Store, Handle, and Administer Vaccines Safely to Prevent Errors

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COVID-19 VACCINE-RELATED ERRORS have demonstrated the importance of ensuring a safe medication-use process. Insufficient training, multiple manufacturers, and noninterchangeable products increase the risk of vaccine-related errors. Increasing the complexity are the addition of boosters with different doses, personnel new to the vaccine administration process, changes in dosing, easily misidentified labeling or products, vaccines given together, and the interchanging of booster products. As a result, there is an increased need to be alert in safety efforts with vaccine administration and storage. Pharmacy staff members must work together to improve safety and prevent vaccine-related errors.

Supply Chain
As staff members dispense and administer more vaccines, the probability that a mix-up can occur increases. Pharmacy staff members should proactively assess areas in the pharmacy where vaccines have been handled and stored and develop a safety plan. Signing up for CDC and drug manufacturer newsletters to stay abreast of safety warnings can help. Staff members should

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| Adult and pediatric formulations (not interchangeable): COVID-19 vaccine | Pfizer-BioNTech adult and pediatric formulations are different and cannot be interchanged. Consider separating and color coding bins and products.  
• Adult formulation (aged ≥ 12 years): (purple cap)  
• Pediatric formulation (aged 5-11 years): (orange cap) |
| Predrawn syringes not labeled | • Label syringes if drawn up and not administered with product name, dose, and purpose.  
• Double check by keeping the empty vial with syringe when possible. |
| Maximum punctures for Moderna vial: 20 | Note each dose with a and each booster with an X to track punctures and calculate waste. |
| Orange-capped Pfizer-BioNTech vials for pediatric patients aged 5-11 years: expiration date mix-up | Train staff; label with manufacture date |
| Mix-ups between influenza vaccine and COVID-19 vaccines | • Have patient read syringe label and vial back, if possible, prior to administration.  
• Limit vaccines taken to administration area to only those being given to prevent a mix-up. |
SAFE HANDLING OF HAZARDOUS DRUGS

Engaging the patient is a final critical step in the process.

Reporting
If a vaccine error is identified, follow policies and procedures for documenting and reporting the error. Report administration errors and serious adverse events to the Vaccine Adverse Event Reporting System (VAERS). To file an electronic report, visit the VAERS website (https://vaers.hhs.gov/reportevent.html).³ The Institute for Safe Medication Practices (ISMP) also requests that providers report vaccine errors to the ISMP National Vaccine Errors Reporting Program (www.ismp.org/report-medication-error).¹,⁶

Conclusion
It is essential to stay abreast of changes in vaccine formulations and recommendations. Communicating with all staff members and being proactive in planning helps ensure that risk in the pharmacy is reduced. When situations do arise, develop a plan to prevent future mix-ups and adverse events.³

REFERENCES

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