

INVENTORY

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Storage and Handling

It is important that all staff members recognize a vaccine delivery and know what to do upon its arrival. The shipment needs to be checked and stored in the refrigerator or freezer right away. Your facility should have procedures in place for immediate receipt and storage of vaccine due to its temperature sensitivity.

Split, full size refrigerator/freezers or separate refrigerator and freezer units are recommended for storing vaccine. Refrigerators or freezers used for vaccine storage must comply with the following requirements:

- Be able to maintain required vaccine storage temperatures year-round;
- Be large enough to hold the year's largest inventory;
- At a minimum, have a working certified thermometer inside each storage compartment;
- Be dedicated to the storage of vaccines.

Dormitory-style refrigerators are not adequate for long-term or permanent storage of biological products because they do not maintain appropriate temperatures. Dormitory style refrigerators are never acceptable for permanent storage of VFC vaccines. Storage units must be free of any food or drink. For additional information on vaccine storage and handling requirements, please refer to CDC's Vaccine Storage and Handling Toolkit available online at <http://www2a.cdc.gov/vaccines/ed/shtoolkit/default.htm>.

All staff should be familiar with your practice's written Emergency Response Plan for vaccine retrieval and storage in the event of a power outage or mechanical failure. Your Emergency Response Plan should be posted on or near your storage unit and updated on an annual basis.

Temperatures

Keeping temperature logs of vaccine storage units to monitor viability of vaccines is required. Logging temperatures twice daily is mandatory to ensure appropriate temperatures are being maintained. Keeping temperature logs for a minimum of three years is required.

Troubleshooting Temperatures:

- Adjust the thermostat setting within the storage unit to obtain an adequate temperature and document action on your temperature log. Monitor for 24 hours.
- Test the existing thermometer by introducing a second thermometer.
- Check the placement of the thermometer. Vaccine should be stored in the center of the refrigerator. The thermometer should be kept as close to the vaccine stock as possible so the thermometer more accurately reflects the actual temperature of the vaccine. Areas of the refrigerator, such as the door or near the sides, may hold warmer temperatures than the center.
- Place water bottles in the refrigerator and ice packs in the freezer to help stabilize internal temperatures should power outages occur.
- Document each corrective action whenever temperatures are reported outside of the required range.

Vaccine Stock Separation

Public vaccine supplied through DOI must be stored separately from privately purchased vaccine. Clearly identify vaccine supplied by DOI at the time of receipt.

1. Establish procedures for vaccine receipt
 - Educate staff members about vaccine deliveries and the difference between stock supplied through DOI and private stocks.
 - Unpack vaccine in a timely manner and check the temperature indicator included with the shipment. Review the packing slip to verify it matches your order.
2. Keep copies of your public and private vaccine order forms and packing slips
3. Label vaccine supplied through DOI
4. Physically separate DOI and private stock
 - Use a dedicated refrigerator, or dedicated shelves or bins

Accountability

LHDs are required to submit quarterly inventories to the Division of Immunization. District accountability reports are created using these inventory and WebVision data. The quarterly reports are posted to the VDH internal website. Localities will be reminded of the dates for inventory reports.

FQHCs/RHCs, Public Hospitals, and large volume private providers are required to complete a monthly report which tracks doses administered and inventory. The report should indicate monthly doses administered of DOI provided vaccine to eligible children, and an ending inventory. Each monthly report is due by the fifth day of the following month. When the accountability report is run, it deducts doses administered, vaccine returns and waste, adjusts for transfers, and adds doses ordered within the span of the inventories you report. Providers who use the inventory module of the Virginia Immunization Information System (VIIS) can avoid sending these paper reports. For more information on using VIIS call the Division of Immunization at 800-586-1929.

Private providers who are not reporting monthly are required to complete a Tally Report tracking DOI supplied vaccine for a 2 month benchmark period. When completing the report, be sure to record the refrigerator and freezer temperatures indicating Fahrenheit or

Celsius. Record the number of *doses*, not vials, for each VVFC vaccine. Fax or mail the completed inventory to the Division of Immunization as indicated on the form. The VVFC Tally Report consists of initial and final inventories along with the doses administered data, vaccine shipments, returns and transfers during a specified time period. Providers will be notified in advance of the deadline for Tally Reports.

