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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 to have plenty of time to pack and move product.
- Determine a packing priority list for vaccine in case all vaccine cannot be moved.
- Pack and 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). See step 4 for packing protocols.
- 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.
- Document the storage unit temperature when the vaccine is removed for transport and at the final destination to identify any temperature deviations.
- During transport maintain temperatures for refrigerated vaccines between 2° – 8°C/36° – 46°F and frozen vaccines at -15°C/5°F or colder.
- Verify that vaccine is placed in the appropriate storage unit, refrigerator vs. freezer at the alternate storage location.
- **IMPORTANT: DO NOT** place enclosed transport container with vaccine directly into storage unit. Either open the top and remove coolant packs or remove vaccines from container and place in proper storage unit.
- If no alternate storage location is available, immediately notify your Defense Health Agency– Public Health – Immunization Healthcare Division (DHA-PH-IHD) Immunization Healthcare Specialist (IHS) for assistance. [www.health.mil/ContactYourIHS](http://www.health.mil/ContactYourIHS)

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

- VERIFY that all equipment is functioning properly, and ALL storage units are clearly labeled on the outside as either a refrigerator or freezer.
- Plug storage unit(s) and alarm system into the designated emergency power (normally the red outlets). If the alarm system has a battery backup, ensure it is charged or has new batteries.
- If your site uses a generator for backup power, make sure it is properly connected and there is sufficient fuel on hand to continuously run the generator for at least 72 hours.
- VERIFY that the alarm alert information is current. Program the appropriate designated staff contact information into the automated call system.
- TEST the alarm system before departing. Call the alarm system more often to ensure it is working during inclement weather or power outage.
- Move all vaccine in storage locations prone to flooding to a higher-level location. See step 4 for packing protocols.
- Prepare and have available equipment and supplies for transporting vaccine if backup power fails.

3. **Resources for Emergency Procedures** can be found at [www.health.mil/coldchain](http://www.health.mil/coldchain)

**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.

**Potentially Compromised-Temperature Sensitive Worksheet (PC-TSMP) – DHA-177**

Utilize when power failure has occurred to prepare and managed potentially compromised vaccine.

**Temperature logs:** For tracking temperatures of vaccines both when stored in refrigerator/freezer and when transporting or storing off site.

**Vaccine Storage and Handling Guide:** A guide to assist clinics in routine and emergency storage and handling procedures.

4. **Packing Protocols for Moving Vaccine:** All packing protocols are available from USAMMA-DOC at: <https://www.amlc.army.mil/USAMMA/Distribution-Operations-Center-Vaccine/Cold-Chain-Management/Cold-Chain-Management-Equipment/>

*Vaccine packing reminders:*

- Validated transport containers (e.g., ThermoSafe insulated shipping boxes, Hard-sided or Styrofoam™ coolers with at least 2-inch-thick walls, PX1L, PX6L, and/or AX56L).
- Always include calibrated thermometer in each transport container 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, corrugated cardboard, packing foam) between coolant material and the vaccines.
- If using insulated shipping boxes or coolers, ensure there is an adequate number of refrigerated and/or frozen coolant material or conditioned frozen water bottles.
- If using a PX1L (VaxiPac), verify the phase-change bricks (PXC/VaxiSafe) are fully chilled according to manufacturer instructions and that there are 5 bricks per PX1L. NOTE: Do not use any other cooling item (frozen or refrigerated packs) with the PX1L.
- If using a PX6L (Insulated Courier), verify PCM coolant belts (blue-frozen, white-refrigerated) are fully conditioned according to manufacturer instructions. Do not use any other cooling item (frozen or refrigerated packs) with the PX6L.
- Verify AX56L (HemaCool) is fully charged and plugged into emergency power.
- NEVER pack refrigerated vaccines with frozen coolant packs!
- Record temperatures hourly when vaccine is outside of a functioning refrigerator or freezer.
- IMPORTANT: **DO NOT** place enclosed transport container with vaccine directly into storage unit. Either open the top and remove coolant packs or remove vaccines from container and place in proper storage unit.

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.

- Step-by-step instructions for reporting a potential vaccine compromise can be found at: [www.health.mil/vaccinecompromise](http://www.health.mil/vaccinecompromise).
- Do not leave vaccine in a non-functioning storage unit or at inappropriate storage conditions.
- Immediately move the vaccine to a working storage unit at proper temperature.
- Segregate and label potentially compromised vaccine as “DO NOT USE.”
- Record room temperature, date/time, and temperature prior to event when vaccine was at required temperature and date/time and temperature post event when vaccine was back at required temperature or storage conditions.

- Document the current, high, and low temperatures of the storage unit and the length of time vaccine was outside the required recommended temperature range.
- Inventory all the vaccine and document vaccines affected, lot numbers, expiration dates and number of doses using the Potentially Compromised-Temperature Sensitive Medical Products (PC-TSMP) Worksheet (DHA-177).
- Submit the current version of the PC-TSMP Worksheet (DHA-177) along with copies of your temperature logs or temperature data to DLA-TSM, USAMMA-DOC and to your DHA-PH-IHD IHS.
- Standby and await vaccine disposition – Do Not use, destroy, or discard the vaccine until disposition is provided by DLA-TSM and/or USAMMA-DOC.

**6. For additional vaccine storage and handling/TSMP questions:**

- **Contact DHA-PH-IHD:** 1-877-GET-VACC, Option 2 (1-877-438-8222) or send an email message to [dha.dodvaccines@health.mil](mailto:dha.dodvaccines@health.mil).
- **Contact USAMMA-DOC** from 0700-1600 (EST): (301) 619-4318/3017, DSN 343. For after-hours urgent issues: (301) 676-1184.  
Email at: [usarmy.detrick.usamma.mbx.doc@army.mil](mailto:usarmy.detrick.usamma.mbx.doc@army.mil)
- **Contact the DLA-TSM Cold Chain Management (CCM) Team:** from 0730-1800 EST at (215) 737-5537/5365, DSN: 444-5537/5365. For URGENT after-hour issues only, call (267) 738-2854.  
Email at: [DSCPColdchain@dla.mil](mailto:DSCPColdchain@dla.mil) or [paacoldchainteam@dla.mil](mailto:paacoldchainteam@dla.mil)