This holiday season, keep children safe from accidental medication poisonings

**Problem:** For many of us, the holidays will include joyous family gatherings. However, holiday cheer will quickly fade if a child at a family gathering gets into unsecured medications and requires a trip to the emergency department (ED). It’s important that you and your patients don’t let your guard down—it can happen to a child you love. In the US, approximately 60,000 children are brought to the ED each year because of unsupervised medication exposures.¹

Leaving prescription and over-the-counter (OTC) medications as well as dietary supplements within reach of children is a predominant risk associated with medication poisonings. However, the problem is worsened by medications that look and taste like candy; medicated patches that children ingest or apply to their skin (after falling off or taken off a sleeping adult); medications like nicotine delivered by chewing gum or mint-like pellets; and other medications that attract a child’s attention.

Most medication poisonings happen in the home. According to a national poll conducted in 2012, nearly all parents with young children (97%) and grandparents (98%) have medications in their homes.² Often these medications are stored in a way that provides easy access to children. For example, medications may be stored in easy-to-open containers like a daily or weekly “pill box” or not kept up and away and out of the sight and reach of children. Easy access to medications is common in grandparents’ homes. Nearly 1 in 4 grandparents admits storing their prescription and OTC medications in places or containers that young children can easily access.

Even more worrisome is that taking just a single (or a few) tablet of some medications can kill a child.³⁻⁵ With these medications, a child can appear to be perfectly fine until it’s too late. Tragically, this was the case for a 2-year-old child who took 2 to 4 tablets of her grandmother’s amiodipine, used to treat high blood pressure and chest pain.⁵ Initially, the child did not appear to have any symptoms. When she became very drowsy about 45 minutes later, the family rushed her to the hospital. But it was too late. Her blood pressure was dangerously low, and despite life-saving efforts, her heart rate kept dropping and she died.

Family members and friends also may bring medications into the home when visiting during this holiday season. People may put a few doses of a medication in their purse, suitcase, pocket, or other container that is not child-resistant. They may even leave a pill or two out on the counter, continued on page 2—Children >

<table>
<thead>
<tr>
<th>Table 1. Examples of single tablets and swallows that can seriously harm or kill a child⁶</th>
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<tr>
<td>Antidepressants (e.g., tricyclic antidepressants)</td>
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<td>Antiarrhythmics</td>
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<td>Calcium channel blockers</td>
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<td>Camphor and camphor-containing products</td>
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<td>Imidazolines (e.g., naphazoline, oxymetazoline)</td>
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<td>Methyl salicylate (e.g., oil of wintergreen)</td>
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<td>Phenothiazines</td>
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<td>Opioids</td>
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<td>Quinine derivatives</td>
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<td>Sulfonylureas</td>
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<td>Topical blood pressure patches (e.g., clonidine)</td>
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**SAFETY briefs**

Don’t cover manufacturer’s barcode. In an ambulatory care pharmacy, XARELTO (rivaroxaban) 10 mg was dispensed instead of VESICARE (solifenacin succinate) 10 mg. The error was missed during the final verification process. However, the patient realized the error prior to taking any doses. One root cause of the error was that the barcode on the manufacturer’s label was covered by a pharmacy-applied label and, therefore, not available to be scanned. It should go without saying that pharmacy staff need to ensure that price stickers or other pharmacy labels or markings never interfere with ability to scan the manufacturer’s barcode. A best practice is to periodically review current inventory and completed prescriptions to confirm manufacturer barcodes are visible for scanning.

