

| Issue | Problem | Recommendation | Organization Assessment | Action Required/ Assignment | Date Completed |
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| **Prescribing and dispensing errors with oral solutions** | | | | | |
| 05/16  agenda safety icon-alert | A 3-month-old infant was hospitalized with a respiratory infection. The parents said she had been receiving 8 mL (800 mg of a 100 mg/mL solution) of **KEPPRA** (lev**ETIRA**cetam) every 12 hours prior to admission for a seizure disorder. A pediatric resident prescribed the same dose without noticing that it was excessive. A pharmacist following up on the dose learned that the baby had been receiving the correct dose of 80 mg every 12 hours after birth, but after a prior admission and discharge, had been receiving “8 mL” of medication for each 12-hour dose. | Express single-entity drug doses in metric weight, not volume alone. Add weight-based and calculated doses on orders and prescriptions, and include the patient’s age/date of birth and weight (in metric units) on prescriptions. Build alerts to warn prescribers and pharmacists about unsafe doses. Test the alert system periodically, and ensure that the dose alerts are enabled and not bypassed easily without documentation. Educate patients and require the patient/parent/ caregiver to demonstrate proper dose measurement of all liquid medications for pediatric patients. |  |  |  |
| **Risk with entering a “test order”** | | | | | |
| 08/16 | Submitting a contrived prescription to a patient’s pharmacy to determine insurance coverage has led to close calls and actual dispensing of the medication to the patient. For example, when a nurse was following-up on a warfarin refill request, she noticed that both apixaban and warfarin were on the patient’s medication list. Review of electronic health record (EHR) notes discovered a “test script” for apixaban had been sent to the pharmacy to determine the copay. The prescription was dispensed and the patient received both medications for 3 days, luckily without harm, before the error was discovered. A similar situation occurred with warfarin and rivaroxaban. | Educate prescribers that sending “test orders” to pharmacies to determine insurance coverage or copays is dangerous. Prescribers should maximize the use of their EHR's ability to access a patient’s health plan formulary information as well as submit prior authorization requests directly to the health plan electronically before transmitting a prescription to the pharmacy. If this functionality is not currently available in the application, plan for EHR upgrades to implement these functions. Otherwise the patient, prescriber, or a prescriber-designated individual should call the insurance company or pharmacy benefits manager (PBM) to inquire about coverage before transmitting the electronic prescription to the pharmacy. |  |  |  |
| **Vaccine errors associated with age-related factors** | | | | | |
| 08/16 | Vaccine errors can leave patients unknowingly unprotected against preventable diseases. Age-related contributing factors were reported most often and were linked to more than 1 in every 3 error reports (38%). The age-related errors were often due to confusion between numerous age-dependent vaccines that target the same disease, unfamiliarity with the vaccine specific recommended age, or not verifying the patient’s age prior to administration. Similar packaging and labeling also contribute to vaccine errors. | Purchase age-specific formulations from different manufacturers. Store vaccines with similar labels, names, or overlapping components separately from one another. Separate pediatric and adult formulations of vaccines in storage areas. Use auxiliary warning labels to draw attention to vaccines which come in multiple formulations. Post immunization schedules in clinical areas where vaccines are given, and prior to prescribing, dispensing, or administering a vaccine, verify the patient’s age. Discuss vaccine errors that can occur and how to prevent them with health professionals who prescribe, dispense, and administer vaccines. |  |  |  |
| **Avoid the directions “use as directed”** | | | | | |
| 07/16 | Based on a survey ISMP conducted from May 19 to June 19, 2016 targeting outpatient pharmacies, many drugs are still prescribed and dispensed with the ambiguous directions “use as directed.” Errors have occurred when two drug names look or sound similar and the pharmacist chooses the incorrect product, not knowing how it is to be used. Other errors happen when there are inadequate directions for use on the prescription label and the person administering the medication has not been properly educated. | Prescribers should include explicit directions for use on prescriptions including the strength, frequency of administration, route of administration, and duration of therapy. Pharmacists should clarify the directions for use with the prescriber when they receive a prescription with the sig “use as directed.” If the directions exceed available space on the pharmacy label, a supplemental or overflow label may be required. Teach patients about the medication and assess their ability to take the medication correctly. |  |  |  |
