



## Transportation of Vaccine

### Rationale:

The best assurance of vaccine efficacy is to minimize the number of times vaccines are handled and transported. If vaccine transportation to another location is required, it is critical that the potency is protected by maintaining the cold chain at all times. It is essential that refrigerated vaccine shall be maintained at 36 - 46 degrees Fahrenheit during transportation.

### Instructions for all transported vaccine:

1. The school vaccine provider shall pack the vaccine in the appropriately sized cooler the day of the clinic according to quantity guidelines outlined below. The vaccine should remain in their original boxes when transported to the home or clinic site.
2. The school vaccine provider shall attach a label to the outside of the container to clearly identify the contents as fragile Vaccines.
3. The certified calibrated thermometer shall be fixed to the outside of the cooler by velcro and used for all temperature readings.
4. The school vaccine provider shall record the time and temperature inside the cooler on the [Vaccine Transport Temperature Log](#).
5. The school vaccine provider shall check the temperature at least hourly to ensure that the cold chain is not broken. Record the time and temperature on the *Vaccine Transport Temperature Log*. Do not open the cooler for hourly temperature readings. Retain these records for three years and then destroy.
6. If the temperature of the cooler falls outside of the recommended guidelines the school vaccine provider shall take the following actions:
  - Label the Vaccine that it has been stored out of range
  - Notify the [manufacturer](#) of the product for instructions in handling the vaccine.
  - If the vaccine was obtained from the Maine Immunization Program notify the Maine Immunization Program at 287-9972.

## Special Instructions for Refrigerated Vaccine Transport:

MIP recommends transporting refrigerated vaccines with a portable refrigeration unit. If this type of unit is not available, a hard-sided insulated cooler with at least 2-inch walls, a Styrofoam vaccine shipping container, or other qualified container may be used as long as it maintains the recommended temperature range (36°F to 46°F [2°C to 8°C]).

- Using a hard-sided cooler, Styrofoam vaccine shipping container, or other qualified container requires the following:

- o Coolers should be large enough to hold the MIP supply of refrigerated vaccines.

- o Label the container with the facility name, “Fragile Vaccines – Do NOT Freeze”, and the date and time the vaccines was removed from the permanent storage unit.

**NOTE:** Do not use soft-sided collapsible coolers for transporting vaccine.

- Conditioned frozen water bottles are recommended for keeping vaccines cold.

- o Use 16.9 oz. bottles for medium/large coolers and 8 oz. bottles for small coolers

- o Before use, condition the frozen water bottles. This is done by placing them in a sink filled with several inches of cool or lukewarm water until there is a layer of water forming near the inner surface of the bottle. The bottle is properly conditioned when the ice block spins freely within the bottle when rotated.

**NOTE:** Do not reuse coolant packs from original vaccine shipping containers.

- Insulating material – two each of the following layers is needed:

- o Corrugated cardboard – two pieces cut to fit the internal dimensions of the coolers(s) and placed between the insulating cushioning material and the conditioned water bottles.

- o Insulating cushioning material such as bubble wrap, packing foam, or Styrofoam for a layer at least 2-inches thick above and below the vaccines. Ensure this layer covers the cardboard completely.

**NOTE:** Do not use packing peanuts or other loose material that may shift during transport.

- A data logger with a buffered probe must be used as a temperature monitoring device.

- o Prepare the probe by pre-chilling it in the refrigerator for at least 5 hours prior to transport.

- o Ensure the data logger has a current and valid certificate of calibration testing.

- o Ensure the data logger certificate is documented to be accurate within +/- 1°F (+/- 0.5°C).

- o The data logger currently stored in the refrigerator can be used for transport, as long as there is a device in place to measure the temperature for any remaining vaccines.

MIP recommends the following packing assembly for refrigerated vaccines:

- Line the bottom of the cooler with a single layer of conditioned water bottles.

- Place a sheet of corrugated cardboard over the water bottles.
- Place at least a 2-inch layer of insulating material (i.e., bubble-wrap, packing foam, or Styrofoam) over the cardboard.
- Stack boxes of vaccines on top of the insulating material.
- When cooler is halfway full, place the data logger buffered probe in the center of the vaccines, but keep the display outside the cooler.
- Cover vaccines with another 2-inch layer of insulating material.
- Add the second layer of corrugated cardboard.
- Fill the remaining space in the cooler with conditioned water bottles.
- Close the lid of the cooler securely and attach the data logger display and a temperature log to the top of the lid to record and monitor the temperature during transport.
- Use the temperature recording form to record the time and temperature inside of the storage unit at the time the vaccines were removed.
- If vaccines are kept in a transport container for longer than an hour, record the temperatures hourly.
- As soon as the destination site is reached, check and record the vaccine temperature.

If the vaccine temperature is 36°F to 46°F (2°C to 8°C), place the vaccine in the refrigerator.

If the vaccine is below 36°F (below 2°C) or above 46°F (above 8°C), label the vaccine as “Do Not Use”, place in the refrigerator, and immediately contact the vaccine manufacturer to determine viability.

**NOTE:** Always keep vaccine properly stored until otherwise instructed by the vaccine manufacturer or MIP.

### **Special Instructions for Frozen Vaccine Transport:**

Varicella, MMRV, and COVID-19 vaccines are fragile and must be kept frozen. For transporting instructions, please reference the following link, pages 46-48:

<https://www.maine.gov/dhhs/mecdc/infectious-disease/immunization/documents/MIP-Policies-and-Procedures.pdf>

COVID-19 vaccine storage and handling requirements, transportation instructions, and other information is listed in section 5.5 of the SLVC toolkit.