

MODULE 5-D: Vaccine Storage and Handling

Vaccine Transfers

On occasion, even with proper inventory management, a provider may experience a situation where they have vaccine inventory with a short expiration date. Where practical, and as long as the cold chain can be maintained, short-dated vaccine should be transferred to another provider so that it can be used prior to expiration. A VFC-enrolled provider may transfer a vaccine(s) to another VFC-enrolled provider within three months of the expiration date. Do not transfer opened vials. It is the provider's responsibility to ship or transfer the vaccine safely and correctly. If the cold chain is broken and the vaccine becomes unserviceable, the VFC Program may charge providers for the cost of the vaccine.

The VFC Program does not recommend transferring varicella-containing vaccines to another provider or location because of storage temperature requirements. Additionally, a partially used multi-dose vial may not be transferred.

It is not recommended to reuse shipping materials to transport vaccine. Transport is recommended in a portable refrigerator unit or in a hard-sided cooler with at least two-inch thick walls. Place at least two inches of "conditioned" coolant packs for vaccine transfers or returns; a "conditioned" coolant pack is one which has been left out for one to two hours to allow for some defrosting so as not to freeze the vaccine. It is recommended to place an insulating barrier between the coolant pack and the vaccines such as bubble wrap. A calibrated temperature monitoring device must be used for monitoring during transport. The provider must complete the transfer in Florida SHOTS.

Vaccine Transfer Process

The provider transporting the vaccines will create the transfer request in Florida SHOTS. The provider receiving the vaccines should accept the Pending Receipt in their Florida SHOTS account. The provider receiving the vaccine is responsible for all VFC vaccines in their possession and must ensure all vaccines are stored properly upon receipt.

How to Create the Transfer using Florida SHOTS

For a step-by-step guide on how to create the vaccine transfer within Florida SHOTS go to flshotsusers.com/wp-content/uploads/2013/07/How-To-Manage-Vaccines-5.15.14.pdf. The Transfer section begins on page 14 of the guide.

Packing Vaccine for Transfer

All public and private providers enrolled in the Vaccines for Children (VFC) Program are responsible for the proper maintenance of their vaccine inventories. When the providers transport vaccines from their clinic to another location they should follow proper vaccine transportation procedures to ensure protection of the vaccine supply.

Health care providers and staff are responsible for maintaining vaccine quality from the time a shipment arrives until the moment they administer a vaccine dose. The following are general guidelines for packing vaccine when transporting to another location or for off-site activities like health fairs and immunization clinics.

Transporting Refrigerated Vaccines

- Pack refrigerated vaccines before packing frozen vaccines.
- CDC recommends transport with a portable refrigerator unit. If this type of unit is not available, a hard-sided insulated cooler with at least 2-inch walls may be used if it can maintain recommended temperature range (between 35°F and 46°F [2°C and 8°C]).
- Place a layer (at least 2 inches) of “conditioned” coolant packs in transport container first. Coolant packs that are frozen must be “conditioned” by leaving them at room temperature for 1 to 2 hours until edges have defrosted and packs look like they have been “sweating.” Frozen coolant packs that are not “conditioned” can freeze vaccines.
- Place an insulating barrier layer on top of coolant packs (e.g., bubble wrap or Styrofoam pellets).
- Next, place a calibrated temperature monitoring device (preferably with a probe in a thermal buffer, e.g., glycol) on top of barrier.
- Stack vaccines with temperature monitoring device on top of barrier.
- Place another insulating barrier layer on top of vaccines.
- Place another layer of “conditioned” coolant packs on top of barrier.
- Always ensure there is no direct contact between coolant packs and vaccines.
- Place a final insulating barrier layer (at least 2 inches) on top of coolant packs along with a list of vaccines in container.
- Pack vaccines in their original packaging. Do not remove vaccine vials from boxes, and do not draw up vaccine in advance.
- Use a properly placed thermometer near the vaccine but not in contact with the frozen packs.

Transporting Varicella-Containing Vaccines

The vaccine manufacturer does not recommend transporting varicella-containing vaccines (VAR and MMRV).

If these vaccines must be transported (e.g., during an emergency):

- CDC recommends transport in a portable freezer unit that maintains temperature between -58°F and +5°F (-50°C and -15°C). Portable freezers may be available for rent in some places.
- If not using a portable freezer, use same packing layers as noted above.
- Coolant packs should be frozen.

