



North Carolina Department of Health and Human Services
Division of Public Health

Pat McCrory
Governor

Aldona Z. Wos, M.D.
Ambassador (Ret.)
Secretary DHHS

Danny Staley
Acting Division Director

May 28, 2015

MEMORANDUM

TO: North Carolina Immunization Program (NCIP) Participants

FROM: Wendy Holmes, R.N., Head *WH*
Immunization Branch

SUBJECT: 2015 Hurricane Season Preparedness

The purpose of this memo is to ensure you are prepared for the 2015 hurricane season. During the months of June through November, hurricanes or tropical storms could pose a threat to North Carolina. In preparation, we would like you to take precautions to protect your vaccine supply now.

To ensure your facility is ready, please take a moment to review your storage and handling preparedness:

- Review and update the Emergency Vaccine Management Plan. All providers are required to have a current plan posted on or near the vaccine storage equipment. All Emergency Vaccine Management Plans must have a recorded review date within the last 12 months and the signature of an individual responsible for the content. The plans must be reviewed and/or updated annually or more frequently if changes occur. All information in the plan must be current. A "review date" and signature is required on all plans in order to verify that they are current.
- All staff (current, new, and temporary) should read the plan and understand what to do in the event of refrigerator or freezer malfunctions, power failures, natural disasters, or other emergencies. Janitorial and security staff should be aware of the plan and know the procedures to follow to notify designated personnel about any problems with the vaccine storage equipment or power outages.
- The primary and back-up vaccine coordinator are responsible for monitoring storage equipment, tracking weather conditions, severe weather patterns, and safe transportation of vaccine if needed (even after hours)
- Set up and maintain a monitoring/notification system during times of inclement weather or other conditions that might cause a power outage. A continuous-monitoring temperature alarm/notification system should be considered, especially for facilities with large inventories.
- Whenever possible, suspend vaccination activities BEFORE the onset of emergency conditions to allow sufficient time to pack and transport vaccine.
- Review and update as necessary, written protocols for: a) vaccine packing, b) transportation, and c) proper storage of vaccine at the alternate storage facility. Verify that you have the appropriate packing materials to safely transport or temporarily store your vaccine. A certified calibrated thermometer with a current certificate of calibration is required to transport vaccine.
- If backup generators are used, test monthly during hurricane season. (Check manufacturer specifications for test procedures and maintenance schedules).

www.ncdhhs.gov • www.publichealth.nc.gov • www.immunize.nc.gov

Tel 919-707-5550 • Fax 919-870-4824

Location: 5601 Six Forks Road • Raleigh, NC 27609

Mailing Address: 1917 Mail Service Center • Raleigh, NC 27699-1917

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- During a short power outage (less than two hours), the storage temperature can probably be maintained with the proper amount of water containers in the refrigerator, with frozen coolant packs in the freezer, and by keeping the storage unit door(s) closed.

Key points to remember if a power failure occurs:

- Determine the cause of the power failure and estimate the time it will take to restore power. If a timeframe for the restoration of power cannot be determined, **do not leave vaccine in a non-working unit**. If the outage is expected to be long term (greater than 2 hours), transport the vaccine to the back-up facility.
- If temperatures reach 8° C or warmer in the refrigerator, or -15° C or warmer in the freezer, begin your emergency vaccine procedures. Immediate action is required when temperatures fall outside the recommended range.
- Do not discard vaccine or administer vaccines exposed to out of range temperatures without consulting with the Immunization Branch. Mark vaccine with “DO NOT USE” sign, and move the vaccine to an approved working storage unit and contact the Immunization Branch at 1-877-873-6247 for further instruction about the viability of the vaccine.

Please take time to review the attached *NCIP Transportation Guidance for Vaccines*. This document and the template for the Emergency Vaccine Management Plan may be found on the NCIP web site at: www.immunize.nc.gov/providers/storageandhandling.htm.

If you have questions, call the Help Desk Staff at 1-877-873-6247.

Attachments

cc:	SMT	CO Staff	Vaccine Manufacturers	Elizabeth Hudgins	RINs	RICs
		Gregg Griggs	Desiree Elekwa-Izuakor	Terri Pennington	Jason Swartz	Ann Nichols
		Frank Skwara				

North Carolina Immunization Program Transportation Guidance for Vaccines

Transportation of vaccines should be a rare occurrence and expected length of transport should be less than 30 minutes. The CDC Storage and Handling Toolkit offers *transport* guidance based on current available data. If *transport* must occur, provider must use a thermometer with a current and valid certificate of calibration. It is strongly recommended that a digital data logger be used to transport vaccine.

