



Vaccine Storage and Handling Toolkit



Key Resources

Additional vaccine storage and handling resources can be found on the [Vaccine Storage and Handling Resources website](#).

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REFERENCE: Purpose-Built Vaccine Storage Units

Purpose-built storage units are designed and tested specifically to maintain appropriate vaccine temperatures. These units may resemble traditional stand-alone units or vending- or dispensing-style units (with or without doors). Although similar to pharmaceutical-grade units, purpose-built units are unique in their design for vaccine storage.

VFC providers and other health professionals who administer vaccines purchased with public funds should ask their immunization program which purpose-built units meet VFC program requirements. Always check with your [immunization program](#) before purchasing any unit that will be used to store VFC vaccines.

Key features and considerations include

Temperature Monitoring

- Many units have multiple temperature probes or sensors, each requiring a current Certificate of Calibration.
- Many purpose-built closed or doorless units may utilize air sensors (non-buffered probes). Because these units have very limited exposure to ambient air, buffered probes are not essential.
- Many units include built-in digital data loggers (DDLs) with electronic interfaces that provide continuous temperature data and/or provide min/max readings. VFC providers must verify that these built-in DDLs meet VFC data logger requirements.

Vaccine Storage

- These units are tested and temperature-mapped to ensure the probe is placed in the optimal location.
- Even when units with multiple built-in probes are used, providers still need a backup DDL for transporting vaccines to a backup facility during an emergency.
- Many purpose-built units do not need water bottles to maintain thermal stability.

VFC Vaccine Management

- Units must allow users to separate public and private vaccine stock physically or virtually.
- If stock is separated virtually, an inventory printout must be accessible upon request.*
- If expired vaccines cannot be removed immediately, it must be possible to make them inaccessible inside the unit.

*The inventory printout should be used to complete storage and handling and inventory sections of the site visit reviewer's guide.



WORKSHEET: Vaccine Storage and Handling SOPs

Complete the following checklist and forms and store this information in an easily accessible area near the vaccine storage unit.

CHECKLIST OF GENERAL INFORMATION

Up-to-date contact information for

- ☐ Primary vaccine coordinator
- ☐ Backup vaccine coordinator
- ☐ Additional staff to assist in emergencies
- ☐ Immunization program
- ☐ Vaccine manufacturers
- ☐ Refrigerator and freezer maintenance and repair companies
- ☐ Temperature monitoring device (TMD) companies
- ☐ Utility/power company
- ☐ Vaccine storage unit alarm company (if applicable)
- ☐ Generator repair company (if applicable)
- ☐ Sources for qualified containers and packouts
- ☐ Descriptions of the roles and responsibilities of the primary and backup vaccine coordinators
- ☐ Information for each storage unit, including serial numbers, links to equipment websites, installation dates, and routine maintenance and repair records
- ☐ Samples of all vaccine-related forms used in your facility
- ☐ Protocols for staff education and training

CHECKLIST FOR NON-EMERGENCY VACCINE STORAGE, HANDLING, AND TRANSPORT

Protocols for

- ☐ Ordering and accepting vaccine deliveries
- ☐ Unpacking deliveries
- ☐ Managing inventory
- ☐ Storing each vaccine and diluent
- ☐ Placing vaccines and diluents in storage units
- ☐ Handling vaccines prior to administration
- ☐ Disposing of vaccines and supplies
- ☐ Monitoring storage unit and temperature
- ☐ Maintaining storage equipment and TMDs
- ☐ Responding to storage and handling problems
- ☐ Transporting vaccines to off-site/satellite facilities

CHECKLIST FOR EMERGENCY VACCINE STORAGE, HANDLING, AND TRANSPORT

- ☐ All contact information in Checklist of General Information as well as up-to-date contact information for
 - Alternative vaccine storage facility (one or more)
 - Transportation of vaccines
 - ☐ Vaccine storage unit specifications (type, brand, model number, serial number)
 - ☐ Copy of emergency SOPs with emergency supplies and at multiple off-site locations such as homes of primary and backup vaccine coordinators and with building manager, security staff, and alternative storage facility
 - ☐ Diagram of facility showing important elements, including doors, flashlights, packing materials, batteries, circuit breakers
- #### Protocols for
- ☐ Monitoring vaccines during a power outage
 - ☐ Packing vaccines and diluents for emergency transport
 - ☐ Transporting vaccines to and from an alternative vaccine storage facility
 - ☐ Determining whether vaccine can be used after an emergency
 - ☐ Accessing your building and facility after hours



WORKSHEET: Vaccine Storage and Handling SOPs

| Store emergency information with emergency supplies.

STAFF CONTACT LIST

Name	Title	Telephone Numbers home / cell / other	Email Address
	Primary Vaccine Coordinator		
	Backup Vaccine Coordinator		

EMERGENCY STAFF CONTACT LIST

Name	Title	Telephone Numbers home / cell / other	Email Address
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			

List contacts in order of preference. Determine whether all or certain people on the list should be contacted or if the first person reached is sufficient.



