



## Pertussis, ACIP and RSV Updates

Tabitha K. Hanson, MPH, DNP, RN | Immunization Program Clinical Consultant

# Objectives

1. Discuss pertussis vaccine effectiveness and implications of waning immunity.
2. Review recent ACIP voting results and data presented at the April ACIP meeting.
3. Identify eligibility criteria and timing of RSV immunization for people of all ages.
4. Describe passive and active immunity in relation to respiratory syncytial virus immunization strategies in pregnancy and infancy.



## Pertussis Vaccine

Tabitha K. Hanson, MPH, DNP, RN | Vaccine Clinical Consultant

# Call to Action

AAP News™



**2 Louisiana infants die of pertussis as infections rise; pediatric flu deaths reach 168**

April 4, 2025

Sean Stangland, Associate Editor

## Two preventable whooping cough deaths

*Louisiana* announced that two infants have died from whooping cough—another vaccine-preventable illness. Infants under 1 are at the greatest risk of serious illness or death because their immune systems are still developing.

For context, there were 10 whooping cough deaths last year—so this isn't too unusual. But it is preventable. Cases continue to rise since the mid-2000s.

[2 Louisiana infants die of pertussis as infections rise; pediatric flu deaths reach 168 |](#)

[AAP News | American Academy of Pediatrics](#)

# Pertussis Vaccines

## Whooping cough (Pertussis) vaccines are for everyone



### DTaP for young children

- ✓ 2, 4 and 6 months
- ✓ 15 through 18 months
- ✓ 4 through 6 years

### Tdap for preteens

- ✓ 11 through 12 years

### Tdap for pregnant women

- ✓ During the 27-36th week of each pregnancy

### Tdap for adults (including adults with COPD or asthma)

- ✓ Anytime for those who have never received it

- DTaP (Daptacel; Infanrix)
- DTaP-HepB-IPV (Pediarix)
- DTaP-IPV-Hib (Pentacel)
- DTaP-IPV (Kinrix; Quadracel)
- DTaP-IV-Hib-HepB (Vaxelis)
- Tdap

# Test Your Knowledge

Who typically gets the diphtheria, tetanus and pertussis-containing vaccine known as DTaP?

- Babies only
- Babies and young children
- Adolescents only
- Adolescents and adults



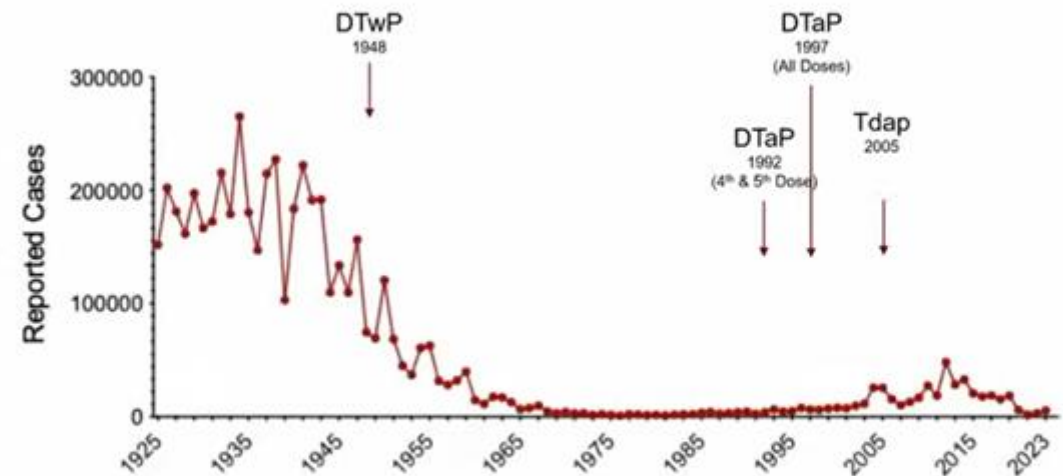
# Pertussis Vaccine for Children

## DTaP (Diphtheria, Tetanus & acellular Pertussis)

Routine Vaccination: 5 dose series

- 3-dose primary series at age 2, 4 and 6 months
- Booster doses at 15-18 months and 4-6 years

## Pertussis Vaccine History

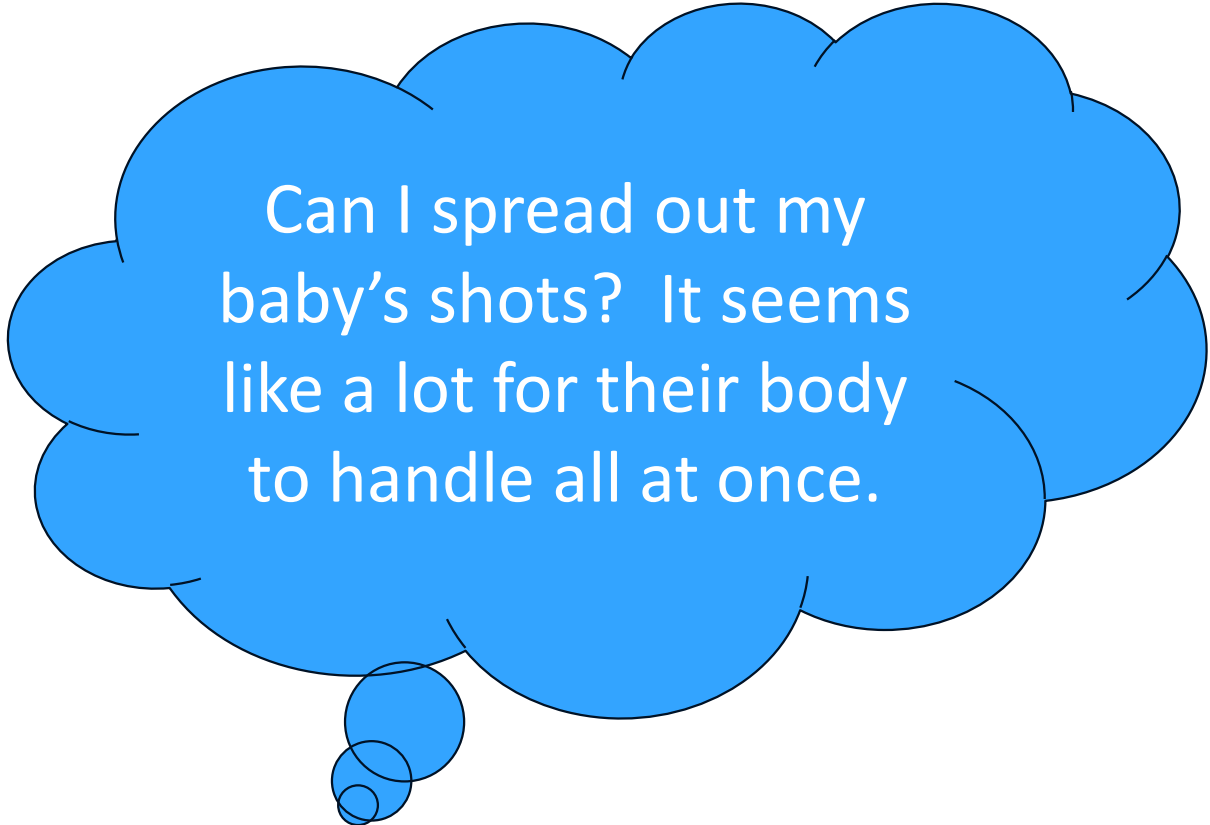


Source: CDC, National Notifiable Diseases Surveillance System and Supplemental Pertussis Surveillance System and 1922-1949, passive reports to the Public Health Service.

# Test Your Knowledge

Who do you think received the most immunologic components in vaccines?

- Children born in 1942
- Children born in 1982
- Children born in 2000
- Children born in 2010



Can I spread out my baby's shots? It seems like a lot for their body to handle all at once.



# More Childhood Vaccines - But Fewer Antigens

Thanks to advances in technology, vaccines today contain fewer antigens.  
Even with more vaccines, the total immunologic load is much less.

## Number of Immunogenic Proteins and Polysaccharides Contained in Vaccines Over the Past 100 Years

1900		1960		1980		2000		2021	
Vaccine	Protein	Vaccine	Protein/Sugar	Vaccine	Protein/Sugar	Vaccine	Protein/Sugar	Vaccine	Protein/Sugar
Smallpox	~200	Smallpox	~200	Diphtheria	1	Diphtheria	1	Diphtheria	1
TOTAL	~200	Diphtheria	1	Tetanus	1	Tetanus	1	Tetanus	1
		Tetanus	1	WC pertussis	~3000	Acellular pertussis	2-5	Acellular pertussis	2-5
		WC pertussis	~3000	Polio	15	Polio	15	Polio	15
		Polio	15	Measles	10	Measles	10	Measles	10
		TOTAL	~3217	Mumps	9	Mumps	9	Mumps	9
				Rubella	5	Rubella	5	Rubella	5
				TOTAL	~3041	Hib	2	Hib	2
						Varicella	69	Varicella	69
						Pneumococcus	8	Pneumococcus	8
						Hepatitis B	1	Hepatitis B	1
						TOTAL	123-126	Rotavirus	11-16
								Hepatitis A	4
								TOTAL	138-146



[Smallpox - Wikipedia](#)

WC = whole-cell  
Offit, CHOP VEC, 2021

# Test Your Knowledge

Which disease is known to be more commonly spread from adults/teens to children/infants?

