

# Sharing Isn't Always Caring: An Overview of the Routine Childhood Immunization Schedule



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# Learning Objectives

- Briefly describe the rationale for each vaccine's inclusion in the CDC/ACIP recommended childhood/adolescent immunization schedule
- Understand the combination vaccines currently available in the US
- Identify available tools to help assess a child's compliance with the vaccine schedule and to develop an individualized catch-up schedule.
- Understand of the conditions that require risk-based immunizations.



# Why Do We Immunize?



Prevention



Community (Herd)  
Immunity



Safety



Economic Benefits



Eradication

Immunization is one of the most effective ways to protect children from potentially serious diseases, a crucial step in safeguarding public health and ensuring a healthy future for all





# The Immunizations and Their Schedule

**Table 1** Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger, United States, 2024

These recommendations must be read with the notes that follow. For those who fall behind or start late, provide catch-up vaccination at the earliest opportunity as indicated by the green bars. To determine minimum intervals between doses, see the catch-up schedule (Table 2).

| Vaccine and other immunizing agents                      | Birth  | 1 mo                     | 2 mos                | 4 mos                    | 6 mos                                   | 9 mos  | 12 mos                   | 15 mos                   | 18 mos               | 19–23 mos            | 2–3 yrs   | 4–6 yrs | 7–10 yrs | 11–12 yrs | 13–15 yrs | 16 yrs               | 17–18 yrs |   |  |  |  |  |  |  |
|--|--|--------------------------|----------------------|--------------------------|---|--|--------------------------|--------------------------|----------------------|----------------------|---|---------|----------|-----------|-----------|----------------------|-----------|---|--|--|--|--|--|--|
| Respiratory syncytial virus (RSV-mAb [Nirsevimab])       | 1 dose depending on maternal RSV vaccination status, See Notes     |                          |                      |                          | 1 dose (8 through 19 months), See Notes |  |                          |                          |                      |                      |   |         |          |           |           |                      |           |   |  |  |  |  |  |  |
| Hepatitis B (HepB)                                       | 1 <sup>st</sup> dose   | ← 2 <sup>nd</sup> dose → |                      | ← 3 <sup>rd</sup> dose → |   |  |                          |                          |                      |                      |   |         |          |           |           |                      |           |   |  |  |  |  |  |  |
| Rotavirus (RV): RV1 (2-dose series), RV5 (3-dose series) | 1 <sup>st</sup> dose   |                          | 2 <sup>nd</sup> dose | See Notes                |   |  |                          |                          |                      |                      |   |         |          |           |           |                      |           |   |  |  |  |  |  |  |
| Diphtheria, tetanus, acellular pertussis (DTaP <7 yrs)   | 1 <sup>st</sup> dose   |                          | 2 <sup>nd</sup> dose | 3 <sup>rd</sup> dose     |   |  |                          | ← 4 <sup>th</sup> dose → | 5 <sup>th</sup> dose |                      |   |         |          |           |           |                      |           |   |  |  |  |  |  |  |
| Haemophilus influenzae type b (Hib)                      | 1 <sup>st</sup> dose   |                          | 2 <sup>nd</sup> dose | See Notes                |   | ← 3 <sup>rd</sup> or 4 <sup>th</sup> dose →<br>See Notes |                          |                          |                      |                      |   |         |          |           |           |                      |           |   |  |  |  |  |  |  |
| Pneumococcal conjugate (PCV15, PCV20)                    | 1 <sup>st</sup> dose   |                          | 2 <sup>nd</sup> dose | 3 <sup>rd</sup> dose     |   |  |                          | ← 4 <sup>th</sup> dose → |                      |                      |   |         |          |           |           |                      |           |   |  |  |  |  |  |  |
| Inactivated poliovirus (IPV <18 yrs)                     | 1 <sup>st</sup> dose   |                          | 2 <sup>nd</sup> dose | ← 3 <sup>rd</sup> dose → |   |  |                          |                          |                      | 4 <sup>th</sup> dose |   |         |          |           |           |                      |           |   |  |  |  |  |  |  |
| COVID-19 (1vCOV-mRNA, 1vCOV-aP5)                         | 1 or more doses of updated (2023–2024 Formula) vaccine (See Notes) |                          |                      |                          |   |  |                          |                          |                      |                      |   |         |          |           |           |                      |           |   |  |  |  |  |  |  |
| Influenza (IIV4)   | Annual vaccination 1 or 2 doses                                    |                          |                      |                          |   |  |                          |                          |                      |                      | Annual vaccination 1 dose only                      |         |          |           |           |                      |           |   |  |  |  |  |  |  |
| <b>OR</b><br>Influenza (LAIV4)                           |  |                          |                      |                          |   |  |                          |                          |                      |                      | Annual vaccination 1 or 2 doses                     |         |          |           |           |                      |           | <b>OR</b><br>Annual vaccination 1 dose only |  |  |  |  |  |  |
| Measles, mumps, rubella (MMR)                            |  |                          |                      |                          | See Notes                               |  | ← 1 <sup>st</sup> dose → |                          |                      | 2 <sup>nd</sup> dose |   |         |          |           |           |                      |           |   |  |  |  |  |  |  |
| Varicella (VAR)  |  |                          |                      |                          |   |  | ← 1 <sup>st</sup> dose → |                          |                      | 2 <sup>nd</sup> dose |   |         |          |           |           |                      |           |   |  |  |  |  |  |  |
| Hepatitis A (HepA)                                       |  |                          |                      |                          | See Notes                               |  | 2-dose series, See Notes |                          |                      |                      |   |         |          |           |           |                      |           |   |  |  |  |  |  |  |
| Tetanus, diphtheria, acellular pertussis (Tdap ≥7 yrs)   |  |                          |                      |                          |   |  |                          |                          |                      |                      | 1 dose  |         |          |           |           |                      |           |   |  |  |  |  |  |  |
| Human papillomavirus (HPV)                               |  |                          |                      |                          |   |  |                          |                          |                      |                      | See Notes   |         |          |           |           |                      |           |   |  |  |  |  |  |  |
| Meningococcal (MenACWY-CRM ≥2 mos, MenACWY-TT ≥2years)   |  |                          |                      |                          |   |  |                          |                          |                      |                      | See Notes   |         |          |           |           | 1 <sup>st</sup> dose |           | 2 <sup>nd</sup> dose                        |  |  |  |  |  |  |
| Meningococcal B (MenB-4C, MenB-FHbp)                     |  |                          |                      |                          |   |  |                          |                          |                      |                      | See Notes   |         |          |           |           |                      |           |   |  |  |  |  |  |  |
| Respiratory syncytial virus vaccine (RSV [Abrysvo])      |  |                          |                      |                          |   |  |                          |                          |                      |                      | Seasonal administration during pregnancy, See Notes |         |          |           |           |                      |           |   |  |  |  |  |  |  |
| Dengue (DEN4CYD; 9–16 yrs)                               |  |                          |                      |                          |   |  |                          |                          |                      |                      | Seropositive in endemic dengue areas (See Notes)    |         |          |           |           |                      |           |   |  |  |  |  |  |  |
| Mpox   |  |                          |                      |                          |   |  |                          |                          |                      |                      |   |         |          |           |           |                      |           |   |  |  |  |  |  |  |

Range of recommended ages for all children
  Range of recommended ages for catch-up vaccination
  Range of recommended ages for certain high-risk groups
  Recommended vaccination can begin in this age group
  Recommended vaccination based on shared clinical decision-making
  No recommendation/not applicable

# DTaP

## Diphtheria, Tetanus, and Pertussis

**Diphtheria** is a serious infection of the nose and throat that can lead to difficulty breathing, heart failure, paralysis, or death

**Tetanus** is a potentially fatal bacterial infection that affects the nerves causing painful muscle spasms and lockjaw resulting in trouble swallowing and/or breathing, or death. There's no cure, only prevention

**Pertussis** commonly called "whooping cough," can cause uncontrollable, violent coughing fits which make it hard to breathe, eat, and drink. Complications include pneumonia, convulsions, brain damage, and death.

### Routine Vaccination

DTaP is only for children younger than 7 years.

**5 doses of DTaP** are recommended at the following ages:

2 months

4 months

6 months

15-18 months

4-6 years



Different vaccines against tetanus, diphtheria, and pertussis (Tdap and Td) are available for older children, adolescents, and adults.

# IPV

## Inactivated poliovirus

**Polio** (or poliomyelitis) is a disabling and life-threatening disease caused by poliovirus, which can infect a person's spinal cord, leading to paralysis.

### Symptoms:

Most people have no symptoms

Others may experience sore throat, fever, fatigue, nausea, headache, or stomach pain

Some will develop more serious symptoms like, paralysis, meningitis, or paresthesia (feeling pins and needles in the legs)

## Routine Vaccination

4 doses of polio vaccine (IPV) are recommended at the following ages:

- 2 months
- 4 months
- 6-18 months
- 4-6 years



# MMR

## Measles, Mumps, and Rubella

**Measles** is highly contagious and can cause serious health complications. Measles causes fever, rash, cough, runny nose, and red, watery eyes. Complications can include ear infection, pneumonia, brain damage, or death.

