

Checklist for Safe Vaccine Storage and Handling

Are you doing everything you should to safeguard your vaccine supply? Review this list to see where you might make improvements in your vaccine management practices. Check each listed item with either a “yes” or “no.”

For more detailed guidance on vaccine storage and handling, see CDC's *Vaccine Storage and Handling Toolkit* at www.cdc.gov/vaccines/hcp/storage-handling

Establish Storage and Handling Policies

yes no

1. We have designated a primary vaccine coordinator and at least one alternate coordinator to be in charge of vaccine storage and handling at our facility.	<input type="checkbox"/>	<input type="checkbox"/>
2. Both the primary and alternate vaccine coordinator(s) have completely reviewed either CDC's <i>Vaccine Storage and Handling Toolkit</i> (www.cdc.gov/vaccines/hcp/storage-handling) or equivalent training materials offered by our state or local health department's immunization program.	<input type="checkbox"/>	<input type="checkbox"/>
3. We have detailed, up-to-date, written standard operating procedures for general vaccine management, including procedures for routine activities and an emergency vaccine retrieval and storage plan for power outages and other problems. Our procedures are based on CDC's <i>Vaccine Storage and Handling Toolkit</i> and/or on instructions from our state or local health department's immunization program.	<input type="checkbox"/>	<input type="checkbox"/>
4. We review these policies with all staff annually and with new staff, including temporary staff, when they are hired.	<input type="checkbox"/>	<input type="checkbox"/>

Manage New Vaccine Shipments and Inventory

yes no

5. We maintain a vaccine stock record to account for and document every dose of vaccine. We update the record to log in new vaccine shipments and document the following:		
a. Date of delivery and the initials of person who unpacked the box	<input type="checkbox"/>	<input type="checkbox"/>
b. Vaccine and diluent name and manufacturer	<input type="checkbox"/>	<input type="checkbox"/>
c. Number and expiration date for each lot	<input type="checkbox"/>	<input type="checkbox"/>
d. Number of doses received	<input type="checkbox"/>	<input type="checkbox"/>
e. Condition of each vaccine and diluent upon arrival	<input type="checkbox"/>	<input type="checkbox"/>
f. Cold chain monitor reading if included in the shipping container	<input type="checkbox"/>	<input type="checkbox"/>
g. Number of doses used	<input type="checkbox"/>	<input type="checkbox"/>
h. Balance of remaining doses after subtracting the amount used	<input type="checkbox"/>	<input type="checkbox"/>
6. We document periodic (e.g., weekly or monthly) inventory checks to verify the quantities and condition of vaccines being stored.	<input type="checkbox"/>	<input type="checkbox"/>

Use Proper Storage Equipment

yes no

7. We store vaccines in separate, self-contained units that refrigerate or freeze only. If we must use a household-style combination unit, we use it only for storage of our refrigerated vaccines, maintaining frozen vaccines in a separate stand-alone freezer.	<input type="checkbox"/>	<input type="checkbox"/>
8. We store vaccines in units with enough room to maintain the year's largest inventory without crowding.	<input type="checkbox"/>	<input type="checkbox"/>
9. We never store any vaccines in a dormitory-style unit (a small combination freezer-refrigerator unit with the freezer compartment inside the refrigerator).	<input type="checkbox"/>	<input type="checkbox"/>
10. We use an appropriate temperature monitoring device (TMD) for each vaccine storage or transport unit.	<input type="checkbox"/>	<input type="checkbox"/>

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	yes	no
11. We use only calibrated TMDs that have a Certificate of Calibration Testing* ("Report of Calibration") and are calibrated every 2 to 3 years from the last calibration testing date or according to the manufacturer's suggested timeline. If storing Vaccines for Children (VFC) vaccine, our TMD is a digital data logger (DDL).	<input type="checkbox"/>	<input type="checkbox"/>
12. We have planned back-up storage unit(s) in the event of a power failure or other unforeseen event.	<input type="checkbox"/>	<input type="checkbox"/>

* Certificate of Calibration Testing ("Report of Calibration") with calibration measurements traceable to a laboratory with accreditation from the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA) signatory body.

