

Childhood Immunization Schedule 2016

Cynthia A. Aguirre MD., FPPS, FPIDSP

Committee on Immunization 2015

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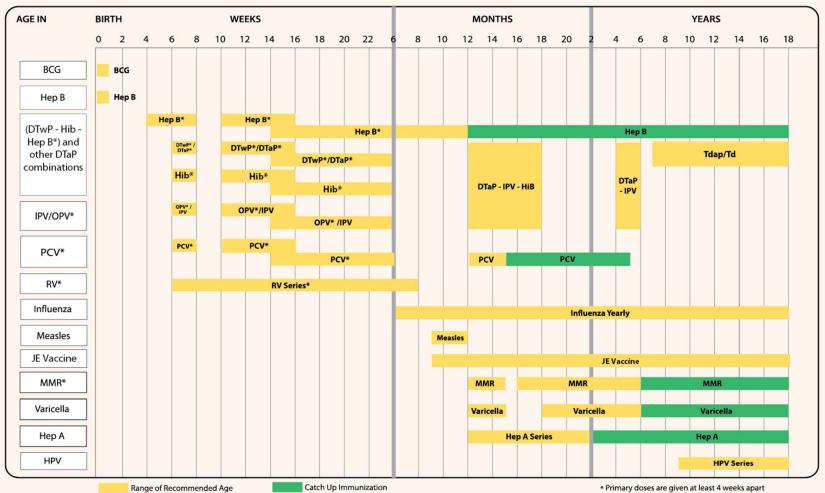
OUTLINE :

- Changes in 2016 Childhood Immunization Schedule
- Interim Dengue Recommendation
- PPS/PIDSP/PFV Position Paper on Combination Vaccine Shortage 2015

Changes in the Childhood Immunization Schedule 2016



- EPI changed to NIP
- Include a separate NIP annotation
- > JE vaccine included in the recommended vaccine group
- Quadrivalent influenzae vaccine included in influenza vaccine recommendation
- Hib recommendation for high risk children included in vaccines for high risk/special groups



Childhood Immunization Schedule 2016

The National Immunization Program (NIP) consists of the following antigens:

- BCG vaccine, single dose given at birth
- Monovalent Hepatitis B vaccine given at birth

• DPT-Hib-Hep B vaccines, 3 doses given at 6-10-14 weeks of age

Oral polio vaccine(OPV), 3 doses given at 6-10-14 weeks of age.

A single dose of Inactivated polio vaccine (IPV) is given with the third dose of OPV at 14 weeks. • Pneumococcal conjugate vaccine (PCV), 3 doses given at 6-10-14 weeks of age

Measles containing vaccine (either monovalent or MMR) given at 9 months of age

Measles-Mumps-Rubella (MMR) vaccine given at 12 months of age

• Rotavirus vaccine given at a minimum age of 6 weeks with minimum interval of 4 weeks between doses. The last dose should be administered not later than 32 weeks.

A school based immunization program to provide catch-up doses for school children and adolescents has been established. Measles-Rubella (MR) vaccine and Tetanus-Diphtheria (Td) vaccines are administered to Grade 1 and Grade 7 students enrolled in public schools.

Human Papillomavirus Vaccine (HPV) shall be given to female children 9-10 years old at health facilities in priority provinces. Quadrivalent HPV 2 doses are given at 0, 6 months.

DISCI AIMER:

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Immunization Schedule Poster Actual Size: 36" x 24" (w x h)



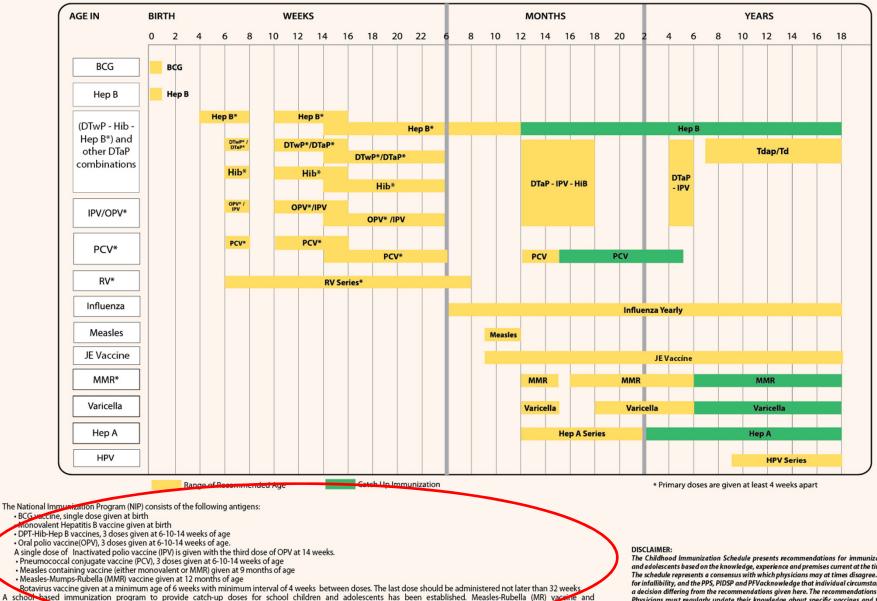
Schedule ng Pagbibigay ng Bakuna para sa mga Batang Isang Taon Pababa NIREREKOMENDANG EDAD NG BATA **SAKIT NA** BAKUNA 21/2 11/2 31/2 9 1 MAIIWASAN BUWAN BUWAN **BUWAN** TAON BCG **Tuberkulosis HEPATITIS B Hepatitis B** Dipterya, Tetano, PENTAVALENT VACCINE (DPT-Hep B-Hi B) Hepatitis B, Pertussis **ORAL POLIO VACCINE (OPV)** Polio INACTIVATED POLIO VACCINE (IPV) Polio PNEUMOCOCCAL CONJUGATE Pulmonya, Meningitis VACCINE (PCV) Tigdas, Beke, MEASLES, MUMPS, RUBELLA (MMR) German Measles

Ang mga bakunang wala dito ay maaring makuha mula sa pribadong ospital o doktor.

