



## Nurses' rights regarding safe medication administration

In our May 2007 newsletter, we expressed our views about the *five rights* of medication administration, stressing that they are merely broadly stated goals that offer nurses no procedural guidance on how to achieve them. Still, every nurse is familiar with the *five rights* of medication administration and attempts to achieve these outcomes by following the processes that the organization has put in place to verify the *right patient*, *right drug* (and form of the drug), *right dose* (and strength, rate of infusion), *right time*, and *right route*. When an error occurs, one or more of these *five rights* may be breached. But too often, the nurse's failure to follow the *five rights* resonates most loudly as the causative factor.

What about *nurses' rights* regarding safe medication administration? What do nurses have the *right* to expect in the workplace to arm themselves with the knowledge, skills, tools, and environment necessary to achieve the *five rights* of medication use?

Close to a decade ago, one nurse—Michelle Colleran Cook—took a stand on this issue and provided testimony, on behalf of the Massachusetts Nursing Association (MNA), to the Joint Committee on Health Care, describing the *six rights* nurses have when administering medications.<sup>1</sup> The *six rights* of nurses, as described during her testimony, are filled with insight and are still applicable today. A summarization of her testimony follows (with permission from the MNA).

■ **Right to a complete and clear order**  
Nurses have the right to an order that is complete and clearly written; the right to question incomplete, illegible, or unclear orders; and the right to a

respectful and timely response—devoid of intimidating comments and behaviors—from prescribers about these queries. Safety advocates recommend the use of computers to order medications. However, such costly systems may take years to implement. Nurses need to remember that it is their duty and *right* to question physician orders that are illegible, incomplete, or potentially unsafe.

■ **Right to have the correct drug, route (form), and dose dispensed**

Nurses have the right to expect accurate and timely medications dispensed from the pharmacy in patient-specific doses (unit doses) and in standard concentrations. However, pharmacists, like nurses, are susceptible to human error under the pressures of time and patient needs, and they can dispense the incorrect drug or dose. The nurse who discovers an error and notifies the pharmacy has the right to expect prompt delivery of the correct medication to avoid unnecessary delays. Within this right lies the expectation that nurses and pharmacists will work together as a team to facilitate communication of orders to the pharmacy, establish check systems to prevent or uncover dispensing errors before they reach the patient, and establish effective medication delivery systems.

■ **Right to have access to information**

Nurses have the right to easily access up-to-date drug information, and the right to ask questions about the drugs they are administering to patients. Good practice dictates that nurses should never administer an unfamiliar drug, and patients should be able to expect care from a nurse who is continually updated on new medications and the ways they are delivered. If a

continued on page 2

## All is not as it seems...

**What does "IJ" mean?** When a pharmacist entered an order for an "injectable" medication into the pharmacy computer, the system software was designed to automatically assign "IJ" as the route of administration. The hospital had previously changed the route codes to more descriptive and familiar abbreviations, such as *IM*, *IV*, and *subcut*. However, during a routine update of the drug information stored in the computer, the route code reverted back to "IJ." Subsequently, when an order for **HUMULIN N** (human insulin [rDNA] isophane suspension) 40 units was entered into the computer, the pharmacist did not notice that the route of administration had defaulted to "IJ" on the computer-generated medication administration record (MAR).

Initially, the patient's nurse misunderstood the abbreviation "IJ" to mean "intrajugular," but she consulted with another nurse since the patient did not have a jugular line. After reviewing the original order, both nurses believed that the route of administration was IV. Poor handwriting and omission of the route of administration in the order led the nurses to view the letter "N" following Humulin as "IV." (See a copy of order

above; also notice that the dose could have been misinterpreted as 4 units since the zero looks like an uppercase U.) Consequently, the patient received 40 units of Humulin N intravenously. Neither nurse recognized that Humulin N should never be administered IV, as the paradigm that only clear medications can be administered IV no longer stands. The patient became hypoglycemic with a blood glucose level of 24 mg per dL. He was quickly treated with 50% dextrose injection and suffered no permanent harm.

**Nurses' Rights** continued from page 1  
 patient is to receive a new drug for which information is unavailable in typical references, nurses have the right to request and receive such information. They have a right to withhold the drug until they have enough information with which to be confident of safe administration. Pharmacists are the drug experts, and nurses should have access to a pharmacist 24 hours a day. More dialogue between nurses and pharmacists can only improve patient outcomes and decrease the risk of medication errors.

