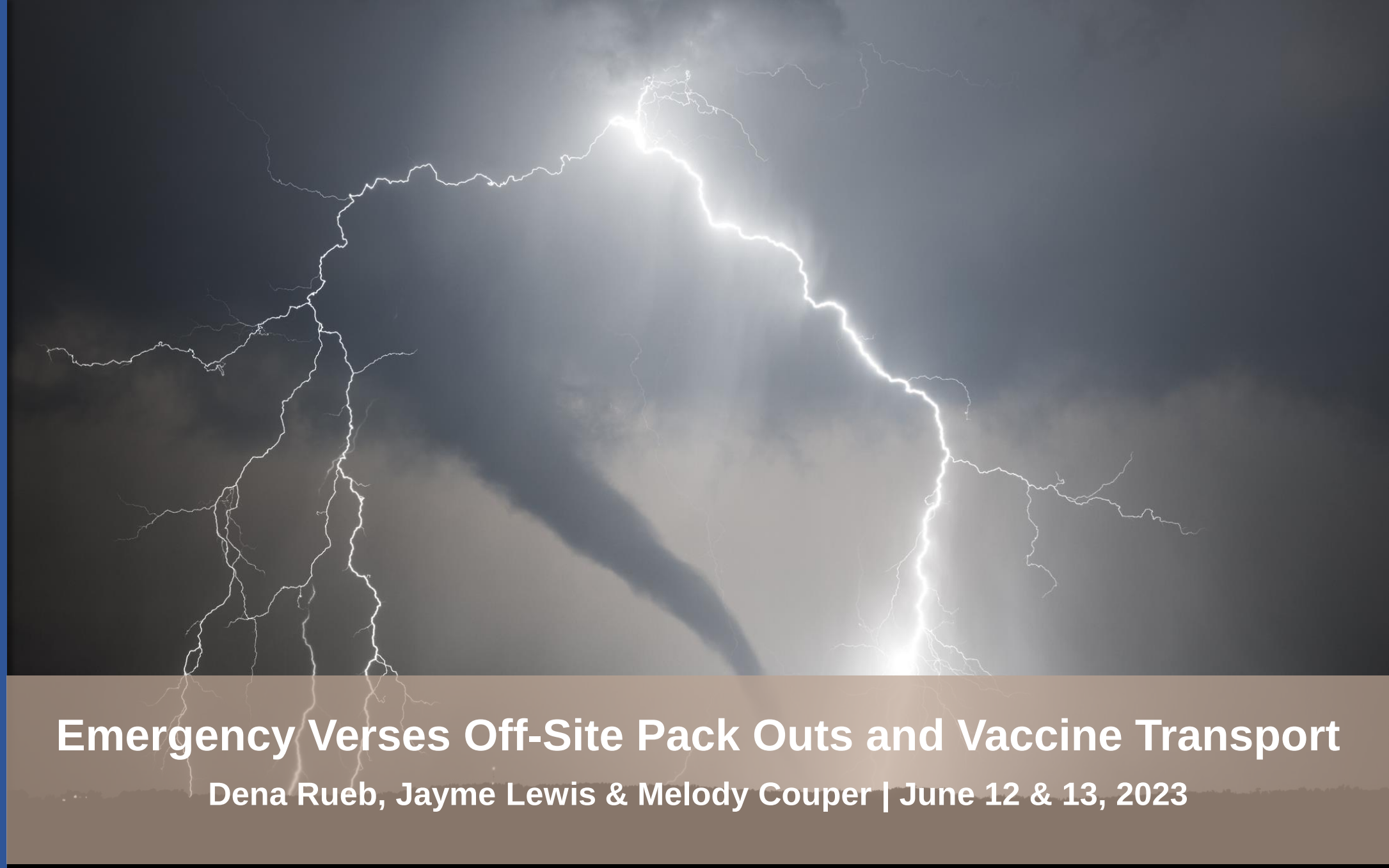


Kansas Department of Health and Environment
Division of Public Health

Emergency Verses Off-Site Pack Outs and Vaccine Transport

Dena Rueb, Jayme Lewis & Melody Couper | June 12 & 13, 2023

Objectives

- Define the meaning of a vaccine pack out.
- Distinguish the difference between an emergency pack out and an off-site pack out and when each would be used.
- Give examples of equipment used for each type of pack out.
- Demonstrate a proper pack out.

Vaccine Pack Out

What is vaccine pack out?

A vaccine pack out is the process of properly preparing vaccine for transportation. It includes preparing and arranging the needed materials and vaccine in such a way that the vaccine remains within the recommended temperature range throughout the transport process.

Emergency Verse Off-Site Definitions

Emergency

Equipment failures, power outages, severe weather conditions, or natural disasters.