- Varicella (Chickenpox)
- Pertussis (Whooping Cough)
- Measles
- Rubella

# Adolescent and Adult Pertussis Vaccine

## Tdap (Tetanus, diphtheria, acellular pertussis)


### Routine Vaccination

- 11-12 years: 1 dose Tdap (entry to 7<sup>th</sup> grade)
- 1 dose with each pregnancy
- Td or Tdap every 10 years


### Wound Management

- Clean wound: Tdap or Td if <10 years since last dose
- All other wounds: Tdap or Td if <5 years since last dose

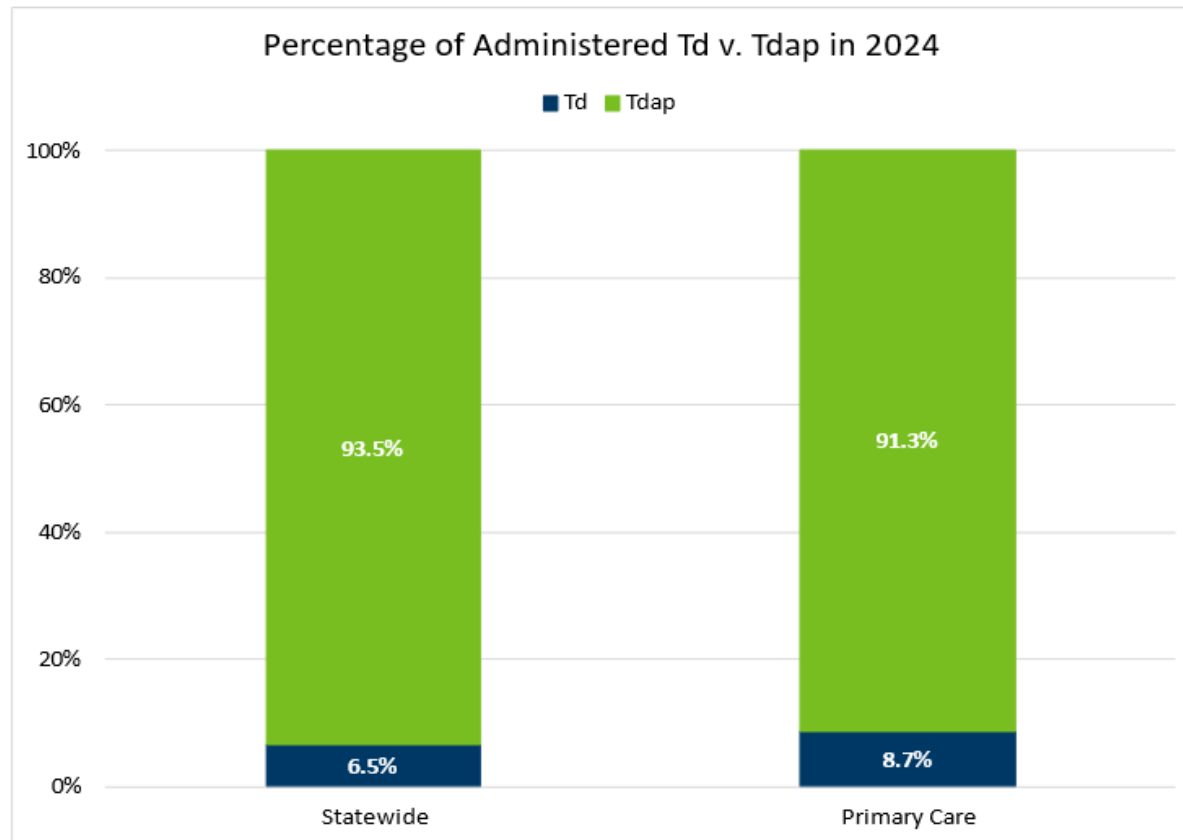
People of all ages need  
WHOOPING COUGH  
VACCINES



DTaP for young children	Tdap for preteens	Tdap for pregnant women	Tdap for adults
✓ 2, 4, and 6 months ✓ 15 through 18 months ✓ 4 through 6 years	✓ 11 through 12 years	✓ During the 27-36th week of each pregnancy	✓ Anytime for those who have never received it

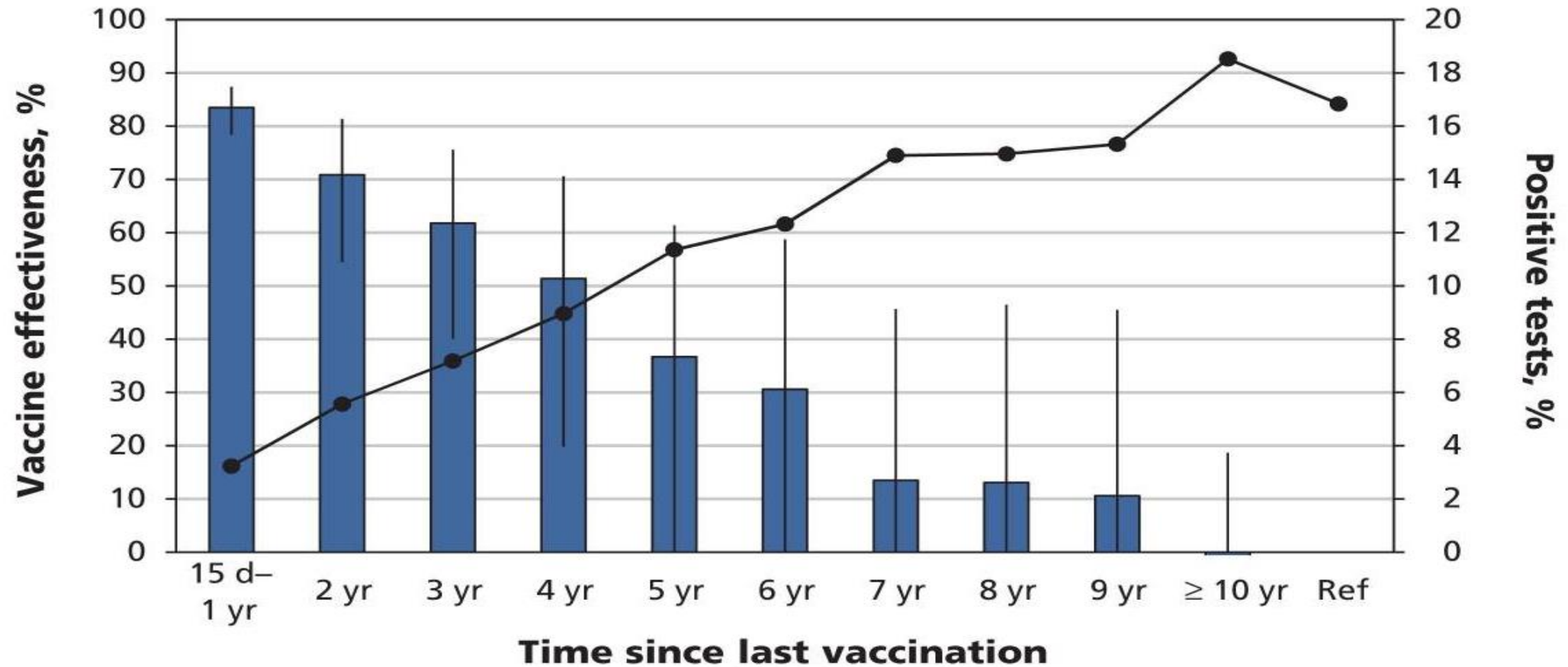
[www.cdc.gov/whoopingcough](http://www.cdc.gov/whoopingcough) 

# Td vs Tdap Immunization Rates in MN



- 6.5% of statewide 18+ Td and Tdap administrations in 2024 were Td, compared to 8.7% in primary care settings
- Statewide: 21,595 Td vs. 308,834 Tdap
- Primary care settings: 18,031 Td vs. 188,314 Tdap

# Pertussis Vaccine Effectiveness



No. positive total    92    24    24    19    20    18    24    22    21    63    159

# VRBPAC/FDA meeting 9/20/2024

- Topic 1: Discussion of the use of pertussis controlled human infection models (CHIMs) for the purpose of licensure of new pertussis vaccines for use as a booster dose in adults.
  - Pertussis remains a public health threat in the acellular pertussis vaccine era.
  - New safe and effective pertussis-containing vaccines that increase the duration of disease protection and/or prevent transmission of *B.pertussis* may address an unmet medical need.
  - Alternative approaches to demonstrate vaccine effectiveness may facilitate licensure of new pertussis-containing vaccines.

# A Whooping Cough Story- Callie

https://vaccinateyourfamily.org/testimonials/callie/  
IN... CDC Vaccines & Im... Advisory Committe... Immunize.org CDC RespVaxView NNIC National Net... CHOP Vaccines English FDA What's New

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## Callie

### A Whooping Cough Story

I had suffered four miscarriages prior to getting pregnant with Callie. So to have her, was truly amazing. I called her our "miracle baby".

*Callie's story, as told by her mother Katie.*



[Callie - Vhttps://vaccinateyourfamily.org/testimonials/callie/](https://vaccinateyourfamily.org/testimonials/callie/) accinate Your Family

# Tdap in Pregnancy

In 2023, approximately 70% of pregnant persons received Tdap vaccine while pregnant in Minnesota.

## What can be done?

- Educate on the safety and importance of Tdap vaccination during pregnancy to ensure that the newborn is protected from pertussis at birth.
- Recommend and offer Tdap vaccine on site to all pregnant patients during each pregnancy, irrespective of prior history of receiving Tdap.
- Although Tdap is typically recommended to be given between 27-36 weeks gestation, it can be given safely at any time during a pregnancy when there is a community pertussis outbreak or when needed for wound management.





# Cocooning

Recommend to pregnant patients that everyone close to the infant be vaccinated against pertussis.

- DTaP: Siblings (infants, toddlers, kindergarteners)
- Tdap: adolescents, adult family members, relatives and caregivers
  - Ideally, those who have never received DTaP or Tdap should be vaccinated **at least 2 weeks before** coming in contact with a newborn.

