



Celebrate National Nurses Week: You are a change agent!

Awareness about medication errors can help bring about change. That's why, according to long-time subscribers to our publications and students, fellows, and other healthcare providers who have spent time at the Institute for Safe Medication Practices (ISMP), the experience has changed their practice. As newcomers to a *national* perspective on the devastation that sometimes results from medication errors, they can't help but be swept away with ISMP's contagious desire to do things differently, to bring about changes to improve the safety of medication use. One lesson quickly learned is that many strategies that effectively reduce medication errors often lie outside the direct control of individual practitioners. But of equal, if not greater importance, is the recognition that there are many things that *individuals* can do in their own practice—changes that are at least partly under their control—to reduce the risk of medication errors.

To celebrate **National Nurses Week**, May 6-12, the nurses at ISMP wanted to pay tribute to the positive impact that *individual frontline nurses* can have on patient safety. Below, we share some of the powerful medication error-reduction strategies that frontline nurses can employ within their own practice, all of which we have personally observed with pride during our onsite consultations with hospitals, or learned during discussions with nurses about their responses to medication errors.

❑ **Make pharmacists a member of the team.** Get to know your pharmacists and how the pharmacy safety-check system works. Rely on them as a ready source of information and as

an integral part of the patient care team, even if, regrettably, they are not participating in the day-to-day activities on the unit. Always ensure your pharmacists receive complete information about patient allergies, height, weight, presenting diagnosis, and chronic conditions (listed on admission orders or a fax copy of the admission assessment) so they can protect you and your patients by properly screening all medication orders for safety before dispensing products.


❑ **Embrace technology.** Although it may not always save time, the use of technology could save patients from harm. Welcome the introduction of bedside bar-coding systems, electronic medication administration records (MARs), electronic drug information resources, and computerized documentation and ordering systems. The more information about patients and drugs that you have at your fingertips, the less the risk of an error.


❑ **Take the MAR to the bedside.** Prepare only one patient's medications at a time and take the MAR, be it paper or electronic, to the bedside (even for *prn* doses). Leave all medications in their labeled packages and compare each to the MAR one last time before opening them at the bedside. Verify patient identity using the MAR and two patient identifiers, and document drug administration at the bedside.

❑ **Minimize calculations.** To determine doses/infusion rates for drugs or solutions with standard concentrations, work with your pharmacists to create dosing tables for reference or allow infusion pumps to perform cal-

continued on next page

safetywires

 **"Rubicin" product confusion.** A hospital reported a mix-up between two "rubicin" drugs in the anthracycline class of antineoplastics. A nurse called a pharmacist to report that the color of idarubicin was different than the dose she had given previously. Further investigation revealed that the patient had received daunorubicin instead of idarubicin on the previous day. With five different "rubicin" drugs on the market, each with similar names, and two with liposomal forms, mix-ups are not surprising. To avoid confusion, oncology nurses should ask pharmacy to prepare a list that displays the anthracycline products by generic and brand name(s), investigational drug name/identifier, and liposomal forms, if available. Include dosing information if possible. Nicknames have also been a source of errors. So don't use "Val" for valrubicin, "Ida" for idarubicin, "Donna" for daunorubicin, "Adria" for **ADRIAMYCIN** (doxorubicin), or "Epi" for epirubicin. Use full drug names only.

 **Dead batteries.** Baxter Colleague CX smart pumps (with the Colleague Guardian Feature) will delete all hospital-specific data in the "drug library" (e.g., concentrations, dosing limits) and revert back to factory settings if the main and back-up lead acid batteries drain, and the maintenance lithium battery drains. If the lithium battery drains, nurses will see "FC 199" on the screen and hear an alarm after the pump is plugged in. If they don't know what "FC 199" means, the change in the "drug library" may not be obvious. Thus, nurses may erroneously depend on the pump's ability to detect subtherapeutic and toxic doses. Obviously, the batteries in any pump should not be allowed to drain totally. However, this could happen on occasion despite best efforts. We spoke with Baxter representatives about the problem and suggested that the pumps should safely shut off before all batteries are allowed to fully drain to safeguard the data stored in the library. If you use these pumps, consider attaching a sticker to instruct nurses to avoid using pumps that display "FC 199" and to return them immediately to biomedical engineering for reprogramming.

Change agent continued

culations, if capable. Even for experienced nurses, manual calculations are error-prone. Some time ago, a nurse posted a question on a website for assistance calculating an infusion rate for 250 mL over 20 minutes. The responses varied, and many cited incorrect and unnecessarily complicated math equations. With that said, if calculations are necessary, have another nurse independently calculate the dose/rate and compare answers to verify accuracy.

