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ISMP Institute for Safe Medication Practices
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Educating the Healthcare Community About Safe Medication Practices

Fixing the cracks—Good catch programs strengthen the foundation

Problem: Imagine a building with hairline fractures in its foundation. These cracks, though seemingly insignificant, represent underlying weaknesses that, if ignored, can lead to significant structural problems. If a building inspector overlooks a minor fracture, the underlying issue can worsen, leading to a major structural failure. Similarly, in healthcare, medication errors caught before they reach the patient can serve as the same warning signs. The problem? Often, these close calls (i.e., near misses, good catches) that do not reach the patient go unreported, just like those ignored cracks. Why the silence? Perhaps a "no harm, no foul" mindset exists, the reporting system is cumbersome, fear of repercussions looms, or the perception exists that leadership does not value these insights. This underreporting prevents us from learning from these close calls and reinforcing our systems, and may increase the risk of actual errors, patient harm, or death.

Reasons Close Calls May Go Unreported

Several factors can hinder the reporting process in a hospital setting. First, some practitioners may think that since the error did not reach the patient, it is not worth reporting and the practitioners will quickly move on to their next task. Some may think that correcting an error is just a routine part of their job.

Second, a lack of clear reporting channels and procedures can deter staff. The questions become, "To whom should this information go? Is there a straightforward process?" This is akin to not knowing who to call when you spot a crack; is it the landlord, the building manager, or someone else? A lack of understanding about what constitutes a reportable close call or the proper method for documentation can contribute to underreporting. Given demanding workloads and staffing challenges, the prospect of completing yet another report can feel burdensome.

Third, fear of repercussions can significantly discourage transparency. Understandably, individuals may hesitate to highlight potential problems if they fear punitive action. No one wants to be blamed for the cracks, even if they were the only ones who noticed them!

Finally, if leadership does not actively foster a culture of safety, or provide feedback to the reporter, the perception may arise that leadership does not value the reports, like leadership dismissing the cracks with a casual "They're fine, don't worry about it."

Good Catches Reported to ISMP

In our September 19, 2024 article, Pharmacy Technician's Good Catch Via Scanning Prevented Wrong Drug Error, we discussed a pharmacy technician's good catch after attempting to compound a sodium phosphate infusion using an intravenous (IV) workflow management system (IVWMS). The technician removed a vial of what they thought was sodium phosphates (phosphate 45 Mmol and sodium 60 mEq per 15 mL) from the bin labeled "sodium phosphate." When they 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

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Warning! Enteral feeding tube declogging system uses a luer lock syringe. A nurse reported concerns with CLOG ZAPPER, an enteral feeding tube declogging system (made by Avanos) used to clear blockages from enteral feeding formulations. According to the instructions for use (IFU), the kit includes a 10 mL syringe with an enzyme-containing powder that must be mixed with 10 mL of water. The IFU instructs users to connect the syringe to the blue luer lock applicator and gently instill 2 to 5 mL of the solution into the feeding tube. The CLOG ZAPPER solution should remain in the tubing for 30 to 60 minutes to clear the feeding tube, and then the user should flush with 6 mL of water.

In 2025, Avanos changed the presentation of the syringe containing the CLOG ZAPPER solution from an oral slip tip (**Figure 1**) to a luer lock connection (**Figure 2**, page 2), but the nurse was not aware. The nurse reported that the tip of the current (luer lock) syringe provided in the CLOG ZAPPER kit did not fit securely to the clear connector that comes attached to the applicator. This resulted in a significant amount of the enzyme powder solution spilling over the edges of the applicator (instead of going into the feeding tube).

Figure 1. Avanos previously dispensed an oral slip tip syringe, such as the ones shown, with the CLOG ZAPPER kit.

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NDC (63323) (**Figure 1**). The technician notified the pharmacist, who escalated the concern to pharmacy administration. The pharmacy had recently purchased the Fresenius Kabi sodium chloride vials due to a drug shortage from their typical supplier.

In our April 18, 2024 article, Sharing a Good Catch Prevented a Future Error, we shared a good catch when a nurse reported that after attempting to remove a vial of furosemide 20 mg/2 mL (Hospira) from an automated dispensing cabinet (ADC), they found vials of ketorolac 30 mg/mL (SOLA) mixed in the pocket with the furosemide during the ADC refilling process. Both products come in similar-sized brown, light-protected vials, with the drug names displayed in white font on orange banners near the top of the label (**Figure 2**). Due to a shortage, the pharmacy had recently purchased ketorolac from SOLA. At an interdisciplinary safety huddle, the leader shared the good catch with staff to alert them to the similar-looking vials. A few days later, when checking medications to be filled in an ADC, a pharmacist found a ketorolac vial mixed with furosemide vials. Since the nurse's good catch had been shared with the pharmacy staff, the pharmacist was aware of the risk from the look-alike vials, which helped them identify the error.

