

ISMP Medication Safety Alert!®

September 25, 2008 ■ Volume 13 Issue 19

Safety Briefs

Speed trap. We just learned about a fairly large chain of pharmacies that gives customers a “19-Minute Promise” to fill up to three new prescriptions in 19 minutes (about 6 minutes each) or less. If the pharmacies fail to meet the mark, the customer receives “dinner and a movie”—a \$10 gift card and a coupon for a 1-night movie rental. The 19-minute claim is surprising, given that even pizza delivery drivers from a well-known national pizza chain are no longer held to delivering pizzas in 30 minutes, due to concerns about car accidents (www.snopes.com/business/consumer/dominos.asp). This might seem like an unfair comparison since the 19-minute dispensing claim doesn't involve deliveries. However, it's even more unfair if the 19-minute claim jeopardizes public health by discouraging pharmacists from spending time checking the patient's history and drug profile; checking for drug interactions, duplications, or other drug use evaluation concerns; calling physicians' offices for clarification; educating patients about the proper use of prescriptions; or any other critical function that promotes safety. It's unacceptable to hold pharmacists to an unrealistic timeframe when they are working with medications. Such claims should help identify pharmacies that prescribers and patients may want to avoid.



Warfarin by generic name. In our August 14th issue, we mentioned the potential for confusion between a branded warfarin product, **JANTOVEN**, **JANUVIA** (sitaGLIPtin), and **JANUMET** (sitaGLIPtin and metFORMIN). Just as dangerous, if not more so, is that some health professionals and patients may not recognize that Jantoven is a brand of warfarin, and patients could easily end up taking two warfarin products together. A case was reported to us last week in which the patient took warfarin prescribed and dispensed under both names, which resulted in an INR of 9.7! On a discharge medication reconciliation form, warfarin

continued on page 2 ▶

Report and spread information about software risks

A pharmacist told us recently about a major safety issue his hospital had reported to their computer system software vendor that could lead to medication errors, only to learn the vendor was already aware of the issue. Unfortunately, at the time the report was made, the vendor had not yet shared this information with other end users, many of whom had not yet detected the problem. (Users of the vendor's software product have since been notified of the problem and the company's plan to correct the problem.)

The vendor had added a new feature with the last release of its software to help identify, by color change on the electronic medication administration record (eMAR), important medications that weren't administered within a certain timeframe. But a bug in the program allowed a discontinued medication to remain active on the eMAR.

With one patient, the dose of enoxaparin had been changed, and both the new order and discontinued order displayed as active medications for this patient. When tested, the software allowed the nurse to document administration of this discontinued medication.

When the risk of administering discontinued medications was called to the attention of the software vendor, a representative said that the company was already aware of the problem and trying to fix it. Meanwhile, the pharmacist immediately turned off the new overdue medication feature once he realized the problem was reproducible. The software vendor has since placed information about the problem on its website to help communicate the problem to other software users.

We also heard from another pharmacist about a similar problem with a different software vendor. In this case, discontinued prn medications remain active on the eMAR until the end of the shift or day. When the pharmacist notified the vendor about the problem, he learned that the company was already aware of it. Although the vendor was working to fix the problem, it had not notified other end users about this issue and the risk of medication errors.

We suspect that the failure to notify end users about software problems is not unique to these two pharmacy system software vendors. It's unacceptable for any computer software or technology vendor to have knowledge of a potential patient safety problem with their product and not report it—urgently, if need be—to end users. This is tantamount to a drug company failing, for example, to report a container label error in which the wrong strength was listed.

Be sure to check with your system vendor to learn about its policy for communicating potentially harmful software glitches to users. You should also learn how the vendor has communicated problems in the past, and the timeliness with which they have corrected problems, particularly those that can harm patients.

Also, when you report a potential medication error problem related to computer software, please consider simultaneously forwarding a description of the problem to ISMP. If possible, screen shots to help demonstrate the problem are also useful. We will follow-up with vendors and pass on information as appropriate to other software users through our various publications, including the *ISMP Medication Safety Alert!*

SafetyBriefs continued from page 1 was identified as a medication the patient had been receiving at home and continued while the patient was hospitalized. The physician checked "continue home warfarin" and wrote a new prescription based on the inpatient warfarin order. The community pharmacy dispensed Jantoven, but didn't discuss the nature of the drug with the patient and didn't ask any questions that might have determined if the patient already had warfarin at home. It's unfortunate that manufacturers feel they must brand long-established products such as warfarin (**COUMADIN**), a high-alert medication, since it only adds to the potential for dangerous confusion. When branded generics are dispensed to patients, it is important that the generic name be listed on the prescription container label, along with the brand name, as necessary, whether Jantoven or Coumadin. Presently, many community pharmacies simply list the brand name for branded products, but that might not help the patient identify duplicate medications. This error was also caused by a failure with discharge counseling, which should be an integral component of discharge reconciliation, no matter which health professional provides the service.