**Mumps** is a contagious disease caused by a virus that affects the salivary glands causing fever, headache, muscle aches, loss of appetite, fatigue, puffy cheeks, swollen salivary glands, and a tender jaw. Complications can include deafness, inflammation of the brain and/or spinal cord (encephalitis/meningitis), or death.

**Rubella** is a contagious viral infection that causes fever, sore throat, rash, headache, and red, itchy eyes. Rubella is very dangerous for pregnant people and developing babies.

### Routine Vaccination

**2 doses of MMR** are recommended at the following ages:

- 12-15 months
- 4-6 years



Measles rash



# HIB

## *Haemophilus influenzae* type b

*Haemophilus influenzae* disease is an infection caused by *H. influenzae* bacteria. *H. influenzae* bacteria can cause many different types of infections that can range from mild ear infections to serious bloodstream infections.

The most common serious infections caused by *H. influenzae* bacteria are:

- Pneumonia (lung infection)
- Bloodstream infection
- Meningitis (swelling of the lining of the brain and spinal cord)
- Epiglottitis (swelling of the throat)
- Cellulitis (skin infection)
- Infectious arthritis (swelling of the joint)



## Routine Vaccination

3 or 4 doses depending on brand of Hib vaccine used.

- **ActHIB<sup>®</sup>, Hiberix<sup>®</sup>, Pentacel<sup>®</sup>, or Vaxelis<sup>®</sup>:** 4-dose series
  - 3-dose primary series at age
    - 2 months
    - 4 months
    - 6 months
  - Booster dose at age 12–15 months
- **PedvaxHIB<sup>®</sup>:** 3-dose series
  - 2-dose primary series at age
    - 2 months
    - 4 months
  - Booster dose at age 12–15 months

# HIB Immunization Schedule:

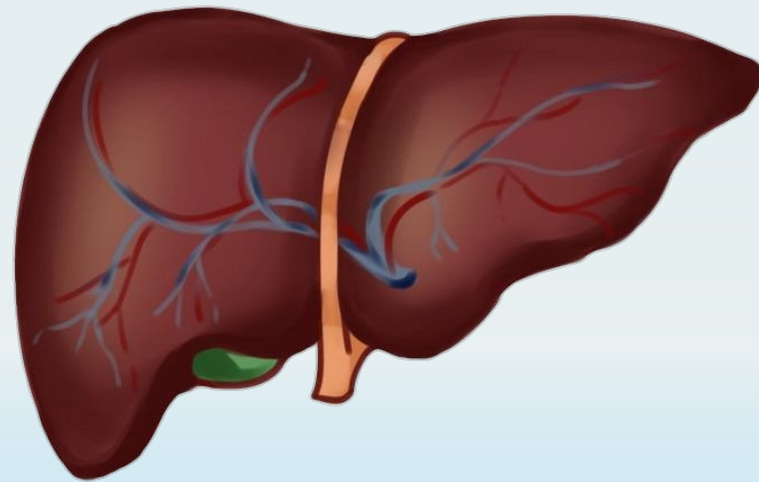
| Age          | HIB Vaccines:<br><b>ActHIB<sup>®</sup></b> , <b>Hiberix<sup>®</sup></b> ,<br><b>Pentacel<sup>®</sup></b> , or<br><b>Vaxelis<sup>®</sup></b> : 4-dose series |
|--------------|---|
| 2 months     | 1 <sup>st</sup> dose  |
| 4 months     | 2 <sup>nd</sup> dose  |
| 6 months     | 3 <sup>rd</sup> dose  |
| 12-15 months | 4 <sup>th</sup> dose (booster dose)   |

| Age          | HIB Vaccine:<br><b>PedvaxHIB<sup>®</sup></b> : 3-<br>dose series |
|--------------|--|
| 2 months     | 1 <sup>st</sup> dose   |
| 4 months     | 2 <sup>nd</sup> dose   |
| 12-15 months | 3 <sup>rd</sup> dose (booster<br>dose)                           |

# HepB vaccine

## Hepatitis B

**Hepatitis B** is a serious liver disease caused by the hepatitis B virus (HBV). For many people, hepatitis B is a short-term illness. For others, it can become a long-term, chronic infection that can lead to serious, and life-threatening health issues like liver disease or liver cancer.



## Routine Vaccination

**3 doses of HepB** vaccine are recommended at the following ages:

- Birth
- 1-2 months
- 6-18 months

When using combination vaccines, a 4<sup>th</sup> dose of HepB may need to be given as part of the schedule.

Infants who did not receive a birth dose of HepB vaccine should start the series ASAP.

# VAR

## Varicella (Chickenpox)

**Varicella (Chickenpox)** is a very contagious disease caused by the varicella-zoster virus. The classic symptom of chickenpox is a rash that turns into itchy, fluid-filled blisters that eventually turn into scabs.

### Disease Complications:

- Pneumonia
- Encephalitis
- Secondary bacterial skin infections
- Shingles (later in life)

### Routine Vaccination

**2 doses of VAR** are recommended at the following ages:

- 12-15 months
- 4-6 years



# RV

## Rotavirus

**Rotavirus** commonly causes severe watery diarrhea and vomiting in infants and young children.



## Routine Vaccination

**2 or 3 doses** depending on brand of RV vaccine used.

- **Rotarix®**: 2-dose series at age 2 and 4 months
- **RotaTeq®**: 3-dose series at age 2, 4, and 6 months

The first dose of either RV vaccine should be given before a child is 15 weeks of age. Children should receive all doses of rotavirus vaccine before they turn 8 months old.

# RV Immunization Schedule:

| Age      | RV Vaccine:<br><b>Rotarix®</b> : 2-dose series |
|----------|--|
| 2 months | 1 <sup>st</sup> dose                           |
| 4 months | 2 <sup>nd</sup> dose                           |

| Age      | RV Vaccine:<br><b>RotaTeq®</b> : 3-dose series |
|----------|--|
| 2 months | 1 <sup>st</sup> dose                           |
| 4 months | 2 <sup>nd</sup> dose                           |
| 6 months | 3 <sup>rd</sup> dose                           |

# HepA

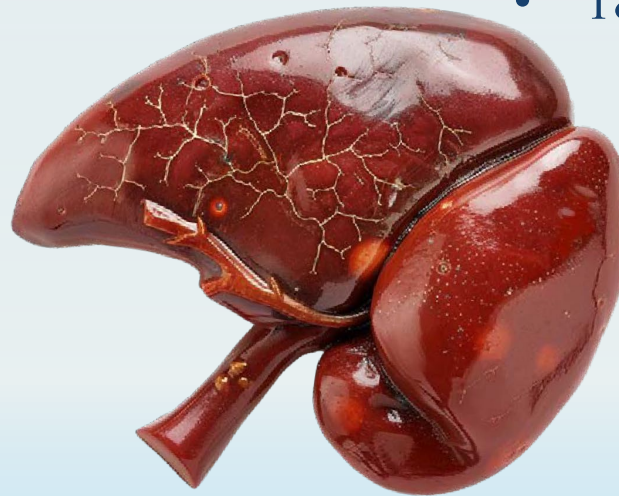
## Hepatitis A

**Hepatitis A** is a very contagious liver disease caused by the hepatitis A virus (HAV). People who get hepatitis A may feel sick for a few weeks or several months but usually recover completely and do not have lasting liver damage. In rare cases, hepatitis A can cause liver failure and even death.

### **Routine Vaccination:**

**2 doses of HepA** are recommended with a minimum interval of 6 months at ages:

- 12 months (Dose 1)
- 18 months (Dose 2)



# PCV15, PCV 20

## Pneumococcal Conjugate

**Pneumococcal disease** is a name for any infection caused by the bacteria *Streptococcus pneumoniae*. *S. pneumoniae* can cause many different types of infections including:

- Pneumonia (lung infection)
- Meningitis (infection of the lining of the brain and spinal cord)
- Bacteremia (bloodstream infection)
- Otitis media (middle ear infection)
- Sinusitis (sinus infection)

## Routine Vaccination

**4 doses of PCV** are recommended at the following ages:

- 2 months
- 4 months
- 6 months
- 12-15 months





# Tdap

## Tetanus, diphtheria, pertussis

**Booster Dose** of tetanus, diphtheria, and pertussis recommended by ACIP/CDC at age 11 years due to:

- Waning immunity (making adolescents susceptible to pertussis)
- Pertussis outbreaks
- Boosting immunity (providing continued protection against tetanus and pertussis)

## Routine Vaccination

**1 dose of Tdap** recommended at age 11.

Every subsequent 10 years a dose of Td or Tdap should be given.