Vaccine Pack Out Guidance

- Verify, at least annually, that the designated emergency site has the capability (room) to store the entire vaccine inventory. Ensure the vaccine storage units are monitored, temperatures are stable, and are within the recommended range for vaccine storage.
- The data logger must always stay with the vaccine, even if the vaccine is moved or transported.
- If the situation involves a short-term power loss (less than 2 hours) monitor the temperature in the vaccine storage units and the keep the door shut.
- If it is near the end of the workday, either stay to monitor the vaccine, or move the vaccine to the emergency site. Never leave the vaccine in an unstable unit.
- Remember that twice daily temperatures must still be documented.

Emergency Pack Out Materials

Materials needed for emergency pack out:

- Styrofoam vaccine cooler or hard-sided cooler
- Data logger for vaccine transport
- Conditioned water bottles
- Corrugated cardboard
- Bubble wrap
- Vaccine inventory sheet, transfer form, or on-hand inventory list

Tips to Help with Pack Out

- Always have the pack out materials ready.
- All staff should be knowledgeable of where materials stored and how to prepare vaccine for transport.
- Keep the pack out instructions and Emergency Storage and Handling Response Plan with the cooler for reference.
- **The data logger must *always* stay with the vaccine, especially when the vaccine is moved or transported.**

Tips to Help with Pack Out

- Conditioned water bottles are a must. NEVER use frozen packs to transport refrigerated vaccines. This could cause vaccines to be exposed to below recommended temperatures and result in vaccine loss.

- When transporting vaccines during an emergency, staff should follow the Emergency Storage and Handling Response Plan and contact their Regional Immunization Consultant or Consultant On-Call.

Emergency Verse Off-Site Definitions

Off-Site Clinic

School clinics, mass vaccination clinics, disaster response

Off-Site Pack Out Materials

Materials needed for off-site pack out:

- Vaccine transport cooler
- Data logger for transport and temperature monitoring
- Phase change materials
- Inventory sheet
- Hourly Temperature Log

Recommended Vaccine Transport

Transport System Recommendations

	Emergency Transport	Transport for Off-Site Clinic, Satellite Facility, or Relocation of Stock
Portable Vaccine Refrigerator or Freezer	Yes	Yes
Qualified Container and Packout	Yes	Yes
Conditioned Water Bottle Transport System*	Yes	No
Manufacturer's Original Shipping Container	Yes (last resort only)	No
Food/Beverage Coolers	No	No

Source: cdc.gov/vaccines/hcp/admin/storage/toolkit/storage-handling-toolkit.pdf

Important Things to Remember

- Have the packing materials and coolers ready.
- Print copies of the pack out instructions and the Routine Storage and Handling Plan to store with the cooler.
- Label vaccines (public or private) when they are received.
- Never use frozen gel packs as they be too cold for the vaccine.
- Never place vaccine directly on ice or gel packs.
- Always take a data logger with you to monitor temps hourly.

Important Things to Remember

- Always condition the water bottles before using.
- Remember frozen vaccines don’t like heat and refrigerator vaccines don’t like cold.
- If there are temperature fluctuations outside the recommended range while the vaccine is in transit, mark the vaccine “Do Not Use”, and store in the recommended vaccine storage unit until the manufacturer can be contacted. Follow the temperature excursion processes and contact your Regional Immunization Consultant or Consultant On-Call.

Purpose Build Coolers and Containers

- It is important to follow the manufacturer's recommendations for pack out on portable vaccines units.

- The data logger probe must be placed with the vaccine and the data logger should be visible from the outside of the portable unit.