MGA PAALALA

Nagsisimula ang pagbabakuna ng bata sa kapanganakan. Sundin ang schedule ng bakuna at siguruhing makumpleto ang mga ito hanggang sumapit ang kanyang unang kaarawan. Kung sakaling hindi nakumpleto and bakuna, maari pa ring bigyan ng pahabol na bakuna ang bata. Humingi ng payo sa health center tungkol dito.

Pag Kumpleto, Protektado



Childhood Immunization Schedule 2016

Tetanus-Diphthenic (Td) vaccines are administered to Grade 1 and Grade 7 students enrolled in public schools. Human Papillomavirus Vactme (UPV) shall be given to female children 9-10 years old at health facilities in priority provinces. Quadrivalent HPV 2 doces are given at 0, 6 months. The Childhood Immunization Schedule presents recommendations for immunization for children and adolescents based on the knowledge, experience and premises current at the time of publication. The schedule represents a consensus with which physicians may at times disagree. No claim is made for infallibility, and the PPS, PIDSP and PFVacknowledge that individual circumstances may warrant a decision differing from the recommendations given here. The recommendations are not absolute. Physicians must regularly update their knowledge about specific vaccines and their use because information about safety and efficacy of vaccines and recommendations relative to their administration continue to develop after a vaccine is licensed.

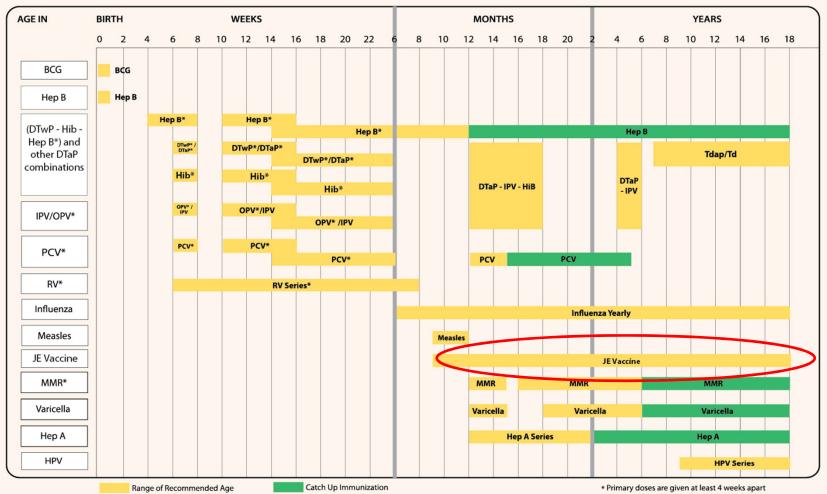
National Immunization Program (NIP)

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- Monovalent Hepatitis B vaccine given at birth
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- Pneumococcal conjugate vaccine (PCV), 3 doses given at 6-10-14 weeks of age
- Rotavirus vaccine given at a minimum age of 6 weeks with a minimum interval of 4 weeks between doses. The last dose should be administered not later than 32 weeks of age.
- Measles –containing vaccine (either monovalent measles vaccine or MMR) given at 9 months of age
- > Measles-Mumps-Rubella (MMR) vaccine given at 12 months of age

National Immunization Program (NIP)

- A school based immunization program to provide catch-up doses for school children and adolescents has been established . Measles-Rubella (MR) and Tetanus-Diphtheria (Td) vaccines are administered to Grade 1 and Grade 7 students enrolled in public schools
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OTHER VACCINES:

Bacillus Calmette-Guarin (BCG)

Given intradermally (ID)

The dose of BCG is 0.05 ml for children < 12 months of age and 0.1 ml for children > 12 months of age

Given at the earliest possible age after birth preferably within the first 2 months of age For healthy infants and children > 2 months who are not given BCG at birth, PPD prior to BCG vaccination is not necessary. However, PPD is recommended prior to BCG vaccination if any of the following is present:

Suspected congenital TB

History of close contact to known or suspected infectious cases

Clinical findings suggestive of TB and/or chest x-ray suggestive of TB

In the presence of any of these conditions, an induration of > 5mm is considered positive

Hepatitis B Vaccine (HBV)

Given intramuscularly (IM)

The first dose is given at birth or within the 1st 12 hours of life. The minimum interval between doses is 4 weeks. The final dose is administered not earlier than age 24 weeks. Another dose is needed if the last dose was given at age < 24 weeks. For preterm infants:

 If born to HBsAg (-) mothers and medically stable, the 1st dose of HBV may be given at 30 days of chronological age regardless of weight, and this can be counted as part of the 3-dose primary series.

 Another dose of HBV is needed for those < 2 kgs whose 1st dose was received at birth For infants born to HBsAg (+) mothers, administer HBV and HBIG (0.5ml) within 12 hours of life. HBIG should be administered not later than 7 days of age, if not immediately available.

For infants born to mothers with unknown HBsAg status:

 With birth weight ≥ 2 kgs, administer HBV within 12 hours of birth and determine mother's HBsAg as soon as possible. If HBsAg (+) administer HBIG not later than 7 days of age.

• With birth weight < 2 kgs., administer HBIG in addition to HBV within 12 hours of life.

Diphtheria and Tetanus Toxoid and Pertussis Vaccine (DTP)

Given intramuscularly (IM)

Given at a minimum age of 6 weeks with a minimum interval of 4 weeks The recommended interval between the 3rd and 4th dose is 6 months , but a minimum of 4 months is valid.