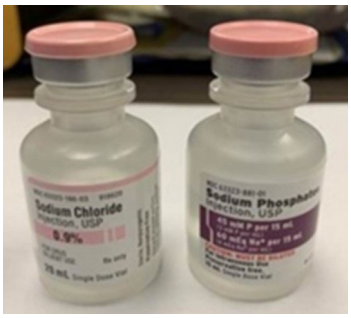

Figure 1. Vials of sodium chloride injection (left) and sodium phosphates injection (right) are similar in size, and both have pink caps.

Figure 2. Similar-looking vials of furosemide (middle two vials) and ketorolac (top and bottom vials) were found mixed together.

Good Catches Are Treasured Gems

Real change in medication safety requires a strong, proactive safety culture. By actively seeking out and addressing potential problems before they escalate—like spotting and repairing those initial "cracks in the foundation"—and rewarding staff who identify these vulnerabilities, we create a system where errors become opportunities for growth. This commitment to early detection allows us to reinforce our defenses and ensure a healthcare system that is truly "built on solid ground" for our patients.

A Pennsylvania hospital tackled the critical issue of wrong-site, wrong-procedure, and wrong-patient errors by implementing a comprehensive good catch campaign in the perioperative setting. This initiative focused on building a safety culture where close calls were openly reported, fostering a proactive environment for error prevention. Key elements included targeted staff training, a simple electronic reporting system, and debriefing sessions to analyze good catches.[1]

The campaign's impact was substantial. In just six months, 391 potential errors were reported and addressed, demonstrating the effectiveness of encouraging open communication. Subsequent surveys revealed significant improvements in staff perceptions across key areas of safety culture, including communication, feedback, reporting, non-punitive responses to errors, and organizational learning.[1] These results underscore the value of the good catch campaign as a powerful strategy for enhancing patient safety in the perioperative setting and beyond.

Safe Practice Recommendations: Organizations should prioritize good catch programs to help identify and address safety concerns before they cause harm, strengthening the foundation for everyone involved in patient care. Consider the following recommendations when implementing a good catch program.

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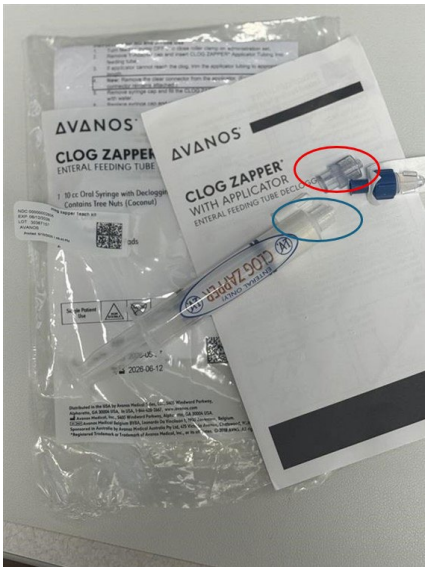
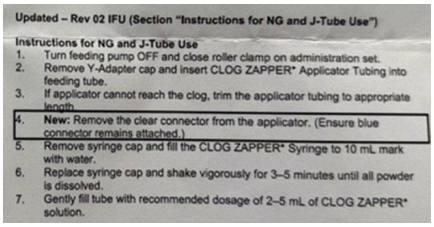


Figure 2. The new CLOG ZAPPER syringe provided in the kit has a luer tip instead of a slip tip. The practitioner must remove the clear connector (circled in red) from the blue applicator and attach the luer lock syringe containing the enzyme solution (circled in blue).

In order to get the new luer lock syringe to connect to the blue luer lock applicator, the practitioner must remove the clear connector, which was designed to connect to an oral slip tip syringe. For these reasons, the pieces did not fit securely, causing the solution to leak. Avanos includes an addendum inside the CLOG ZAPPER kit, instructing users to remove the clear connector from the applicator (**Figure 3**). However, practitioners may be unaware of this change or forget to remove the connector. Besides the risk of leaking, the more serious concern is that the luer lock syringe format could lead to misconnections; practitioners could connect the luer lock syringe containing the non-sterile enzyme solution directly to a patient's intravenous (IV) tubing.



Updated – Rev 02 IFU (Section "Instructions for NG and J-Tube Use")

Instructions for NG and J-Tube Use

1. Turn feeding pump OFF and close roller clamp on administration set.
2. Remove Y-Adapter cap and insert CLOG ZAPPER* Applicator Tubing into feeding tube.
3. If applicator cannot reach the clog, trim the applicator tubing to appropriate length.
4. **New:** Remove the clear connector from the applicator. (Ensure blue connector remains attached.)
5. Remove syringe cap and fill the CLOG ZAPPER* Syringe to 10 mL mark with water.
6. Replace syringe cap and shake vigorously for 3–5 minutes until all powder is dissolved.
7. Gently fill tube with recommended dosage of 2–5 mL of CLOG ZAPPER* solution.

