BE READY BEFORE AN EMERGENCY

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Utah Department of Health
IMMUNIZATION PROGRAM
Immunize for healthy lives

Utah VFC
Utah Vaccines for Children

Utah Department of
Health & Human Services
Population Health

CONTENTS:

Be ready BEFORE and Emergency!

It is important to be ready, before an emergency. Having the materials on hand and having staff with knowledge of how to use them can help ease the stress in an already stressful situation and ensure that your vaccines remain viable.

Vaccines cost a lot of money, not only to the Vaccines for Children (VFC) Program, but for providers storing privately purchased vaccines. Every measure should be taken to avoid breaks in the cold-chain and loss of these investments. Equipment failures, power outages and natural disaster – these and other emergencies can compromise vaccine storage conditions and damage your vaccine supply. Before an emergency, have the materials and equipment on hand, and most importantly, know how to use them.

It is critical to have an up-to-date emergency plan with steps you should take to protect your vaccine.

If you have vaccines that need to be moved for reasons such as moving locations, scheduled power outages, or know equipment maintenance, please work with your VFC Representative or a member of the Vaccine Management team to assist you in this process. We will work with you to move your vaccines.

This guide will provide useful information for materials you should have on hand, as well as provide instruction on ow to prepare and effectively use the materials. A training is also available to walk you through the steps.

We will go over the steps of CDC's Emergency Packing Procedure for refrigerated vaccines. Follow CDC's Emergency Packing Procedures for refrigerated vaccines may shorten the duration your vaccine were exposed to out of range temperatures. CDC is currently working on guidelines for transporting frozen. At this time, there is no additional guidance. Frozen vaccine will be transported in the refrigerator emergency pack-out. **All** frozen vaccine transported must have manufacturers contacted for additional guidance.

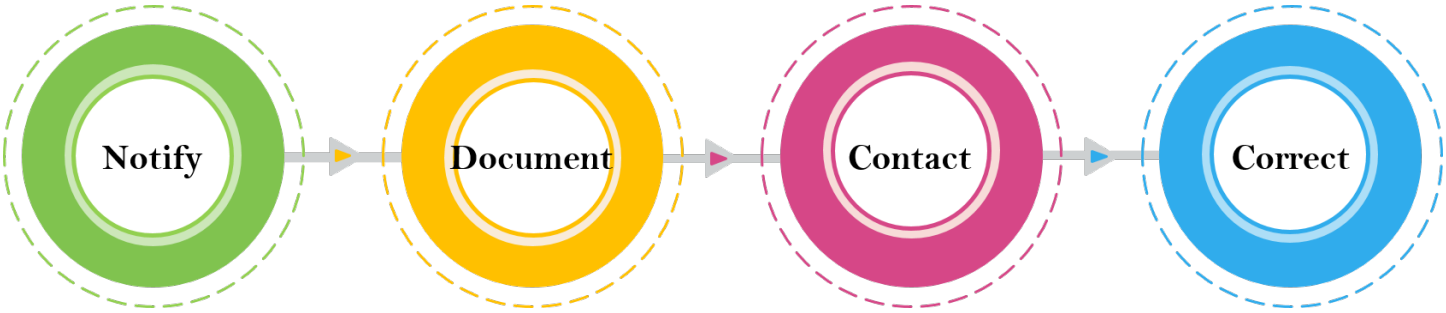
Along with having the materials to prepare an emergency pack-out, you must also have a certified digital data logger or you may hear DDL. This is a VFC requirement. DDLs are required to monitor your vaccine during transport to ensure in-range temperatures. DDL logs are required submitted with emergency paperwork to the Utah Department of Health, Immunization Program. Per VFC requirements, your clinic must supply and have on hand a back-up digital data logger (DDL) that meet CDC's requirements. It is important that all staff know how to use the back-up data logger prior to an emergency.

- **Digital Data Logger(s)** that meet CDC requirements-Provide current certificate of calibration (per the current 2020 CDC Vaccine Storage & Handling Toolkit)
    - Detachable probe the reflects vaccine temperature (e.g., a probe buffered with glycol, class beads, sand, or Teflon)
    - Certified calibrated (current certificate of calibration)
    - Display current, minimum, & maximum temperature
    - Recommended uncertainty of +/-0.5° C (+/1°F)
    - Logging interval that can be programmed by the user to measure & record temperatures
    - Alarm for out-of-range temperatures
    - Low-battery indicator
    - Temperature data can be downloaded to a computer
        - Example: VFC 5000-TP backup data loggers

Though one backup DDL is a VFC requirement, it is good business practice to have one DDL per unit. If there is a problem with your daily monitoring system, you can monitor your unit with your backup data logger. You may also find that depending on your vaccine stock, you may need multiple emergency pack-outs. Each pack-out is required monitored with a DDL.

