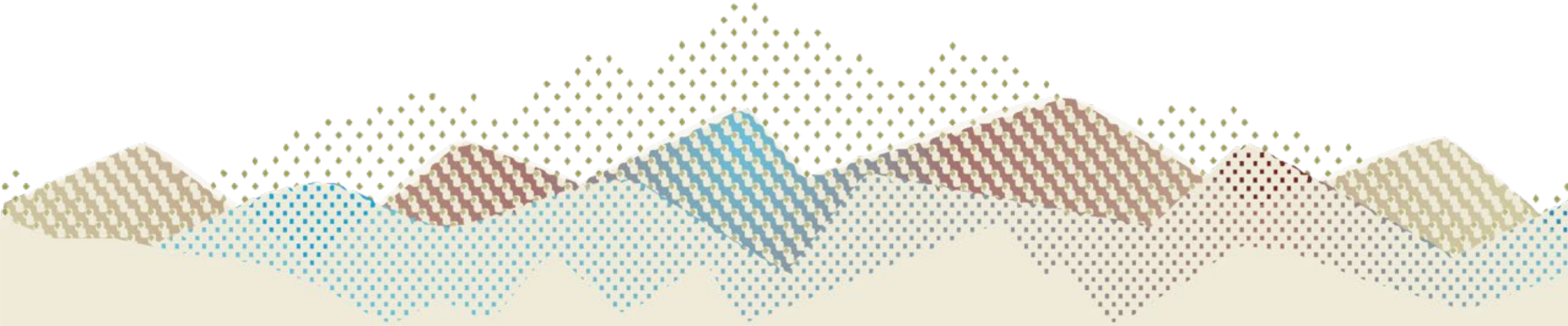
Enhancing Perinatal Support and Services Webinar Series

Vaccinations and General Biases

May 20, 2026



About Us

Mission:

To help our members, and the communities we serve, be healthy.

Vision:

To be the most highly regarded managed care plan in California.

Mary Baracco, APRN,CNM,WHNP

Mary has spent her career supporting growing families. She's delivered many babies and spent over 20 years in early childhood education. She has worked in public health maternal, child, and adolescent divisions in both Napa and Trinity counties and has worked extensively with parents experiencing perinatal mood disorders.

Mary has also had the honor of teaching and mentoring the next generation of nurses by teaching in health occupations at Napa Valley College.

She led the Napa Valley breastfeeding coalition as president for eight years and has more than 35 years of experience helping and supporting families with breast/chestfeeding – including 10 years as a certified lactation specialist and 20 years as an international board-certified lactation consultant.

Guest Presenter

Matthew Morris, MD

- Board-Certified Family Medicine Physician
- Partnership Regional Medical Director – Auburn Region
- Serving Plumas, Sierra, Nevada, and Placer Counties

Introduction and Objectives

- Today we will review and discuss vaccinations as they apply to our population in California. The day-to-day information we are getting may seem a little confusing, mostly around what is recommended, and for whom and when. The CDC has been the go-to standard for information about vaccines. The CDC continues to offer a wealth of information on many health topics. We encourage you to continue to reference them. It is our goal to clear up some of that confusion as we focus on what California requires.
- There are several other reliable evidence-based websites as well. Some of them are listed on our resource slide.
- Our objectives will center around understanding what is required, how vaccine safety is determined and how vaccines are developed. We will also provide food for thought about how biases are developed and the opportunity for self-reflection and our own professionalism.

Ethical Challenges

- We, as health professionals, have an ethical responsibility to offer our clients evidence-based information about vaccines.
- This information will help them to make informed decisions about healthcare for themselves and their family.
- It is important that we carefully examine our own beliefs and biases and remain objective and non-political.
- There are important laws and regulations that direct us to the requirements for public school attendance. Some parents use this information in their decision making.
    - Example – homeschooling
- These laws and regulations were not intended to be political.
- The information we provide to our clients is an important part of informed consent. It is the health care provider's responsibility to obtain the actual informed consent.

Introduction: What is a Bias?

