Mom hopes son’s overdose spurs prevention efforts

A grieving mother contacted us about the death of her 2-year-old son, Blake (see photo), from an accidental drug overdose. Her son was not ill, he was not taking any medicine, and he was not hospitalized. Instead, the tragic event began, of all places, at a long-term care facility.

In November 2011, the family was visiting the boy’s great-grandmother at the long-term care facility. Two days after the visit, Blake was found unconscious and in respiratory arrest, and emergency medical personnel were unable to revive him. A medical examiner later found a small, white, 1 x 1.5 inch piece of what appeared to be tape in the boy’s throat. Later, after a toxicology report indicated that a lethal dose of fentanyl was in Blake’s system, the “tape” was sent to a lab to be analyzed. The tape turned out to be a fentanyl patch.

An investigation led to the long-term care facility where the boy had visited days earlier. Authorities found that medication patches were not being discarded properly. A used fentanyl patch was found on a bedside table. Authorities also found used medication patches in other resident’s rooms on the floor, stuck to bed railings, and in other unsecured areas. Blake’s mother also stated that patches had been discarded in the trash bin in the great-grandmother’s room.

Follow these suggestions for safe medication patch use, storage, and disposal.

- Keep track of patches on the body. While medication patches have adhesive backings, they do not always stay on the skin. Whenever possible, residents and their caregivers should be taught to regularly check to make sure the patch is still where it belongs, particularly soon after awakening, after a shower, and anytime clothes or bed sheets are changed. The healthcare professional or caregiver who applies the patch should document its placement (in the medication administration record [MAR] if hospital or nursing home staff) and check its location during routine assessments. Always ensure it is removed before applying a new patch.

- Dispose of patches safely. As a precaution, the FDA instructs individuals to fold the adhesive side of a used fentanyl patch together and flush it down the toilet. In a healthcare setting, if the used fentanyl patch cannot be flushed down the toilet, it should be disposed of in a secure sharps container in the resident’s room/bedside where the disposal is witnessed and documented according to policy. Only after a used fentanyl patch has been disposed of properly should a new patch be placed on the resident. The used patch should never be placed temporarily on a bedside table or stuck to a bed rail while applying a new patch.

- Keep out of reach. Individuals who will be using medication patches at home should be educated to keep new patches far away from the reach of children, and to not let children see them apply patches or call them stickers, tattoos, or special Band-Aids. This could attract children and encourage them to mimic their actions.

Welcome to the premiere issue of Long-Term Care Advise-ERR, a medication safety newsletter from the Institute for Safe Medication Practices (ISMP). Written by nurses and edited by a diverse, expert advisory board, Long-Term Care Advise-ERR is designed to:

- Alert nurses to serious medication hazards in long-term care
- Inform nurses about deeply rooted system causes of medication errors
- Empower nurses to protect residents from medication errors
- Engage nurses as integral members of interdisciplinary medication safety teams
- Advocate for improvement in professional practice, product safety, and regulation.

To achieve these goals, we’ll bring you anonymous medication safety stories—sometimes amusing, sometimes tragic, but always memorable—that ISMP has received through its National Medication Errors Reporting Program (ISMP MERP). We’ll talk about why mistakes happen and offer practical advice on how to avoid errors.

Just as important, you’ll have a chance to share your safety stories, ask questions, and participate in surveys so we can learn about you, your medication safety concerns, and the innovative ways that you make residents safe.

We’re glad you’re joining us on this very important journey to prevent medication errors that can harm residents in long-term care.
Overdose—continued from page 1

One theory is that Blake may have run over a used fentaNYL patch on the floor of his great-grandmother’s room while playing with his toy truck. The patch probably stuck to the wheels of the toy. Later, he may have peeled off the patch and put it in his mouth. From there, the fentaNYL began absorbing into his body. The patch then became stuck in his throat. A used fentaNYL patch can still contain a large amount of unab sorbed medication. So, both new and used patches can be dangerous to children (and pets).

This theory about the child’s death is quite feasible given that there have been reports of other children who have been exposed to patches in a similar manner. In fact, we have received a number of reports over the years about children being accidentally exposed to used fentaNYL transdermal patches. A 4-year-old boy died after placing a fentaNYL patch on his body. His mother had been using these patches for pain from Crohn’s disease. After she found her son dead, she also found a torn fentaNYL patch wrapper in an overturned bedroom trashcan. Children have also been exposed to danger from medication patches that have fallen off a family member. In one case, the child sat on the fallen patch and it stuck to her upper thigh. Another child removed a patch while his grandmother was sleeping and applied it to himself. In these cases, the patches were noticed right away and the children were not injured.

In April 2012, the US Food and Drug Administration (FDA) alerted the public to this risk (www.fda.gov/Drugs/DrugSafety/ucm300747.htm). FDA reported that 26 children have been accidentally exposed to fentaNYL patches during the past 15 years. Ten children have died, and 12 were hospitalized. Sixteen cases involved children 2 years old or younger.

