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Community/Ambulatory Care

ISMP Medication Safety Alert!®

Educating the Healthcare Community About Safe Medication Practices

ISMP An ECRI Affiliate

Ensuring competency and safety when onboarding newly hired professional staff

Problem: The academic curricula for many healthcare practitioners often do not sufficiently cover topics such as medication safety, medication-use systems, and basic medication prescribing, preparation, and administration. In addition, the recent nationwide surge of healthcare staff resignations and staffing shortages has left many healthcare organizations in a hiring frenzy. Newly hired healthcare practitioners strive to do their best, but certain safety practices require specific education and repeated practice. This is true for all healthcare practitioners, including physicians, nurses, pharmacists, pharmacy technicians, medical assistants, and other practitioners. What happens when they think, "I don't know how to do that!"? Are organizations creating systems, supported by a good culture, in which staff feel safe and have a process to stop and ask for help before getting in over their heads? Or do new healthcare practitioners find themselves in a position where they must troubleshoot issues on their own as they go, making assumptions and guessing to avoid the risk of losing respect? (See our previous publication, ***Be Wary of "Misspeakers" Who "Shoot from the Hip"*** [www.ismp.org/node/559].) Below we identify problems and make recommendations to best ensure competency and promote a safety culture during the onboarding process.

Not Having a Colleague Available to Answer Questions

Given the shortage of staff present during a given shift, part of the challenge is that there might not be a seasoned teammate available for new staff to ask for help. This can occur if an individual has not been designated to oversee the new hire during their training period, or if the designated individual was not provided with dedicated time for training and is busy with other tasks.

New Staff Hesitant to Admit a Lack of Competency

When new practitioners want to make a good impression on supervisors and colleagues, they might be afraid to speak up and admit that they do not feel comfortable with or do not know how to complete a particular task. The pressure to appear competent in front of others could result in medication errors that eventually reach patients.

Healthcare practitioners are expected to speak up about patient safety concerns to help intercept errors and avoid adverse patient outcomes. This was discussed in ***Speaking Up About Patient Safety Requires an Observant Questioner and a High Index of Suspicion*** published in the January 2020 issue of this newsletter. But what if the healthcare practitioner's patient safety concern is related to their own lack of knowledge? Without discounting the courage it may take for healthcare practitioners to admit they are unskilled to complete a task, open communication within a safe learning environment can protect patients from harm or even death.

Safe Practice Recommendations: Recognizing that every organization has limited resources, consider incorporating the following recommendations into your new hire onboarding processes:

Explain how the organization handles errors. The healthcare educator or individual who oversees new practitioner onboarding should explain to the new hire that the organization is transparent with employees about medication errors. Ask how they would like to be alerted to errors that they have made. Help them to understand that feedback about errors is not intended as

continued on page 2 — Onboarding >

SAFETY briefs

Mix-ups between look-alike timolol eye drop formulations. Timolol maleate ophthalmic 0.5% solution is a beta-adrenergic blocker indicated for the treatment of elevated intraocular pressure in patients with ocular hypertension or open-angle glaucoma. Organizations have reported mix-ups between generic once-daily and twice-daily formulations made by Bausch + Lomb due to the same generic name and similar-looking cartons (**Figure 1**) and dropper bottles. However, these products are not equivalent. While the product with the National Drug Code (NDC) number 68682-0045-50 is indicated for once-daily dosing, the other product with the NDC number 68682-0813-05 is indicated for twice-daily dosing, although it may be decreased to once-daily if intra-ocular pressure is well-controlled. While

continued on page 2 — SAFETY briefs >

Figure 1. Generic formulations of 0.5% twice-daily timolol (left) and once-daily timolol (right) have similar-looking cartons.

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You have less than a week to submit nominations for this year's **CHEERS Awards**. Nominations will be accepted through **August 6, 2023**. For more information, visit: www.ismp.org/node/123.

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> **Onboarding** — continued from page 1

an attack, but rather an opportunity to learn and grow. Provide new hires with information about medication errors that have occurred, strategies that have been implemented to prevent them, and how to report safety concerns or issues that they feel are unsafe and could lead to an error.

Invest time to "train the trainer." As the onboarding process can sometimes feel overwhelming to both the trainer and new hire due to the vast amount of information being shared, develop orientation guides, training manuals, and checklists to support the live orientation process, help ensure consistent guidance, and document completion of the required tasks.

