



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

Pat McCrory  
Governor

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

Laura Gerald, M.D., M.P.H.  
State Health Director

May 28, 2013

**MEMORANDUM**

**TO:** North Carolina Immunization Program (NCIP) Participants

**FROM:** Beth Rowe-West, R.N., B.S.N, Head *BRW*  
Immunization Branch

**SUBJECT:** Upcoming Hurricane Season

The purpose of this memo is to ensure you are prepared for the 2013 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 practices:

- Designate a primary and back-up vaccine coordinator to monitor storage equipment, track weather conditions, and ensure safe transportation of vaccine if needed [even after hours].
- Review and update your Disaster Recovery Plan with staff (required to be updated yearly).
- Maintain written protocols on site for: a) vaccine packing, b) transportation, and c) proper storage of vaccine at the alternate storage facility.
- Maintain appropriate packing materials to safely transport or temporarily store vaccine.
- Fill empty space in your refrigerator with water jugs.
- Line the bottom and sides of your freezer with ice packs.
- Verify that all frozen vaccines are properly stored in the freezer. These include: MMR, MMR-V, and varicella.
- Ensure that a certified thermometer is located on the middle shelf with the vaccine in the refrigerator and one is located in the middle of the freezer with the vaccine. The CDC requires the use of glycol-encased probes, rather than air probes, because they provide a more accurate reading of actual vaccine temperatures.
- Continue to check and log the refrigerator and freezer temperatures twice a day, even if you have an alarm system or a monitoring system (data logger). Check temperatures twice daily, first thing in the morning and just before leaving for the day.
- If applicable, test backup generators quarterly and maintain backup generators at least annually (check manufacturer specifications for test procedures and maintenance schedules).

Key points to remember if a power failure occurs:

- Record the temperature of the refrigerator/freezer but limit the opening and closing of refrigeration units.
- Once the temperature reaches 8° C or warmer in the refrigerator, or -15° C or warmer in the freezer, begin your disaster recovery procedures. Immediate action is required when temperatures fall outside the recommended range.
- Move the vaccine to a properly working unit with regularly recorded in-range temperatures, and contact the Immunization Branch at 1-877-873-6247.
- Do not discard vaccine and do not administer affected vaccines until you have discussed the viability of the vaccine with the Immunization Branch at the number listed above.

www.ncdhhs.gov • [www.publichealth.nc.gov](http://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

An Equal Opportunity / Affirmative Action Employer



**Whenever possible, facilities should suspend vaccination activities BEFORE the onset of emergency conditions to allow sufficient time for packing and transporting vaccine.** If you do not have a back-up generator, make arrangements with the local hospital, retirement home, fire station, or another practice to store your vaccine there when weather predictions call for inclement weather, or when your vaccine storage equipment cannot be fixed or the power cannot be restored within six hours. Before moving your vaccine, call the location to ensure their back-up generator is working and temperatures are within the appropriate range.

Please take time to review the attached *NCIP Minimum Required Vaccine Ordering, Handling, and Storage Procedures*. If you have questions, call the Help Desk Staff at 1-877-873-6247.

Attachment

cc:	SMT	CO Staff Joy Reed	Vaccine Manufacturers Terri Pennington	Steve Shore Maclyn Powell	RINs RICs	Greg Griggs Ann Nichols
-----	-----	----------------------	---	------------------------------	--------------	----------------------------

# NORTH CAROLINA IMMUNIZATION PROGRAM (NCIP)

## MINIMUM REQUIRED VACCINE ORDERING, HANDLING, AND STORAGE PROCEDURES

### Vaccine Personnel

- ❖ Designate one staff member as the primary vaccine coordinator and at least one back-up vaccine coordinator. Staff must participate in yearly, documented training/education on proper storage and handling practices and VFC program requirements.

