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

Safety coaches engage staff to report medication concerns and promote safe behavior

Problem: While reporting safety concerns, close calls (e.g., good catches), and errors are a fundamental component of a safety culture, encouraging practitioners to submit reports is no easy task. In our August 26, 2021 article, *Pump up the volume: Tips for increasing error reporting and decreasing patient harm*, we discussed barriers to error reporting. Practitioners may be less likely to report if the process is time-consuming, confusing, or complex. If the error was captured and corrected before it reached a patient, as with close calls, practitioners may see this as "unworthy of reporting" since it did not cause patient harm or is thought of as a "one-time event." Furthermore, the likelihood of reporting is highly dependent on practitioner psychological safety.

We know that learning from errors and close calls represents one of the primary means by which organizations can address system vulnerabilities. However, we also know that underreporting exists. A sustained high level of medication safety within an organization cannot be accomplished by a single individual (e.g., a medication safety officer) or a single department (e.g., pharmacy, nursing) alone. Instead, staff and leadership must view it as a cultural foundation of shared responsibility and a value associated with every healthcare priority, linked to every activity. Practitioners should strive to be 200% accountable for patient safety—100% for themselves, and 100% to support safe practices of their peers.[1] Implementing a patient safety coach program is a way to establish this cultural foundation. This article explores implementing a safety coach program to engage staff as important contributors to medication safety.

Safety Coach Program Overview

Through a safety coach program, frontline staff are selected as safety champions and receive additional training in error prevention and coaching skills. Safety coaches learn how to observe the safety performance of their peers, engage in coaching conversations about safety issues by asking open-ended questions, recognizing and rewarding good "safety" behaviors, providing feedback to correct poor behaviors, and ensuring the understanding and consistent use of error-prevention techniques. Patient safety coaches aim to increase staff awareness of potential risks and hazards and to escalate concerns so that changes can be made to prevent errors from occurring. They discuss their safety observations, regularly attend patient safety coach meetings, and encourage others to report close calls and safety events.[2,3] Consider safety coaches as "deputies" working in the field, directly encouraging safety and correcting risky practices in real-time, and reporting learnings back to leaders (e.g., medication safety officer, managers, directors) so they can work together towards the shared safety goal of preventing patient harm. By engaging with frontline staff, who know firsthand the changes that need to be made, they can directly impact the culture of safety.[4]

For example, in 2018, practitioners at CHOC Children's (previously known as the Children's Hospital of Orange County) implemented a patient safety coach program, using resources from the Children's Hospitals' *Solutions for Patient Safety*, a network of more than 140 children's hospitals.[5] CHOC Children's is a 334-bed pediatric acute care hospital located in Orange, California. The safety coach leader initially rolled out the program to nursing units, but after a successful response, pharmacists, pharmacy technicians, respiratory therapists, nurse practitioners, and additional clinical and

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Pharmacy technician's good catch via scanning prevented wrong drug error. A pharmacy technician reported a close call (i.e., good catch) after attempting to compound a patient's sodium phosphate infusion using an intravenous (IV) workflow management system (IVWMS). The technician removed a vial of what he thought was sodium phosphate (phosphate 45 Mmol and sodium 60 mEq per 15 mL) from the bin labeled "sodium phosphate." When he scanned the barcode on the vial, the IVWMS fired an alert indicating the incorrect product had been scanned. This caused the technician to pause, and upon inspection of the vial, he identified that he had a 20 mL vial of 0.9% sodium chloride in his hand. Both products, made by Fresenius Kabi, come in similar-sized clear plastic vials with pink caps, have names beginning with the word "Sodium," and have the same first five numbers in their NDC (63323) (**Figure 1**). The technician notified the pharmacist who escalated the concern to pharmacy administration. The pharmacy recently purchased the Fresenius Kabi sodium chloride vials due to a drug shortage from their typical supplier.

