



# Nurse Advise-ERR™

Educating the healthcare community about safe medication practices

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## An error is an error, regardless of the rules used to redefine it

**M**ost organizations have an official definition of a medication error and reporting requirements. But a study in Australia<sup>1</sup> identified a group of unspoken rules that nurses frequently followed to determine whether they really needed to report an error – rules that helped them redefine in their minds whether a “real” medication error had occurred. Although the study took place 6 years ago, no doubt similar rules are still around today.

**If I can make it right, it's not an error.** More experienced nurses became innovative about making things right when an error occurred. For example, if a dose was omitted, the nurse changed the subsequent drug administration schedule to “get back on track.”

**If it's not my fault, it's not an error.** If nurses felt they could not avoid the error, it was not considered a “real” error. Examples included late administration or an omission when the prescribed drug was not available on the unit.

**If a patient's needs are more urgent than accurate medication administration, it's not an error.** If, in the nurse's judgment, patient needs took priority, any irregularity in drug administration was not considered an error. Examples included delayed, omitted, or otherwise altered drug administration to patients caused by dealing with urgent situations arising with another patient.

**A clerical error is not a real error.** Nurses frequently assumed there was no “real” error when faced with an apparent mistake with documentation. When a nurse on a previ-

ous shift, for example, failed to document drug administration or documented a dose in the wrong section of a medication administration record, the nurse was later asked to correct the entry or document a medication that may or may not have been given.

**If it prevents something worse, it's not an error.** If a nurse knew that she would be busy later due to planned admissions, discharges, and procedures, she administered medications early rather than risk omitting doses. Technically, nurses knew that early administration was an error, but since it was preferable to omission of the prescribed medications, they did not consider these “real” errors.

**If everyone knows, it's not an error.** When everyone was aware that actual practice differed from policy, it was not considered an error. For example, physicians knew that ICU nurses sometimes gave medications early or withheld medications at night so that patients suffering from sleep deprivation could sleep uninterrupted for longer periods of time. In these cases, drug omissions or early/delayed administration, even for critical medications, were not considered “real” errors.

Not surprisingly, unspoken rules like these have evolved over time because of the stigma attached to errors. Fearful of embarrassment, or even punishment, nurses try to protect themselves and their colleagues, and independently change practice when they feel it is in their patient's best interest. As a result, important information about the cause of errors is lost. The situations described above clearly stem from system prob-

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## safetywire

### Ask pharmacy to dispense U-500 insulin doses.

Concentrated insulin (U-500) can be used for patients with insulin resistance who would otherwise need large volumes of U-100 insulin. A red label on U-500 **HUMULIN R** (regular insulin, from Eli Lilly and Company) warns “high potency” and “not for ordinary use,” but the type size is small and easily overlooked. Recently, a nurse removed what she thought was a dose of Humulin R from the refrigerator, but she failed to notice that it was the U-500 concentration. The vial of U-500 insulin had been dispensed for another patient who had been discharged. The nurse withdrew the prescribed dose using a U-100 syringe, which resulted in a five-fold overdose. To prevent this error in your hospital, make sure U-500 insulin is not available on your unit, and ask pharmacy to prepare, label, and dispense each U-500 insulin dose in a syringe when it's prescribed for patients. Also, alert co-workers that U-500 insulin should never be given IV due to the serious nature of an inadvertent overdose.

 **Naturally speaking.** A young woman developed temporary nerve damage 4 weeks after taking 500 mg of St. John's wort for mild depression. She began to feel “stinging” pain on the areas exposed to sun, and sought medical attention when the pain worsened. Her symptoms gradually disappeared 2 months after she stopped taking the herb. The active ingredients in this herb, known as “photoactive hypericins,” produce substances that can damage myelin when exposed to light. In addition, St. John's wort interacts with many drugs, which must be considered

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*didyouKnow ...***Premixed IV bags should be stored in their overwraps?**

**?** Have you ever noticed the water droplets that form inside the protective plastic overwrap that covers an IV bag? It's actually water vapor that has transpired through the IV bag, moving from the greater humidity within the bag (100%) to a lesser humidity inside the overwrap. These protective overwraps serve an important purpose—to control the amount of water vapor that escapes from the solution. Once IV bags are removed from this overwrap, the rate of evaporation increases because the bags are exposed to room air. Thus, over time, the drug's concentration will increase as the fluid volume within the container decreases and the amount of drug remains the same.