- Bias is a prejudice, inclination, or tendency in favor of or against one person, group, or thing compared to another, often in an unfair way. These inclinations can be conscious (explicit) or unconscious (implicit), influencing decisions and perceptions. *Merriam-Webster*
- **Types:** Cognitive shortcuts (stereotypes), institutional bias (policies), and emotional bias (status quo bias).
- **Context:** They are often seen as negative, though some biases, like favoring family, can be personal preferences
- **Usage examples:** A hiring manager favoring candidates from their alma mater, a news outlet favoring one political party, or a researcher focusing only on data that supports their hypothesis.
- **Scientific research:** A study might have a bias toward positive results, ignoring negative data. Or vice versa: bias toward negative results, ignoring positive results
- **Daily life:** A person may show a confirmation bias, only seeking information that aligns with their current beliefs.

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Vaccines and Bias

What type of bias do you think might affect vaccine decision making?

- Conscious (explicit) or unconscious (implicit)
- Someone focusing only on data that comes from non-evidence-based sources or social media.
- Someone may only seek information that aligns with their current beliefs or favor research that illustrates their opinion.

Biases affect our everyday thinking. It's easy to understand how people take on biases about vaccines and other health care topics. Professionally it's our responsibility to objectively evaluate these topics and to put our personal biases (beliefs or opinions) aside in this process.

References: prior slide

Life Expectancy

- The World Health Organization recently announced that the COVID-19 pandemic reversed the upward trend in life expectancy. The Opioid epidemic contributed to this decline as well.
- Think what might have been if there was a vaccine at the beginning of the pandemic. For perspective, each year we lose ~ 30K to 50K+ people from the flu. There were 103 million confirmed cases of COVID 19 in the United States and 1.2 million people died. (2022-2024) https://www.cdc.gov/nchs/fastats/flu.htm
- In the 1800s, the life expectancy was about 40 years. Much of this was influenced by infant and childhood deaths. If a person survived childhood, they had a much better chance of living longer, into the fifth or sixth decade.
- Many health improvements including clean water, better food, hygiene practices, how diseases were transmitted, and the development of vaccines helped to quickly and dramatically improve life expectancy overall. Life expectancy in our time is about 79 years old.

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Disease Driven Mortality and Morbidity

Mortality

- Death occurs, irreversible, and permanent
- Focuses on the number and causes of death in a population or an individual (statistics)
- Focuses on preventing premature death
- Public health uses this information and data to develop policies and interventions. Examples: clean water, availability of medications, and vaccines.

Morbidity

- Illness, disease, or injury in a population or as an individual
- Focuses on the overall burden, often through statistical analysis
- The illness or injury may be short or long-term
- Focuses on prevention and treatment
- Public health will use this information to monitor overall health and health trends of the population being observed. Examples: pediatric, perinatal, the senior population

The First Vaccine - Smallpox

- Smallpox was the first vaccine that was developed in the late 1700s. Health care as we know it today was rudimentary. The vaccine was not developed in a lab.

- Physician, Dr. Edward Jenner noticed that when women who milked the cows (milkmaids) were exposed to “cow pox” they developed and exhibited mild disease. Then when they were exposed to Smallpox, they were immune. They could be exposed and did not get sick.

- Dr. Jenner arranged to expose an 8-year-old boy by rubbing a small amount of fluid from a Cow’s Cowpox pustule into a small area of broken skin. The child developed a mild illness from the Cowpox. When he was repeatedly exposed to Smallpox, he did not become ill.

- When this became known people rushed to get “vaccinated”.

Current Recommendations
California School Requirements and Expectations

California school and childcare vaccine requirements remain the same despite recent federal changes. All vaccines recommended by CDPH, continue to be covered by insurance in California. (*CDPH*)

- The only exemption allowed is medical
- Personal and religious exemptions are no longer accepted
- What is Herd Immunity?