The 5th dose may not be given if the 4th dose was administered at age 4 years or older.

Haemophilus influenzae Type b Conjugate Vaccine (Hib)

Given intramuscularly (IM) Given as a 3-dose primary series with a minimum age of 6 weeks and a minimum interval of 4 weeks A booster dose is given between 12-15 months of age with an interval of 6 months from

the 3rd dose. Refer to Vaccines for Special Groups for Hib recommendation in high risk children

Inactivated Poliovirus Vaccine (IPV)

Given intramuscularly (IM) Given at a minimum age of 6 weeks with a minimum interval of 4 weeks The primary series consists of 3 doses A booster dose should be given on or after the 4th birthday and at least 6 months from the previous dose

Pneumococcal Conjugate Vaccines (PCV)

Given intramuscularly (IM) Given at a minimum age of 6 weeks Primary vaccination of PCV consists of 3 doses with an interval of at least 4 weeks between doses plus a booster dose given 6 months after the 3rd dose. Healthy children 2 to 5 years old who have no previous PCV vaccination may be given 1 dose of PCV13 or 2 doses of PCV10 at least 8 weeks apart. Routine use of PCV is not recommended for healthy children 5 years and above. Refer to Vaccines for Special Groups for Pneumococcal vaccine recommendation in high risk children

Rotavirus Vaccine (RV)

Given per orem (PO)

Given at a minimum age of 6 weeks with a minimum interval of 4 weeks between doses. The last dose should be administered not later than 32 weeks of age. The monovalent human rotavirus vaccine (RV1) is given as a 2-dose series and the pentavalent human bovine rotavirus vaccine (RV5) is given as a 3-dose series.

Influenza Vaccine (Trivalent/Quadrivalent)

Trivalent influenza vaccine given intramuscularly (IM) or subcutaneously (SC) Quadrivalent influenza vaccine given intramuscularly (IM) Given at a minimum age of 6 months The dose of influenza vaccine is 0.25 ml for children 6 months to 35 months and 0.3 cell for children 36 months to 18 years. Children 6 months to 8 years receiving influenza vaccine for the first time should receive 2 doses separated by at least 4 weeks. If only 1 dose was given during the previous influenza season, give 2 doses of the vaccine then 1 dose yearly thereafter. Children aged 9 to 18 years should receive 1 dose of the vaccine yearly. Annual vaccination should begin in February but may be given throughout the year.

Measles Vaccine

Given subcutaneously (SC) Given at the age of 9 months, but may be given as early as 6 months of age in cases of outbreaks as declared by public health authorities. In lieu of monovalent measles vaccine, MMR may be given if recommended by public health authorities.

Measles-Mumps-Rubella Vaccine (MMR)

Given subcutaneously (SC) Given at a minimum age of 12 mont. MMR may be given at an earlier age if recommended by public health authorities. The minimum interval between doses is at least 4 weeks: Two doses of MMR are recommended. The 2nd dose is usually given from 4-6 years of age but may be given earlier Children below 12 months of age given any measles containing vaccine (Measles, MR, MMR) should be given 2 additional doses

Varicella Vaccine

Given subcutaneously (SC) Given at a minimum age of 12 months Two doses of varicella vaccine are recommended. The 1st dose is given at 12-15 months of age. The 2nd dose is usually given at 4-6 years of age. • For children below 13 years old the recommended minimum interval between doses is

3 months. However, if the 2nd dose was administered at least 4 weeks after the 1st dose, it is considered valid.

 For children 13 years and above, the recommended minimum interval between doses is 4 weeks.

Measles-Mumps-Rubella-Varicella Vaccine (MMRV)

Given subcutaneously (SC) Given at a minimum age of 12 months MMRV may be given as an alternative to separately administered MMR and Varicella vaccine The maximum age is 12 years The recommended minimum interval between doses is 3 months

Hepatitis A Vaccine

Given intramuscularly (IM) Given as a 2 dose series at a minimum age of 12 months A 2nd dose is given at <u>least 6 months from the 1st</u> dose

Japanese Encephalitis Vaccine (JE)

Given subcutaneously (SC) Given at a minimum age of 9 months Children 9 months to 17 years of age should receive one primary dose followed by booster dose 12-24 months after the primary dose Individuals 18 years and older should receive a single dose only

Tetanus and Diphtheria Toxoid (Td)/ Tetanus and Diphtheria Toxoid and Acellular Pertussis Vaccine (Tdap)

Given intramuscularly (IM)

For children who are fully immunized*, Td booster doses should be given every 10 years. A single dose of Tdap can be given in place of a due Td dose and can be administered regardless of the interval since the last tetanus and diphtheria toxoid containing vaccine *Fully immunized is defined as 5 doses of DTP or 4 doses of DTP if the 4th dose was given on or after the 4th birthday

For fully immunized pregnant adolescent, administer one dose of Tdap vaccine anytime after 20 weeks age of gestation

For the unimmunized pregnant adolescent, give the 3-dose tetanus-diphtheria containing vaccine (Td/Tdap) following a 0-1-6 month schedule. Tdap should replace one dose of Td given preferably after 20 weeks age of gestation

Human Papillomavirus Vaccine (HPV)

Given intramuscularly (IM)

Primary vaccination consists of a 3-dose series with the minimum age of 9 years. The recommended schedule is as follows:

- Bivalent HPV at 0, 1 and 6 months
- Quadrivalent HPV at 0, 2, and 6 months

The minimum interval between the 1st and the 2nd dose is at least 1 month and the minimum interval between the 2nd and the 3rd dose is at least 3 months. The 3rd dose should be given at least 6 months from the 1st dose.

A 2-dose schedule is an option for girls 9 to 14 years of age, for both bivalent and quadrivalent vaccines. The doses are given at least 6 months apart.

