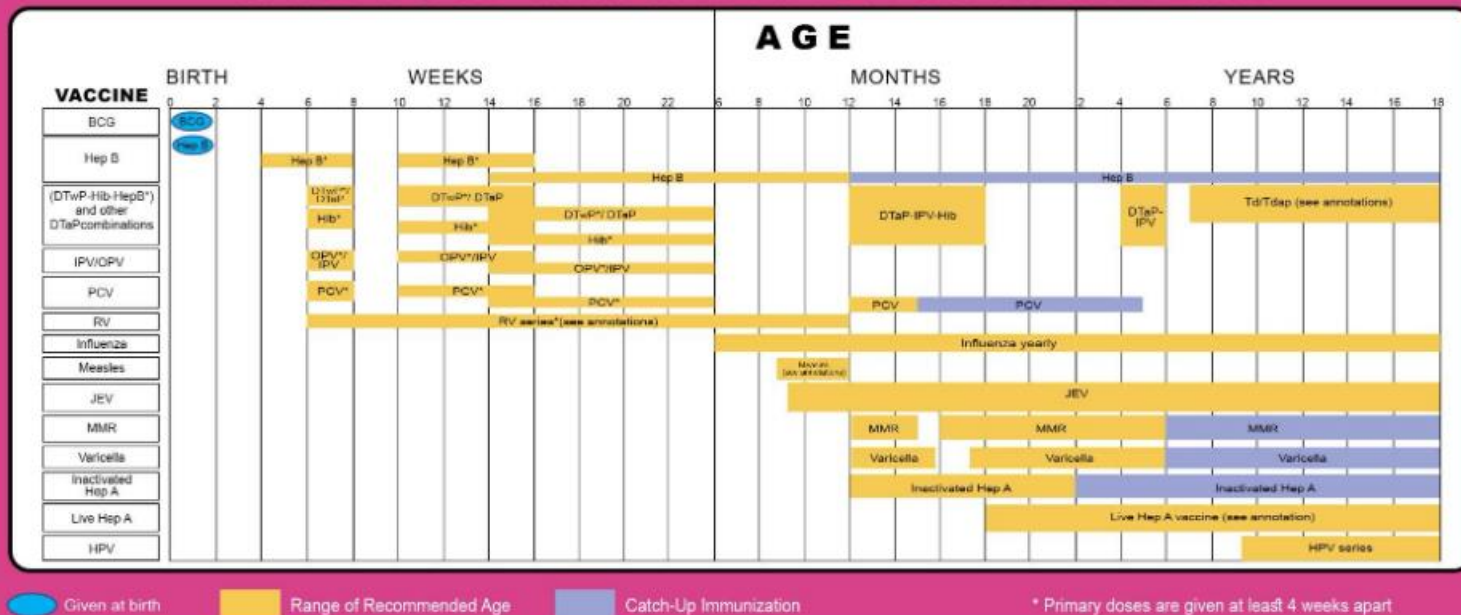




CHILDHOOD IMMUNIZATION SCHEDULE 2021



PLEASE READ ANNOTATIONS

DISCLAIMER: The Childhood Immunization Schedule presents recommendations for immunization for children and adolescents based on updated literature review, experience and premises current at the time of publication. The PPS, PIDSP and PFV acknowledge that individual circumstances *may* warrant a decision differing from the recommendations given here. 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.

Vaccines in the Philippine National Immunization Program (NIP):

The following vaccines are in the 2021 NIP:

- BCG, monovalent Hep B, Pentavalent vaccine (DTwP-Hib-HepB), bivalent OPV, IPV, PCV, MMR, MR, and Td

Recommended Vaccines:

These are vaccines not included in the NIP which are recommended by the Philippine Pediatric Society (PPS), Pediatric Infectious Disease Society of the Philippines (PIDSP) and the Philippine Foundation for Vaccination (PFV).

- Available in selected areas only.