The main changes to the medical exemption process that came into effect under Senate Bills (SB) 276 and SB714 (2019) can be found in the link below.

https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Immunization/School/laws-exemptions.aspx

What Vaccines are required in California Schools

Hep B –
Hepatitis B

DTaP – Diphtheria, Tetanus and Pertussis (whooping cough)

IPV or OPV – Inactivated Polio

MMR – Measles, Mumps, and Rubella

Varicella – Chicken Pox

AAP – American Academy of Pediatrics
West Coast Health Alliance First Year Vaccines Schedule

California, Oregon, Washington, and Hawaii

- **Birth:** Hepatitis B (Hep-B).
- **1–2 months:** Hep-B, DTaP, Hib, IPV (Polio), PCV, Rotavirus (RV).
- **4 months:** DTaP, Hib, IPV, PCV, RV.
- **6 months:** DTaP, Hib, IPV, PCV, RV,
- **6-18 months:** Hep-B
- **6–19 months:** prior to hospital D/C at birth through first RSV season if the mother was not vaccinated during pregnancy
- **12 months:** Hib, PCV, MMR, Varicella,
- **12-18 months:** Hep-A
- **Annual:** Influenza

How are Vaccines Developed
Five Basic Categories

1) **Live attenuated vaccines** uses a weakened version of the viral pathogen that causes the disease to induce a protective immune response against that virus. Examples of attenuated viral vaccines are the MMR vaccine and the varicella vaccine. Sometimes they can cause very mild illness. Children who get the measles vaccine, for example, may get a fever or a slight rash, but they will not get seriously ill.

2) **Inactivated vaccines** use the killed version of the pathogen that causes a disease. Examples include the flu, polio shot, and hep-A.

3) **Subunit / polysaccharide / recombinant / conjugate vaccines** like the hepatitis B vaccine or the HPV vaccine, a specific part of the pathogen is used. Usually, a protein on the surface of the virus that our immune system will recognize and fight. We also do that with some bacterial pathogens like Hib, *pneumococcus,* and *bordetella pertussis*.

Vaccines Types, continued

4) **Toxoid vaccines** such as for diphtheria and tetanus, target toxins produced by the bacteria rather than the bacteria itself. Your immune response is therefore to the toxin, not to the bacteria.

5) **Viral vector vaccines** unlike most conventional vaccines, viral vector vaccines do not contain antigens or immunogens. Their mechanism of action is essentially as a safe delivery system for the genetic codes, or proteins and their known ability to get inside cells in an efficient manner and locate the nuclei to insert genetic material. Examples of common viral vector vaccines are COVID-19 and ebola (often used outside of the US).