# HPV-9

## Human Papillomavirus

**Human Papillomavirus** is the most common STI with nearly 80% of sexually active individuals contracting the virus which causes morbidity and mortality including:

- Cancers (genital/perianal and oropharyngeal)
- Obstetric complications due to cervical pre-cancerous treatments
- Genital Warts

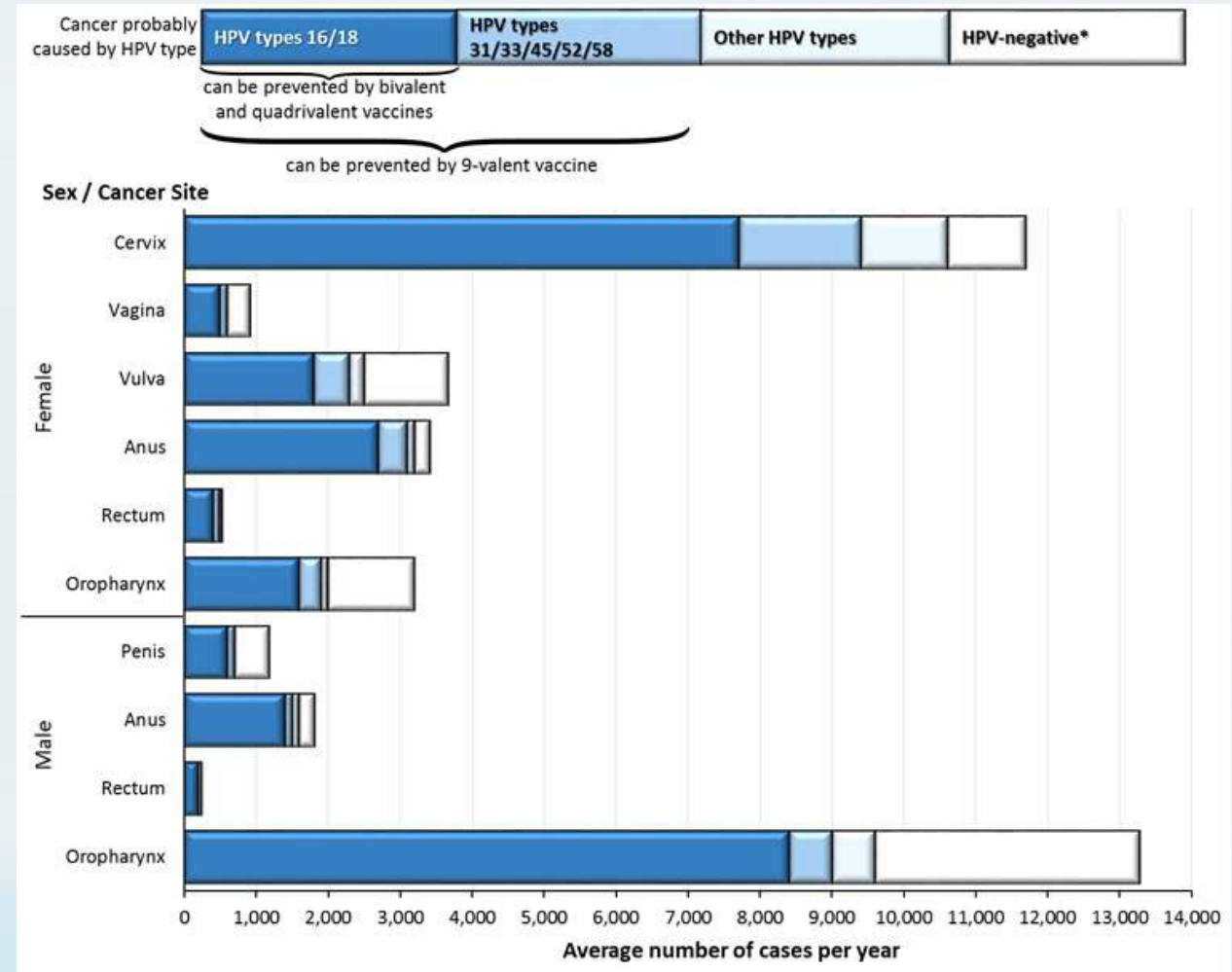
### Routine Vaccination

At age 11 years, as early as age 9 years

#### Age at 1<sup>st</sup> dose

9-14 years old      2 doses 6 months apart

≥15 years old      3 doses (0, 1-2, and 6 months)



# Men ACWY

## Meningococcal

**Meningococcal disease** is a name for infection caused by a strain of the *Meningococcus* bacteria. The primary manifestations of this include meningitis and sepsis. Complications from these illnesses include:

- Intellectual disability
- Permanent hearing loss
- Loss of limbs
- Death

## Routine Vaccination

### MCV-4/MenACWY

2 doses at ages:

- 11 years
- 16 years

# MenB

## Meningococcal

Although *Meningococcus B* can cause the same morbidity and mortality as the other *Meningococcus* strains, the ACIP and CDC recommend **Shared Clinical Decision-Making** for MenB acknowledging:

Variable risk

Individualized care

Informed choices

Vaccine efficacy

## Consider Vaccination

**2 doses of MenB** with interval based on brand used:

Bexsero<sup>®</sup>:

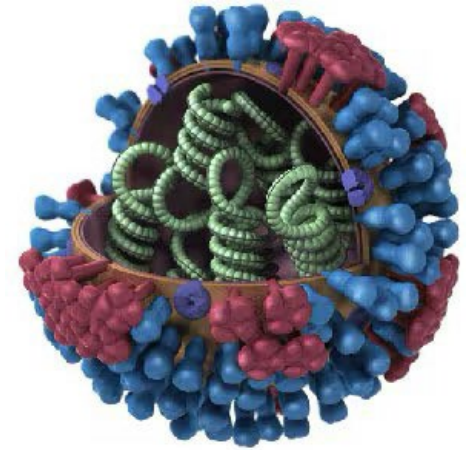
- 2 doses at least 1 month apart

Trumemba<sup>®</sup>:

- 2 doses at least 6 months apart

# Flu IIV4

## Influenza

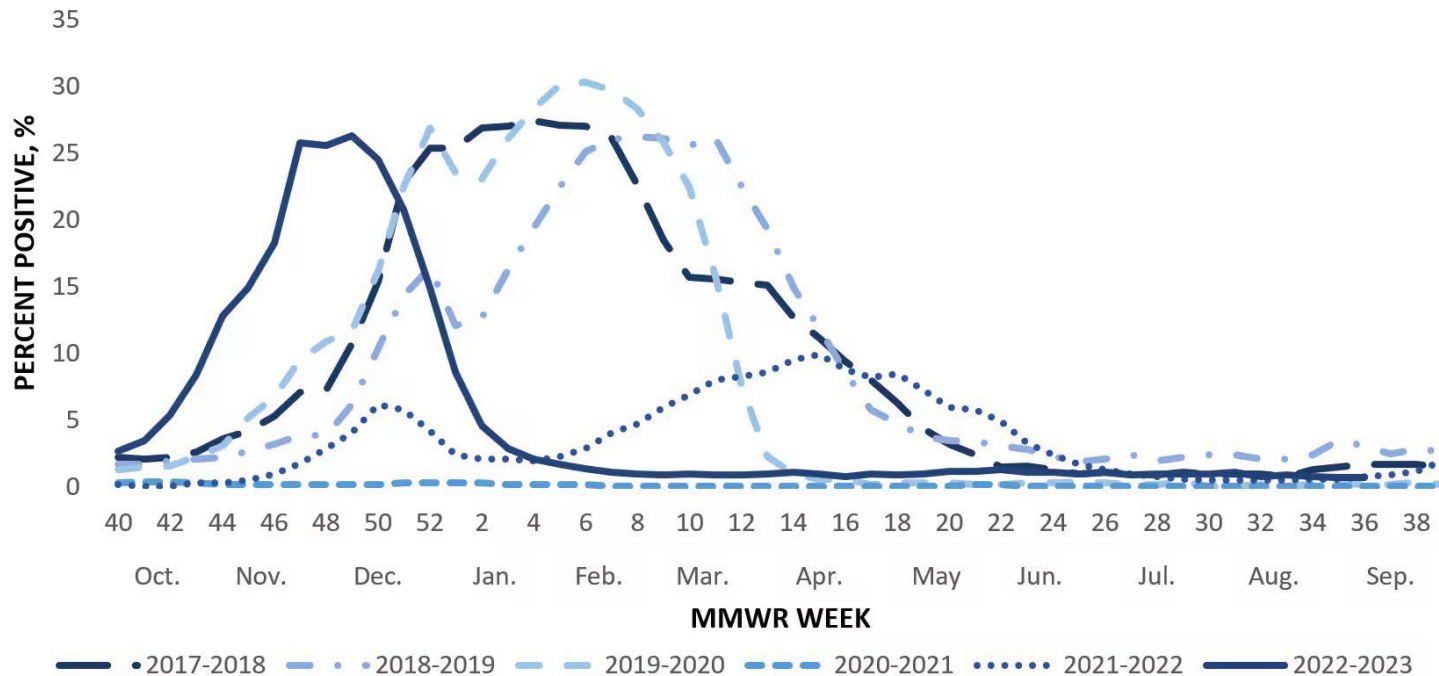


**Flu** is a respiratory virus that spreads every year between October and May. Flu is very contagious and can cause serious illness or even death.

### Annual Vaccination

Everyone 6 months and older should **get a flu vaccine every flu season** (October-May)

- Children 6 months through 8 years of age may need 2 doses of flu vaccine during a single flu season.
- 9 years and older only need 1 dose every flu season.

