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ISMP
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Community/Ambulatory Care
ISMP Medication Safety Alert!®
Educating the Healthcare Community About Safe Medication Practices

Broken benefit verification system contributes to workarounds and medication errors

Problem: Ensuring medication affordability prior to sending a patient to the pharmacy is common in physician offices and prior to discharge from hospitals. Prescribers want to avoid prescribing medication therapy or creating a treatment plan that the patient cannot afford. However, the process to check a patient's prescription benefits can be resource intensive if the prescriber does not have access to real-time prescription benefit checking functionality within the prescribing system. As an alternative, some prescribers may send a test prescription to a patient's pharmacy to determine insurance coverage and the expected patient financial responsibility. However, sending test prescriptions can introduce significant risks that can lead to an error, including the following:

- The test prescription is not marked as a "test" when generated from the electronic health record (EHR) and sent to the pharmacy. As a result, the pharmacy fills the prescription, and the patient picks it up when the prescriber does not intend for the patient to receive the prescription. If the prescription is not picked up, it is returned to stock and the prescription remains active on the patient's profile, which could be inadvertently filled at a future date.

- The test prescription is processed through the patient's insurance, but the claim is not reversed. This may result in delays in prescription dispensing due to drug utilization review (DUR) alerts (e.g., drug-drug interaction, duplicate therapy) and insurance rejections (e.g., duplicate therapy, refill too soon) which need to be resolved when the pharmacy submits a prescription claim for the actual medication that is prescribed for the patient.

- The test prescription is for a controlled substance. Once the pharmacy processes the prescription, it is transmitted to the prescription drug monitoring program (PDMP). As a result, the PDMP will display inaccurate dispensing information which may impact the patient's future pain care.

- The test prescription is not discontinued in the EHR, so it appears to be an actual prescription sent to an outpatient pharmacy. This can lead to misinterpretation of the patient's medication therapy since it is documented in the medication history which ultimately impacts medication reconciliation at transitions in care.

ISMP continues to receive reports of test prescriptions being sent to pharmacies to check prescription coverage, which have resulted in medication errors. In a recent case, described below, a patient suffered harm as a result of a prescriber transmitting a test prescription.

Case Report

A health system reported that a provider sent a test prescription for venetoclax (**VENCLEXTA**) to the organization's outpatient pharmacy. However, there was no indication or communication that the prescription was only being sent to check whether the patient's insurance covered the medication and how much it would cost. So, the pharmacy processed and filled the prescription. The prescriber had intended to cancel the prescription but failed to communicate that to the pharmacy. The medication was dispensed to the patient.

In addition, the patient did not speak English which contributed to inadequate communication and counseling when they picked up their medications from the outpatient pharmacy upon discharge.

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SAFETY briefs

Eyelids stuck together with nail glue. A patient presented to the emergency department (ED) after mistakenly instilling a drop of nail glue (ethyl cyanoacrylate) into her eye rather than eye drops as intended (**Figure 1**). When she arrived at the ED, her eyelid was glued shut with a contact lens still in place on the eye. The patient required observation in the ED and administration of mineral oil to break up the glue and erythromycin ointment. Eventually, her eyelid was able to be opened enough to remove the contact lens. They then rinsed her eye out at the eyewash station.

Figure 1. The reporter shared images of a nail glue product (left) and an ophthalmic lubricant (right) that are packaged in similar-looking containers. Patients have mixed up ophthalmic products with nail glues and other non-ophthalmic medications packaged in containers similar to those used for ophthalmic products.

This is not the first time we have received reports describing situations in which people accidentally confused eye drop containers with other look-alike containers. In the December 2002 issue of this newsletter, we described an error in which a patient with very poor eyesight had been instilling glucose control solution into one of his eyes instead of timolol maleate ophthalmic solution. In the March 2011 issue, we wrote about a case in which a patient

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Once home, the patient began taking the venetoclax. Within a few days, they experienced adverse effects, including intracranial bleeding.

Venetoclax is a chemotherapeutic agent, and as such, is considered a high-alert medication. It is approved to treat various forms of leukemias in adults. For example, it is used to treat newly diagnosed acute myeloid leukemia (AML) in adults 75 years or older, or those who have comorbidities that preclude the use of intensive induction chemotherapy, when used in combination with azacitidine, or decitabine, or low-dose cytarabine. When a patient starts the medication, a ramp-up dosing phase is required—3 or 4 days for patients with AML with the final dose determined by the concomitant chemotherapeutic agents administered with it, or 5 weeks for patients with chronic lymphocytic leukemia (CLL) or small lymphocytic lymphoma (SLL). Due to these medication combinations, often times patients begin the venetoclax ramp-up dosing either in an inpatient setting or while receiving combination treatment in an outpatient infusion center. The complexity of this treatment regimen can be confusing to any patient, even if language or literacy barriers do not exist.

