

New York State Vaccines for Children (NYS VFC) Program Guidance for Vaccine Transport

Routine transport of vaccine is not recommended. Each transport increases the risk of exposing vaccine to inappropriate storage conditions, which compromises the viability of vaccines. However, in certain situations transporting vaccine may be necessary. All Vaccines for Children (VFC) providers must have an individualized emergency vaccine storage and handling plan which includes protocols on the safe transport of vaccines. Vaccine coordinators and/or backup coordinators are responsible for execution of the plan when indicated.

Any time vaccine is transported, return the completed Transport Tracking Form(s) (pages 6 and 7 of this document) to the NYS VFC program via fax at (518) 449-6912 or via email at nyvfc@health.ny.gov

Effective January 1, 2018: VFC Providers are required to use a continuous temperature monitoring device or digital data logger during the transport of vaccine.

When is vaccine transport necessary?

Transport of vaccine is not recommended, however certain situations may necessitate vaccine transport. Possible situations for transport include:

1. Transport to another facility in an emergency
 2. Transport due to physical office relocation
 3. Transport to another site or provider to avoid wastage
 4. Transport to an off-site clinic
1. **Emergency transport** may be necessary for temporary or short-term storage due to power outage, natural disaster, or equipment failure. This scenario does not require prior approval by the VFC Program.
 - A. All provider sites must have emergency storage and handling plans in place which include; procedures for transport, responsible persons and information on alternate storage location(s).
 - B. Required supplies for transport must be readily accessible. Refer to ***How Should Vaccine be Transported?*** on page 2 for more information.
 2. **Transport due to physical office relocation.** The VFC Program (1-800-KID-shot) must be notified prior to a physical move to ensure that logistics for storage and handling of vaccines during the move are followed. Additionally, the VFC Program requires new address and shipping information to ensure vaccine deliveries arrive at the proper location.
 3. **Transport to another facility when vaccines cannot be used and would expire (also referred to as transferring).** Vaccine supply of >10 doses that will not be used should be transferred to another VFC provider.
 - A. Prior approval by the VFC Program (1-800-KID-SHOT) is necessary and the transport must be completed in accordance with vaccine transport protocols. The inventory for both sites must be adjusted in NYSIIS (New York State Immunization Information System) to account for the transfer.
 - B. If another VFC provider is nearby and is able to utilize the vaccine, obtain approval from the VFC Program. The local health department may be able to assist in locating providers that may need the vaccine. This may be beneficial to avoid financial restitution.
 - C. Vaccine that will not be used and will expire in the next 60 – 90 days must be reported at: <https://www.surveymonkey.com/s/FBTH26G>

4. Transport of vaccines to an off-site clinic. Off-site clinics generally have limited hours and have no vaccine storage capacity.

A. Transport of vaccines to any off-site clinic requires prior approval by the VFC Program.

B. If vaccines must be transported to an off-site clinic, the amount transported should be limited to only what is needed for that workday.

- i. Transport and workday should total no more than 8 hours.
- ii. Do not keep vaccines in transport container unless it is a portable refrigerator or freezer unit. Move the vaccines into a suitable storage unit as soon as possible.
- iii. If transport container must be used at an off-site clinic:
 - a. Always keep a digital data logger or continuous temperature monitoring device next to the vaccines.
 - b. Read and document temperatures at least hourly.
 - c. Keep the transport container(s) closed as much as possible and only remove the amount of vaccine that is needed. No more than 1 multi-dose vial or 10 doses should be removed for preparation and administration at one time.

Each clinic location with storage capacity requires its own VFC PIN# and must follow all storage and handling requirements.

How should vaccine be transported?

- 1. Portable vaccine refrigerator and freezer units** are considered the **best option** for vaccine transport. Portable vaccine refrigerator and freezer units are preferred because they use built-in temperature regulation, controlled by a thermostat, to maintain the temperature and do not require the use of pack out methods to maintain appropriate temperatures.
- 2. Use a continuous temperature monitoring device** or digital data logger to monitor temperatures during transport. Effective January 1, 2018, all VFC Providers are required to use a continuous temperature monitoring device or digital data logger during the transport of vaccine.
- 3. Qualified containers and pack outs** are tested under laboratory conditions and are acceptable to use for emergency or short-term vaccine transport, when portable vaccine refrigerator and freezer units are not available.
 - A. Qualified containers do not have built-in temperature regulation to maintain temperature but are known to maintain appropriate temperatures when a qualified pack out method is also used.
 - B. Polystyrene coolers or intact Styrofoam vaccine shipping containers are examples of qualified containers. Soft-sided or collapsible coolers are never acceptable.
 - C. Qualified pack outs require specific supplies and packing procedures to minimize temperature excursions. Refer to the instructions in the ***CDC's: Packing Vaccines for Transport during Emergencies*** on pages 4 and 5.