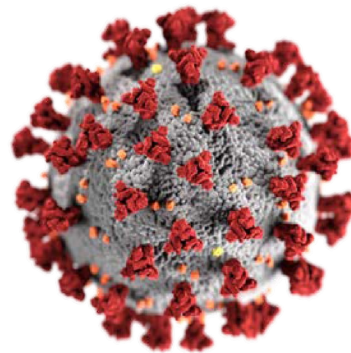
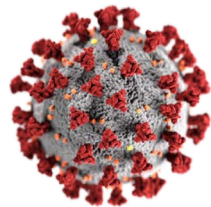
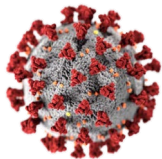
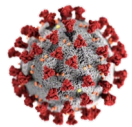


# COVID-19

## Coronavirus disease 2019



**COVID-19** is a very contagious disease caused by a virus named SARS-CoV-2. COVID-19 attacks the lungs and respiratory system causing cold-like symptoms such as, a sore throat or cough. COVID-19 can quickly progress to life-threatening illness.



- Number of doses recommended depends on child's **age** and **type of COVID-19 vaccine** used.
- **Age 6 months – 4 years** should receive 2 or 3 doses of updated (2024-2025 Formula) COVID-19 vaccine.
- **Age 5 years and older** should receive 1 or 2 doses of updated (2024-2025 Formula) COVID-19 vaccine.

# COVID-19 2024-2025 Recommendations

**TABLE 2. Recommended COVID-19 vaccination schedule for children aged 6 months–4 years who are not moderately or severely immunocompromised,\* by previous COVID-19 vaccination history – United States, September 2024**



| Previous COVID-19 vaccination history <sup>1,5</sup> | 2024–2025 COVID-19 vaccine | No. of 2024–2025 doses indicated | Interval between doses  |
|--|----------------------------|----------------------------------|---|
| Unvaccinated   | Moderna                    | 2                                | 4–8 wks between dose 1 and dose 2                                     |
|  | or Pfizer-BioNTech         | 3                                | 3–8 wks between dose 1 and dose 2<br>≥8 wks between dose 2 and dose 3 |
| <b>Previously received Moderna vaccine</b>           |                            |                                  |   |
| 1 dose any Moderna                                   | Moderna                    | 1                                | 4–8 wks after dose 1  |
| ≥2 doses any Moderna                                 | Moderna                    | 1                                | ≥8 wks after last dose  |
| <b>Previously received Pfizer-BioNTech vaccine</b>   |                            |                                  |   |
| 1 dose any Pfizer-BioNTech                           | Pfizer-BioNTech            | 2                                | 3–8 wks between dose 1 and dose 2<br>≥8 wks between dose 2 and dose 3 |
| 2 doses any Pfizer-BioNTech                          | Pfizer-BioNTech            | 1                                | ≥8 wks after dose 2   |
| ≥3 doses any Pfizer-BioNTech                         | Pfizer-BioNTech            | 1                                | ≥8 wks after last dose  |

**TABLE 1. Recommended 2024–2025 COVID-19 vaccination schedule for persons aged ≥5 years who are not moderately or severely immunocompromised,\* by previous COVID-19 vaccination history – United States, September 2024**



| Previous COVID-19 vaccination history <sup>1,5</sup>      | 2024–2025 COVID-19 vaccine        | No. of 2024–2025 doses indicated | Interval between doses            |
|---|-----------------------------------|----------------------------------|-----------------------------------|
| Unvaccinated  | Moderna                           | 1                                | NA                                |
|   | or Pfizer-BioNTech                | 1                                | NA                                |
|   | or Novavax<br>(aged ≥12 yrs only) | 2                                | 3–8 wks between dose 1 and dose 2 |
| Previously received ≥1 COVID-19 vaccine dose <sup>1</sup> | Moderna                           | 1                                | ≥8 wks after last dose            |
|   | or Pfizer-BioNTech                | 1                                | ≥8 wks after last dose            |
|   | or Novavax<br>(aged ≥12 yrs only) | 1                                | ≥8 wks after last dose            |

# RSV

## Respiratory Syncytial Virus

- **RSV** is a contagious respiratory illness that can be especially serious for infants, adults over the age of 60, and people with chronic health conditions.
- RSV typically causes cold-like symptoms such as, coughing, runny nose, decrease in appetite, sneezing, fever or wheezing. But very young infants with RSV may only experience irritability, decreased activity, or breathing difficulties.

There are **two ways to protect babies** from RSV:

1. RSV vaccine (Abrysvo) given to mothers who are 32-36 weeks pregnant during RSV season (at least 14 days before giving birth).
2. Or RSV immunization (Nirsevimab) for **infants younger than 8 months of age** born during- or entering- their first RSV season.





# Routine Schedule Immunizations Licensed in the US

|  |                 |               |
|--|-----------------|---------------|
| Monoclonal antibody  | Abbreviation(s) | Trade name(s) |
| Respiratory syncytial virus monoclonal antibody (Nirsevimab) | RSV-mAb         | Beyfortus™    |

| Vaccines   | Abbreviation(s) | Trade name(s)                               |
|--|-----------------|---|
| COVID-19†  | 1vCOV-mRNA      | Comirnaty®/Pfizer-BioNTech COVID-19 Vaccine |
|  |                 | Spikevax®/Moderna COVID-19 Vaccine          |
|  | 1vCOV-aPS       | Novavax COVID-19 Vaccine                    |
| Dengue vaccine                                       | DEN4CYD         | Dengvaxia®                                  |
| Diphtheria, tetanus, and acellular pertussis vaccine | DTaP            | Daptacel®<br>Infanrix®                      |
| <i>Haemophilus influenzae</i> type B vaccine         | Hib (PRP-T)     | ActHIB®<br>Hiberix®                         |
|  | Hib (PRP-OMP)   | PedvaxHIB®                                  |
| Hepatitis A vaccine                                  | HepA            | Havrix®<br>Vaqta®                           |
| Hepatitis B vaccine                                  | HepB            | Engerix-B®<br>Recombivax HB®                |
| Human papillomavirus vaccine                         | HPV             | Gardasil 9®                                 |
| Influenza vaccine (inactivated)                      | IIV4            | Multiple                                    |
| Influenza vaccine (live, attenuated)                 | LAIV4           | FluMist® Quadrivalent                       |
| Measles, mumps, and rubella vaccine                  | MMR             | M-M-R II®<br>Priorix®                       |

| Vaccines   | Abbreviation(s)      | Trade name(s)        |
|--|----------------------|----------------------|
| Meningococcal serogroups A, C, W, Y vaccine          | MenACWY-CRM          | Menveo®              |
|  | MenACWY-TT           | MenQuadfi®           |
| Meningococcal serogroup B vaccine                    | MenB-4C              | Bexsero®             |
|  | MenB-FHbp            | Trumenba®            |
| Meningococcal serogroup A, B, C, W, Y vaccine        | MenACWY-TT/MenB-FHbp | Penbraya™            |
| Mpox vaccine   | Mpox                 | Jynneos®             |
| Pneumococcal conjugate vaccine                       | PCV15                | Vaxneuvance™         |
|  | PCV20                | Prevnar 20®          |
| Pneumococcal polysaccharide vaccine                  | PPSV23               | Pneumovax 23®        |
| Poliovirus vaccine (inactivated)                     | IPV                  | Ipol®                |
| Respiratory syncytial virus vaccine                  | RSV                  | Abrysvo™             |
| Rotavirus vaccine                                    | RV1<br>RV5           | Rotarix®<br>RotaTeq® |
| Tetanus, diphtheria, and acellular pertussis vaccine | Tdap                 | Adacel®<br>Boostrix® |
| Tetanus and diphtheria vaccine                       | Td                   | Tenivac®<br>TDvax™   |
| Varicella vaccine                                    | VAR                  | Varivax®             |

# Your child needs vaccines as they grow!

## 2024 Recommended Immunizations for Birth Through 6 Years Old

Want to learn more?  
Scan this QR code to find out which  
vaccines your child might need. Or visit  
[www.cdc.gov/vaccines/tool/child.html](http://www.cdc.gov/vaccines/tool/child.html)



