What's New from ACIP 2025 Vaccination Update

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Disclosures

- No financial disclosures or conflicts
- The views expressed may not represent the official guidance from the US or NJ State Governments or the Department of Veterans Affairs
- I cannot speculate on the future vaccination plans/recommendation from DHHS

Objectives

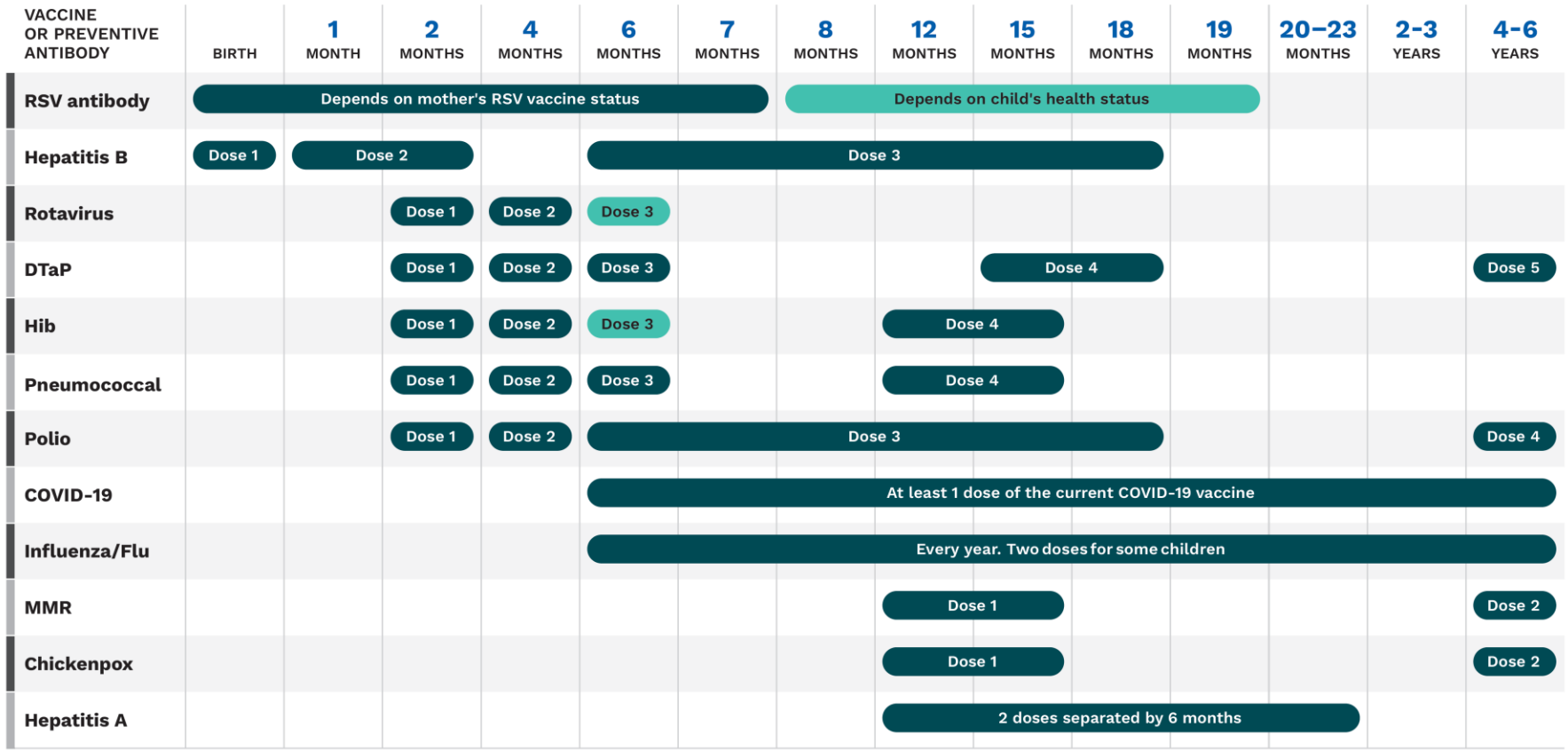
- Review the most recent recommended changes in vaccination recommendations

- Discuss the potential for newer vaccines to impact disease

Your child needs vaccines as they grow!

2025 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 **www2.cdc.gov/vaccines/childquiz/**



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. Visit **wwwnc.cdc.gov/travel** for more information.
3. Your child misses a vaccine recommended for their age.

https://www.cdc.gov/vaccines/imz-schedules/downloads/parent-ver-sch-0-6yrs.pdf 6/2/2025

CDC U.S. CENTERS FOR DISEASE CONTROL AND PREVENTION

FOR MORE INFORMATION
Call toll-free: **1-800-CDC-INFO (1-800-232-4636)**
Or visit: **www2.cdc.gov/vaccines/childquiz/**

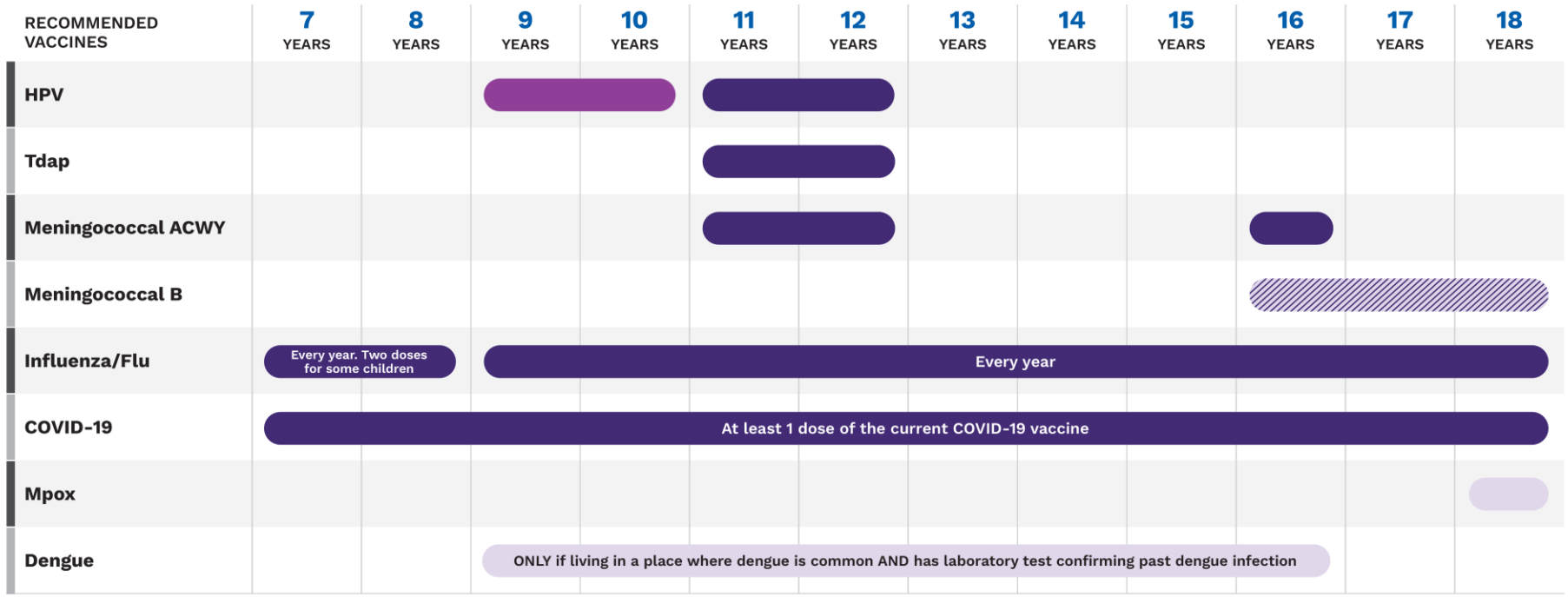
AAFP AMERICAN ACADEMY OF FAMILY PHYSICIANS