The quadrivalent HPV can be given to males 9-18 years of age for the prevention of anogenital warts.

Japanese Encephalitis Vaccine (JE)

- Given subcutaneously
- Given at a minimum age of 9 months
- Children 9 months to 17 years of age should receive one primary dose followed by a booster dose 12-24 months after the primary dose
- Individuals 18 years and older should receive a single dose only



Japanese Encephalitis



WHO Map from International Travel and Health showing Japanese encephalitis countries or areas at risk (11)

PLOS | NEGLECTED TROPICAL DISEASES

RESEARCH ARTICLE

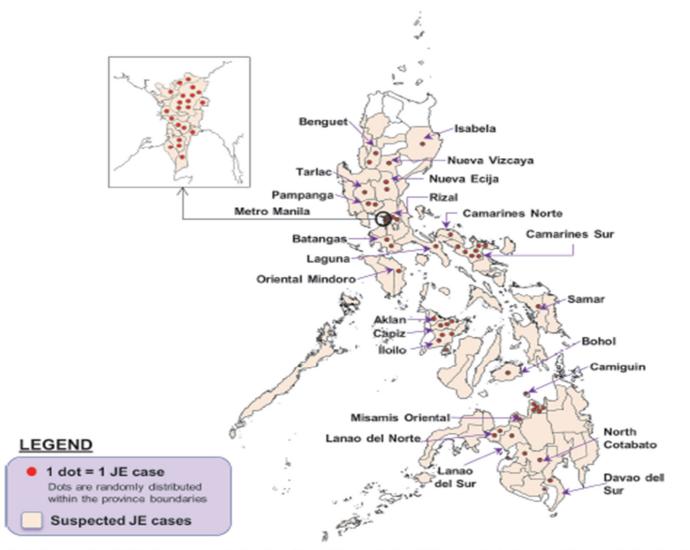
Epidemiology of Japanese Encephalitis in the Philippines: A Systematic Review

Anna Lena Lopez¹*, Josephine G. Aldaba¹, Vito G. Roque, Jr.², Amado O. Tandoc, III³, Ava Kristy Sy³, Fe Esperanza Espino⁴, Maricel DeQuiroz-Castro⁵, Youngmee Jee⁶, Maria Joyce Ducusin⁷, Kimberley K. Fox⁶

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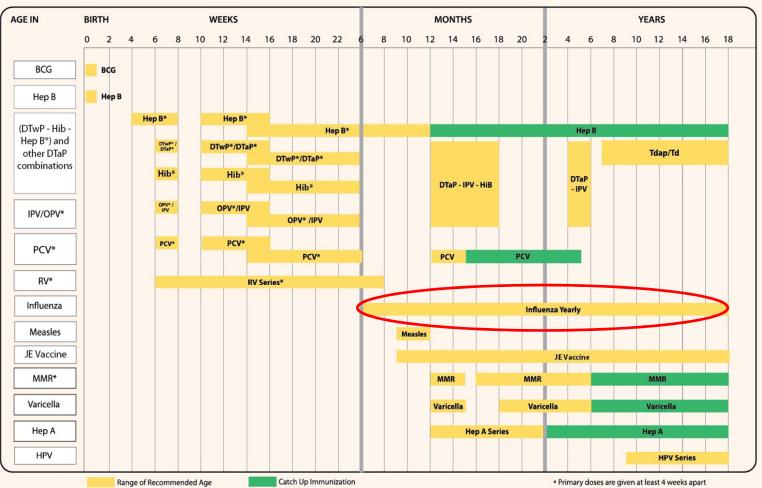
PLOS | NEGLECTED TROPICAL DISEASES

Fig 6. Geographic distribution of suspected and confirmed JE cases in the Philippines. Data from surveillance and referral testing, January 2011 to March 2014. There were additionally 21 confirmed JE cases out of 159 cases referred by hospitals in Metro Manita without available data on geographic origin.



Summary: Epidemiology of JE in the Philippines

- 1. JE is endemic in the Philippines:
- JE is responsible for 7.4% to 40% of meningitis- encephalitis syndrome
- JE in the Philippines affects predominantly children younger than 15 years old
- It has a case fatality ratio 8.1% to 15.3% and those who survive have significant neurologic sequelae
- Jan 2011 to March 2014 there were 1032 suspected cases of JE, of 497 cases tested 75 (15%) were lab confirmed JE cases
- Results from disease surveillance, sero-epidemiologic studies, swine and other animal surveillance as well as mosquito surveys confirm circulation of JEV virus across all regions of the Philippines.



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 Pneumococcal conjugate vaccine (PCV), 3 doses given at 6-10-14 weeks of age.
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OTHER VACCINES:

Bacillus Calmette-Guarin (BCG)

Given intradermally (ID)

The dose of BCG is 0.05 ml for children < 12 months of age and 0.1 ml for children > 12 months of age

Given at the earliest possible age after birth preferably within the first 2 months of age For healthy infants and children > 2 months who are not given BCG at birth. PPD prior to BCG vaccination is not necessary. However, PPD is recommended prior to BCG vaccination if any of the following is present:

Suspected congenital TB

· History of close contact to known or suspected infectious cases

Clinical findings suggestive of TB and/or chest x-ray suggestive of TB

In the presence of any of these conditions, an induration of > 5mm is considered positive

Hepatitis B Vaccine (HBV)

Given intramuscularly (IM)

The first dose is given at birth or within the 1st 12 hours of life. The minimum interval between doses is 4 weeks. The final dose is administered not earlier than age 24 weeks. Another dose is needed if the last dose was given at age < 24 weeks. For preterm infants:

· If born to HBsAg (-) mothers and medically stable, the 1st dose of HBV may be given at 30 days of chronological age regardless of weight, and this can be counted as part of the 3-dose primary series.