Inappropriate use of the comment field. ISMP has received numerous error reports when the field for “comments” or “notes” in the electronic prescribing (e-prescribing) system was used to clarify a medication order. According to a recent error report from a long-term care facility, a nurse received a telephone order for a resident to receive warfarin 1.5 mg daily. During order entry, the nurse chose warfarin 3 mg tablets, intending to include directions to administer a ½ tablet daily. However, the nurse accidentally selected 1.5 tablets instead of 0.5 (½) tablets, and the final entry of the order read “warfarin 3 mg—Administer 1.5 tablets daily.” In the special instructions section of the entry, the nurse tried to clarify the order by entering, “Administer 1.5 mg daily.” Unfortunately, the pharmacy dispensed 4.5 mg per dose, and the resident re-continued on page 2—SAFETY briefs >
SAFE PRACTICE RECOMMENDATIONS: During this holiday season and throughout the year, please remind patients to keep all medications and vitamins up and away and out of a child’s reach and sight. Also, remind them to discuss safe storage of medications with their guests when they arrive. Encourage patients, parents, and caregivers to visit www.upandaway.org to learn more ways to keep children safe from accidental medication poisonings and follow the recommendations below:

- Keep all medications in a secure cabinet, locked if possible, but at a minimum, up and away from the reach or view of children. Never leave medications on counters or tables (including children’s vitamins or iron supplements), even if they are in containers with child-resistant caps.
- Avoid keeping medications in purses, backpacks, suitcases, or other places where children may explore, or in pockets where the medication can fall out.
- Use child-resistant caps on containers and be sure they are closed properly after use (listen for a click to ensure proper closure). And, remember that “child resistant” does not mean “child proof.”
- Avoid the use of dual-purpose prescription container caps that can serve as a child-resistant cap but can be flipped over for use as a non-child-resistant cap, which can result in child poisonings if the non-resistant side is used.
- With oral liquid medications, never leave a syringe bottle adaptor in place if it prevents the ability to secure the child-resistant cap.
- When children visit other homes, or when family or friends visit, look out for potential poisoning dangers and intervene before an accident happens. Don’t hesitate to discuss medication access and safety with hosts or guests.
- Don’t take medications in front of children because they tend to mimic adults. Also, don’t put medications away while children are watching.
- Educate children about medications. Never tell children that medications are candy. Teach them that they should only take medication (or eat candy) when an adult has given them permission.
- If a child is exhibiting any symptoms or acting strangely for any reason, don’t wait. Keep the possibility of a poisoning in mind and seek help immediately.
- Contact the Poison Help number (1-800-222-1222) immediately if you think an accidental poisoning has occurred. Encourage your patients to program this number into their cell phones so they have ready access in the event of an emergency.

References


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We have received similar reports from community pharmacists who have received electronic prescriptions (e-Rx) from prescribers who include two different sets of directions, one in the sig field and another in the notes field, in the e-Rx. For example, a community pharmacy received an e-Rx for the anticonvulsant gabapentin with “1 tablet PO TID” in the sig field but “1 po bid x7 days, then i po tid thereafter” in the notes field.

Using the comment field to correct electronic orders is problematic. Often, the pharmacy does not see the information in the comment field because the interface may not properly transmit it to the pharmacy system or it is displayed apart from other dosing instructions. Staff and prescribers should seek assistance if they cannot enter the correct dose or frequency into the e-prescribing system, rather than relying on the comment field to correct the problem. Direct communication with the pharmacy may help prevent confusion and error. We ask that pharmacists communicate with prescribers and facilities when potential or actual errors are encountered with the systems they are using. We also ask that all healthcare practitioners continue to report actual errors, close calls, or hazardous conditions related to e-prescribing to our medication error reporting program at: www.ismp.org/merp. We will continue to share reports that we receive in our newsletter and communicate with vendors and others who may be able to effect change in safe electronic prescribing.

An oldie but still not good. A young man recently presented to the local emergency department (ED) with a headache, numbness in his extremities, and shortness of breath that developed 2 hours after taking a new prescription for a contraindicated medication. The prescriber had forgotten to change the electronic prescribing system to reflect the updated medication order. We will continue to follow up with this case and share the outcomes.
Opioid mix-ups. In our August 2014 issue, we highlighted cases of mix-ups between HYDROcodone-acetaminophen and oxyCODONE-acetaminophen combination products. While the exact causes of many of these errors remain a mystery, a number of regulatory and product changes may be contributing. For example, all approved opioid-acetaminophen combination products are now limited to 325 mg of acetaminophen or less. Even though some of these changes happened a couple of years ago, we continue to receive reports of mix-ups between HYDROcodone-acetaminophen and oxyCODONE-acetaminophen combination products. Thus, we thought it was Worth repeating strategies that can be used to reduce the risk of mix-ups.

