacteria, E. coli, accounts for 80% of all UTI’s. Sexually active women are at risk (due to diaphragm use and failure to urinate after intercourse). Diabetic patients are at risk for urinary infections. 7 millions patients in the U.S. are treated for UTI’s each year.

What are the symptoms? Young patients may have pain or burning on urination, frequency or urgency (or both), change in appearance of the urine (darker/discolored), or low-grade fever. Older patients may have fever, confusion/altered mental status, or a coma if they become septic. It is likely that the elderly will not experience any symptoms of burning, etc. UTI’s are treated with antibiotics (see prior information on antibiotics).

How are urinary infections preventable? Again, proper handwashing is always the first line of defense (see prior information). Avoid the use of bladder catheters (Foley/indwelling) when possible. Consumers should be taught the above symptoms of a urinary infection and encouraged

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to report symptoms to caregivers. Drink six to eight glasses of water daily; some believe that cranberry juice also promotes urinary health. Females should be taught to empty the bladder before and after intercourse; the anal area should be cleansed from front to back to prevent carrying bacteria back to the urethral area. Avoid tight clothing.

3) SEIZURES:

What are seizures? A seizure is the response to the abnormal electrical discharge in the brain. Seizures can range to occurring multiple times during the day or may not recur for years. Some seizures can be controlled with one anti-convulsant medication; others require more than one medication for control.

Who is at risk? Many of our consumers have a diagnosis of seizures either related to congenital factors or traumatic brain injury. Some other causes may be: infection, fever (in children/infants), metabolic disturbances, those experiencing inadequate blood flow to the brain (stroke, brain tumor, hemorrhage), low blood levels of sodium, calcium, glucose, magnesium, high levels of glucose or sodium, heatstroke, meningitis, adverse reactions from drugs, near drowning, and alcohol intoxication. Two-thirds of people experiencing a seizure never have another.

What are the symptoms? What occurs during a seizure depends on the area of the brain involved. There are many types of seizures ranging from a grand mal seizure/tonic-clonic seizures (full body jerking, teeth clenching, loss of consciousness) to petit mal seizures where the individual may experience only staring spells or eyelid fluttering. A typical seizure may last from 2-5 minutes and the person may be drowsy after (this is referred to a post ictal state) and want to sleep for several hours.

Status epilepticus is a true medical emergency as the seizure does not stop, causing intense muscle contractions, an inability to breathe properly, and widespread electrical discharge in the brain. 911 must be called. The person can sustain permanent damage or die if emergent medical treatment is not given.

How are seizures prevented? Adhering to the prescribed anti-convulsant medications are of primary importance with frequent monitoring by a Neurologist (specialist in the study of Neurology). Avoid situations that are known to cause seizures, based on the individual's history. The following have been known to precipitate seizures: flashing lights/strobe lights, crowded/noisy environment, stress, lack of sleep, situations that may increase body temperature (hot shower, hot

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weather, hot tub), video game noise, or repetitive sounds.

Vagal nerve stimulation (VNS): this is a device for seizure control and is implanted under the skin. It works by sending impulses of electrical energy to the brain via the vagus nerve. After implantation, the Neurologist programs the timing/impulses according to needs. The person is usually unaware of it operating. A special magnet device can be held near the site to stop the seizures. Those who have auras (warning prior to a seizure) such as a certain smell or taste, can activate the device at the time of the aura to help stop the seizure. The goal is seizure control.

What to do if a seizure happens: Roll the person onto their side to avoid choking on saliva and place pillows or blankets around the head to prevent injury. Move obstacles that may injure the person. Do NOT attempt to place your fingers inside the person's mouth. Never leave a person alone during a seizure. The goal is to ensure that the person is breathing and to protect from injury; breathing assessment may be difficult due to teeth clenching and muscle contraction.

Documentation: Many group homes/facilities use a seizure log and this is a great tool for tracking seizures; it is helpful to Neurologists to determine the trend of seizures so that appropriate medications can be prescribed or adjusted. If this is not available, make note of: (a) the date, time, and duration of the seizure, (b) the areas of the body that are affected, (c) note if the person becomes incontinent of bowel or bladder, (d) note what occurred before (triggers?) and after the seizure; (e) was the person sleepy or confused after (post ictal state), and (f) note if the person has a VNS and if the device was used/swiped. Continue to monitor their vital signs (pulse, BP, respiratory rate, temperature) if able and oxygen saturation level (if able) to assess for stability.

When to call 911: Some physicians have protocols to be followed within the home and will request that 911 be called if the individual exceeds a certain number of seizures within a given timeframe – follow these protocols. Some physicians will order the medication, Diastat, given if a seizure lasts greater than five minutes.

Call 911 in the following situations: (a) seizure lasting more than five minutes (some information lists this as little as two minutes) and is not controlled by Diastat, (b) if the airway becomes compromised and the person is not breathing appropriately, (c) if this is a first seizure for the person, (d) the person experiences continuous seizures (status epilepticus) that are not stopping, or

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(e) the person experiences multiple seizures with rest periods in between. As always, when in doubt, it is best to call 911.