Blake’s mother asked us to share information about how to properly use, store, and dispose of fentaNYL patches, which can be found in the check/out column to the right on page 1. She also asked us to emphasize that parents need to be aware of possible hazards when they visit any healthcare facility with their child. She warns, “You can’t count on people not making mistakes like dropping pills or forgetting them on a bed rail. Parents should keep a close eye on their kids when visiting someone where any medicine is used.” Regulatory agencies should also require safe patch disposal in all healthcare facilities.

Pop quiz

What medication was prescribed in this order and faxed to a long-term care pharmacy?

The physician prescribed CARDURA (doxazosin) 2 mg PO QHS, but the order was misinterpreted and dispensed as COUMADIN (warfarin) 2 mg HS. The resident received Coumadin instead of Cardura for 20 days before the error was discovered during hospitalization for uncontrolled hypertension. Fortunately, the resident did not experience bleeding episodes from taking Coumadin for 20 days. Both medications are available in 1 mg, 2 mg, and 4 mg tablets, and are generally administered once daily. These drug names may not seem alike, but when handwritten (see picture), the similarities are much more apparent. There have been numerous reports of mix-ups between these drugs on handwritten prescriptions. Prescribers should include the medication’s purpose on all prescriptions. Likewise, pharmacists and nurses should verify a medication’s purpose before it is dispensed or administered, especially for a high-alert medication such as warfarin.
Oral KCl overdose fatal

A long-term care resident died from cardiac arrest after receiving a 10-fold overdose of oral potassium chloride. An order for 8 mEq was misinterpreted by several facility staff members as 80 mEq. The doctor’s potassium order showed “8” followed by a filled-in dark circle, which apparently was intended to obliterate a previously entered number or letter (Figure 1). However, a transcription secretary and two nurses interpreted the dark circle as a zero, making the dose 80 mEq, not 8 mEq as intended!

The pharmacist dispensing this medication to the long-term care facility recognized this was an “unusually high dose” but confirmed it was “correct” by calling the facility and speaking with one of the nurses. That nurse assured him that the dose was correct based on an earlier discussion with her colleagues. Unfortunately, the pharmacist did not verify the dose directly with the prescriber. The pharmacy dispensed enough medication for 80 mEq doses, which were administered over 8 days by seven different nurses until the resident finally complained of shortness of breath and chest tightness. She was hospitalized, suffered a cardiac arrest, and later died.

No one ever confirmed the high potassium dose directly with the physician. If a pharmacist or nurse suspects that an order is potentially harmful, he or she should pursue the matter directly with the prescriber who wrote the order until satisfied that the therapy is safe for the resident or until the order is changed. Never assume and never guess what the prescriber intended. This includes, among other things, an information-gathering process (e.g., checking the latest laboratory value before dispensing an electrolyte, verifying the resident’s condition) as well as direct communication with the prescriber. A step-by-step process for resolving drug safety questions was provided in a 2008 hospital newsletter and can be accessed at: www.ismp.org/Newsletters/acuteCare/articles/20080313.asp.

Also, this case clearly shows how dangerous it is to improperly correct errors made while prescribing. Any errors that are identified while prescribing should be struck with a line (e.g., daily), have the word “error” inserted immediately above the item, and have the prescriber’s initials and date documented next to it. The item should then be written correctly.

We need YOU to report medication errors to ISMP

Articles in this publication are based on actual medication errors reported by healthcare practitioners. We’d like to hear from you too! Please share reports of medication errors and prevention recommendations, in confidence, with ISMP so we can share the lessons learned with colleagues in the US and worldwide. Report medication errors to the ISMP National Medication Errors Reporting Program (ISMP MERP) at 1-800-FAIL-SAF(E) or online at: www.ismp.org.

Reports we receive are forwarded to the US Food and Drug Administration (FDA) and to pharmaceutical companies when appropriate. Reporter and facility identity and location are strictly confidential and never published. Visit our website for additional information.

Figure 1. An order for KCl “8” mEq misinterpreted as “80” mEq.

Figure 2. The dose was 4 units of regular insulin, but the resident received 44 units.

It wasn’t clear to me. A nurse in a long-term care facility was about to administer what she thought was HYPOTEARS PF (polyvinyl alcohol, preservative-free) drops to a resident. What she initially picked up was a container of albuterol inhalation solution, which had been mistakenly placed in the resident’s medication drawer. Luckily the nurse noticed the error and did not place albuterol into the resident’s eyes. Hypotears PF are packaged in a clear, single dose, low-density polyethylene (LDPE) container, very similar to many inhaled respiratory medications (see photo). The names of the medications are molded into the plastic but are colorless. To avoid mix-ups with products packaged in LDPE containers, be sure to store each separately. If possible, also keep medications that come in LDPE containers in their original outer packaging, which is often labeled more clearly. Or ask your pharmacy to dispense all LDPE containers (including respiratory medications) in clear plastic bags with auxiliary labels for easier identification.

in the above case, but a similar error happened in the US several years ago in which 44 units of regular insulin was given instead of 4 units. The abbreviation U has also been misread as “cc,” which has resulted in infusion rate errors with IV insulin. Some progress has been made in eliminating “U” as an abbreviation for units, especially in long-term care facilities that are accredited by The Joint Commission, which includes “U” on its “Do Not Use” abbreviation list. But we need everyone to be persistent in ensuring that this dangerous abbreviation is never used.

Safety wires cont’d from page 2

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