■ **Right to have policies to guide safe medication administration**

Nurses have the right to expect healthcare administration to provide the structure necessary to administer medications safely. Nursing practice is governed by licensing boards, but nursing policies and procedures guide the actual drug administration processes within a healthcare facility. Administrators need to keep in touch with frontline staff to learn about new trends in medication administration and barriers to safety. Nurses have the right to expect that their nurse leaders will give the provision of a safe environment in which to administer medications the highest priority.

■ **Right to administer medications safely and to identify system problems**

Nurses have the right to participate in the design of systems that impact safe medication administration. Creating solutions to maximize safety should include those who administer medications. Nurses have the right to speak up and be heard about errors and risks in the medication use system without fear of reprisal. System glitches that place the patient at risk need to be addressed and corrected, but they can only be fixed if they are first identified. Just as they advocate for patients, nurses have the right to advocate for their ability to practice in safe settings.

**Reference:** 1) Massachusetts Nurses Association (MNA). Nurses six rights for safe medication administration. Testimony provided by Michelle Collieran Cook to the Joint Committee on Health Care. Posted on the MNA website in June 1999; available at: [www.massnurses.org/nurse\\_practice/sixrights.htm](http://www.massnurses.org/nurse_practice/sixrights.htm). **Permission granted by MNA to summarize the testimony of Michelle Collieran Cook and publish it in *Nurse Advise-ERR*.**

■ **Right to stop, think, and be vigilant when administering medications**

Nurses have the right to be mindful when administering medications; to avoid complacency and to step away from the distractions of a busy work place to give due attention to the serious job of medication administration. With decreases in licensed staff and increases in patient acuity, nurses still get the job done. But there is a limit to the sensory input a person can handle. Nurses have the right to stop, think, and give medication administration their full attention. If an order seems amiss, nurses have the right to stop until their questions are fully answered. When administering an unfamiliar drug, they have the right to stop and learn about the drug before administering it. Will this take additional time? Yes. Will some people become irritated? Probably. But every nurse would rather be known as the nurse who is slow and accurate when administering medications than the nurse who works quickly but harmed a patient.

We encourage you to bring the issue of *nurses' rights* to your staff meetings for discussions and to share these with senior management. You may want to add a few additional rights to the list, and may also recognize that similar rights related to safe medication use exist for other healthcare professionals, particularly pharmacists and physicians. Still, these rights cannot be used as excuses when errors happen, nor are they a means of pointing the blame elsewhere. Instead, discussions about *nurses' rights* should help shed light on the interdisciplinary nature of medication use and the system improvements that support safety. The discussions can also help to raise safety expectations among all staff. History has taught us that, when expectations are raised, improvements often follow.

► **Special Announcement**

**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 23, 2007**. Award recipients will be recognized at our annual **CHEERS Awards Dinner**, to be held in Las Vegas, NV, on **December 4, 2007**. For information, visit: [www.ismp.org/cheersawards](http://www.ismp.org/cheersawards).

**Free CE Credit.** One hour of continuing education (CE) credit is now available for the January-June 2007 issues of **Nurse Advise-ERR** at: [www.ismp.org/Newsletters/nursing/newsletterCE/NursingCE.asp?aid=7/12/2007](http://www.ismp.org/Newsletters/nursing/newsletterCE/NursingCE.asp?aid=7/12/2007)

**Joint Commission Update.** It's not too late to register for our teleconference, **Joint Commission Update: 2007-2008 Requirements Related to Medication Use**, to be held on **August 2**. Visit [www.ismp.org/educational/teleconferences.asp](http://www.ismp.org/educational/teleconferences.asp) for details about the 2008 safety goals and standards that will be discussed.

**ISMP employment opportunity.** ISMP is seeking a full-time RN with clinical and managerial experience to support its consulting group. For details, visit: [www.ismp.org/jobline/job11.asp](http://www.ismp.org/jobline/job11.asp).

**AORN shares tool.** The Association of periOperative Registered Nurses (AORN) and the Department of Defense have developed a tool kit ([www.aorn.org/PracticeResources/ToolKits/PatientHandOffToolkit/](http://www.aorn.org/PracticeResources/ToolKits/PatientHandOffToolkit/)) to help guide critical patient hand-offs in preoperative, intraoperative, and post-anesthesia care units. The tool kit, which includes sample checklists, forms, and a PowerPoint presentation, is designed to help streamline communication when transferring surgical patients.