⚡ Standard colors for wristbands. We were very happy to learn recently that the American Heart Association (AHA) has taken steps to nationalize a color-code system for patient wristbands. You may recall an article we wrote in 2006 (*ISMP Medication Safety Alert! Confusion over meaning of color-coded wristbands. March 9, 2006*) in which we described a hospitalized patient with a history of an anaphylactic reaction to latex. The patient was given a green bracelet which, at that particular hospital, signaled a latex allergy. During his stay, he was transported to an ambulatory diagnostic center for a test. Staff at the center were not aware that green wristbands signaled a latex allergy and performed the test using latex-containing vials/syringes. The patient experienced an anaphylactic reaction and required emergency medical treatment to correct the situation. We also mentioned an article published by the Pennsylvania Patient Safety Authority (Use of color-coded patient wristbands creates unnecessary risk. Supplementary Advisory. December 14, 2005; Available at: www.psa.state.pa.us/psa/lib/psa/advisories/v2_s2_sup_advisory_dec_14_2005.pdf). The article included another event reported to the Pennsylvania

continued on page 3 ▶

Caution when changing infusion duration

Hospitals using some infusion pump models need to be aware of a situation that could lead to incorrect flow volumes when doses of medications are infused over a specific time period. If, for example, a nurse selects magnesium replacement using a Hospira Symbiq smart pump, the dose, rate, volume to be infused (VTBI), and the time prompts initially default to blank entries. As soon as the nurse enters the dose per hour (1 g), which in this example is formatted in terms of 1 g per 100 mL, the infusion rate automatically appears on the screen. So, if 1 g is entered and the rate is 100 mL/hr, then the VTBI and the time will be automatically calculated (Figure 1).

However, if the nurse decides that 1 g should be infused over 30 minutes and changes the setting to that time, the rate on some pumps may remain at 100 mL/hr, and the VTBI may

change to 50 mL (Figure 2). The pump does not signal the nurse that the rate should be 200 mL/hr (over 30 minutes) for a VTBI of 100 mL. Otherwise, only half of the dose will be infused before the pump stops. A medication error is likely since there's no warning that the VTBI has been changed, while the rate remains the same. This error happens with drugs whose entire dose is infused over a specified time (e.g., piggybacks), but not with large volume infusions.

To prevent these types of errors, each entry on the confirmation screen should be rechecked before starting the infusion. Better yet, smart pump drug libraries should be programmed with the most common standard times for infusing medications (e.g., 30 minutes, 1 hour). Staff should also be warned about the potential for this error.

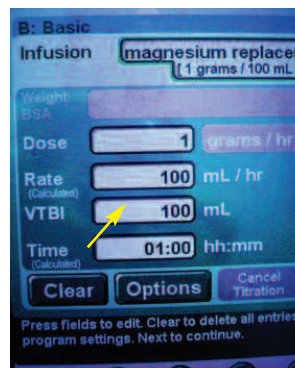


Figure 1. Pump (Hospira Symbiq used for demonstration) properly calculates rate and time based on the concentration and VTBI.

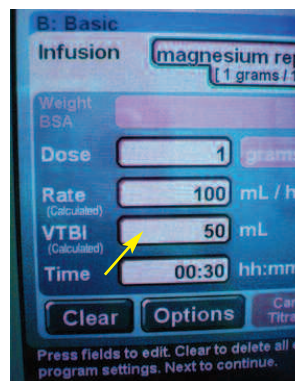


Figure 2. VTBI must be adjusted when time for infusion is adjusted.

Taking steps to reduce tolerance to at-risk behaviors

A newly employed nurse manager at a hospital where barcode scanning for medication administration was used discovered that a patient had received multiple medications despite not wearing an identification wristband. The patient was a postpartum maternity patient. It wasn't clear when the wristband had been removed, but a laboratory worker refused to draw routine labs because the patient was not wearing her identification wristband.

The lab worker thoughtfully described the risk to the patient. He explained why he could not draw blood and why the patient's nurse needed to get her a new wristband before any medications could be given. The patient mentioned that she had not been wearing the

wristband for some time, but had still received her medications.


