Mix-ups between the influenza (flu) vaccine and COVID-19 vaccines

Since the 2021-22 influenza (flu) vaccine became available last month, the Institute for Safe Medication Practices (ISMP) has received 16 cases of accidental influenza and coronavirus disease 2019 (COVID-19) vaccine mix-ups. All reports were sent by consumers or healthcare practitioners via one of the ISMP national error reporting programs (www.ismp.org/report-medication-error). Most of the mix-ups occurred in patients who consented to a flu vaccine but received one of the COVID-19 vaccines instead. In three cases, patients received the flu vaccine instead of the intended COVID-19 vaccine. All the events occurred in community/ambulatory care pharmacies.

In the October 7, 2021, ISMP Medication Safety Alert! (www.ismp.org/node/27847), ISMP reviewed several errors with vaccine mix-ups and noted several possible contributing factors. Given that flu season is a busy time for vaccinations, many pharmacies are facing an increased demand for vaccination services. Since many of the errors were reported by consumers, details about the contributing factors were not provided in many cases. However, the possible causative factors we have gleaned from the reports include the following:

**Syringes near each other.** Two vaccine providers indicated that they had picked up a COVID-19 vaccine instead of the flu vaccine syringe, which were right next to each other in the vaccination area. Bringing both vaccines into a patient vaccination area when they are not needed sets the vaccine provider up for a possible mix-up.

**Unlabeled syringes.** While many vaccine providers purchase the flu vaccine in manufacturer prefilled syringes, which are labeled, COVID-19 vaccines are available in multiple-dose vials and must be prepared in a syringe for administration to patients. It is possible that these prepared COVID-19 vaccine syringes were not labeled. Also, COVID-19 vaccine doses may be prepared in an unlabeled syringe by one healthcare provider and administered by another; as a result, the person who administers the vaccine may not visually verify the empty vial if it remains with the person who prepared the dose.

**Distractions.** After a vaccine mix-up, one vaccine provider told the patient that he had become distracted by their conversation. Interruptions and other distractions in a busy pharmacy could also lead to mix-ups.

**Staffing shortages.** Because most healthcare providers are experiencing staffing shortages, it is possible that current vaccine providers are multitasking and are hurried/rushed, even when patients are scheduled for vaccinations. For example, a pharmacist who was working alone in a busy pharmacy recently told us that she needed to administer more than 50 vaccinations during her shift, in addition to dispensing prescriptions.

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Prevention Measures

- Schedule flu and/or COVID-19 vaccines during dedicated blocks of time each day and ensure adequate staffing is available.
- Explore the use of qualified and trained volunteers to assist in the vaccination process to alleviate some stress caused by professional staffing shortages.
- Provide a separate area for vaccine administration, away from distractions and interruptions.
- During the production and/or verification phase of the dispensing process, scan the vaccine barcode to verify the correct product has been retrieved. Ideally, prior to administration, barcode scanning should again confirm the correct vaccine.
- Clearly label all individual syringes containing vaccines. To facilitate proper labeling, provide vaccine preparers with any necessary labels (www.ismp.org/ext/788, www.ismp.org/ext/789) to affix to the syringes.
- Only bring the intended and labeled vaccine syringe(s) for one patient into the vaccination area.
- Immediately before vaccination, ask the patient to provide at least two patient identifiers (i.e., full name and date of birth) and verify the patient’s vaccine(s) with the patient’s signed consent form(s).
- Prior to vaccine administration, ask the patient/parent to read the syringe label (and vial if present) and expiration date aloud to confirm the correct vaccine.
- Document the vaccine lot number and expiration date before vaccine administration. Document the vaccine administration afterward in the patient’s profile, on vaccination records, and via state or other immunization registries.
- If a vaccine mix-up occurs, apologize to the patient and provide the intended vaccine either before the patient leaves or ask the patient to return to the vaccination site.
- Report all vaccine errors internally as well as to the US Food and Drug Administration (FDA) Vaccine Adverse Event Reporting System (VAERS, https://vaers.hhs.gov/), which is mandatory for COVID-19 vaccine errors under an Emergency Use Authorization (EUA). ISMP also asks providers to report vaccine errors to the ISMP National Vaccine Errors Reporting Program (ISMP VERP, www.ismp.org/report-medication-error).

The National Alert Network (NAN) is a coalition of members of the National Coordinating Council for Medication Error Reporting and Prevention (NCCMERP). The network, in cooperation with the Institute for Safe Medication Practices (ISMP) and the American Society of Health-System Pharmacists (ASHP), distributes NAN alerts to warn healthcare providers of the risk for medication errors that have caused or may cause serious harm or death, or to warn them about new findings that could cause harm and are being reported with unusual frequency. NCCMERP, ISMP, and ASHP encourage the sharing and reporting of medication errors both nationally and locally, so that lessons learned can be used to increase the safety of the medication use system.