

ICP Consultant Connection

May 2010

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LPN IV Therapy Certification Rule Changes in Ohio

In February of 2010, the Ohio Board of Nursing (OBN), added, amended, or rescinded multiple rules in the Ohio Administrative Code, (OAC-4723). One chapter of special interest to the long-term care realm is OAC 4723-17, titled; Intravenous Therapy Courses for Licensed Practical nurse. So no matter if you are an RN or LPN, please take the time to review these changes as these are rules / guidelines that are in place for nurses, developed and overseen by the Ohio Board of Nursing. Some of the rule changes include:

4723-17-01: Definitions.

- ÿ In this section, the term, "Antibiotic", was amended to be defined as; "A medication, including an anti-infective or an anti-fungal, administered to inhibit the growth of, or destroy, microorganisms in the treatment or prevention of infectious disease."
- ÿ The term, "Piggyback" was amended to read, "An intermittent or secondary intravenous infusion".
- ÿ Also in this section, make sure to know definition of the terms, "Initiate and Maintain", as they because these terms may be used differently dependent upon what type of venous line is being utilized, i.e.: Peripheral Short, vs. Peripherally Inserted Central Catheter.

4723-17-03: Intravenous Therapy

Procedures:

- ÿ (A) (3): Was amended to give the length of a catheter, reading: A Licensed Practical Nurse may not Initiate or discontinue a peripherally inserted central catheter, or any other catheter that is longer than 3 inches.
- ÿ (B) (1): The list of allowable fluids has been changed to include the combination of fluids and LPN may administer. It also has a terminology change from: central venous line or peripherally inserted central catheter, now just stating "Venous Lines". The rule reads:
 - § An LPN may Administer (maintain) the following solutions through a venous line":
 - 5% Dextrose and Water
 - 5% Dextrose and Lactated Ringers
 - 5% Dextrose and Normal Saline
 - Normal Saline
 - Lactated Ringers
 - 0.45% Sodium Chloride and Water
 - 0.2% Sodium Chloride and Water

- ÿ (B) (2): This was re-written and added, and the older version was crossed out completely. This reads as follows: "An LPN may initiate or maintain any of the solutions set forth in paragraph (B) (1) of the rule that contain vitamins or electrolytes after an RN initiates the first infusion of the solution containing vitamins or electrolytes".
- ÿ (B) (7): This has been revised to read: An LPN may place a venous access catheter, no longer than three inches in length in the hand, forearm, or antecubital space followed by the placement of a saline or heparin lock, either for purposes of intermittent infusions, or to initiate infusions of any of the solutions set forth in paragraph (B) (1) of this rule.
- ÿ (B) (8): Was added stating: An LPN may stop an infusion of blood or blood component when a complication rises. A rule that did not change which has been in place is 4723-17-03 (E) which goes over allowable procedures for a non-IV certified LPN, that has been overlooked by many RN's and LPN's and includes:
 - ÿ Verification of the peripheral intravenous solution being administered
 - ÿ Peripheral infusion site and extremity examination for possible infiltration
 - ÿ Regulating the prescribed flow rate of a peripheral intravenous solution
 - ÿ Discontinuation of a peripheral IV device
 - ÿ Performance of routine dressing changes at the insertion site of a peripheral venous or arterial infusion, PICC infusion, or central venous pressure subclavian infusion

Be proactive and stay ahead of the game by keeping up to date with the recent rule changes from the Ohio Board of Nursing. Visit the site by going to:

http://nursing.ohio.gov/Law_and_Rule.htm

Erin Clyburn BSN, RN, WCC, Nurse Consultant, ICP, Inc.
Ohio Board of Nursing Recently Adopted Rules from November 18,
2009 Public Hearing.

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Aerosolized Drug as Cornerstone for Treatment of Respiratory Disorders

Traditionally aerosolized bronchodilators have been one of the mainstays of therapeutic intervention for patients with chronic obstructive pulmonary disease (COPD). As the geriatric population grows so does the number of COPD patients. Given that a large number of older adults have arthritis and decreased lung function which impedes their ability to actuate typical inhalers, a question has arose. What would be an acceptable alternative to conventional inhalers for those who can't utilize them and when is their use appropriate?

Chronic Disease States which commonly Inhibit Conventional Inhaler Use

- **Arthritis** – robs patients of dexterity and strength in their hands and fingers
- **Carpal tunnel syndrome, peripheral neuropathy** - as a result of diabetes or B12 deficiency
- **Osteoarthritis** – The presence of chronic spinal cord compression caused by C5 and C6 osteoarthritis leading to hand muscle atrophy, severe hand pain, or lack of peripheral sensation in the digits
- **Dementia** - Patients with dementia, either Alzheimer's or non-Alzheimer's in origin will not be good candidates for self-actuation of MDIs due to a lack of reliable technique
- **Loss of muscle strength** - Even without the presence of a chronic disease or disorder, there is a normal age-related decline in muscle strength. Sarcopenia is a slowly progressive process or disease characterized by weakening muscles and strength, which normally occurs in most adults between the ages of 35 and 70.
- **Insufficient Respiratory Function** - One concern relating directly to the efficacy of an aerosol delivery is the patient's ability to take in and hold a deep breath

What Can Patients Use as Alternatives?