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN®

Older children and teens need vaccines too!

2025 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 **www2.cdc.gov/vaccines/childquiz/**



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. Visit **wwwnc.cdc.gov/travel** for more information.
3. Your child misses any vaccine recommended for their age or for babies and young children.

https://www.cdc.gov/vaccines/imz-schedules/downloads/parent-version-schedule-7-18yrs.pdf 6/2/2025

CDC U.S. CENTERS FOR DISEASE CONTROL AND PREVENTION

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You need vaccines throughout your life!

2025 Recommended Immunizations for Adults Aged 19 Years and Older

Want to learn more?
Scan this QR code to find out which vaccines you may need. Or visit:
www2.cdc.gov/nip/adultimmsched/

Staying **up to date** on your vaccines is one of the best things you can do to protect your health.

If you are pregnant or have a medical condition that puts you at higher risk for infections, talk to your health care provider about which vaccines are right for you.

KEY

- ALL adults in age group should get the vaccine.
- SOME adults in age group should get the vaccine.
- Adults should talk to their health care provider to decide if this vaccine is right for them.

VACCINE	19–26 YEARS	27–49 YEARS	50–64 YEARS	65+ YEARS
COVID-19	Aged 64 and younger: At least 1 dose of the current COVID-19 vaccine.			65+: At least 2 doses.
Influenza/Flu	Every Year			
RSV	If pregnant during RSV season		If aged 60 through 74 years	If aged 75 years or older
Tdap/Td	Tdap every pregnancy. Td/Tdap every 10 years for all adults.			
MMR	If aged 68 years or younger			
Chickenpox	If U.S. born and aged 45 years or younger			
Shingles				
HPV		Aged 27–45 years		
Pneumococcal				
Hepatitis A				
Hepatitis B	Through 59 years			
Meningococcal				
Hib				
Mpox				

https://www.cdc.gov/vaccines/imz-schedules/downloads/adults-schedule-easy-read.pdf 6/2/2025

CDC U.S. CENTERS FOR DISEASE CONTROL AND PREVENTION

FOR MORE INFORMATION
Call toll-free: **1-800-CDC-INFO (1-800-232-4636)**
Or visit: **www2.cdc.gov/nip/adultimmsched/**

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Respiratory Viruses 2024 vs. 2025

Table 1 Recommended Adult Immunization Schedule by Age Group, United States, 2024

Vaccine	19–26 years	27–49 years	50–64 years	≥65 years
COVID-19	1 or more doses of updated (2023-2024 Formula) vaccine (See Notes)			
Influenza inactivated (IIV4) or **Influenza recombinant** (RIV4)	1 dose annually			
or	or			
Influenza live, attenuated (LAIV4)	1 dose annually			
Respiratory Syncytial Virus (RSV)	Seasonal administration during pregnancy. See Notes.		≥60 years	

Recommended vaccination for adults who meet age requirement, lack documentation of vaccination, or lack evidence of immunity

Recommended vaccination for adults with an additional risk factor or another indication

Recommended vaccination based on shared clinical decision-making

No recommendation/ Not applicable

Recommended vaccination for adults who meet age requirement, lack documentation of vaccination, or lack evidence of immunity

Recommended vaccination for adults with an additional risk factor or another indication

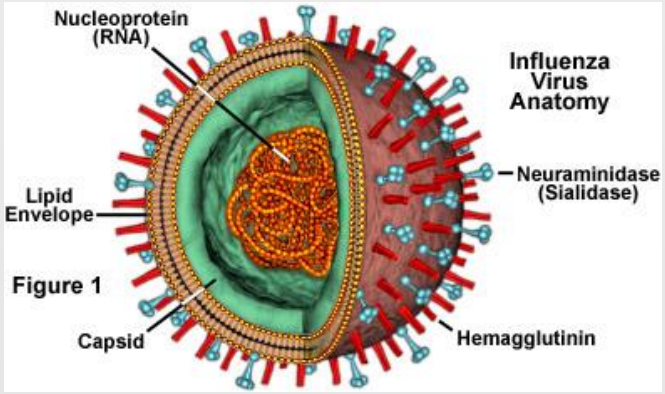
Recommended vaccination based on shared clinical decision-making

No Guidance/Not Applicable

Vaccine	19-26 years	27-49 years	50-64 years	≥65 years
COVID-19	1 or more doses of 2024–2025 vaccine (See Notes)			2 or more doses of 2024-2025 vaccine (See Notes)
Influenza inactivated (IIV3, ccIIV3) Influenza recombinant (RIV3)	1 dose annually			1 dose annually (HD–IIV3, RIV3, or aIIV3 preferred)
Influenza inactivated (aIIV3; HD–IIV3) Influenza recombinant (RIV3)	Solid organ transplant (See Notes)			
Influenza live, attenuated (LAIV3)	1 dose annually			
Respiratory Syncytial Virus (RSV)	Seasonal administration during pregnancy. (See Notes)		60 through 74 years (See Notes)	≥75 years

https://www.cdc.gov/vaccines/hcp/imz-schedules/adult-age.html 6/2/2025

Influenza Vaccine Components 2025-2026 season



https://micro.magnet.fsu.edu/cells/viruses/influenzavirus.html

Egg-Based

- A/Victoria/4897/2022 (H1N1)pdm09-like virus
- A/Croatia/10136RV/2023 (H3N2)-like viru
- B/Austria/1359417/2021 (Victoria lineage)-like virus