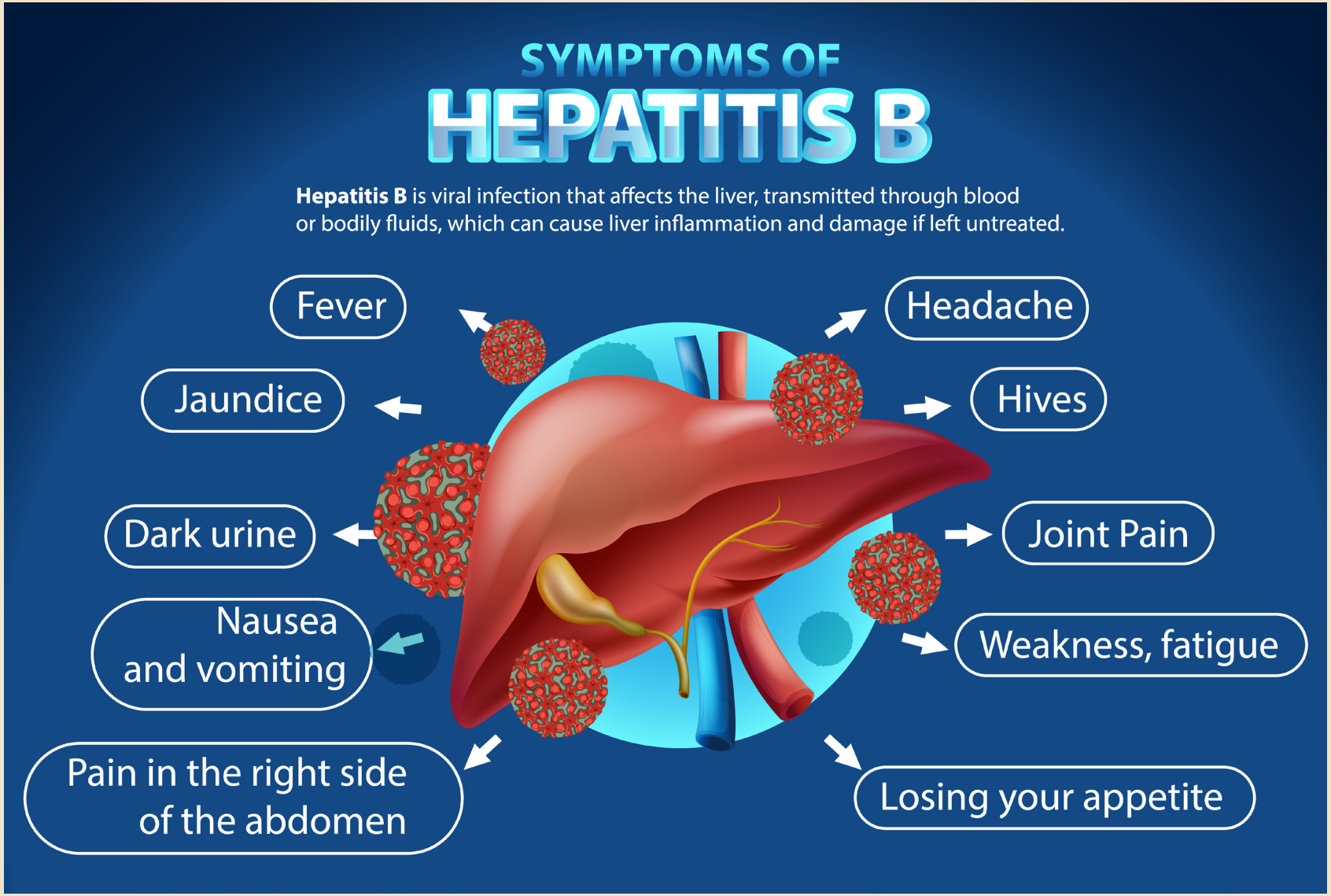
https://www.ajmc.com/view/5-types-of-vaccine-technology

Adverse Reactions

- Adverse reactions should be reported to the vaccine adverse event reporting system (VAERS). Your HCP will usually file this report, or you can do it yourself. Visit the **VAERS website** or call **1 (800) 822-7967**.
- *VAERS is only for reporting reactions, and VAERS staff members do not give medical advice.*
- The National Vaccine Injury Compensation Program (VICP) is a federal program that was created to compensate people who may have been injured by certain vaccines. Claims regarding alleged injury or death due to vaccination have a time limit for filing. which may be as short as two years. Visit the **VICP website** or call **1 (800) 338-2382** to learn about the program and about filing a claim.

Hepatitis B (Hep-B)

