Republic of the Philippines
Department of Health
OFFICE OF THE SECRETARY

May 21, 2015

DEPARTMENT MEMORANDUM
No. 2015 - 0164

FOR: **ALL UNDERSECRETARIES, ASSISTANT SECRETARIES, DIRECTORS OF BUREAUS, DOH-REGIONAL OFFICES, AND SPECIALTY HOSPITALS, CHIEFS OF MEDICAL CENTERS AND HOSPITALS, AND OTHERS CONCERNED**

SUBJECT: **Administration of Inactivated Poliomyelitis virus Vaccine (IPV)**

Poliomyelitis is a highly infectious disease caused by the poliovirus which mainly affects under-five children. The best way to prevent polio is with immunization. Initial symptoms of poliomyelitis include fever, fatigue, headache, vomiting, stiffness in the neck, and pain in the affected limbs. Poliovirus invades the nervous system with one in 200 infections leading to irreversible paralysis (usually in the legs).

The global number of polio cases have decreased by over 99% since 1988, from an estimated 350,000 cases in more than 125 endemic countries then, to 356 reported cases in 2014. These included 337 cases in endemic countries; international spread from endemic areas into polio-free areas accounted for the remainder. In 2014, only parts of 3 countries in the world remain endemic for the disease–the smallest geographic area in history. Of the 3 strains of wild poliovirus (type 1, type 2, and type 3), wild poliovirus type 2 has been eradicated since 1999 and case numbers of wild poliovirus type 3 are down to the lowest levels with the last case reported in November 2012 from Nigeria. Until poliovirus transmission is completely stopped in polio-endemic countries, polio-free regions remain at risk.

In the Philippines, the last wild poliovirus was recorded in 1993. The country enjoyed polio-free status along with the other countries of the Western Pacific when the Region was certified polio-free in year 2000.

In May 2012 the World Health Assembly (WHA) declared the completion of the poliovirus eradication to be a programmatic emergency for global public health and called for a development of a comprehensive Polio Endgame Strategy. The Polio Eradication and Endgame Strategic Plan 2013-2018, endorsed by the WHA was developed to eradicate both wild polioviruses and vaccine-derived polioviruses.

As part of its major objectives, the Endgame Plan calls on countries to strengthen their immunization programme, introduce at least 1 dose of Inactivated Polio Vaccine (IPV) in the routine immunization schedules by the end of 2015 and shift from using trivalent Oral Polio Vaccine (tOPV) to bivalent OPV (bOPV) by 2016.

Introducing IPV is a key element of the Endgame Plan and global readiness to manage risks associated with the cessation of type 2 Oral Polio Vaccine (OPV2). The primary role of IPV will be to maintain immunity against type 2 poliovirus while removing OPV2 from routine immunization globally. More specifically, IPV needs to be introduced for the following reasons:

- **To reduce risks.** Once OPV2 is withdrawn globally, IPV will help fill the immunity gap by priming population against type 2 poliovirus should it be reintroduced. A region immunized with IPV would have a lower risk of re-emergence or reintroduction of wild and vaccine-derived type 2 poliovirus.

- **To interrupt transmission in the case of type 2 polioviruses outbreaks.** Should monovalent OPV2 (mOPV2) be needed to control an outbreak, especially after the shift from tOPV to bOPV, the immunity levels needed to stop transmission will be easier to reach with a population vaccinated with IPV compared a population completely unvaccinated with Type 2 OPV. Thus introducing IPV now could facilitate future outbreak control.

- **To hasten eradication of polioviruses.** IPV will boost immunity against poliovirus types 1 and 3 in children who have previously received OPV, which could further hasten the eradication of these two wild polioviruses.

A. Coverage

All infants at 14 weeks of age (3 ½ months). This shall be integrated in the essential vaccination of all infants.

B. New Recommended Schedule of Poliovirus Vaccine Immunization

1. The new primary infant immunization series consist of three (3) doses of OPV plus one dose of IPV. Infants shall receive OPV and IPV following the recommended schedule below:

Dose	Minimum Age to be Given	Vaccine	Route and Dosage
1st dose	1 ½ months (6 weeks)	OPV (oral polio vaccine)	Oral; 2 drops into the child's mouth
2nd dose	2 ½ months (10 weeks)	OPV (oral polio vaccine)	Oral; 2 drops into the child's mouth
3rd dose OPV and one dose IPV given together	3 ½ months (14 weeks)	OPV (oral polio vaccine)	Oral; 2 drops into the child's mouth
		IPV (inactivated polio vaccine)	0.5ml, intramuscular, LEFT upper thigh

C. Co-administration of IPV

IPV should **always** be co-administered with OPV3 during the routine immunization schedule. IPV and OPV given together enhance infant's protection against poliovirus infection.

In fact, IPV can safely be administered at the same time as other routine childhood vaccination if administered in a separate syringe at a separate injection site. Other vaccines where IPV can be safely administered are Pneumococcal Conjugate Vaccine (PCV), Rotavirus vaccine (RV) and Pentavalent (DPT-HepB-Hib) vaccines.