**Actively** recall pregnant patients who have not yet received Tdap during their pregnancy.





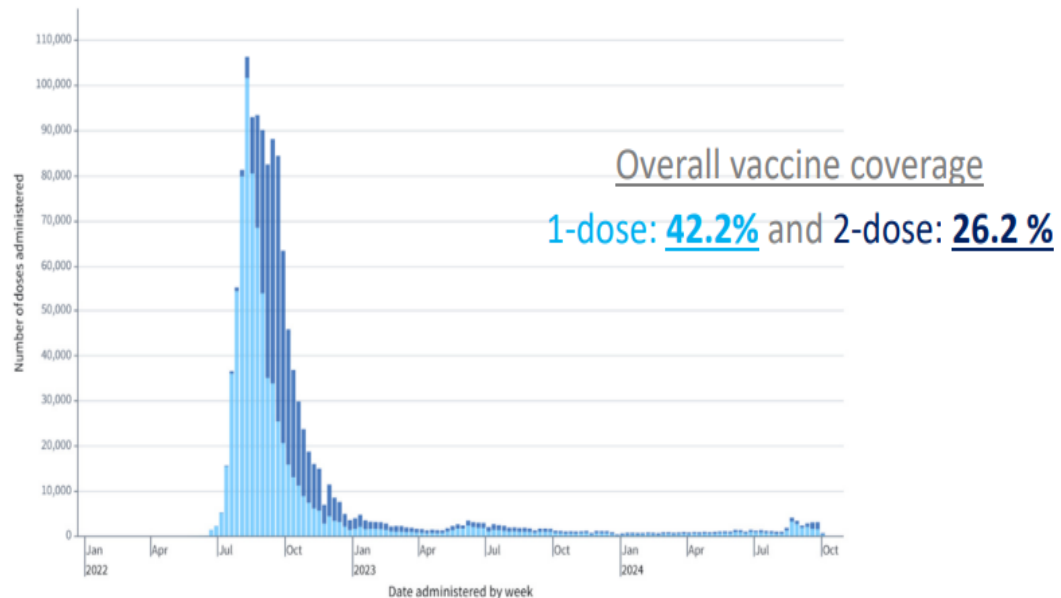
## ACIP Updates



## April ACIP Meeting Updates

# Mpox vaccine: Jynneos

## Jynneos vaccine coverage in the United States among people at risk for mpox – June 2022 to September 2024



- Modeling data suggests *any increase* in coverage reduces the risk of outbreaks, and low coverage (<50%) could promote larger outbreaks

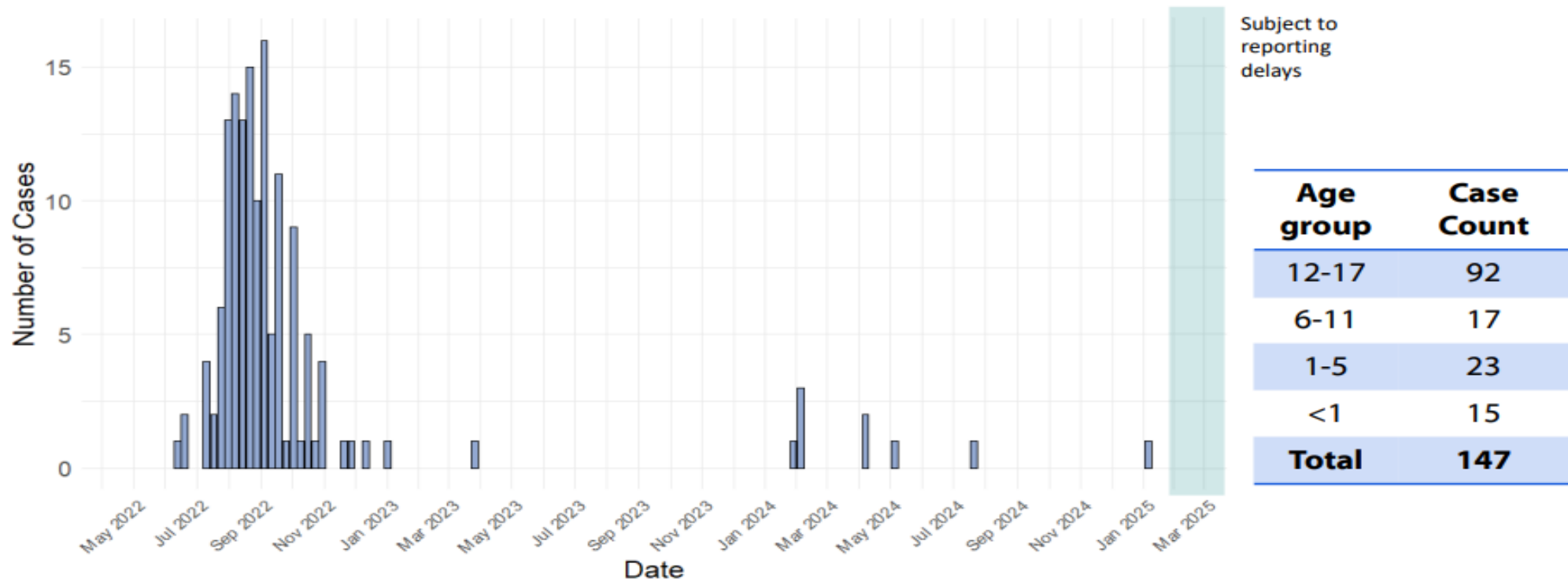


Current recommendation:  
2-dose series for >18 years and at risk  
for mpox infection.

[Adult Immunization Schedule Notes | Vaccines & Immunizations | CDC](#)

# U.S. Mpox case trends

## U.S. mpox case trends in adolescents and pediatrics, May 2022 – March 2025



# Lyme disease vaccine

- New Lyme Disease Vaccine Work Group.
- Multivalent recombinant protein vaccine (VLA15) currently in Phase 3 clinical trials.
- mRNA vaccine candidates in early clinical trials.
- Work group meeting in May 2025.
- WG presentation to ACIP in June 2025.



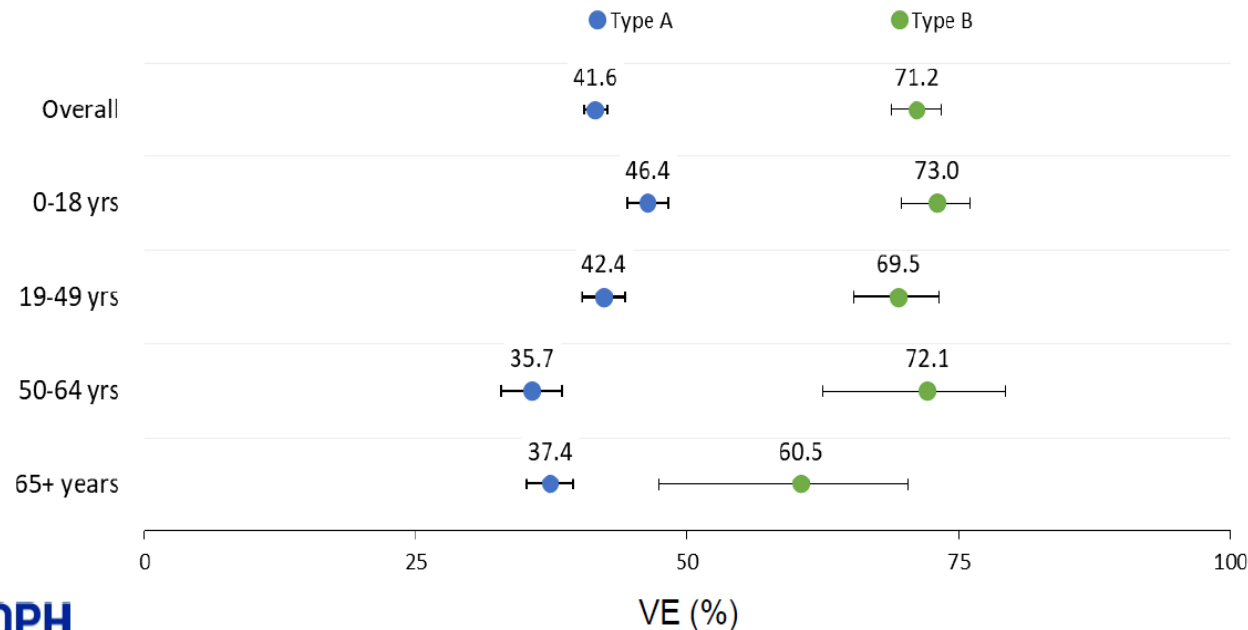
# Influenza vaccine



- Influenza vaccine composition for 2025-26 has been selected.
  - The U.S. FDA made a recommendation on March 15.
  - Trivalent vaccine includes an update to the influenza A (H3N2) component.
- Influenza vaccine effectiveness (VE) estimates.
- FluMist self/caregiver administration.

# California Department of Health Study: Influenza VE

## Vaccine effectiveness by type and age group California 2024–2025



Age Group	% VE (overall)	% VE (type A)	% VE (type B)
Overall	44.7	41.6	71.2
<b>0 - 18vrs</b>	<b>50.2</b>	<b>46.4</b>	<b>73.0</b>
19 - 49yrs	46.4	42.4	69.5
50 - 64 yrs	38.6	35.7	72.1
65+ yrs	39.3	37.4	60.5





# FluMist Self/Caregiver Administration

**FluMist for Self/Caregiver Administration is same FDA-recommended and approved FluMist vaccine, simply delivered to the home**