For example, a significant amount of fluid may be lost if a minibag containing potassium chloride has been removed from its overwrap and has been sitting on a shelf for several weeks. Thus, if a physician prescribed a 1-hour infusion of potassium chloride, a more concentrated solution would be infused in much less time. Such a case actually happened. The patient was to receive 40 mEq of potassium chloride in 100 mL over an hour, but the bag was empty in 30 minutes. Half of the water had evaporated, leaving 40 mEq of potassium in just 50 mL of solution. Another 100 mL minibag that also had been removed from its overwrap was found to contain only 85 mL.

Most IV solutions are packaged in polyvinylchloride bags, but some are in less permeable plastics that permit less evaporation. Manufacturers recommend discarding IV bags anywhere from 7 days (e.g., Abbott's heparin and dopamine in 5% dextrose solutions packaged in certain containers) to 3 months (e.g., 500 or 1,000 mL solutions from B. Braun Medical) after they've been removed from their overwraps. The time span depends on the material used for the IV bag, the volume of solution, and the drug contained in the solution.

Store all IV bags in their overwraps until use. To avoid unnecessary waste, talk to your pharmacist about the best way to handle IV bags that have been removed from the overwrap, but then not used. For frequently used medications, nurses may be tempted to mark IV bags with an expiration date. But do not write directly on the bags. Volatile chemicals from the ink may leach into the solution. Perhaps these bags should be sent to the pharmacy and redistributed to a unit where a patient is currently receiving the solution. 

**Errors** *continued*

blems that need to be addressed rather than hidden and tolerated. If we ignore them, we will not be able to make significant changes in our systems, processes, and nursing practice across the organization.

Bring up this issue at your next staff meeting. Admittedly, it's not easy to discuss. In fact, nurses in the study

were, at first, reluctant to admit that the researchers' findings rang true. But open discussions are likely to increase comfort with reporting *all* errors, including variances that fall into the categories above, and reduce any need for these old rules from our past. 

1. Baker H. Rules outside the rules for administration of medication: a study in New South Wales, Australia. *J Nurs Scholarsh.* 1997;29(2):155-158.

*nicecatch*

**Catch a hazard.** An error doesn't have to happen to make a "nice catch." In fact, it's best to report all hazardous conditions you encounter well *before* an error happens so problems can be corrected right away. We just heard about a nurse who reported look-alike vials in the refrigerator. She had quickly grabbed a 10 mL vial of **QUELICIN** (succinylcholine), a neuromuscular blocking agent that paralyzes respiratory (and other skeletal) muscles, instead of a 5 mL vial of diltiazem, which was needed to treat atrial fibrillation. Even though the vial sizes differ, both have bright orange and black lettering on a white label. The nurse noticed the problem right away, so the correct medication was given. Because she took the time to report the problem, the following changes occurred in her hospital to prevent this error: (1) After consultation with appropriate clinicians, neuromuscular blocking agents were removed from unit refrigerators if they were not essential floor stock; (2) In units where neuromuscular blocking agents remained as floor stock (e.g., ED, ICU, CCU), the vials were segregated in a closed red box and labeled with bright orange stickers stating "WARNING: Paralyzing Agent." If these products are stored in automated dispensing cabinets, an alert also could appear on the screen.

*safetywire* *continued*

before taking it with other prescription and over-the-counter products. Obtain a complete medication history, including use of nonprescription and herbal products, nutritional supplements, or other dietary products, when patients present for care. And now that summer is here, remind patients who take St. John's wort to avoid unprotected sun exposure, wear protective covering, and apply sunscreen.

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**To report errors call 1-800-FAIL-SAF(E)**