For many years the solution for patients unable to actuate an MDI was to give them small volume nebulizers (SVNs), either by mask or if the patient was able, by mouthpiece. A comparison of MDIs with holding chambers (MDI/HC) and SVNs demonstrated more positive characteristics in the MDI devices. The acceptance of respiratory therapy protocols by many institutions has allowed therapists to select the aerosol delivery device most appropriate for the patient. In many cases, this means providing training to the patient on the use of inhalers and spacers. Portability and adaptability of MDIs has made them popular with a large percentage of those with chronic respiratory disorders. When patients are capable of understanding and remember the correct technique for using MDIs, the therapy is generally effective.

The use of spacers and valved holding chambers has been shown to increase the amount of medication deliver to the lungs. These devices also minimize the amount of drug that impacts the oral mucosa, which can result in systemic absorption. The dilemma of which aerosol delivery device to use in certain patient populations has never been completely solved. The American Association for Respiratory Care (AARC) Clinical Practice Guidelines (CPGs) is a good reference; however newer devices have entered the marketplace since they were written.

Although giving nebulizer treatments by mask to older adults who are determined incapable of actuating an MDI is standard in many institutions, the treatment may not be all that effective. Much of the medication delivered is wasted when the patient exhales or performs a breath-hold maneuver. Interventions may include using a nebulizer with an attached reservoir bag. Increasing the volume of diluents in the nebulizer will also increase the amount of drug that is nebulized. Patients released from the hospital who are capable of actuating MDIs may be sent home with a prescription for home care to set up the patient with a portable compressor. Inhaling through the nose will decrease drug delivery as well. It is important to remember patients who aren't alert enough to use a mouthpiece are frequently not alert enough to inhale with their mouth open even when coached. In these cases it may be appropriate to increase the initial drug dosage in the SVN and monitor carefully.

Problematic Inhaler Types

Dry powder inhalers (DPIs) rely on high inspiratory flow to draw air through a dry-powder medication creating an aerosol. DPIs eliminate the problem of canister actuation, but have not been adaptable to all patient populations. Many older patients may be unable to load or activate the DPI as a result of the high inspiratory flow rates needed to deliver the aerosols. As an effort to overcome the need for hand and breath coordination, breath-actuated MDIs were designed to self actuate in response to the patient's inspiratory efforts. Patients who lack the strength needed to actuate MDIs as a result of either age or a disease process have the option to use an assistive device called the MDI Ease® available for use with Combivent® and Atrovent® inhalers. This device still requires some manipulation but allows the patient to use hand-grip strength instead of finger strength.

How Are We Treating Patients Unable to Properly Use MDIs?

Comparisons of MDIs used in conjunction with valved holding chambers and SVNs used with aerosol masks have shown the MDI/HC system delivers more drug to the lungs. The addition of a mask to the MDI/HC delivery system also compensates for lack of breath-hand coordination. Unfortunately this would not solve the problem of the patient's inability to actuate the canister. MDI/HC systems with masks are recommended by the AARC CPGs as being appropriate for patients less than three years of age who are unable to use a mouthpiece. The appropriateness for this same system in compromised elderly patients still requires additional studies.

Kevin Kellar, PharmD Candidate

B-Type Natriuretic Peptide (BNP) & Diagnosing Heart Failure

Heart failure is a significant health problem that accounts for more than 1 million hospitalizations and about 3.4 million ambulatory care and emergency visits annually. The estimated cost of these is at least \$37 million. It is often difficult to diagnosis heart failure since most of these patients also have several comorbidities which present with similar symptoms. Research is being done to determine the usefulness of b-type natriuretic peptide (BNP) in heart failure.

The use of BNP, a heart hormone, is growing clinically. It is measured in the blood as a marker for heart failure. Most often measured in emergency situations, BNP may determine whether a patient's shortness of breath is due to heart failure or due to another cause such as lung disease. The appropriate use of BNP is still being evaluated. It is thought that BNP is only useful when questioning the diagnosis of heart failure after a thorough exam. A very high BNP level (ranging 1,000-10,000 pg/mL) is strong evidence for heart failure. Otherwise, low BNP levels (<50 pg/mL) make heart failure unlikely. There is hope that BNP levels can quickly determine a proper medical diagnosis and treatment.

A limitation of BNP is that it can be altered by many things. Levels decrease in most patients whom have been taking drug therapies for blood pressure and water retention. Levels of BNP tend to increase with age and also in those with kidney disease. BNP levels tend to be lower in obese patients. Therefore these levels should be interpreted cautiously in particular individuals.

