

# ISMP Quarterly Action Agenda

 One of the most important ways to prevent medication errors is to learn about problems that have occurred in other organizations and to use that information to prevent similar problems at your practice site. To promote such a process, the following selected items from the January–March 2015 issues of the *ISMP Medication Safety Alert!* have been prepared for an interdisciplinary committee to stimulate discussion and action to reduce the risk of medication errors. Each item includes a brief description of the medication safety problem, a few recommendations to reduce the risk of errors, and the issue number to locate additional information as desired. Look for our high-alert medication icon under the issue number if the agenda item involves one or more medications on the ISMP List of High-Alert Medications ([www.ismp.org/sc?id=479](http://www.ismp.org/sc?id=479)). The Action Agenda is also available for download in a Microsoft Word format (<https://ismp.org/newsletters/acutecare/articles/ActionAgenda1502.doc>) that allows expansion of the columns in the table designated for organizational documentation of an assessment, actions required, and assignments for each agenda item. Continuing education credit is available for nurses at: [www.ismp.org/sc?id=480](http://www.ismp.org/sc?id=480).

Key:  —ISMP high-alert medication

| No.                                                                                             | Problem                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Recommendation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Organization Assessment | Action Required/ Assignment | Date Completed |
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| Technology and error-prevention strategies needed to address the IV sterile compounding process |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                         |                             |                |
| (1,5)<br>       | Sterile compounding is a significant core pharmacy practice in dire need of improvement. However, it is routinely relegated to low priority until a significant error occurs. Variability in practices, a failure to identify and teach best practices, learned workplace tolerance of risk, routine practice deviations, and a host of cultural issues have led to harmful errors that should cause pharmacy to examine every task involved in sterile compounding. IV workflow technology with barcode scanning is available to help prevent many errors but only 6-7% of hospital pharmacies employ this technology. | All staff involved in sterile compounding should be taught the safe, detailed steps associated with sterile compounding along with the reasons behind these steps to reinforce the need to follow these standards. Pharmacy staff should be knowledgeable of the best practice standards required by USP <797>. IV workflow technologies or barcode scanning that's integrated with the pharmacy and hospital information systems can also help prevent sterile compounding errors ( <a href="http://www.pharmacyautomation.com">www.pharmacyautomation.com</a> ). ISMP is up-dating its sterile compounding guidelines to better guide those involved in these processes. |                         |                             |                |
| Severe bleeding associated with opening PRADAXA (dabigatran) capsules                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                         |                             |                |
| (3)<br>       | A patient in an assisted living facility was admitted to the hospital with hematemesis while taking Pradaxa. It is believed that nurses at the facility may have been opening the Pradaxa cap-sules and sprinkling the contents on the patient's food. The oral bioavailability of Pradaxa increases by 75% when the pellets are taken without the capsule shell, thus increasing the risk of bleeding.                                                                                                                                                                                                                 | Alert nurses to the risk of bleeding if capsules are not administered intact. Also add a statement to the medication administration record listing for Pradaxa—"Do NOT break, chew, or open cap-sules." Before opening any capsules or crushing any tablets, encourage staff to reference the ISMP Do Not Crush list: <a href="http://www.ismp.org/Tools/DoNotCrush.pdf">www.ismp.org/Tools/DoNotCrush.pdf</a> .                                                                                                                                                                                                                                                           |                         |                             |                |
| FARXIGA (dapagliflozin) and FETZIMA (levomilnacipran) mix-ups                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                         |                             |                |
| (1)                                                                                             | Several medication errors due to name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Add computer alerts to verify the indications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                         |                             |                |

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|              | confusion between Farxiga and Fetzima have been reported. The errors can be largely attributed to the drugs being approved and marketed within 6 months of each other; Fetzima in July 2013 and Farxiga in January 2014. In addition to name similarity, the container labels seem similar since both display the proprietary name of the product in red font.                                                                                                                                                                                                                                                      | for these drugs—to lower blood glucose levels in adults with type 2 diabetes with Farxiga, and to treat depression with Fetzima. Encourage pre-scribers to include the indication with medication orders and prescriptions. Community pharmacists should counsel patients receiving either of these drugs and confirm the indication.                                                                                                                                                                                                                                                                       |                         |                             |                |
| HAZARD ALERT! Demonstration IV solutions administered to patients in error                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                         |                             |                |
| (1)                                                                                          | Wallcur demonstration IV solutions were administered to more than 40 patients after these products, meant only for educational purposes, were assumed to be sterile bags of IV saline. Most patients developed chills and/or sepsis, but one patient died. These products are not sterile, and many contain distilled water, not saline. Educators use these and other demonstration products for training simulations with students, but they should never be administered to humans. These events may be related to shortages of IV saline products, leading purchasers to seek alternative replacement supplies. | In December 2014, FDA issued a warning not to use these products in humans or animals. Wallcur has voluntarily recalled its current products, and the company is working with FDA to identify ways to better label them to avoid errors. Sequester the use of demonstration or trainer products to the classroom/simulation lab only, and establish a process to account for each product to be sure it does not reach patient care units. Educate staff so that they are aware of this situation, and work with buyers/suppliers to check all purchased products carefully prior to placing them in stock. |                         |                             |                |
| NATIONAL ALERT NETWORK: Mix-ups between BLOXIVERZ (neostigmine) and VAZCULEP (phenylephrine) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                         |                             |                |
| (3,6)<br>  | ISMP has received multiple reports about mix-ups between two new presentations of older medications, Bloxiverz 10 mg/10 mL and Vazculep 50 mg/ 5 mL (pharmacy bulk pack), because the cartons look similar in size, color, and design. Although Vazculep comes as a pharmacy bulk package, one error happened in the operating room. A mix-up could be serious either way. For example, if Vaz-culep is mistaken as Bloxiverz, from a 100-fold to a 1,250-fold overdose of phenylephrine will be delivered,                                                                                                         | Alert clinical staff, especially in the operating room and anesthesia, to the potential risk of confusion between the two drugs, and keep supplies of these drugs separated. Verify product selection by using barcode scanning and/or independent double checks. If possible, do not purchase the pharmacy bulk packages of phenylephrine. If needed, store only in the pharmacy. Always dilute bolus doses of phenylephrine prior to injection.                                                                                                                                                           |                         |                             |                |

