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April 2015 Issue

From the Front Lines

AlixaRx Clinical Pharmacists Address Everyday Challenges in Long-Term Care

Therapeutic Interchange

Recently AlixaRx announced the therapeutic interchange (TI) program which goes beyond the practice of substituting generic drugs. Strict guidelines regulate the use of therapeutic interchange which permits using a therapeutically similar drug to the prescribed medication with written authorization from the prescriber. To get this program underway, your AlixaRx Clinical Pharmacist (ACP) has been diligently working to help facilities obtain TI authorization letters from Medical Directors and other prescribers. Approved therapeutic interchanges will be specific for each facility, by prescriber, and by the category of therapeutic interchange authorized in the protocol. The prescriber can accept or decline any recommended pharmacy TI's for their patients. Once the completed authorization forms are turned in to the Pharmacy, any new order written for a medication on the TI list will be substituted with the indicated alternative.

Advantages of therapeutic a therapeutic interchange program includes:

- Providing a reduction in cost of the medication from a therapeutic category
- Minimizing delay in initiating therapy while managing costs to the facility or payer
- Standardization of products used within a therapeutic category with similar or better therapeutic efficacy and similar or lower side effect profiles
- Optimizing the utilization of the Automated Dispensing Unit (ADU) and Electronic Medication Cabinet (EMC) dispensing system
- Reduce the number of requests to the prescriber for order changes to a preferred medication

Pharmacy laws regulating therapeutic interchange can vary widely by region. For the states of Virginia, Nebraska, Minnesota and Missouri, who do not allow TI programs, recommendations will be made on an individual basis by the AlixaRx Clinical Pharmacist. Only new orders received by the pharmacy will be converted to the authorized substitute. AlixaRx Clinical Pharmacist will make individual recommendations to have any current existing orders changed to the appropriate approved interchange.

Once the therapeutic interchange has been made at the pharmacy, the facility will be notified that an interchange has occurred via fax to the facility. In addition, a notification will be placed in the medication delivery indicating the original medication ordered and the medication to be substituted as authorized by the prescriber. Once the nurse receives this notification, the original order should be discontinued in PCC and the new medication order should be entered on the MAR for appropriate dispensing and administration. All interchanges should be written as a telephone order and filed in the chart (signed TI on file serves as the prescribers signature).

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Fentanyl Transdermal Patches: NOT for the Opioid Naïve

The Institute for Safe Medication Practices has published several articles regarding the safe use of Fentanyl transdermal patches, yet patients are still dying from improper prescribing of this powerful narcotic pain medication to the opioid naïve. Nursing plays a crucial role in preventing this severe adverse drug reaction.

Fentanyl transdermal patches (DURAGESIC TRANSDERMAL PATCH) are indicated for the management of pain severe enough to require daily, around-the-clock, long-term opioid treatment and for which alternative treatment options are inadequate. Life-threatening hypoventilation resulting in apnea or respiratory arrest may occur at any dose of the Fentanyl transdermal patch in patients not taking chronic opioids and not tolerant to opioids. **Patients considered opioid tolerant are those who are using at least 60 mg/day oral morphine, 30 mg/day oral oxycodone, 8 mg/day oral hydromorphone, 25 mcg transdermal fentanyl/hour, or an equianalgesic dose of another opioid for a week or longer.** Hypoventilation may occur 1—3 days after the initial application or after a dose increase, coinciding with peak fentanyl concentrations. Following removal of a transdermal patch, significant amounts of fentanyl may be absorbed from the skin for 17 hours or more. Therefore, respiratory depression may be prolonged in these patients. Signs of a potential overdose include respiratory distress, shallow breathing, tiredness, extreme sleepiness, or sedation, an inability to think, talk, or walk normally, and feeling faint, dizzy, or confused.

Although many members of the medical team have a responsibility to prevent the inappropriate use of fentanyl patches, nurses are vitally important. With easy access to medical records, complete medication lists, and contact with family members regarding medication histories, nurses have the ability to determine if it is safe to administer the fentanyl patch to their patients. Prior to suggesting the use of a Fentanyl patch or entering a new order for one, nurses should check to see if the patient has been on another narcotic chronically for at least a week. If the patient is opioid naïve, the prescriber should be promptly informed prior to administering the medication.

