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.

1. Stock the vaccines and diluents properly. For front opening fridges:
   - Label shelves with what should be on them.
   - Stack vaccines closer to expiry and with VVM stage 2 in the front to use first.
   - Keep space between boxes so cold air can circulate between them.
   - Store opened and returned vials in a box marked “use-first.”
   - Store diluent at least 24 hours before use.
   - Open the door as infrequently as possible.
   - Never store vaccine or diluent in the freezer.
   - Separate out vaccines to be discarded: Discard:
     - vials that are expired
     - vials with the VVM at stage 3 or 4
     - vials of PCV, BCG and measles vaccine opened for more than 6 hours or at end of RI session
   - Follow the wirsed policy for vaccine disposal.
   - Use the vaccine fridge only for vaccines, diluents, and water packs.

2. Monitor the refrigerator temperature twice daily, including weekends:
   - Set fridge thermostat so temperature is around 8° at the hottest part of the day.
   - 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°:
      - Protect the vaccines
        Relocate the vaccines to prevent further heat exposure. Deal with heat-sensitive vaccine first (OPV, then BCG & Maxima).
        - 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
      - Separate 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 so, plug it in.
        - 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 fridge door is not well-sealed, clean or replace the seal.
        - If the thermostat is set too high, set it to between 2° and 8°
        - If the fridge has stopped working properly, fix the underlying problem – such as
          - Plugging in the fridge.

   B. If the refrigerator temperature is below 2°:
      - Safeguard the freeze-sensitive vaccines
        Immediately relocate all liquid vaccines to prevent further freeze exposure. Dual first with freeze-sensitive vaccines (Pentavalent, TT, PCV, Rota and IPV).
        - 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
      - Separate the damaged vaccines from the usable:
        - Discard any vials frozen solid
      - Fix the underlying problem – this is crucial:
        - If the thermostat is set too low, set it between 2° and 8°.
        - If the fridge or the Fridge-Tag are incorrectly stored in the fridge (e.g., too close to the wall, at the bottom of the fridge, too close to the wall of a room), contact your supervisor.

C. Document and inform relevant people whenever the temperature falls out of the acceptable range of -4° 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., the vaccine fridge was not replaced 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.