## WHO

Extends the options for who can administer needle-free vaccine

## HOW

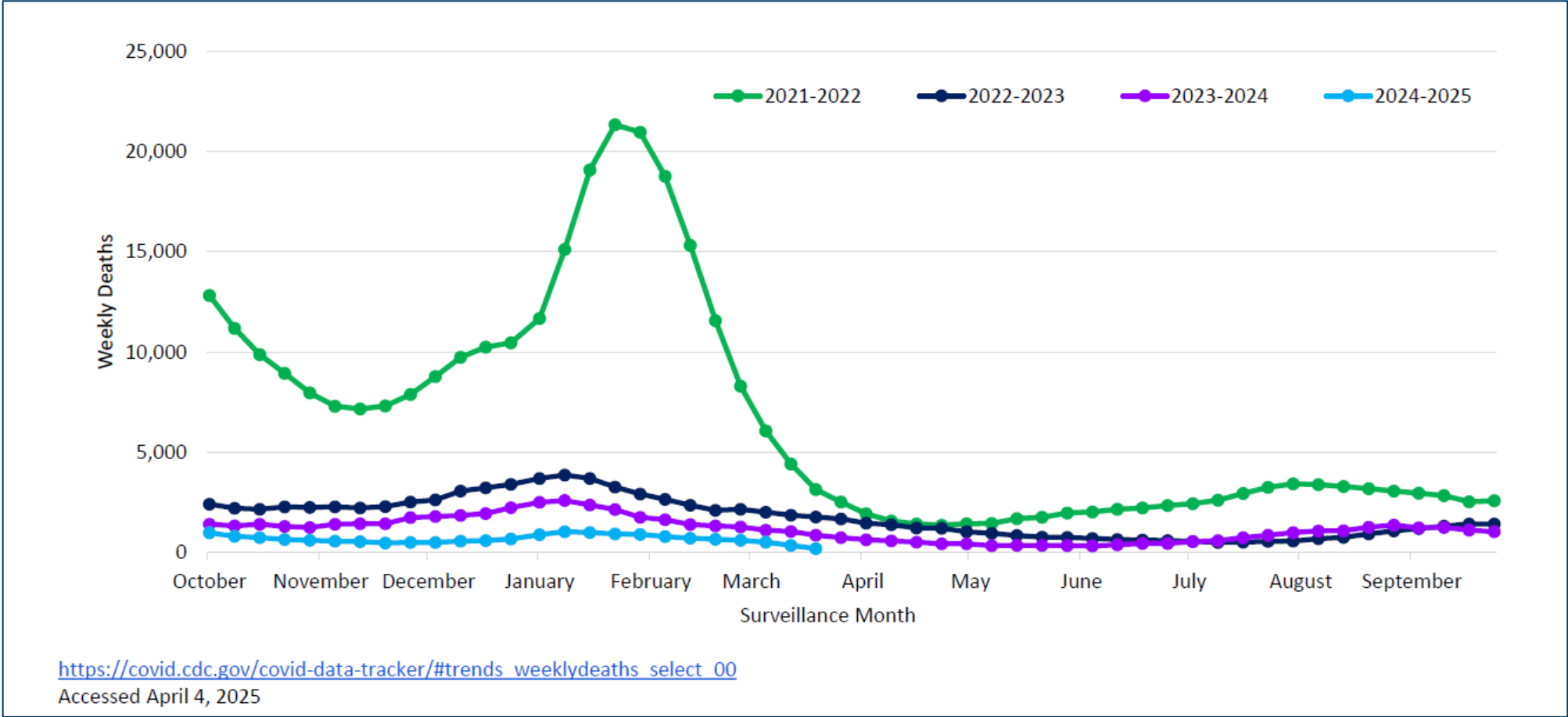
Enables administration in home settings using established online pharmacy service

## WHY

Expands access and empowers individuals to administer FluMist at home according to ACIP recommendations

- Same FluMist (AstraZeneca) as available in health care provider offices.
- Packaged for delivery and administration by eligible patients (2-49 years old).
- Only available for people with insurance.
  - Not VFC in 2025-26.
- Documentation in state IIS will be mandatory.
- AstraZeneca and pharmacy adhere to standard roles.

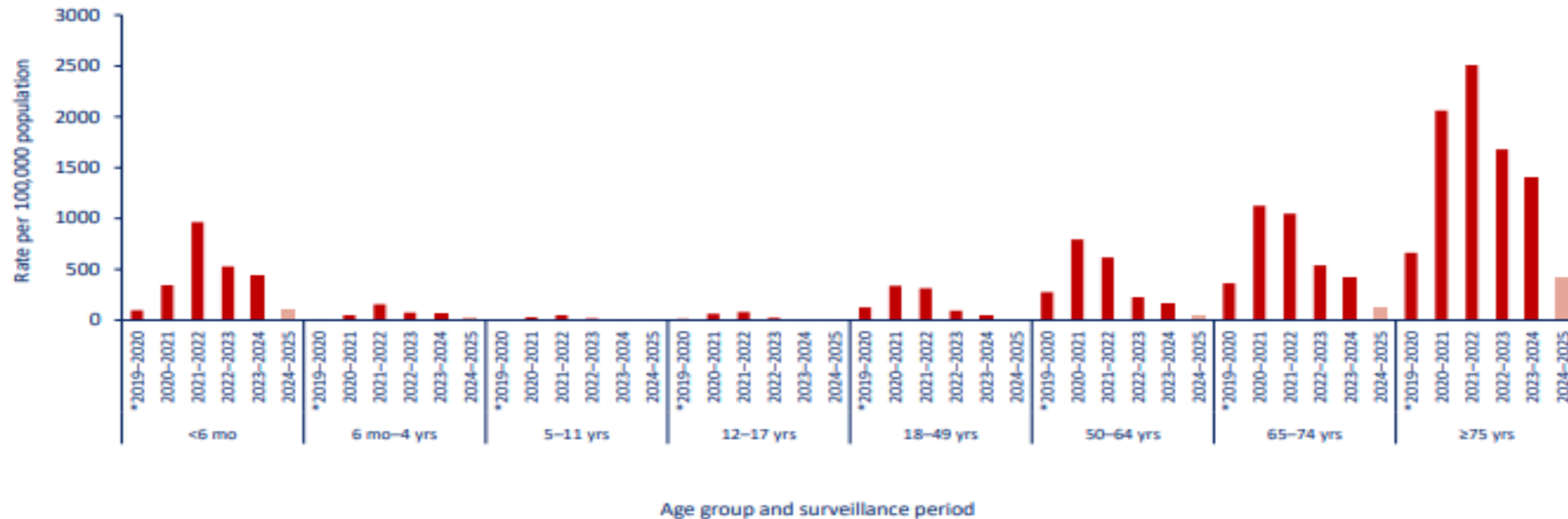
# Weekly COVID-19 deaths in the U.S. 2021-2025



# Highest rates of COVID-19 hospitalization

## Among all age groups, rates of COVID-19–associated hospitalizations have declined since the 2021–2022 season.

Cumulative rates of COVID-19–associated hospitalizations — COVID-NET, March 2020–March 2025

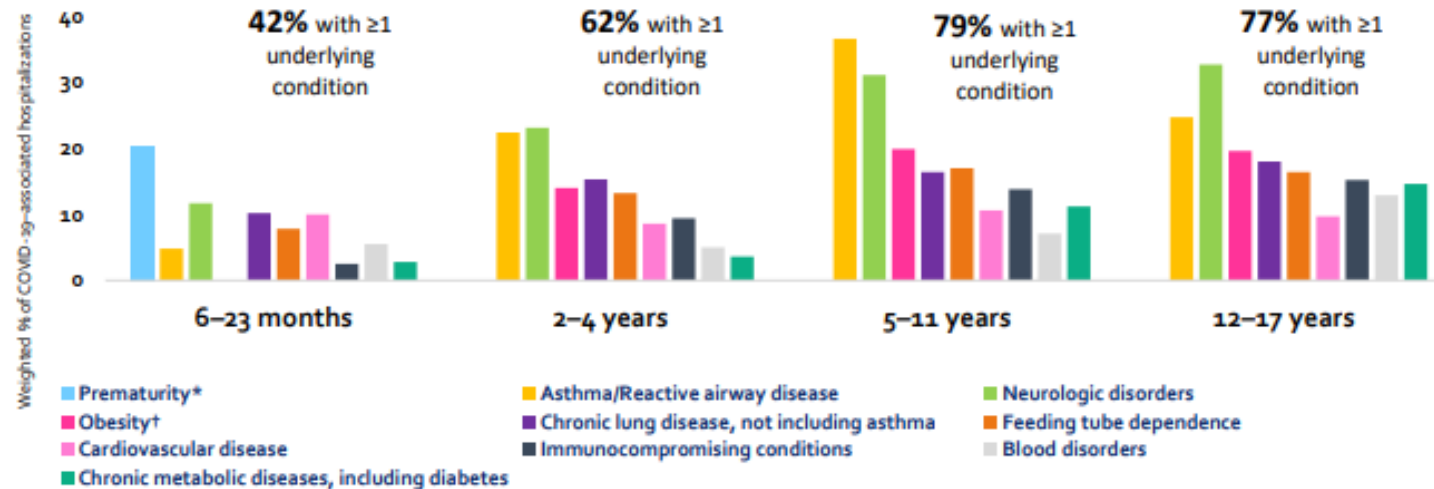


\* The 2019–2020 surveillance period includes March–September 2020; other seasons are defined as October through September. The 2024–2025 season shows data from October 2024–March 2025 and is ongoing.



# At Risk for COVID-19 hospitalization

During October 2022–April 2024, more older children hospitalized with COVID-19 had underlying medical conditions compared with younger age groups.



**Among children and adolescents ages 6 months–17 years hospitalized with COVID-19, 59% had ≥1 underlying condition.**

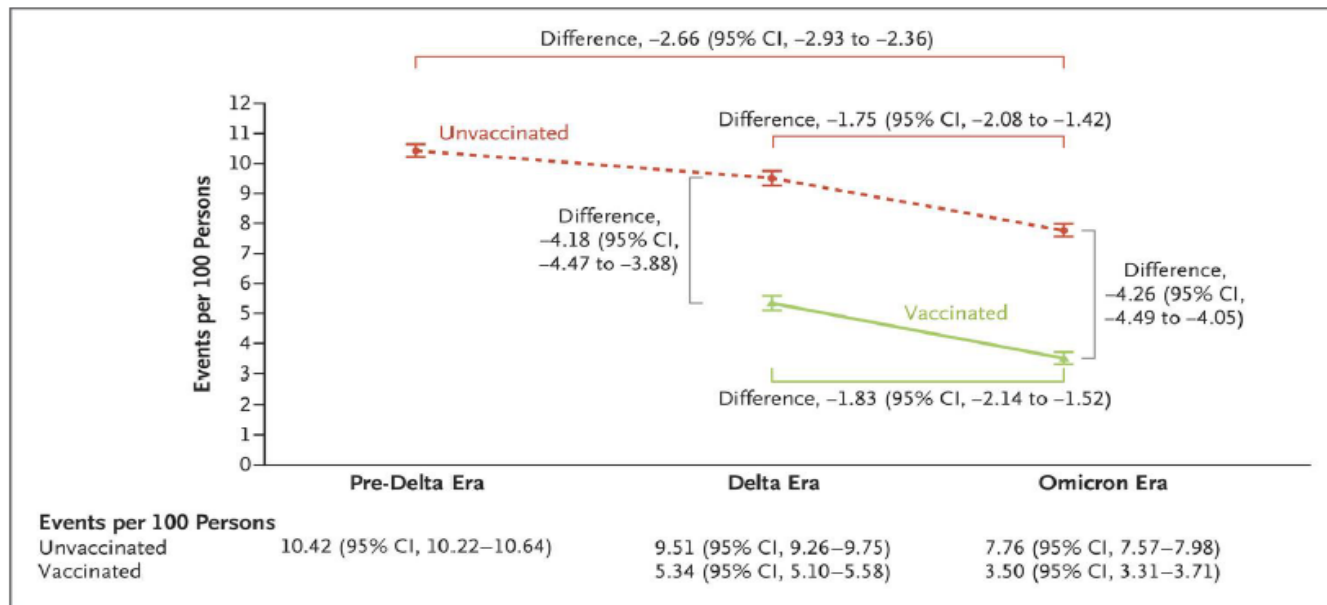
\* Prematurity is only assessed for children aged <2 years. †Obesity is not calculated for children aged <2 years. Data are limited to hospitalizations with COVID-19 as the likely reason for admission. Source: Pre-publication analysis from Rebecca Free and presented at IDWeek 2024. Data reflect the period of October 1, 2022–April 30, 2024.