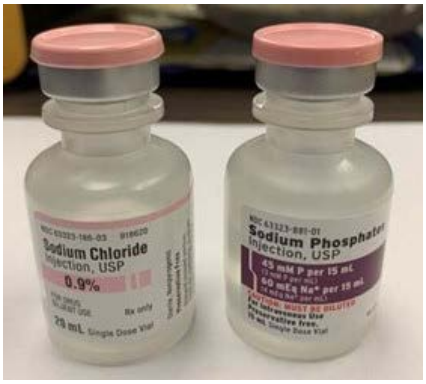

Figure 1. Vials of sodium chloride injection (left) and sodium phosphates injection (right) are similar size, and both have pink caps.

ISMP has reported multiple serious compounding errors that have caused patient harm or death mostly due to preparing the wrong concentration/strength or using the

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non-clinical roles joined forces as well. In total, training has occurred for 259 practitioners and other staff members from over 60 departments over the last 7 years.

CHOC Children's adopted eight error-prevention tools (**Figure 1**) that were developed utilizing recommendations from Children's Hospital's *Solutions for Patient Safety*,[6] which safety coaches use in their interactions to promote safe behaviors and are considered the foundational language of a safety culture. Safety coaches at CHOC Children's now report close to 200 close calls or safety concerns annually through their organizational safety reporting system. Actions taken and lessons learned are then shared throughout the organization.

Figure 1. Children's Hospitals' *Solutions for Patient Safety* error-prevention tools used by CHOC Children's. **iCare Principles are standard behaviors that support CHOC Children's values; in all forms of communication associates, medical staff, and volunteers must pledge to take an active role in maintaining these principles.*

Examples of the tools CHOC Children's uses include the following:

3P: A safety coach nurse reaches out to a second nurse regarding her patient's (**Patient**) intravenous (IV) medication that was almost finished infusing and that requires a flush during the safety coach's scheduled break (**Problem**). The second nurse confirms she will administer the flush to the patient to prevent a delay (**Plan**).

STAR: A pharmacy technician identifies an error when scanning an oral liquid medication bottle label. Rather than making an assumption, the technician who had recently received safety coach training pauses (**Stop**) to evaluate the error message (**Think**). He escalates (**Act**) the concern to the pharmacist who investigates and makes necessary system changes to reflect the correct information (**Review**).

ARCC: A pharmacist was reviewing medication inventory kept in the refrigerator and questions why medication vials that come in two concentrations are stored in the same bin, only separated by a divider (**Ask a Question**). She recognizes the potential for a pharmacy team member to select the incorrect vial in error (**Request a Change** and **State a Concern**). She notifies the pharmacy

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wrong product or diluent. Unfortunately, such errors are virtually impossible to detect for those who administer the final preparations. Consequently, drug compounding errors that are not identified before the preparation leaves the pharmacy, or are missed by the person preparing a product outside a pharmacy setting, have a high likelihood of reaching the patient. For this reason, the ISMP ***Targeted Medication Safety Best Practices for Hospitals*** (www.ismp.org/node/160) *Best Practice #11*, calls for using IVWMS for compounding sterile preparations.

Organizations should provide initial and ongoing IVWMS competency assessments, including a broad spectrum of scenarios (e.g., incorrect drug alert upon scanning) that staff might encounter. If a medication barcode will not scan, pharmacy staff must confirm product identity. Develop an escalation process when a medication barcode will not scan. The process should include when and how to report close-call compounding events, barcode-related issues, why it is dangerous to use a proxy scan, and who is responsible for monitoring barcode issues. Ensure wrong drug scans that were intercepted by the technology are captured, to facilitate compounding error analysis and process improvement. In addition, when the pharmacy receives a new product (e.g., new product added to formulary, drug shortage), conduct a review to identify potential risks with the product's design, including look-alike labeling and packaging concerns with other products in use within the organization (www.ismp.org/node/71460). When problems are recognized, consider purchasing the product (or one product of a problematic pair) from a different manufacturer. Communicate with staff when new products are purchased so they are aware of the potential for mix-ups between look-alike products. Store look-alike products separately, and consider the use of signage, or other warnings such as auxiliary labels on the vials and in storage locations.