 Another dose of HBV is needed for those < 2 kgs whose 1st dose was received at birth For infants born to HBsAg (+) mothers, administer HBV and HBIG (0.5ml) within 12 hours of life. HBIG should be administered not later than 7 days of age, if not mmediately available.

For infants born to mothers with unknown HBsAg status:

 With birth weight ≥ 2 kgs, administer HBV within 12 hours of birth and determine mother's HBsAg as soon as possible. If HBsAg (+) administer HBIG not later than 7 days of age.

• With birth weight < 2 kgs., administer HBIG in addition to HBV within 12 hours of life.

Diphtheria and Tetanus Toxoid and Pertussis Vaccine (DTP)

Given intramuscularly (IM)

Given at a minimum age of 6 weeks with a minimum interval of 4 weeks The recommended interval between the 3rd and 4th dose is 6 months , but a minimum of 4 months is valid.

The 5th dose may not be given if the 4th dose was administered at age 4 years or older.

Haemophilus influenzae Type b Conjugate Vaccine (Hib)

Given intramuscularly (IM) Given as a 3-dose primary series with a minimum age of 6 weeks and a minimum interval of 4 weeks A booster dose is given between 12-15 months of age with an interval of 6 months from the 3rd dose.

Refer to Vaccines for Special Groups for Hib recommendation in high risk children

Inactivated Poliovirus Vaccine (IPV)

Given intramuscularly (IM) Given at a minimum age of 6 weeks with a minimum interval of 4 weeks The primary series consists of 3 doses A booster dose should be given on or after the 4th birthday and at least 6 months from the previous dose

Pneumococcal Conjugate Vaccines (PCV)

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Rotavirus Vaccine (RV)

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Given at a minimum age of 6 weeks with a minimum interval of 4 weeks between doses. The last dose should be administered not later than 32 weeks of age. The monovalent human rotavirus vaccine (RV1) is given as a 2-dose series and the pentavalent human bovine rotavirus vaccine (RV5) is given as a 3-dose series.

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Measles Vaccine

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Measles-Mumps-Rubella Vaccine (MMR)

Given subcutaneously (SC) Given at a minimum age of 12 mont. MMR may be given at an earlier age if recommended by public health authorities. The minimum interval between doses is at least 4 weeks: Two doses of MMR are recommended. The 2nd dose is usually given from 4-6 years of age but

may be given earlier Children below 12 months of age given any measles containing vaccine (Measles, MR, MMR) should be given 2 additional doses

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3 months. However, if the 2nd dose was administered at least 4 weeks after the 1st dose, it is considered valid.

· For children 13 years and above, the recommended minimum interval between doses is 4 weeks.

Measles-Mumps-Rubella-Varicella Vaccine (MMRV)

Given subcutaneously (SC) Given at a minimum age of 12 months MMRV may be given as an alternative to separately administered MMR and Varicella vaccine The maximum age is 12 years The recommended minimum interval between doses is 3 months

Hepatitis A Vaccine

Given intramuscularly (IM) Given as a 2 dose series at a minimum age of 12 months A 2nd dose is given at least 6 months from the 1st dose

Japanese Encephalitis Vaccine (JE)

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Tetanus and Diphtheria Toxoid (Td)/ Tetanus and Diphtheria Toxoid and Acellular Pertussis Vaccine (Tdap)

Given intramuscularly (IM)

For children who are fully immunized*, Td booster doses should be given every 10 years. A single dose of Tdap can be given in place of a due Td dose and can be administered regardless of the interval since the last tetanus and diphtheria toxoid containing vaccine *Fully immunized is defined as 5 doses of DTP or 4 doses of DTP if the 4th dose was given on or after the 4th birthday

For fully immunized pregnant adolescent, administer one dose of Tdap vaccine anytime after 20 weeks age of gestation

For the unimmunized pregnant adolescent, give the 3-dose tetanus-diphtheria containing vaccine (Td/Tdap) following a 0-1-6 month schedule. Tdap should replace one dose of Td given preferably after 20 weeks age of gestation

Human Papillomavirus Vaccine (HPV)

Given intramuscularly (IM)

Primary vaccination consists of a 3-dose series with the minimum age of 9 years. The recommended schedule is as follows:

Bivalent HPV at 0, 1 and 6 months

· Quadrivalent HPV at 0, 2, and 6 months

The minimum interval between the 1st and the 2nd dose is at least 1 month and the minimum interval between the 2nd and the 3rd dose is at least 3 months. The 3rd dose should be given at least 6 months from the 1st dose.

A 2-dose schedule is an option for girls 9 to 14 years of age, for both bivalent and guadrivalent vaccines. The doses are given at least 6 months apart.

The guadrivalent HPV can be given to males 9-18 years of age for the prevention of anogenital warts.

Influenza Vaccine (Trivalent/Quadrivalent)

- Trivalent influenza vaccine given intramuscularly (IM) or subcutaneously (SC)
- Quadrivalent influenza vaccine given intramuscularly (IM)
- Given at a minimum age of 6 months
- The dose of influenza vaccine is 0.25 ml for children 6 months to 35 months and 0.5 ml for children 36 months to 18 years
- Children 6 to 8 years receiving influenza vaccine for the first time should receive 2 doses separated by at least 4 weeks. If only one dose was given during the previous influenza season, give 2 doses of the vaccine then 1 dose yearly thereafter.
- Children aged 9 to 18 years should receive 1 dose of the vaccine yearly
- Annual vaccination should begin in February but may be given throughout the year.