In an emergency event, you must activate your emergency plan immediately!

CDC has provided easy steps to identify and handle a temperature excursion:



Notify the primary or backup vaccine coordinator immediately. If they are not available, report the problem to a supervisor.

Notify staff by labeling exposed vaccine as "DO NOT USE". DO NOT discard vaccine.

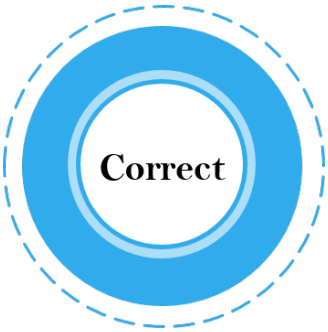
Document details of the temperature excursion.

For more information, refer to the Emergency Response Checklist. This form and others are on the VFC Forms webpage.

Contact vaccine manufacturer(s) for viability.

Contact the Immunization Program.

- You will need to provide documentation, manufacturer(s) case number and DDL data.



Do not disconnect/confirm alarm until you have determined and addressed the cause.

You may need to implement your Emergency Plan of Action.

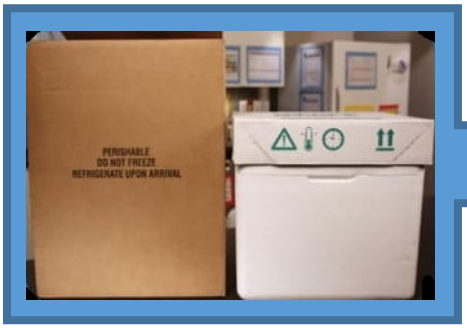
Never leave vaccine in a non-functioning unit.

Examples of certified pack-outs and backup digital data loggers (DDL);
**Any and all images used are for example purposes only*

Portable Fridge and/or Freezer 	**Portable Fridge and/or Freezer** • CDC preferred method for transport of refrigerated and/or frozen vaccines. • For frozen vaccine, must maintain temperatures between 50° C and -15° C (-58° F and +5° F). • For refrigerated vaccine, must maintain temperatures between 2° C and 8° C (36° F and 46° F). • Certified DDL is required to monitor temperatures during transport. • You may need multiple portable fridge and/or freezers to ensure you have enough storage for your location's typical supply of refrigerated/frozen vaccine.
Certified Pack-out 	**Certified Pack-out (refigerator and/or freezer)** • There are several manufacturers for this type of pack-out. • Make sure that you find the right one for your facilities needs. • These are available in both refrigerator pack-outs and freezer pack-outs. • You may need multiple pack-outs of each on had to ensure you have enough storage for your location's typical supply of refrigerated/frozen vaccines.
Vaccine Shipper/Hard-sided cooler  	**Emergency Certified Pack-out** • Additional materials are required to have on hand for this type of pack-out. • Coolers should be large enough for your location's typical supply of refrigerated/frozen vaccines. • Can use original shipping boxes from manufacturers, if available. • **Do not** reuse frozen coolant packs from original shipping contaner, as they increase risk of freezing vaccines. • Do NOT use soft-sided collapsible coolers.
Digital Data Logger (DDL)  	**DDL** ***Per the current 2020 CDC Vaccine Storage & Handling Toolkit)*** • Detachable probe the reflects vaccine temperature (e.g., a probe buffered with glycol, class beads, sand, or Teflon) • Certified calibrated (current certificate of calibration) • Display current, minimum, & maximum temperature • Recommended uncertainty of +/-0.5° C (+/1°F) • Logging interval that can be programmed by the user to measure & record temperatures • Alarm for out-of-range temperatures • Low-battery indicator • Temperature data can be downloaded to a computer ○ Example: VFC 5000-TP backup data loggers

Materials needed for an Emergency Pack-out:

It is good business practice to train staff prior to an emergency, on how to prepare the emergency pack-out. This will ensure that you have enough materials on hand to properly prepare and transport vaccine and possibly shorten the length of time your vaccine exposed to out-of-range temperatures.



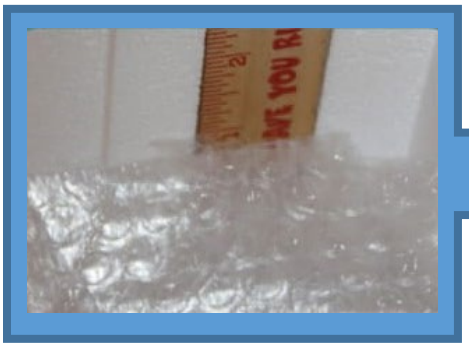
Hard-sided cooler, Vaccine shipper or Styrofoam™ shipping container.