HIGH-ALERT **Patient almost given CARBOplatin instead of nivolumab.** A physician prescribed an **OPDIVO** (nivolumab) infusion for a patient in an outpatient infusion

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manager (**Chain of Command**), who separates the vial storage locations and creates a labeled bin for each medication concentration.

QVV: For an infant, a prescriber orders **KEPPRA** (lev**ETIRA**cetam) 30 mg/kg/*dose* instead of 30 mg/kg/*day*. A pharmacist, who was a safety coach, reaches out to the prescriber to clarify (**Qualify**) the dose, based on dosing information in the drug information resource (**Validate**), and to confirm whether the dose was appropriate (**Verify**) for the infant. The prescriber confirms it was an error and modifies the order to 15 mg/kg/dose twice daily (30 mg/kg/day).

CUS: An environmental services associate who completed the safety coach program identifies a safety concern with how another staff member was pulling a patient's IV pole behind their wheelchair. She speaks up and says, "I am concerned (**I am Concerned**) that the patient's IV tubing is going to get stuck under the wheels (**There is a Safety Issue**). Can you please rearrange the tubing on the IV pole to keep it from getting tangled?"

Consider which scenario would have the most impact on promoting a safety culture:

Scenario 1: *A pharmacy manager met with a pharmacy technician to inquire about an anonymous error report submitted a few weeks prior. The report described the technician engaging in the unsafe practice of preparing multiple patient-specific syringes with various volumes from the same medication bottle and labeling them after the fact. The technician could not remember why he chose to engage in this behavior that day or any details about what else may have been occurring in the pharmacy at that time, but said he would not do it again, without fully understanding the risk.*

OR

Scenario 2: *A pharmacy technician who completed the organizational safety coach training program recognized a colleague was engaging in an unsafe practice. Utilizing **STAR** (**Stop**, **Think**, **Act**, **Review**), the safety coach brought this to his attention in the moment and said, "I notice you are preparing multiple patient-specific doses of medication and labeling them after the fact. A safer way to do this is to **Stop**, **Think**, **Act**, and **Review** for each step in preparing and labeling one syringe at a time. We do this to prevent the potential for mislabeling a syringe. This almost happened to me when I was interrupted by a phone call and realized I had placed a label on the wrong syringe." The technician responded that this was not his typical workflow, but he was trying to make up for lost time due to a printer issue that morning causing a delay. He told the safety coach he understood the risk, and agreed it was safest to prepare and label one syringe at a time.*

Safe Practice Recommendations: ISMP encourages organizations to evaluate the feasibility of implementing a safety coach program and to consider the following recommendations:

Designate a safety coach lead. A designated safety coach lead or team should oversee the safety coach program, including safety coach training and quality improvement. Refer to safety coaching resources such as:

- Solutions for Patient Safety (www.ismp.org/ext/1419)
- Patient Safety Coaches Academy (www.ismp.org/ext/1420)
- Safety Collaborations (www.ismp.org/ext/1421)

Create a safe environment. Promote and implement a fair and Just Culture (www.justculture.com), where safety is a primary value in the organization and staff continually look for risks that pose a threat. Incorporate nonpunitive policies about error reporting that align with a Just Culture. Maintain confidentiality of those involved in safety events while sharing event details and lessons learned.

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center, but the patient almost received a **CARBO**platin infusion prescribed for a different patient. The pharmacy dispensed both infusions in brown, opaque bags to protect them from light. The pharmacy system was set up to print two patient-specific labels with barcodes for each medication: one to affix to the compounded infusion and the other to be placed on the brown bag. At some point, the infusion bags were inadvertently switched. Prior to administration, the nurse noticed that the intravenous (IV) tubing that the pharmacy had primed and attached to the infusion (labeled as nivolumab on the outer bag) was not the appropriate tubing. The nurse removed the infusion from the outer bag and identified the error. The nurse contacted the pharmacy and received the correct infusion before it was time for administration.