ANNOTATIONS

BACILLE CALMETTE GUERIN (BCG)

Given intradermally (ID)

- The dose of BCG is 0.05 ml for children < 12 months and 0.1 ml for children ≥ 12 months
- Given at the earliest possible age after birth preferably within the first 2 months of life
- 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:
 - 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 5 mm is considered positive and BCG is no longer recommended

DIPHTHERIA, TETANUS, PERTUSSIS VACCINE (DTP)

- Given intramuscularly (IM)
- Given at a minimum age of 6 weeks.
- The primary series consists of 3 doses with a minimum interval of 4 weeks
- Booster series consists of 3 doses until adolescence with the following schedule:
 - 12-23 months (DTP)
 - 4-7 years (DTP)
 - 9-15 years (Td/Tdap)

Ideally, the minimum interval between booster doses should be at least 4 years

- Full-dose DTP should preferably be used only until age 7 years, but package inserts should be consulted for maximum age indications of specific products

HAEMOPHILUS INFLUENZAE TYPE B CONJUGATE VACCINE

- 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 age 12-15 months with an interval of 6 months from the third dose

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

HEPATITIS A VACCINE (HAV)

Inactivated Hepatitis A Vaccine

- Given intramuscularly (IM)
- Minimum age: 12 months
- 2 dose series: minimum interval between first and second dose is 6 months

Live attenuated Hepatitis A Vaccine

- Given subcutaneously (SC)
- Minimum age: 18 months
- Given as single dose

HEPATITIS B VACCINE (HBV)

- Given intramuscularly (IM)
- Administer the first dose of monovalent HBV to all newborns ≥ 2 kgs within 24 hours of life
- A second dose is given 1-2 months after the birth dose
- The final dose is administered not earlier than 24 weeks of age
- Another dose is needed if the last dose was given at age < 24 weeks

For infants born to HBsAg (+) mothers (preterm or term infants):

- 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 the 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

**For infants born < 2 kgs, the 1st dose received at birth is not counted as part of the vaccine series. Additional 3 HBV doses are needed*

HUMAN PAPILLOMAVIRUS VACCINE (HPV)

- Given intramuscularly (IM)
 - For ages 9-14 years, a 2-dose series is recommended
 - Bivalent HPV (2vHPV), quadrivalent (4vHPV) or nonavalent (9vHPV) given at 0 and 6 months
 - If the interval between the first and second dose is less than 6 months, a third dose is needed, the minimum interval between the second and third dose is 3 months
 - For ages 15 years and older, a 3-dose series is recommended.
 - Bivalent HPV (2vHPV), quadrivalent (4vHPV) or nonavalent 9vHPV at 0, 2 and 6 months
 - The minimum interval between the first and the second dose is 1 month and the minimum interval between the second and third dose is 3 months, the third dose should be given at least 6 months from the first dose
 - For males age 9-18 years, a 4vHPV and 9vHPV can be given for the prevention of anogenital warts and anal cancer.

INFLUENZA VACCINE (TRIVALENT/QUADRIVALENT INFLUENZA VACCINE)

- Trivalent influenza vaccine (TIV) given intramuscularly (IM) or subcutaneously (SC)
- Quadrivalent influenza vaccine (QIV) given intramuscularly (IM)
- Given at a minimum age of 6 months
- For pediatric dose, follow the manufacturer's recommendations
- Children age 6 months to 8 years receiving influenza vaccine for the 1st 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 one dose yearly thereafter
- Children age 9 to 18 years should receive one dose of the vaccine yearly
- Annual vaccination should begin in February but may be given throughout the year

JAPANESE ENCEPHALITIS LIVE ATTENUATED RECOMBINANT VACCINE

- Given subcutaneously (SC)
- Given at a minimum age of 9 months
- Children age 9 months to 17 years 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

MEASLES VACCINE

- Given subcutaneously (SC)
- Given at the age of 9 months, but may be given as early as age 6 months in cases of outbreaks as declared by public health authorities
- If measles vaccine is not available, then MMR/MR vaccine may be given as substitute for infants below 12 months of age. In such cases, the recipient should receive 2 more MMR vaccines starting at 1 year of age, following recommended schedules

MEASLES-MUMPS-RUBELLA (MMR) VACCINE

- Given subcutaneously (SC)
- Given at a minimum age of 12 months
- 2 doses of MMR vaccine are recommended
- The second dose is usually given at 4-6 years of age but may be given at an earlier age with a minimum of 4 weeks interval between doses.