As more is being learned about the use of the biomarker BNP for the diagnosis and treatment of heart failure, major professional organizations are determining their recommendations. It is important to remember that a high BNP level of multiple thousands has more of an association with heart failure. The 2009 ACCF/AHA guidelines state that measurement of BNP can be useful in the evaluation of patients presenting in the urgent care setting in whom the clinical diagnosis of heart failure is uncertain. Still there is a lot of variation in the use of the lab throughout different institutions. An article recently printed in the *Annals of Emergency Medicine* does state that a very high BNP may be strong evidence of heart failure but otherwise it looks like it usually adds nothing except additional unnecessary cost. They feel that routine BNP testing increases cost without aiding the care of most patients.

Sara Lutz, PharmD Candidate

Long-Term Treatment With Bisphosphonates

Bisphosphonates have been proven to be beneficial in people fighting osteoporosis. However, with long-term use (more than 4 years) there can be some negative effects seen. At the 2010 annual meeting of American Academy of Orthopaedic Surgeons, information was presented as to the negative effects seen in a small study population.

Anthony Ding, a medical student from Columbia University College of Physicians and Surgeons in New York City, reported that women taking bisphosphonates for 4-5 years had an improved buckling ratio (measure of structural integrity) in the proximal femur from baseline. However, this improvement seemed to revert to baseline when used for more than 5 years. The fractures associated with long-term bisphosphonate use are not typical fractures. These fractures usually occur with little or no trauma and are slow to heal. Lisa Cannada, MD, of St. Louis University said that Ding's study and others coming to similar conclusions "are convincing that the bone architecture is affected."

Ding and co-author Melvin Rosenwasser went on to examine the structural effects of bisphosphonate treatment. They performed a retrospective cohort study consisting of 111 postmenopausal women with osteoporosis (61 had taken bisphosphonates for at least 4 years and 50 controls taking calcium and vitamin D). In the short-term group, the buckling ratio

improved 3.8% from baseline compared to the long-term group's improvement by just 1.3% from baseline. The fractures are believed to be due to loss of heterogeneity of tissue properties. When comparing the microarchitecture of bone of bisphosphonate exposed versus bisphosphonate naïve, no differences were observed. However, heterogeneities of the mineral matrix ratio and crystallinity were significantly reduced in the bisphosphonate exposed group by 28% and 33%, respectively. While these studies were presented, they have not been published in any peer-reviewed journal yet.

On the same day as these findings were being reported to the AAOS, the FDA made an announcement saying, "Bisphosphonate drugs do not seem to increase the risk of femoral fractures, though the agency will continue to evaluate that possibility." They added, "At this point, the data that the FDA has reviewed have not shown a clear connection between bisphosphonate use and a risk of atypical subtrochanteric femur fractures." The Endocrine Society has also sided with the FDA's stance on the issue. Therefore, due to the stance of the FDA and the Endocrine Society, I would recommend no change in therapeutic approach with bisphosphonates.

Matthew Swartz, PharmD Candidate
ICP-Tiffin
March 2010



ICP Consultant Connection

April 2010

1815 West County Road 54 Tiffin, Ohio 44883 • 175 Canal Street Sharpsville, Pennsylvania 16150

Important Product Information RE: Cleaning & Disinfecting Blood Glucose Meters

ICP has chosen ARKRAY as our primary provider of blood glucose meters and ARKRAY has provided this information regarding the CMS recently consolidated

F Tags 441, 442, 443, 444, and 445, into a new, revised F Tag 441. This is reflected in a new CMS Manual that went into effect September 30, 2009. This new manual can be found at <http://www.cms.hhs.gov/transmittals/downloads/R51SOMA.pdf>.

CMS states in their new manual that “resident-care devices (glucose monitoring devices) may transmit pathogens if devices contaminated with blood or body fluids are shared without cleaning and disinfecting between uses for different residents” and “properly clean and disinfect or sterilize reusable equipment before use on another person”. Per the same document, surveyors are instructed to observe that meters dedicated to a specific resident be cleaned after use or cleaned and disinfected after use between multiple residents.

Below is a list of common questions ARKRAY heard from those reviewing this guideline and their interpretation of these guidelines. They recommend reviewing the CMS Manual to understand the guidelines prior to implementing or making any changes to your policy and procedures surrounding cleaning and disinfecting blood glucose meters.

Can blood glucose meters be shared between residents?

It is our interpretation that “yes”, blood glucose meters can be shared between resident uses.

Both the CMS Manual and CDC Report “Transmission of Hepatitis B Virus Among...” provide direction to clean and disinfect meters between resident use. Though there are also statements in both that mention meters for individual use, there is clear direction on how to use one meter between multiple residents.

Do blood glucose meters need to be cleaned AND disinfected?