Set up the new hire for success. Standardize the orientation process and provide new hires with orientation to the tasks that are critical to their role as well as medication safety-specific education. Designate an orientation/staff development leader, superusers, and safety coaches and give them time to help with onboarding to make sure the new hires are competent in the areas and systems in which they are assigned to work. Ideally, those who train new staff should have a reduced workload to accomplish the goals of orientation safely and thoroughly.

Assess competency. To understand a new hire's baseline knowledge and experience, create self-assessments and ask them, "How many times have you done this?" Observe the new hire a designated number of times completing a task to validate competency. Provide annual competency assessments for skills and knowledge on tasks that are expected of an employee, including those that may not be performed often (e.g., low-volume/high-risk duties). If gaps are identified, employers should provide additional education and training to ensure the employee reestablishes competency.

Encourage open dialogue. It is important for the new hire to develop a questioning attitude regarding medication safety during orientation AND throughout their career. Encourage orientees to take notes and ask questions to help enhance understanding and learn from mistakes. Staff who are overseeing this process should have an open attitude towards questions and be skilled to explain the "whys" behind the way certain things are done; avoid a "this is how we've always done things" mentality. Staff who onboard new hires should expect some challenging questions, even silly ones now and then. Encourage the trainers to be patient and react to questions with thoughtful responses. Everyone was a new hire at some point and should appreciate that they too relied on others to get acclimated to the new environment.

If a new hire finds that what they are being taught significantly deviates from the orientation guide, they should be encouraged to escalate this to their supervisor for clarification. Inconsistencies during onboarding can be a contributing factor to medication errors and should be resolved upfront. Also, insights from orientees who are unfamiliar with processes or have experience with a different way of doing things, can help improve longstanding and potentially outdated ones, or identify problems or workarounds not apparent to current staff.

Conduct audits and direct observation. Do not rely solely on the completion of orientation checklists to evaluate competency. Instead, to track how new hires are progressing, assess their proficiency with essential tasks by auditing their work. For example, utilize direct observation to assess utilization of barcode scanning and verifying at least two patient identifiers when providing medications at the point-of-sale. Any medication error or deviation from the intended processes, including workarounds, should be discussed and addressed promptly. The plan to audit and directly observe tasks should be disclosed to the new hire during the onboarding process so that they are not surprised. Explain that this is another way to identify potential system issues and to help the staff member improve. Also, explain that the response will not be punitive if they "get something wrong."

Check in frequently. Set up regular meetings with new hires to maintain a "finger on the pulse" on how they are performing and feeling. Even though they may be competent in the necessary areas, they still may need reassurance. Provide positive feedback on tasks they have mastered and

continued on page 3 — **Onboarding** >

>SAFETY briefs continued from page 1

the once-daily formulation outer carton states "Once Daily," this information is not displayed on the dropper bottle label itself.

The manufacturer told us potassium sorbate was added to the once-daily formulation to enhance the ocular bioavailability. The concern is that if the once-daily formulation is used twice a day, this could lead to increased systemic absorption, with the potential risk of adverse cardiovascular events in vulnerable patients (although none have been reported to us so far). Also, if the twice-daily formulation is only used once a day, it may result in ineffective treatment of the patient's condition.

We have been in contact with the US Food and Drug Administration (FDA) and the manufacturer to recommend differentiation of the generic names, cartons, and dropper bottles. Explore purchasing one of these medications from a different manufacturer. Ensure barcode scanning is used prior to dispensing and administration to identify any misfills. Evaluate how the once-daily product appears in your warehouse's and/or wholesaler's system. Wholesalers and distributors should take steps to differentiate the two formulations in the ordering system to prevent mix-ups (e.g., include once-daily [timolol maleate 0.5% (once-daily)] or twice-daily [timolol maleate 0.5% (twice-daily)] in the generic name of the drug).

Wrong Tezspire device dispensed. TEZSPIRE (tezepelumab-ekko) is indicated for the add-on maintenance treatment of adult and pediatric patients aged 12 years and older with severe asthma. It is available in single-dose vials as well as a prefilled syringe and a prefilled pen for subcutaneous injection. All three dosage forms are available in a concentration of 210 mg/1.91 mL (110 mg/mL). The recommended dose of Tezspire is 210 mg administered subcutaneously once every four weeks. Recently, when reviewing a refill request for Tezspire, a pharmacist discovered that the pharmacy had dispensed a Tezspire syringe the prior month instead of the ordered Tezspire pen. At the time of the first fill, the Tezspire syringe was sent

continued on page 3 — **SAFETY briefs** >

Coming soon: Applications for the **Judy Smetzer Just Culture Champion Scholarships** open **August 1, 2023**. Visit: www.ismp.org/node/30840.