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|                                                                                           | which could lead to cardiac arrest or death.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                         |                             |                |
| 2014-2015 Targeted Medication Safety Best Practices for Hospitals                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                         |                             |                |
| (3)<br>   | ISMP conducted a survey in early and late 2014 to determine the progress made toward implementation of the ISMP 2014-2015 Targeted Best Practices. The survey showed modest gains. Practices with the highest implementation included eliminating glacial acetic acid from hospitals (93%), dispensing oral liquid medications in oral syringes (75%), and dispensing vinca alkaloids in a minibag (72%). Practices with the lowest compliance included the use of liquid dosing devices with metric measurement scales only (53%), measuring/expressing weights in metrics only (49%), a weekly dosing default for methotrexate (47%), and pharmacist education of patients discharged on weekly methotrexate (30%). | Hospitals experiencing difficulty with gaining support for implementation of these practices should view our Frequently Asked Questions at: <a href="http://www.ismp.org/sc?id=338">www.ismp.org/sc?id=338</a> . Encourage staff to contact ISMP if there is a particular barrier that should be addressed to promote national adoption. ISMP plans to expand awareness of the Targeted Best Practices and address the barriers to implementation noted by participants who responded to the latest survey. |                         |                             |                |
| Fresenius-Kabi new NAROPIN (ropivacaine) minibags look like IV minibags                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                         |                             |                |
| (3)<br> | New premixed Naropin minibags are intended for continuous epidural infusions or local infiltration, but they look just like medications in minibags that are intended for IV administration. Ropivacaine can't be given IV due to the risk of severe cardiac effects. The product includes labeling about its intended use, and a sticker is provided to affix to the bag.                                                                                                                                                                                                                                                                                                                                            | If the new Naropin minibags are purchased, they should be dispensed by pharmacy with an auxiliary label stating, "EPIDURAL OR INFILTRATION USE," along with warnings about the proper route of administration. Consider requiring pharmacy to provide epidural tubing with the product to distinguish it from IV drugs.                                                                                                                                                                                     |                         |                             |                |
| EPINEPHrine for anaphylaxis: Autoinjector or 1 mg vial or ampul?                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                         |                             |                |
| (4)<br> | Anaphylaxis requires immediate treatment with <b>EPINEPH</b> rine. In the home, <b>EPINEPH</b> rine autoinjectors can ensure prompt treatment. In hospitals,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | While cost is a factor, for outpatient clinics/office practices, autoinjectors might be more practical as they are labeled unit doses that can be used quickly in an emergency, and                                                                                                                                                                                                                                                                                                                         |                         |                             |                |