It is ARKRAY’s interpretation that “yes” if the meter is for multiple use and “no” if the meter is for individual use. I

The CMS Manual states “resident-care devices (glucose monitoring devices) may transmit pathogens if devices contaminated with blood or body fluids are shared without cleaning and disinfecting between uses for different residents” and “properly clean and disinfect or sterilize reusable equipment before use on another person”. Per the same document, surveyors are instructed to observe that meters dedicated to a specific resident be cleaned after use or cleaned and disinfected after use between multiple residents.

Can cleaning and disinfecting be combined into one step?

There are products available on the market that can both clean and disinfect. ARKRAY recommends using the Sani-Cloth® wipes manufactured by Professional Disposables International, Inc (PDI) to both clean and disinfect surfaces. If a surface is heavily soiled though, PDI recommends using 1 wipe to clean off visible soil and a 2nd wipe to disinfect the surface. The first wipe takes off the physical, protein material so then proper disinfection can occur on microorganisms left on the surface of the device. The quaternary ammonium chlorides (quats) do act as a cleaner and their action along with alcohol also provide for disinfection. See specific wipe product sheets for additional information.

What is the difference between using one meter per resident vs. one meter per multiple residents?

If a meter is used per individual patient, there must be an established protocol to clean meters after each use. In addition each meter would be subject to QC protocols (i.e. running control solution tests daily). If a meter is used on multiple residents, there must be an established protocol to clean and disinfect meters between use. As a reminder there are commercially available wipes that both clean and disinfect, making this one step.

Does this topic only apply to blood glucose meters?

See F Tag 441 Page 2

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No. F Tag 441 is geared towards establishing an infection control program and preventing the spread of infection. All equipments that reside in the LTC environment (thermometers, blood glucose meters, handrails, etc) are subject to cleaning, disinfecting, and/or sterilization. The facility needs to establish a policy and procedure that address this topic and how each piece of equipment that comes is handled.

ARKRAY is in support of these guidelines and has established the following guidelines for cleaning and disinfecting:

- ARKRAY Cleaning Guidelines: To clean the outside of the blood glucose meter, use a lint-free cloth dampened with soapy water or isopropyl alcohol (70% - 80%).
- ARKRAY Disinfecting Guidelines: To disinfect the meter, dilute 1 mL of household bleach (5%-6% sodium hypochlorite solution) in 9 mL of water to achieve a 1:10 dilution (final concentration of 0.5% - 0.6% sodium hypochlorite). The solution can then be used to dampen a paper towel (do not saturate the towel). Then use the dampened paper towel to thoroughly wipe down the meter. Please note that there are commercially available 1:10 bleach wipes from a variety of manufacturers.
- The following products are also acceptable disinfectants for use on meters:
 - γ **Super Sani-Cloth® & Sani-Cloth® HB Germicidal Disposable Wipe.** These products are pre-moistened towelettes manufactured by Professional Disposables International, Inc (PDI). They are readily available through major medical distributors. To use these products, remove a wipe from container and follow product label instructions to disinfect the meter. Take extreme care not to get liquid in the test strip and key code ports of the meter.

ARKRAY'S solution to this topic is to establish a policy and procedure in regards to blood glucose monitoring that states:

1. Nursing staff will be properly trained on the use of blood glucose meters and safety lancets. This training will be well documented.
2. Nurses will wear gloves and follow proper hand hygiene when handling blood glucose meters and performing blood glucose test.
3. Nurses will use a single use safety lancet to obtain a blood sample.
4. Blood glucose meters will be cleaned and disinfected between multi-resident use.
 - a. ARKRAY will provide individual meters for those residents with infectious disease.
 - b. ARKRAY recommends using a PDI Germicidal Disposable Wipe to clean and disinfect your meters. This same wipe can be used to clean and disinfect other equipment and surfaces in your facility, eliminating the need to purchase multiple products.
5. Single use safety lancets will be properly disposed.
6. Blood glucose meters will be properly stored between use.

ARKRAY recommend that your policy and procedure surrounding blood glucose monitoring be manageable and properly followed.

Dangerous duo? Herbal remedies and heart meds

Herbal remedies like ginkgo biloba and St. John's wort have grown in popularity in recent years as natural treatments for everything from fatigue and depression to headache and anxiety. Yet, according to a review article published in the February 9 issue of the *Journal of the American College of Cardiology*, for patients taking certain heart medications, these centuries-old herbal remedies can introduce some dangerous modern complications. For example, heart patients on an aspirin regime or who take the blood thinner Warfarin (also known as Coumadin) may be at higher risk for bleeding if they combine those medications with ginkgo biloba. And St. John's wort, popularly used to treat sleep problems or depression, can interact with heart medications to increase the risk for arrhythmias, high blood pressure and high levels of cholesterol.

While these herbal treatments can have very real impact on the effectiveness of heart medications, because they are over-the-counter "natural" remedies, doctors don't always remember to inquire about them, and patients often leave them off the list of medications they are taking. It's this information gap that Dr. Arshad Jahangir, a cardiologist with the Mayo Clinic and an author of the review, hope to close. Jahangir suggests that misconceptions about the very real effects of so-called "natural" remedies may give people a false sense of security—one that can be particularly dangerous for elderly heart patients, who are more likely to have co-existing conditions and are already at higher risk for bleeding.