> **Onboarding** — continued from page 2

constructive feedback on areas in which they need to improve. Focus coaching efforts on these particular tasks and situations, allow for additional practice time, and set up a plan to reassess.

Provide a mentor. Consider pairing the new hire with a friendly face who can help them navigate the organization. Resources are available to set up a formal mentoring program, such as those provided by the American Society of Health-System Pharmacists (ASHP), including ***Developing a Structured Mentorship Program*** (www.ismp.org/ext/1084) which is designed for students, residents, and practitioners. There are also other programs practitioners can access, such as the one offered through the American Nurses Association (ANA) Mentoring Programs (www.ismp.org/ext/1129).

Address intimidation. It is critically important for the orientation program to include how to respond when there is disagreement over what the new employee has been asked to do and what the new employee feels is safe. Healthcare practitioners have a responsibility to question processes that do not align with their knowledge or experience. Even though there may be a rational explanation, educate orientees that it is better to question a deviation from what they were taught—it is better to learn something new than to proceed with a task that may not be safe. Incorporate the following resources into the orientation process:

- ***Survey results: Practitioners Speak Up about the Persistence of Disrespectful Behaviors in Healthcare*** (published in the July 2022 issue of this newsletter)
- ***Addressing Disrespectful Behaviors and Creating a Respectful, Healthy Workplace*** (published in the November 2022 issue of this newsletter)

Recognize new orientees. Emphasize that the organization values a culture of safety and encourages ongoing reporting of medication errors and sharing lessons learned. Consider implementing a program that includes "weekly or monthly shout-outs" or "good catches" to acknowledge new staff who exemplify values in safety. This is a way for staff and leaders to recognize new colleagues who speak up for patient safety and to encourage a safe learning culture. Be transparent with staff about the error that occurred without identifying individuals, and, when appropriate, make sure the organization reviews reported errors to consider prevention measures.

Continually reassess. To identify areas for improvement, ask for feedback from the new hire, those helping with the onboarding process, and peers working with them. Consider more training time if the new hire needs additional support. With the rapid changes that healthcare organizations face, ensure competency assessments and onboarding materials are updated regularly to reflect current policies and practices. Better onboarding ultimately leads to increased workplace satisfaction, reduced turnover, and a safer learning environment.

Special Announcements

Foundations in Medication Safety

ISMP's new online, interactive program offers pharmacies a standardized, cost-effective way to ensure staff involved in the medication-use process have the baseline knowledge needed to promote safe medication use. For details, visit: www.ismp.org/node/76167.

MSI workshop for community, mail order, and specialty pharmacy

Don't miss the opportunity to register for a unique, virtual ***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 **October 20 and 27, 2023**, from **7:30 am – 4:30 pm ET**. For more information, please visit: www.ismp.org/node/75243.

> SAFETY briefs

continued from page 2

to the provider's office where the patient was shown how to use the syringe and they received their first dose. The pharmacist called the provider's office to notify them of the dispensing error and received a new prescription for a Tezspire pen. The Tezspire pen was delivered to the provider so that they could provide patient training on how to use the pen device since it has different administration instructions than the Tezspire syringe. Thankfully the pharmacist caught the dispensing error, otherwise there would have been a risk that the patient may not have known how to administer the medication with the pen device.

The pharmacy identified a couple of factors that may have contributed to this event. Tezspire was a new medication in this pharmacy, so the staff was unfamiliar with the multiple formulations. Also, it was difficult to clearly identify the different formulations in the pharmacy computer system. The medication names did not clearly identify one as a pen or syringe. While there were dosage form codes or abbreviations associated with each product in the pharmacy computer system, they did not help users differentiate the products as the codes looked similar and were confusing.

The pharmacy shared that they are working to include "syringe" or "pen" in the product name description within their pharmacy computer system. In fact, this event has prompted them to look for other products that could benefit from this updated naming convention. We encourage you to investigate how these drug products are displayed in your pharmacy computer system. Work with your internal information technology staff, computer system vendor, and/or drug information content provider to better differentiate these products and provide full text descriptions (e.g., syringe, pen) of the dosage form.