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# Incidence of Long COVID

## Incidence of Long COVID has decreased, but still occurs



- **Vaccinated persons had a lower cumulative incidence of Long COVID at 1 year following SARS-CoV-2 infection than unvaccinated persons**

Health records from Department of Veterans Affairs included 441,583 veterans with SARS-CoV-2 infection between March 1, 2020, and January 31, 2022, and 4,748,504 noninfected contemporaneous controls. Cumulative incidence of Long COVID (defined as incidence of newly diagnosed symptoms and conditions not present prior to index date) measured at 1 year after SARS-CoV-2 infection during the pre-Delta, Delta, and Omicron eras of the Covid-19 pandemic.

# Summary of international COVID-19 booster recommendations

	UK <sup>1</sup>	Canada <sup>2</sup>	Australia <sup>3</sup>	WHO	US
<b>Older adults</b>	≥65 years: 12 months ≥75 years and long-term care facility residents: 6 months	≥80 years and long-term care facility residents: 6 months 65-79 years: 12 months; <i>may receive every 6 months</i>	≥75 years: 6 months ≥65 years: 12 months, <i>may receive every 6 months</i>	Country dependent, often ≥75 or ≥80 years: 6–12-month interval Country dependent, often 50 or 60 years: 12-month interval	≥65 years: 6 months
<b>Adults (routine)</b>	Not recommended	<i>May receive every 12 months</i>	<i>May receive every 12 months</i>	Not routinely recommended Pregnant adults and adolescents: dose in each pregnancy***	12 months
<b>High-risk adults**</b>	12 months	12 months	<i>May receive every 12 months</i>	12 months	12 months
<b>Immunocompromised adults</b>	6 months	6 months	12 months, <i>may receive every 6 months</i>	6-12 months	6 months, <i>plus may receive additional doses at 2-month intervals</i>
<b>Children (routine)</b>	Not recommended	<i>May receive every 12 months</i>	Not recommended	Not routinely recommended	12 months
<b>High-risk children**</b>	12 months	12 months	Not recommended	Not routinely recommended	12 months
<b>Immunocompromised children</b>	6 months	6 months	<b>Under 5 years: not recommended</b> <b>5-17 years: May receive every 12 months</b>	6-12 months	6 months, <i>plus may receive additional doses at 2-month intervals</i>

1 <https://assets.publishing.service.gov.uk/media/66e7fbf624c4f1826d81bb32/Greenbook-chapter-14a-20240916.pdf> 2 <https://www.canada.ca/en/public-health/services/publications/vaccines-immunization/national-advisory-committee-immunization-summary-guidance-covid-19-vaccines-2025-summer-2026.html> 3 <https://www.health.gov.au/our-work/covid-19-vaccines/getting-your-vaccination/booster-doses>

\* Booster refers to people who have already completed an initial series. For people who are unvaccinated, more doses may be needed than are shown in this table

\*\* Adults and children at increased risk of SARS-CoV-2 exposure or severe COVID-19 disease.

\*\*\* Ideally during the second trimester or at any opportunity

*Italics indicate discretionary/shared clinical decision-making recommendations*

# Human Papillomavirus Vaccine (HPV)

Representation of HPV vaccination recommendations on Table 1 of the child and adolescent immunization schedule, 2022–2025

Vaccine	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
HPV														See notes			

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

- **Current recommendation:**

- HPV vaccination is routinely recommended at age 11 or 12 years.
- Vaccination CAN START at age 9 years.

- **Wording change recommendation:**

- HPV vaccination is routinely recommended at age 9-12 years.

**ACIP VOTE JUNE 2025**

# Single Dose of HPV Vaccine?



- Current U.S. recommendation:
- 2 or 3 dose series depending on age at initial vaccination.
  - 9-14 years old (2-dose series).
  - 15+ years (3-dose series).
- Questions being considered by ACIP HPV vaccines work group:
  - Should one dose of HPV vaccine be used for the prevention of HPV at any age?
  - Should two doses of HPV be used for persons 15 years and older?

## ACIP Vote June 2025



# Cytomegalovirus (CMV) vaccine

More than 16,000 children born with cCMV infection in the U.S. every year – 4.5 per 1,000 live births

Outcome	Annual number of affected children	%
Neonatal death	80	0.5
cCMV disease†	2800	17
Long-term outcomes ( <i>selected</i> )		
Sensorineural hearing loss	825	5
Cognitive impairment	495	3
Motor impairment	165	1



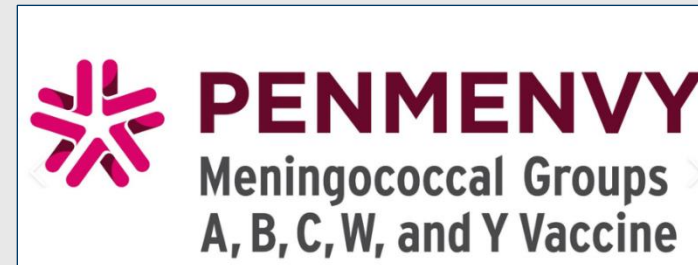
Frequencies based on unpublished review of 30 unique cohorts of children with cCMV identified through newborn screening followed up through childhood.

- In the United States, nearly 75% of cCMV infections are due to primary maternal infection.
- An effective CMV vaccine could reduce cCMV disease burden.
  - Long-lasting immunity to ensure women are protected before pregnancy and throughout childbearing years
  - Phase 1 and 2 vaccine trials showed no safety concerns. Phase 3 is ongoing.

# GSK's pentavalent vaccine: PENMENVY (MenABCWY)

**ACIP voted unanimously (15 YES – 0 NO) and passed the following recommendations:**

1. ACIP recommends GSK's MenABCWY vaccine may be used when both MenACWY and MenB are indicated at the same visit\*
  - Healthy person aged 16-23 (routine schedule) when shared clinical decision-making favors administration of MenB vaccine, and
  - Persons aged  $\geq 10$  years who are at increased risk for meningococcal disease (e.g. because of persistent complement deficiencies, complement inhibitor use, or functional or anatomic asplenia).
2. VFC Vote: Approve the updated Vaccines for Children (VFC) resolution for vaccines to prevent meningococcal disease.



## **Clinical considerations:**

- There are now 2 meningococcal pentavalent products.
- Men B products are not interchangeable.
- Men B is shared clinical decision making (SCDM).

# Chikungunya Vaccine Votes



## Two chikungunya vaccines:

### CHIK-LA (Ixchiq)

- Live attenuated vaccine.
- Licensed in November 2023.
- Manufactured by Valneva.



### CHIK-LA vote:

- ACIP **recommends** live attenuated chikungunya vaccine (CHIK-LA) for persons aged  $\geq 18$  years traveling to a country or territory where there is a chikungunya outbreak.  
\*Age  $\geq 65$  is a precaution for use of CHIK-LA

### CHIK-VLP

- Virus-like particle vaccine.
- Licensed in February 2025.
- Manufactured by Bavarian Nordic.



### CHIK-VLP votes:

- ACIP **recommends** virus-like particle chikungunya vaccine (CHIK-VLP) for persons **aged  $\geq 12$  years traveling to** a country or territory where there is a chikungunya outbreak.

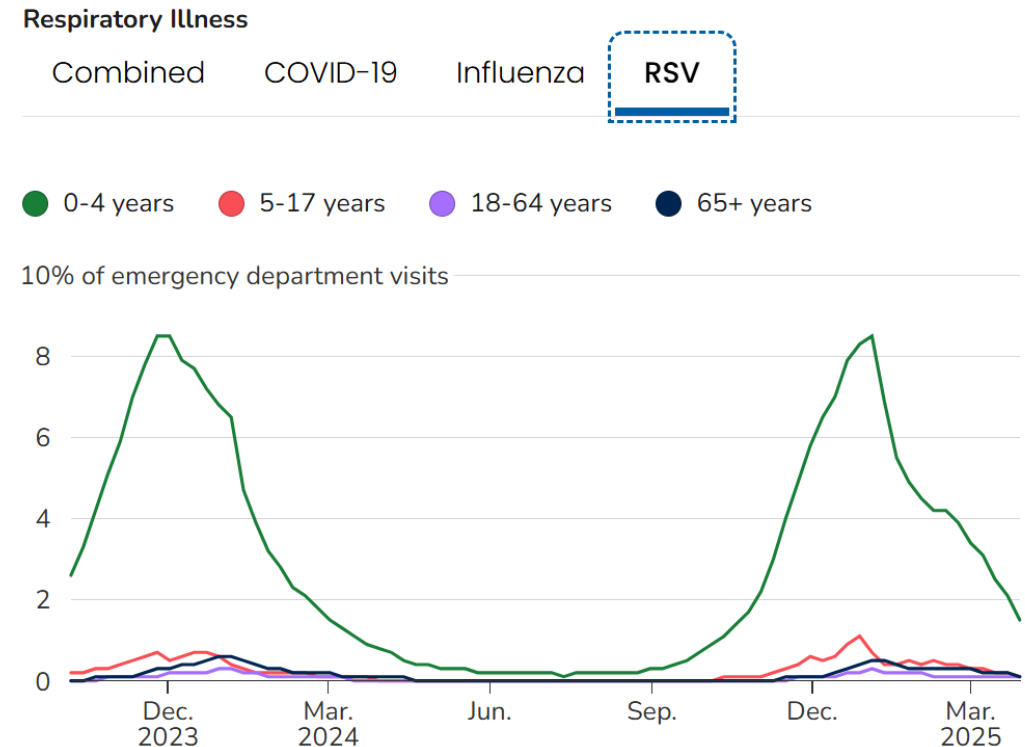
ACIP recommends virus-like particle chikungunya vaccine (CHIK-VLP) for **laboratory workers** with potential for exposure to chikungunya virus.