Test your skills

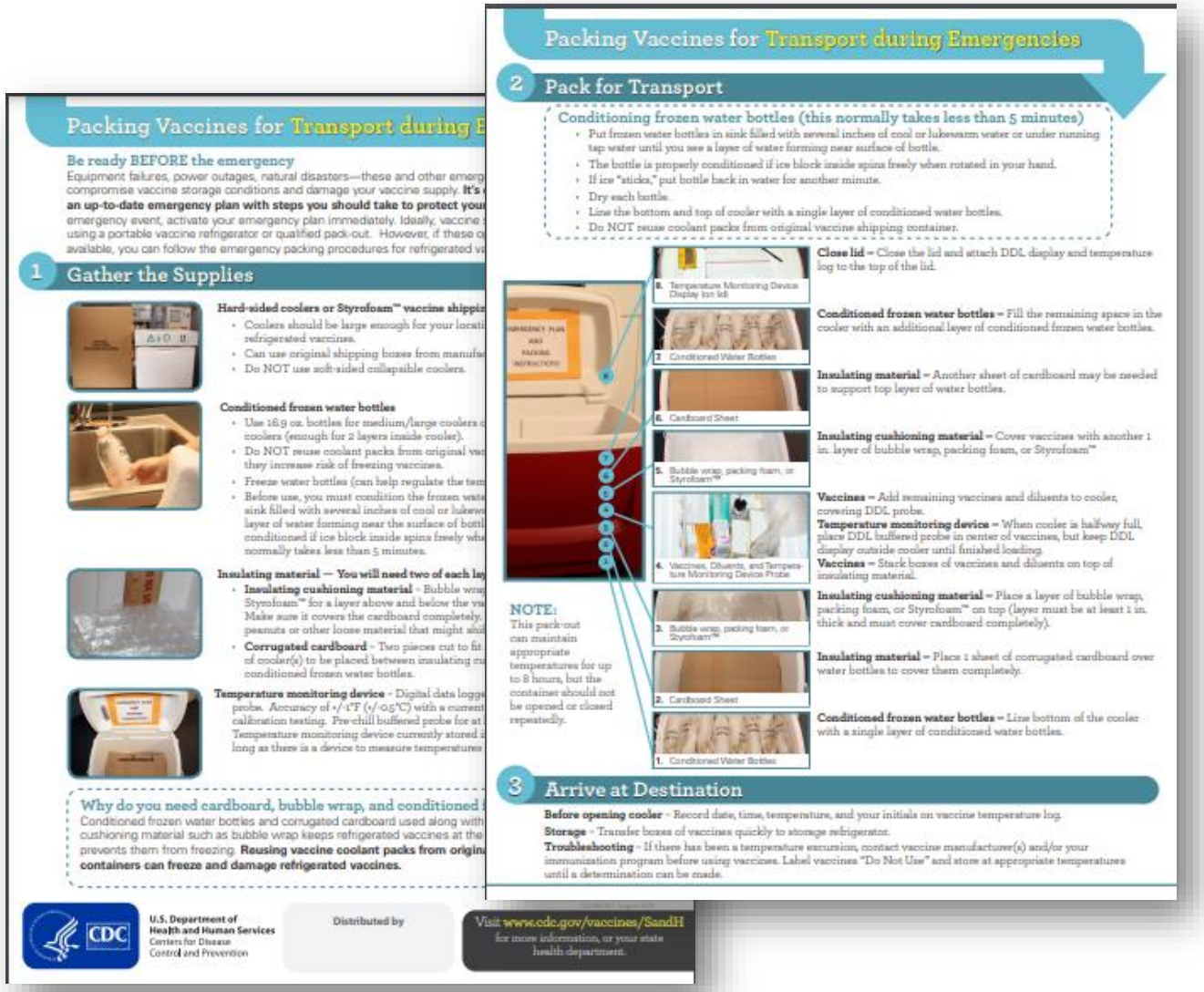
What is wrong with this picture?

Test your skills

What is wrong with this picture?

Resources

Emergency pack out instructions



Packing Vaccines for Transport during E

Be ready BEFORE the emergency

1 Gather the Supplies

Why do you need cardboard, bubble wrap, and conditioned

Packing Vaccines for Transport during Emergencies

2 Pack for Transport

Conditioning frozen water bottles (this normally takes less than 5 minutes)

- Put frozen water bottles in sink filled with several inches of cool or lukewarm water or under running tap water until you see a layer of water forming near surface of bottle.
- The bottle is properly conditioned if ice block inside spins freely when rotated in your hand.
- If ice "sticks," put bottle back in water for another minute.
- Dry each bottle.
- Line the bottom and top of cooler with a single layer of conditioned water bottles.
- Do NOT reuse coolant packs from original vaccine shipping container.

NOTE: This pack-out can maintain appropriate temperatures for up to 8 hours, but the container should not be opened or closed repeatedly.

Close lid – Close the lid and attach DDL display and temperature log to the top of the lid.

Conditioned frozen water bottles – Fill the remaining space in the cooler with an additional layer of conditioned frozen water bottles.

Insulating material – Another sheet of cardboard may be needed to support top layer of water bottles.

Insulating cushioning material – Cover vaccines with another 1 in. layer of bubble wrap, packing foam, or Styrofoam™

Vaccines – Add remaining vaccines and diluents to cooler, covering DDL probe.
Temperature monitoring device – When cooler is halfway full, place DDL buffered probe in center of vaccines, but keep DDL display outside cooler until finished loading.
Vaccines – Stack boxes of vaccines and diluents on top of insulating material.

Insulating cushioning material – Place a layer of bubble wrap, packing foam, or Styrofoam™ on top (layer must be at least 1 in. thick and must cover cardboard completely).

Insulating material – Place 1 sheet of corrugated cardboard over water bottles to cover them completely.

Conditioned frozen water bottles – Line bottom of the cooler with a single layer of conditioned water bottles.

