

UNIVERSAL IMMUNIZATION PROGRAMME

Standard

**Operating
Procedure**

**For Cold Chain Maintenance
in Walk-in-Cooler (WIC)
Walk-in- Freezer (WIF)
Ice Lined Refrigerator (ILR)
Deep freezer (D/F)**

Cold Chain

Key points:

- Vaccines lose their potency due to either exposure to excessive heat or excessive cold (some vaccines like DPT, TT, Hept.B), or light (some vaccines like BCG).
- Store OPV in the temperature range of (-) 25 to (-) 15°C & all other vaccines in +2 to 8°C in state, regional and district stores. At CHC/PHC all vaccines in +2 to 8°C.
- Once a vaccine loses its potency due to heat or freezing, it can no longer protect individuals from a disease and therefore is useless.
- Vaccine potency once lost cannot be restored.
- Never use damaged vaccines as it gives a false sense of security to the beneficiaries.
- Reconstituted BCG and Measles Vaccines should not be used beyond 4 hours & JE vaccine beyond 2 hours from the time of its reconstitution.

WIC/WIF

Do's

1. Stack vaccines only on selves.
2. Stack vaccines to allow circulation of air between boxes of vials. Leave at least 5 cm gap between a vaccine box and wall of the cold room.
3. Indicate batch no. vaccine name, and expiry date on the shelves as ready reference of easy retrieval of vaccine
4. Store OPV in WIF; all other vaccines in WIC.
5. Always wear warm cloth when entering cold room. It should include a jacket, trouser, gloves and a cap.
6. Monitor cold room temperature continuously and record at least twice a day.

Don'ts

1. Never Shut down cold room while loading or unloading vaccines.
2. Never Over load cold room.
3. Never Store vaccines on the floor or under the evaporator.
4. Never store freeze-sensitive vaccines in front of the evaporator.

ILR & D/F

Do's

1. Keep the equipment in a cool room away from direct sunlight and at least 10 cms away from the wall.
2. Keep the equipment properly leveled.
3. Fix the plug permanently to the socket
4. Use voltage stabilizer.
5. Keep the vaccines neatly stacked with space between the stacks for circulation of air.
6. Keep the equipment locked and open it only when necessary.
7. Defrost periodically
8. Place thermometer in between vaccines, record the temperature twice a day.
9. Outside the equipment paste a notice that helps the user during a break down.
10. Keep freeze sensitive vaccine and close expiry vaccines at TOP of the Basket

Don'ts

1. Do not open the top un-necessarily. (Paste this message on the top of the ILR)
2. Do not keep food or drinking water in the DFs/ILR
3. Do not keep more than one month's requirement at PHC headquarters and 3 months requirement at district level
4. Do not keep unusable vaccines (expired, frozen, VVM in discard stage etc.)
5. Do not sit on any cold chain equipment.
6. Do not disturb thermostat setting frequently.
7. Do not keep diluents in D/F

Voltage Stabilizer and Control panel of ILR/DF

Voltage stabilizer:

1. **Voltmeter:-** display the input and output voltage
2. **Green light:** display the status of power input.
3. **Selector switch:** used for selection for input and output display.
4. **Miniature Circuit Breaker:** Auto cut off at the time of overloading of cold chain equipment.
5. **Delay Timer Push Button:** The push button can be used for instant starting of equipment without delay period.

Control Panel – ILR/DF

1. **Green light:-** It shows that electric power is available up to the equipment from stabilizer.
2. **Red light :-** indicates that the temperature inside the equipment is **not** in safe range.
3. **Thermometer** shows the inside bottom temperature of equipment
4. **Yellow switch** is a thermostat by pass switch used when the ambient temperature is more than 45o C or requires lowering down inside temperature quickly.
5. **Thermostat:** It is used to monitor the inside temperature of the vaccine.

Diesel Generator

Do's

- 1. Keep at least 1 meter away from the surrounding walls**
- 2. Should operate only on the leveled surface.**
- 3. Always use recommended lubricating oil by the manufacturers depending upon the ambient temperature**
- 4. Always Keep at least 72 hrs running fuel in the fuel tank.**
- 5. Always keep battery in fully charged condition.**

Don'ts

- 1. Never run the DG set in close area. Ensure the smoke is released in the open area at a sufficient height outside the building where WIC/F is installed.**
- 2. Never run the D.G set without proper earthing.**

Vaccine Vial Monitor

Key points:

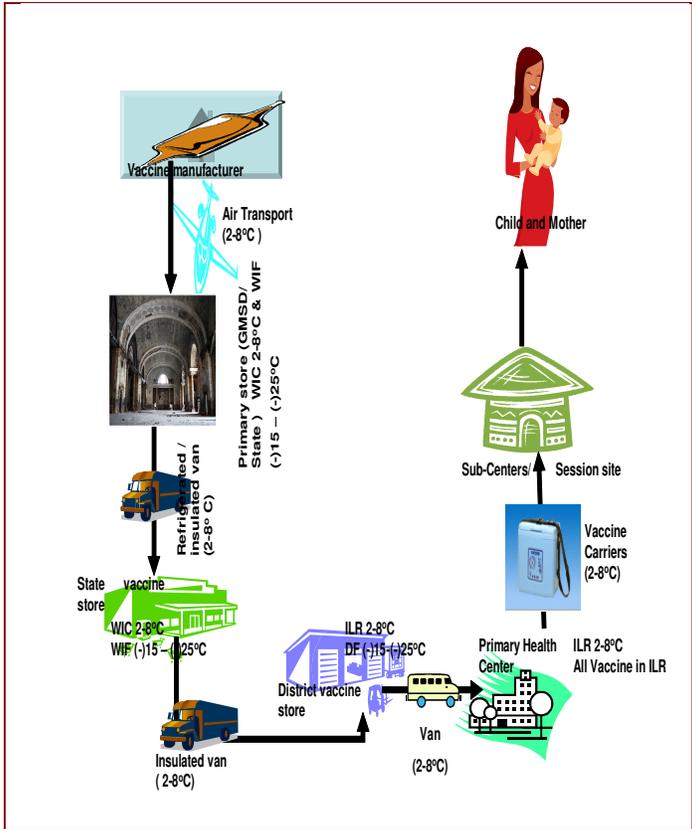
VVM has only two stages, **START POINT** and **END** point based in VVM colour.

The square is lighter than the circle- Expiry date is not passed **USE** the vaccine



The square matches or darker than the circle- **DO NOT USE** the vaccine

COLD CHAIN SYSTEM



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