Keep the Vaccines Safe and Effective to Impact Child Health

Vaccines must be kept at the right temperature to protect children in your community and avoid wastage. Vaccines allowed to freeze or to get too warm lose potency. You play a critical role in protecting children from disease by keeping vaccines safe and effective.

To help ensure the children in your community always get vaccine that is safe and effective:

1. Stock the vaccines and diluents properly. For top-opening fridges:
   - Vaccines allowed to freeze or to get too warm lose potency. You play a critical role in protecting children
   - To help ensure the children in your community always get vaccine that is safe and effective:
   - Vaccines must be kept at the right temperature to protect children in your community and avoid wastage.

2. Monitor the refrigerator temperature twice daily, including weekends
   - Set refrigerator thermostat so temperature is around 8°C at the hottest part of the day.
   - Once refrigerator temperature stays between 2°C and 8°C, do not adjust the thermostat.
   - Every morning, and again during the hottest part of the day, read the current temperature on the Fridge-tag.
   - Immediately record the temperature on the Fridge Tag Temperature Recording Sheet.
   - Make your own recording sheet if none is available.

3. Take action if the fridge is too warm or too cold
   - A. If the refrigerator temperature is above 8°C
      - Protect the vaccines
      - Relocate the vaccines to prevent further heat exposure.
      - Transfer the vaccines to one or more of these:
        - Another vaccine fridge at the facility
        - Cold boxes or vaccine carriers with chilled water packs
        - A near-by vaccine storage facility
      - Discard the damaged vaccines from the usable
      - Check the VVM of all vaccine vials.
      - Document and discard all vials with the VVM at stage 3 or 4 (see below).
      - Involve a supervisor if possible.
      - Fix the underlying problem -- this is crucial.
      - Check to see if the electric cable is unplugged.
      - If there has been a power outage, and the fridge has a reset button, hit the reset button once the power returns.
      - If the fridge door is not fully closed, close it correctly.
      - If the thermostat is set too low, set it between 2°C and 8°C.
      - If so, plug it in.
      - If the fridge door is not well-sealed, replace the seal.
      - If the fridge has stopped working properly, fix the underlying problem.
      - If the thermostat is set too high, set it to between 2°C and 8°C.
      - If the fridge is too warm, open the door to let air in.

   - B. If the refrigerator temperature is below 2°C
      - Safeguard the freeze-sensitive vaccines
      - Immediately relocate all liquid vaccines to prevent further freeze exposure.
      - If vaccines or the Fridge-Tag are incorrectly stored in the fridge (e.g., too close to the wall, at the bottom of an Ice Lined Refrigerator, or close to freezing compartment), put them in the recommended places (see Figure 1).
      - If the fridge temperature is below 2°C, put them in the recommended places (see Figure 1).
      - Fix the underlying problem, contact your supervisor to have the thermostat repaired by a technician.
      - Document and inform relevant people whenever the temperature falls out of the acceptable range of +2°C to +8°C.
      - On the monitoring chart, document the characteristics of the alarm, the diagnosis, and the actions taken.
      - Contact the cold chain technician supporting the facility if the fridge needs repair.
      - Inform the relevant EPI manager/focal person urgently if the problem is significant or urgent (e.g., vaccine fridge not safe or not functional, significant vaccine loss).

4. Check the VVM after a fridge problem and before transporting or opening the vial
   - Follow the guidelines in Figure 4 to determine whether to discard the vaccine.

The facility head, cold chain manager, EPI focal person, and other responsible staff should review the temperature recording sheet together at least monthly and address any problems.

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**Figure 1. Arranging vaccines in top opening refrigerators**

**Figure 2. FridgeTag**

**Figure 3. Fridge Tag Temperature Recording Sheet**

**Figure 4. Vaccine Vial Monitor Instructions**