3 Arrive at Destination

Before opening cooler – Record date, time, temperature, and your initials on vaccine temperature log.
Storage – Transfer boxes of vaccines quickly to storage refrigerator.
Troubleshooting – If there has been a temperature excursion, contact vaccine manufacturer(s) and/or your immunization program before using vaccines. Label vaccines "Do Not Use" and store at appropriate temperatures until a determination can be made.

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

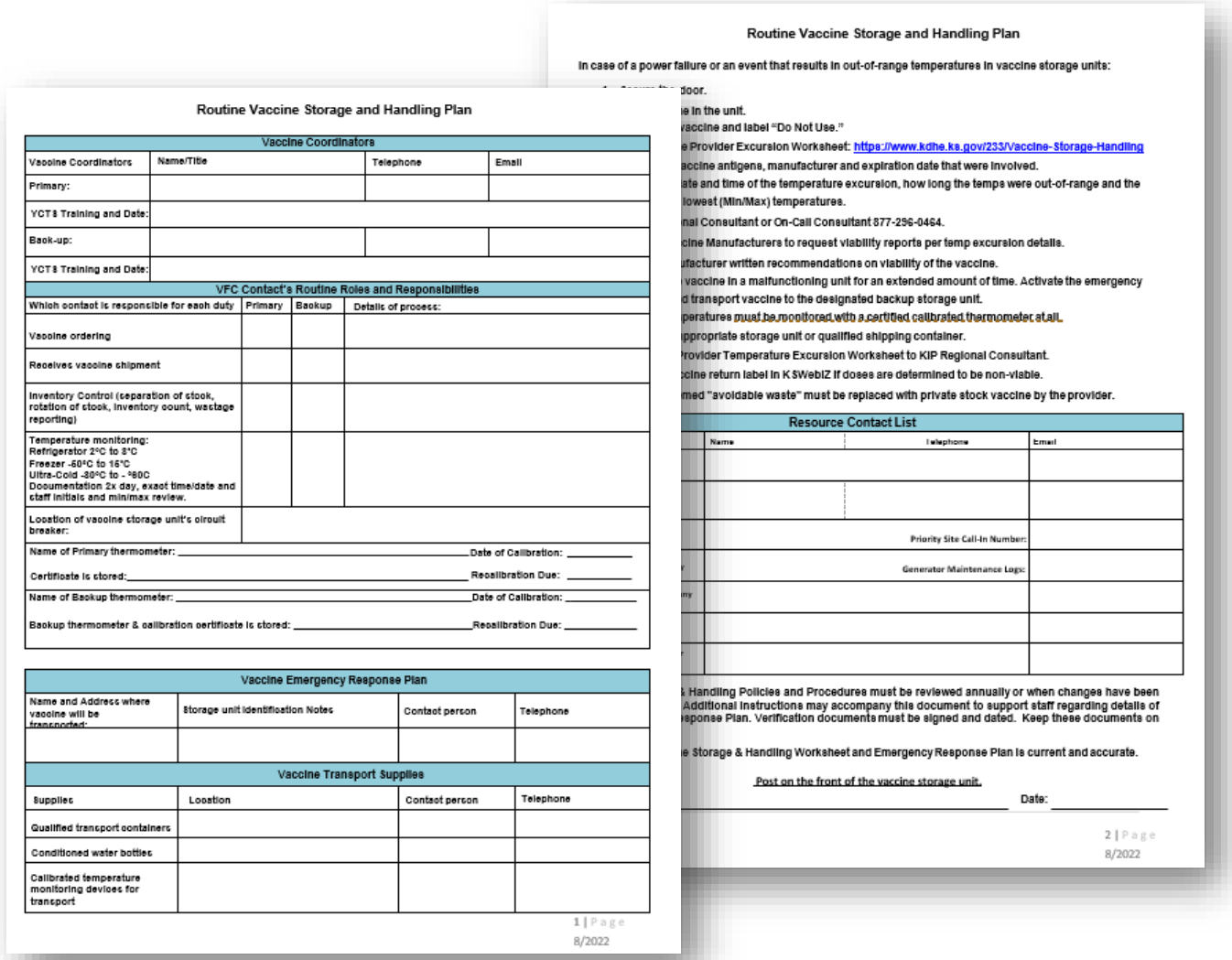
Distributed by

Visit www.cdc.gov/vaccines/SandH for more information, or your state health department.