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 vaccines
- The maximum age is 12 years
- The recommended minimum interval between doses is 3 months, but a second dose given 4 weeks from the first dose is considered valid

PNEUMOCOCCAL CONJUGATE VACCINE (PCV)

- Given intramuscularly (IM)
- Given at a minimum age of 6 weeks
- Primary vaccination consists of 3 doses with an interval of at least 4 weeks between doses. A booster dose is given 6 months after the third dose.
- For previously unvaccinated infants age 7-11 months, give a total of 3 doses. The first 2 doses are given 1 month apart. The interval between the second and third dose is at least 2 months but should ideally be given at or after the first birthday.
- For previously unvaccinated older children age 12 months to 5 years
 - **PCV 10:** 1-5 years old: give 2 doses at least 2 months apart
 - **PCV 13:** 12-23 months: give 2 doses at least 2 months apart
 - 2 to 5 years old: give 1 dose

POLIOVIRUS VACCINE

Inactivated Polio Vaccine (IPV)

- Given intramuscularly (IM), alone or in combination with DPT-containing vaccines
- Given at a minimum age of 6 weeks, at least 4 weeks apart
- The primary series consists of 3 doses given at 6, 10, and 14 weeks.
- The first booster is given at 12-18 months. The minimum interval between the third dose and the first booster dose is 6 months.
- The second booster is given at age 4-6 years.
- If the fourth dose is given at age 4 years onward, no further doses are necessary

Oral Polio Vaccine (OPV)

- Only available as part of the government's NIP
- The primary series consists of 3 doses beginning at age 6 weeks with a minimum interval of ≥ 4 weeks; a dose of IPV is given together with the third dose of OPV

ROTAVIRUS VACCINE (RV)

Human (RV1)

- Given per orem (PO) as oral liquid formulation
- Given as a 2-dose series
- 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 24 weeks of age.

Human-Bovine live-attenuated reassortant (RV5) (oral liquid formulation)

- Given per orem (PO)
- Given as a 3-dose series
- First dose is given at age 6-12 weeks, with a minimum interval of 4-10 weeks between doses. The last dose should not be administered beyond 32 weeks of age.

Human-Bovine live-attenuated reassortant (RV5) (oral freeze-dried formulation)

- Given per orem (PO)
- Given as a 3-dose series, recommended at 2, 4 and 6 months
- Given at minimum age 6 weeks with a minimum interval of 4 weeks between doses
 - The last dose should not be administered beyond 12 months of age.

TETANUS AND DIPHTHERIA TOXOID (Td)/ TETANUS AND DIPHTHERIA TOXOID AND ACELLULAR PERTUSSIS (Tdap) VACCINE

- Given intramuscularly (IM)
- For children who are fully immunized, Td /Tdap booster doses should be given every 10 years
- For children age ≥ 7 years a single dose of Tdap can be given to replace due Td. Tdap can be administered regardless of the interval since the last tetanus and diphtheria-toxoid containing vaccine. Subsequent doses are given s Td/Tdap.

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

- Give 1 dose of Tdap for every pregnancy
 - For fully immunized pregnant adolescents, administer 1 dose of Tdap vaccine at 27 to 36 weeks AOG, regardless of previous Td or Tdap vaccination
 - For unimmunized pregnant adolescents, administer a 5-dose tetanus-diphtheria (Td)-containing vaccine following a 0-,1-, 6-,18-, and 30-month schedule. Use Tdap as one of the 5 doses, preferably given at 27-36 weeks AOG

VARICELLA VACCINE

- Given subcutaneously (SC)
- Given at a minimum age of 12 months
- 2 doses of varicella vaccine are recommended
- The second dose is usually given at 4-6 years of age, but may be given earlier at an interval of 3 months from the first dose.
- If the dose was given 4 weeks from the first dose, it is considered valid.
- For children ≥ 13 years of age, the recommended minimum interval between doses is 4 weeks

VACCINES FOR HIGH RISK / SPECIAL GROUPS

PNEUMOCOCCAL CONJUGATE VACCINE (PCV)/ PNEUMOCOCCAL POLYSACCHARIDE VACCINE (PPSV23)

- Given intramuscularly (IM)
- Immunocompromised children and those with high-risk medical conditions should receive both PCV and PPSV23.
 - The two vaccines should not be co-administered. The minimum interval between PCV and PPSV23 is 8 weeks. If a dose of PPSV23 is inadvertently given earlier than the recommended interval, this dose need not be repeated.
 - All recommended PCV doses should be given prior to PPSV23 if possible.
- The following tables summarize the indication and schedule of PCV/PPSV23 administration to children with high-risk conditions according to age group:

PCV-PPSV23 VACCINATION SCHEDULE	INDICATIONS FOR PNEUMOCOCCAL VACCINES
<p><u>Age: 24 months to 5 years</u></p> <p>•Administer 1 dose of PCV if only 3 doses of PCV was received previously; give 1* or 2** doses of PPSV23 at least 8 weeks after the most recent dose of PCV</p> <p>•Administer 2 doses of PCV at least 8 weeks apart if unvaccinated or less than 3 doses of PCV was received previously; give 1 or 2* doses of PPSV23 at least 8 weeks after the most recent dose of PCV</p>	<p>ONE DOSE*</p> <ul style="list-style-type: none"> •Chronic heart disease, including congestive heart failure and cardiomyopathies •Chronic lung disease, including chronic obstructive pulmonary disease, emphysema, and asthma •Diabetes mellitus, Cerebrospinal fluid leaks, Cochlear implant(s), Alcoholism •Chronic liver disease <p>TWO DOSES**</p> <ul style="list-style-type: none"> •Sickle cell disease and other hemaglobinopathies •Congenital or acquired asplenia, or splenic dysfunction •HIV infection •Chronic renal failure and nephrotic syndrome •Diseases associated with treatment with immunosuppressive drugs or radiation therapy, including malignant neoplasms, leukemias, lymphomas, and Hodgkin disease; or solid organ transplantation •Congenita or acquired immunodeficiency (includes B- (humoral) or T-lymphocyte deficiency, complement deficiencies (particularly C1, C2, C3, and C4 deficiencies), and phagocytic disorders (excluding chronic granulomatous disease) •Leukemia or lymphoma •Hodgkin disease •Generalized malignancy •Iatrogenic immunosuppression (diseases requiring treatment with immunosuppressive drugs, including long-term systemic corticosteroids and radiation therapy) •Solid organ transplant •Multiple myeloma <p>Any of the listed conditions is an indication for PCV</p> <p>(*) indicates need for ONE dose of PPSV23 (**) indicates need for TWO doses of PPSV23</p>
<p><u>Age: 6 to 18 years:</u></p> <p>•Administer 1 dose of PCV13 if they have not previously received this vaccine; give 1 or 2* doses of PPSV23 at least 8 weeks after the most recent dose of PCV</p>	<p>Any of the listed conditions is an indication for PCV</p> <p>(*) indicates need for ONE dose of PPSV23 (**) indicates need for TWO doses of PPSV23</p>

RABIES VACCINE

- Given intramuscularly (IM) or intradermally (ID)
- Recommended regimens for pre-exposure prophylaxis (PrEP):
 - For immunocompetent individuals given WHO prequalified vaccines (Verorab® or Rabipur®):
 - Intramuscular (IM) regimen: Purified Vero Cell Rabies vaccine (PVRV) 0.5 ml OR Purified Chick Embryo Cell vaccine (PCECV) 1 ml given on days 0 and 7
 - Intradermal (ID) regimen: PVRV or PCECV 0.1 ml given on days 0 and 7
 - For immunocompromised individuals or those given non-WHO prequalified vaccines, give 3 doses on days 0, 7, 21 or 28
 - Other pre-qualified vaccines in the list (Rabivax-S & Vaxirab-N) are not available in the country
- 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:
 - High-risk* individuals who have completed PrEP require booster doses, regardless of the interval between exposure and last dose of the vaccine. Booster doses may be given through either:
 - 1-visit regimen: 0.1 ml ID (PVRV or PCECV) on each of the 4 sites on day 0
 - 2-visit regimen: 0.1 ml ID (PVRV or PCECV) OR 0.5 ml PVRV or 1.0 ml PCECV IM at 1 site on days 0 and 3

*for high-risk individuals, pls. refer to: <https://ais.doh.gov.ph/uploads/aopdf/ao2018-0013.pdf>

