ISMP Medication Safety Alert!®

Nurse Advise-ERR™

Educating the healthcare community about safe medication practices

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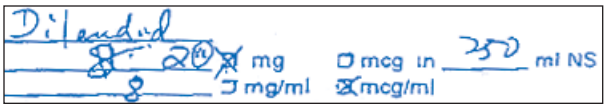
"Bad marks" on order forms

Letters, initials, checks, and other marks – whether stray or well-intentioned – can obscure or change how a medication order appears. Several reports of errors demonstrate this well.

A physician prescribed patient-controlled analgesia (PCA) using **DILAUDID** (hydromorphone) 2 mg in 250 mL of sodium chloride 0.9% injection to make a concentration of 8 mcg/mL. While writing on the preprinted form, he accidentally wrote the concentration (8) on the dose line. He quickly saw his mistake, crossed out the 8 and wrote a 2, and initialed the change and circled his initials. He then completed the line for concentration.



When the pharmacist read the order, he mistook the circled initials as a zero and dispensed **20** mg of hydromorphone in 250 mL normal saline (**80** mcg/mL concentration). The pharmacist labeled the bag as containing "20 mg/250 mL NS," but then incorrectly labeled the concentration as "**8** mcg/mL." Two nurses checked the bag before it was hung, but they verified only the concentration (8 mcg/mL), which matched the incorrect label. They didn't see that the label read 20 mg/250 mL instead of the prescribed 2 mg/250 mL. Fortunately, a nurse on the night shift discovered the mistake. The patient suffered no ill effects.

Other well-intentioned marks have caused confusion. A unit secretary conscientiously checked off each order she transcribed. But when a pharmacist read a handwritten order for **LEVBID** (hyoscyamine extended release), he saw **ENBREL** (etanercept), because the "L" in Levbid had been obscured by the check mark. He realized his mistake because Enbrel is given subcutaneously and the order specified the oral route. In another hospital, "40 mg Tylenol Infants' Drops" looked like 140 mg because a check mark preceding the dose looked like the number "1." Also, if orders are numbered, the number could be read as part of the dose or as the quantity of tablets.

We've also seen the transcriber's initials at the beginning of each order, or the letters "P," "M," "K," and "O" to indicate that the order was **P**ulled, entered on the **M**AR or **K**ardex, or that it had been **O**rdered. This led to the dispensing of **MONOPRIL** (fosinopril) instead of **ACCUPRIL** (quinapril) because an "M" had been placed in front of the drug name. To prevent these types of errors, see the suggestions in Check it Out!

safetywire

Patches administered IV? A hospital experienced two events involving patients with severe chronic pain who were using **DURAGESIC** (fentanyl transdermal system) patches. Both patients had removed the patches, cut them into small pieces, soaked the pieces in water, and injected the solution into themselves intravenously. The syringes used did not come from the hospital. One patient had serious complications; the other suffered no harm. In both cases, the patients, in retrospect, were found to have histories suggestive of illicit drug use.

check it out! ✓✓✓✓

Transcription errors can be reduced with computerized prescriber order entry. Until then, consider the following to prevent "bad marks" when prescribing or transcribing orders.

✓ **Raise awareness.** Warn others that letters, initials, checks, and other marks used when transcribing orders can cause errors.

✓ **Talk to prescribers.** Ask prescribers to write the dose ***after*** the drug name, not before it, and to refrain from numbering each order.

✓ **Send orders to the pharmacy *before* transcription**. "Clean" orders will help the pharmacist interpret the order correctly and speed the dispensing process.

✓ **Make notations on the bottom of the form.** Marks that signal completion or verification of order transcription are less likely to interfere with the drug name or dose when placed on the bottom of the form.

✓ **Redesign order forms.** If check marks or notations must be used for large order sets, order forms should be designed with a separate column or box in which to place the check mark or notation to communicate that an order has been transcribed.

✓ **Correct entries carefully**. Use a single line to cross out the error. Write your initials in the upper right-hand corner next to the erroneous entry (away from the corrected entry). Don't circle your initials.