Source: cdc.gov/vaccines/recs/storage/downloads/emergency-transport.pdf

Resources

Routine Vaccine Storage and Handling/Emergency Plan



Routine Vaccine Storage and Handling Plan

Vaccine Coordinators			
Vaccine Coordinators	Name/Title	Telephone	Email
Primary:			
YCT$ Training and Date:			
Back-up:			
YCT$ Training and Date:			

VFC Contact's Routine Roles and Responsibilities			
Which contact is responsible for each duty	Primary	Backup	Details of process:
Vaccine ordering			
Receives vaccine shipment			
Inventory Control (separation of stock, rotation of stock, inventory count, wastage reporting)			
Temperature monitoring: Refrigerator 2°C to 8°C Freezer -50°C to 15°C Ultra-Cold -80°C to - °80C Documentation 2x day, exact time/date and staff initials and min/max review.			
Location of vaccine storage unit's circuit breaker:			

Name of Primary thermometer: _____ Date of Calibration: _____

Certificate is stored: _____ Recalibration Due: _____

Name of Backup thermometer: _____ Date of Calibration: _____

Backup thermometer & calibration certificate is stored: _____ Recalibration Due: _____

Vaccine Emergency Response Plan			
Name and Address where vaccine will be transported:	Storage unit identification Notes	Contact person	Telephone

Vaccine Transport Supplies			
Supplies	Location	Contact person	Telephone
Qualified transport containers			
Conditioned water bottles			
Calibrated temperature monitoring devices for transport			

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Routine Vaccine Storage and Handling Plan

In case of a power failure or an event that results in out-of-range temperatures in vaccine storage units:

door.
e in the unit.
vaccine and label "Do Not Use."
e Provider Excursion Worksheet: https://www.kdhe.ks.gov/233/Vaccine-Storage-Handling
accine antigens, manufacturer and expiration date that were involved.
ate and time of the temperature excursion, how long the temps were out-of-range and the
lowest (Min/Max) temperatures.
nal Consultant or On-Call Consultant 877-296-0464.
cine Manufacturers to request viability reports per temp excursion details.
ufacturer written recommendations on viability of the vaccine.
vaccine in a malfunctioning unit for an extended amount of time. Activate the emergency
d transport vaccine to the designated backup storage unit.
peratures must be monitored with a certified calibrated thermometer at all.
ppropriate storage unit or qualified shipping container.
rovider Temperature Excursion Worksheet to KIP Regional Consultant.
cine return label in KSWebIZ if doses are determined to be non-viable.
med "avoidable waste" must be replaced with private stock vaccine by the provider.

Resource Contact List			
	Name	Telephone	Email
		Priority Site Call-In Number:	
		Generator Maintenance Logs:	

& Handling Policies and Procedures must be reviewed annually or when changes have been
Additional instructions may accompany this document to support staff regarding details of
sponse Plan. Verification documents must be signed and dated. Keep these documents on

e Storage & Handling Worksheet and Emergency Response Plan is current and accurate.

Post on the front of the vaccine storage unit.

Date: _____

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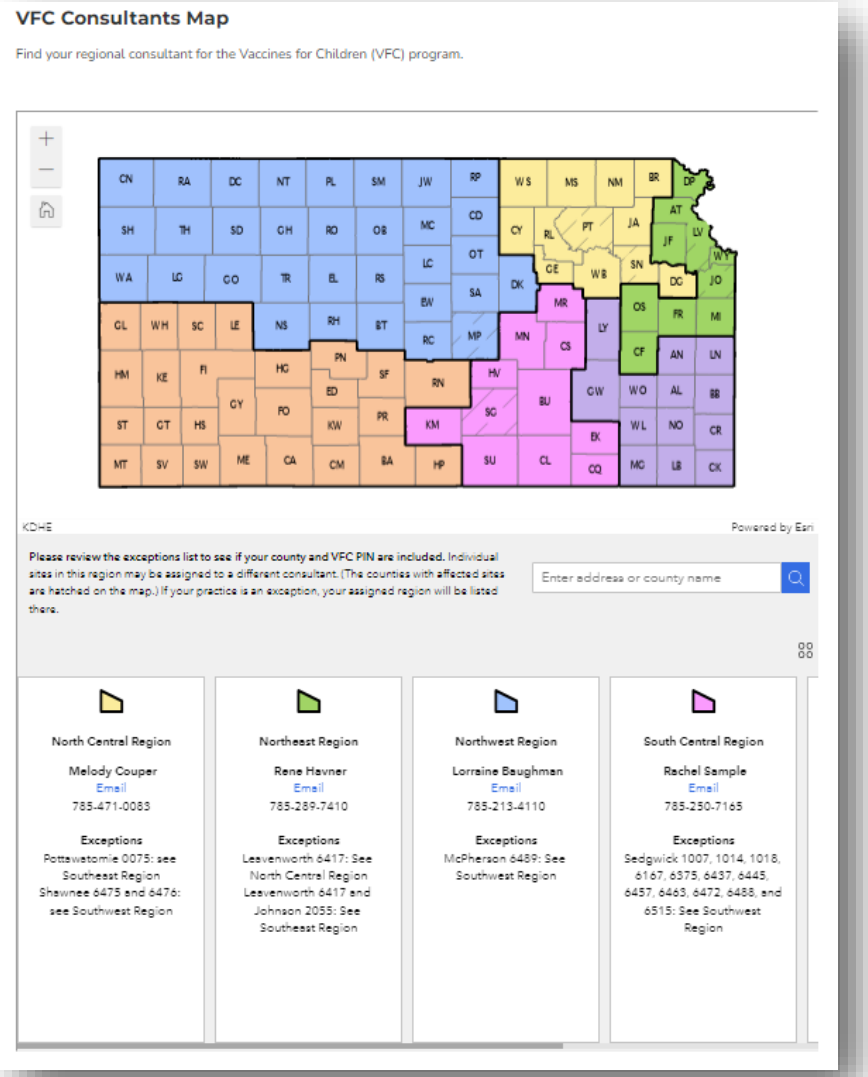
Source: kdhe.ks.gov/215/