VACCINES FOR HIGH RISK / SPECIAL GROUPS

Pneumococcal Conjugate Vaccine (PCV)/ Pneumococcal Polysaccharide Vaccine (PPSV)

Given intramuscularly (IM)

Indications for children with high risk medical conditions: chronic heart, lung, kidney disease, DM, CSF leak, cochlear implant, sickle cell disease and other hemoglobinopathies, anatomic and functional asplenia, HIV and congenital immunodeficiency, immunosuppression, malignancy, and solid organ transplantation

Children > 2 through 5 years of age:

- Give one dose of PCV13 if an incomplete schedule of 3 doses of any PCV was administered previously
 Give 2 doses of PCV13 at least 8 weeks apart if unvaccinated or any incomplete schedule of less than 3 doses of any PCV was administered previously
- Give a supplemental dose of PCV13 if 4 doses of PCV7 or other age appropriate complete PCV7 series was given

For children with no history of PPSV vaccination, give PPSV at least 8 weeks after the most recent PCV13

Children 6 through 18 years of age:

- Give one dose of PCV13 followed by one dose of PPSV at least 8 weeks later if with no prior PCV or PPSV immunization
- Give one dose of PPSV at least 8 weeks after the most recent PCV13 if with previous PCV13 but without PPSV immunization
- A single dose of PPSV is given at least 8 weeks after the last dose of PCV 13 in children with no history of PPSV immunization

A single revaccination with PPSV should be administered 5 years after the 1st dose of PPSV to children with high risk medical conditions

Haemophilus influenzae Type b Conjugate Vaccine (Hib) Given intramuscularly (IM)

Indications for children with high risk conditions : chemotherapy recipients, anatomic/functional asplenia including sickle cell disease, HIV infection, immunoglobulin or early complement deficiency

Children aged 12-59 months :

- Unimmunized* or with one dose of Hib vaccine received before age 12 months, give 2 additional doses 8 weeks apart
- Given ≥ 2 doses of Hib vaccine before age 12 months, give one additional dose

Children \leq 5 years old who received a Hib booster dose during or within 14 days of starting chemotherapy/radiation treatment should receive a repeat dose of the vaccine at least 3 months after completion of therapy

Children who are hematopoetic stem cell transplant recipients should be reimmunized with 3 doses of Hib vaccine, 6-12 months after transplant regardless of vaccination history: doses should be given 4 weeks apart

Unimmunized children aged 15 months and older undergoing elective splenectomy, give one dose of Hib containing vaccine at least 14 days before procedure

Give one dose of Hib vaccine to unimmunized children 5-18 years old who have anatomic/functional asplenia (including sickle cell disease) and HIV infection

* Unimmunized children are those without a primary series and booster dose or those without at least one dose of the vaccine after 14 months of age

Meningococcal Vaccine

Given intramuscularly (IM) or subcutaneously (SC)

Tetravalent meningococcal (ACYW-135) conjugate vaccine MCV4-D, MCV4-TT, MCV4-CRM given intramuscularly

Tetravalent meningococcal polysaccharide vaccine (MPSV4) given intramuscularly (IM)/subcutaneously (SC)

Indicated for those at high risk for invasive disease: persistent complement deficiencies, anatomic/functional asplenia, HIV, travellers to or resident of areas where meningococcal disease is hyperendemic or epidemic or belonging to a defined risk group during a community or institutional meningococcal outbreak Dosing schedule:

- MCV4-D: minimum age is 9 months . For children 9-23 months give 2 doses 3 months apart. For children 2 years and above give one dose.
- MCV4-TT given to children 12 months and above as a single dose
- MCV4-CRM given to children 2 years and above as a single dose

Revaccinate with a MCV4 vaccine every 5 years as long as the person remains at increased risk of infection

MPSV4 given to children 2 years and above as a single dose. If MPSV4 is used for high risk individuals as the 1st dose, a 2nd dose using MCV4 should be given 2 months later. Booster doses of MPSV4 are not recommended.

MCV4-D and PCV13 should be given at least 4 weeks apart

Rabies Vaccine

Given intramuscularly (IM) or intradermally (ID)

- Recommended regimens for pre-exposure prophylaxis:
 - Intramuscular regimen: Purified Vero Cell Rabies Vaccine (PVRV) 0.5 ml or Purified Chick Embryo Cell Vaccine (PCECV) 1 ml given on days 0,7,21 or 28
 - Intradermal regimen: PVRV or PCECV 0.1 ml given on days
 0,7,21 or 28

A repeat dose should be given if the vaccine is inadvertently given subcutaneously.

Rabies vaccine should never be given in the gluteal area since absorption is unpredictable.

In the event of subsequent exposures, those who have completed 3 doses of pre-exposure prophylaxis regardless of the interval between exposure and last dose of the vaccine will require ONLY booster doses given on day 0 and 3. Booster doses may be given IM (0.5 ml PVRV or 1 ml PCECV) or ID (0.1 ml of PVRV or PCECV). There is no need to give rabies immune globulin.

Typhoid Vaccine

Given intramuscularly (IM)

Given at a minimum age of 2 years old with revaccination every 2—3 years

Recommended for travellers to areas where there is a risk of exposure and for outbreak situations as declared by public health authorities

Cholera Vaccine

Given per orem (PO)

Given at a minimum age of 12 months as a 2-dose series two weeks apart

Recommended for outbreak situations and natural disasters as declared by health authorities

VACCINES FOR HIGH RISK / SPECIAL GROUPS

Pneumococcal Conjugate Vaccine (PCV)/ Pneumococcal Polysaccharide Vaccine (PPSV)

Given intramuscularly (IM)

Indications for children with high risk medical conditions: chronic heart, lung, kidney disease, DM, CSF leak, cochlear implant, sickle cell disease and other hemoglobinopathies, anatomic and functional asplenia, HIV and congenital immunodeficiency, immunosuppression, malignancy, and solid organ transplantation

Children > 2 through 5 years of age:

- Give one dose of PCV13 if an incomplete schedule of 3
 doses of any PCV was administered previously
- Give 2 doses of PCV13 at least 8 weeks apart if unvaccinated or any incomplete schedule of less than 3 doses of any PCV was administered previously
- Give a supplemental dose of PCV13 if 4 doses of PCV7 or other age appropriate complete PCV7 series was given

For children with no history of PPSV vaccination, give PPSV at least 8 weeks after the most recent PCV13 Children 6 through 18 years of age

Children 6 through 18 years of age:

- Give one dose of PCV13 followed by one dose of PPSV at least 8 weeks later if with no prior PCV or PPSV immunization
- Give one dose of PPSV at least 8 weeks after the most recent PCV13 if with previous PCV13 but without PPSV immunization
- A single dose of PPSV is given at least 8 weeks after the last dose of PCV 13 in children with no history of PPSV immunization

A single revaccination with PPSV should be administered 5 years after the 1st dose of PPSV to children with high risk medical conditions

Haemophilus imiuenzae Type b Conjugate Vaccine (Hib) Given intramuscularly (IM)

Indications for children with high risk conditions : chemotherapy recipients, anatomic/functional splenia including sickle cell disease, HIV infection, immunoglobblin or orrly complement deficiency

Children aged 12-59 months :

- Unimmunized* or with one dose of Hib vaccine received before age 12 months, give 2 additional doses 8 weeks apart
- Given ≥ 2 doses of Hib vaccine before age 12 months, give one additional dose

Children \leq 5 years old who received a Hib booster dose during or within 14 days of starting chemotherapy/radiation treatment should receive a repeat dose of the vaccine at least 3 months after completion of therapy

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Unimmunized children aged 15 months and older undergoing elective splenectomy, give one dose of Hib containing vaccine at least 14 days before procedure

Give one dose of Hib vaccine to unimmunized children 5-18 year old who have anatomic/functional asplenia (including sickle cell disease) and HIV infection

* Unimmunized children are those without a primary series and booster dose or those without at least one dose of the vaccine after 14 months of age

Meningococcal Vaccine

Given intramuscularly (IM) or subcutaneously (SC)

Tetravalent meningococcal (ACYW-135) conjugate vaccine MCV4-D, MCV4-TT, MCV4-CRM given intramuscularly

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Indicated for those at high risk for invasive disease: persistent complement deficiencies, anatomic/functional asplenia, HIV, travellers to or resident of areas where meningococcal disease is hyperendemic or epidemic or belonging to a defined risk group during a community or institutional meningococcal outbreak Dosing schedule:

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- MCV4-TT given to children 12 months and above as a single dose
- MCV4-CRM given to children 2 years and above as a single dose

Revaccinate with a MCV4 vaccine every 5 years as long as the person remains at increased risk of infection

MPSV4 given to children 2 years and above as a single dose. If MPSV4 is used for high risk individuals as the 1st dose, a 2nd dose using MCV4 should be given 2 months later. Booster doses of MPSV4 are not recommended.

MCV4-D and PCV13 should be given at least 4 weeks apart

Rabies Vaccine

Given intramuscularly (IM) or intradermally (ID)

Recommended regimens for pre-exposure prophylaxis:

- Intramuscular regimen: Purified Vero Cell Rabies Vaccine (PVRV) 0.5 ml or Purified Chick Embryo Cell Vaccine (PCECV) 1 ml given on days 0,7,21 or 28
- Intradermal regimen: PVRV or PCECV 0.1 ml given on days
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In the event of subsequent exposures, those who have completed 3 doses of pre-exposure prophylaxis regardless of the interval between exposure and last dose of the vaccine will require ONLY booster doses given on day 0 and 3. Booster doses may be given IM (0.5 ml PVRV or 1 ml PCECV) or ID (0.1 ml of PVRV or PCECV). There is no need to give rabies immune globulin.

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Given at a minimum age of 2 years old with revaccination every 2—3 years

Recommended for travellers to areas where there is a risk of exposure and for outbreak situations as declared by public health authorities

Cholera Vaccine

Given per orem (PO)

Given at a minimum age of 12 months as a 2-dose series two weeks apart

Recommended for outbreak situations and natural disasters as declared by health authorities

Hemophilus influenzae Type b Conjugate Vaccine (Hib)

Given intramuscularly (IM)

Indications for children with high risk conditions: chemotherapy recipients, anatomic/ functional asplenia including sickle cell disease, HIV infection, immunoglobulin or early complementary deficiency

- Children aged 12-59 months:
 - Unimmunized* or with one dose of Hib vaccine received before age 12 months, give 2 doses of Hib vaccine 8 weeks apart
 - Given 2 doses of Hib vaccine before age 12 months give an additional dose

➤ Children ≥ 5 years old who received a Hib booster dose during or within 14 days of starting chemotherapy/radiation treatment should receive a repeat dose of the vaccine at least 3 months after completion of therapy

Hemophilus influenzae Type b Conjugate Vaccine (Hib)

- Children who are hematopoetic stem cell transplant recipients should be reimmunized with 3 doses of Hib vaccine, 6-12 months after transplant regardless of vaccination history: doses should be given 8 weeks apart
- Unimmunized children aged 15 months and older undergoing elective splenectomy, give one of Hib containing vaccine at least 14 days before procedure
- Give one dose of Hib vaccine to unimmunized children 5-18 years old who have anatomic/functional asplenia (including sickle cell disease) and HIV infection

*Unimmunized children are those without a primary series and booster dose or those without at least one dose of the vaccine after age 14 months of age

Interim Recommendation for Use: Dengue Tetravalent Vaccine Committee on Immunization Pediatric Infectious Disease Society of the Philippines

The Philippine Food and Drug Administration (FDA) released a Certificate of Product Registration (CPR) for Dengue Tetravalent Vaccine on 22 December 2015, which authorizes marketing of this product to local consumers. Since the CPR was signed after the completion of the Committee's regular meetings and after its deliberation with various stakeholder, this interim recommendation is made for the clinician's guidance.

