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Emergency/Inclement Weather Preparedness: Vaccine Storage and Handling

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1. **Checklist for Vaccine Storage Locations WITHOUT Emergency Backup Power**

- If possible, decrease immunization operations in order to have plenty of time to pack and move product.
- Determine a packing priority list for vaccine in case all vaccine cannot be moved.
- Keep a detailed itemized list along with contact information affixed to outside of the transport container for easy identification.
- Label transport container as “temperature sensitive” and “Refrigerated” or “Frozen” product.
- Move all vaccine that is not stored in a location supported by backup power to your designated alternate storage location (e.g., logistics, pharmacy, alternate clinics).
- During transport maintain temperatures for refrigerated vaccines between 2° – 8°C (36° – 46°F) and frozen vaccines at -15°C (5°F) or less.
- Verify that it is placed in the appropriate storage unit; refrigerator vs. freezer at alternate storage location.
- If no alternate storage location is available, immediately notify your Defense Health Agency – Immunization Healthcare Branch (DHA-IHB) Immunization Healthcare Specialist (IHS) for assistance. ([Contact Your IHS](#)).

2. **Checklist for Vaccine Storage Locations CONNECTED to Emergency Backup Power**

- Ensure ALL storage units are clearly labeled on the outside as either a refrigerator or freezer.
- VERIFY functionality of all equipment:
  - Make sure refrigerator/freezer is plugged into the designated emergency power (normally the red outlets);
  - Verify all alarm and call systems are plugged into emergency power or they will not be able to operate;
  - If alarm or call system has a battery backup ensure system is charged or has new batteries;
  - Check the automated call system to determine if it is programmed correctly and that it is setup to call the appropriate designated staff;
  - TEST call and alarm system before departing.
- Verify duty officer alarm response procedures and policies are updated.
- Have Storage and Handling emergency plan readily accessible and review with all staff.

- Prepare equipment and supplies and have them readily available for responders in case the emergency movement of vaccine is required due to failure of backup power.
  - Validated storage containers, refrigerated gel packs, frozen packs, and thermometers.
  - Insulating barrier (e.g., Bubble wrap, packing foam, Styrofoam™, corrugated cardboard).
  - Verify AX27L (formerly VaxiCool) is fully charged and plugged into emergency power.
  - Verify PX6L chilled belts are fully conditioned according to manufacturer instructions.
  - Verify PX1L (formerly VaxiPac) phase change bricks are fully chilled according to manufacturer instructions and that there are 3 bricks per PX1L. NOTE: Do not use any other cooling item (frozen or refrigerated packs) with the PX1L.
- All vaccine storage locations in low-lying areas or in lower levels of the facility that may incur flooding should move vaccine to a higher-level location.
- Call continuous temperature tracking system (e.g., Sensaphone, AmegaView, REES, etc.) more frequently during the storm, if possible.

### 3. Resources for Emergency Procedures

**Emergency Vaccine Retrieval and Storage Plan Worksheet:** Local list of emergency contacts and equipment repair. Should be prepared as part of emergency standard operating procedures, updated as needed and readily accessible to all staff. [Emergency Vaccine Retrieval and Storage Plan Worksheet](#)

**Potentially Compromised-Temperature Sensitive Worksheet (PC-TSMP):** Utilize when power failure has occurred to prepare and managed potentially compromised vaccine. [PC-TSMP Worksheet](#)

**Temperature logs:** For tracking temperatures of vaccines both when stored in refrigerator and when transporting or storing off site. [www.health.mil/coldchain](http://www.health.mil/coldchain)

**Vaccine Storage and Handling Guideline:** A guide to assist clinics in routine and emergency storage and handling procedures. All above worksheets, packing procedures, and emergency procedures are outlined in the guide. [Vaccine Storage and Handling Guidelines \(dated 9 Feb 15\)](#)

### 4. Packing Protocols for Moving Vaccine

All packing protocols are available from USAMMA/DOC at: [USAMMA Cold Chain Management Processes & Procedures](#)

*Vaccine packing reminders:*

- Always use validated containers (e.g., Endotherm shipping containers, Hard-sided or Styrofoam™ coolers with at least 2 inch thick walls, PX1L, PX6L, AX27L);
- Always include calibrated thermometer to track temperatures during transport and storage;
- Always document on the outside of the storage container the vaccine type, date, time, originating facility, phone number. Include that the contents are fragile and temperature sensitive;
- Always use insulating barrier (e.g., Bubble wrap, packing foam, Styrofoam™, corrugated cardboard) between coolant packs and the vaccines. NEVER pack refrigerated vaccine with frozen packs;
- Record temperatures hourly when vaccine is outside of a functioning refrigerator or freezer.

Additional CDC guidance for packing vaccines for transport during emergencies can be found at [Packing Vaccines for Transport during Emergencies](#)

### 5. Procedures for Reporting Potentially Compromised Vaccine

Sometimes vaccine loss cannot be prevented. If vaccine is suspected to have been outside the recommended temperature range immediate action must be taken.

- Immediately place vaccine in a working storage unit at proper temperature.
- Segregate and label potentially compromised vaccine as “DO NOT USE”.
- Record room temperature and temperatures of refrigerator(s) and freezer(s) when vaccine discovered and length of time vaccine was outside recommended temperature ranges.
- Inventory all the vaccine and document vaccines affected, lot numbers, expiration dates and number of doses on the [PC-TSMP Worksheet](#)
- Submit the PC-TSMP Worksheet along with copies of your temperature logs through Service-specific channels, to USAMMA/DOC and to your DHA-IHB IHS.
- NEVER discard vaccine until it has been confirmed as a loss by USAMMA/DOC.
- Step-by-step instructions for reporting a potential vaccine compromise can be found [Potential Vaccine Compromise Reporting](#)

USAMMA/DOC is the DOD agency responsible for the management and storage of temperature sensitive medical products. To contact USAMMA/DOC for vaccine loss guidance call: 0700-1600 (EST): (301) 619-4318/3017, DSN 343. For after-hours urgent issues: (301) 676-1184/0808.

Email at: [usarmy.detrick.medcom-usamma.mbx.doc@mail.mil](mailto:usarmy.detrick.medcom-usamma.mbx.doc@mail.mil)

**For additional vaccine storage and handling tools visit:**

**Defense Health Agency – Immunization Healthcare Branch Storage and Handling webpage:**  
[www.health.mil/coldchain](http://www.health.mil/coldchain)

**CDC Vaccine Storage and Handling:** [CDC Vaccine Storage and Handling](#)