Device manufacturers must standardize to the metric system. A few weeks ago we heard from a pharmacist about a child who was accidentally given an overdose of propranolol. During a clinic visit, a mother showed a nurse a picture of the oral syringe

continued on page 4 — SAFETY briefs >

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Meds-to-Beds drug omission related to alternate point-of-sale workflow

Recently, an error occurred at a specialty pharmacy that is part of a health system. The pharmacy delivers prescriptions to onsite clinics when patients come in to meet with providers. The program includes providing medications to patients with complex medical conditions and medications that require extra steps before they can be dispensed, such as medications with risk evaluation and mitigation strategy (REMS) requirements. In a recent case, a patient with multiple myeloma was scheduled to come into the clinic to pick up **REVLIMID** (lenalidomide) and dex**AMETH**asone. Because of the REMS requirements, prescriptions for Revlimid cannot be refilled; patients need to obtain a new prescription every month, which, for this patient, coincides with their clinic visits.

The patient in this case presented to the clinic, and a new prescription for Revlimid was sent to the pharmacy. The pharmacy filled the Revlimid prescription and delivered it to the patient. However, the pharmacy technician did not deliver the patient's dex**AMETH**asone (a non-specialty medication) that the pharmacy had filled earlier in anticipation of the patient coming into the clinic. The filled dex**AMETH**asone prescription had been placed in the pharmacy's will-call area, which the pharmacy technician did not realize. When the pharmacist identified this, they called the patient at home multiple times before reaching them. Fortunately, the patient had one extra week of dex**AMETH**asone supply, so they did not have a lapse in therapy.

When the pharmacy investigated this event, several contributing factors were identified. First, the pharmacy staff were focused on meeting the REMS program requirements for Revlimid and thus were less focused on the dex**AMETH**asone prescription. Second, when prescriptions for the same patient are filled at separate times or on separate days, they may be assigned to different electronic will-call bins, which happened in this case, rather than merged into a single bin and storage location in will-call. This increases the risk that pharmacy staff miss medications placed in separate bins. Finally, staff had developed an alternate point-of-sale (POS) workflow when delivering prescriptions to patients in clinics. The standard procedure was to scan all prescriptions at the POS to mark the prescriptions as "sold" before releasing them to the patient. However, when delivering medications to patients in the clinic, staff did not conduct the barcode scanning step. Instead, they manually updated the system to "sold" after they delivered the prescriptions to the patient. Staff adopted this alternate workflow because patients were not always present in the clinic when delivering the medications. If the medication must be returned to the pharmacy, it is a lengthy process to reverse the prescription from "sold" back to "ready" because, in part, the pharmacy computer system required the prescription(s) to go through the entire dispensing workflow again.

Develop a standard prescription delivery process that incorporates scanning all prescriptions (e.g., at the POS) using barcode scanning technology, including prescriptions delivered as part of Meds-to-Beds programs. Investigate the use of hand-held technologies that can be brought to the clinic and enable completion of the POS transaction at the bedside. Establish a system to verify with the clinic, before leaving the pharmacy, that the patient is there to receive the medications. Standardize processes and investigate pharmacy computer system upgrades to ensure all prescriptions for one patient are combined into one will-call bin. Incorporate system alerts to notify staff when multiple bins contain prescriptions for the same patient.

>SAFETY briefs continued from page 3

she was using at home to measure and administer propranolol liquid to her child. She pointed to how much medication she was drawing up, about 2 mL, which was more than the correct dose of 1.2 mL. The syringe had both mL (milliliter) and tsp (teaspoon) markings printed on it. It appears that the presence of both mL and teaspoon dose markings was confusing the mother.

The nurse then provided the mother with 5 mL oral syringes with only metric markings and instructed her to discard the syringe she was currently using at home. Using the teach-back method, the nurse explained how to accurately measure the medication. The mother then correctly demonstrated how to draw up 1.2 mL of medication. Thankfully, the child's vital signs were within normal limits, and they were able to go back home after the education session.

Confusion between teaspoons and mL often contributes to dose and measurement errors involving oral liquid medications. These errors can lead to serious adverse events and patient harm. ISMP first reported on the confusion of teaspoons and mL in its newsletter in 2000, and issued in 2009 and 2011 calls for practitioners to move to sole use of the metric system for measuring over-the-counter and prescription oral liquid doses. However, mix-ups have continued to result in the injury of children and adults.

In ***Best Practice 4*** in the new ***ISMP Targeted Medication Safety Best Practices for Community Pharmacy*** (www.ismp.org/node/65345), we once again call for healthcare practitioners and product vendors to standardize to the use of the mL unit of measure when prescribing, dispensing, and measuring oral liquid medications. The healthcare industry needs to acknowledge the risk of confusion when using non-metric measurements with oral liquid medications and standardize to the use of mL alone. This includes device and syringe manufacturers. They should produce oral dosing devices with only metric unit markings and eliminate teaspoon, tablespoon, and other non-metric units of measurement. This change will help protect patients from harmful dosing errors.

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