A subunit vaccine

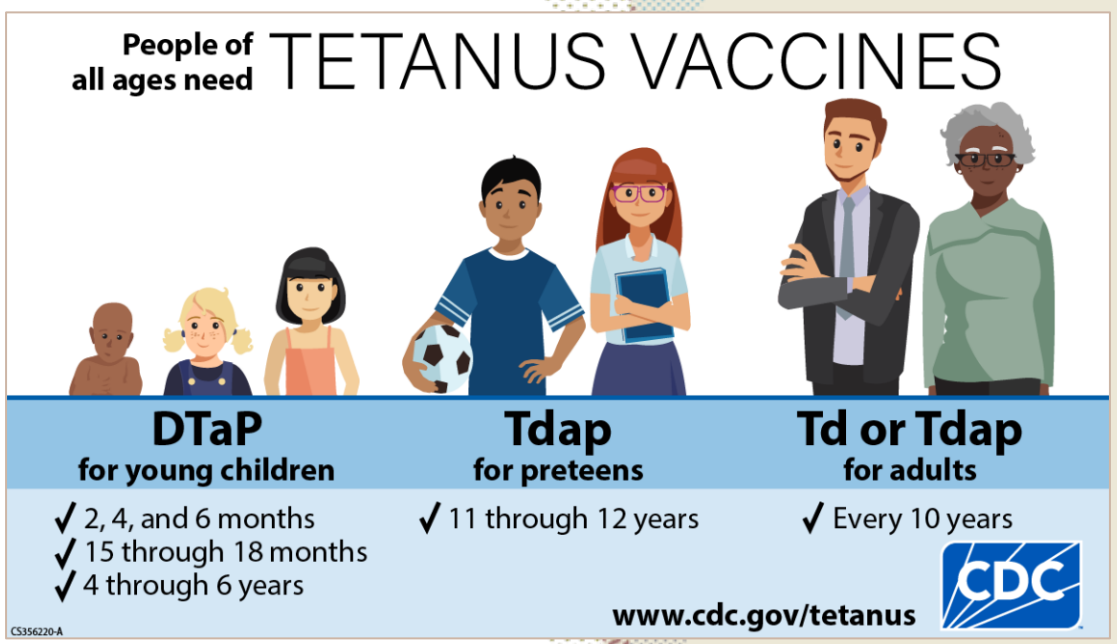


DTaP

DT is a Toxoid Vaccine and P is Subunit Vaccine

The Tdap vaccine is a combination booster shot that protects adolescents and adults against three serious bacterial infections: tetanus (lockjaw), diphtheria, and pertussis (whooping cough).

DTaP (full-strength) is used for infants / children aged six weeks to six years, while Tdap (reduced strength) is a booster for preteens, teens, and adults.



Hib

As a Subunit Vaccine

- The Hib vaccine protects against *haemophilus influenzae* type B, this is a bacteria that causes serious, sometimes fatal infections like meningitis, pneumonia, and severe throat swelling.
- Recommended for children under 5 (typically at 2, 4, and 6 months and 12 to 15 months, it is highly effective – over 95%) in preventing disease.
- CDC recommends *haemophilus influenzae* type B (Hib) vaccination for all children younger than 5 years old in the United States.
- The FDA introduced the vaccine in 1981, and widespread use began in 1982. Universal infant vaccination was recommended in 1991.

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IPV (Polio)

Inactivated Vaccine

- **Polio vaccine** can prevent **polio**.
- Polio (or poliomyelitis) is a disabling and life-threatening disease caused by poliovirus, which can infect a person's spinal cord, leading to paralysis.
- Most people infected with polio virus have no symptoms, and many recover without complications. Some people will experience sore throat, fever, tiredness, nausea, headache, or stomach pain.
- A smaller group of people will develop more serious symptoms that affect the brain and spinal cord
- Later in life people may develop post polio syndrome which may affect their ability to function in their day-to-day life.
- The first polio vaccine was available in 1955. Developed by Dr. Jonas Salk, it was a liquid served on a sugar cube. Soon after Dr. Sabin developed the second polio vaccine as an injection. Both were very effective.