4) CHEST PAIN:

What is it? Chest pain is discomfort in the upper abdomen, thorax, jaw, neck, or shoulders. It ranks among the most common serious complaints in Emergency Departments. A broad array of diseases and conditions may cause it, including angina pectoris or myocardial infarction (heart attack), anxiety and hyperventilation, aortic dissection, costochondritis, damaged ribs, cough, pneumonia, pleurisy, pneumothorax, embolism, or duodenitis. It may be a crushing pain, constant, intermittent, or sharp pain. When measuring pain, it is best to ask the patient/consumer their level of pain (scale of 1-10, with 10 being the most severe and 1 the least).

Who is at risk? Anyone can develop chest pain due to any one of the above conditions. However, those at an increased risk for chest pain related to cardiac disease or a myocardial infarction (heart attack) are: those with hypertension, elevated cholesterol/lipid levels, smokers, those with prior heart conditions, male gender, age, obesity, and persons with diabetes mellitus.

What are the symptoms of a myocardial infarction (heart attack)?

- Chest discomfort - Most heart attacks involve discomfort in the center of the chest that lasts more than a few minutes, or that goes away and comes back. It can feel like uncomfortable pressure, squeezing, fullness, or pain. Patients are known to describe this as a sensation of "something sitting on my chest."
- Discomfort in other areas of the upper body - Symptoms can include pain or discomfort in one or both arms, the back, neck, jaw or stomach.
- Shortness of breath with or without chest discomfort.
- Other signs may include breaking out in a cold sweat, nausea or lightheadedness. Women's symptoms may occur as shortness of breath, nausea/vomiting, and back or jaw pain, causing many women to ignore these symptoms. Do not associate chest pain as the **only** symptom of a heart attack.

How is chest pain/cardiac disease prevented? Prevention is KEY in avoiding heart disease and knowing your risk factors plays a great role in prevention. Family members with heart disease do increase your risk and you may have to work harder to prevent heart disease. Start with a complete physical with your primary physician and discuss your family's health issues, as well as your potential risk for heart disease. Then, start on a path to a healthier lifestyle including eating

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healthier, balanced meals with less fat content and more fruits, vegetables, and fiber. Exercise 30 minutes a day for most days. Avoid smoking and alcohol or limit your alcohol intake. Drink at least six to eight 8 oz. glasses of water daily.

If you are a cardiac patient and use Nitroglycerine: Your physician has likely advised you on how to use this medication. It can be a sublingual (dissolves under the tongue) dose. **Some tips:** Do not run out of this medication. Always check the expiration date to make sure that it is still effective. Keep it stored in the original container for effectiveness. Do not store near heat/cold (do not carry in chest pocket due to body warmth).

Use it as your physician has advised. Typical guidelines are that it is taken at the beginning of chest pain. After 5 minutes, repeat the dose if you continue to have pain. Repeat once more after 5 minutes if you continue to have chest pain (total of three doses). At this point, if chest pain has not resolved, 911 needs to be called. Do not attempt to drive yourself (or have your spouse drive) to the hospital.

Go by ambulance for three reasons: in a busy facility you will be given priority treatment when you arrive by ambulance (which you need in this case). If your condition deteriorates, you have trained emergency squad personnel to care for you in a crisis situation. If you drive (or spouse drives), you are endangering yourself, spouse, and other drivers.

With regards to chest pain and when to call 911/ambulance, Fairfield Medical Center (www.fmchealth.org) advises the following:

- Chest discomfort does not go away after resting/taking your chest pain medication.
- New or worsening chest pain, tightness, or discomfort lasting longer than 15-20 minutes.
- Chest discomfort accompanied by feeling lightheaded, dizzy, weak, or faint.
- Chest discomfort with sudden sweating for no reason that you know of.
- Chest discomfort with nausea or vomiting.
- New or worsening trouble breathing.
- Loss of feeling in your face, arms, legs, or sudden weakness.
- Other: you have trouble thinking clearly, seeing, or speaking. You cough or vomit blood.

The Big Picture With Relationship To Cost: The cost of health care is on the rise and many of our consumers are frequently admitted and re-admitted. Hospitals are reimbursed under the DRG/Medicaid system at a standard rate based on the diagnosis category. For example, a hospital admission for pneumonia with complications (DRG 194 for 2009) yields a payment of \$5583.

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(www.acclaimdataanalytics/drg.com). If we could decrease pneumonia hospitalizations in our 88 counties by five admissions in each county (440 cases), this would be a savings of \$2,456,520. If we could decrease these by ten admissions in each county (880 cases), this would save \$4,913,040! ..you get the picture!

SUMMARY

In summary, the purpose of this article is to educate families, consumers, provider/direct care staff, and caregivers on signs and symptoms to observe for in the hopes that early detection of illness can result in earlier treatment and decreased hospital admissions. Please share this with anyone that would benefit from the information.

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