Promoting greater awareness of these potential interactions, and encouraging both health care providers and patients to compile more complete pictures of their medication regimes is key, the authors argue. Yet, so too is ensuring that doctors and medical staff know which questions to ask. Some supplements—garlic and grapefruit juice, for example—may simply seem like parts of a healthy diet, but in certain amounts can interact dangerously with heart medications. Garlic supplements, often taken to help lower blood pressure and improve overall immune system health, can increase the risk for bleeding among patients taking Warfarin, for example.

The authors don't dismiss the potential merits of herbal remedies, many of which have been used for centuries, but they do point to a need for greater education—and scrutiny. Because most herbal remedies are classified as food products, they aren't put through the trials and analysis that are standard for other medications.

http://wellness.blogs.time.com/2010/02/01/dangerous-duo-herbal-remedies-and-heart-meds/?artId=3396?contType=blog_wellness?chn=us

Proper Vaccine Refrigeration Vital to Putting Disease on Ice

ScienceDaily (Jan. 28, 2010)

Every year, billions of dollars worth of vaccines are shipped to thousands of medical providers across the country, and every year doctors must dispose of tens of millions of dollars worth of those vaccines because they became too warm or too cold while in storage.

Now, researchers at the National Institute of Standards and Technology (NIST), with funding from and in collaboration with the Centers for Disease Control and Prevention (CDC), have completed the first of a series of tests to determine best practices for properly storing and monitoring the temperature of refrigerated vaccines.

Their initial findings will be included in a CDC training video and report to be released July 2010.

To ensure they are effective, most vaccines must be kept between 2 and 8 degrees Celsius from the time they are manufactured until they are administered. In addition to the cost of spoiled vaccines that must be destroyed, lack of temperature control probably has resulted in the administering of ineffective vaccinations to the public in a small, but significant, percentage of cases.

In this first phase of a larger study, NIST researchers compared standard-sized refrigerators without freezers against smaller, dormitory-style refrigerators under a variety of conditions, storage practices and use scenarios, including leaving the refrigerator door ajar for various periods, power loss and raising the ambient temperature of the room.

The NIST Thermometry group found that standard-sized, freezerless refrigerators outperformed the smaller,

dormitory refrigerators by every measure, but the study also identified several good practices for vaccine storage. Among other things, the group determined that vaccines should never be kept on the door shelves because the relative lack of insulation in the door allowed unacceptable temperature drifts. Vaccines also should be kept away from the walls of the refrigerator, because the defrost cycle can cause the temperature of the walls to shift, and out of the crispers usually found at the very bottom of standard refrigerators because these areas were often shown to drop below 2 degrees Celsius.

In addition, they found that water bottles kept on the door shelves provided thermal ballast which helps to mitigate temperature rises caused by power failure, leaving the door ajar or raising the temperature of the room where the refrigerator is kept.

“While we don’t advocate any particular brand of refrigerator, we can say that the standard-sized freezerless refrigerators perform very well, but the dorm-style refrigerators do not and should not be used for storing vaccines,” says NIST physicist Gregory Strouse. “Among the many recommendations that we have made, we think one of the most positive upshots of this research is that medical clinics in most cases need not spend several thousand dollars on a pharmaceutical grade refrigerator simply for the purpose of storing vaccines.”

The NIST group plans to do further comparisons of standard-sized refrigerators with freezers and pharmaceutical grade refrigerators and begin evaluations of strategies for transporting vaccines overland. They also intend to study various styles of temperature sensors for use in shipping.

Dexlansoprazole Gets New Brand Name

Cheryl A. Thompson

BETHESDA, MD 04 March 2010—Takeda Pharmaceuticals North America Inc. and FDA announced today that dexlansoprazole, a proton pump inhibitor, will soon be marketed under the brand name Dexilant to prevent more dispensing errors.

Dexlansoprazole’s original brand name of Kapidex apparently sounds or looks like Casodex and Kadian. Takeda said it has received reports of dispensing errors involving those products.

Takeda’s product is the newest of the three. According to the so-called summary review of the company’s new drug application, FDA’s trade-name review team had found Kapidex to be an acceptable product name.

The new product became available to pharmacies in late February 2009.

By August, the Institute for Safe Medication Practices was alerting pharmacists to dispensing errors involving Kapidex and Casodex.

Casodex is AstraZeneca’s bicalutamide product, an androgen-receptor inhibitor.

Kadian is an extended-release morphine sulfate product by Alpharma Branded Products Division Inc.

Takeda said its dexlansoprazole delayed-release capsules will look the same as always. The National Drug Code, however, will change.

The company said it expects Dexilant to be available toward the end of April.