| VACCINE OR PREVENTIVE ANTIBODY | BIRTH                                  | 1 MONTH | 2 MONTHS | 4 MONTHS  | 6 MONTHS | 7 MONTHS | 8 MONTHS                         | 12 MONTHS | 15 MONTHS | 18 MONTHS | 19 MONTHS | 20-23 MONTHS | 2-3 YEARS | 4-6 YEARS |
|--------------------------------|--|---------|----------|---|----------|----------|----------------------------------|-----------|-----------|-----------|-----------|--------------|-----------|-----------|
| <b>RSV antibody</b>            | Depends on mother's RSV vaccine status |         |          |   |          |          | Depends on child's health status |           |           |           |           |              |           |           |
| <b>Hepatitis B</b>             | Dose 1                                 | Dose 2  |          |   | Dose 3   |          |                                  |           |           |           |           |              |           |           |
| <b>Rotavirus</b>               |  | Dose 1  | Dose 2   | Dose 3  |          |          |                                  |           |           |           |           |              |           |           |
| <b>DTaP</b>                    |  | Dose 1  | Dose 2   | Dose 3  |          |          |                                  |           | Dose 4    |           |           |              |           | Dose 5    |
| <b>Hib</b>                     |  | Dose 1  | Dose 2   | Dose 3  |          |          |                                  | Dose 4    |           |           |           |              |           |           |
| <b>Pneumococcal</b>            |  | Dose 1  | Dose 2   | Dose 3  |          |          |                                  | Dose 4    |           |           |           |              |           |           |
| <b>Polio</b>                   |  | Dose 1  | Dose 2   | Dose 3  |          |          |                                  |           |           |           |           | Dose 4       |           |           |
| <b>COVID-19</b>                |  |         |          | At least 1 dose of the current COVID-19 vaccine |          |          |                                  |           |           |           |           |              |           |           |
| <b>Influenza/Flu</b>           |  |         |          | Every year. Two doses for some children         |          |          |                                  |           |           |           |           |              |           |           |
| <b>MMR</b>                     |  |         |          |   |          |          |                                  | Dose 1    |           |           |           |              |           | Dose 2    |
| <b>Chickenpox</b>              |  |         |          |   |          |          |                                  | Dose 1    |           |           |           |              |           | Dose 2    |
| <b>Hepatitis A</b>             |  |         |          |   |          |          | 2 doses separated by 6 months    |           |           |           |           |              |           |           |

|              |           |
|--------------|-----------|
| IM/SC        | 26        |
| Oral         | 2         |
| <b>Total</b> | <b>28</b> |

### KEY

- ALL children should be immunized at this age.
- SOME children should get this dose of vaccine or preventive antibody at this age

### Talk to your child's health care provider for more guidance if:

1. Your child has any medical condition that puts them at higher risk for infection.
2. Your child is traveling outside the United States.
3. Your child misses a vaccine recommended for their age.

# Older children and teens need vaccines too!

## 2024 Recommended Immunizations for Children 7–18 Years Old

Want to learn more?  
Scan this QR code to find out which  
vaccines your child might need. Or visit  
[www.cdc.gov/vaccines/tool/teen.html](http://www.cdc.gov/vaccines/tool/teen.html)



| RECOMMENDED VACCINES | 7 YEARS   | 8 YEARS | 9 YEARS   | 10 YEARS | 11 YEARS   | 12 YEARS | 13 YEARS | 14 YEARS | 15 YEARS | 16 YEARS  | 17 YEARS | 18 YEARS  |  |
|----------------------|---|---------|---|----------|--|----------|----------|----------|----------|---|----------|---|--|
| HPV                  |   |         | ALL children in age group can get the vaccine   |          | ALL children in age group should get the vaccine |          |          |          |          |   |          |   |  |
| Tdap <sup>1</sup>    |   |         |   |          | ALL children in age group should get the vaccine |          |          |          |          |   |          |   |  |
| Meningococcal ACWY   |   |         |   |          | ALL children in age group should get the vaccine |          |          |          |          | SOME children in age group should get the vaccine   |          |   |  |
| Meningococcal B      |   |         |   |          |  |          |          |          |          | Parents/caregivers should talk to their health care provider to decide if this vaccine is right for their child |          |   |  |
| Influenza/Flu        | Every year. Two doses for some children         |         | Every year  |          |  |          |          |          |          |   |          |   |  |
| COVID-19             | At least 1 dose of the current COVID-19 vaccine |         |   |          |  |          |          |          |          |   |          |   |  |
| RSV                  |   |         |   |          | if pregnant during RSV season                    |          |          |          |          |   |          |   |  |
| Mpox                 |   |         |   |          |  |          |          |          |          |   |          | SOME children in age group should get the vaccine |  |
| Dengue               |   |         | ONLY if living in a place where dengue is common AND has laboratory test confirming past dengue infection |          |  |          |          |          |          |   |          |   |  |

<sup>1</sup> One dose of Tdap is recommended during each pregnancy

### KEY

-  ALL children in age group should get the vaccine
-  ALL children in age group can get the vaccine
-  SOME children in age group should get the vaccine
-  Parents/caregivers should talk to their health care provider to decide if this vaccine is right for their child

### Talk to your child's health care provider for more guidance if:

1. Your child has any medical condition that puts them at higher risk for infection or is pregnant.
2. Your child is traveling outside the United States.
3. Your child misses any vaccine recommended for their age or for babies and young children.

|       |   |
|-------|---|
| IM/SC | 7 |
| Oral  | 0 |
| Total | 7 |

# Routine Schedule Combination Vaccines Licensed in the US

| Vaccines  | Abbreviation(s)   | Trade name(s)                                 |
|---|-------------------|---|
| DTaP, hepatitis B, and inactivated poliovirus vaccine                                       | DTaP-HepB-IPV     | Pediarix <sup>®</sup>                         |
| DTaP, inactivated poliovirus, and <i>Haemophilus influenzae</i> type B vaccine              | DTaP-IPV/Hib      | Pentacel <sup>®</sup>                         |
| DTaP and inactivated poliovirus vaccine   | DTaP-IPV          | Kinrix <sup>®</sup><br>Quadracel <sup>®</sup> |
| DTaP, inactivated poliovirus, <i>Haemophilus influenzae</i> type b, and hepatitis B vaccine | DTaP-IPV-Hib-HepB | Vaxelis <sup>®</sup>                          |
| Measles, mumps, rubella, and varicella vaccines   | MMRV              | ProQuad <sup>®</sup>                          |

# Immunization Schedule with Combination Vaccines

|  | NEWBORN                 | 2 MONTHS   | 4 MONTHS  | 6 MONTHS   | 12 MONTHS  | 15 MONTHS                                     | 18 MONTHS | 4-6 YEARS   | 11-12 YEARS                       | 16-18 YEARS                 |       |      |
|--|-------------------------|--|---|--|--|---|-----------|---|-----------------------------------|-----------------------------|-------|------|
| <b>PEDIARIX<sup>®</sup></b><br><b>PROQUA<sup>®</sup></b><br><b>QUADRACE<sup>™</sup></b><br><b>KINRIX<sup>®</sup></b> | Hep B<br>RSV (seasonal) | <b>PEDIARIX<sup>®</sup></b><br>DTaP, IPV, HepB<br>+<br>PCV<br>Rotavirus<br>Hib | <b>PEDIARIX<sup>®</sup></b><br>DTaP, IPV, HepB <sup>1</sup><br>+<br>PCV<br>Rotavirus<br>Hib | <b>PEDIARIX<sup>®</sup></b><br>DTaP, IPV, HepB<br>+<br>PCV                   | HepA<br>MMR <sup>4</sup><br>Varicella <sup>4</sup><br>PCV <sup>5</sup><br>Hib <sup>5</sup> | DTaP  | HepA      | <b>QUADRACEL<sup>™</sup></b><br><b>or KINRIX<sup>™7</sup></b><br>DTaP, IPV<br>+<br><b>PROQUAD<sup>™</sup></b><br>MMRV | HPV (2 doses)<br>Tdap<br>Men ACWY | Men ACWY<br>MenB (2 doses)  | IM/SC | 26   |
|  | RSV (seasonal)          | <b>PENTACEL<sup>®</sup></b><br>DTaP, IPV, Hib<br>+<br>PCV<br>Rotavirus<br>HepB | <b>PENTACEL<sup>®</sup></b><br>DTaP, IPV, Hib<br>+<br>PCV<br>Rotavirus                      | <b>PENTACEL<sup>®</sup></b><br>DTaP, IPV, Hib<br>+<br>PCV                    | HepA<br>MMR <sup>4</sup><br>Varicella <sup>4</sup><br>PCV <sup>5</sup>                     | <b>PENTACEL<sup>®</sup></b><br>DTaP, IPV, Hib | HepA      | <b>QUADRACEL<sup>™</sup></b><br><b>or KINRIX<sup>™7</sup></b><br>DTaP, IPV<br>+<br><b>PROQUAD<sup>™</sup></b><br>MMRV | HPV (2 doses)<br>Tdap<br>Men ACWY | Men ACWY<br>MenB (2 doses)  | IM/SC | 25   |
|  | HepB                    | <b>VAXELIS<sup>™</sup></b><br>DTaP, IPV, Hib, HepB<br>+<br>PCV<br>Rotavirus    | <b>VAXELIS<sup>™</sup></b><br>DTaP, IPV, Hib, HepB <sup>1</sup><br>+<br>PCV<br>Rotavirus    | <b>VAXELIS<sup>™</sup></b><br>DTaP, IPV, Hib <sup>3</sup> , HepB<br>+<br>PCV | HepA<br>MMR <sup>4</sup><br>Varicella <sup>4</sup><br>PCV <sup>5</sup><br>Hib <sup>5</sup> | DTaP  | HepA      | <b>QUADRACEL<sup>™</sup></b><br><b>or KINRIX<sup>™7</sup></b><br>DTaP, IPV<br>+<br><b>PROQUAD<sup>™</sup></b><br>MMRV | HPV (2 doses)<br>Tdap<br>Men ACWY | Men ACWY<br>Men B (2 doses) | IM/SC | 24   |
|  |                         |  |   |  |  |   |           |   |                                   |                             |       | Oral |
|  |                         |  |   |  |  |   |           |   |                                   |                             | Total | 28   |
|  |                         |  |   |  |  |   |           |   |                                   |                             | Total | 27   |
|  |                         |  |   |  |  |   |           |   |                                   |                             | Total | 26   |