Resources

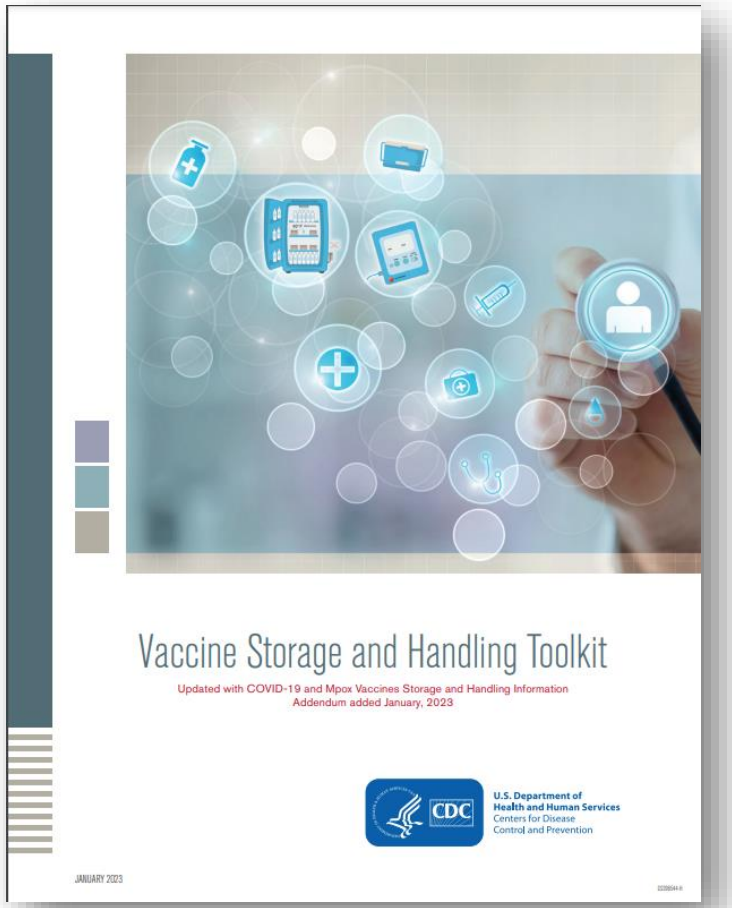
VFC Consultant Map

Consultant On-Call
877-296-0464



Source: kdhe.ks.gov/2006/

Resources



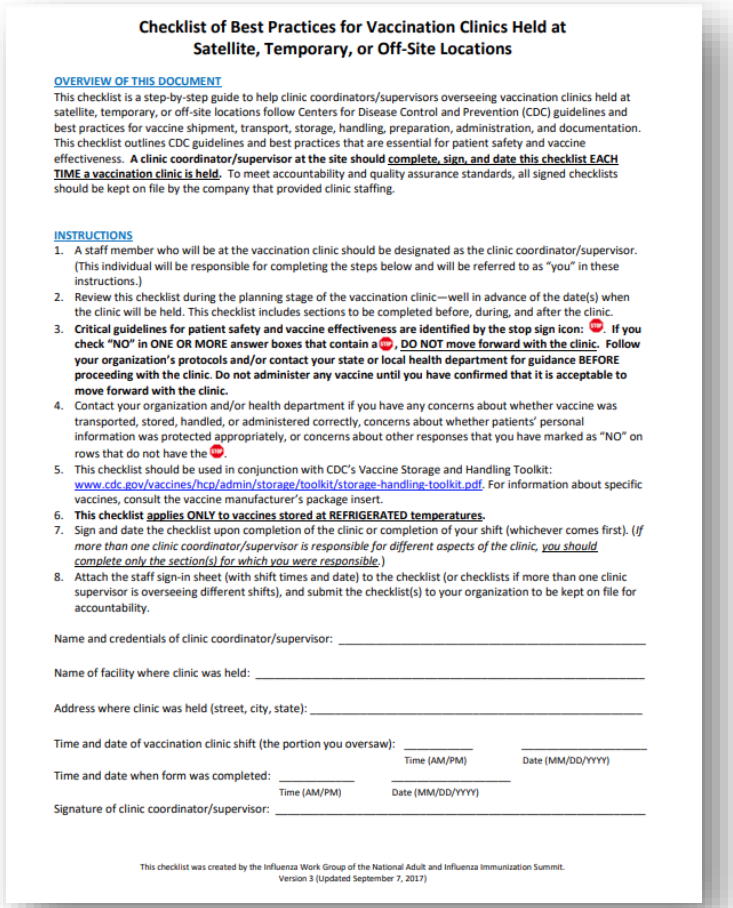
Vaccine Storage and Handling Toolkit

Updated with COVID-19 and Mpox Vaccines Storage and Handling Information
Addendum added January, 2023

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

JANUARY 2023

cdc.gov/vaccines/hcp/admin/storage/toolkit/storage-handling-toolkit.pdf



Checklist of Best Practices for Vaccination Clinics Held at Satellite, Temporary, or Off-Site Locations

OVERVIEW OF THIS DOCUMENT

This checklist is a step-by-step guide to help clinic coordinators/supervisors overseeing vaccination clinics held at satellite, temporary, or off-site locations follow Centers for Disease Control and Prevention (CDC) guidelines and best practices for vaccine shipment, transport, storage, handling, preparation, administration, and documentation. This checklist outlines CDC guidelines and best practices that are essential for patient safety and vaccine effectiveness. **A clinic coordinator/supervisor at the site should complete, sign, and date this checklist EACH TIME a vaccination clinic is held.** To meet accountability and quality assurance standards, all signed checklists should be kept on file by the company that provided clinic staffing.

INSTRUCTIONS

1. A staff member who will be at the vaccination clinic should be designated as the clinic coordinator/supervisor. (This individual will be responsible for completing the steps below and will be referred to as "you" in these instructions.)
2. Review this checklist during the planning stage of the vaccination clinic—well in advance of the date(s) when the clinic will be held. This checklist includes sections to be completed before, during, and after the clinic.