PCV

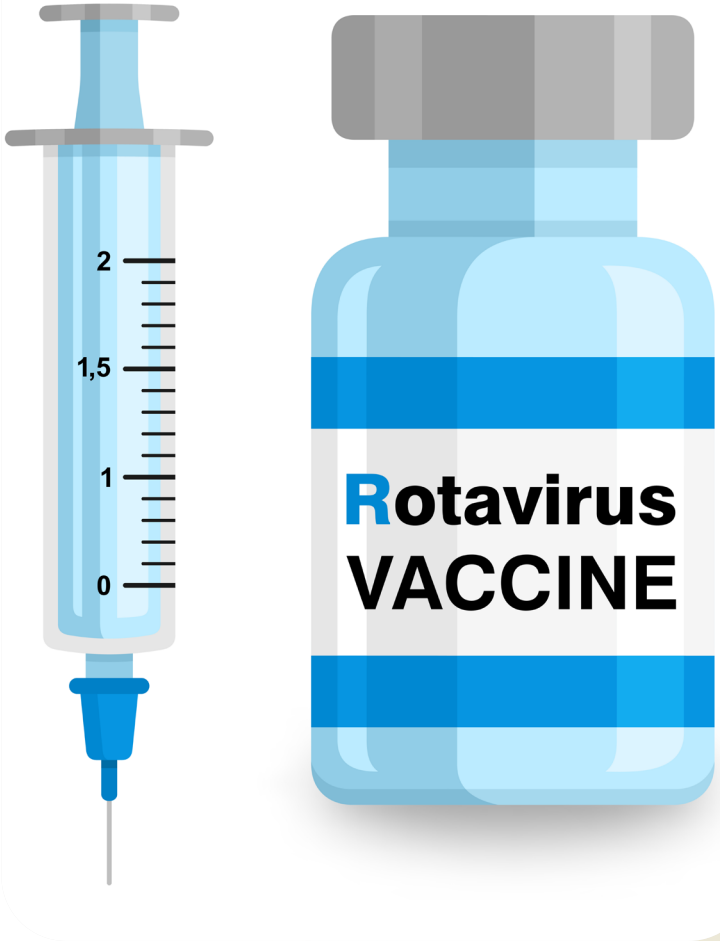
Subunit Vaccine

- The pneumococcal conjugate vaccine (PCV) protects against infections caused by *streptococcus pneumoniae* bacteria, including *pneumonia, meningitis, and bloodstream infections*.
- It is routinely given to infants, young children, and older adults to prevent severe illness and death, with common versions including PCV15, PCV20, and PCV21.

Rotavirus (RV)

Live Attenuated Vaccine

- Before the rotavirus vaccine was introduced in 2006, the virus caused approximately 2.7 million episodes of childhood diarrheal illness, 55K to 70K hospitalizations, and 20 to 60 deaths annually in the United States (*2026 Population of USA = 349M*)
- Denmark explicitly declined to add rotavirus vaccination. Their health authority concluded that rotavirus infection "hardly ever results in death or long-term harm" in a country with universal health care access. Dehydrated infants can be reliably rehydrated (*2026 Population of Denmark = 6.2M*)
- That calculation depends on a health care system that guarantees rapid access. In the USA, where the population is much larger, access is uneven and many families lack paid sick leave, the burden falls differently. Since introducing the vaccine, U.S. rotavirus hospitalizations have dropped by 85% to 95%.



RSV
a protein subunit or mRNA vaccine

- Respiratory syncytial virus (RSV) is a common, highly contagious virus causing respiratory infections that are usually mild, cold-like symptoms, but can lead to severe pneumonia or bronchiolitis, particularly in infants under six months, older adults, and those with weakened immune systems.
- It spreads via respiratory droplets and surface contact, with symptoms typically appearing four to six days after exposure.

- RSV vaccines are immunizations that protect older adults and infants from severe RSV disease.
- Approved for adults 60+ and pregnant individuals (32-36 weeks),and infants.
- The vaccine prevents lower respiratory tract infections by inducing antibodies against the virus.

CDC

MMR
Measles, Mumps and Rubella
Live Attenuated Vaccine

- **Measles** sometimes called the hard measles or 10-day measles, can be a serious disease. Because of distrust of the vaccine there have been several outbreaks across the country with serious ramifications.
- **Mumps** is a virus. Highly contagious, common in other countries. May lead to sterility in males.
    - *https://www.cdc.gov/mumps/about/index.html* this link has extensive accurate information.
- **Rubella** also known as the three-day measles or German measles. It is a mild disease – about three days with a rash.
    - Why do we vaccinate? If a woman gets infected while pregnant, it can lead to congenital rubella syndrome (CRS), causing miscarriage, fetal death, or severe birth defects such as blindness, deafness, heart problems, and severe mental deficits.

MMR
Measles, Mumps and Rubella
Continued…

- Measles vaccine was introduced in 1963. The combo MMR was developed and licensed in 1971. Before the vaccine there were:
  - 3-4 million cases annually
  - 400-500 deaths annually and 48,000 hospitalizations
  - A rubella outbreak in 1964-1965 caused 11,000 SABs and 2,100 newborn deaths (*CDC*)
- This vaccine's link to autism has been disproven. However, this belief persists.
- The MMR has an exceptional safety record.
- It is not recommended for those children who have severe immuno-suppression – like HIV, or for pregnant women.