❑ **Put safety ahead of timeliness.**

Timeliness is not always the most important dimension of drug administration. While it's essential to start drug therapy as soon as possible, medication administration should never be rushed. Of course, drugs must be readily accessible for emergencies. But often, the clinical need for quick administration does not outweigh the safety of having your pharmacist review the order *before* administration. Knowing what goes into the pharmacy safety-check system also helps with being realistic about turnaround time for medications and waiting for pharmacy-prepared solutions when possible.

❑ **Engage patients.** Many patients want to play a role in their own safety but may not know how to become involved. To better engage patients, hold meaningful conversations with them about safety and suggest *specific activities* that can reduce the risk of an error, such as holding out their armbands to be checked before medication administration. Always tell patients the names and doses of medications you are administering. Encourage questions and thoroughly investigate concerns (e.g., changes in appearance, dose, frequency), as they could be clues to an error.

❑ **Double check high-alert drugs.**

It's impractical to ask others to double check all medications before administration. But there's a handful of drugs (e.g., insulin, heparin),

classes of drugs (e.g., thrombolytics, opioids, chemotherapy), and patient populations (e.g., neonatal/pediatric parenteral medications) for which independent double checks are crucial, since the consequence of an error could be catastrophic.

❑ **Take time to report errors.** It's only through insightful information from those who have made errors that we learn about their system-based causes and remedies. So make it a priority to report errors, near misses, and hazardous conditions that could lead to an error ("accidents waiting to happen"). Actively seek feedback about reported errors and hazardous situations to spur change. Also make a commitment to report interesting errors or hazardous conditions in confidence to ISMP (call 1-800-FAIL-SAF[E]) to share your "lessons learned" with others.

❑ **Review safety literature.** Too often, blaming attitudes and defensive posturing forms the framework for discussions about errors. To encourage blameless discussion, bring reports of errors that have occurred elsewhere (like those in this newsletter) to staff meetings, discuss the likelihood of it happening in your practice site, identify possible system-based causes, and make suggestions for prevention.

Traditionally, **National Nurses Week** is devoted to highlighting the diverse ways in which nurses, the largest healthcare profession, are working to improve healthcare. We encourage you to celebrate the 2005 **National Nurses Week** with an acknowledgement of the many things nurses do to protect patients, and a renewed commitment to change the things you can within your own practice. There are 3 million change agents in healthcare today; they happen to be called nurses. The changes you make as just one individual will have an enormous impact on the safety and quality of healthcare services in the US.

▶ **NURSES In the News**

Recently, two easy-to-replicate safety efforts in hospitals have come to our attention. The first is the **Safe Passage** program, implemented at the **Clarian Health Partners** system in Indianapolis, IN. Each nursing unit has a trained **Safe Passage** nurse, who proactively identifies opportunities for improvement in both patient and staff safety. These frontline **Safe Passage** nurses are provided with time away from their clinical or operational duties to analyze safety issues, plan safety initiatives, and attend meetings of the **Safe Passage** Council, which includes representation from pharmacy and clinical engineering. In fact, no hospital policy, procedure, improvement initiative, or technology is implemented without careful consideration by the Council. Since implementation of the program, numerous medication safety hazards have been identified and corrected, and event reporting has increased by 300%. For more information on this novel effort, please send an e-mail request to Kelly Wright at kwright@hetcom.com.

Spectrum Health Hospitals in Grand Rapids, MI, implemented another innovative effort, the **Good Catch!** program, which also has resulted in widespread safety improvements. Nurses intercept many potentially serious medication errors, but they often go unreported. Through the **Good Catch!** program, these errors are now quickly captured and the information is used to prevent similar errors from reaching patients. Small bright green cards with a friendly fish motif are used to capture the **Good Catches!**, and the hospital's risk and quality departments use the information to plan and implement new safety strategies. Periodic rewards are offered via drawings for local gift certificates to stimulate reporting. To date the program has received more than 10,000 **Good Catches!**, many of which have resulted in positive medication safety changes. For more information, please contact Sylvia Baird, RN, Manager of Patient Safety at Sylvia.Baird@spectrum-health.org.

All is not as it seems...

What is the dose of Toradol that a nurse wrote in the transcribed telephone order below?