3. **Critical guidelines for patient safety and vaccine effectiveness are identified by the stop sign icon: STOP. If you check "NO" in ONE OR MORE answer boxes that contain a STOP, DO NOT move forward with the clinic. Follow your organization's protocols and/or contact your state or local health department for guidance BEFORE proceeding with the clinic. Do not administer any vaccine until you have confirmed that it is acceptable to move forward with the clinic.**
4. Contact your organization and/or health department if you have any concerns about whether vaccine was transported, stored, handled, or administered correctly, concerns about whether patients' personal information was protected appropriately, or concerns about other responses that you have marked as "NO" on rows that do not have the STOP.
5. This checklist should be used in conjunction with CDC's Vaccine Storage and Handling Toolkit: www.cdc.gov/vaccines/hcp/admin/storage/toolkit/storage-handling-toolkit.pdf. For information about specific vaccines, consult the vaccine manufacturer's package insert.
6. **This checklist applies ONLY to vaccines stored at REFRIGERATED temperatures.**
7. Sign and date the checklist upon completion of the clinic or completion of your shift (whichever comes first). (*If more than one clinic coordinator/supervisor is responsible for different aspects of the clinic, you should complete only the section(s) for which you were responsible.*)
8. Attach the staff sign-in sheet (with shift times and date) to the checklist (or checklists if more than one clinic supervisor is overseeing different shifts), and submit the checklist(s) to your organization to be kept on file for accountability.

Name and credentials of clinic coordinator/supervisor: _____

Name of facility where clinic was held: _____

Address where clinic was held (street, city, state): _____

Time and date of vaccination clinic shift (the portion you oversaw): _____ (Time AM/PM) _____ (Date MM/DD/YYYY)