**Please note: You may need more than one emergency pack-out.*

Conditioned frozen water bottles.

**You will need enough frozen water bottles on hand to have two (2) layers in each emergency pack-out*.

***Do not** reuse coolant packs from original vaccine shipping containers. They can freeze and damage refrigerated vaccines.



Insulating material (corrugated cardboard and bubble wrap or packing foam).

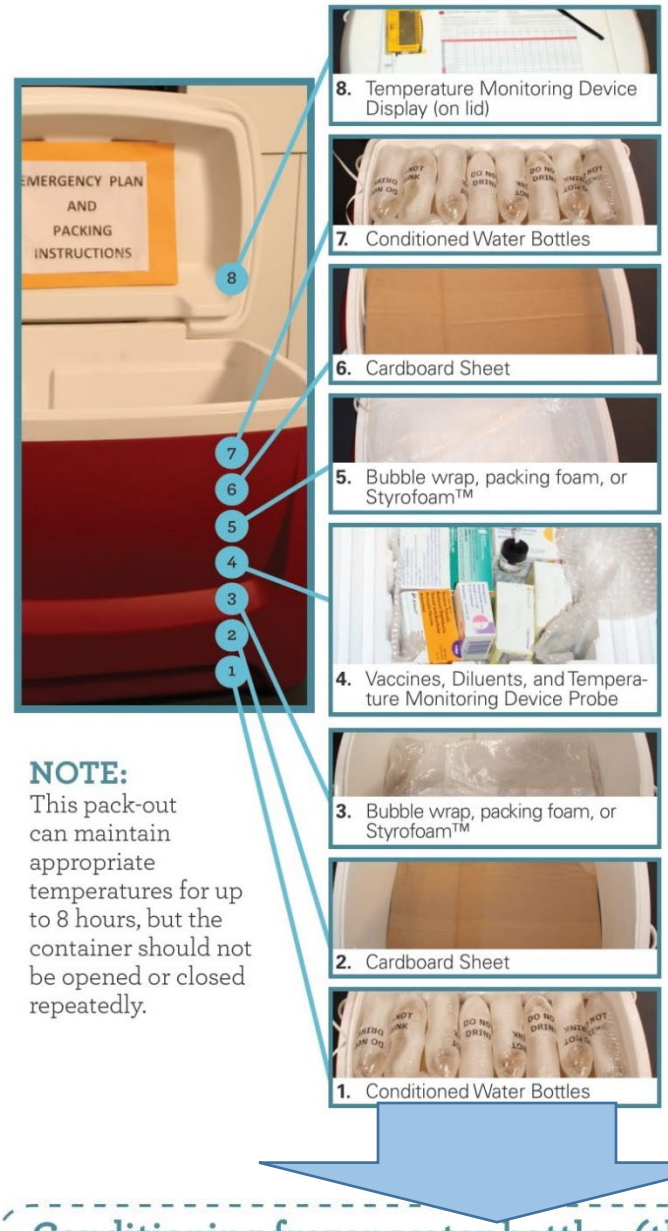
**Please note: You will need enough material to do two (2) layers of each (corrugated cardboard and bubble wrap) in each emergency pack-out. Bubble wrap must be at least 1" thick to provide adequate insulation.*

Digital Data Logger (DDL) for each emergency pack-out. Have a place in the emergency pack-out where you can store your Emergency Plan of Action, instructions, and necessary paperwork.

**Please note: in a natural disaster or other emergency, power and/or internet may not be available.*

Emergency Pack-out Instructions (per [CDC's printable guide]):

This guide will show you step-by-step instructions, starting with the bottom of your pack-out.



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 logs to the top of the lid.

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

Insulating material – Place another 1 sheet of corrugated cardboard over insulation material to support top layer of water bottles.

Insulating 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 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 the bottom of the cooler with a single layer of conditioned water bottles.

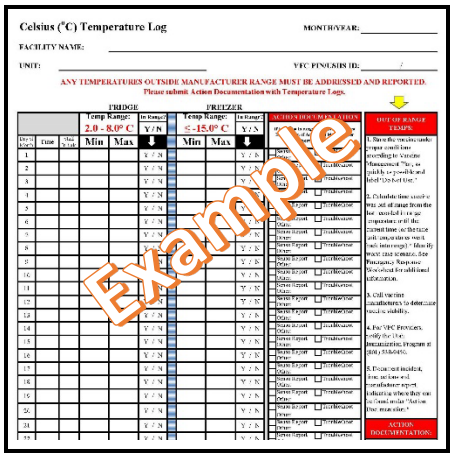
Conditioning frozen water bottles (this normally takes less than 5 minutes)

- 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.