- Examine where you have these products stored. Close proximity and similar looking containers can increase the risk of mix-ups.
- Consider employing name differentiation strategies (e.g., tall man letters, bolding, highlighting) for the HYDROcodone and oxyCODONE portions of the product names.
- Prescribers should indicate on the prescription how much HYDROcodone or oxyCODONE as well as acetaminophen is intended. If the combination prescribed isn’t available, the pharmacist should contact the prescriber.
- At the point-of-sale, pharmacy staff should review each prescription container with the patient.
- Educate patients about the importance of reading all prescription and over-the-counter labels to ensure they are taking the correct medication and not taking multiple acetaminophen-containing products. Provide guidance to not exceed maximum recommended daily doses of acetaminophen.

ISMP welcomes Liz Hess, PharmD, MS, the 2015-2016 ISMP Safe Medication Management Fellow, sponsored by Express Scripts Foundation. Liz joins ISMP from the University of North Carolina Medical Center (UNCMC) where she completed a PGY-1/PGY-2/MS in Health-System Pharmacy Administration. Liz received a BS in biology in 2009 and her Doctor of Pharmacy in 2013 from The Ohio State University. She earned a Masters in Pharmacy Administration in 2015 from UNC Eshelman School of Pharmacy.

Liz is joined by Bryan Bailey, PharmD, BCPS, also a 2015-2016 ISMP Safe Medication Management Fellow. Bryan joins ISMP as part of the US Army Medical Department’s Training with Industry program. He is an active duty officer who holds the rank of major. Bryan has served in a variety of pharmacy administration and clinical positions during his 10-year military career. He received his Doctor of Pharmacy from Southwestern Oklahoma State University in 2003 and completed a PGY-1 pharmacy practice residency in 2009. He is currently working on a Masters in Health Administration through Ohio University.

ISMP and the US Food and Drug Administration (FDA) also welcome Briana Rider, PharmD, as the 2015-2016 FDA/ISMP Safe Medication Management Fellow. Briana joins ISMP from the Office of Disease Prevention and Health Promotion (ODPHP) of the Office of the Assistant Secretary for Health at the US Department of Health and Human Services in Washington, DC. While there, she completed a 16-month ORISE Health Policy Fellowship where she coordinated efforts to reduce healthcare-associated adverse outcomes. Briana received her Doctor of Pharmacy from Wilkes University Nesbitt College of Pharmacy and Nursing in Wilkes-Barre, PA in 2014.

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Anxiety/Insomnia cont’d from page 2

The patient brought the prescription bottle with him, which was filled for hydrALAZINE 25 mg with instruction to take 1-3 tablets every 6 hours. Given that hydrALAZINE is indicated for the treatment of hypertension and not anxiety, staff in the ED questioned if a prescribing or dispensing error had occurred, especially since hydrALAZINE is well known as a look- and sound-alike medication with hydrOXyazine, a medication with an indication for anxiety. The patient’s community pharmacy was called and it was determined that an error had in fact occurred. The pharmacy received a printed prescription for hydrOXyazine from an urgent care center and mistakenly entered it into the pharmacy computer system as hydrALAZINE. The patient’s initial blood pressure upon admission to the ED, roughly 3 hours after taking 50 mg of hydrALAZINE, was 105/57 mmHg. Pharmacists should encourage prescribers to include the purpose on the prescription. However, this does not excuse pharmacists from discussing new therapies with patients to verify that the medication is appropriate to treat the patient’s condition and that the patient understands the new regimen.

ISMP has reported on confusion between these two medications leading to dispensing errors for over a decade.