## Epidural and intravenous infusion mix-ups

A nurse accidentally infused potassium chloride injection by the epidural route into a postoperative patient with hypokalemia. The nurse intended to connect the IV tubing from the potassium minibag (20 mEq in 50 mL) to the maintenance IV infusion line via a Y-site port. Instead, she connected the potassium bag to a Y-site port located on the patient's epidural line through which fentanyl and bupivacaine was infusing. The patient received the entire contents of the minibag over 2 hours, after which the nurse disconnected the minibag. Shortly thereafter, an anesthesiologist discontinued the epidural line. Later, the nurse returned to the patient's room to hang another dose of potassium chloride and realized that she must have connected the prior infusion to the epidural tubing. The anesthesiologist and surgeon were immediately notified. Fortunately, the patient developed no symptoms during or after the potassium infusion.

At first glance, the underlying cause of this error may seem clear—using tubing with a Y-site access port for an epidural infusion. However, examining why this error occurred in a facility that typically used special epidural tubing without access ports led to the discovery of additional causal factors.

### ■ Standard procedures not followed

For patients with epidural infusions in place for analgesia during the immediate postoperative period, post-anesthesia care unit (PACU) staff typically attached special epidural tubing without an access port. Standard procedures were not followed in this case. The patient's surgery occurred on a weekend, and the patient had been recovered in ICU, not PACU. While in ICU, the epidural catheter was capped because it started leaking. Thus, the patient was transferred to a medical-surgical unit with a capped epidural.

### ■ Faulty procedure and tubing

Usually, when staff nurses receive a patient in the medical-surgical unit with an epidural infusion, the special tubing has already been attached. In fact, before this error, a patient had never come to the unit with a capped epidural catheter. When the patient complained of pain, the nurses decided to start the epidural analgesic per the standing orders that had remained on the chart. In preparation, they read a recently written policy and procedure for epidural analgesia which, unfortunately, did not mention the need for special tubing without access ports. In fact, epidural tubing was not available in the unit's supplies. Thus, regular IV tubing had been used to connect the epidural analgesia, allowing the potassium infusion to be accidentally connected to the epidural infusion port.

### ■ Double-checking policy not known

The hospital had a rigorous policy regarding independent double-checks for IV potassium infusions in concentrations greater than 60 mEq/L. If the policy had been followed, the double-check would have required the nurse to show a colleague at the bedside exactly where she had attached the IV potassium infusion. However, the double-check policy had just been implemented a few weeks prior to the error, and some nurses were unfamiliar with its scope. Most of the nurses thought the policy required two staff to double-check the medication label and dose against a patient's medication administration record (MAR), but they were not aware that they also needed to check pump settings and trace the tubing to the site of injection.

See **Check it out!** for recommendations to reduce the risk of mix-ups between epidural and IV routes of administration.

### checkitout! ✓✓✓✓

Consider the following suggestions to help avoid epidural and intravenous infusion mix-ups.

✓ **Use special tubing.** Only use special epidural tubing without injection ports for epidural infusions. Use of this tubing with restrictive access is a key error-prevention strategy that should be clearly described in all policies, procedures, and standard order sets related to epidural infusions. Place a neon "Epidural" sticker on the tubing (which is often included with epidural tubing).

✓ **Build redundancy.** Require an independent double-check of all epidural infusions at the bedside, and require nurses to trace the tubing from the source (infusion) to the insertion site (port) to verify the line attachment.

✓ **Communicate.** Establish a standard communication process for use when transferring surgical patients between preoperative, intraoperative, and postoperative care settings. Unusual circumstances, such as capped epidural catheters, should be described fully. See **Special Announcements** for information about a tool kit to help with critical handoffs of surgical patients.

✓ **Restrict privileges.** Epidural infusions should only be started by practitioners who demonstrate ongoing competency (typically professional staff from anesthesia, PACU, labor and delivery, and certain critical care units).

✓ **Segregate pumps.** Place general IV pumps and epidural infusion pumps on opposite sides of the patient's bed to separate the two infusion systems. Use a different make or model of pump for epidural infusions to make them look different from IV pumps. Label the pump, "Epidural." Avoid using dual-channel pumps for simultaneous administration of IV and epidural infusions.