The nurse manager learned about the missing wristband, looked at the patient's chart, and discovered that the patient's electronic medication record did, in fact, reflect that the appropriate drugs had been administered to the patient as ordered. Apparently an alternative barcode source associated with this patient had been scanned prior to medication administration (e.g., wristband placed on a clipboard or door jam, or another work-around).

The reason the patient was not wearing a wristband (e.g., wet, smeared, destroyed, removed by patient) had not

continued on bottom of page 3 ▶

SafetyBriefs continued from page 2

Patient Safety Reporting System in which a patient had been incorrectly identified as DNR (do not resuscitate) during an arrest. A nurse had mistakenly placed a yellow wristband on the patient which, in this hospital, was used to designate DNR status. The nurse worked at another hospital in which yellow wristbands were used to identify a "restricted extremity" that should not be used for drawing lab studies or IV access. Luckily the mistake was quickly realized and the patient was rescued. AHA is asking all hospitals to consider using three standardized colors for alert wristbands to improve patient safety: red for patient allergies; yellow for a fall risk; and purple for do-not-resuscitate patient preferences. Several states have already adopted these colors by consensus.

 **Ever wonder why doctors need to include purpose on prescriptions?** Here's why: an obvious mental slip. The physician prescribed

Disp: *hydralazine 25mg*
Sig: *#100 1-2pu 80pm 1hch*

hydralazine instead of hydroxyzine. Yes, the pharmacist immediately recognized the error and had the order changed to hydroxyzine. There's a grateful patient out there somewhere.



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"Tell Back" works best to confirm patient understanding

In the past few years, multiple studies have demonstrated that patients often leave medical encounters with a poor understanding of their health conditions and recommended treatment. One of the soon-to-be published studies on this subject demonstrates the low level of understanding patients have about follow-up care and medication therapy upon discharge from the emergency department (Engel KG et al. Patient comprehension of emergency department care and instructions: are patients aware of when they do not understand? *Ann Emerg Med* [in press, but available now on the journal website]).

Given the importance of patient understanding of medical information, there are surprisingly few studies that point out how to approach this task. But a study published earlier this year offers some insight into what approach to assessing understanding of medical information patients most prefer and perceive to be the most effective (Kemp EC, et al. Patients prefer the method of "Tell Back-Collaborative Inquiry" to assess understanding of medical information. *J Am Board Fam Med* 2008;21(1):24-30). Researchers tested three types of inquiry about the patient's understanding:

- Yes-No
- Tell Back-Directive
- Tell Back-Collaborative.

The Yes-No approach asked closed ended questions to assess patient understanding. (Example: "I've given you a lot of information. Do you understand?") The Tell Back Directive method used open-ended

questions that were physician-centered and paternalistic in that it was clear authority and control still remained with the physician. (Example: "It's really important that you do this exactly the way I explained. What do you understand?") The Tell Back-Collaborative approach used open-ended questions that were patient-centered, making it clear that power and responsibility were shared among the healthcare provider and patient. (Example: I imagine you are really worried about this clot. I've given you a lot of information. It would be helpful to me to hear your understanding about your clot and its treatment.)

Patients showed a significant preference for the Tell Back-Collaborative inquiry over other tested approaches. Because of the potential for embarrassment if patient misunderstandings are exposed, one might anticipate healthcare providers' reluctance to put patients "on the spot" with open-ended questions. But a collaborative approach to Tell Back allows the patient to save face for misunderstandings by acknowledging the large amount of information being provided. Patients might also view the request for Tell Back as evidence of the healthcare provider's care and concern for them personally, or evidence of the provider's attention to detail and competence. So, when educating patients about their medications, instead of asking "Do you have any questions?" or "Do you understand?" ask them to restate their understanding of the information you provided in their own words within a shame-free environment.

Taking steps continued from page 2

been determined. The manager investigated the at-risk behavior of administering medications to patients without an identification wristband with the nurse on-duty when the deviation in safe practice occurred.

One of the subsequent actions taken as a result of this risk was to share a recent article about barcode scanning work-arounds (www.philly.com/philly/news/homepage/22751404.html) with staff. Another important step was that the new

manager shared her expectations with staff that they would bring barriers to scanning to her attention and disclose work-arounds caused by the barriers so they could be addressed. The safety benefits associated with barcode technology to prevent medication errors were also reviewed and discussed with staff members. Our hats are off to the lab worker for speaking up about the problem and to the new nurse manager who identified an at-risk behavior and took the beginning steps to reduce staff tolerance of it.