WORKSHEET: Vaccine Storage and Handling SOPs

| Store emergency information with emergency supplies.

GENERAL RESOURCES CONTACT LIST

Resources	Contact Person Name/Title	Telephone Numbers home / cell / other	Email Address
Local Health Department Immunization Program			
State Health Department Immunization Program			
Refrigerator Repair Company			
Freezer Repair Company			
Utility/Power Company			
Temperature Monitoring Device Company			
Vaccine Storage Unit Alarm Company (if applicable)			
Generator Repair Company (if applicable)			
Other:			
Other:			
Other:			

Refer to ["Handling a Temperature Excursion in Your Vaccine Storage Unit"](#) for a list of vaccine manufacturers and their contact information.

ALTERNATIVE VACCINE STORAGE FACILITIES

Alternative Vaccine Storage Facility Name/Address	Contact Person Name/ Title	Telephone Numbers home / cell / other	Email Address
1.			
2.			
3.			



WORKSHEET: Vaccine Storage and Handling SOPs

| Store emergency information with emergency supplies.

PACKING MATERIAL SUPPLIERS CONTACT LIST

Emergency Resources	Company Name	Contact Person Name/ Title	Telephone Numbers home/ cell/other	Email Address
Portable vaccine refrigerator/freezer units				
Qualified containers and packout materials				
Qualified containers and packout materials (alternative)				
Packing materials				
Packing materials (alternative)				
Other:				
Other:				
Other:				

VACCINE STORAGE UNIT SPECIFICATIONS

Type of Unit (Refrigerator or Freezer)	Brand	Model Number	Serial Number
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

WARNING!

¡ADVERTENCIA!

**DO NOT TURN OFF CIRCUIT
BREAKER #__!**

¡No apague interruptor de circuito #__!

VACCINE IN STORAGE!

¡AVISO! CONTIENE VACUNAS.

In the event of an electrical problem, immediately contact

Si hay un problema con la electricidad, comuníquese inmediatamente con

Name _____ Phone Number _____

WARNING!

¡ADVERTENCIA!

**DO NOT UNPLUG THE
REFRIGERATOR OR FREEZER!**

**¡No desconecte el refrigerador
o congelador!**

VACCINE IN STORAGE!

¡AVISO! CONTIENE VACUNAS.

In the event of an electrical problem, immediately contact

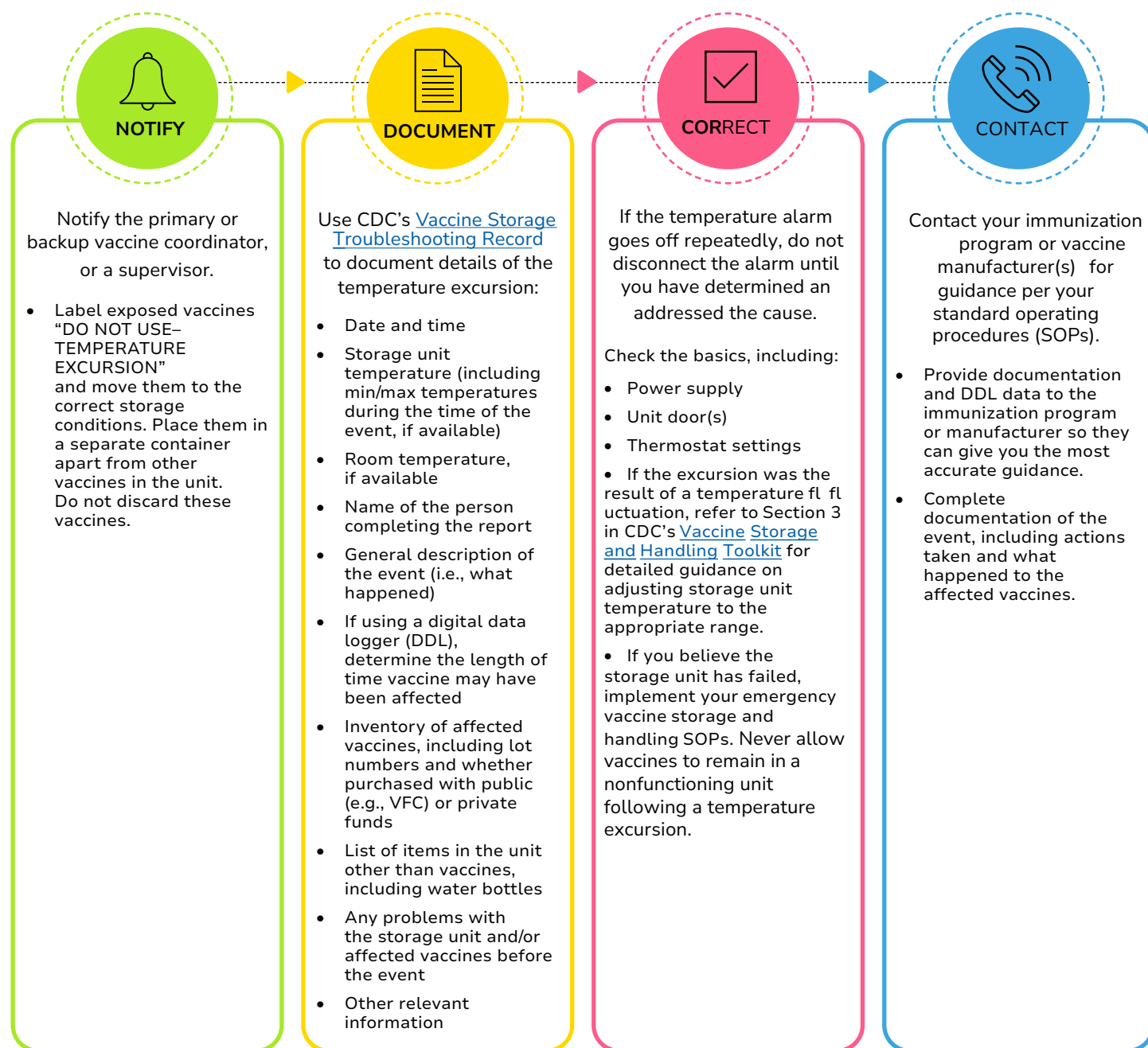
Si hay un problema con la electricidad, comuníquese inmediatamente con