Contact

Web: www.icppharm.com
email: icp@icppharm.com

Ohio Main Line: 800.228.8278

Ohio Pharmacy: 877.447.5539
Fax: 800.325.9826

Business Office: 800.252.1679
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Mission Statement:

ICP is committed to exceeding our customers' and employees' expectations through quality health-care service, continuous education, and effective communication.

Oral Bisphosphonate Users May Be At Risk of Femur Fracture

Cheryl A. Thompson

BETHESDA, MD 10 March 2010—FDA today announced it has not found a “clear connection” between the use of oral bisphosphonates and a risk of atypical fractures in the bone below the hip joint.

The announcement came after two presenters at the annual meeting of the American Academy of Orthopaedic Surgeons were reported to have said their research suggested that bisphosphonates, if used for four or more years, may impair bone quality.

FDA said it is working with outside experts to gather more information about atypical subtrochanteric femur fractures in oral bisphosphonate users. The agency said it has already reviewed all the case reports and clinical trial data provided by the companies marketing alendronate sodium, etidronate disodium, ibandronate sodium, pamidronate disodium, risedronate sodium, tiludronate disodium, and zoledronic acid.

Health care professionals, FDA said, should continue to follow the recommendations in the drugs' labeling when prescribing oral bisphosphonates.

But, the agency added, health care professionals should be aware that patients taking an oral bisphosphonate may be at risk of atypical subtrochanteric femur fractures.

<http://www.ashp.org/import/news/HealthSystemPharmacyNews/newsarticle.aspx?id=3294>

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Axona®: Food for Thought in Alzheimer's disease?

By the age of 85, almost 30% of the population will develop Alzheimer's disease. This disease decreases cognition, function, and affects behavior progresses overtime and is irreversible. The exact process which causes this decline is still unknown and therefore it is more difficult to treat. Treatment options for Alzheimer's disease are limited with current therapy options only delaying the inevitable cognitive decline. Currently FDA approved treatments include medications that will increase neurotransmission in the brain (tacrine, galantamine, rivastigmine, and donepezil) and a medication that is believed to regulate glutamate in the brain which decreases the damage that excessive glutamate can cause (memantine). Medications continue to be studied in an attempt to discover a more effective treatment for Alzheimer's disease.

Medical foods are also being looked at as a potential treatment option for Alzheimer's disease. A medical food is approved by the FDA with ingredients having to be generally recognized as safe (GRAS), but does not go through the same rigorous studying for effectiveness that medications go through before

they are approved. One medical food that became available in April 2009 by prescription only is called Axona. Produced and marketed by Accera, Axona is marketed as an alternative source of energy for use by the brain and liver with the main ingredient being caprylic triglycerides. Axona is intended as a dietary supplement and not to replace medication therapy.

The study provided to support documentation for use of Axona for improvement uses the ADAS-Cog scale as a measurement for progression of Alzheimer's disease. The ADAS-Cog is rated from 0-70 with the score increasing for each missed question. On the ADAS-Cog scale, a moderate decline over 18 months is typically between two and seven points. This study looked at the decline or improvement over 45, 90, and 104 days. At 45 days, the Axona group looked favorable, but as time progressed the difference between the Axona group and the placebo group shrank to less than one point difference on the ADAS-Cog scale. This trial does not show promising hope, but Axona would need to be looked at over a longer period of time to determine if it holds a place in therapy for Alzheimer's disease.

drug, Axona does not come without side effects. Adverse reactions were mainly gastrointestinal issues including flatulence, diarrhea, and dyspepsia which decreased when it was taken with food. Additionally, Accera cautions against people taking Axona who are allergic to milk, soy, coconut oil, or palm oil. It is also not recommended for diabetics or people susceptible to ketoacidosis due to the two grams of sugar and carbohydrates contained in the product, or people with kidney or liver dysfunction.

While the jury is still out on whether Axona is truly food for thought, patients should remain on proven therapies to help decrease cognitive decline.

References:

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Cory Stewart - ONU Pharm D candidate

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In the meantime, some patients may already be taking Axona as part of their treatment plan. Although not a

Immunization Rates Among Adults Appear To Be Low

McClatchy (2/4, Goldstein) reported that data compiled by the Infectious Diseases Society of America, the “Trust for America’s Health, a nonpartisan health research group, and the Robert Wood Johnson Foundation, the largest healthcare philanthropy in the country,” indicated that immunization rates among adults are low. In fact, “millions of Americans forgo routine vaccinations for preventable diseases,” and “some 40,000 to 50,000 adults die every year as a result,” according to the report titled “Adult Immunization: Shots to Save Lives.”

This trend is especially pronounced in the elderly population, according to the Los Angeles Times (2/4, Maugh) “Booster Shots” blog. “Nationally, 33.1% of adults over the age of 65 have not received” Pneumovax, “a vaccine against the most common bacterial cause of pneumonia.” Notably, “even in Oregon, the state with the highest vaccination rate, 26.8% were unprotected.” In “California, 39% were not immunized,” and the “the only places with a worst record were the District of Columbia, where 45.6% had not been vaccinated, and Illinois, where 40.4% had not.”

