

## THE SWITCH OFF TOPV TO BOPV: IMMUNIZATION UPDATE FOR STAFF AND STUDENT NURSES

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### ABSTRACT

*Poliomyelitis is a dangerous infectious disease affected by a virus that penetrate the nervous system. It lives in the throat and intestinal tract & most often spread through person-to-person contact by stool of an infected person and by secretions oral or nasal ,< 1% of polio cases result in permanent paralysis of the limbs (usually the legs) in this 5-10% of peoples die with paralysis of respiratory muscles. Paralysis can lead to permanent disability and death. Two types of vaccines are available in all Government Hospitals to prevent polio attack ,that are oral polio vaccine (OPV) and inactivated polio vaccine (IPV) both contains all three serotypes of polio virus such as type 1 polio virus, type 2 poliovirus, and type 3 polio virus .Polio vaccines are safe.*

**KEYWORDS:** OPV, bOPV, tOPV, Poliomyelitis

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### INTRODUCTION



**Figure 1**

The first polio vaccine was the inactivated polio vaccine (IPV) or Salk vaccine developed by Joan Salk in 1955. Second polio vaccine was developed by Albert Sabin in 1961, the vaccine named as oral polio vaccine (OPV) or “Sabin vaccine”. OPV Consists of a mixture of live attenuated polio virus of all three polio virus 1, 2 and 3. Oral polio vaccines are given to the child by mouth to prevent poliomyelitis. Reduced number of poliomyelitis cases was reported each year from an estimated 350,000 in trivalent oral polio vaccine 1988 dropped to 359 in 2014.

OPV produces antibodies in the blood to all three types of polio virus. During infection produced antibodies are protects against paralysis by preventing the spread of polio virus to the nervous system. OPV also produces a local, immune response in the mucous membrane of the intestines, during infection mucosal antibodies are limits the penetration of the polio virus inside the intestine. This intestinal immune response to OPV is main

reason that can rapidly stop person-to-person transmission of polio virus.

### “WHO” SCHEDULE FOR “OPV”

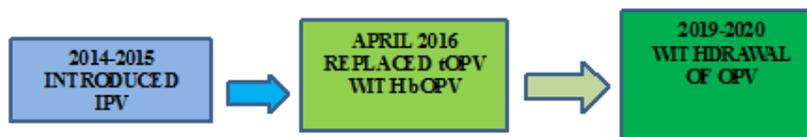


Figure 2

### Reason for Replacing TOPV with BOPV

In routine immunization programme tOPV contains polio virus 1,2 and 3. OPV is very effective against the virus, but in very rare cases can lead to paralysis through circulating vaccine-derived polioviruses (cVDPVs) and vaccine-associated paralytic polio (VAPP). Even though type 2 has been eradicated worldwide, vaccine-related type 2 viruses continue to carry more risks than benefits. The last case was detected for wild polio virus type 2 in 1999, hence wild polio virus type 2 was completely eradicated. So second polio virus was planned and removed from tOPV. Hence needed to replace tOPV with bOPV. From May 2016 tOPV was not used in immunization programme-routine as well supplementary.

### Introduction of IPV for Routine Immunization Strengthening

The introduction of IPV will help to reduce risks associated with the withdrawal of OPV type 2. Children should be vaccinated at least one dose of inactivated polio vaccine (IPV) at between the following ages:

- A dose at 2 months
- A dose at 4 months
- A dose at 6-18 months
- A booster dose at 4-6 years

### Introduction of IPV Helps To

- Reduce associated risks with type 2 polio virus
- Interrupt transmission of polio and outbreaks
- Do polio eradication.

### Reference Guide for IPV

Table 1

AGE OF CHILD	MODE OF DOSE
2months	Actual/normal dose
4months	Actual/normal dose
6-18months	Actual/normal dose
4-6years	Booster dose

## **CONCLUSIONS**

The Staff Nurses and Student Nurses must know about the updates of Immunization. Health care professionals must update their knowledge to have healthy communication and be able to respond to the parents' questions, giving clarifications to the parents as well as educating them about Immunization to protect the child.

## **REFERENCES**

1. *Indian Academy of Pediatrics Committee on Immunization (IAPCOI). Consensus recommendations on immunization and IAP immunization timetable 2012. Indian Pediatr. 2012;49:549-64.*
2. *Vashishtha VM, Choudhury P, Bansal CP, Yewale VN, Agarwal R. editors. IAP Guidebook on Immunization, 2013-2014. National Publication House, Indian Academy of Pediatrics, Gwalior, 2014.*
3. *Vashishtha VM, Yewale VN, Bansal CP, Mehta PJ. IAP perspectives on measles and rubella elimination, strategies. Indian Pediatr. 2014;51:719-22*