D. Contraindications

- IPV should **not** be given to anyone who has had a severe allergic reaction (anaphylaxis) to a previous dose or to any component of the vaccine.
- Infants with moderate or severe illness (Temperature $\geq$ 39 °C) should not be vaccinated until they have improved.
- Mild illness such as upper respiratory tract infections is **not** a contraindication.

E. Follow up immunization of OPV3 defaulters among children under-one year old

IPV should always be given along with OPV3, together with Penta3 and PCV3 at 14 weeks (3 ½ months) old.

However, if this schedule is missed, immunize defaulters with OPV3 and one dose of IPV, together with Penta3 and PCV3 before the infant turns 1 year.

F. Inactivated Polio vaccine (IPV)

IPV is presented as a 0.5ml suspension for injection. It is supplied as a 5 ml multi-dose vial, 10 doses per vial with vaccine vial monitor (VVM).

In using the IPV, the vial should be shaken before use. Check the VVM and expiry date for validity. Draw up 0.5ml with an auto-disable syringe (ADS). Keep the vaccine cool with other vaccines during the session.

Before administering the IPV, the health worker shall:

- Ensure that the infant is at least 3½ months of age or 14 weeks of age before providing a dose of IPV with OPV3.
- Determine the infant's eligibility to receive the 3rd dose of OPV, PCV and Pentavalent vaccines.
- Establish if the infant does not have high fever ($\geq$39 °C) before administering the vaccines.
- Screen each infant for contraindications such as allergies to any previous vaccine prior to vaccine administration or immunocompromised children.

G. Storage and Transport of the IPV

DOH shall provide the Inactivated Polio Vaccines (IPV) to all the health facilities offering immunization services through the DOH Regional Offices (DOH-ROs).

IPV should be stored between +2°C to +8°C and should never be frozen. Strictly, conduct a twice a day temperature monitoring in every vaccine storage.

The Multi-Dose Vial Policy can be used with the IPV 10 dose vial product.

H. Immunization Safety and Adverse Events Following Immunization (AEFI)

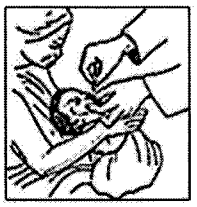
IPV is safe and well tolerated. Local reactions (erythema, induration or tenderness of the injection site) are usually mild and transient in nature. Systemic adverse reactions reported in infants receiving IPV concomitantly at separate sites or combined with DPT-containing (Diphtheria Pertussis Tetanus) vaccines have been similar to those associated with administration of DPT-containing vaccines alone.

Pentavalent and PCV vaccines may be given at the same time as IPV, so children may also have reactions to these other vaccines. It may be difficult to tell which vaccine has caused the reaction. It is important to emphasize to parents that all vaccines are safe but may cause side effects.

The complete list of adverse reactions following vaccination of OPV, IPV, PCV and pentavalent vaccines can be found in Annex C.

Adverse reactions should be reported following the existing manual on Adverse Events Following Immunization (AEFI).

a. Proper administration of OPV3, Penta3, PCV and a dose of IPV.



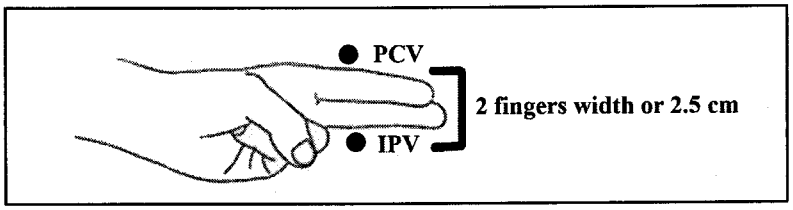
1. Give OPV

2. Penta R thigh

3. PCV L thigh

4. IPV L thigh

b. The distance between the PCV and IPV injection sites on the child's LEFT thigh should be two (2) fingers width (or 2.5 cm).



I. Recording and Reporting

Record the date and site of injection (LEFT thigh) for each dose of the IPV was administered to the infant in the immunization card of the infants/Mother and Child Book, Early childhood and development (ECCD) card and in the Target Client List (TCL).

A revised TCL and other immunization recording and reporting forms which include a space to record the IPV dose given to a child will be distributed. However, if using a TCL and other records without a column for IPV, make a line in the OPV3 column and use the other half to record IPV dose.

Include in the monthly, quarterly and summary FHSIS reporting the number of infants given the OPV1, OPV2, OPV3 and IPV. The indicators shall be calculated as follows:

a) % of infants given OPV1 = $\frac{\text{\# of infants given OPV1}}{\text{Total \# of infants 0-11 months old}}$ x 100

b) % of infants given OPV2 = $\frac{\text{\# of infants given OPV2}}{\text{Total \# of infants 0-11 months old}}$ x 100

c) % of infants given OPV3 = $\frac{\text{\#of infants given OPV3}}{\text{Total \# of infants 0-11 months old}}$ x 100

d) % of infants given IPV = $\frac{\text{\# of infants given IPV}}{\text{Total \# of infants 0-11 months old}}$ x 100

For strict compliance.

