

Vaccine Storage & Handling Guide for In Clinic Influenza Vaccination

The proper storage and handling of vaccine are important to ensure potency of the vaccine. The reduced potency of vaccines results in inadequate immune response and poor protection against the disease. Therefore, it is important to maintain proper cold chain or a temperature-controlled environment to maintain vaccines in optimal condition.

Use this guide to help you with vaccine storage and handling in your vaccination clinics.

Section 1: Vaccine Storage & Handling Equipment

Vaccine Storage Units

Vaccine storage units act as an insurance policy to protect patients from administration of damaged vaccines. Investing in a reliable storage unit will likely cost less than replacing spoiled vaccines.

- **Best Practice:**
 - Pharmacy-biologic-, and laboratory-grade units for vaccine storage. They are purpose-built for the storage of biologics and maintain consistent, stable temperatures.
 - Compact pharmacy-biologic-laboratory-grade stand-alone units. They are purpose-built, under-the-counter storage units suitable for smaller practices with limited space.
- Other Types of storage units:
 - Commercial grade intended to store food and beverages. They are larger and more powerful than household units but are not designed to store biologics. They experience some temperature fluctuations.
 - Stand-alone household grade units are intended for home food storage. They experience temperature fluctuations and do not maintain consistent, stable temperatures.
- **Never use any of the following units for vaccine storage:** household-grade combination refrigerator-freezers; compact household-grade stand-alone refrigerators (less than 11 cubic feet); dormitory-style refrigerators.

Storage Unit Specifications

- Maintain consistent temperatures
 - Refrigerators: between 36°F and 46°F (2°C and 8°C)
 - Freezers: between -58°F and +5°F (between -50°C and -15°C)
- Have enough space to store the vaccine inventory safely
- Have enough space to store:
 - Refrigerators: water bottles to stabilize temperatures (non-purpose-built units)
 - Freezers: frozen cold packs to stabilize temperatures (non-purpose-built units)
- **Best Practice:** Defrost automatically
- Seal tightly and close properly
- Be used primarily for vaccine storage. Never store food in the unit.

Temperature Monitoring

Investing in reliable continuous temperature monitoring device is less expensive than replacing vaccines spoiled due to inaccurate temperature readings.

- Digital data logger (DDL) or continuous temperature monitoring system:
 - Accuracy of +/-1°F (+/-0.5°C) with a current, valid certificate of calibration testing
 - Buffered temperature probe
 - Digital display of current, minimum, and maximum temperatures
 - Out-of-range temperature alarm

- To find companies that sell data loggers enter “**digital data loggers**” in your web browser.
- **Best Practice:** have a back-up data logger for use if the primary device breaks.
- **Unacceptable temperature monitoring devices:** round dial thermometers, bar thermometers, kitchen thermometers, infrared temperature guns, thermometers that are built-in the refrigerator, digital thermometers that are not data loggers
- **Best Practices:**
 - Twice daily temperature monitoring
 - Use a temperature log to document temperatures:
 - VFC [Refrigerator Temp Log](#)
 - VFC [Freezer Temp Log](#)
 - Download data logger reports every two weeks or after a temperature excursion.

Vaccines Exposed to Out-of-range Temperatures (temperature excursion)

- **Take immediate action.**
 - Place “Do Not Use” sign on the unit(s) and keep the doors closed.
 - Alert your supervisor immediately and report the out of range temperatures.
 - Document details of the temperature excursion on the Temperature Log.
 - Contact the vaccine manufacturer(s) to determine if the vaccine is viable.
 - The vaccine should not be used until viability is determined.

Section 2: Resources and Tips

- For storage and handling trainings, job aids, and other best practice resources visit www.eziz.org.
 - [Storage and Handling Job Aids](#)
- Centers for Disease Control and Prevention (CDC) [Vaccine Storage and Handling Toolkit](#).