

New York State COVID-19 Vaccine 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. Opened vials cannot be transported.

Any time vaccine is transported, return the completed Transport Tracking Form(s) (final page of this guidance) to the NYS COVID-19 Vaccine Program via email at covid19vaccine@health.ny.gov

Each receiving location with storage capacity must be enrolled in the COVID-19 Vaccine Program and must follow all NYS Department of Health guidance and directives, including 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/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 packout methods to maintain appropriate temperatures.
2. **Use a continuous temperature monitoring device** or digital data logger to monitor temperatures during transport.
3. **Qualified containers and packouts** are tested under laboratory conditions and are acceptable to use for emergency or short-term vaccine transport, when portable vaccine refrigerator 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 packout 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 packouts 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 3 and 4.
 - D. 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). Janssen, Moderna and Pfizer vaccine may be transported refrigerated.
 - B. Use portable refrigerator unit or qualified container and packout with a digital data logger. Properly maintained packouts can hold appropriate temperatures for up to 8 hours if left undisturbed.
 - C. Keep vaccines out of direct sunlight.
 - D. Protect vaccines as much as possible from drops, shocks, and vibration. Transport in the original carton whenever possible. If individual vials are transported vials should be placed with dunnage (padding material like bubble wrap or similar padding). Transport container must be secured.
 - E. Transport only full, unpunctured vials.
 - F. Take care to ensure vaccine does not refreeze during transport.

- G. Include hours used for transport when calculating the beyond use date (BUD) for vaccines. For more information and sample BUD tracking labels, see <https://www.cdc.gov/vaccines/covid-19/info-by-product/moderna/downloads/bud-tracking-labels.pdf> and <https://www.cdc.gov/vaccines/covid-19/info-by-product/pfizer/downloads/bud-tracking-labels.pdf>

5. To transport frozen vaccine:

- A. As of March 2021, the Moderna vaccine and the Pfizer vaccine may be stored or transported in a frozen state (-25°C to -15°C or -13°F to 5°F). Frozen transport is preferred, if Moderna or individual vials of Pfizer vaccine must be transported and have not been thawed.
- B. Use a portable freezer unit or qualified container and packout and a digital data logger acceptable for frozen temperatures.
- C. Immediately upon arrival at the destination, unpack the vaccines and place them in a freezer or refrigerator at an acceptable temperature range.
- D. If individual vials of Pfizer are transported frozen, any hours used for transport count against the 2-week limit for storage at -25° C to -15° C. Frozen vials transported at -25° C to -15° C may be returned one time to the recommended storage condition of -80° C to -60° C.
- E. Never transport or store Moderna vaccine on dry ice or below -40°C (40°F).
- F. Keep vials out of direct sunlight.
- G. **If frozen vaccine begins to thaw during transport, store in a refrigerator at receiving location. Do NOT refreeze vaccine that has started to thaw.**

6. To transport ultra-frozen vaccine:

- A. As of February 2021, the Pfizer vaccine is the only COVID vaccine that can be stored or transported in an ultra-frozen state (-80°C to -60°C or -112°F to -76°F).
- B. Use the original thermal shipping container with dry ice or a portable ultra-cold freezer that can maintain a temperature of -80°C.
- C. **Transport only full trays of vaccine;** partial trays or individual vials must be transported at -25° C to -15° C unless already thawed, which requires refrigerated transport. Partially used vials cannot be transferred between providers under any circumstances.
- D. Keep tray(s) in original packaging to protect vaccine from light.
- E. Do not open trays or remove any vials until ready to thaw.
- F. Place trays in ultra-cold storage within five minutes of unpacking.
- G. Once Pfizer COVID-19 vaccine is removed from ultra-cold storage, it must be used within 120 hours (5 days).
- H. Never refreeze thawed vaccine.

If temperature goes above or below the appropriate range during transport, report as soon as vaccine arrives at the receiving location by emailing vaccinetempexcursion@health.ny.gov.

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, <https://www.cdc.gov/vaccines/hcp/admin/storage/toolkit/storage-handling-toolkit.pdf> pages 21-24 and 49-62

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
health department.