MENINGOCOCCAL VACCINES

- Given intramuscularly (IM) or subcutaneously (SC)
- Tetravalent meningococcal (ACYW-135) conjugate vaccine MCV4-D, MCV4-TT, MCV4-CRM given intramuscularly (IM)
- Tetravalent meningococcal polysaccharide vaccine (MPSV4) given intramuscularly (IM)/subcutaneously (SC)
- Indicated for those at high risk for invasive disease:
- Persistent complement component deficiencies (including those with inherited or chronic deficiencies in C3, C5-9, properdin, factor D, factor H), anatomic/functional asplenia (including sickle cell disease), HIV, travelers to or resident of areas where meningococcal disease is hyperendemic or epidemic, including countries in the African meningitis belt or the Hajj, or belonging to a defined risk group during a community or institutional meningococcal outbreak

Conjugate vaccines

- 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
 - Except in cases of asplenia, HIV, persistent complement component deficiency where 2 doses given 8 weeks apart are recommended
- MCV4-TT: minimum age is 6 weeks
 - For infants 6 to 12 weeks of age: give first 2 doses at least 2 months apart; the 3rd (booster) dose is at age 12 months
 - For children from 12 months of age to adolescence: 1 dose only
- 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

Polysaccharide vaccines (MPSV4)

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

Co-Administration

- MCV4-D and PCV13:
 - If MCV4-D is administered to a child with asplenia (including sickle cell disease) or HIV infection, do not administer MCV4-D until age 2 years and at least 4 weeks after the completion of all PCV13 doses
- MCV4-D and DTaP:
 - If MCV4-D is to be administered to a child at high risk for meningococcal disease, it is recommended that MCV4-D be given either before or at the same time as DTaP
- MCV-TT with tetanus-toxoid (TT) - containing vaccines:
 - Whenever feasible, MCV4-TT should be co-administered with TT-containing vaccines, or administered 1 month before the other TT- containing vaccines

HAEMOPHILUS INFLUENZAE TYPE B CONJUGATE VACCINE (HIB)

- Given intramuscularly (IM)
- Indications for children with the following high-risk conditions:
 - Chemotherapy recipients, anatomic/functional asplenia including sickle cell disease, HIV infection, immunoglobulin or early component complement deficiency
- Children aged 12-59 months:
 - Unimmunized* or with one Hib vaccine dose received before age 12 months, give 2 additional doses 8 weeks apart
 - With ≥ 2 Hib vaccine doses received before age 12 months., give 1 additional dose
- For children ≤ 5 years old who received a Hib vaccine dose(s) during or within 14 days of starting chemotherapy or radiation treatment, repeat the dose(s) of Hib vaccine at least 3 months after completion of therapy
- For children who are hematopoietic stem cell transplant recipients, revaccination with 3 doses of Hib vaccine given 4 weeks apart, starting 6-12 months after transplant, is recommended regardless of vaccination history.
- Unimmunized* children ≥ 15 months of age and undergoing elective splenectomy should be given 1 dose of Hib-containing vaccine at least 14 days before the procedure
- Unimmunized* children 5-18 years old and with either anatomic or functional asplenia (including sickle cell disease) or HIV infection, should be given 1 dose of Hib vaccine

****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***

TYPHOID VACCINE

- Given intramuscularly (IM)
- Given at a minimum age of 2 years old with revaccination every 2—3 years
- Recommended for travelers to areas where there is a risk for exposure and for outbreak situations as declared by public health authorities

CHOLERA VACCINE

- Given per os (PO)
- Given at a minimum age of 12 months as 2-dose series two weeks apart.
- Recommended for outbreak situations and natural disasters as declared by health authorities

INACTIVATED HEPATITIS A VACCINE (HAV)

- Given intramuscularly (IM)
- Administer 2 doses of Hepatitis A vaccine, at least 6 months apart to unvaccinated individuals who are at increased risk for infection:
 - Travelers to or are working in countries with intermediate or high endemicity of infection
 - MSMs, Homelessness, Users of injection and non-injection illicit drugs,
 - Working with HAV infected primates or with HAV in research laboratories,
 - With clotting factor disorders, and chronic liver disease
 - HIV

HUMAN PAPILLOMAVIRUS VACCINE (HPV)

- Given intramuscularly (IM)
- Give 3 doses of HPV vaccine following the 0-, 1-2-, and 6-month schedule, regardless of age at vaccine initiation to the following:
 - Children with history of sexual abuse or assault starting at age 9 years
 - Immunocompromised children including those with HIV infection
- HPV vaccination is not recommended during pregnancy. If HPV vaccine is inadvertently given during pregnancy, delay the remaining doses until after pregnancy. Pregnancy testing is not necessary before initiating HPV vaccination