As “for other diseases, immunization is even spottier,” Medscape (2/4, Lowes) reported. The rate for the human papillomavirus vaccine among “eligible adult women” was 10%, while “less than 2%” of those over 60 were inoculated against shingles, with “tetanus, diphtheria, and whooping cough” vaccination rates just as low. Speaking at a “press conference... William Schaffner, MD, chair of the Infectious Diseases Society of America’s Immunization Work Group and report coauthor, compared the state of adult immunizations to that of pediatric immunizations 30 years ago.”

There are “several reasons adults bypass their vaccinations,” HealthDay (2/4, Reinberg) reported. “In many cases, insurance does not cover the cost of vaccines,” a number of “adults believe vaccines aren’t safe or effective,” and “vaccine production methods haven’t been updated.” In light of these findings, the authors are calling for universal vaccine coverage and an increase in educational/awareness programs. They also suggest “providing government incentives for research and development of vaccines to ensure supply.” Reuters (2/5, Allen) also covers the report.

Institutional Care Pharmacy of Ohio AWARDED ACCREDITATION FROM THE JOINT COMMISSION

By demonstrating compliance with The Joint Commission’s national standards for health care quality and safety, ICP Inc. in Tiffin, Ohio has earned The Joint Commission’s Gold Seal of Approval™.

Founded in 1951, The Joint Commission is dedicated to continuously improving the safety and quality of the nation’s health care through voluntary accreditation. ICP, Inc., which provides pharmacy, respiratory and medical supplies, received the accreditation award after The Joint Commission found that it had demonstrated compliance with The Joint Commission’s national standards for home care organizations during an on-site survey in December 2009.

Achieving accreditation demonstrates ICP’s commitment to provide high quality services to our customers. ICP’s Joint Commission accreditation shows the commitment and investment in quality on a day-to-day basis. ICP strives to be the best and maintaining Joint Commission accreditation is another step toward excellence. ICP’s Ohio location has been accredited since 1997.

Accreditation is attainable only through the cooperation and communication among staff members. Everyone at ICP plays a valuable role in working to meet the standards.

Martha Somers, Performance Improvement Coordinator

Escitalopram May Help Stroke Patients Recover Some Mental Skills

The Los Angeles Times (2/2, Roan) reports, “Widely used antidepressants may help patients recover cognitive functions, such as memory skills, that are damaged following a stroke,” according to a study published in the February issue of the Archives of General Psychiatry “and funded by the National Institute of Mental Health.”

Bloomberg News (2/2, Ostrow) reports that specifically, the “antidepressant Lexapro [escitalopram] may help stroke patients recover some of their mental skills.”

The University of Iowa study found that escitalopram may “help produce new brain cells,” HealthDay (2/1, Reinberg) reported. In a study of “129 stroke patients with no symptoms of depression” who were randomized “to take either Lexapro or a placebo daily or participate in a problem-solving therapy program designed for people with depression,” investigators found that “after 12 weeks, patients taking Lexapro scored higher on tests for thinking, learning, and memory, as well as tests measuring verbal and visual memory, compared with those taking a placebo or receiving problem-solving therapy.”

WebMD (2/1, Warner) reported that “researchers say the beneficial effect of Lexapro on stroke recovery was independent of its effect on depression and suggests that the use of antidepressants in stroke treatment merits further study.” Reuters (2/2, Steenhuisen) also covers the story.

5 STAR QUALITY RATING SYSTEM - Part 3 of 3

Quality Measures Domain

Nursing home quality measures come from the RAI /MDS information generated at specific times throughout the resident's stay and is specific to each facility's residents. The data is converted into quality measures by CMS. A subset of 19 quality measures is currently being used to identify quality of care. These measures contribute to the Resource Utilization Groups, which identify levels of acuity specific to each resident in every facility & provides accurate information for reimbursement. CMS has selected 10 QMs as core measures with the highest reliability.

Quality Measures have 4 intended purposes:

- Give information about the care in nursing homes to choose a nursing home
- Give information about care in nursing home where resident currently lives
- Encourage consumers to talk to facility staff about the quality of care
- Give data to the facility to assist them with quality of care improvements

QUALITY MEASURES Ratings:

Long Stay Residents' quality measures have been increased from 10 to 14 & Short Stay Measures have been increased from 3 to 5 as of October 2009. Ratings are calculated on 19 different physical & clinical measures for facility residents based on the MDS (resident assessment instrument) submitted from the 3 most recent quarters.