Safe Practice Recommendations: Due to the variety of insurance plans, concerns around affordability, and limited access to real-time prescription benefit checking, many physician offices and hospitals rely on outpatient pharmacies to check copays. Making direct calls to the patient's insurance provider takes a great deal of time, and insurance representatives often cannot provide real-time copays for prescriptions in the absence of an electronic claim. Many factors, including a patient's deductible, may factor into the ultimate prescription copay. So, what can prescribers and pharmacists do instead of relying on test prescriptions?

Many EHRs, at least in outpatient settings, include functionality to access a patient's health plan formulary information as well as electronically submit prior authorization requests directly to the health plan (e.g., real-time prescription benefit checking before transmitting a prescription to the pharmacy). Prescribers (and clinic-based pharmacists if available) should maximize the use of these capabilities if available in their application. If not currently available, organizations should plan for EHR upgrades to implement these functions.

Since we last wrote about the risks introduced by test prescriptions back in 2019, some EHR systems have evolved to provide functionality to facilitate communication between providers and pharmacy staff regarding checking insurance coverage and the cost for a patient. For example, Epic provides a "test script" function for providers, and a "test prescription" mode within their Willow Ambulatory (WAM) computer system to run the claim, view insurance coverage information, and automatically reverse a claim and delete the prescription.

We have learned from one health system's outpatient and specialty pharmacies that they have utilized the above mentioned Epic and WAM functionalities. As an additional safety feature, they configured the system to send a test prescription message, including clear verbiage that it is a test prescription, via electronic in-basket messaging to a dedicated pharmacy technician team. The pharmacy team then uses this communication as a test prescription hard copy, submits the claim, and using the WAM test prescription mode, reverses the claim. This bypasses the generation of an actual electronic prescription within Epic. The organization that shared the report above stated that they also decided to have providers submit a copay check request through an electronic in-basket messaging system instead of submitting an actual prescription to be run as a claims test.

Due to the current system of insurance companies driving therapy through their formularies and patient copays, patient affordability needs to be determined early in the course of therapy. Currently, prescribers rely on the use of test prescriptions as an element of their treatment plan development. However, in this current climate, consider using technology-driven real-time prescription benefit software embedded into EHRs, adopting a test-claim mode within the pharmacy dispensing system, and identifying a methodology that avoids generating a real prescription when a benefit test is desired.

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glued their eyelids shut after accidentally grabbing Super Glue instead of one of their eye medications. Then, in our August 2018 issue, we shared the story of an older woman who inadvertently instilled ear wax removal drops (carbamide peroxide 6.5%) into her eye causing irritation and redness that persisted after rinsing her eye for 15 minutes. And twice, in the March 2015 and March 2024 issue, we have warned about the actual and potential administration of clotrimazole topical solution into the eyes.

Any non-ophthalmic substance packaged in bottles (or tubes) that look like eye drops or ointments might pose a risk, particularly if the products are left in areas where ophthalmic medications are stored and/or if the patient has impaired eyesight. Those using ophthalmic drugs should be warned to store other look-alike products (e.g., glues, topical drugs, ear drops) away from ophthalmic medications. When possible, patients with poor eyesight should avoid purchasing non-ophthalmic products in dropper bottles or tubes that may look like their ophthalmic products. Healthcare practitioners, especially pharmacists, should be on guard for circumstances like these in order to appropriately advise patients to store their eye medications away from look-alike containers of other products.

Another confused drug name pair. A pharmacy intern recently shared with us a drug name that was confused with another. The pharmacy received a prescription for chlorpro**MAZINE**, a first-generation antipsychotic; however, it was entered into the pharmacy computer system as chlorthalidone, a thiazide-related diuretic. The error was caught during pharmacist verification and did not reach the patient.

These names share the same first five letters (c-h-l-o-r) and therefore can appear near one another on drug selection screens. Also, they both are available in 25 mg and 50 mg tablets. To help prevent errors, alert pharmacy staff and prescribers about the potential to mix up these medications. Prescribers should include the purpose of the drug on prescriptions. Educate staff that

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Voxzogo dispensing error after confusion between dose and vial strength

Problem: VOXZOGO (vosoritide) is a C-type natriuretic peptide indicated to increase linear growth in pediatric patients with achondroplasia with open epiphyses. The product is packaged in kits that include 10 single-dose vials of medication containing either 0.4 mg, 0.56 mg, or 1.2 mg of lyophilized vosoritide powder and 10 prefilled sterile water for injection diluent syringes containing either 0.5 mL, 0.7 mL, or 0.6 mL, respectively. For example, the Voxzogo 0.4 mg kit contains 10 each of the 0.4 mg vials of drug and 0.5 mL prefilled diluent syringes (**Figure 1**). After reconstitution, the drug concentrations are 0.4 mg/0.5 mL for the 0.4 mg vial, 0.56 mg/0.7 mL for the 0.56 mg vial, and 1.2 mg/0.6 mL for the 1.2 mg vial. However, the full vial volume after reconstitution is not able to be withdrawn (e.g., the manufacturer states that the nominal deliverable volume from the 0.4 mg vial is only 0.4 mL, not 0.5 mL).