Use of a **hard-sided insulated cooler**, may be used for short-term or emergency transport, when portable or qualified containers are not available.

4. To transport refrigerated vaccine:

- A. Temperatures during transport are to be maintained between 36°F and 46°F (2°C and 8°C).
- B. Properly maintained pack outs can hold appropriate temperatures for up to 8 hours if left undisturbed.

5. To transport frozen vaccine:

- A. Acceptable temperature ranges for frozen vaccines are between -58°F and 5°F (-50°C and -15°C).
- B. Follow steps for packing refrigerated vaccine but use FROZEN water bottles (not conditioned).
- C. If transporting frozen vaccine in same container as refrigerate-only vaccines, place insulating

material around refrigerated vaccines to protect from freezing temperatures. Refrigerated vaccines should be packed before packing frozen vaccines. Place rubber bands around the frozen vaccines for aid in identification.

- D. To transport frozen vaccines at refrigerated temperature¹:
- i. Use the same packing layers/materials as noted in the refrigerated vaccine instructions above.
 - ii. Place rubber bands around the frozen vaccines to keep them separate.
 - iii. **Do NOT use the frozen vaccine and contact the vaccine manufacturer at (1-800-637-2590) for further guidance on next steps. Do NOT discard the vaccine unless directed to do so by the manufacturer.**

Do's and Don'ts of Vaccine Transport	
Do	Don't
<ul style="list-style-type: none"> Use portable vaccine refrigerators and freezers to transport vaccine. Use a calibrated, <u>continuous</u> temperature monitoring device during transport and inside temporary storage at all times. Use of a digital data logger (DDL) during transport and inside temporary storage is required effective January 1, 2018. Ensure that the vaccine cold chain is maintained at all times to ensure vaccine potency is protected. PROMPTLY unpack and place vaccine in acceptable storage units* when arriving at alternate or offsite location. Consider the many factors when planning for transport including: <ul style="list-style-type: none"> the amount and type of vaccines the status and availability of vaccine transport containers, packing materials, temperature monitoring devices and the status of the storage units* at the off-site or alternate facility (i.e., are the storage units operating normally? Is there enough adequate space inside the units?) the time of year and seasonal temperature If possible, transport refrigerated vaccine in a separate container from frozen vaccine. 	<ul style="list-style-type: none"> Don't place vaccine in the trunk of a vehicle. Don't use dry ice. Don't use soft-sided or collapsible coolers for vaccine transport. Do not use cold chain monitors (CCMs) to monitor temperatures when transporting vaccine. Don't hesitate to contact manufacturers or the NYS VFC Program if there are questions about vaccine viability. Don't discard vaccine unless directed to do so by the manufacturer.

*An acceptable storage unit meets VFC Program requirements, maintains appropriate temperatures, has adequate space available and is monitored by a temperature monitoring device with a valid calibration certificate.

Resources

Centers for Disease Control (CDC), Packing Vaccines for Transport during Emergencies, <http://www.cdc.gov/vaccines/recs/storage/downloads/emergency-transport.pdf>

Centers for Disease Control (CDC), Vaccine Storage and Handling Toolkit, pages 69, 18 and 102 <http://www.cdc.gov/vaccines/recs/storage/toolkit/storage-handling-toolkit.pdf>

American Academy of Pediatrics, Storage and Handling Series, Disaster Planning https://www.aap.org/en-us/Documents/immunization_disasterplanning.pdf

¹ Varicella-containing vaccines may be transported at refrigerated temperatures between 36° F and 46° F (or between 2° C and 8° C) for up to 72 continuous hours prior to reconstitution.

Packing Vaccines for Transport during Emergencies

Be ready BEFORE the emergency

Equipment failures, power outages, natural disasters—these and other emergency situations can compromise vaccine storage conditions and damage your vaccine supply. **It's critical to have an up-to-date emergency plan with steps you should take to protect your vaccine.** In any emergency event, activate your emergency plan immediately, and if you can do so safely, follow the emergency packing procedures for refrigerated vaccines.