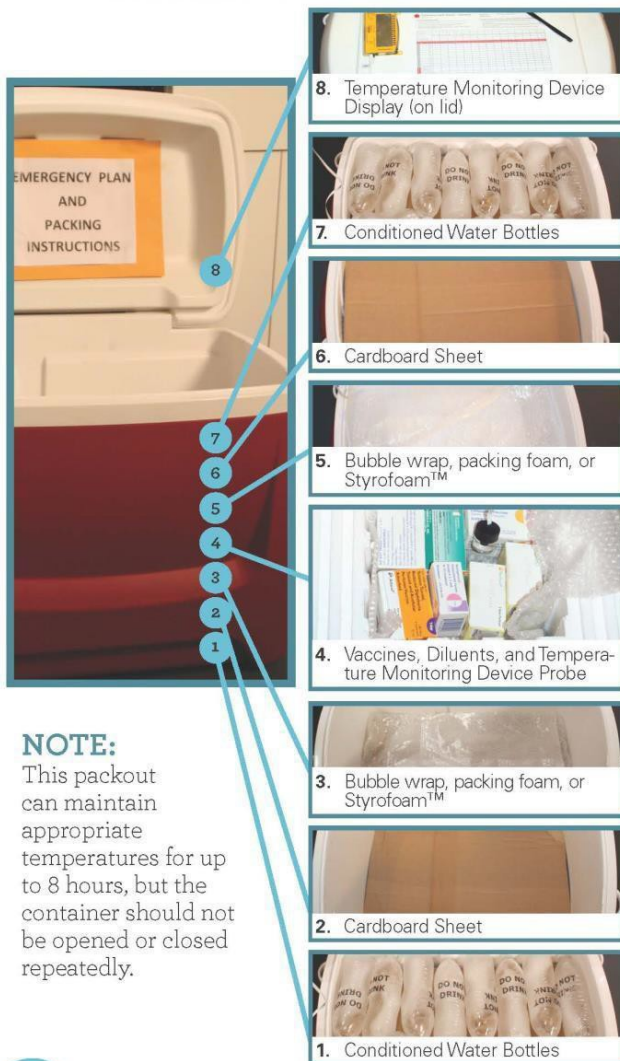
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Packing Vaccines for Transport during Emergencies

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.



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

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

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

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

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

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).

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

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

NOTE:

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

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.

COVID-19 Vaccine Transport Tracking Sheet

Providers must email completed Vaccine Transport Tracking Sheet to covid19vaccine@health.ny.gov

Date of transport: _____ Name of provider releasing vaccine: _____ PIN: _____

Name of contact person at *releasing* provider: _____ Phone number of contact person: _____

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

Vaccines will be transported (*Select one*):

<input type="checkbox"/> Refrigerated 2°C to 8°C (36°F to 46°F) <ul style="list-style-type: none"> Moderna, Pfizer, and Janssen vaccines Use portable refrigerator unit or qualified container and packout with DDL Keep vaccines out of direct sunlight Transport only full, unpunctured vials Minimize shocks and vibrations during transport Include hours used for transport when calculating the beyond use date (BUD) for Moderna and Pfizer vaccines Never refreeze thawed vaccine 	<input type="checkbox"/> Frozen -25°C to -15°C (-13°F to 5°F) <ul style="list-style-type: none"> Moderna and Pfizer vaccine Use a portable freezer unit or qualified container and packout with DDL Never transport or store Moderna vaccine on dry ice or below -40°C (40°F) Keep vaccine out of direct sunlight Include hours of transport in 2-week limit for Pfizer frozen storage Pfizer vaccine transported frozen may be returned to ULT storage one time Never refreeze thawed vaccine 	<input checked="" type="checkbox"/> Ultra-frozen -80°C to -60°C (-112°F to -76°F) <ul style="list-style-type: none"> Pfizer vaccine only Use original thermal shipping container with dry ice or a portable ultra-cold freezer that can maintain a temperature of -80°C Transport only full trays of Pfizer vaccine at ultra-frozen temperatures Keep tray(s) in original packaging to protect vaccine from light Do not open trays or remove any vials until ready to thaw Place trays in ultra-cold storage within five minutes of unpacking Once removed from ultra-cold storage, vaccine must be used within 120 hours (5 days) Never refreeze thawed vaccine
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Vaccines included in this transport (*Attach additional sheets if needed*):

Manufacturer	Lot #	Expiration Date	Beyond Use Date (BUD) ¹	# of Doses ²	Dose in Sequence (1 or 2)	Cold Chain Maintained (Y/N) ³	Comments

¹ The BUD for Moderna vaccine will be 30 days after thawing begins. The BUD for Pfizer vaccine will be 120 hours (5 days) after thawing begins.

² After 2/16/2021, count six doses per vial for Pfizer vaccine.

³ If temperature goes out of range during transport, report immediately to vaccinatempeexcursion@health.ny.gov

Name of provider receiving vaccine (or alternate storage location): _____ PIN: _____

Name of contact person at *receiving* provider: _____ Phone number of contact person: _____

Time arrived at receiving location: _____ AM PM

Temperature of transport container upon arrival: _____ °C °F

Temperature of *receiving* storage unit on day of transport: _____ °C °F

Maximum temperature reached during transport: _____ °C °F