



Department of Nursing POLICY AND PROCEDURE

POLICY NUMBER: 270
VERSION: 4

SUBJECT: VACCINES: EMERGENCY POWER OUTAGE/STORAGE UNIT FAILURE

PURPOSE: To ensure proper steps are taken to safeguard vaccines in the event of planned or unplanned power interruptions (e.g. power outages, weather related circumstances, storage unit failure, building maintenance/repairs, etc.).

POLICY: Clinic staff shall adhere to the guidelines regarding proper storage and handling of vaccines in the event of an emergency power outage or storage unit failure to assure that patients are administered viable vaccines.

Before an emergency or planned/unplanned power interruption occurs:

- Maintain emergency contact information for key staff responsible for vaccine management.
- Stock supplies indicated in Transporting Refrigerated Vaccines and Transporting Frozen Vaccines (<http://www.eziz.org/assets/docs/IMM-983.pdf> and <http://eziz.org/assets/docs/IMM-1130.pdf>)
- Label and keep accessible any necessary vaccine packaging and transport supplies, copies of vaccine transport job aids, facility floor plans when available, and other related information.
- Identify alternate vaccine storage location(s). Ensure the location has adequate space to accommodate vaccines and that the temperature monitoring equipment meets VFC Program requirements.
- Be familiar with back-up power sources for commercial/lab/pharmacy grade storage units.
- Store water bottles in vaccine refrigerators and cold packs in freezers where vaccines cannot be stored, doors and floors of the unit. This helps maintain the interior temperature in the event of a power loss.

In the event of an emergency or planned/unplanned power interruption:

- Assess the situation. Do not open the storage unit.
- Determine the cause of the power failure and estimate the time it will take to restore power.
- Notify key staff listed on the Emergency Plan as appropriate

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- If the power outage is expected to be short term, usually restored within 2 hours:
 - Record the time the outage started, the unit temperatures (CURRENT, MIN, and MAX) and room temperature.
 - Verify water bottles are distributed throughout the refrigerator.
 - Place a “DO NOT OPEN” sign on storage unit(s) to conserve cold air mass.
 - Monitor the interior temperature until power is restored. Do not open the unit to verify the temperature.

- If the power outage is expected to be long term, usually longer than 2 hours, consider moving vaccines to an alternative storage unit.

Relocating Vaccine

- If temperature in the affected refrigerator and freezer are moving closer to unacceptable limits or if the temperatures are acceptable, but there is little likelihood that the power outage/storage unit failure can be resolved within a reasonable period of time, relocate vaccines. **Do not place vaccines in any refrigerator used for food or designated as biohazard.**

- Before transporting vaccines, review job aids (<http://www.eziz.org/assets/docs/IMM983.pdf> and <http://eziz.org/assets/docs/IMM-1130.pdf>)

- Contact the alternate storage facility to verify they can accept the vaccines.

- Contact the VFC Program.

Packaging and Transporting Vaccines

- Complete the Refrigerated Vaccine Transport Log and or the Frozen Vaccine Transport Log.

- Notify the key staff listed on the Emergency Plan as appropriate.

- Prepare coolers for transport following the VFC Program job aids Transporting Refrigerated Vaccine and or Transporting Frozen Vaccines.

- The following procedures will keep all vaccines except varicella and MMRV within the recommended temperature range for up to 12 hours during transport and or storage outside the primary storage unit:
 - Use a hard-sided cooler.

 - Place conditioned frozen gel packs. Condition frozen gel packs by leaving them at room temperature for 1-2 hours until the edges are defrosted and packs look like they are sweating. Cold packs that are not conditioned can destroy the vaccines by freezing them.

 - Identified back-up storage units should have a calibrated digital thermometer in each compartment. Prepare the thermometer by placing it in the refrigerator for at least 2 hours before packing the vaccine. HDHS has a continuing monitor system; a thermometer is still required for transport.

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- Completely cover the vaccines with two 2-inch layers of bubble wrap. Not using enough will cause the vaccines to freeze.
- Place the thermometer probe on top of the bubble wrap directly above a cold pack.
- Frozen vaccine can only be moved in an emergency and the vaccine must be kept frozen during transport. See job aid for details on keeping the vaccine frozen during transport.
- Diluent stored in the refrigerator should be transported cold, room temp diluent may be transported at room temperature and varicella diluent can be transported at room temperature.
- Complete an appropriate Vaccine Transport Log.
- When unpacking the vaccines:
 - Record the temperature in the cooler on the transport log.
 - Temp between 35 F and 46F (2C to 8C) for refrigerated vaccine and 5F (-15C) for frozen, unpack the vaccine.
 - For out-of-range temperatures upon arrival after transport, contact VFC Program immediately at 877-243-8832.
- Upon arrival to the alternate vaccine storage site, document the total transport time, the temperatures (CURRENT, MIN, and MAX) in the transport cooler (s) and the alternate storage units.

After Power is Restored

- Verify storage units are functioning properly before attempting to move the vaccine from the cooler.
- Follow the same transportation procedures and transfer vaccine back to its original storage unit.
- Vaccine kept at the proper temperature during the power outage, whether it was transported or not may be used.
- For vaccine not maintained at the required temperature:
 - Segregate it in the storage unit.
 - Mark it “Do Not Use.”
 - Contact the VFC Program; be prepared to provide timeframes and temperature information.
- Never return vaccine to the vaccine distributor without VFC Program authorization.

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REFERENCES:

California Department of Public Health, VFC Provider Participation Requirements

Vaccine policy information www.eziz.org:

IMM-983-Transporting Refrigerated Vaccine, 1/2018

IMM-1123-Emergency Vaccine Plan, 12/2014

IMM-1130-Transporting Frozen Vaccine, 1/2017

Approved By: Susan Knapp (CHIEF NURSING OFFICER I)	
Date: 05/19/2016	Original Date: 07/01/2008
Reviewed: 09/22/2017	Next Review Date: 09/22/2019
Supersedes:	