Once you have arrived at your off-site location:

1. Before opening your emergency pack-out, document the date, time, min/max temperatures, and initial the manual temperature log, upon arrival.

The temperature log can be download from the VFC Forms webpage. It is good business practice to have a temperature log, pen, and other materials stored in the emergency pack-out. In the event of a power outage or other natural disaster, power and/or internet may not be available.



2. Now that you have the above information document, you can start to transfer your vaccine from the emergency pack-out to the fridge/freezers at your off-site location. Label vaccines as "DO NOT USE" until additional guidance from contacting manufacturer(s).

> Reminder: Per CDC guidance, any/all frozen vaccine transferred during an emergency must have manufacturer(s) contacted, due to exposure to refrigerator temperatures. You will need to provide the manufacturer(s) with duration of fridge temperatures, current min/max temperature, and if the vaccines had previously been exposed to out of range temperatures. The manufacturer(s) will determine if the vaccine is viable and provide additional guidance.

3. Contact manufacturer(s) for additional guidance. Document temperature excursion on the Emergency Response Checklist. These and additional forms can be located on the VFC Forms webpage.

- Frozen vaccine transported during an emergency will require manufactuers be contacted to provide additional guidance.

Contact the manufacturer for excursions:	
Dynavax	1-844-375-4728
GlaxoSmithKline	1-888-825-5249
Massachusetts Biological Labs	1-888-825-5249
MedImmune	1-877-633-4411
Merck	1-800-672-6372
Pfizer	1-800-438-1985
Sanofi Pasteur	1-800-822-2463
Seqirus	1-855-358-8966

Depending on the action required, we have forms available on our website to best fits the need of the event. It is good business practice to have a copy of each form available in your emergency pack-out. In the event of a power outage or other natural disaster, power or internet may not be available.

4. Download the data from your backup data logger (DDL). This information will be requested and required by the Immunization Program to ensure that in-range temperatures were maintained.

> *Please note, if out-of-range temperatures are discovered during transport of your vaccine, additional information will be required.

5. Update the Immunization program. You will do this by verifying vaibility of the vaccine, providing documentation (Emergency Response Checklist/Vaccine Storage Troubleshooting Record), manufacturer(s) case numbers, and DDL data.

- As documents and forms update, please make sure you have the most current version.
- You may need to refresh your browser or clear your cache.

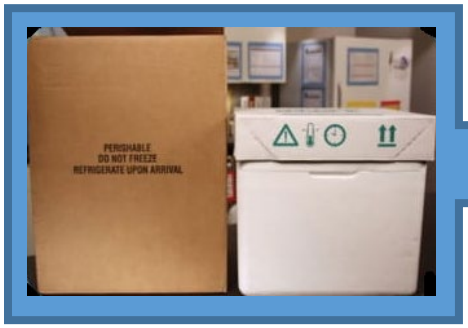
The Immunization Program staff will review the information provided. Please keep in mind that they may request additional information if necessary.

6. Once the issue is resolved, work with the Immunization to move the vaccine to your location.

Review of Materials needed for an Emergency Pack-out:

Again, it is good business practice to train staff prior to an emergency. It is important for all staff to know how to prepare the emergency pack-out.

In doing this, it will ensure you have enough materials on hand to properly prepare and transport vaccine and possibly shorten the time that your vaccines are exposed to out-of-range temperatures.



Hard-sided cooler or Styrofoam™ shipping container.

Please note: You may need more than one emergency pack-out.

Conditioned frozen water bottles.

You will need enough frozen water bottles on hand to have two (2) layers in each emergency pack-out.

***Do not reuse coolant packs from original vaccine shipping containers. They can freeze and damage refrigerated vaccines.**

Insulating material (corrugated cardboard and bubble wrap or packing foam).

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Useful Links

- Immunization Program website
- USIIS website
- USIIS User Documentation
- CDC Immunization Information System website
- UDOH Immunization Program website
- CDC Vaccines and Immunizations website
- CDC Vaccine Adverse Event Reporting System (VAERS) website

VFC Forms: Training, Provider & Eligibility Forms, VFC Educational Material, Report Forms, Storage & Handling Forms, Tally Sheets, and more.

Vaccine Storage & Handling Toolkit: View/Print the current Vaccine Storage and Handling Toolkit [Jan 2020] from CDCs website.

USIIS Portal: Login to the USIIS portal to gain access to USIIS Immunize, Vaccine Inventory, Doses Administered Reporting, VOMS, Clinic Reports & Batch Processes, and more.

SensoScientific Login Portal: Log in to view temperatures, run reports, and confirm alarms.

Please note – bookmarked sites in your web browser may need to be refreshed/clear your cache to reflect the most current information

QUESTIONS?

For additional assistance, please contact the Vaccine Management Team.
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(801) 538-9450