New Vaccine Guidelines Recommend Use of 13-valent Pneumococcal Vaccine in Elderly

The Advisory Committee on Immunization Practices (ACIP) has recently updated the vaccination guidelines with a recommendation to provide the 13-valent pneumococcal vaccine (PCV-13, Prevnar13) in series with the 23-valent pneumococcal polysaccharide vaccine (PPSV-23, Pneumovax) to all adults aged 65 and over. These recommendations are based on the results of the CAPiTA clinical trial which evaluated the effectiveness of the PCV13 vaccine to prevent community-acquired pneumonia among approximately 85,000 adults aged 65 or greater whom had not been previously vaccinated for pneumococcal disease.

A summary of the new guidelines is presented below:

1. **No previous pneumococcal vaccine**

   Adults aged 65 and over who have not previously received a pneumococcal vaccine should receive a dose of PCV-13 (Prevnar-13) first. A dose of PPSV-23 (Pneumovax) should be given 6-12 months after the dose of PCV-13. PCV-13 and PPSV-23 should never be administered at the same time. The minimum acceptable time between doses of PCV-13 and PPSV-23 is 8 weeks

2. Previous vaccination with Pneumovax
Adults aged 65 and over who have previously received a dose of PPSV-23 should also receive a dose of PCV-13 if they have not previously received it. PCV-13 should be given at least 1 year after the receipt of the most recent dose of PPSV-23. If an additional dose of PPSV-23 is indicated (patient received 1st dose of PPSV-23 before age 65), the dose should be given 6-12 months after the PCV-13 dose and at least 5 years after the most recent PPSV-23 dose.

PCV-13 may be coadministered with the trivalent influenza vaccine. Vaccination with PCV-13 is contraindicated in anyone who may have had a severe allergic reaction to any component of PCV-13 or PCV-7 or to any diphtheria toxoid containing vaccine.

Common adverse reactions reported with PCV-13 are similar to PPSV-23 and may include: pain, redness or swelling at injection site, limitations of movement in the arm in which the vaccine was given, fatigue, headache, chills, decreased appetite, generalized muscle pain and joint pain. Adverse events occurring after the administration of any vaccine should be reported to the Vaccine Adverse Event Reporting System (VAERS). For more information about VAERS, refer to http://vaers.hhs.gov.

The recommendation for the use of PCV-13 in adults aged 65 or older will be reevaluated in 2018 and revised as needed.

Reference: Tomczyk, S, Bennett, N, Stoecker, C, et al. Use of 13-valent Pneumococcal Conjugate Vaccine and 23-Valent Pneumococcal Polysaccharide Vaccine Among Adults Aged ≥65 years: Recommendations of the Advisory Committee on Immunization Practices. MMWR 2014; 63: 822-825.

Order Entry/Transcription – Knowing the Difference Between Concentration, Volume and Dose

The following orders were listed on physician order sheets and MARs:

Example 1: Morphine Sulfate (Concentrate) Solution 20 MG/ML administer 10 ml by mouth every 1 hour as needed for pain. Max dose 24 doses in 24 hours. Monitor pain.

This order was intended for the resident to get Morphine Sulfate 10mg every 1 hour as needed for pain. If administered via the order above the patient would have received 200mg of morphine every hour as needed – 20x the intended dose! **Remember mL(milliliters) is a measurement of volume not a dose.**

Example 2: Risperdal Solution 1mg/ml administer 0.75mg/ml per G-tube daily.

The physician intended for the resident to get 0.75mg of Risperdal daily via G-tube. Risperdal **0.75mg/ml is a concentration not a dose** – dosages are always listed by weight i.e. mcg, mg, grams never as a concentration (weight/volume) or as a volume (as seen in the morphine example above).

The dose for medications should be expressed in weight. For most medications this is micrograms (mcg), milligrams (mg), or grams. A milliliter (mL) is a volume of liquid not a dose. The dose will depend on the concentration of the liquid. If the dose is always listed by weight these potential errors can be prevented.

Use the below generic format when entering liquid medications:

Name of medication (concentration typically mg/mL) administer (dose in weight) (may include the calculated volume) via (route) and then the frequency (daily, BID, etc.). So the morphine order above should read as follows: Morphine Sulfate Solution 20mg/ml give 10mg (0.5ml) by mouth every 1 hour as needed for pain.