In our February 8, 2024 article, *The dark side—safety issues when protecting medications from light* (www.ismp.org/node/121522), we shared a similar error along with recommendations to safeguard this process. Review prescribing information, published literature, and drug information resources to identify medications on your organization's formulary that require protection from light during specific steps of the medication-use process. To limit the overuse of brown bags covering infusions that do not need to be protected from light during administration, refer to resources such as *Hospital Pharmacy's Light-Sensitive Injectable Prescription Drugs—2022* (www.ismp.org/ext/1248). According to this reference, **CARBO**platin does not require light protection during administration.

When available, practitioners should scan the manufacturer's barcode directly on the product to prevent the risk of a false positive barcode scan from a pharmacy-applied patient label. If a pharmacy-generated label with a barcode is needed (e.g., compounded infusion), affix it directly on the product container (e.g., syringe, infusion bag). In order to force scanning of the actual product, do not include barcodes on pharmacy-generated labels placed

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Select safety coaches. Leaders must select frontline staff as coaches in their department. Encourage safety coaches to be curious, ask staff regularly about safety issues, and exhibit appreciative listening.

Educate safety coaches. Provide initial and ongoing education to safety coaches to ensure understanding and consistent use of error-prevention techniques and how to report or escalate a concern. Consider simulations where staff can role-play while observing the safety performance of their peers, practice asking open-ended questions, engaging in coaching conversations about safety issues, and providing feedback to correct poor safety behaviors. Consider using CHOC Children's error-prevention tools (**Figure 1**, page 2).

Educate staff. Ensure staff are aware of who the safety coaches are on each unit, and that their purpose is to promote safe behaviors and reinforce error-prevention techniques. Encourage staff to go to safety coaches with their concerns, or if they need help reporting an error, close-call, or hazardous condition. Staff should consider the safety coach as a mentor who they can trust if they need help understanding the safe way to complete a task. Highlight situations where harm was prevented due to the safety coach program when staff raises concerns in real-time. Through this process, the system changes and actions taken by leaders will have buy-in from the process owners (e.g., frontline staff) so they can ensure commitment to safe medication practices.

Meet regularly. Leaders should meet with the safety coaches regularly to gather feedback. Debrief on recent encounters and identify opportunities for improvement in the hospital and the safety coach program. Provide safety coaches with recognition of their critical role in system or process changes.

Report close calls and errors. Encourage staff and safety coaches to report close calls and errors to the organization's error reporting program, as well as to ISMP (www.ismp.org/report-medication-error).

Learn from concerns. Share impactful stories identified through the safety coach program. Reward those who report safety concerns and risks (e.g., good catch program). Make appropriate changes to enhance safety and inform staff that the changes were a result of reporting to foster ongoing reporting.

We thank Brittney Anderson, DNP, CPNP, CPHQ, Director of Clinical Quality, CHOC Children's Hospital, for sharing a review of the safety coach program, as well as helping to write this article. Email ISMP (ismpinfo@ismp.org) with questions.

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on the outer containers or bags. Also, evaluate light-protective products used within your organization. Bags available to reduce the amount of light transmission to medications have various opacities. Consider purchasing products that meet the requirements for light protection but allow practitioners to read the medication label through the bag and have visibility of the inner product for monitoring the infusion during administration.

Special Announcements

Virtual MSI workshop

You still have time to join us for one of our ***ISMP Medication Safety Intensive (MSI)*** workshops before the end of the year. Upcoming sessions will be held on: **October 3 and 4**; and **December 5 and 6, 2024**. For more information about the workshops and to register, please visit: www.ismp.org/node/127.

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