Cell Culture-Based

- A/Wisconsin/67/2022 (H1N1)pdm09-like virus
- A/District of Columbia/27/2023 (H3N2)-like virus
- B/Austria/1359417/2021 (Victoria lineage)-like virus

https://www.fda.gov/vaccines-blood-biologics/influenza-vaccine-composition-2025-2026-us-influenza-season

Vaccine Formulations

- ACIP recommends adults ≥65 years preferentially higher dose or adjuvanted influenza vaccines
  - HD-IIV3
  - RIV3
  - aIIV3
- If not available other age-appropriate influenza vaccine should be administered

TABLE 1. Influenza vaccines — United States, 2024–25 influenza season*

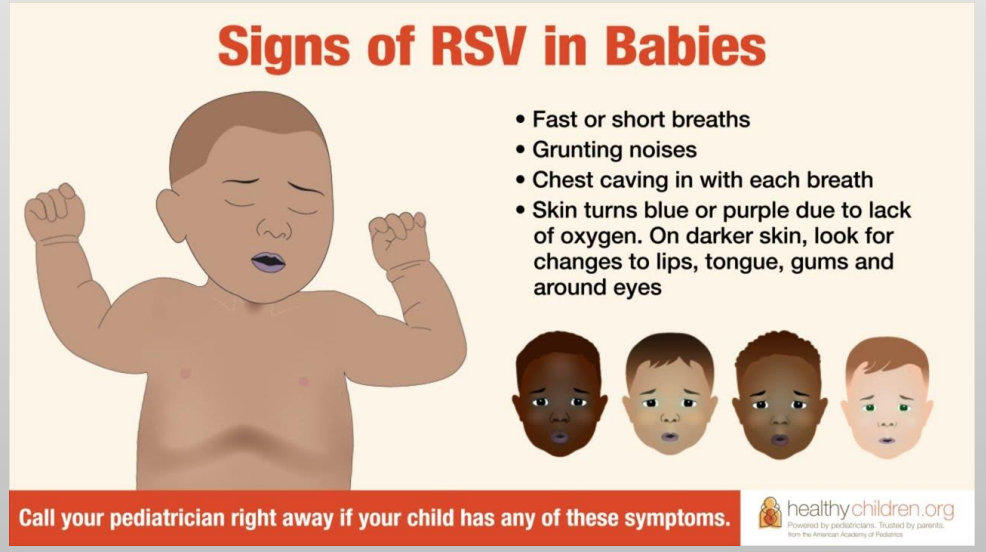
Trade name (manufacturer)	Presentations	Age indication	µg HA (IIV3s and RIV3) or virus count (LAIV3) for each vaccine virus (per dose)	Route	Mercury (from thimerosal, if present), µg/0.5 mL
IIV3s (standard-dose, egg-based vaccines†)					
Afluria	0.5-mL PFS§	≥3 yrs§	15 µg/0.5 mL	IM¶	—**
(Seqirus)	5.0-mL MDV§	≥6 mos§ (needle and syringe)	7.5 µg/0.25 mL 15 µg/0.5 mL	IM¶	24.5
		18 through 64 yrs (jet injector)			
Fluarix (GlaxoSmithKline)	0.5-mL PFS	≥6 mos	15 µg/0.5 mL	IM¶	—
FluLaval (GlaxoSmithKline)	0.5-mL PFS	≥6 mos	15 µg/0.5 mL	IM¶	—
Fluzone	0.5-mL PFS††	≥6 mos††	15 µg/0.5 mL	IM¶	—
(Sanofi Pasteur)	5.0-mL MDV††	≥6 mos††	7.5 µg/0.25 mL 15 µg/0.5 mL	IM¶	25
ccIIV3 (standard-dose, cell culture-based vaccine)					
Flucelvax	0.5-mL PFS	≥6 mos	15 µg/0.5 mL	IM¶	—
(Seqirus)	5.0-mL MDV	≥6 mos	15 µg/0.5 mL	IM¶	25
HD-IIV3 (high-dose, egg-based vaccine†)					
Fluzone High-Dose (Sanofi Pasteur)	0.5-mL PFS	≥65 yrs	60 µg/0.5 mL	IM¶	—
aIIV3 (standard-dose, egg-based vaccine† with MF59 adjuvant)					
Fluad (Seqirus)	0.5-mL PFS	≥65 yrs	15 µg/0.5 mL	IM¶	—
RIV3 (recombinant HA vaccine)					
Flublok (Sanofi Pasteur)	0.5-mL PFS	≥18 yrs	45 µg/0.5 mL	IM¶	—
LAIV3 (egg-based vaccine†)					
FluMist (AstraZeneca)	0.2-mL prefilled single-use intranasal sprayer	2 through 49 yrs	$10^{6.5–7.5}$ fluorescent focus units/0.2 mL	NAS	—

Grohskopf, et al. MMWR 2024

RSV Prevention in Infants

- Physical prevention
- Nirsevimab
  - 1 IM injection
  - Lasts 5 months
  - All infants <8 months at the start of RSV season
  - High risk 8-19 months old entering 2nd RSV season

- Reduces risk of severe RSV approx. 80%
- No long-term immunity



https://www.cdc.gov/rsv/clinical/index.html Accessed 9/12/2023

Maternal Vaccination

- RSVpreF vaccine
  - Abrysvo® (Pfizer)
  - 32-36 weeks pregnant in RSV season
  - No recommendation on subsequent pregnancy
- Decreased risk of infant hospitalization with RSV >50%
- No need to immunize infant
  - Except birth <2 weeks from maternal immunization
  - Specific high risk

https://www.cdc.gov/vaccines/vpd/rsv/public/pregnancy.html Accessed 12/1/2023

RSV Vaccine in Older Adults

- Mostly among older adults
- Estimated 60,000–160,000 hospitalizations and 6,000–10,000 deaths annually among adults aged ≥65 years
- Increased risk of severe infection
  - COPD
  - Asthma
  - CHF
  - CAD
  - DM
  - CKD
  - Residents of long-term care facilities
  - Frailty
  - Advanced age
  - Immune compromised

Melgar, et al. MMWR 2023

Effectiveness 2023-2024 (1 year)

- Arexvy® (GSK)
  - 77% preventing RSV-associated ED visits
  - 83% preventing hospitalizations
- Abrysvo® (Pfizer)
  - 79% preventing ED visits
  - 73% preventing hospitalizations
- Second year data pending

- mResvia® (Moderna)
  - Phase 2/3 trails
  - Efficacy preventing symptomatic illness
  - 80% at 4 months
  - 56% 12 months

https://www.cdc.gov/rsv/hcp/vaccine-clinical-guidance/older-adults.html#:~:text=respiratory%20virus%20season.-,Pfizer's%20Abrysvo,during%20each%20respiratory%20virus%20season.

