

# **North Carolina Immunization Program (NCIP)**

## **Minimum Required Vaccine Ordering, Handling, and Storage Procedures\***

\*Storage procedures apply to both private and state vaccine stocks

### **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. All changes to key staff must be communicated to the NCIP

### **Storage and Handling Plans**

- ❖ Maintain and update (with signature) annually or as needed written Routine Vaccine Management and Emergency Management Plans. Ensure all staff read and understand the plans, especially what to do in the event of a unit malfunction, power failure, natural disaster, or other emergencies. The routine plan must include guidance on: a) proper vaccine storage and handling practices, b) vaccine shipping and receiving, c) vaccine ordering, d) inventory control, e) vaccine expiration, spoilage, and waste prevention. The Emergency Plan must include: a) name, contact information, and how to notify staff responsible for preparing and transporting vaccine, b) alternative vaccine storage facility information, c) how to pack vaccine for transport, and d) how to document steps taken

### **Vaccine Storage Equipment (NCIP strongly recommends contacting the branch prior to the purchase of new equipment (data loggers/storage units) to ensure equipment meets program requirements)**

- ❖ DO NOT store vaccine in a dormitory or dorm-style refrigerator/freezer at any time
- ❖ Dedicate refrigerators and freezers to the storage of vaccines only. Units must be able to maintain required vaccine storage temperatures year-round and be large enough to hold the year's largest inventory, along with sufficient room to store water bottles in the refrigerator and frozen coolant packs/frozen water bottles in the freezer
- ❖ Place the storage unit in a well vented room with space around the sides and at least 4 inches between the back of the unit and the wall
- ❖ Do not plug storage units in power strips, ground fault interrupters outlets, or outlets that are activated by a wall switch. These can be tripped or switched off, resulting in loss of electricity to the storage unit
- ❖ Post a "DO NOT UNPLUG" sign on the refrigerator, freezer, and circuit breakers
- ❖ Replace storage units that do not meet the minimum requirements or that have malfunctioned (new purchases must be stand-alone units)
- ❖ Maintain one back up data logger thermometer with a current certificate of calibration on hand (not stored in unit)

### **Vaccine Storage Practices**

- ❖ Rotate vaccine stock weekly and use shorter-dated vaccines first. Remove expired immediately and contact the NCIP for wastage instructions. Notify NCIP at least four months before the expiration date to avoid restitution for improper inventory management. Keep vaccines in their original packages and store similar looking vaccines on different shelves to avoid confusion and medication errors
- ❖ Place vaccine in the central area of the storage unit to allow for proper air circulation around the vaccine. Do not store vaccines in the door, vegetable bins, on the floor of the unit or near the cooling vents at the top of the unit
- ❖ Store water bottles against the inside walls, on the top shelves, and in the doors of the refrigerator
- ❖ Keep frozen coolant packs (as well as frozen water bottles) in the freezer along the walls and floor and inside the freezer door
- ❖ Store MMR in the freezer
- ❖ Do not store food and beverages in the unit; Store other medications and biologic products in a separate storage unit

### **Temperature Monitoring (As of January 1, 2018 All Thermometers Must be Digital Data Loggers)**

- ❖ Read and manually record the current temperature twice each day, once when the clinic opens and once when the clinic closes (including half days), from a data logger with a probe inside the unit. Record and clear the min/max reading once a day (when the clinic opens). Recorded temperatures must include time of reading, name and/or initials of the person assessing temperature. Temperatures must be recorded exactly as shown on the data logger display and cannot be rounded
- ❖ Download and review data logger readings weekly
- ❖ Data logger probes should be placed centrally, near vaccine and have a current certificate of calibration issued by an ILAC-accredited laboratory
- ❖ Post the temperature log on the vaccine storage unit and maintain copies of all temperature logs for 3 years
- ❖ Refrigerator temperature must be maintained between 2°C and 8°C (36° 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. Call the NCIP at 877-873-6247 for assistance and document on the temperature log any actions taken. 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

### **Vaccine Shipments and Transfers**

- ❖ Immediately unpack vaccine deliveries, examine quantity, lot number, and expiration dates of the vaccine order against the invoice, and store appropriately. Call NCIP if cold chain monitor was activated; Never refuse delivery of a vaccine shipment
- ❖ Arrange for deliveries only when the vaccine coordinator or back-up will be available. Consider holidays, vacations, staff schedules, and changes in hours of operation when designating vaccine delivery date and time
- ❖ Do not transfer or borrow vaccine from other providers without prior approval from the NCIP

### **Vaccine Ordering and Inventory Management**

- ❖ Order and administer all ACIP-recommended vaccines based on actual population served
- ❖ 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