Ensure Optimal Operation of Storage Units

yes no

13. We have a "Do Not Unplug" sign (e.g., www.immunize.org/catg.d/p2090.pdf) next to the electrical outlets for the refrigerator and freezer and a "Do Not Stop Power" warning label (e.g., www.immunize.org/catg.d/p2091.pdf) by the circuit breaker for the electrical outlets. Both signs include emergency contact information.	<input type="checkbox"/>	<input type="checkbox"/>
14. We perform regular maintenance on our vaccine storage units to assure optimal functioning. For example, we keep the units clean, dusting the coils and cleaning beneath the units as recommended by the manufacturer.	<input type="checkbox"/>	<input type="checkbox"/>

Maintain Correct Temperatures

yes no

15. We always keep at least one accurate (+/-0.5°C [+/-1°F]), calibrated temperature monitoring device (TMD) with the vaccines in the refrigerator and a separate calibrated TMD with the vaccines in the freezer.	<input type="checkbox"/>	<input type="checkbox"/>
16. We use a temperature monitoring device (TMD) (digital data logger [DDL] preferred and required for vaccine storage) that:		
a. has a detachable probe that has been buffered against sudden temperature changes by being immersed in a vial filled with liquid (e.g., glycol, ethanol, glycerin), loose media (e.g., sand, glass beads), or a solid block of material (e.g., aluminum, Teflon®).	<input type="checkbox"/>	<input type="checkbox"/>
b. includes an alarm for out-of-range temperatures.	<input type="checkbox"/>	<input type="checkbox"/>
c. has a low-battery indicator.	<input type="checkbox"/>	<input type="checkbox"/>
d. displays current, minimum, and maximum temperatures.	<input type="checkbox"/>	<input type="checkbox"/>
e. can measure temperatures within +/-0.5°C (+/-1°F).	<input type="checkbox"/>	<input type="checkbox"/>
f. has a logging interval (or reading rate) that can be programmed by the user to measure and record temperatures at least every 30 minutes.	<input type="checkbox"/>	<input type="checkbox"/>
17. We maintain the refrigerator temperature at 2–8°C (36–46°F), and we aim for 5°C (41°F).	<input type="checkbox"/>	<input type="checkbox"/>
18. We maintain the freezer temperature between -50°C and -15°C (-58°F and +5°F). We maintain the temperature for an <i>ultracold</i> freezer (if applicable) between -90°C and -60°C (-130°F and -76°F).	<input type="checkbox"/>	<input type="checkbox"/>
19. We set the thermostat for the storage unit at the factory-set or midpoint temperatures.	<input type="checkbox"/>	<input type="checkbox"/>
20. We keep extra containers of water in the refrigerator (e.g., in the door and/or on the floor of the unit where the vegetable bins were located) to help maintain cool temperatures. We keep ice packs, ice-filled containers, or frozen water bottles in the freezer to help maintain cold temperatures and to have frozen water bottles available for conditioning in the event of an emergency.	<input type="checkbox"/>	<input type="checkbox"/>

Maintain Daily Temperature Logs

yes no

21. If we are using a TMD (preferably a DDL) that records minimum and maximum temperatures, we check and record these temperatures once per day at the start of each workday. (Access Immunize.org's temperature logs at www.immunize.org/clinical/topic/storage-handling .)	<input type="checkbox"/>	<input type="checkbox"/>
22. If we are using a TMD that does not record minimum and maximum temperatures, we check and record the current temperatures of the refrigerator and freezer at least twice each workday. (Access Immunize.org's temperature logs at www.immunize.org/clinical/topic/storage-handling .)	<input type="checkbox"/>	<input type="checkbox"/>
23. We consistently record temperatures on the log either in Celsius or Fahrenheit. We never mix temperature scales when we record our temperatures.	<input type="checkbox"/>	<input type="checkbox"/>