1. 25mg Toradol IV x1



The order was written for "1.25 mg of Toradol x 1," or so it seemed. Despite a spelling error (Tordal), that's the way a pharmacist initially read the transcribed telephone order. Since the dose didn't make sense, the pharmacist checked with the transcribing nurse, who responded by saying she'd numbered the order for 25 mg of **TORADOL** (ketorolac) IV using the number 1 followed by a period. Errors are possible whenever numbers or extraneous marks precede drug orders. Avoid the temptation to number orders, even on preprinted order forms. We see no reason for it, but if orders must be numbered, each digit should be circled. In the past we've published other cases where initials, letters, checkmarks, and other incidental marks used during ordering or transcription of handwritten orders can obscure or change how a medication order appears. See our [August 2003](#) newsletter article, "Bad marks" on order forms, for additional details.



What is the nurse trying to communicate in the following transcribed telephone order?

Do not restart Xigris @ this time



When a pharmacy technician delivered **XIGRIS** (drotrecogin alfa, activated) to the unit, a nurse questioned why it had been sent when she'd transcribed a telephone order to discontinue it earlier that day. Actually, the pharmacist had *renewed* this several thousand-dollar product when he received the above order, which contains the universal "do not" symbol, ostensibly to signify "Do not restart Xigris." Unfortunately, the pharmacist had not picked up on the nurse's unsuitable use of this particular symbol, which could have cost the hospital many of these symbols: \$\$\$\$\$!

nicecatch

Alerts that work! A nurse faxed a handwritten order for "Vancomycin

1.5 g IV q12" to the pharmacy, but the pharmacist misread the drug as vecuronium. Unfortunately, when he entered the order for 1.5 g of

vecuronium into the pharmacy computer system, it failed to warn him that this was an unsafe dose. A busy pharmacy technician also did not notice that the dose was unusually large, even though he needed to use 15 vials of vecuronium (10 mg each) to prepare a 250 mL bag—the same size bag used for vancomycin. As part of safe practice at this hospital, neuromuscular blockers were always dispensed with an alert sticker stating "Neuromuscular blocker, patient must be intubated." Luckily, the nurse noticed the sticker and did not hang the bag. Analysis of the event determined that the following factors contributed to the mistake: failed dose alert system in the pharmacy computer for neuromuscular blockers, not questioning doses that require more than two vials to prepare, illegible handwriting (especially on the faxed order), and lack of an indication for the drug on the handwritten order.

ISMP Medication Safety Alert! Nurse Advise-ERR (ISSN 1550-6304) ©2005 Institute for Safe Medication Practices (ISMP). Permission is granted to subscribers to reproduce material for internal newsletters or communications. Other reproduction is prohibited without written permission. Unless noted, published errors were received through the USP-ISMP Medication Errors Reporting Program. **Editors:** Judy Smetzer, RN, BSN; Nancy Tuohy, RN, MSN; Michael R. Cohen, RPh, MS, ScD; Russell Jenkins, MD. **ISMP, 1800 Byberry Road, Suite 810, Huntingdon Valley, PA 19006.** Tel. 215-947-7797; Fax 215-914-1492; E-MAIL: nursing@ismp.org.

Report medication errors to ISMP at 1-800-FAIL-SAF(E).

► Special Announcements**► Nominations for Cheers Awards.**

The ISMP Board of Trustees invites you to nominate **Individuals or Small Groups, Healthcare Organizations, or Professional Organizations/Group Collaboratives** for this year's annual **ISMP Cheers Awards**. The nominees must have achieved extraordinary success in the area of medication safety. Nominations are also being accepted for the annual **ISMP Medication Safety Alert! Subscriber Award**, which honors an organization that widely distributes and uses ISMP newsletters to improve medication safety. Self-nominations are welcomed. All nominations must be received by **August 31, 2005**. Award recipients will be recognized at our annual **Cheers Awards** banquet, to be held in Las Vegas, NV, on **December 6, 2005**. For more information, please visit www.ismp.org/cheersawards.

► New PCA video. ISMP has recently released a new video, **Patient Controlled Analgesia—Strategies for Patient Safety**. Various vignettes demonstrate the key principles necessary to reduce errors when patient controlled analgesia (PCA) is utilized, including proper patient selection and education, drug administration safeguards, close patient monitoring, and staff education. Also covered are factors that have contributed to PCA errors, such as PCA by proxy, drug product mix-ups, device design flaws, and prescription errors. Visit www.ismp.org for details.

► ISMP offers a new self-assessment.

Your director of pharmacy should have received a copy of the new **ISMP Medication Safety Self Assessment™ for Antithrombotic Therapy in Hospitals**. This tool is intended to help an interdisciplinary team at your hospital assess your practices and identify opportunities for improvement when using antithrombotic agents. As with our prior self-assessments, we are encouraging hospitals to submit their findings to ISMP using our secure web-based survey form. For more information, visit our homepage, www.ismp.org.