Everyone 6 months+: 1) COVID-19 vaccine per current recommendations 2) Flu vaccine every fall

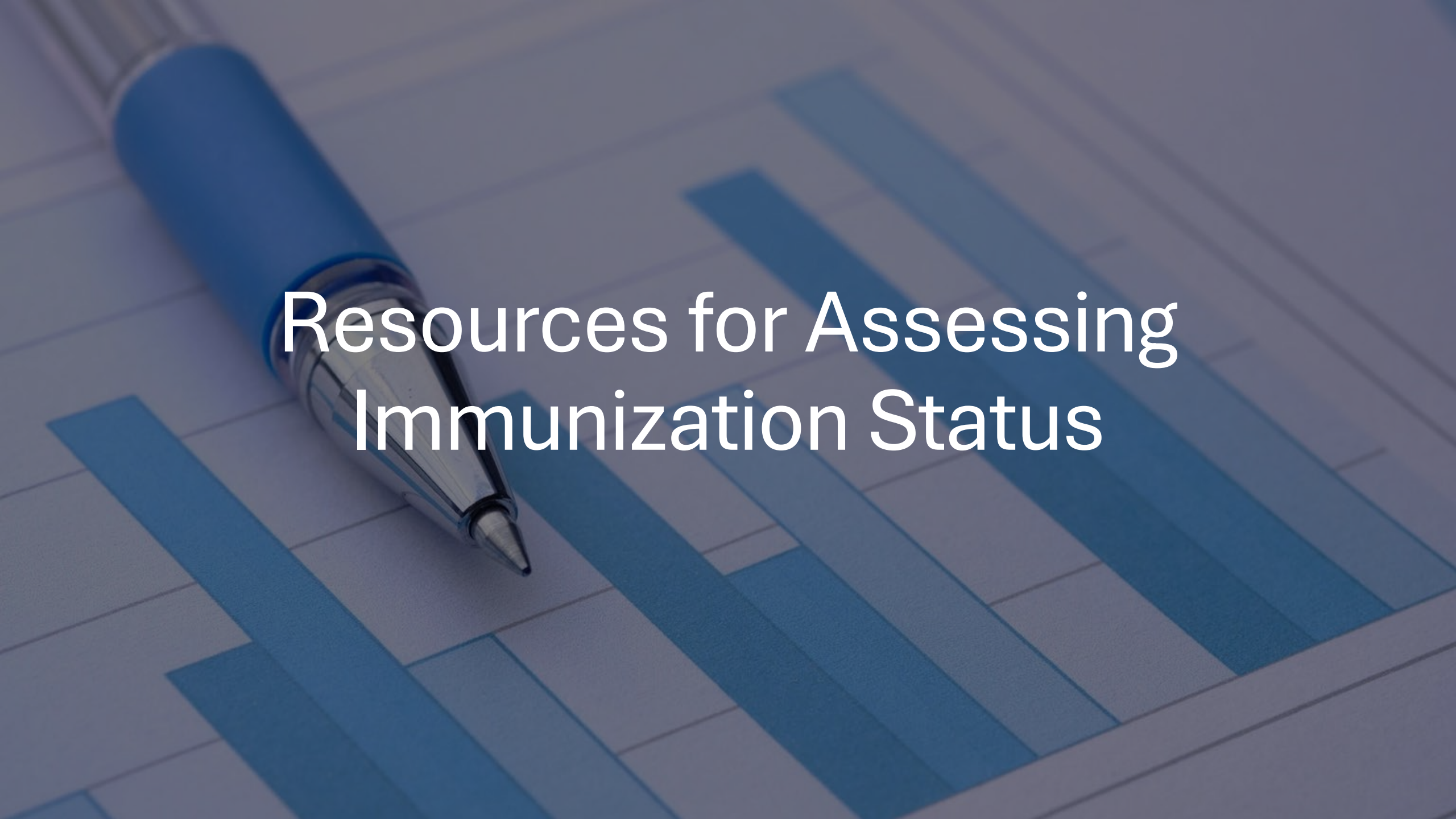
\*Adapted from the California Department of Health Immunization Branch

# Doses per Schedule Comparison

|       | Single Immunizations Only | PEDIARIX <sup>®</sup><br>PROQUAD <sup>®</sup><br>QUADRACEL <sup>™</sup><br>or KINRIX <sup>®</sup> | PENTACEL <sup>®</sup><br>PROQUAD <sup>®</sup><br>QUADRACEL <sup>™</sup><br>or KINRIX <sup>®</sup> | VAXELIS <sup>™</sup><br>PROQUAD <sup>®</sup><br>QUADRACEL <sup>™</sup><br>or KINRIX <sup>®</sup> |
|-------|---------------------------|---|---|--|
| IM/SC | 33                        | 26  | 25  | 24   |
| Oral  | 2                         | 2   | 2   | 2  |
| Total | 35                        | 28  | 27  | 26   |

## Assumptions:

- Influenza and COVID-19 doses are not included in these counts
- RSV Immunization is given
- 2 dose Rotavirus is used
- 3 dose Hib is used (when Hib is not included in a combination vaccine)
- Men ACWY and MenB are given individually at age 16-18

A blue ballpoint pen is positioned diagonally across the frame, pointing towards the bottom right. The background is a light blue document with a grid pattern and several dark blue horizontal bars, suggesting a bar chart or data table. The overall image has a soft, slightly blurred aesthetic.

# Resources for Assessing Immunization Status

# The Vaccine Handbook App    CDC Vaccine Schedules App



## **The Vaccine Handbook (The Purple Book) App**

The Vaccine Handbook draws together the latest vaccine science and guidance into a concise, user-friendly, practical resource for the private office, public health clinic, academic medical center, and hospital.

The **FREE** app is for iPhone and Android users.



Get the CDC Vaccine Schedules **FREE** app for clinicians and other health care professionals for immediate access to CDC's latest recommended immunization schedules and view childhood, adolescent, adult, and catch-up vaccine schedules and footnotes on your smartphone and tablet devices.