	yes	no
24. We follow the directions on the temperature log to call appropriate personnel if the temperature in a storage unit goes out of range.	<input type="checkbox"/>	<input type="checkbox"/>
25. If out-of-range temperatures occur in the unit, we complete the <i>Vaccine Storage Troubleshooting Record</i> (www.immunize.org/catg.d/p3041.pdf) to document actions taken when the problem was discovered and what was done to prevent a recurrence of the problem.	<input type="checkbox"/>	<input type="checkbox"/>
26. Trained staff (other than staff designated to record the temperatures) review the temperature logs weekly.	<input type="checkbox"/>	<input type="checkbox"/>
27. We keep temperature logs on file for at least 3 years.	<input type="checkbox"/>	<input type="checkbox"/>

Store Vaccines Correctly

	yes	no
28. We post signs (e.g., www.immunize.org/catg.d/p3048.pdf) on the doors of the refrigerator and freezer that indicate which vaccines should be stored in the refrigerator and which in the freezer.	<input type="checkbox"/>	<input type="checkbox"/>
29. We do not store any food or drink in any vaccine storage unit.	<input type="checkbox"/>	<input type="checkbox"/>
30. We store vaccines in the middle of the refrigerator or freezer (away from walls and vents), leaving room for air to circulate around the vaccine. We never store vaccine in the doors.	<input type="checkbox"/>	<input type="checkbox"/>
31. We have removed all vegetable and deli bins from the storage unit, and we do not store vaccines in these empty areas.	<input type="checkbox"/>	<input type="checkbox"/>
32. If we must use a combination refrigerator-freezer unit, we store vaccines only in the refrigerator section of the unit. We do not place vaccines in front of the cold-air outlet that leads from the freezer to the refrigerator (often near the top shelf). In general, we try to avoid storing vaccines on the top shelf, and we place water bottles in this location.	<input type="checkbox"/>	<input type="checkbox"/>
33. We check vaccine expiration dates and rotate our supply of each type of vaccine so that vaccines with the earliest expiration dates are located closest to the front of the storage unit, facilitating easy access.	<input type="checkbox"/>	<input type="checkbox"/>
34. We store vaccine in their original packaging with the lids closed in clearly labeled containers.	<input type="checkbox"/>	<input type="checkbox"/>

Take Emergency Action As Needed

	yes	no
35. In the event that vaccines are exposed to improper storage conditions, we take the following steps:		
a. We restore proper storage conditions as quickly as possible. If necessary, we label the vaccine "Do Not Use" and move it to a unit where it can be stored under proper conditions. We do not discard the vaccine before discussing the circumstances with our state or local health department and/or the appropriate vaccine manufacturers.	<input type="checkbox"/>	<input type="checkbox"/>
b. We follow the <i>Vaccine Storage Troubleshooting Record's</i> (www.immunize.org/catg.d/p3041.pdf) instructions for taking appropriate action and documenting the event.	<input type="checkbox"/>	<input type="checkbox"/>
c. We contact our clinic supervisor or other appropriate clinic staff to report the incident. We contact our state or local health department and/or the appropriate vaccine manufacturers for consultation about whether the exposed vaccine can still be used.	<input type="checkbox"/>	<input type="checkbox"/>
d. We address the storage unit's mechanical or electrical problems according to guidance from the unit's manufacturer or a qualified repair service.	<input type="checkbox"/>	<input type="checkbox"/>
e. In responding to improper storage conditions, we do not make frequent or large changes in thermostat settings. After changing the setting, we give the unit at least a day to stabilize its temperature.	<input type="checkbox"/>	<input type="checkbox"/>
f. We do not use exposed vaccines until our state/local health department's immunization program or the vaccine manufacturer has confirmed that the vaccine is acceptable for use. We review this information with our clinic medical director before returning the vaccine to our supply. If the vaccine is not acceptable for use, we follow our state or local health department instructions for vaccine disposition.	<input type="checkbox"/>	<input type="checkbox"/>

If we answer "yes" to all of the above, we give ourselves a pat on the back! If not, we assign someone to implement needed changes!