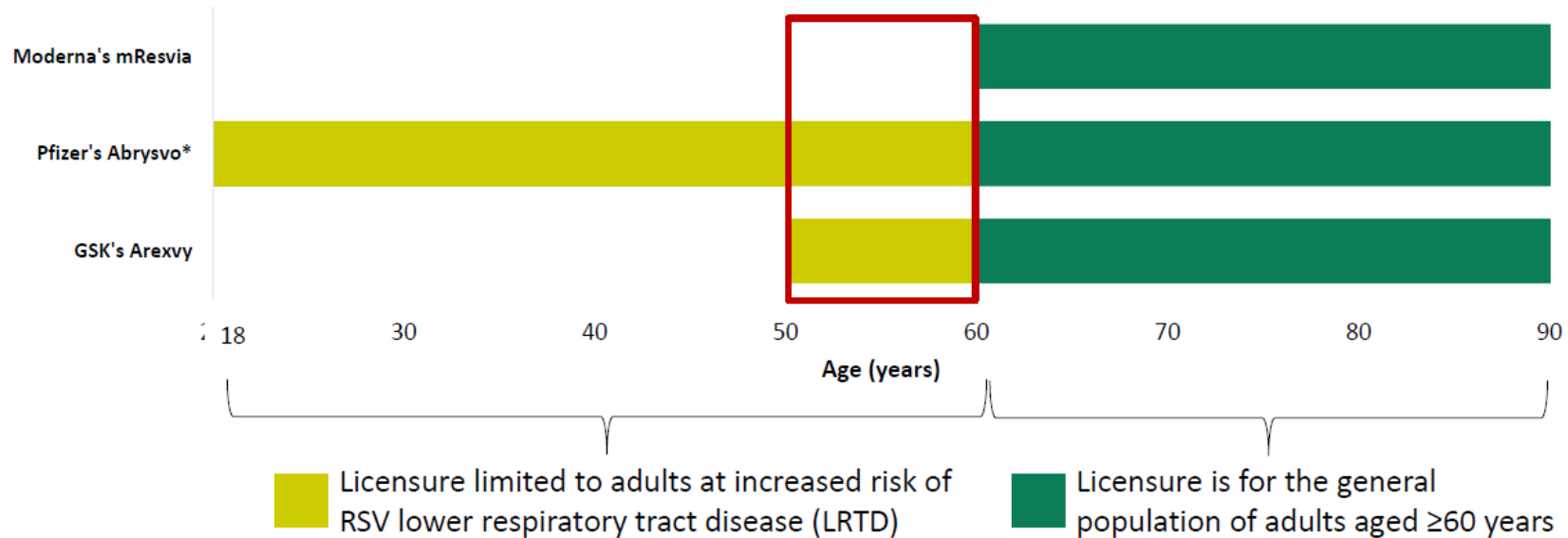
# Respiratory Syncytial Virus (RSV)

# What is RSV (Respiratory Syncytial Virus)?

- RSV is one of the most common causes of childhood respiratory illness and results in annual outbreaks of respiratory illnesses in all age groups.
- Currently, there are no antiviral treatments for severe RSV disease except for highly immunocompromised patients.
- An estimated 58,000–80,000 children under age 5 years are hospitalized each year nationwide because of RSV infection, with some requiring oxygen, intravenous fluids, or mechanical ventilation.
- RSV is associated with 90,000-140,000 hospitalizations in US adults aged 65 year and older each year.



## RSV vaccine FDA licensure for RSV prevention in adults, as of April 16, 2025

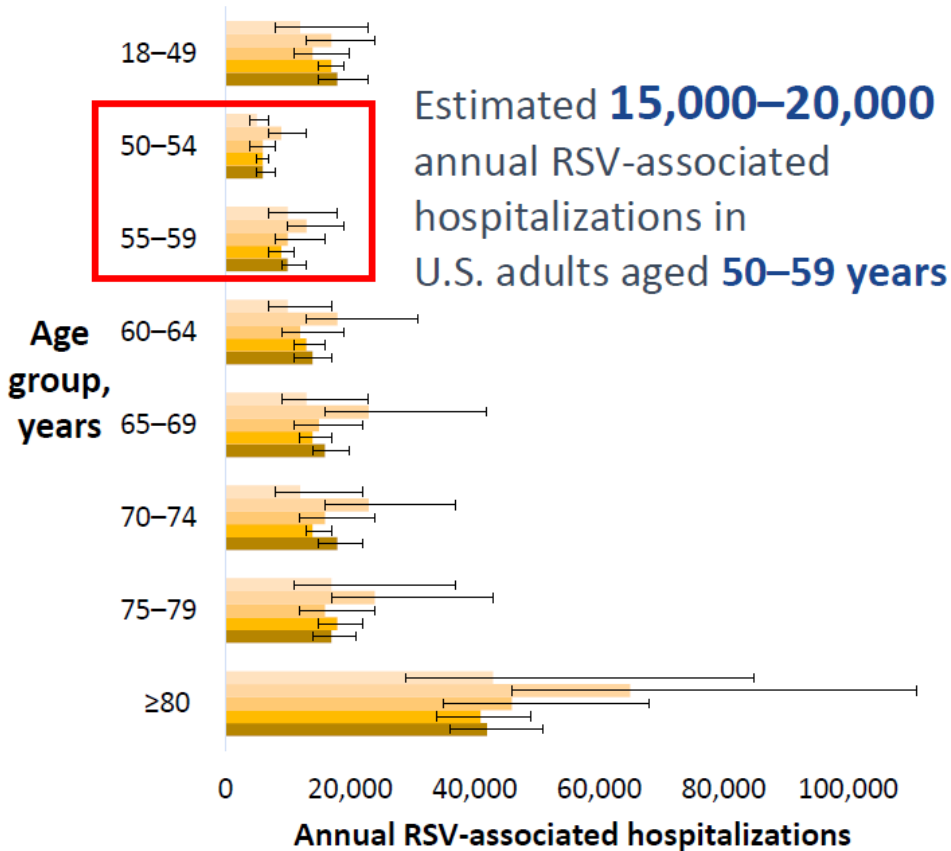


**\*Pfizer's Abrysvo is also licensed and recommended for use in pregnancy to prevent RSV LRTD in infants after birth. No other RSV vaccine should be administered in pregnancy.**

# RSV-associated hospitalizations by age group

Estimated annual number of RSV-associated hospitalizations\* among adults aged  $\geq 18$  years by age group and year, RSV-NET, 2016–17 to 2019–20, 2022–23

Surveillance season: 2016–17 2017–18 2018–19 2019–20 2022–23



Havers FP, et al. Burden of Respiratory Syncytial Virus-Associated Hospitalizations in US Adults, October 2016 to September 2023. JAMA Netw Open. 2024 Nov 4;7(11):e2444756. <https://pubmed.ncbi.nlm.nih.gov/39535791/>

\*Estimated hospitalizations exclude recorded hospitalizations among pregnant women.

# Risk factors for RSV in adults

**Proposed list of risk factors for the 50–59 recommendation is the same as that currently used for the 60–74 recommendation**



**Chronic cardiovascular disease**



**Chronic lung or respiratory disease**



**Diabetes mellitus**

complicated by chronic kidney disease, neuropathy, retinopathy or other end-organ damage or requiring treatment with insulin or sodium-glucose cotransporter-2 (SGLT2) inhibitor



**Severe obesity**  
(body mass index  $\geq 40$  kg/m<sup>2</sup>)



**End stage renal disease/dialysis dependence**



**Chronic hematologic conditions**



**Chronic liver disease**



**Neurological or neuromuscular conditions** causing impaired airway clearance or respiratory muscle weakness



**Residence in a nursing home**



**Moderate or severe immunocompromise**



**Other chronic medical conditions or risk factors that a provider determines would increase risk of severe disease due to viral respiratory infection (e.g., frailty)**

Britton A, Roper LE, Kotton CN, et al. Use of Respiratory Syncytial Virus Vaccines in Adults Aged  $\geq 60$  Years: Updated Recommendations of the Advisory Committee on Immunization Practices — United States, 2024. MMWR Morb Mortal Wkly Rep 2024;73:696-702. DOI: <http://dx.doi.org/10.15585/mmwr.mm7332e1>.



# RSV April Vote and Additional Doses

- Adult RSV previous ACIP recommendation:
  - 75 years and older.
  - 60-74 years of age at risk.
  - Pregnancy.
- April vote:
  - ACIP recommends that adults **50–59 years of age who are at increased risk** of severe RSV disease receive a single dose of RSV vaccine.

**At this time, additional doses are NOT recommended.**

## Second dose studies

- Moderna's mResvia:
  - Durability of immune response demonstrated out to 24 months.
  - Revaccination at 12 or 24 months restores immune response.
- GSK's Arexvy:
  - Robust humoral and cellular immune responses observed following revaccination at 24- and 36-month intervals.