SUMMARY TABLE: Immunization of Pre-Adolescents and Adolescents (9 to 18 years old)

Vaccine	Range Of Recommended Age	Dose(s) Needed	Schedule Of Immunization	Route Of Administration	Precautions And Contraindications
Hep B Vaccine	Unvaccinated 9-18 years old	3	0, 1, 6 months	IM	<ul style="list-style-type: none"> • Severe allergic reaction to vaccine component • Moderate to severe illness
Inactivated Hepatitis A Vaccine	Unvaccinated 9-18 years old	2	Second dose given at least 6 months from first dose	IM	<ul style="list-style-type: none"> • Severe allergic reaction to vaccine component • Moderate to severe illness
Live Hepatitis A Vaccine	Unvaccinated 9-18 years old	1	Anytime at this age group	SQ	<ul style="list-style-type: none"> • Severe allergic reaction to vaccine component • Moderate to severe illness • Immunosuppression • Pregnancy • Recent receipt of blood products
MMR	Unvaccinated 9-18 years old	2	4 weeks interval between doses	SC	<ul style="list-style-type: none"> • Severe allergic reaction to vaccine component • Pregnancy • Immunosuppression • Recent receipt of blood products • Moderate to severe illness
	Incompletely vaccinated 9-18 years old	1	2nd dose given anytime but at least 4 weeks from 1st dose		
Varicella	Unvaccinated 9-12 years old	2	Minimum interval between doses is 3 months	SC	<ul style="list-style-type: none"> • Severe allergic reaction to vaccine component • Pregnancy • Immunosuppression • Recent receipt of blood products • Moderate to severe illness
	Unvaccinated ≥13 years old	2	Minimum interval between doses is 1 month		
	Incompletely vaccinated 9-18 years old	1	Given anytime 9-12 years old: second dose at least 3 months from first dose ≥13 years old: second dose at least 1 month from first dose		
Influenza Vaccine	9-18 Y years old	1	Give annually beginning February	IM/SC	<ul style="list-style-type: none"> • Severe allergic reaction to vaccine component • Moderate to severe illness • History of Guillain-Barre syndrome following a previous dose

SUMMARY TABLE: Immunization of Pre-Adolescents and Adolescents (9 to 18 years old)

Vaccine	Range Of Recommended Age	Dose(s) Needed	Schedule Of Immunization	Route Of Administration	Precautions And Contraindications
Td/Tdap	Unvaccinated 9-18 years old	5	<ul style="list-style-type: none"> •For primary immunization, the 1st and 2nd doses should be given with an interval of at least 4 weeks, and the 2nd and 3rd doses within interval of at least 6 months. •Two booster doses are given <ul style="list-style-type: none"> - 1st booster is given at least 1 year after the 3rd dose - 2nd booster is given at least 1 year after the 1st booster 	IM	<ul style="list-style-type: none"> •Severe allergic reaction to vaccine component •Moderate to severe illness
	Incompletely Vaccinated				
	With 1 dose	4	0, 1, 2, 6 months		
	With 2 doses	3	0, 1, 6 months		
	With 3 doses	2	0, 6 months		
Fully vaccinated*	1	1 doseTd / Tdap every 10 years			
*Fully vaccinated is defined as having received 5 valid doses of DTP or 4 valid doses of DTP if the fourth dose was administered on or after the fourth birthday.					
HPV Vaccine					
Bivalent HPV (2vHPV)	Females: 15-18 years old	3	0, 1-2, 6 months	IM	<ul style="list-style-type: none"> •Severe allergic reaction to vaccine component •Moderate to severe illness •If found to be pregnant after immunization, delay remaining doses until completion of pregnancy
Quadrivalent HPV (4vHPV) /Nonavalent HPV (9vHPV)	Females: 15-18 years old	3	0, 2, 6 months		
	Males: 15-18 years old				
For females: Bivalent HPV (2vHPV)/ Quadrivalent HPV (4vHPV)/ Nonavalent HPV (9vHPV)	9-14 years old	2	0, 6-12 months		
For males: Quadrivalent HPV(4vHPV)/ Nonavalent HPV (9vHPV)					