By authority of the Secretary of Health

VICENTE Y. BELIZARIO JR., MD, MTM&H
Undersecretary of Health
Office for Technical Services

ANNEX A: Infants Immunization Schedule

Vaccines	Route & Site of Administration	Age of the Child					
		At Birth	1 ½ months	2 ½ months	3 ½ months	9 months	12 months
BCG	Intradermal (upper arm)	✓					
Hepatitis B	Intramuscular (upper thigh)	✓					
DPT-HepB-Hib	Intramuscular (upper right thigh)		✓	✓	✓		
OPV	Oral (mouth)		✓	✓	✓		
IPV	Intramuscular (upper left thigh)				✓		
Rotavirus	Oral (mouth)		✓	✓			
PCV	Intramuscular (upper left thigh)		✓	✓	✓		
Measles	Subcutaneous (upper arm)					✓	
MMR	Subcutaneous (upper arm)						✓

ANNEX B: Summary of the Multi-Dose Vial Policy (MDVP) 2014

All opened WHO-prequalified multi-dose vials of vaccines should be discarded at the end of the immunization session, or within six hours of opening, whichever comes first, UNLESS the vaccine meets all four of the criteria listed below. If the vaccine meets the criteria, the opened vial can be kept and used for up to 28 days after opening.

The criteria are as follows:

1. The vaccine is approved for use for up to 28 days after opening the vial, as determined by WHO.†
2. The expiry date of the vaccine has not passed.
3. The vaccine vial has been, and will continue to be, stored at WHO- or manufacturer recommended temperatures;
4. The vaccine vial monitor, if one is attached, is visible on the vaccine label and is not past its discard point, and the vaccine has not been damaged by freezing.

ANNEX C: Vaccine Adverse Reactions

Vaccine Type and Reactions	Frequency Category	Expected rate of reaction	Estimated number* of AEFI cases per reaction
1. Oral Polio Vaccine			
Vaccine Associated Paralytic Polio (VAPP)			
a. Recipient VAPP	Very rare	<1/10,000 (<0.01%)	<2,748
b. Contact VAPP	Very rare	<1/10,000 (<0.01%)	<2,748
2. Inactivated Polio Vaccine (IPV)			
Injection site erythema	Uncommon to Common	>1/1,000 & <1/100 (0.1% & <1%) to	2,748 to <27,478
		>1/100 & <1/10 (>1% & <10%)	>27,478 to <274,784
Injection site induration	Common to Very common	>1/100 & <1/10 (>1% & <10%) to	>27,478 to <274,784
		>1/10 (>10%)	>274,784
Injection site tenderness	Very common	>1/10 (>10%)	>274,784
3. Pneumococcal Conjugate Vaccines			
Fever > 39oC	Uncommon	>1/1,000 & <1/100 (0.1% & <1%)	2,748 to <27,478
Injection site reaction	Very common	>1/10 (>10%)	>274,784
4. Diphtheria-Tetanus-wPertussis (DTPw)			
Fever 100.1oF - 102oF	Very common	>1/10 (>10%)	>274,784
Injection site Redness	Very common	>1/10 (>10%)	>274,784
Swelling	Very common	>1/10 (>10%)	>274,784
Pain (Severe-Moderate)	Very common	>1/10 (>10%)	>274,784
Fussiness (Severe-Moderate)	Very common	>1/10 (>10%)	>274,784
Drowsiness	Very common	>1/10 (>10%)	>274,784
Anorexia	Very common	>1/10 (>10%)	>274,784
Vomiting	Common	>1/100 & <1/10 (>1% & <10%)	>27,478 to <274,784
Persistent screaming	Uncommon to Rare	>1/1,000 & <1/100 (0.1% & <1%) to	2748 ot <27,478
		>1/10,000 & <1/1,000 (>0.01% & <0.1%)	>275 to <2748
Hypotonic Hyporesponsive Reaction	Very rare	<1/10,000 (<0.01%)	<275
Seizures	Very rare	<1/10,000 (<0.01%)	<275
Encephalopathy	Very rare	<1/10,000 (<0.01%)	<275
5. Haemophilus Influenza b (Hib)			
Fever	Common	>1/100 & <1/10 (>1% & <10%)	>27,478 to <274,784
Injection site reaction	Very common	>1/10 (>10%)	>274,784
6. Hepatitis B Vaccines			
Fever	Common	>1/100 & <1/10 (>1% & <10%)	>27,478 to <274,784
Headache	Common	>1/100 & <1/10 (>1% & <10%)	>27,478 to <274,784
Injection site pain	Common to Very common	>1/100 & <1/10 (>1% & <10%) to	>27,478 to <274,784
		>1/10 (>10%)	>274,784
Injection site redness	Common	>1/100 & <1/10 (>1% & <10%)	>27,478 to <274,784
Injection site swelling	Common	>1/100 & <1/10 (>1% & <10%)	>27,478 to <274,784
Anaphylaxis	Very rare	<1/10,000 (<0.01%)	<275

Note: The estimated number of AEFI cases per reaction indicated in the table is based on 2015 estimated population. This estimates will change relative to the change in population.