RSV Adult Vaccine Recommendations

- Age ≥75
  - 1 dose
  - No subsequent doses currently
- Age 60-74
  - Risk factor for severe infection
  - 1 dose
  - No subsequent doses currently

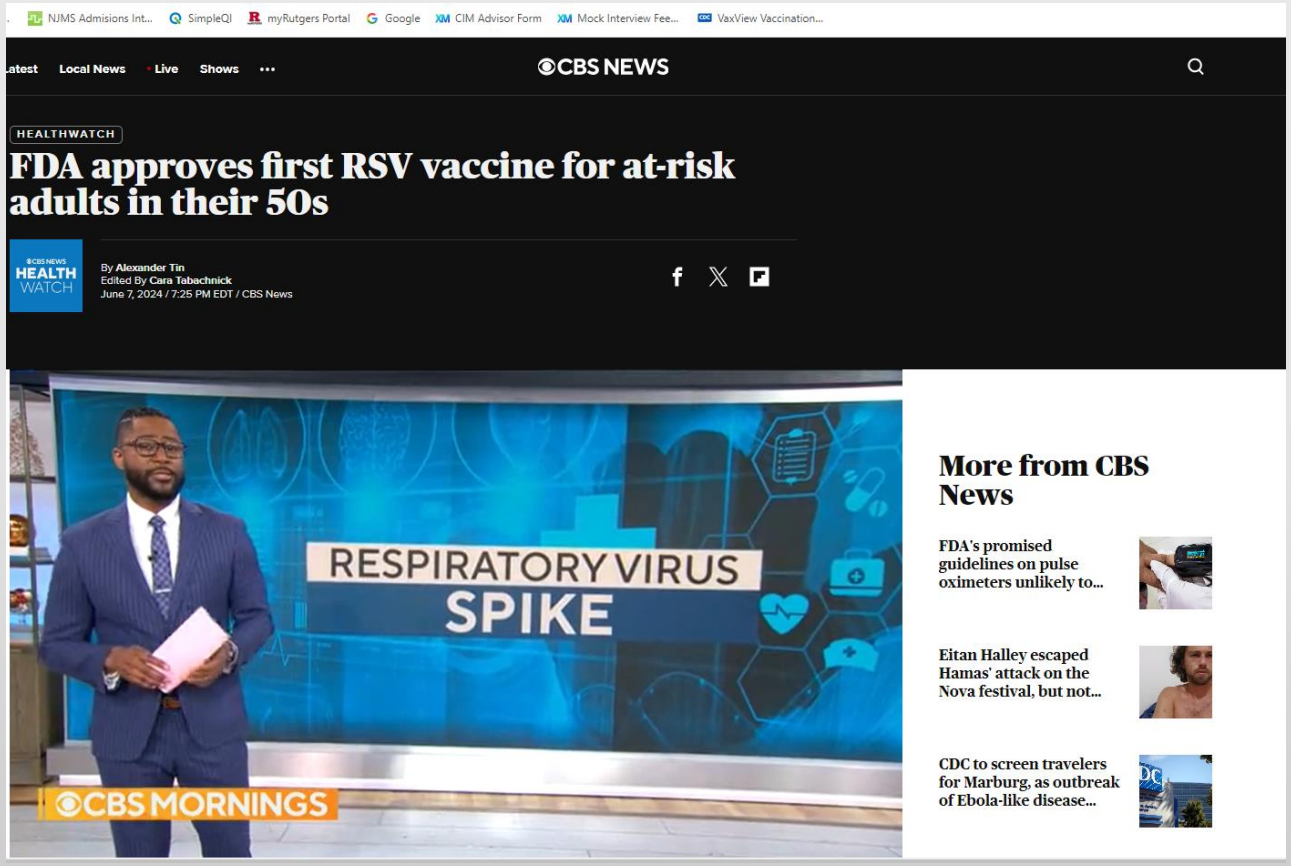
- 1 time dose approved
- Ideally before RSV season
- Recommended ASAP
- “Coadministration of RSV vaccines with other adult vaccines during the same visit is acceptable.”
- “Available data on immunogenicity of coadministration of RSV vaccines and other vaccines are currently limited.”

https://www.cdc.gov/vaccines/hcp/imz-schedules/adult-notes.html#note-rsv 6/2/2025