Name _____ Phone Number _____



Handling a Temperature Excursion in Your Vaccine Storage Unit

Any temperature reading outside ranges recommended in the manufacturers' package inserts is considered a temperature excursion. Identify temperature excursions quickly and take immediate action to correct them. This can prevent vaccine waste and the potential need to revaccinate patients.



MANUFACTURER CONTACT INFORMATION FOR EXCURSIONS

AstraZeneca: 800-236-9933

Bavarian Nordic: 844-422-8274

CSL Sequris: 855-358-8966

Dynavax: 844-375-4728

Emergent Biosolutions: 888-483-9053

GSK: 877-356-8368

[Stability calculator](#)

Merck: 800-672-6372

[Stability calculator](#)

Moderna: 866-663-3762

[Stability calculator](#)

Novavax: 844-668-2829

Pfizer: **800-438-1985**

[Stability calculator](#)

Sanofi: 800-633-1610

[Stability calculator](#)

Valneva: 844-349-4276

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Vaccine Storage Troubleshooting Worksheet



Complete both sides to record any vaccine storage issue, such as exposure to temperatures outside manufacturers' recommended storage ranges.

Date and Time of Event	Storage Unit Temperature	Room Temperature	Person Completing Report
Date:	Temp when discovered:	Temp when discovered:	Name & Title:
Time:	Min temp: Max temp:		Facility: Date:
Event Description (If multiple related events occurred, list each date, time, and length of time out of storage.)			
Describe what happened, including whether the affected vaccine was administered to any patients.			
Estimate the length of time between the event and the last documented storage temperature reading in an acceptable range (2°C to 8°C [36°F to 46°F] for refrigerator; -50°C to -15°C [-58°F to 5°F] for freezer; -90°C to -60°C [-130°F to -76°F] for ultra-cold freezer).			
List inventory of vaccines on the back of this page. List what else was in the storage unit at the time of the event here (i.e., water bottles in the refrigerator and/or frozen coolant packs in the freezer).			
Describe any prior problems with this unit and/or with the affected vaccines, including any previous temperature excursions.			
Include any other information that might be helpful to understand this event (i.e., a cracked door seal).			
Action Taken			
Describe what happened to the vaccine, including what time it was placed in proper storage conditions. (Move exposed vaccine to the correct storage conditions and label it "DO NOT USE –TEMPERATURE EXCURSION" until you receive further guidance from the immunization program and/or the manufacturer(s). Do not discard the vaccine.)			
List who was contacted regarding the event (e.g., supervisor, immunization program, manufacturer).			
Describe what prevention measures were implemented to avoid a similar event in the future.			
Results (For public-purchased vaccine, follow the immunization program's instructions for vaccine disposition.)			
Describe what happened to the vaccine, including whether it was able to be used (e.g., shortened expiration date, discarded, or returned).			

Storage Unit Description (e.g., Freezer #1)	Vaccine	Manufacturer	Lot Number(s)	Expiration Date(s)	Number of Doses (actual doses, not vials)	Funding Source (Public/VFC or Private)	Excursion History & Total Out-of-Range Duration (e.g., 1 prior on 7/16/26; 25 minutes total)

MANUFACTURER CONTACT INFORMATION

AstraZeneca 800-236-9933	Dynavax 844-375-4728	Merck 800-672-6372	Pfizer 800-438-1985
Bavarian Nordic 844-422-8274	Emergent Biosolutions 888-483-9053	Moderna 866-663-3762	Sanofi 800-633-1610
CSL Seqirus 855-358-8966	GSK 877-356-8368	Novavax 844-668-2829	Valneva 844-349-4276