If necessary, varicella-containing vaccines that have not been reconstituted may be transported at refrigerator temperature between 36°F and 46°F (2°C and 8°C) for up to 72 continuous hours prior to reconstitution (package inserts). Follow these steps:

- Place a calibrated temperature monitoring device (with a probe in a thermal buffer) in the container as close as possible to vaccines. If transported in same container with refrigerated vaccines, place insulating material (e.g., bubble wrap) around refrigerated vaccines to protect from freezing temperatures and use rubber bands around frozen vaccines to keep them separate.
- Record:
 - Time vaccines are removed from storage unit and placed in container
 - Temperature during transport
 - Time at end of transport when vaccine returned to main storage unit

- Immediately upon arrival at facility:
 - Place varicella-containing vaccines in freezer between -58°F and +5°F (-50°C and -15°C). Any stand-alone freezer that reliably maintains a temperature between -58°F and +5°F (-50°C and -15°C) is acceptable for storage of varicella-containing vaccines.
 - Document time vaccines are removed from container and placed in the storage unit.

Do NOT use dry ice, even for temporary storage or emergency transport. Dry ice may expose varicella-containing vaccines to temperatures colder than -58°F (-50°C).

Transferring Multi-Dose Vials

A partially used vial may NOT be transferred to another provider or transported across state lines.

Monitoring Temperatures at Off-Site/Satellite Clinics and/or Events

Immediately upon arrival at off-site/ satellite facility, store vaccines at recommended temperature range in an on-site refrigerator or freezer. Place a calibrated temperature monitoring device(s) in storage unit(s) with vaccines. Read and record temperatures a minimum of two times during the workday if the vaccines are stored in a refrigerator and freezer.

CDC does not recommend keeping vaccines in a transport container(s) unless it is a portable refrigerator or freezer unit. If vaccines must be kept in a transport container(s) during an off-site clinic, temperature(s) should be read and recorded at least hourly. In addition:

- Container(s) should remain closed as much as possible.
- A calibrated temperature monitoring device(s) (with a probe in a thermal buffer) should be placed as close as possible to vaccines.
- Amount of vaccine needed at one time (no more than 1 multi-dose vial or 10 doses) for preparation and administration by each vaccinator.
- If you have concerns about vaccines or diluents that may have been compromised (exposed to inappropriate conditions/temperatures or handled improperly), label them "Do NOT Use" and store them under appropriate conditions (set apart from other vaccines).
- In hot climates and summer seasons, keep the insulated containers in the air-conditioned interior of the car during transport, rather than in the trunk.



Refrigerated/frozen packs.



Place bubble wrap, crumpled brown packing paper, or Styrofoam™ peanuts between the refrigerated/frozen packs and the vaccines.



Place a thermometer next to the vaccine but not in contact with the refrigerated/frozen packs.

- Label the outside of the cooler containers to clearly identify the contents as being valuable and fragile vaccines. Below are some examples of labels the provider can attach to the coolers.



What to do After the Off-Site Activity is Over

The designated staff will unpack, check, and immediately store the vaccines at the recommended temperature ranges of 35° to 46°F (2° to 8°C); and the freezer temperature of 5°F (-15°C) or colder when they return to the clinic from the off-site activity.

If the designated staff has suspicion of a cold chain failure or evidence of vaccine exposure to temperatures outside the recommended temperature range, the staff should immediately notify the primary vaccine coordinator. If the primary vaccine coordinator is not available, the staff should report the problem to the immediate supervisor. The designated staff, the primary vaccine coordinator, or the immediate supervisor should follow these steps:

- Store the potentially compromised vaccines under appropriate conditions in a properly functioning refrigerator/freezer.
- Separate the potentially compromised vaccines, and label “DO NOT USE”, to prevent inadvertent administration, until the vaccine manufacturer(s) determine the integrity and potency of the vaccines.
- Contact the VFC Program for guidance.
- Do not discard any vaccine unless directed to do so by the VFC Program.

If the VFC Program determines that the vaccine becomes unserviceable, account for these doses using the **Vaccine Returns/Waste functionality within Florida SHOTS** and follow the VFC Program vaccine return procedures (see Module 4).