# RSV is the leading cause of hospitalization in infants

- In the absence of RSV prevention products:
- Most infants (68%) are infected in the first year of life and nearly all (97%) by age 2 years.
- 2-3% of young infants are hospitalized for RSV
  - Highest rates occur in the first months of life and risk declines with increasing age in early childhood
  - 79% of children aged <2 years had no underlying medical conditions



# Current RSV Protection Recommendations

**CDC and ACIP recommend all infants should be protected against severe RSV disease with either maternal RSV vaccine or nirsevimab**

## Maternal vaccine

Abrysvo, Pfizer



Pregnant women 32 through 36 weeks' gestation

Administer September through January in most of the continental United States†

## Nirsevimab

Beyfortus, Sanofi & AstraZeneca



All infants <8 months\*

Second season dose for children ages 8–19 months at increased risk of severe RSV disease

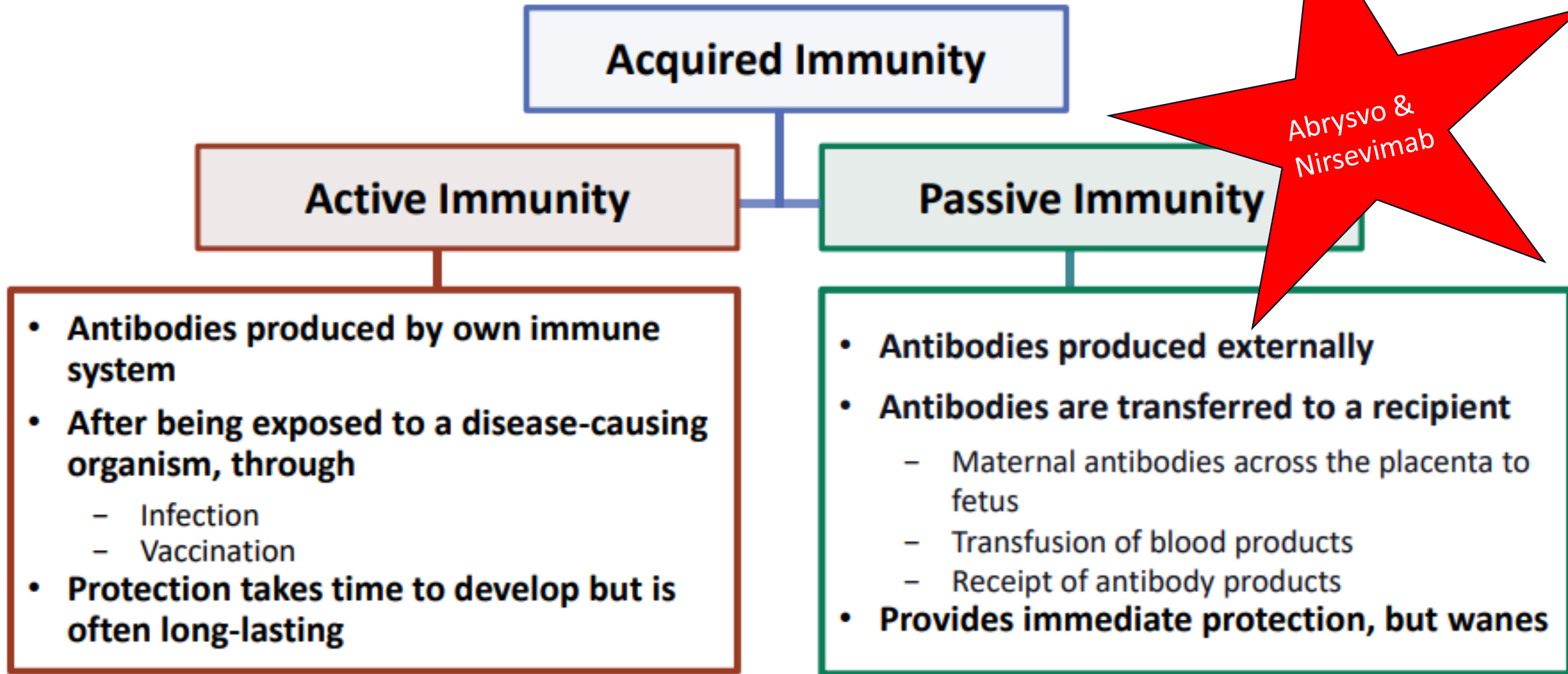
Administer October through March in most of the continental United States† (as early as possible‡)






**\*Either** maternal RSV vaccine or nirsevimab is given to protect infants against severe RSV disease – only one is needed in most instances


† Timing of administration for RSV immunization may differ in jurisdictions with RSV seasonality that differs from most of the continental United States; ‡ The optimal timing for nirsevimab administration is shortly before the RSV season begins (e.g., October–November), or within a baby's first week of life if born October through March (ideally during the birth hospitalization.)

# Active and Passive Immunity

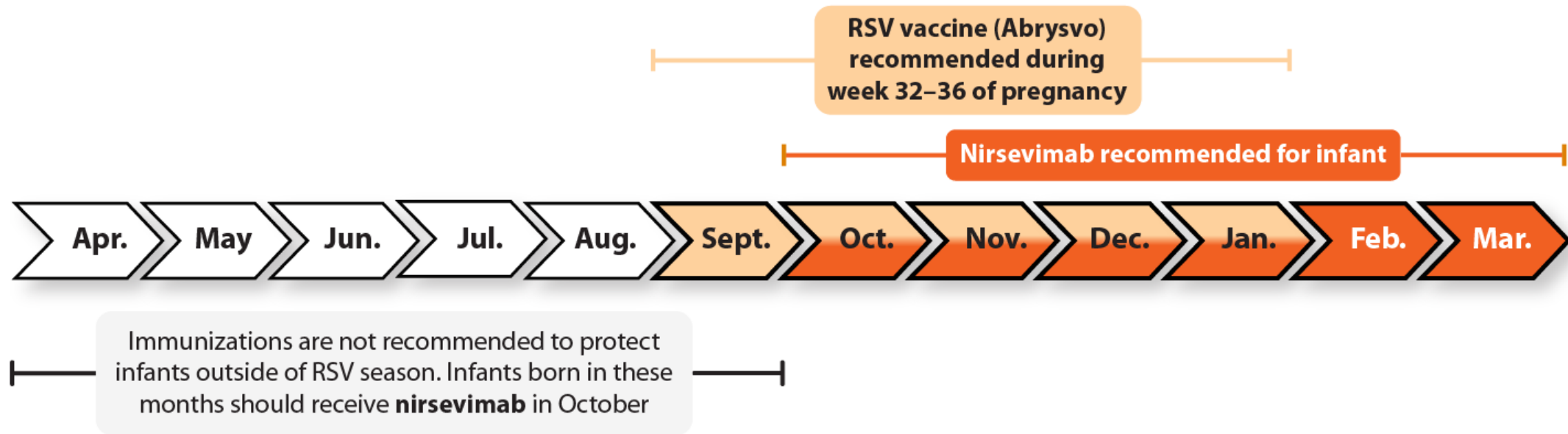


# Second long-acting monoclonal antibody for protection of infants from severe RSV disease

 <h3>Maternal vaccine</h3> <p>Abrysvo, Pfizer</p> <p>Pregnant women 32 through 36 weeks' gestation</p> <p>Administer September through January in most of the continental United States†</p>	 <h3>Nirsevimab</h3> <p>Beyfortus, Sanofi &amp; AstraZeneca</p> <p>All infants &lt;8 months*</p> <p>Second season dose for children ages 8–19 months at increased risk of severe RSV disease</p> <p>Administer October through March in most of the continental United States† (as early as possible*)</p>	 <h3>Clesrovimab</h3> <p>Merck</p> <p>Currently <u>not</u> FDA approved</p> <p>Target action date: 6/10/25</p> <p>All infants &lt;8 months*</p> <p>Administer October through March in most of the continental United States† (as early as possible*)</p>
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 **\*Either** maternal RSV vaccine or an infant antibody is given to protect infants against severe RSV disease – only one is needed in most instances

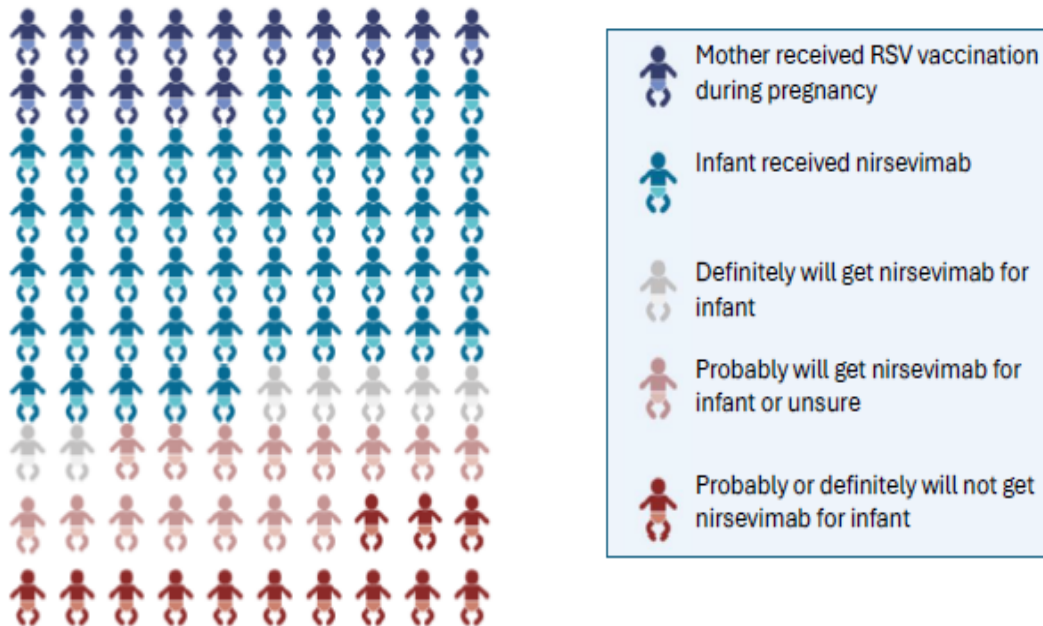
# Timing of Maternal RSV and Nirsevimab



# Vaccine Effectiveness and Uptake

## 50% of women 18-49 years who have an infant <8 months received nirsevimab for their infant, February 2025, United States