1 Gather the Supplies



Hard-sided coolers or Styrofoam™ vaccine shipping containers

- Coolers should be large enough for your location's typical supply of refrigerated vaccines.
- Can use original shipping boxes from manufacturers if available.
- Do NOT use soft-sided collapsible coolers.



Conditioned frozen water bottles

- Use 16.9 oz. bottles for medium/large coolers or 8 oz. bottles for small coolers (enough for 2 layers inside cooler).
- Do NOT reuse coolant packs from original vaccine shipping container, as they increase risk of freezing vaccines.
- Freeze water bottles (can help regulate the temperature in your freezer).
- 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 bottle. The bottle is properly conditioned if ice block inside spins freely when rotated in your hand.



Insulating material — You will need two of each layer

- **Insulating cushioning material** – Bubble wrap, packing foam, or Styrofoam™ for a layer above and below the vaccines, at least 1 in thick. Make sure it covers the cardboard completely. Do NOT use packing peanuts or other loose material that might shift during transport.
- **Corrugated cardboard** – Two pieces cut to fit interior dimensions of cooler(s) to be placed between insulating cushioning material and conditioned frozen water bottles.



Temperature monitoring device – Digital data logger (DDL) with buffered probe. Accuracy of $\pm 1^{\circ}\text{F}$ ($\pm 0.5^{\circ}\text{C}$) with a current and valid certificate of calibration testing. Pre-chill buffered probe for at least 5 hours in refrigerator. Temperature monitoring device currently stored in refrigerator can be used, as long as there is a device to measure temperatures for any remaining vaccines.

Why do you need cardboard, bubble wrap, and conditioned frozen water bottles?

Conditioned frozen water bottles and corrugated cardboard used along with one inch of insulating material such as bubble wrap keeps refrigerated vaccines at the right temperature and prevents them from freezing. **Reusing vaccine coolant packs from original vaccine shipping containers can freeze and damage refrigerated vaccines.**



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Visit www.cdc.gov/vaccines/SandH
for more information, or your state
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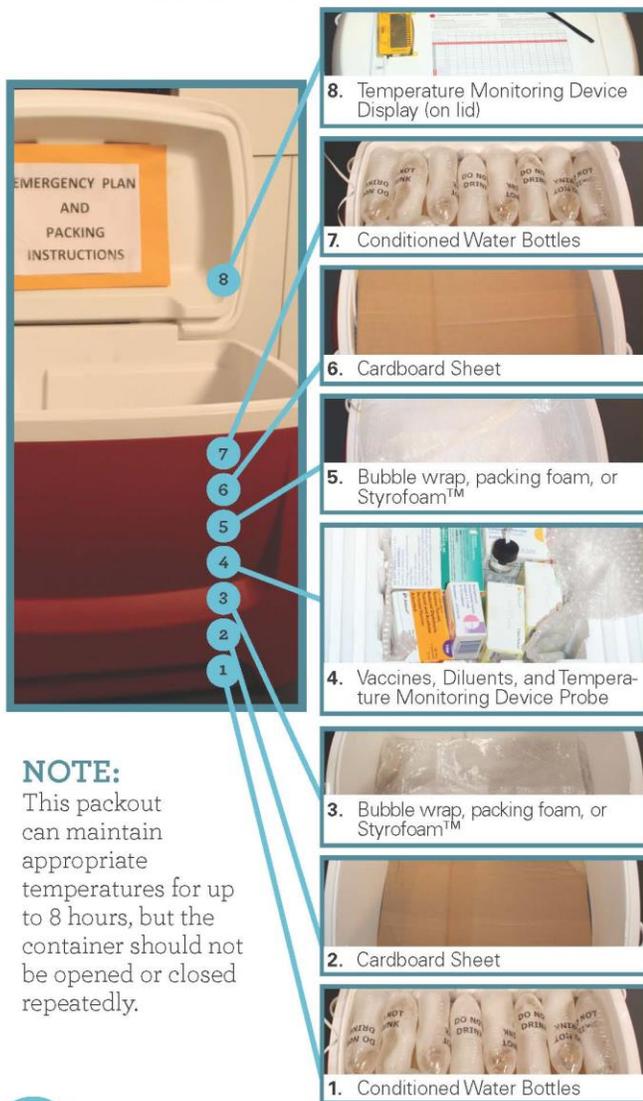
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Packing Vaccines for Transport during Emergencies

2 Pack for Transport

Conditioning frozen water bottles

- Put frozen water bottles in sink filled with several inches of cool or lukewarm water or under running tap water until you see a layer of water forming near surface of bottle.
- The bottle is properly conditioned if ice block inside spins freely when rotated in your hand.
- If ice “sticks,” put bottle back in water for another minute.
- Dry each bottle.
- Line the bottom and top of cooler with a single layer of conditioned water bottles.
- Do NOT reuse coolant packs from original vaccine shipping container.