Melgar, et al. MMWR 2023; Britton, et al. MMWR 2024

Higher Risk Groups

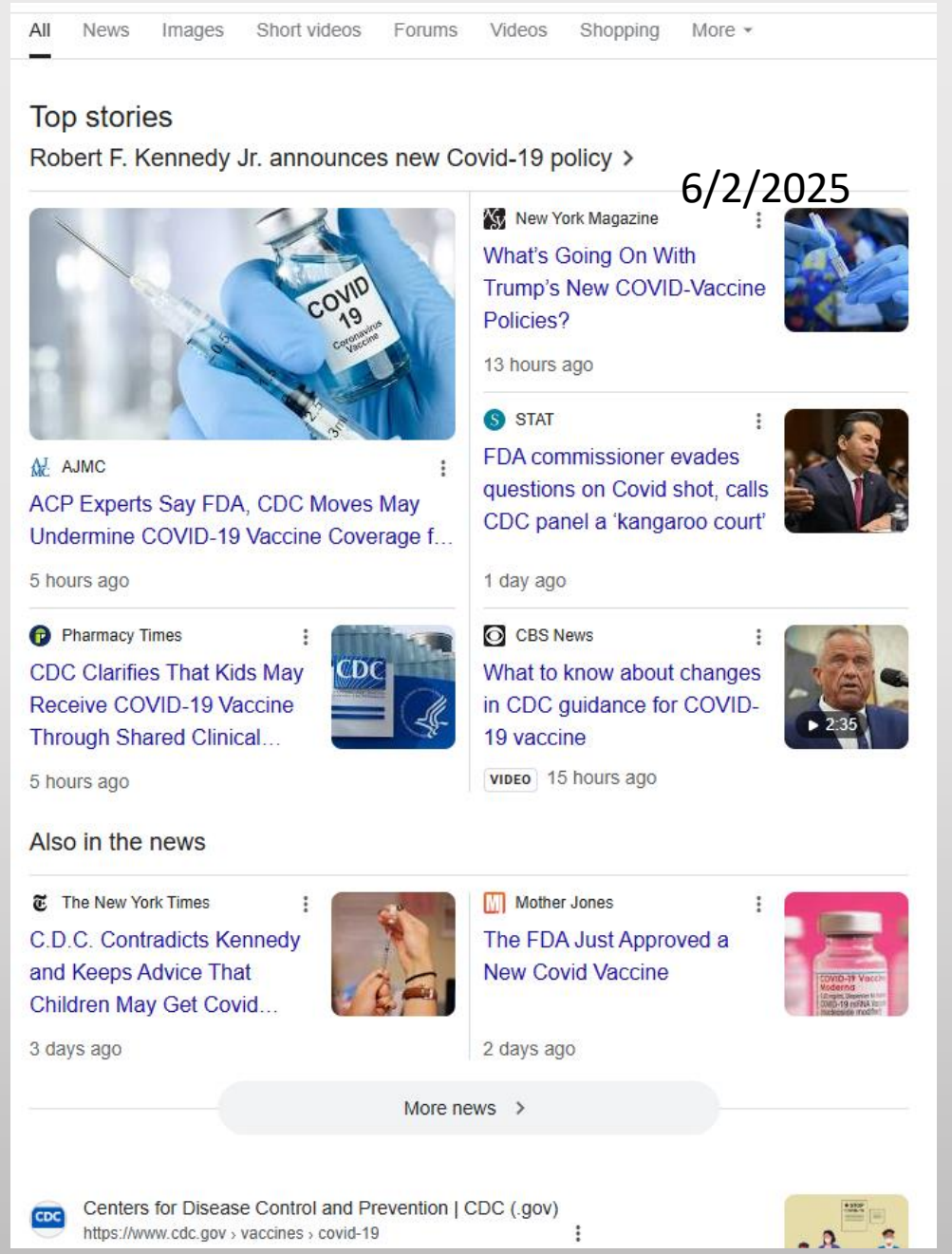
- June 7, 2024 FDA approved Arexvy (GSK) for high-risk patients 50-59 years old
- “Insufficient evidence for a recommendation”
- No national recommendations
  - Immunocompromised
  - Transplant
  - Oncology



https://www.cbsnews.com/news/fda-approves-first-rsv-vaccine-for-adults-in-their-50s/

COVID-19 Vaccine

- May News Updates
- FDA approved Moderna updated vaccine
  - High risk adults
  - Age >65
- FDA recommended updating vaccine
  - Target JN.1 variant
  - Increase protection for current risks
  - Includes LP.8.1 (in the news)