# CDC Clinical Decision Support for Immunization (CDSI)



| Series Dose             | Dose 1  |                              |                                  |                                    |                           |                             |                               |   |                        |                |                |           |                     |          |
|-------------------------|---|------------------------------|----------------------------------|------------------------------------|---------------------------|-----------------------------|-------------------------------|---|------------------------|----------------|----------------|-----------|---------------------|----------|
| Age                     | Absolute Minimum Age                                  | Minimum Age                  | Earliest Recommended Age         | Latest Recommended Age (less than) | Maximum Age (less than)   | Effective Date              | Cessation Date                |   |                        |                |                |           |                     |          |
| Preferable Interval     | From Immediate Previous Dose Administered? Y/N        | From Target Dose # in Series | From Most Recent (CVX List)      | From Relevant Observation (Code)   | Absolute Minimum Interval | Minimum Interval            | Earliest Recommended Interval | Latest Recommended Interval (less than) | Interval Priority Flag | Effective Date | Cessation Date |           |                     |          |
| Allowable Interval      | From Immediate Previous Dose Administered? Y/N        | From Target Dose # in Series | Absolute Minimum Interval        | Effective Date                     | Cessation Date            |                             |                               |   |                        |                |                |           |                     |          |
| Preferable Vaccine      | Vaccine Type (CVX)                                    | Vaccine Type Begin Age       | Vaccine Type End Age (less than) | Trade Name (MVX)                   | Volume (in ml)            | Forecast Vaccine Type (Y/N) |                               |   |                        |                |                |           |                     |          |
|                         | 6 weeks - 4 days                                      | 6 weeks                      | 2 months                         | 3 months + 4 weeks                 | 5 years                   | n/a                         | n/a                           |   |                        |                |                |           |                     |          |
|                         | n/a   | n/a                          | n/a                              | n/a                                | n/a                       | n/a                         | n/a                           |   |                        |                |                |           |                     |          |
|                         | n/a   | n/a                          | n/a                              | n/a                                | n/a                       | n/a                         | n/a                           |   |                        |                |                |           |                     |          |
|                         | PCV13 (133)   | 6 weeks                      | n/a                              | n/a                                | 0.5                       | N                           |                               |   |                        |                |                |           |                     |          |
|                         | PCV15 (215)   | 6 weeks                      | n/a                              | n/a                                | 0.5                       | Y                           |                               |   |                        |                |                |           |                     |          |
|                         | PCV20 (216)   | 6 weeks                      | n/a                              | n/a                                | 0.5                       | Y                           |                               |   |                        |                |                |           |                     |          |
| Allowable Vaccine       | Vaccine Type (CVX)                                    | Vaccine Type Begin Age       | Vaccine Type End Age (less than) |                                    |                           |                             |                               |   |                        |                |                |           |                     |          |
|                         | PCV7 (100)  | 6 weeks - 4 days             | n/a                              |                                    |                           |                             |                               |   |                        |                |                |           |                     |          |
|                         | Pneumococcal, unspecified formulation (109)           | 6 weeks - 4 days             | n/a                              |                                    |                           |                             |                               |   |                        |                |                |           |                     |          |
|                         | PCV13 (133)   | 6 weeks - 4 days             | n/a                              |                                    |                           |                             |                               |   |                        |                |                |           |                     |          |
|                         | Pneumococcal Conjugate, unspecified formulation (152) | 6 weeks - 4 days             | n/a                              |                                    |                           |                             |                               |   |                        |                |                |           |                     |          |
|                         | PCV10 (177)   | 6 weeks - 4 days             | n/a                              |                                    |                           |                             |                               |   |                        |                |                |           |                     |          |
|                         | PCV15 (215)   | 6 weeks - 4 days             | n/a                              |                                    |                           |                             |                               |   |                        |                |                |           |                     |          |
|                         | PCV20 (216)   | 6 weeks - 4 days             | n/a                              |                                    |                           |                             |                               |   |                        |                |                |           |                     |          |
| Inadvertent Vaccine     | Vaccine Type (CVX)                                    |                              |                                  |                                    |                           |                             |                               |   |                        |                |                |           |                     |          |
|                         | PPSV23 (33)   |                              |                                  |                                    |                           |                             |                               |   |                        |                |                |           |                     |          |
| Conditional Skip        | Skip Context  | Set Logic                    | Set ID                           | Description                        | Effective Date            | Cessation Date              | Condition Logic               | Condition ID                            | Type                   | Start Date     | End Date       | Begin Age | End Age (less than) | Interval |
|                         | n/a   | n/a                          | n/a                              | n/a                                | n/a                       | n/a                         | n/a                           | n/a                                     | n/a                    | n/a            | n/a            | n/a       | n/a                 | n/a      |
| Recurring Dose          | Recurring Dose (Yes/No)                               |                              |                                  |                                    |                           |                             |                               |   |                        |                |                |           |                     |          |
|                         | No  |                              |                                  |                                    |                           |                             |                               |   |                        |                |                |           |                     |          |
| Seasonal Recommendation | Start Date  | End Date                     |                                  |                                    |                           |                             |                               |   |                        |                |                |           |                     |          |
|                         | n/a   | n/a                          |                                  |                                    |                           |                             |                               |   |                        |                |                |           |                     |          |
| Series Dose             | Dose 2  |                              |                                  |                                    |                           |                             |                               |   |                        |                |                |           |                     |          |
| Age                     | Absolute Minimum Age                                  | Minimum Age                  | Earliest Recommended Age         | Latest Recommended Age (less than) | Maximum Age (less than)   | Effective Date              | Cessation Date                |   |                        |                |                |           |                     |          |
| Preferable Interval     | From Immediate Previous Dose Administered? Y/N        | From Target Dose # in Series | From Most Recent (CVX List)      | From Relevant Observation (Code)   | Absolute Minimum Interval | Minimum Interval            | Earliest Recommended Interval | Latest Recommended Interval (less than) | Interval Priority Flag | Effective Date | Cessation Date |           |                     |          |
| Allowable Interval      | From Immediate Previous Dose Administered? Y/N        | From Target Dose # in Series | Absolute Minimum Interval        | Effective Date                     | Cessation Date            |                             |                               |   |                        |                |                |           |                     |          |
| Preferable Vaccine      | Vaccine Type (CVX)                                    | Vaccine Type Begin Age       | Vaccine Type End Age (less than) | Trade Name (MVX)                   | Volume (in ml)            | Forecast Vaccine Type (Y/N) |                               |   |                        |                |                |           |                     |          |
|                         | 10 weeks - 4 days                                     | 10 weeks                     | 4 months                         | 5 months + 4 weeks                 | 5 years                   | n/a                         | n/a                           |   |                        |                |                |           |                     |          |
|                         | Y   | n/a                          | n/a                              | n/a                                | 4 weeks - 4 days          | 4 weeks                     | 8 weeks                       | 13 weeks                                | n/a                    | n/a            | n/a            |           |                     |          |
|                         | n/a   | n/a                          | n/a                              | n/a                                | n/a                       | n/a                         |                               |   |                        |                |                |           |                     |          |
|                         | PCV13 (133)   | 6 weeks                      | n/a                              | n/a                                | 0.5                       | N                           |                               |   |                        |                |                |           |                     |          |
|                         | PCV15 (215)   | 6 weeks                      | n/a                              | n/a                                | 0.5                       | Y                           |                               |   |                        |                |                |           |                     |          |
|                         | PCV20 (216)   | 6 weeks                      | n/a                              | n/a                                | 0.5                       | Y                           |                               |   |                        |                |                |           |                     |          |
| Allowable Vaccine       | Vaccine Type (CVX)                                    | Vaccine Type Begin Age       | Vaccine Type End Age (less than) |                                    |                           |                             |                               |   |                        |                |                |           |                     |          |
|                         | PCV7 (100)  | 6 weeks - 4 days             | n/a                              |                                    |                           |                             |                               |   |                        |                |                |           |                     |          |
|                         | Pneumococcal, unspecified formulation (109)           | 6 weeks - 4 days             | n/a                              |                                    |                           |                             |                               |   |                        |                |                |           |                     |          |
|                         | PCV13 (133)   | 6 weeks - 4 days             | n/a                              |                                    |                           |                             |                               |   |                        |                |                |           |                     |          |
|                         | Pneumococcal Conjugate, unspecified formulation (152) | 6 weeks - 4 days             | n/a                              |                                    |                           |                             |                               |   |                        |                |                |           |                     |          |
|                         | PCV10 (177)   | 6 weeks - 4 days             | n/a                              |                                    |                           |                             |                               |   |                        |                |                |           |                     |          |
|                         | PCV15 (215)   | 6 weeks - 4 days             | n/a                              |                                    |                           |                             |                               |   |                        |                |                |           |                     |          |
|                         | PCV20 (216)   | 6 weeks - 4 days             | n/a                              |                                    |                           |                             |                               |   |                        |                |                |           |                     |          |
| Inadvertent Vaccine     | Vaccine Type (CVX)                                    |                              |                                  |                                    |                           |                             |                               |   |                        |                |                |           |                     |          |
|                         | PPSV23 (33)   |                              |                                  |                                    |                           |                             |                               |   |                        |                |                |           |                     |          |
| Conditional Skip        | Skip Context  | Set Logic                    | Set ID                           | Description                        | Effective Date            | Cessation Date              | Condition Logic               | Condition ID                            | Type                   | Start Date     | End Date       | Begin Age | End Age (less than) | Interval |

# Immunization Calculation Engine



The Immunization Calculation Engine (ICE) is a free, open-source immunization forecasting software system. The core component of ICE is the **ICE Web Service**, which evaluates a patient's immunization history and generates the appropriate immunization recommendations for the patient. The ICE Web Service runs in [OpenCDS](#) which is a third-party platform that may be used to build decision support services for any clinical domain.

The ICE software system has been developed and configured by a collaborative partnership of public health experts and information technology and has been released under a [standard open-source license](#).

Due to its standards-based Web Service interface, its Java-based implementation, and its complete lack of dependence on any commercial software, ICE can be deployed in diverse technical environments and easily integrates with third party clinical systems such as Immunization Information Systems (IIS), Electronic Health Record Systems (EHR-S), and Health Information Exchanges (HIEs).

Clinical systems utilize the ICE Web Service by passing a Virtual Medical Record (vMR) to its Web Service which adheres to the Decision Support Service (DSS) standard. In response, ICE utilizes its immunization rules and the data in the vMR, such as the patient's date of birth, gender, immunization history, and disease indicators, to evaluate and return the validity of each immunization in the patient's history along with one or more evaluation reasons. It also returns a recommendation for each vaccine group along with one or more recommendation reasons. ICE's Web Service architecture scales to support simultaneous real-time processing of many patients submitted by one or more systems. It can also service requests for multiple immunization schedules.