Short-dated vaccine may be transferred to another NCIP provider with the approval of the NCIP and if the cold chain can be maintained. Providers must notify the NCIP of any vaccine doses that will expire before they can be administered at least four months before the expiration date to avoid restitution for improper inventory management. Providers must coordinate with the NCIP to transfer and document the transfer of vaccine between providers. Vaccine transfers between providers can occur only after receiving approval from the NCIP.

Transporting Refrigerated Vaccine

Guidelines for vaccine transport

Assemble packing supplies

1. **Cooler.** Use hard plastic Igloo-type coolers. Attach a "Vaccines: Do Not Freeze" label to the cooler.
2. **"Conditioned" cold packs.** Condition frozen gel packs by leaving them at room temperature for 1 to 2 hours until the edges have defrosted and packs look like they've been "sweating." Cold packs that are not conditioned can freeze vaccine. **Do not use dry ice.**
3. **Thermometer.** Prepare the thermometer by placing it in the refrigerator at least 2 hours before you pack the vaccine.
4. **Packing material.** Use two 2-inch layers of bubble wrap. Not using enough bubble wrap can cause the vaccine to freeze.



Pack vaccine

1. Cold packs

Spread conditioned cold packs to cover only half of the bottom of the cooler.



2. Bubble wrap

Completely cover the cold packs with a 2-inch layer of bubble wrap. Then, place the thermometer/probe on top of the bubble wrap directly above a cold pack.



3. Vaccine

Stack layers of vaccine boxes on the bubble wrap. Do not let the boxes of vaccine touch the cold packs.



4. Bubble wrap

Completely cover the vaccine with another 2-inch layer of bubble wrap.



5. Cold packs

Spread "conditioned" cold packs to cover only half of the bubble wrap. Make sure that the cold packs do not touch the boxes of vaccine.



6. Form & display

Fill the cooler to the top with bubble wrap. Place the thermometer's digital display on top. It's ok if temperatures go above 46°F while packing.



As soon as you reach the destination site, check the vaccine temperature. If the vaccine is:

- Between 35°F and 46°F, put it in the refrigerator.
- Below 35°F or above 46°F, contact your VFC Rep or the VFC program immediately. Then label the vaccine "Do Not Use" and put it in the refrigerator.

Transporting Frozen Vaccines

Guidelines for vaccine transport in emergency situations

- Routine transport of varicella-containing vaccines (MMRV and varicella vaccine) is not allowed. These vaccines should only be moved and transported when absolutely necessary.
- Make sure you have a vaccine emergency plan that includes the name and address of the destination site where you can take your frozen vaccine in an emergency.
- If vaccines must be transported, contact your VFC Program Representative or the VFC Program.
- Varicella-containing vaccines should preferably be transported under frozen conditions (below 5F or -15C).
Do not freeze diluent for varicella-containing vaccines
- Vaccines must be placed in a freezer maintaining temperatures below 5F (-15C) immediately upon arrival at the backup storage facility.

Assemble packing supplies and documents

Most emergencies happen suddenly. Be sure you are prepared for emergency transport of frozen vaccine by always having the following supplies ready.

- 1. Cooler.** Use hard plastic Igloo-type coolers.
- 2. Frozen cold packs.** Keep enough frozen cold packs in your vaccine freezer to make two layers in the transport cooler. You will need 6-8 frozen packs per cooler. **NEVER USE DRY ICE.**
- 3. Thermometer.** Keep a portable MIN/MAX thermometer in your vaccine freezer even if you normally use a continuous read thermometer for monitoring vaccine freezer temperatures.
- 4. Packing materials.** Use any material like bubble wrap to place on top of the frozen cold packs to prevent contents from shifting. Make sure you **DO NOT** place bubble wrap between the vaccine and frozen packs.

Pack vaccines and prepare for transport

Prepare for transport

- Verify that the destination site has enough room for your vaccine and that someone will be there when the vaccine arrives.
- Verify that you have all the packing supplies on the above list.

Pack vaccines



Spread a layer of frozen ice packs to cover the bottom of the cooler. Do not use dry ice.

1



Spread another layer of frozen ice packs to cover the vaccine.

4



Stack layers of vaccine boxes directly on top of the frozen ice packs.

2



Fill the cooler to the top with insulation material (bubble wrap).

5



Place the thermometer probe with the top layer of vaccine.

3



Place the thermometer's display on top of the insulation/packing material. Then close the cooler and transport the vaccine.

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