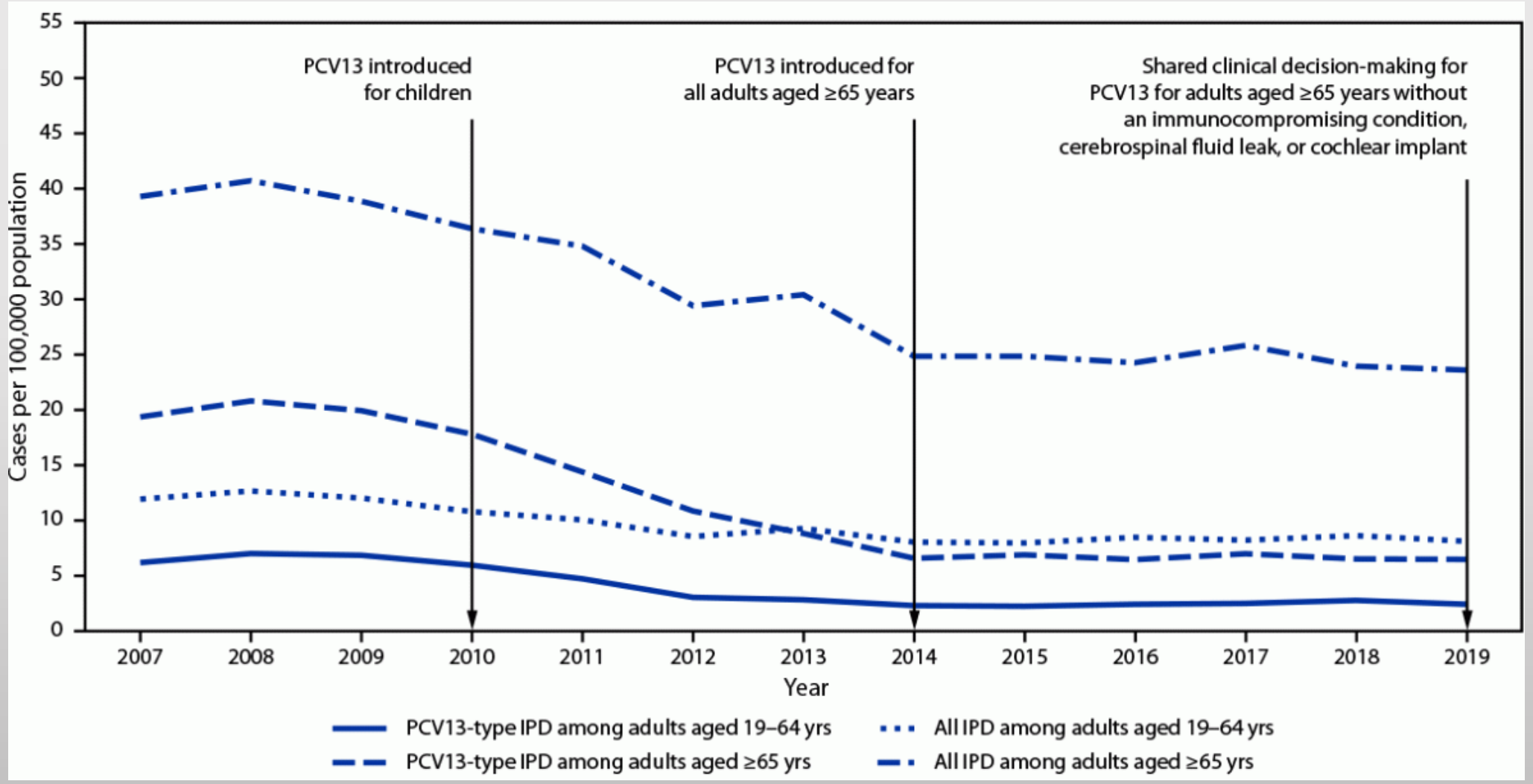
Pneumococcus

Historical Context

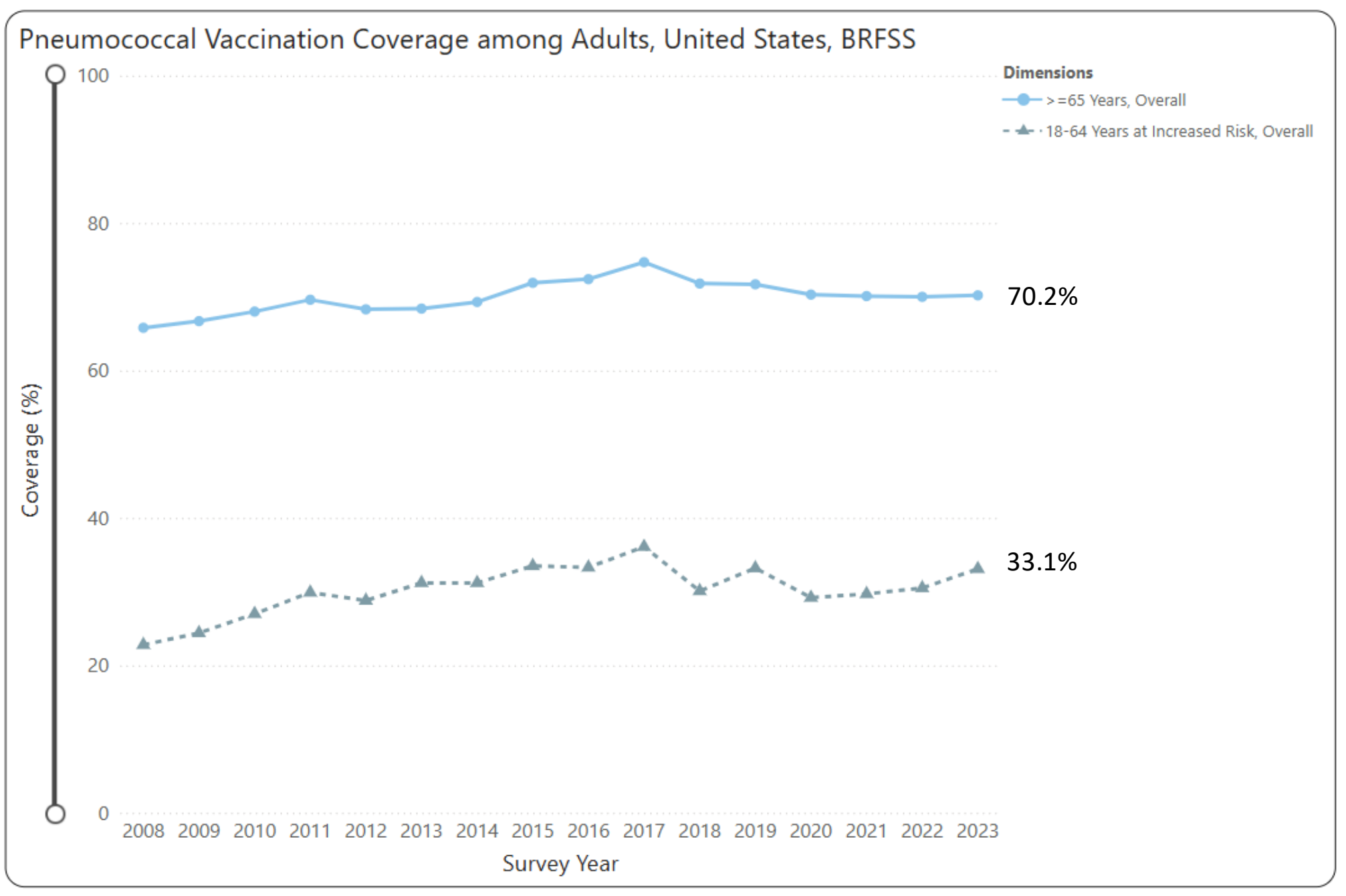
- PPSV23 recommended for adults ≥65 yrs. since the 1980s
- PCV7 licensed in 2000
  - Reduced invasive disease caused by vaccine serotypes by 97%
  - 20% fewer episodes of chest X-ray confirmed pneumonia
  - 7% fewer episodes of acute otitis media
  - 20% fewer tympanostomy tube placements
- PCV13 licensed in 2010 after comparison with PCV7
  - Children in 2010
  - High risk adults in 2012 (with PPSV23)
- CAPiTA trial of PCV13 in adults
  - 85,000 adults ≥65 yrs. 2008-2013
  - 46% efficacy against vaccine-type pneumococcal pneumonia
  - 75% efficacy against vaccine-type invasive pneumococcal disease
  - All adults ≥65 yrs. in 2014
  - Shared decision making for non-immunocompromised adults ≥65 yrs. in 2019
- PCV13 adult recommendations
  - Fraught with confusion
  - All adults ≥65 yrs. in 2014
  - Shared decision making for non-immunocompromised adults ≥65 yrs. in 2019
- PCV15 and PCV20 licensed in 2021
- PCV21 licensed in 2024 for adults
  - Pediatric studies in Phase 3 now

Black, et al. Ped ID Jrnl 2000; Black, et al. Peds ID Jrnl 2002; Bryant, et al. Pediatrics 2010; Yeh, et al. Pediatrics 2010; Bonten, et al. NEJM 2015;
https://www.cdc.gov/vaccines/hcp/imz-schedules/downloads/adult/adult-combined-schedule.pdf