| **New syringe and package insert for HUMULIN R U-500** | | | | | |
| 08/16  agenda safety icon-alert | Many medication errors have occurred when using U-100 or tuberculin syringes to administer U-500 insulin due to confusion and conversion errors. A new U-500 syringe designed for the administration of regular insulin (concentrated) U-500 will be available later this year. It has a volume of 0.5 mL with a scale measuring from 25 to 250 units in 5 unit increments. A new package insert has also been published for Humu**LIN** R U-500 ([www.ismp.org/sc?id=2786](http://www.ismp.org/sc?id=2786)). | Once the U-500 syringe is available, no longer prescribe or dispense U-100 or tuberculin syringes to administer U-500 insulin. Co-prescribe the U-500 syringes with U-500 insulin vials (unless the prefilled pen is prescribed). Prescribers will need to order U-500 insulin in actual units of U-500 rather than expressing the dose in terms of U-100 units to facilitate use of a U-100 syringe. Educate patients and make sure they can accurately prepare and administer a dose. |  |  |  |
| **Methotrexate-metOLazone mix-ups** | | | | | |
| 06/16  agenda safety icon-alert | Two errors occurred in which methotrexate was dispensed instead of met**OL**azone, resulting in the death of a patient. In the fatal error, a nurse called prescriptions into the pharmacy, and met**OL**azone 2.5 mg daily was transcribed incorrectly as methotrexate 2.5 mg daily. In the other error, a prescription was entered into the pharmacy computer as methotrexate, and the checking pharmacist did not compare the label to the original order. | Segregate methotrexate from other medications in the pharmacy, employ a hard stop in dispensing software to prevent “daily” instructions on the label, and educate the patient about weekly dosing. A methotrexate patient counseling handout is available in English and Spanish on our website (www.ismp.org/sc?id=1709). Also, pharmacists should always check the original prescription when verifying order entry and/or the final product. |  |  |  |
| **Opioid sharing, storage, and disposal** | | | | | |
| 06/16  agenda safety icon-alert | Results of a national survey examining practices surrounding the sharing of opioids and medication storage and disposal (Kennedy-Hendricks A, et al. *JAMA Internal Medicine.* 2016.) indicated that 20% of respondents had shared opioid medications with another person. Over 60% of respondents with left over opioids kept them for future use, and almost half of respondents did not recall receiving information on safe storage or proper disposal. | Avoid prescribing large quantities of opioids and better communicate the risks involved with opioid therapy and ways to safeguard use, storage, and proper disposal. Patient education about opioids should be mandatory and scripted. Use ISMP’s free high-alert medication consumer leaflets for selected opioids (www.ismp.org/sc?id=1709) during patient education sessions. |  |  |  |
| **Don’t squeeze the round DROP-TAINER** | | | | | |
| 05/16 | Patients reported running out of latanoprost ophthalmic solution early. The patients were using the medication according to the pharmacy label instructions, but they were squeezing the round Drop-tainer bottle causing variability in dosing. Patients must press the bottom of the round Drop-tainer bottle rather than squeeze it, which is done for other bottles. | Pharmacist should identify products dispensed in Drop-tainer bottles, particularly the round versions. Ensure patients are educated on proper administration technique and verify that they can correctly administer the medication. Manufacturers should include clear instructions for proper use in the product labeling. |  |  |  |
| **New brand name for vortioxetine** | | | | | |
| 05/16  agenda safety icon-alert | Because of mix-ups between the confused drug names **BRINTELLIX** (vortioxetine) and **BRILINTA** (ticagrelor), the name Brintellix has been changed to **TRINTELLIX**. Due to the lag time associated with manufacturing bottles with the new brand name, you may continue to see bottles labeled with the brand name Brintellix during the transition period. | Pharmacy staff who order and stock the medication should be aware that Trintellix will have a new National Drug Code (NDC) number. Drug information and electronic system vendors should start using the new brand name and NDC number. Including the purpose on prescriptions for either drug can help prevent mix-ups. |  |  |  |