### Storage and Handling Plans

- ❖ Maintain written routine vaccine storage and handling plans as a reference for staff. Plan must include guidance on: a) ordering vaccines b) controlling inventory c) storing vaccines and monitoring storage conditions d) minimizing vaccine wastage and e) vaccine shipping, including receiving, packing and transporting.
- ❖ Post a current Disaster Recovery Plan on or near the vaccine storage equipment and update annually. Ensure that all staff read and understand what to do in the event of refrigerator or freezer malfunctions, power failures, natural disasters, or other emergencies. The plan must include: a) name, contact information, and how to notify staff responsible for preparing and transporting vaccine, b) how receiving location will be notified, c) how to pack vaccine for transport, and d) how to document steps taken.

### Vaccine Storage Equipment

- ❖ DO NOT store vaccine in a dormitory or dorm-style refrigerator/freezer at any time. Refrigerators and freezers used for vaccine storage must be able to maintain required vaccine storage temperatures year-round and must be large enough to hold the year's largest inventory.
- ❖ Do not store food and beverages in the vaccine storage unit.
- ❖ Storage equipment that does not meet minimum requirements must be replaced.
- ❖ Post a "DO NOT UNPLUG" sign on the refrigerator, freezer, and circuit breakers.

### Vaccine Storage Practices

- ❖ Rotate vaccine stock weekly and place vaccines with shorter expiration dates in front of those with longer expiration dates. Remove expired immediately. Notify NCIP at least four months before the expiration date to avoid restitution for improper inventory management.
- ❖ Place vaccine to prevent overcrowding and to allow for proper air circulation around the vaccine. Store vaccines in the middle of the compartment away from the coils, walls, floor, and cold air vent. Do not store vaccines in the door or vegetable bins.
- ❖ Store water bottles against the inside walls and in the doors of the refrigerator. Keep frozen packs in the freezer along the walls, back, bottom, and inside the freezer door.
- ❖ Store MMR in the freezer.
- ❖ Store other medications and biologic products in a separate storage unit

### Temperature Monitoring

- ❖ Read and manually record temperatures twice each day; once at the beginning and again at the end of the day. Record from an interior thermometer with a current certificate of calibration in accordance with National Institute of Standards and Technology (NIST). Post the temperature log on or nearby the vaccine storage unit and maintain copies of temperature logs for 3 years.
- ❖ Refrigerator temperature must be maintained between 2°C and 8°C (35° and 46° F) with an optimum of 5°C (40°F).
- ❖ Freezer temperature must be maintained between -50°C and -15°C (-58°F and +5°F) with an optimum of -20° C (-4°F).
- ❖ Take immediate action when temperatures are out-of-range. Isolate the affected vaccine vials or packages, mark "DO NOT USE," and store the vaccines under appropriate conditions in a properly functioning vaccine storage unit. Call the NCIP at 877-873-6247 for assistance and document on the temperature log any actions taken regarding the out of range temperatures.

### Vaccine Shipments and Transfers

- ❖ Immediately unpack vaccine deliveries, examine and store appropriately.
- ❖ Arrange for deliveries only when the vaccine coordinator or back-up will be available.
- ❖ Never refuse delivery of a vaccine shipment. Immediately check vaccine cold chain monitors and call NCIP if the cold chain monitor was activated. Check quantity, lot number, and expiration dates of the vaccine order against the invoice and the NCIP and report any discrepancies immediately.
- ❖ Do not transfer or borrow vaccine without prior approval from the NCIP.

### Vaccine Ordering and Inventory Management

- ❖ **Order vaccine based on actual need of eligible children served by the practice.**
- ❖ Draw up vaccine only at the time of administration.
- ❖ Physically distinguish between public and private vaccine stock and maintain complete, accurate, and separate stock records
- ❖ Store vaccine in their original containers. Use only the specific diluent provided by the manufacturer.
- ❖ Multi-dose products may be used until the expiration date stamped on the vial unless otherwise indicated in the manufacturer's package insert. Vaccine with expiration dates on the vial with only the month and year may be used through the last day of that month. As doses are used, mark multi-dose vials to keep an accurate inventory.