Apply your knowledge - Write the above Risperdal order as it should have been entered/transcribed. Give it a try – the answer is listed on the bottom of the page.

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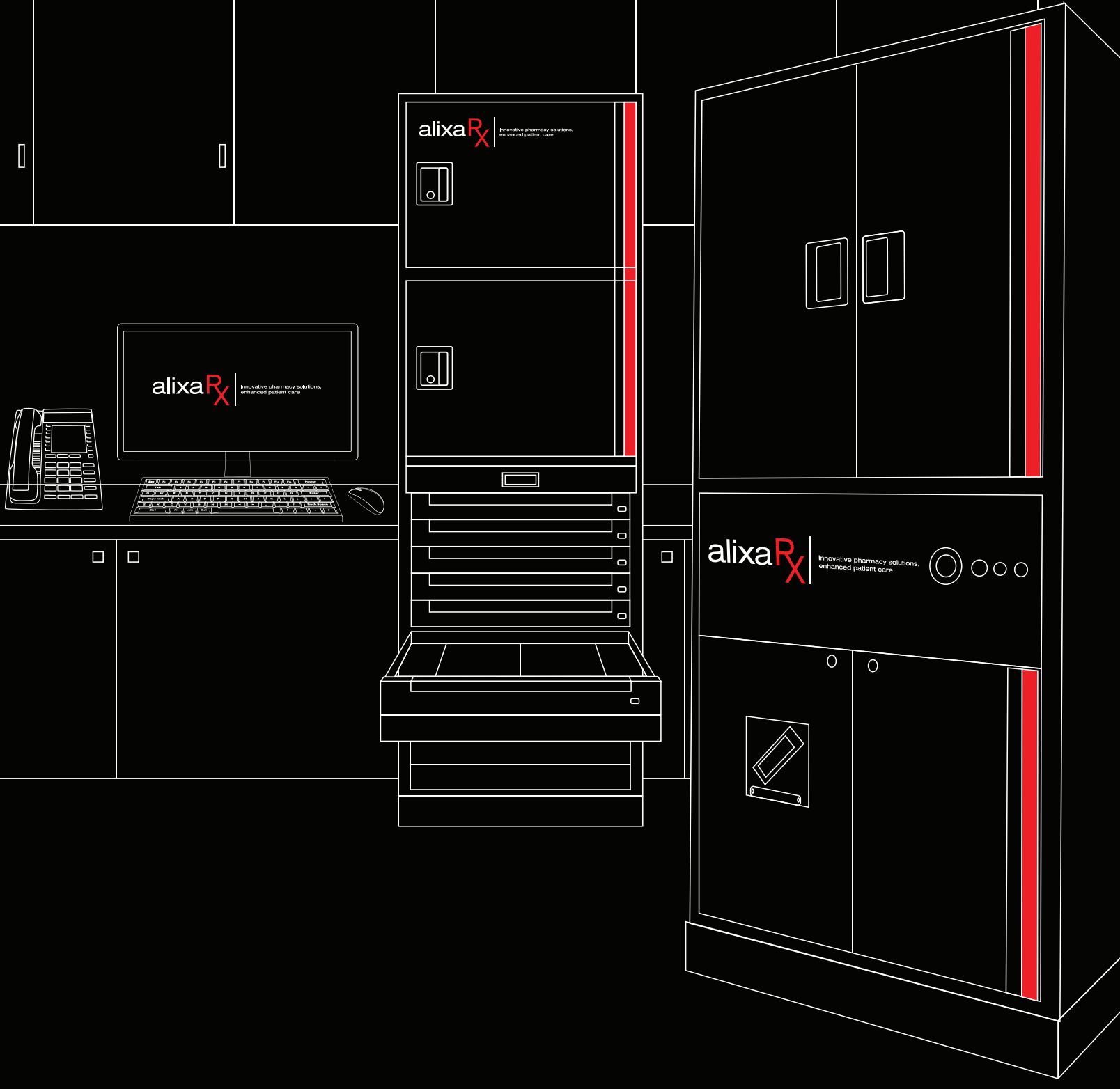
Answer: Risperdal Solution 1mg/ml administers 0.75mg (0.75ml) per G-tube daily.



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