Infant protection against RSV by maternal RSV vaccination\* or receipt of nirsevimab†, and intent‡ for nirsevimab receipt by women aged 18–49 years who have an infant <8 months during the RSV season (born since April 1, 2024), February, United States

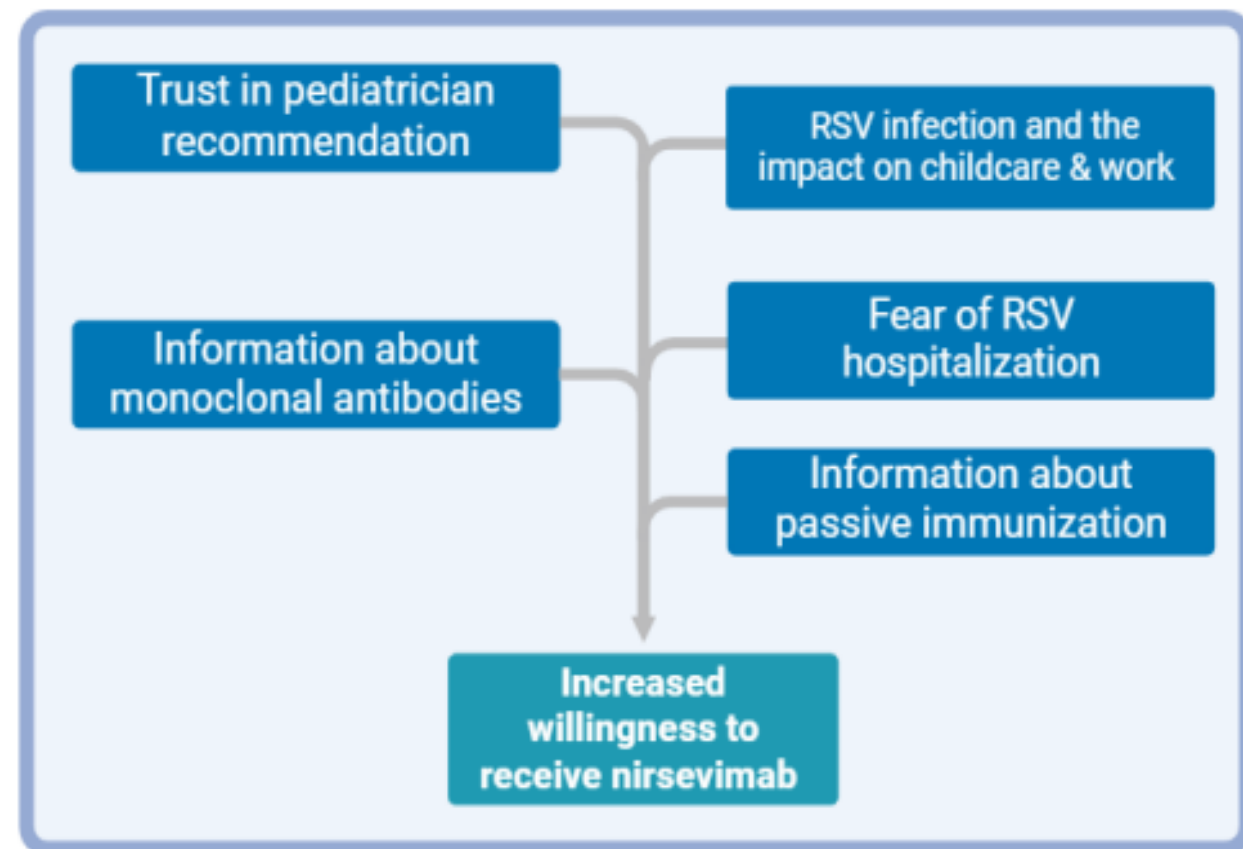


Abrysvo reduced the risk of severe LRTI by 91.1% within 90 days after birth.

Nirsevimab was effective against RSV-associated hospitalization among infants in their first RSV season during the 2023–2024 RSV season by 91%.

## Factors that may increase parental intent to receive RSV immunization products for their infant

- Trust in pediatrician's recommendation and fear of RSV infection was associated with increased intent to receive nirsevimab<sup>1</sup>
- Receiving information about monoclonal antibodies and passive immunization led to a positive impact (68%) on willingness to receive the immunization<sup>2</sup>





## Factors that may decrease parental intent to receive RSV immunization products for their infant

- Parents deferring RSV immunization were concerned about adverse events and wanted to wait until the product had been available for longer, wanted more time to decide, or trusted their own prevention measures against RSV<sup>1,2,3,4,5</sup>



Time



Risk of  
Adverse  
Events



Illness  
Prevention

Q: Is there ever a time when even though maternal Abrysovo was given, baby should still receive nirsevimab?

## When RSV Antibody May Be Considered for Infants Born to Vaccinated Mothers



- Born to mothers who may not mount an adequate immune response to vaccination (e.g., immunocompromising conditions)
- Born to mothers who have conditions associated with reduced transplacental antibody transfer (e.g., living with HIV infection)
- Infants who have procedures leading to loss of maternal antibodies (e.g., cardiopulmonary bypass, extracorporeal membrane oxygenation [ECMO], exchange transfusion)
- Infants with substantially increased risk for severe RSV disease (e.g., hemodynamically significant congenital heart disease, ICU admission with oxygen requirement at discharge)

# Seasonality of RSV and RSV vaccine

*Question: It's March 20<sup>th</sup> and we are still seeing cases of RSV in our community. Can we keep giving nirsevimab after March 31?*

## Based on Climate



In jurisdictions with differing RSV seasonality (e.g., Alaska, southern Florida, Puerto Rico, and other jurisdictions with tropical climates), providers should follow state, local, or territorial guidance on the timing of administration.

[RSV Immunization Guidance for Infants and Young Children | RSV | CDC](#)

[Use of Nirsevimab for the Prevention of Respiratory Syncytial Virus Disease Among Infants and Young Children: Recommendations of the Advisory Committee on Immunization Practices — United States, 2023 | MMWR](#)

# Can I give Nirsevimab after March 31?

## Keep in mind

ACIP recommendations on the timing of nirsevimab administration are intentionally flexible to help optimize patient access, including reimbursement of nirsevimab.

*Because the timing of the onset, peak, and decline of RSV activity varies geographically, public health authorities (e.g., CDC, health departments) or regional medical centers may provide additional guidance for nirsevimab administration for their jurisdictions.*

## Potential advantages:

- Infants born in April could be immunized shortly after birth, providing protection during their first few months of life when they are highest risk for severe disease.

## Potential disadvantages:

- The risk of exposure and infection during the tail end of the RSV season might be low.
- Most infants born to unvaccinated mothers are recommended to receive only one dose of an RSV antibody.
- Most infants who receive a dose in April would not be recommended to receive a dose in October; a dose in October could provide protection for an entire RSV season.

[CDC: RSV Immunization Guidance for Infants and Young Children \(www.cdc.gov/rsv/hcp/vaccine-clinical-guidance/infants-young-children.html\)](https://www.cdc.gov/rsv/hcp/vaccine-clinical-guidance/infants-young-children.html).

# Caution: High risk for administration errors

- Multiple products
- Age
- Timing
- Amount
- Seasonality

## Report to VAERS

[emergency.cdc.gov/newsletters/coca/2024/012224.html](https://emergency.cdc.gov/newsletters/coca/2024/012224.html)

## Administer the Correct RSV Immunization Product

Infants and Some Young Children



**Infant RSV antibody only**

**! Do not administer Abrysvo, Arexvy, or mResvia to infants or children.**

During Pregnancy



**Abrysvo only**

**! Do not administer RSV antibody\*, Arexvy, or mResvia during pregnancy.**

Older Adults



**Abrysvo (Pfizer)  
Arexvy (GSK)  
mResvia (Moderna)**

**! Do not administer RSV antibody\* to older adults.**

\*Includes nirsevimab, clesrovimab, and palivizumab. Clesrovimab is not currently approved by FDA or recommended by ACIP

# Test Your Knowledge

Which of the following RSV vaccines are approved for use in both older adults and pregnant persons?

- a. Abrysvo
- b. Arexvy
- c. mRESVIA
- d. All of the above

# Test Your Knowledge

Which of the following RSV vaccines are approved for use in both older adults and pregnant persons?

- a. **Abrysvo**
- b. Arexvy
- c. mRESVIA
- d. All of the above

**ANSWER: a.**

Abrysvo is the only RSV vaccine that has been approved for both older adults and pregnant people. Arexvy and mRESVIA are only approved for older adults.

# Test Your Knowledge

Which of the following immunizations are recommended to be given in the first week of life?

- A. Influenza
- B. COVID-19
- C. Nirsevimab
- D. Hepatitis B
- E. A & D
- F. C & D



# Test Your Knowledge

Which of the following immunizations are recommended to be given in the first week of life?

- A. Influenza
- B. COVID-19
- C. Nirsevimab
- D. Hepatitis B
- E. A & D
- F. C & D**

**Answer: F. C & D:** Both nirsevimab monoclonal antibody and Hep B vaccine can be administered before an infant leaves the hospital. Nirsevimab should be administered within 1 week of birth.

# Thank You!

**Tabitha Hanson, MPH, DNP, RN**

*Tabitha.hanson@state.mn.us*

- [Use of Nirsevimab for the Prevention of Respiratory Syncytial Virus Disease Among Infants and Young Children: Recommendations of the Advisory Committee on Immunization Practices — United States, 2023 | MMWR](#)
- [RSV Immunization Guidance for Infants and Young Children | RSV | CDC](#)
- [Nirsevimab Frequently Asked Questions](#)
- [Ask The Experts About Vaccines: RSV \(Respiratory Syncytial Virus\) | Immunize.org](#)
- [CDC: ACIP Presentation Slides: April 15-16, 2025 Meeting \(www.cdc.gov/acip/meetings/presentation-slides-april-15-16-2025.html\)](#)