Varicella

A Live Attenuated Vaccine

- The varicella (chickenpox) vaccine is a safe, highly effective live-attenuated vaccine that protects against the varicella-zoster virus, reducing severe disease by nearly 100%. It is typically given in two doses for children (12–15 months and 4–6 years) or unvaccinated adults, providing long-lasting protection and preventing serious complications. It was approved by the FDA and introduced in the US in 1995.
- Occasionally children or other vaccinated persons will have a case of breakthrough chicken pox. This is a mild disease. Often only forming “red bumps” no pustules.
- There are two vaccines that prevent “chickenpox” the varicella vaccine and the combination MMRV.

Varicella Continued

A Live Attenuated Vaccine

- Although varicella vaccine was developed to prevent “chickenpox” is has the positive added protection against the later development of Shingles.
- Shingles are a direct result of the body storing the “varicella-zoster virus” and it remaining dormant. The virus stays in the **sensory nerve ganglia**, **dorsal root ganglia** (along the spine) and **cranial nerve ganglia** (such as the trigeminal nerve in the face). The virus resides in the nervous system for life. If immunity declines, the dormant virus can travel back down the nerves to the skin, causing herpes zoster, commonly known as **shingles**.
- When someone is varicella vaccinated the incidence of chickenpox is dramatically reduced, thus reducing the chances of shingles which can make the person seriously ill, often requiring hospitalization.
- **Initial Infection**: While the latent virus hides in the nerves, the initial infection takes place in the respiratory tract and skin.

PubMed, CDC, Cleveland Clinic, Children's Hosp. of Philadelphia

Hep-A
Inactivated Vaccine

- Protects against serious liver disease caused by the Hep A virus, which is transmitted through contaminated food, water, or close contact.
- The first inactivated hepatitis A vaccine (havrix) was licensed in the U.S. in 1995
- It's highly effective, protection often lasts over 25 years.
- A two-dose series is standard, with the second dose administered six to 12 months after the first.
- Routine childhood vaccination was recommended 2006. It is also recommended for international travelers, people with liver disease, and high-risk groups.
- Since the introduction of the vaccine, cases of hepatitis A in the U.S. have **dropped by 95%.**
- A combination vaccine, Twinrix, protects against both hepatitis A and hepatitis B.

CDC.gov, Vaccine History.gov

Wrap-up, Takeaways, Survey, and questions

Please scan the QR code below for the post survey feedback.

Enhancing Perinatal Support and Services Webinar Survey

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Enhancing Perinatal Support and Services Webinar Series Sessions

The recordings to all sessions can be found online at:
https://www.partnershiphp.org/Providers/Medi-Cal/Pages/ProviderEducationTrainingMaterials.aspx

PROVIDER LEARNING PORTAL

Enhancing Perinatal Support and Services Webinar Series

Session 1 - Basics of Prenatal Support
Survey | PowerPoint Presentation

(86 Minutes)

Session 2 - Basics of Postpartum Support
Survey | PowerPoint Presentation

(90 Minutes)

Session 3 - Early Lactation Challenges
Survey | PowerPoint Presentation

(87 minutes)

To receive a certificate of completion, please fill out the survey after reviewing the recording.

Next Webinar Session

Enhancing Perinatal Support and Services Webinar Series

Date: Wednesday, June 17, 2026

Time: Noon – 1:30 p.m.

Topic: Parenting Education

Doula Pathway Webinar and Training

Doula Credentialing

Covered Benefits

Doula Contracting

Claims

Date: Tuesday, September 15, 2026
Time: Noon to 1 p.m.

To register, please scan the QR code below:

Questions? Email:
DoulaServices@partnershiphp.org

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References

- https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Immunization/School/laws-exemptions.aspx#:~:text=Beginning%20January%201%2C%202021%20all,from%20the%20physician's%20licensing%20entity.
- CDC.gov
- Cleveland Clinic
- https://www.cdc.gov/nchs/fastats/flu.htm
- https://www.ajmc.com/view/5-types-of-vaccine-technology
- https://www.healthychildren.org/English/safety-prevention/immunizations/Pages/Recommended-Immunization-Schedules.aspx
- https://www.cdc.gov/nchs/fastats/flu.htm
- https://www.cdph.ca.gov/Programs/OPA/Pages/NR26-001.aspx