For Staff Meeting Discussion

Could your order transcription practices lead to a medication error?

Provided through an unrestricted educational grant from Eli Lilly and Company

As You See It Patient education survey results

How do you educate patients about their prescribed medications? What are the most frequent barriers you face? Over 250 nurses answered these questions in our June survey, and their responses tell a story of challenges and successes with this considerable responsibility – a responsibility that clearly impacts the health of patients and their families.

Teaching Methods. Almost all nurses cited verbal discussion at discharge (94%) or during drug administration (84%) as the most frequent method used to teach patients about their medications. Written information about medications was provided to patients much less frequently (1 in 4 nurses *never* provide it). A full third of nurses felt that the available written materials did not cover the most important information clearly for their patients. Half of the nurses told us they did not use videos, television, or an intranet site to teach patients about medications or medication safety.

Patient Feedback. More than two thirds (68%) of nurses reported that they required all patients to repeat back an explanation or demonstrate drug administration techniques that had been taught to them. Nurses who worked in teaching hospitals (75%) were even more likely to require this validation. Most nurses (80%) felt that patients were provided with a way to contact them for questions after discharge. This was clearly the case for patients who visited outpatient settings (92%).

Teaching Barriers. Fifty-six percent of nurses in teaching hospitals and 41% in nonteaching hospitals had little or no written information to provide to patients about medication *error prevention*, making this one of the most frequently reported barriers. One in four nurses cited lack of written materials about medications as a frequent problem; 1 in 3 felt there was a frequent lack of written materials in the patient's native language; and 1 in 4 said that written materials may not be suitable for their patients' health literacy or reading level. Most nurses felt they had sufficient knowledge about medications to educate patients, readily available drug references, and access to pharmacy resources. However, lack of time was frequently experienced by almost half (43%) of all responding nurses, more so for nurses in inpatient settings (47%) and less for nurses who work in outpatient settings (29%). Full survey results can be viewed at www.ismp.org/NursingSurvey.asp.

See As We See It! for ISMP patient teaching tips, and thanks to all who completed the survey!

NaturallySpeaking

Warfarin and digoxin interactions with ginseng. A patient taking warfarin after a heart valve replacement had maintained an INR of between 2.5 and 3.5 for many months. After he started taking ginseng, an herb said to improve well-being, his INR dropped to 1.8. After discontinuing the herb, his INR returned to therapeutic levels with no warfarin dose adjustments. The patient denied medication or dietary changes that could have resulted in the same effect. Another patient, taking the same dose of digoxin for years, experienced an elevated digoxin level. Common causes of an elevated serum digoxin were ruled out before the patient admitted he was taking ginseng. His digoxin level returned to an acceptable level after stopping the ginseng.

As We See It Teaching tips

- **Install a computerized drug information system** (e.g., *Micromedex*, *Lexi-Pals)* that offers patient leaflets in different languages and appropriate reading levels.
- **Always provide patients with written drug information** if they are taking error-prone medications (e.g., metered-dose inhalants) or high-alert medications (e.g., warfarin, heparin, insulin, opiates, chemotherapy).
- **Include the family or caregivers**, when appropriate, during patient education. Do not wait until discharge to begin education about complex drug regimens.
- **Clearly explain the directions** for using each medication, including obvious information. (For example, patients have eaten the oranges that they used to practice insulin injections, believing that's how they should take their insulin; drank a capful of medication while "in the bathtub" instead of putting a capful in the bathtub; spread contraceptive jelly on their toast each morning for birth control; taken warfarin prn since they were told the medication was "for leg pain and swelling.")
- **Always require repeat demonstrations** or explanations about medications that will be taken at home.
- **Use the time you already spend with patients** (e.g., during assessments and daily care) to evaluate their level of understanding about their medications.
- **Develop standing orders for pharmacy consults** to educate patients who are being discharged on five or more prescription medications.
- **Identify patients at risk for nonadherence** with medication regimens. Consider a referral to home care services, and alert a pharmacist to design a drug administration schedule that minimizes the number of times per day that medications must be taken or administered.

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