Module 2

Inactivated poliovirus vaccine (IPV) attributes and storage requirements
Learning objectives

- At the end of the module, the participant will be able to:
  - Describe the main attributes of IPV
  - Describe the correct storage conditions for IPV

- Duration
  - 15 minutes
Key issues

1. What is inactivated poliovirus vaccine (IPV)?
2. At which temperature should IPV be stored?
3. Where should IPV be stored?
4. How safe is IPV?
What is the presentation of inactivated poliovirus vaccine (IPV)?

- Liquid suspension providing protection against all 3 types of poliovirus
- Multi dose vials, 10 doses per vial
- Does not require reconstitution
- Preservatives in multi-dose vials of IPV do not meet WHO requirements to preserve the vaccine for 28 days
- Multi-dose vials of this vaccine must be discarded at the end of the immunization session or within 6 hours after opening, whichever comes first
IPV has high heat sensitivity

- IPV has greater susceptibility to heat than many existing heat sensitive vaccines
- VVM on IPV may change color faster than other vaccines
- Proper temperature monitoring and stock management is required to avoid wasting IPV vials with VVM reaching the discard point
- While the “earliest expiry, first out” principal usually applies in vaccine stock management, the status of a VVM overrules this, whereby any batch showing a darker VVM should be used sooner, regardless of a later expiry date
IPV is freeze sensitive (unlike OPV)

- The “shake test” is **not** effective in determining whether IPV has been frozen.
- Therefore it is very important that if there is **any** suspicion that IPV has been frozen, the vial **must** be discarded.
Where do you store the vaccine?

- Store IPV in a refrigerator, between $+2^\circ C$ and $+8^\circ C$
- Do not open the door frequently
- Monitor fridge temperature regularly
- Do not put IPV in the freezer
Storing Principles

- Maintain the cartons in a neat row
- Store similar vaccines in the same area to facilitate easy identification
- Keep ~2 cm of space between rows for circulation of air
- Record the period of time the vaccine stays in storage without being used
- In top-opening refrigerators, store IPV and other freeze-sensitive vaccines on top.
- In front-opening refrigerators store IPV and other freeze-sensitive vaccines on the lower shelves
- For cold boxes and carriers, IPV may be freeze damaged if placed in close contact with icepacks.
- Keep icepacks at room temperature before placing them in the cold boxes and carriers.
Which vaccine should be stored in front?

**Earliest Expiry First Out (EEFO) Principle**

Vaccines with earlier expiration dates and VVM at or near Stage 2 should be kept in front and used first.

Vaccines with later expiration dates should be stored in the back.

---

Inactivated poliovirus vaccine attributes and storage conditions, Module 2 | 05
November 2014
For some VVMs on IPV vials, the inner square is getting darker but is still lighter than outer square

What should you do?
What should you do?

The refrigerator stops functioning

What should you do?
How safe is IPV vaccine?

- IPV is one of the safest vaccines
- Infrequently reported side effects: swelling, redness and pain at injection site, fever and discomfort
- IPV may be given with other vaccines in the infant Expanded Program on Immunization (EPI) schedule without interfering with their effectiveness
- Incidence of Adverse Events does not increase when IPV is given in the same session (either as stand-alone or in combination vaccines)
Key messages

- IPV is a liquid, injectable formulation
- IPV should be discarded after 6 hours and hence the MDVP does not apply
- Vaccine comes in 10 dose vials
- Injection site soreness and fever are most common reactions
- Store vaccines between +2°C and +8°C, never freeze
- “Shake Test” is ineffective in determining whether IPV has been frozen
- Keep vaccines with early expiration dates and VVM at or near stage 2 in front of the refrigerator and use first
- Regularly monitor the temperature of the refrigerator
End of module

Thank you for your attention!