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|                                                                                         | <b>EPINEPH</b> rine in ampuls or vials is often used. The National Comprehensive Cancer Network has asked hospitals to use autoinjectors to avoid accidentally administering a full 1 mg <b>EPINEPH</b> rine dose IV in error. Deciding between the autoinjector or 1 mg vial or ampul is difficult given the high cost of the autoinjectors and a shelf life of only 12-18 months.                                                                                                                                                                 | the contents cannot be administered IV. Staff training and ongoing education about proper autoinjector use should be required. If using vials, prepare kits containing a 1 mg <b>EPINEPH</b> rine ampul or vial along with a syringe, needle, label with proper dose for IM injection, and a warning to administer IM only.                                                                                                                                                                                                                                    |                         |                             |                |
| Unprepared to treat anaphylaxis when administering INFeD (iron dextran injection)       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                         |                             |                |
| (4)<br> | A patient died after he was not treated for anaphylaxis while receiving a dose of INFeD. The nurse called a rapid response team but did not obtain <b>EPINEPH</b> rine from a code cart because she believed it would require a physician's order to administer.                                                                                                                                                                                                                                                                                    | Review your procedures/protocols for treating anaphylaxis and ensure <b>EPINEPH</b> rine is immediately available when the risk of anaphylaxis is high. Make sure clinicians are aware of the proper use of <b>EPINEPH</b> rine kits or autoinjectors. Be explicit in protocols about the conditions under which nurses may administer a dose.                                                                                                                                                                                                                 |                         |                             |                |
| Recommendations to address system-based causes of vaccine errors                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                         |                             |                |
| (24)<br>[201<br>4] (6)<br>[201<br>5]                                                    | Analysis of data submitted to the ISMP National Vaccine Errors Reporting Program in 2013-2014 identified the vaccines most often associated with errors—influenza, DTaP-IPV, HepA, Tdap, 2HPV, 4HPV, DTaP, MMRV, HepB, and Hib. Analysis also identified the most common contributing factors—choosing among age-dependent formulations; unfamiliarity with vaccine doses, schedules, ages, and components of combination vaccines; similar vaccine names/abbreviations/labeling/packaging; using the wrong diluent; and unsafe storage conditions. | Compare the patient's current age with information in the immunization schedule and Vaccine Inform-ation Statements (VIS). Structure appointments to vaccinate one child or adult at a time. Provide patients/parents with the VIS to read before vaccination. Establish protocols for frequently administered vaccines. Integrate a clinical pharmacist into the team in pediatric primary care and public health areas. Keep 2-component vaccines together when possible. Label all prepared syringes. Use full vaccine names or CDC standard abbreviations. |                         |                             |                |
| Safety issues with Teva's TREANDA (bendamustine)                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                         |                             |                |
| (4,5<br>)                                                                               | A new Treanda liquid formulation is available in a concentration of 90 mg/mL in                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | If both formulations are in stock, take steps to highlight their differing concentrations to                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                         |                             |                |

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|                          | 45 mg (0.5 mL) and 180 mg (2 mL) vials. The older powder formulations of bendamustine have been available in a 5 mg/mL concentration in 25 mg and 100 mg containers after reconstitution. Unlike the older formulation, the liquid product requires refrigeration, must be kept in its carton until use, and is incompatible with most closed system transfer devices (CSTDs).                                                                                                                                                                                                                                                                                                                                                                                                                    | prevent mix-ups. Alert practitioners to the different concentrations and required storage and handling conditions. Teva has announced it will continue making the powder form available, at least until this problem can be resolved. If you have specific questions about which CSTD to use with the new liquid formulation, call Teva at: 1-800-896-5855.                                                                                                                                                                                                               |                         |                             |                |
| Delayed administration and contraindicated drugs place hospitalized Parkinson's disease patients at risk |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                         |                             |                |
| (5)                                                                                                      | Patients with Parkinson's disease require strict adherence to an individualized, timed medication regimen of antiparkinsonian agents. Yet 70% of neurologists report that patients do not get the medications they need on time when hospitalized, causing an immediate increase in symptoms. A hospitalized patient who received her medications several hours late had difficulty talking and maintaining her balance. Her tremors intensified, and she became so confused and agitated that her physician prescribed 5 mg of haloperidol, a contraindicated drug which further worsened her symptoms. Surgical procedures complicate this further due to NPO status and the risk of administering contraindicated anesthetic or antidopaminergic drugs (e.g., metoclopramide) postoperatively. | Establish an expedited reconciliation process for Parkinson's disease patients. Ensure the formulary includes common medications to treat Parkinson's disease, thus avoiding non-formulary delays. Identify the patient's baseline symptoms, and observe the patient for increasing symptoms that may signal a dosage or timing error. Avoid contraindicated drugs, and build alerts in order entry systems for drug-drug and drug-disease interactions. When patients are hospitalized, obtain a neurology consultation or have a clinical pharmacist review all orders. |                         |                             |                |
| DOXOrubicin liposomal (DOXIL) mix-up                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                         |                             |                |
| (5)<br>                | A patient was given <b>DOXO</b> rubicin liposome injection 50 mg IV push by mistake instead of an IV dose of conventional <b>DOXO</b> rubicin. <b>DOXO</b> rubicin can be administered IV push via a                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Ensure staff handling chemotherapy are aware of the consequences of confusing <b>DOXO</b> rubicin liposome with conventional <b>DOXO</b> rubicin, and vice versa. Establish segregated and separate storage areas in                                                                                                                                                                                                                                                                                                                                                      |                         |                             |                |

January – March 2015

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|     | running IV line, but the liposomal product should not be administered undiluted or via IV push due to the potential for infusion reactions, which the patient experienced (flushing, vomiting, hypotension). The same error has been repeated at other practice locations many times in the past. | the pharmacy for each product. Implement special quality control checks, including an independent double check by two professionals before dispensing or administering these drugs. Encourage staff to refer to all liposomal products by their brand names. |                         |                             |                |