Long Stay Measures use the Percentage of Clients with:

- ADL change and increased needs
- Mobility Changes and Decline
- High risk pressure ulcers
- Long Term Catheters
- Restraints
- Urinary Tract Infections
- Influenza Vaccinations
- Pneumonia—residents who received pneumococcal vaccination
- Moderate to Severe Pain
- Residents with low risk pressure ulcers
- Residents with more depression/anxiety
- Incontinence: low risk residents who lose control of their bowels or bladder
- Residents who spend most of their time in bed or chair
- Weight loss: residents who lose too much weight

Short Stay Measures (post acute care-surgery, clinical conditions, etc. with expectation for relatively quick discharge) use the percentage of clients with:

- Delirium
- Pressure Ulcers
- Moderate to severe pain in the past week
- Received influenza vaccine during the flu season
- Received pneumococcal vaccination

Ratings for the QM domain are calculated using the 3 most recent quarters for which data is available. This time period was selected to increase the number of assessments

available for calculating the QM rating, increasing the stability of estimates and reducing the amount of missing data.

Adjusted 3 quarter QM values for each of the 10 QMs used in the 5 Star algorithm calculation:

$$QM -3 qtr = [(QMq1 * Dq1) + (QMq2 * Dq2) + (QMq3 * Dq3)] :$$

QM 1st qtr, QM 2nd qtr, & QM 3rd qtr correspond to the adjusted QM values for the 3 most recent quarters & D 1st qtr, D 2nd qtr, D 3rd qtr are the denominators (# of eligible residents for each particular QM) for the same 3 quarters

Note: As of October 2009, the QM data listed on Nursing Home Compare will represent an average of 3 quarters of data. This replaces the 1 quarter of QM data previously displayed and matches the data for the 5 STAR calculation.

As indicated, CMS has specific detailed complex formulas to calculate the ratings for each domain, to identify the number of Stars each, for Health Inspections, Staffing, and Quality Measures. The Stars calculated from each domain are then calculated in the Overall STAR RATING.

CALCULATING OVERALL RATING:

- Start with Health Inspections Stars – most important, and drives the total 5 Star Rating:
 - ∇ The top 10 % of facilities (lowest 10 % in terms of health inspection deficiency score) receive 5 Star rating
 - ∇ Middle 70% of facilities receive a rating of 2 or 3 or 4 stars, based on their deficiency weighted points
 - ∇ The bottom 20 % (highest % of deficiencies) receive 1 Star rating
 - › Step 1 – Health Inspection Rating Stars:
Health Inspection Rating of the facility — # of health inspection stars previously calculated
 - › Step 2 – Staffing Rating Stars - # of staffing stars previously calculated
Add 1 Star if center has 4 or 5 Star staffing; or subtract 1 Star for 1 Star staffing
 - › Step 3 – Quality Measures Rating Stars - # of QM stars previously calculated
Add 1 Star for 5 Star QMs: or subtract 1 Star for 1 Star QMs

See "Example #1" page 4

Contact

Web: www.icppharm.com
email: icp@icppharm.com

Ohio Main Line: 800.228.8278

Ohio Pharmacy: 877.447.5539
Fax: 800.325.9826

Business Office: 800.252.1679
Fax: 800.338.8593

Medical Supplies: 877.228.8278
Fax: 800.208.6809

PA Pharmacy: 888.203.8965
Fax: 888.431.4924

Pharmacy Services:

*Subacute Care
Long Term Care
Assisted Living
Alternative Living
MRDD
Correctional Facilities*

Consulting Services:

*Consultant Pharmacists
Nurse Consultants
Respiratory Therapists
Medical Record Experts
Reimbursement Authorities
MDS Specialists
Wound Care Certified Consultants
Continuing Education Programs
Mock Surveys
Venipuncture Assistance*

Additional Services:

*Respiratory Equipment and Supplies
Medicare Part B Billing
Inventory Bar Coding Program
Enteral / Nutritional Program
Medical Supplies
Incontinence Products
Wound Care Products*

Mission Statement:

ICP is committed to exceeding our customers' and employees' expectations through quality health-care service, continuous education, and effective communication.

Continued from page 3

Example #1:

Health Inspection=3 stars; Staffing Rating=5 stars; QMs=0 stars:
 $3+1+0=4$ stars = Final Rating: 3 plus 1 plus 0 = 4 STARS

Example #2:

Health inspections=3 stars; staffing rating=1 star; QMs=0 stars
 $3-1+0=2$ stars = Final Rating: 3 minus 1 plus 0 = 2 STARS

Example #3:

Health inspections=2 stars; staffing rating=3 stars; QMs= 4 Stars:
 $2+0+0=2$ stars = Final Rating: 2 plus 0 plus 0 = 2 STARS

This is a summary of CMS Design for Nursing Home Compare-5 Star Quality Rating System: Technical User's Guide, & is most current as of October 2009.

Other websites:

www.cms.hhs.gov; www.medicare.gov/NHCompare
www.medicare.gov/Publications/Pubs/pdf/02174.pdf
www.medicare.gov/Nursing/Cneclist.pdf
www.cms.hhs.gov/NursingHomeQualityInits/Downloads/NHQIQMUsersManual.pdf

Kathleen Klepcyk, RN, ICP, Inc. Nurse Consultant