The recommended daily subcutaneous dose of Voxzogo is based on the patient's actual body weight. The manufacturer provides a dosing table in the prescribing information to help prescribers and pharmacists select the proper dose, dose volume, and vial size for dispensing. For example, a patient weighing 22 to 32 kg should receive 0.4 mg of vosoritide daily. According to the dosing table, this requires administration of 0.5 mL of reconstituted drug from a **0.56 mg vial**. Similarly, a patient weighing 33 to 43 kg should receive 0.5 mg of vosoritide daily, which requires the caregiver to withdraw and administer 0.25 mL of reconstituted drug from a **1.2 mg vial** (not the 0.56 mg vial).

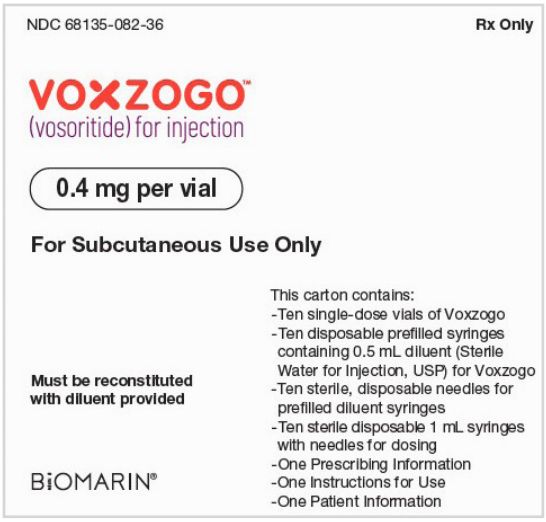

Figure 1. The Voxzogo 0.4 mg kit contains 10 each of the following: 0.4 mg vials of lyophilized vosoritide, 0.5 mL prefilled diluent syringes, needles for the diluent syringes, and 1 mL syringes with needles for dosing.

A pharmacist recently reported that a prescriber ordered and a pharmacist dispensed the wrong kit (i.e., the 0.4 mg kit) for a patient who required a 0.4 mg dose. They became confused about the doses and associated vial sizes. They assumed the 0.4 mg vials would yield a 0.4 mg dose, similar to other injectable products. However, as mentioned above, a 0.4 mg dose requires use of the 0.56 mg Voxzogo kit; the complete vial contents cannot be withdrawn from the 0.4 mg vial to provide the 0.4 mg dose. The error was discovered when the caregiver tried to draw up 0.5 mL of reconstituted drug for the 0.4 mg dose but could only withdraw about 0.45 mL into the syringe. (Note: Once they have received proper training from a healthcare practitioner, caregivers may prepare and administer the ordered doses in a home setting.)

Safe Practice Recommendations: To prevent errors, create order sentences within the electronic health record to guide prescribers to select the appropriate dose based on the patient's actual body weight. Automatically link the appropriate Voxzogo kit to the corresponding order sentence. Pharmacies may consider adding a note to the drug file and to the pharmacy shelf that directs pharmacy staff to double check that the vial size selected is appropriate for the prescribed dose. Alert clinic, medical office, and pharmacy staff to the potential for confusion with the kit sizes and corresponding doses. Provide education about dosing and that the labeled total content of each drug vial is not able to be withdrawn; therefore, the manufacturer-supplied dosing table must be used during prescribing and dispensing. Relay this information to caregivers who will administer the drug at home. Pharmacists should teach caregivers using the "teach-back" method, which incorporates a return demonstration by the caregivers to confirm their ability to prepare and administer the correct dose.

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it is best to type the entire drug name or keep typing letters until the intended drug name appears distinct by itself, especially for drug names with this much overlap in letters at the beginning of the names.

Improve systems to communicate and manage questions for providers. A patient with atrial fibrillation was seen at a health system cardiology office. The provider sent a prescription for the antiarrhythmic agent dronedarone 400 mg tablets to a community pharmacy. When the pharmacy entered the order, the insurance company rejected it as the medication was not covered by the plan. The pharmacy followed up with the cardiology office by sending an electronic medication message recommending the prescription be changed to dofetilide, another antiarrhythmic, which requires continuous electrocardiogram (ECG) monitoring upon treatment initiation and should not be started in an outpatient setting. They also included the complete list of medications that were preferred by the patient's insurance.