In order to improve accountability at your facility:

- Report all doses administered to eligible patients during the designated time period.
- List all DOI supplied vaccines in your inventory on the designated dates.
- Report all lost, spoiled, expired or wasted vaccine DOI supplied vaccine by completing a VVFC Return Form. Once wasted vaccine is reported do not count the doses in subsequent inventories even though you may still have them on hand after they are reported.
- Keep track of any vaccine that is administered to non-eligible patients on a VVFC Borrowing Form.
- Report transfers when they occur so that stock may be deducted from your inventory and added to the recipient's inventory.

Rotating Stock

Organize your DOI supplied vaccine stock so doses with earlier expiration dates are used first. Upon receiving a shipment of vaccine, check expiration dates and store the earliest expiration dates in the front and the latest expiration dates in the back of the appropriate storage unit.

Vaccine Returns

Please report any expired, spoiled, wasted, or transferred vaccine supplied through DOI by completing a VVFC Return Form. Report returns before or after taking a physical inventory, and once those doses are reported, do not include them in subsequent inventories even though you may still have them on-hand after they are reported. Once a return form is received, it will be deducted from your inventory on the date you indicate on the form. To reduce wastage, contact the Order Center to assist in transferring overstocked vaccine to a nearby provider. Please see

<http://www.vdh.virginia.gov/Epidemiology/Immunization/VFC/documents/forms/Vaccine%20Return%20Process.pdf>

Vaccine Replacement

If your practice does not have DOI supplied vaccine in stock and an eligible child needs vaccinations, you may use vaccine from your private stock to immunize the child. Usage of your private stock vaccine should be documented on the Two Directional Borrowing Form. Once vaccine is received from DOI, you may administer corresponding number of doses to privately insured patients and document each dose on the VVFC Two Directional Borrowing Form. Instances of borrowing should be minimal. Please review <http://www.vdh.virginia.gov/Epidemiology/Immunization/VFC/documents/forms/Two-DirectionalBorrowing.pdf>

Vaccine Loss Due to Negligence

The Division of Immunization will require providers to reimburse the VVFC Program for vaccine that has been wasted due to negligence or failing to correctly store, handle, or transport vaccine. Negligence is defined as loss of vaccine on the part of the provider/clinic staff. The following situations qualify in this category:

1. Vaccine stored improperly (i.e., refrigerating vaccine that should have been frozen, or freezing vaccine that should have been refrigerated)
2. Vaccine left out of refrigerator or freezer
3. Refrigerator or freezer unplugged or electrical service interrupted (circuit breaker)
4. Leaving the door of refrigerator or freezer ajar resulting in temperatures falling below the acceptable range
5. Prolonged storage of vaccines when temperatures are recorded out of range resulting in vaccine spoilage
6. Failure to properly read and record refrigerator(s) and freezer(s) temperatures, and/or failure to take immediate corrective actions when temperatures are out of appropriate range.
7. Pre-drawing or pre-mixing vaccine, then not administering in accordance with vaccine manufacturer/CDC recommendations
8. Transporting vaccine inappropriately (not using cool packs or dry ice), thus not maintaining the cold chain
9. Failure to notify VVFC Order Center when provider office hours change or the practice moves, resulting in vaccine spoilage
10. Discarding vaccine prior to the manufacturer's stated expiration date (e.g., discarding vaccine in a multi-dose vial 30 days after the vial is first used)
11. Expiration due to failure to notify the VVFC Order Center of need to transfer. Providers should notify the Order Center three months prior to expiration date of vaccine they cannot use to arrange for a vaccine transfer
12. Failure to rotate stock appropriately
13. Using dorm style refrigerators or using improper refrigeration unit to store the vaccine
14. Not using a certified thermometer and/or incorrect placement of the thermometer

Note: Temperatures recorded on temperature logs are considered official documents when making vaccine viability decisions. A thermometer's margin of error is not considered when temperatures are recorded at or below 35°F/2°C for refrigerators and at or above 6°F/15°C for freezers.

Reimbursing the VVFC Program for wasted vaccine:

1. Instances of spoiled or expired vaccine supplied by DOI will be reviewed on a case-by-case basis. This review will help determine whether negligence was involved.
2. Excessive waste of vaccine may be determined to be abusive and will be evaluated in accordance to VFC Fraud and Abuse Policies.
3. If negligence is found and financial restitution is necessary, DOI will send the provider a letter informing the cost of the wasted vaccine.