Figure 3. An addendum to the CLOG ZAPPER IFU instructs users to remove the clear connector from the applicator, but this step was missed by the nurse who reported this event.

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Create a policy. A well-defined policy is the cornerstone of any successful program. The policy should clearly define what constitutes a good catch, emphasize the importance of reporting, and outline how leadership will analyze good catches to identify trends and implement system-wide changes, promoting transparency and building trust among staff.

Make it easy to report. Reporting mechanisms should be exceedingly easy, readily accessible, and require minimal training. Instead of asking the reporter broad, general questions, the report should prompt for key identifying information and a free-text description of the event.

Encourage staff to speak up. Bringing positive attention to those who report potential safety concerns sends a powerful message about the organization's culture of safety. One approach is to share good catches during huddles or staff meetings. Share what situation occurred and how it was caught, highlighting the learning points for others, to foster a culture of shared knowledge.

Provide recognition. For particularly impactful good catches, consider offering the individual a small token of appreciation. A small gift card to a local coffee shop or movie theater can go a long way. Even better, feature their story in the hospital newsletter or on the hospital's internal communication platform, sharing the lessons learned with a wider audience. Some organizations provide staff with a traveling trophy or offer a meet and greet with executive leadership. Gather feedback from staff to determine what motivates them and makes them feel most appreciated.

Detect errors through other means. To generate a more complete picture of the safety of the medication-use process, organizations must collect and analyze data beyond that gathered through voluntary error reporting. Include errors detected and/or averted by automation (e.g., barcode scanning data, smart pump data, alerts generated in order entry and verification systems). While time consuming, you can learn a lot about process variation through observational studies of critical or complex parts of the process (e.g., pharmacy compounding, medication administration). Staff are often very willing to suggest at what points in the process they are feeling vulnerable; all you have to do is ask.

Educate practitioners. Incorporate training about the good catch program into orientation and annual competency assessments. Education should include clear instructions on how to report close calls through the organization's reporting system, along with real-life examples of good catches and their positive impact on patient safety. Explain that reports do not go "into a black hole" but follow a structured pathway, including review by leadership and interdisciplinary groups. Consider creating easily accessible resources, such as posters and infographics, outlining the steps for reporting and the benefits of participation.

Report close calls and errors. Encourage staff to report close calls and errors not only to the organization's internal system but to ISMP as well.

Learn and improve. Establish a regular forum, such as safety huddles and/or a dedicated section in the departmental or organizational newsletter, to share impactful good catch stories and the resulting system improvements. This demonstrates the value of reporting and encourages continued participation in the program. The goal is to enhance awareness about how fixing those little "cracks" can prevent bigger issues down the road, ultimately creating a safer environment for patients and staff alike.

Contributing author Kara Jensen, PharmD, BCPS; 2025-2026 ISMP Safe Medication Management Fellow, supported by the US Army.

Reference

1) Lozito M, Whiteman K, Swanson-Biearman B, Barkhymer M, Stephens K. Good catch campaign: improving the perioperative culture of safety. *AORN J.* 2018;107(6):705-14.

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ISMP has previously warned about the risk of tubing misconnections and wrong route administration errors when non-parenteral medications are dispensed in luer lock syringes. The CLOG ZAPPER syringe displays "I.V." in a circle with a line through it, intending to warn practitioners that this should not be administered IV. However, practitioners may easily overlook this warning, and the luer lock design allows for this inappropriate connection. The IFU also instructs users to "Keep APPLICATOR and SYRINGE together with patient if procedure must be repeated." Storing the syringe in a patient's room creates a significant risk in the hospital setting.

The hospital reported that Avanos indicated that the luer lock connector was an intentional modification design change to their product and that they were not planning to change the connector type. We have also reached out to Avanos to recommend changing to an ENFit (enteral/oral) syringe and applicator connector to prevent inadvertent IV administration. If your organization uses this product, immediately inform staff of this risk. Educate practitioners about the addendum and the critical need to remove the clear connector from the blue applicator before use to prevent leakage. Ensure practitioners understand the risk of misconnection when using a luer lock syringe for a non-parenteral medication and emphasize why they should never store this syringe at the bedside.

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Report medication and vaccine errors to ISMP: Please visit: www.ismp.org/report-medication-error or call 1-800-FAIL-SAF(E). ISMP guarantees the confidentiality of information received and respects the reporters' wishes regarding the level of detail included in publications.

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