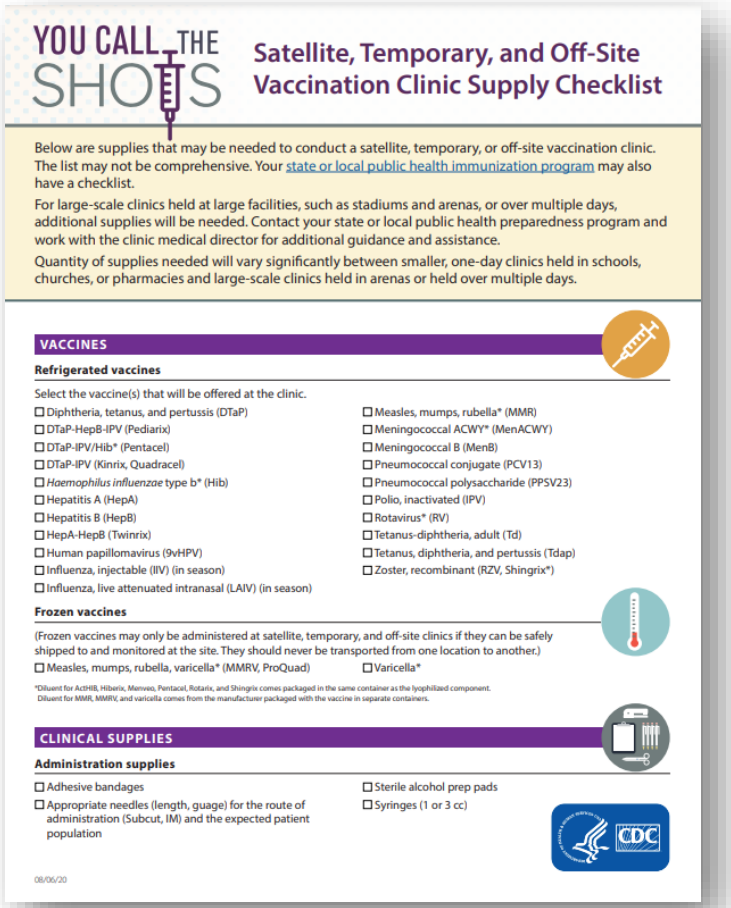
Time and date when form was completed: _____ (Time AM/PM) _____ (Date MM/DD/YYYY)

Signature of clinic coordinator/supervisor: _____

This checklist was created by the Influenza Work Group of the National Adult and Influenza Immunization Summit.
Version 3 (Updated September 7, 2017)

izsummitpartners.org/content/uploads/2017/02/NAIIS-Vaccination-Clinic-Checklist_v2.pdf

izsummitpartners.org/content/uploads/2017/11/NAIIS-Vaccination-Clinic-Checklist-Spanish.pdf



YOU CALL THE SHOTS

Satellite, Temporary, and Off-Site Vaccination Clinic Supply Checklist

Below are supplies that may be needed to conduct a satellite, temporary, or off-site vaccination clinic. The list may not be comprehensive. Your state or local public health immunization program may also have a checklist.

For large-scale clinics held at large facilities, such as stadiums and arenas, or over multiple days, additional supplies will be needed. Contact your state or local public health preparedness program and work with the clinic medical director for additional guidance and assistance.

Quantity of supplies needed will vary significantly between smaller, one-day clinics held in schools, churches, or pharmacies and large-scale clinics held in arenas or held over multiple days.

VACCINES

Refrigerated vaccines

Select the vaccine(s) that will be offered at the clinic.

- ☐ Diphtheria, tetanus, and pertussis (DTaP)
- ☐ DTaP-HepB-IPV (Pediarix)
- ☐ DTaP-IPV/Hib* (Pentacel)
- ☐ DTaP-IPV (Kinrix, Quadracel)
- ☐ *Haemophilus influenzae* type b* (Hib)
- ☐ Hepatitis A (HepA)
- ☐ Hepatitis B (HepB)
- ☐ HepA-HepB (Twinrix)
- ☐ Human papillomavirus (9vHPV)
- ☐ Influenza, injectable (IIV) (in season)
- ☐ Influenza, live attenuated intranasal (LAIV) (in season)
- ☐ Measles, mumps, rubella* (MMR)
- ☐ Meningococcal ACWY* (MenACWY)
- ☐ Meningococcal B (MenB)
- ☐ Pneumococcal conjugate (PCV13)
- ☐ Pneumococcal polysaccharide (PPSV23)
- ☐ Polio, inactivated (IPV)
- ☐ Rotavirus* (RV)
- ☐ Tetanus-diphtheria, adult (Td)
- ☐ Tetanus, diphtheria, and pertussis (Tdap)
- ☐ Zoster, recombinant (RZV, Shingrix*)

Frozen vaccines

(Frozen vaccines may only be administered at satellite, temporary, and off-site clinics if they can be safely shipped to and monitored at the site. They should never be transported from one location to another.)

- ☐ Measles, mumps, rubella, varicella* (MMRV, ProQuad)
- ☐ Varicella*

*Diluent for ActHIB, Hiberix, Menveo, Pentacel, Rotarix, and Shingrix comes packaged in the same container as the lyophilized component. Diluent for MMR, MMRV, and varicella comes from the manufacturer packaged with the vaccine in separate containers.

CLINICAL SUPPLIES

Administration supplies

- ☐ Adhesive bandages
- ☐ Appropriate needles (length, guage) for the route of administration (Subcut, IM) and the expected patient population
- ☐ Sterile alcohol prep pads
- ☐ Syringes (1 or 3 cc)

08/06/20

cdc.gov/vaccines/hcp/admin/downloads/2020-vaccine-clinic-supply-checklist-508.pdf

Vaccine Pack Out Activity

Now let's have some fun and practice pack outs.

Please feel free to look at the coolers and ask questions.