As per the office's established workflow and messaging system, the electronic medication message was routed into the office's standard medication message queue which is managed by clinical support staff. The queue captured many different types of messages, most of which were refill requests, making it difficult to differentiate other messages from the routine refill requests. Thankfully, a support staff person recognized that this message was not for a standard refill request, but rather a change in medication. Instead of setting up this medication change as a prescription for the provider to sign, they escalated the issue to the provider.

Health systems and medical offices should evaluate their medication message queues for potential risks and implement strategies to reduce these likely unrecognized risks. The organization that reported this event mentioned that they are exploring establishing separate queues for different message types. Ensure staff managing the message queues have appropriate

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Wrong patient error results in ED visit for an adolescent child

A prescriber ordered an antibiotic for a 13-year-old adolescent to treat an infection. The patient's mother went to their pharmacy to pick up the prescription. However, the pharmacy gave her a prescription for a different patient with a similar last name. The medication she received was **SUBOXONE** (buprenorphine and naloxone) 8 mg/2 mg sublingual film, which is used to treat opioid use disorder. The pharmacy did not review the prescription label with the mother. When she arrived home, believing she had received the prescribed antibiotic, the adolescent's mother administered the Suboxone to her child. Shortly after taking the medication, the adolescent became lethargic and started vomiting. The mother looked at the prescription label and realized the medication was for a different patient. She called Poison Control (1-800-222-1222 or www.poison.org) who directed her to take the adolescent to the emergency department (ED).

Wrong patient errors are one of the more common event types reported by consumers and community pharmacists. ISMP has written about wrong patient errors many times since we started publishing this newsletter in September 2002. These errors, including dispensing methotrexate to a pregnant patient and opioids to a child, have resulted in potential and actual serious adverse events. There are strategies that we know can help prevent these errors, including those described in *Best Practice #1* in the 2023-2024 ***ISMP Targeted Medication Safety Best Practices for Community Pharmacy*** (www.ismp.org/node/65345).

- Pharmacies should request, using open-ended questions, the patient or caregiver provide at least two identifiers (e.g., full patient name, date of birth) to verify the patient's identity. Asking for the patient's photo identification (ID) or more identifiers (e.g., patient's address, patient's phone number) are additional options to use during the patient verification process.
- Have pharmacists and pharmacy technicians compare the stated identifiers to either the prescription, pharmacy information system, and/or prescription or vaccine label.
- Employ technological enhancements at the point-of-sale that require pharmacy staff to electronically verify the patient's identity before the register transaction can be completed.
- At the point-of-sale, review the pharmacy labels and contents of each prescription container with the patient to check that the patient's name and medications are correct.
- Managers should periodically perform quality control checks by observing the patient identification processes at various points in the pharmacy workflow to ensure adherence to the standardized work practices.

We strongly encourage adoption of this and the other *Best Practices* in all US community and ambulatory care pharmacies. The *Best Practices* are fully described on ISMP's website at: www.ismp.org/node/65345. In addition, there is a worksheet (www.ismp.org/node/67951) you can use to identify gaps in implementation of these *Best Practices* and develop an action plan to address vulnerabilities.

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competencies to triage and escalate the messages as needed. Pharmacies should also evaluate how they communicate with prescribers and establish standard workflows depending on the type of issue and communication needed. In situations that are urgent, more complex, or when there are multiple therapeutic alternatives, it may be better to call the provider than send an electronic message.

Special Announcements

MSI workshop for outpatient pharmacy

Join us for our ***ISMP Medication Safety Intensive (MSI)*** workshop designed for those working in community, mail order, and specialty pharmacies. Learn how to identify risks before they cause harm and how to use data for continuous improvement. This program will take place on **Friday, September 20** and **Friday, September 27, 2024**, from **7:30 am - 4:30 pm ET**. To register, please visit: www.ismp.org/node/127.

New in-person human factors course

Our colleagues at ECRI are offering a new program entitled, ***Human Factors Engineering: Systems Thinking to Enhance Patient Safety***. During the two-day, live training, ECRI's human factors engineers will provide the foundational knowledge to understand and conduct proactive assessments and reactive near miss and adverse events assessments from a true systems perspective. Applications for continuing education (CE) credits have been made. The course will be held at ECRI headquarters in Plymouth Meeting, PA, on: **September 24 and 25, 2024**. For more information and to register, please visit: www.ismp.org/ext/1403.

ISMP's on-demand library

Educational programs available on ISMP's on-demand library webpage are a convenient way for practitioners to stay ahead of new trends in medication safety and access ISMP's collection of webinars and symposia. For additional details, please visit: www.ismp.org/ext/1404.

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