NOTE:

This packout can maintain appropriate temperatures for up to 8 hours, but the container should not be opened or closed repeatedly.

Close lid – Close the lid and attach DDL display and temperature log to the top of the lid.

8. Temperature Monitoring Device Display (on lid)

Conditioned frozen water bottles – Fill the remaining space in the cooler with an additional layer of conditioned frozen water bottles.

7. Conditioned Water Bottles

Insulating material – Another sheet of cardboard may be needed to support top layer of water bottles.

6. Cardboard Sheet

Insulating material – Cover vaccines with another 1 in. layer of bubble wrap, packing foam, or Styrofoam™

5. Bubble wrap, packing foam, or Styrofoam™

Vaccines – Add remaining vaccines and diluents to cooler, covering DDL probe.

4. Vaccines, Diluents, and Temperature Monitoring Device Probe

Temperature monitoring device – When cooler is halfway full, place DDL buffered probe in center of vaccines, but keep DDL display outside cooler until finished loading.

Vaccines – Stack boxes of vaccines and diluents on top of insulating material.

3. Bubble wrap, packing foam, or Styrofoam™

Insulating material – Place a layer of bubble wrap, packing foam, or Styrofoam™ on top (layer must be at least 1 in. thick and must cover cardboard completely).

2. Cardboard Sheet

Insulating material – Place 1 sheet of corrugated cardboard over water bottles to cover them completely.

1. Conditioned Water Bottles

Conditioned frozen water bottles – Line bottom of the cooler with a single layer of conditioned water bottles.

3 Arrive at Destination

Before opening cooler – Record date, time, temperature, and your initials on vaccine temperature log.

Storage – Transfer boxes of vaccines quickly to storage refrigerator.

Troubleshooting – If there has been a temperature excursion, contact vaccine manufacturer(s) and/or your immunization program before using vaccines. Label vaccines “Do Not Use” and store at appropriate temperatures until a determination can be made.

Refrigerated Vaccine Transport Tracking Sheet

Transport between 36° F and 46° F (or between 2° C and 8° C)

Providers must **complete this document** to track transport of NYS VFC vaccine.
Return the completed document to the VFC Program by fax at 518-449-6912 or by email at nyvfc@health.ny.gov

Date of Transport: _____ Name of Provider Releasing Vaccine: _____ PIN _____

Vaccine transported due to: Power Outage Excess Supply Short dated Unit malfunction Building maintenance
 Other _____

Temperature of *releasing* storage unit on day of transport: _____ C° F° Time placed in transport container: _____ AM PM

Vaccines to be transported (attach additional sheets if needed):

Vaccine	Lot #	Manufacturer	Expiration date	# of doses	Cold Chain Maintained (Y/N)	Comments

Name of Provider Receiving Vaccine (or alternate storage location): _____ PIN _____

Time arrived at receiving location: _____ AM PM Temperature of transport container upon arrival: _____ C° F°

Temperature of *receiving* storage unit: _____ C° F° Maximum temperature reached during transport: _____ C° F°

Frozen Vaccine Transport Tracking Sheet

Transport between -58° F and + 5° F (or between -50° C and -15° C)

Providers must **complete this document** to track transport of NYS VFC vaccine.
Return the completed document to the VFC Program by fax at 518-449-6912 or by email at nyvfc@health.ny.gov

Date of Transport: _____ Name of Provider Releasing Vaccine: _____ PIN _____

Vaccine transported due to: Power Outage Excess Supply Short dated Unit malfunction Building maintenance
 Other _____

Temperature of *releasing* storage unit on day of transport: _____ C° F° Time placed in transport container: _____ AM PM

Vaccines to be transported (attach additional sheets if needed):

Vaccine	Lot #	Manufacturer	Expiration date	# of doses	Cold Chain Maintained (Y/N)	Comments

Name of Provider Receiving Vaccine (or alternate storage location): _____ PIN _____

Time arrived at receiving location: _____ AM PM Temperature of transport container upon arrival: _____ C° F°

Temperature of *receiving* storage unit: _____ C° F° Maximum temperature reached during transport: _____ C° F°