

Emergency Vaccine Transport Guidance

Overview

Emergency transport involves relocating vaccines to protect them when a facility's ability to store vaccines is compromised (e.g., because of power loss). If transport must occur, providers must have the materials listed below given there's a need for emergency transport. It's critical to have an up-to-date emergency plan with guidance on what to do to protect the vaccine supply. The emergency plan must include the name and address of the alternative storage facility.

Note: Instructions for emergency transport may vary for some vaccines. Review manufacturer guidance for each vaccine product to ensure cold chain is maintained properly.

Preparedness Before an Emergency

- Suspend vaccination activities **before** the onset of emergency conditions to allow sufficient time to pack and transport vaccine.
- If it's apparent that emergency conditions will last for an extended period, prepare to transport vaccine to an alternative storage facility.
- Confirm the availability of trained staff to assist with vaccine transport.
- Ensure the alternative storage facility has a dedicated unit or shared space that can maintain temperatures at the appropriate range.

Emergency Vaccine Transport System Recommendations	
Container	Emergency Transport
Portable Vaccine Refrigerator or Freezer	Yes
Qualified Container and Packout	Yes
Conditioned Water Bottle Transport System	Yes (for refrigerated vaccines only)
Manufacturer's Original Shipping Container	Yes (last resort only)
Food/Beverage Coolers	No

Materials Needed for Vaccine Transport

	○ Transport Container: Hard-sided cooler or Styrofoam™ vaccine shipping container. ○ Size: cooler must be large enough for your facility's typical supply of vaccines. ○ DO NOT use soft-sided collapsible coolers.
	○ Size: – 16.9- or 8-ounce water bottles for conditioning. ○ Phase change materials (PCMs) that can be conditioned to 4°C to 5°C can also be used. ○ Conditioned Water Bottles for Refrigerated Vaccines: Before use, you must condition the frozen water bottles. Put them in a sink filled with several inches of cool or lukewarm water until you see a layer of water forming near the surface of the bottle. The bottle is properly conditioned if the ice block inside spins freely when rotated. ○ Frozen Vaccines: Use frozen water bottles or freezer packs when – transporting frozen vaccines. ○ DO NOT reuse coolant packs from original vaccine shipping containers, as they increase the risk of freezing vaccines.

North Carolina Immunization Program (NCIP)

	○ Insulating Materials: Bubble wrap and corrugated cardboard – enough to form two layers in the cooler. ○ Bubble wrap: must be at least 1 inch thick and make sure it covers the cardboard completely. ○ Corrugated Cardboard: must be cut to its interior dimensions of cooler (s).
	○ Temperature Monitoring Device: Use a digital data logger (DDL) with a buffered probe. ○ Accuracy: Data logger must have an accuracy of $\pm 0.5^{\circ}\text{C}$ ($\pm 1^{\circ}\text{F}$). ○ Calibration Requirement: Data logger must maintain a valid and up-to-date certificate of calibration. ○ Probe Preparation: Pre-chill buffered probe for at least 5 hours in refrigerator.

Transporting Refrigerated Vaccines

- **Packing for Transport:**
- **Step 1:** Place a layer of **conditioned** water bottles at the bottom of the cooler.
- **Step 2:** Followed by a sheet of cardboard.
- **Step 3:** Add a layer of insulating material (2-3 inches of bubble wrap, packing foam, or Styrofoam™).
- **Step 4:** Add vaccine into the cooler covering the thermometer probe.
- **Step 5:** Add a second layer of insulating materials.
- **Step 6:** Add another sheet of cardboard for support.
- **Step 7:** Add another layer of **conditioned** water bottles.
- **Step 8:** Lastly, attach data logger display to the lid of the cooler along with the temperature log.

Transporting Frozen Vaccines (Emergency-Only)

- **Packing for Transport:**
- **Step 1:** Place a layer of frozen water bottles **or** freezer packs at the bottom of the cooler.
- **Step 2:** Add vaccine into the cooler covering the thermometer probe.
- **Step 3:** Add a second layer of frozen water bottles **or** freezer packs to cover vaccine.
- **Step 4:** Fill the cooler on top with insulation material (bubble wrap).
- **Step 5:** Lastly, attach data logger display to the lid of the cooler along with the temperature log.

Temperature Monitoring After Transport

- **Temperature Monitoring:** Before opening cooler, record date, time, temperature, and the initials of the person that assisted with the transport.
- **Storage Upon Arrival:** Vaccines must be immediately stored in an appropriate storage unit equipped with a digital data logger upon arrival at the clinic or facility.
- **Troubleshooting:** If a temperature excursion occurred during transport, contact the NCIP to determine viability for the vaccines. Label the vaccines “**Do Not Use**” and store them at appropriate temperatures until viability has been assessed.

For assistance, contact the NCIR Help Desk by
Phone: 1.877.USE.NCIR (873-6247)
Email: ncirhelp@dhhs.nc.gov.