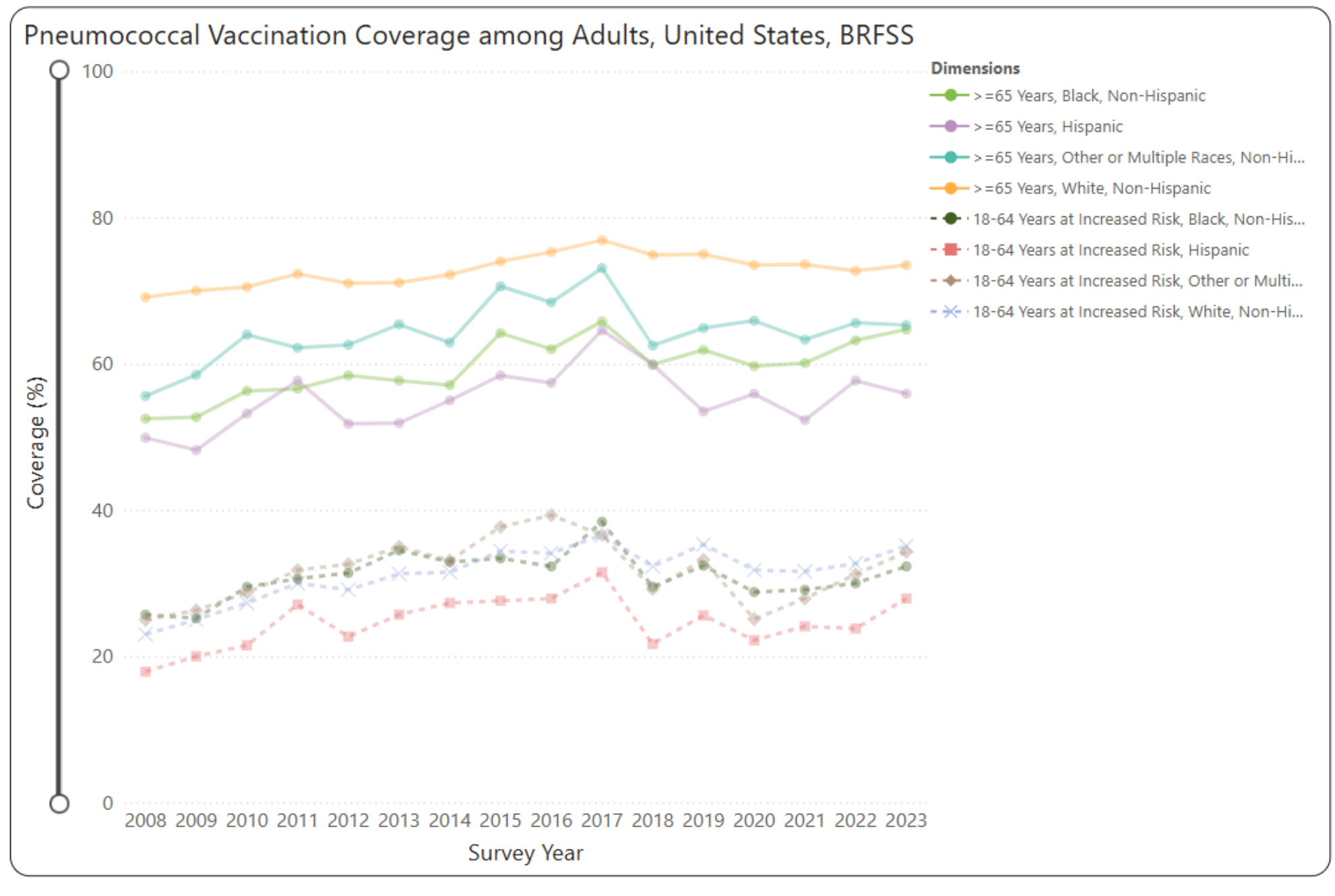
Decreased Invasive Pneumococcal Disease



Kobayashi, et al. MMWR 2022



https://www.cdc.gov/adultvaxview/about/general-population.html Accessed 2/10/2025



https://www.cdc.gov/adultvaxview/about/general-population.html Accessed 2/10/2025

U.S. Centers for Disease Control and Prevention

MMWR

Morbidity and Mortality Weekly Report

Weekly / Vol. 74 / No. 1

January 9, 2025

Expanded Recommendations for Use of Pneumococcal Conjugate Vaccines Among Adults Aged ≥50 Years: Recommendations of the Advisory Committee on Immunization Practices — United States, 2024

Miwako Kobayashi, MD[1]; Andrew J. Leidner, PhD[2]; Ryan Gierke, MPH[1]; Wei Xing, MSTAT[1]; Emma Accorsi, PhD[1]; Pedro Moro, MD[3]; Mini Kamboj, MD[4]; George A. Kuchel, MD[5]; Robert Schechter, MD[6]; Jamie Loehr, MD[7]; Adam L. Cohen, MD[1]

Why Drop The Age?

- ACIP Pneumococcal Vaccines Work Group
- Adults 50–64 yrs. with IPD
  - Approx. 90% had one or more risk condition
  - 2022 IPD incidence 13.2/100,000 and mortality rates 1.8/100,000
  - Higher than those in all other age groups except adults aged ≥65 years
  - PCV20 serotypes accounted for 56% cases
  - PCV21 serotype accounted for 83% cases

Kobayashi, et al. MMWR 2024

Why Drop The Age? – Disparities

- 32%–54% of adults 50–64 yrs. have at least one risk condition that qualifies for risk-based pneumococcal vaccination
- 2022 Behavioral Risk Factor Surveillance System
  - 37% of recommended adults were vaccinated
  - 70% of adults ≥65 years with an age-based recommendation
- Racial disparities in vaccination rates
- IPD rates among Black adults peaked at a younger age (55–59 years)

Kobayashi, et al. MMWR 2024

Morbidity and Mortality Weekly Report

Use of 21-Valent Pneumococcal Conjugate Vaccine Among U.S. Adults: Recommendations of the Advisory Committee on Immunization Practices — United States, 2024

- PCV21 approved in June 2024 for adults ≥18 yrs.
- ACIP recommended
  - All adults ≥65 yrs.
  - Adults 19-64 yrs. with risk factors
- Comparable immunogenicity and safety to other PCV
  - 8 new serotypes added
  - 10 serotypes not included from PCV20
- Can be administered with other vaccines

