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
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**: 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. ○ **DO NOT** reuse coolant packs from original vaccine shipping containers, as they increase the risk of freezing vaccines.

	○ **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 fit 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 +/-0.5°C (+/-1°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

- **Packing for Transport:**
- **Step 1**: Place a layer of conditioned water bottles at the bottom of the cooler.
- **Step 2**: Add vaccine into the cooler covering the thermometer probe.
- **Step 3**: Add a second layer of conditioned water bottles 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.