The Dengue Tetravalent Vaccine is a live attenuated vaccine containing dengue serotypes 1 to 4. The recommended age indication is from 9 to 45 years based on studies showing optimal safety and efficacy within these age group. There is insufficient data for the safe use of this vaccine in children younger than 9 years.

Interim Recommendation for Use: Dengue Tetravalent Vaccine Committee on Immunization Pediatric Infectious Disease Society of the Philippines

Dengue Tetravalent Vaccine

- > 0.5 ml given subcutaneously
- Given at a minimum age of 9 years
- Given as 3-dose series at 0, 6 and 12 months

Dengue Tetravalent Vaccine

Department of Health

- School based immunization
- > One million eligible children in 3 regions
- Grade 4 pupils (SY 2015-2016) 9 years and above enrolled in all public schools of Region III, IV-A and NCR
- > 3 doses of dengue vaccine will be provided at 6 months interval

 \rightarrow Dose: 0.5 ml administered on left deltoid arm

→Dose 1: April, May, June 2016

→Dose 2: October, November, December 2016

→Dose 3: April, May, June 2016

- Screening and quick health assessment forms should be accomplished
- > Only students with signed notification and consent forms included

Background:

- 2015: critical shortage of DTaP containing combination vaccines for use in private sector
- Shortage affecting countries globally as well as ASEAN regions due to:
 - \rightarrow Difficulties in vaccine production capacities and
 - manufacturing
 - \rightarrow Increase global demand for combination vaccines
- PPS/PIDSP/PFV proposed technical guidelines and options for practitioners to optimize their immunization regimens according to evidence based good clinical practices

Prioritization within Indications:

Follow PPS/PIDSP/PFV official recommendations and ensure all patients receive all recommended doses of DTaP, Hib, Hep B, and Polio vaccines

Refer to vaccine information provided in the Summary of Product

- Ensure minimum intervals between doses and minimum age are met
- Ensure minimum intervals between doses and minimum age are met for each component vaccine in combination vaccine
- Prioritize infant primary series over 1st toddler booster dose and toddler booster dose over pre-school booster
- ➢ In infant primary series prioritize 1st and 2nd dose over 3rd dose

- If supply is lacking a 2-dose regimen can be used instead of 3doses with 2 months interval between 1st and 2nd dose
- Infants who received a 2-dose infant primary series should be given booster at age 11-12 months (2+1 schedule)
- If an alternative product containing same antigens is available the 3-dose infant primary series is prioritized over the 2-dose series

Vaccine Substitutions

DTaP-IPV-Hep B-Hib is not available for any dose of infant/toddler primary series

Alternative: DTaP-IPV/Hib co-administered with stand alone Hep B OR DTaP-IPV co-administered with Hep B and Hib stand alone vaccines

> DTaP-IPV/Hib is not available for any dose of infant/toddler series

: Alternative: DTaP-IPV co-administered with Hib stand alone

vaccine OR

DTaP-IPV-Hep B-Hib vaccine

DTaP-IPV is not available for any dose of infant/toddler series
Alternative: DTaP co-administered with IPV and Hib stand alone vaccines

- DTaP-IPV is not available for pre-school booster
 Alternative: Tdap-IPV vaccine (Or Tdap and IPV co-administered)
 If this not available:
 Alternative: Co-administer Td and IPV vaccine (but will not provide pertussis booster
- ACIP recommends using same brand for all doses of vaccination series. If provider do not know or do not have available the brand of vaccine previously given another may be used
- If aP based product is not available a wP based product if available may be used

Schedule Flexibility

- Infants who delayed receiving 1st dose of 3-dose infant series should have series started as soon as possible
- Infants who received 1st dose of 3-dose infant series 2nd dose should be given as soon as possible and as close as possible to the ideal 2 month interval between dose 1 and dose 2

Infants who received 2 doses of 3-dose infant series with interval of ≥ 2 months and no vaccine available for 3rd dose, omission of 3rd dose acceptable

These infants should be given subsequent toddler or preschool booster vaccination (2+1 regimen)

 If interval between 1st and 2nd dose of primary infant series is < 2 months, a 3rd dose should be given as soon as possible to complete the infant series

Delay in Timing for Toddler Booster Dose

- Given 3-dose primary infant series: booster dose should be given as close to 24 months of age as possible
- Given 2-dose primary infant series: booster dose administered as close to 12 months of age as possible

References:

 European Center for Disease Prevention and Control. Shortage of acellular pertussis containing vaccines and impact on immunization programmes in the EU/EEA- 8 October 2015. Stockholm :ECDC;2105

2. National Center for immunization and Respiratory Diseases, US CDC, December 2015

3. PIDSP/PFV/PPS Childhood Immunization Schedule 2015

Website:

http://www.pps.org.ph pidsphil.org philvaccine.org





 Evidence gathered from results of controlled trials, case-controlled studies, meta-analyses, published and unpublished economic analysis relevant to vaccine recommendations shall be evaluated



- The data shall be presented to the Committee en banc for comments
- The Committee deliberates on the data presented, and converts the evidence into an overall recommendation
- Recommendation is presented to the PIDSP Board for comments and final approval



- The PIDSP Board transmits the Committee's recommendations to the Philippine Pediatric Society
 - The PPS convenes a meeting of stakeholders for inputs
 - Any changes resulting from the meeting are incorporated into the final recommendation by the PPS Committee on Immunization
 - The final recommendation is transmitted to the Philippine Foundation for Vaccination for dissemination



The recommendations are released during the following conventions:

- Philippine National immunization Conference (PNIC)
- Pediatric Infectious Disease Society of the Philippines (PIDSP)
- Philippine Pediatric Society (PPS)