## Patient ICE Results

Back

### Patient Info

**Name:** Patient 92

**DOB:** 1990-01-01

**Gender:** M

**Evaluation Date:** 2024-10-16

**Age @Evaluation:** 34y 9m 15d

### Patient Output Grid - Click on the bulleted-list icons for additional details

| Vaccine Group | Recommendations  | Evaluations  |
|---------------|--|--|
| Hep B         | <p>Recommendation Date: N/A<br/>Overdue Date: N/A<br/>Earliest Date: N/A<br/>Status: NOT_RECOMMENDED<br/>Message: PROOF_OF_IMMUNITY<br/>Vaccine Group: Hep B</p>       | <p>Date: 1990-03-15<br/>Age: 0y 2m 14d<br/>Valid: true<br/>Vaccine: Hep B NOS (45)</p> <p>Date: 1990-04-01<br/>Age: 0y 3m 0d<br/>Valid: false<br/>Vaccine: Hep B NOS (45)</p> <p>Date: 1996-03-15<br/>Age: 6y 2m 14d<br/>Disease: Hepatitis B (070.30)</p> <p>Date: 1996-03-15<br/>Age: 6y 2m 14d<br/>Valid: false<br/>Vaccine: Hep B, adolescent or pediatric (08)</p> <p>Date: 2010-02-01<br/>Age: 20y 1m 0d<br/>Valid: false<br/>Vaccine: Hep B, adolescent or pediatric (08)</p> |
| DTP           | <p>Recommendation Date: 1997-01-01<br/>Overdue Date: 1997-01-01<br/>Earliest Date: 1997-01-01<br/>Status: RECOMMENDED<br/>Message: DUE_NOW<br/>Vaccine: Tdap (115)</p> |  |

# Integrated EHR Solutions

# ShowMe Vax

**Immunizations** + All Visits

◆ **Outside records found.** Outside records are available to be added to the local record. [View Records](#)

[View Forecast](#) [Patient Risk Assessment](#) 0 Risk Documented [Print Record](#)

| Immunizations                        | Today   | 11yrs 3m<br>OCT 17, 2024 | 11yrs 8m<br>MAR 16, 2025 | 11yrs 8m<br>MAR 16, 2025 | 13yrs<br>JUL 23, 2026 | 13yrs<br>JUL 23, 2026 | 14yrs 2m<br>SEP 19, 2027 | JUN 26, 2029 |
|--------------------------------------|---|--------------------------|--------------------------|--------------------------|-----------------------|-----------------------|--------------------------|--------------|
| Polio<br>Complete                    |   |                          |                          |                          |                       |                       |                          |              |
| Influenza<br>Last Admin: [Date]      | Dose 1  |                          |                          |                          |                       |                       |                          |              |
| Measles, Mumps, Rubella<br>Complete  |   |                          |                          |                          |                       |                       |                          |              |
| Varicella<br>Complete                |   |                          |                          |                          |                       |                       |                          |              |
| Hepatitis A<br>Complete              |   |                          |                          |                          |                       |                       |                          |              |
| Human Papillomavirus<br>Not Started  | 3 Dose Series   |                          |                          |                          |                       |                       |                          |              |
| <b>Meningococcal<br/>Not Started</b> | <b>Dose 1</b>   |                          |                          |                          |                       |                       |                          |              |
| 1 Due<br>OCT 16, 2024                | Earliest: JUN 26, 2024<br>Recommended From: JUN 26, 2024<br>Recommended Until: JUN 26, 2024 |                          |                          |                          |                       |                       |                          |              |
| 2 Not Due Until<br>JUN 26, 2024      | Latest: JUN 26, 2024  |                          |                          |                          |                       |                       |                          |              |

RSV Aged Out -- -- -- --

Sharing/Follow Up Status: **Needed** [Document](#) [View Outside Records](#) Last Registry Import: 14 months ago [Import](#)

DOB [ ] Age 11Y

Print Close Audit

Today Future

Imm [ ]

Precautions / Contraindications  
▲ This patient does not have any vaccination Precautions / Contraindications

Immunization History

| Vaccine                   | Dose | Date       | Age    | Status | Reason |
|---------------------------|------|------------|--------|--------|--------|
| DTaP / TD / Tdap          |      |            |        |        |        |
| DTaP-HepB-IPV PEDIARIX    | 1    | 1/2013     | 0Y 2M  | Valid  |        |
| DTaP-HepB-IPV PEDIARIX    | 2    | 1/2013     | 0Y 4M  | Valid  |        |
| DTaP-HepB-IPV PEDIARIX    | 3    | 1/2014     | 0Y 10M | Valid  |        |
| DTaP-HepB-IPV PEDIARIX    | 2    | 11/06/2024 | 0Y 4M  | Valid  |        |
| COVID-19 (PFR) 5 thru 11y |      |            |        |        |        |
| COVID Tris-Suc (PFR 5-11) | 3    | 1/2022     | 9Y     | Valid  |        |
| COVID-19 (PFR) 5 thru 11y | 4    | 1/2023     | 10Y    | Valid  |        |

Recommended immunizations for today, 10/17, 11Y

| Vaccine                   | On-Hand |
|---------------------------|---------|
| COVID-19 (PFR) 5 thru 11y | ❌       |
| HPV9 (Gardasil 9)         | ✅       |
| Influenza, P-Free         | ✅       |
| MCV4O/MCV4P Menveo        | ✅       |
| Tdap, Adsorbed            | ✅       |

Please do not rely solely on the Recommender to forecast immunizations. Utilize clinical judgment and consult both the ACIP recommended immunization schedules and the CDC Pink Book @ <https://www.cdc.gov/pinkbook/hop/table-of-contents/index.html>

The first recommended return date is 04/17/2025 (11Y)

Future recommendations based upon provider preferences for vaccines

| Vaccine                    | Date  | Age |
|----------------------------|-------|-----|
| HPV9 (Gardasil 9)          | 04/17 | 11Y |
| MCV4O/MCV4P Menveo         | 06/26 | 16Y |
| Meningococcal B OMV Bexse  | 06/26 | 16Y |
| Td,(Adult/Ped) adsorbed    | 10/17 | 21Y |
| Recombinant Zoster (Shing) | 06/26 | 50Y |
| PCV15                      | 06/26 | 65Y |
| RSV, recombinant subunit   | 06/26 | 75Y |

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# Risk Based Immunization Schedule

**Table 3** Recommended Child and Adolescent Immunization Schedule by Medical Indication, United States, 2024

Always use this table in conjunction with Table 1 and the Notes that follow. Medical conditions are often not mutually exclusive. If multiple conditions are present, refer to guidance in all relevant columns. See Notes for medical conditions not listed.

| Vaccine and other immunizing agents | Pregnancy                           | Immunocompromised (excluding HIV Infection) | HIV infection CD4 percentage and count*                        |                 | CSF leak or cochlear implant | Asplenia or persistent complement deficiencies | Heart disease or chronic lung disease               | Kidney failure, End-stage renal disease or on Dialysis         | Chronic liver disease | Diabetes |
|-------------------------------------|-------------------------------------|---|--|-----------------|------------------------------|--|---|--|-----------------------|----------|
|                                     |                                     |   | <15% or <200mm   | ≥15% and ≥200mm |                              |  |   |  |                       |          |
| RSV-mAb (nirsevimab)                |                                     | 2nd RSV season                              | 1 dose depending on maternal RSV vaccination status, See Notes |                 |                              |  | 2nd RSV season for chronic lung disease (See Notes) | 1 dose depending on maternal RSV vaccination status, See Notes |                       |          |
| Hepatitis B                         |                                     |   |  |                 |                              |  |   |  |                       |          |
| Rotavirus                           |                                     | SCID <sup>b</sup>                           |  |                 |                              |  |   |  |                       |          |
| DTaP/Tdap                           | DTaP<br>Tdap: 1 dose each pregnancy |   |  |                 |                              |  |   |  |                       |          |
| Hib                                 |                                     | HSCT: 3 doses                               | See Notes  |                 |                              | See Notes                                      |   |  |                       |          |
| Pneumococcal                        |                                     |   |  |                 |                              |  |   |  |                       |          |
| IPV                                 |                                     |   |  |                 |                              |  |   |  |                       |          |
| COVID-19                            |                                     | See Notes                                   |  |                 |                              |  |   |  |                       |          |
| IIV4                                |                                     |   |  |                 |                              |  |   |  |                       |          |
| LAIV4                               |                                     |   |  |                 |                              |  |   | Asthma, wheezing: 2–4 years <sup>c</sup>                       |                       |          |
| MMR                                 | *                                   |   |  |                 |                              |  |   |  |                       |          |
| VAR                                 | *                                   |   |  |                 |                              |  |   |  |                       |          |
| Hepatitis A                         |                                     |   |  |                 |                              |  |   |  |                       |          |
| HPV                                 | *                                   | 3 dose series. See Notes                    |  |                 |                              |  |   |  |                       |          |
| MenACWY                             |                                     |   |  |                 |                              |  |   |  |                       |          |
| MenB                                |                                     |   |  |                 |                              |  |   |  |                       |          |
| RSV (Abrysvo)                       | Seasonal administration, See Notes  |   |  |                 |                              |  |   |  |                       |          |
| Dengue                              |                                     |   |  |                 |                              |  |   |  |                       |          |
| Mpox                                | See Notes                           |   |  |                 |                              |  |   |  |                       |          |

Recommended for all age-eligible children who lack documentation of a complete vaccination series
  Not recommended for all children, but is recommended for some children based on increased risk for or severe outcomes from disease
  Recommended for all age-eligible children, and additional doses may be necessary based on medical condition or other indications. See Notes.
  Precaution: Might be indicated if benefit of protection outweighs risk of adverse reaction
  Contraindicated or not recommended \*Vaccinate after pregnancy, if indicated
  No Guidance/ Not Applicable

a. For additional information regarding HIV laboratory parameters and use of live vaccines, see the General Best Practice Guidelines for Immunization, "Altered Immunocompetence," at [www.cdc.gov/vaccines/hcp/acip-recs/general-recs/immunocompetence.html](http://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/immunocompetence.html) and Table 4-1 (footnote J) at [www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html](http://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html).
 b. Severe Combined Immunodeficiency
c. LAIV4 contraindicated for children 2–4 years of age with asthma or wheezing during the preceding 12 months

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