Kobayashi, et al. MMWR 2024

Conditions with Increased Risk

Immunocompromising conditions	▪ Chronic renal failure ▪ Congenital or acquired asplenia ▪ Congenital or acquired immunodeficiency[§] ▪ Generalized malignancy	▪ HIV infection ▪ Hodgkin disease ▪ Iatrogenic immunosuppression[¶] ▪ Leukemia ▪ Lymphoma	▪ Multiple myeloma ▪ Nephrotic syndrome ▪ Sickle cell disease/other hemoglobinopathies ▪ Solid organ transplant

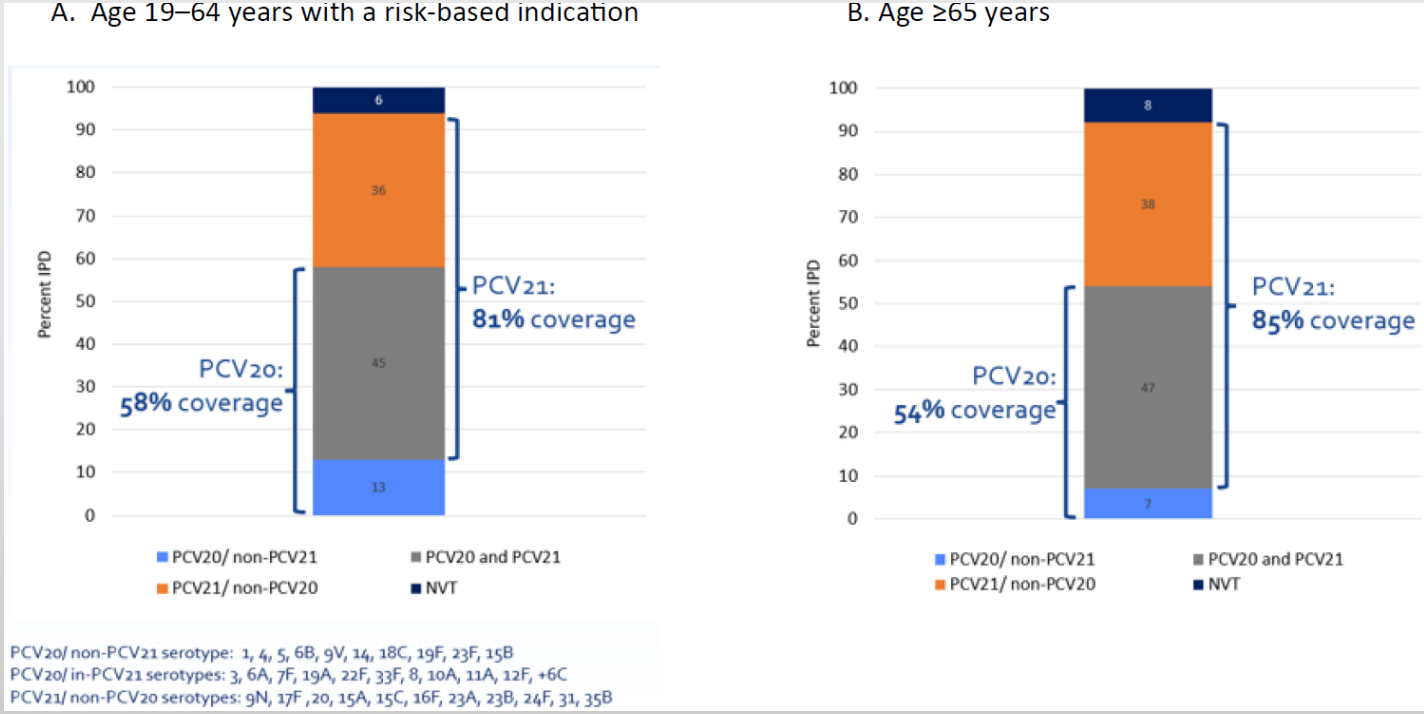
* Also applies to people who received PCV7 at any age and no other pneumococcal vaccines
¶ If PPSV23 is not available, PCV20 or PCV21 may be used
† The minimum interval for PPSV23 is ≥8 weeks since last PCV13 dose and ≥5 years since last PPSV23 dose
§ Includes B- (humoral) or T-lymphocyte deficiency, complement deficiencies (particularly C1, C2, C3, and C4 deficiencies), and phagocytic disorders (excluding chronic granulomatous disease)
¶ Includes diseases requiring treatment with immunosuppressive drugs, including long-term systemic corticosteroids and radiation therapy

Chronic health conditions	▪ Alcoholism ▪ Chronic heart disease, including congestive heart failure and cardiomyopathies ▪ Chronic liver disease	▪ Chronic lung disease, including chronic obstructive pulmonary disease, emphysema, and asthma ▪ Cigarette smoking ▪ Diabetes mellitus

https://www.cdc.gov/pneumococcal/downloads/Vaccine-Timing-Adults-JobAid.pdf Accessed 2/14/2025

Adult Epidemiology

- Pre-COVID-19 annual disease burden
  - Approx. 100,000 hospitalizations for non-invasive pneumococcal infection
  - Approx. 30,000 IPD cases
- 2018-2022
  - 80% of IPD in adults recommended to be vaccinated were PCV21 serotypes
  - 20-30% were serotypes unique to PCV21



Kobayashi, et al. MMWR 2022; Kobayashi, et al. MMWR 2024

Morbidity and Mortality Weekly Report

Use of 21-Valent Pneumococcal Conjugate Vaccine Among U.S. Adults: Recommendations of the Advisory Committee on Immunization Practices — United States, 2024

FIGURE. Serotypes*,† included in pneumococcal vaccines currently recommended for adults — United States, 2024

■ Included in vaccine □ Not included in vaccine

Vaccine	Serotype																												
	1	3	4	5	6A	6B	7F	9V	14	18C	19A	19F	23F	22F	33F	8	10A	11A	12F	15B	2	9N	17F	20	15A	15C	16F	23A	23B	24F	31	35B
PCV21		■			■		■				■			■	■	■	■	■	■			■	■	■	■	■	■	■	■	■	■	■
PPSV23	■	■	■	■		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■								
PCV20	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■												
PCV15	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■																	

Abbreviations: PCV = pneumococcal conjugate vaccine; PCV15 = 15-valent PCV; PCV20 = 20-valent PCV; PCV21 = 21-valent PCV; PPSV23 = 23-valent pneumococcal polysaccharide vaccine.

* PCV21 is approved for the prevention of invasive pneumococcal disease caused by serotype 15B based upon prespecified criteria for the proportion of participants with fourfold or more rise in OPA responses. https://www.fda.gov/media/179426/download?attachment

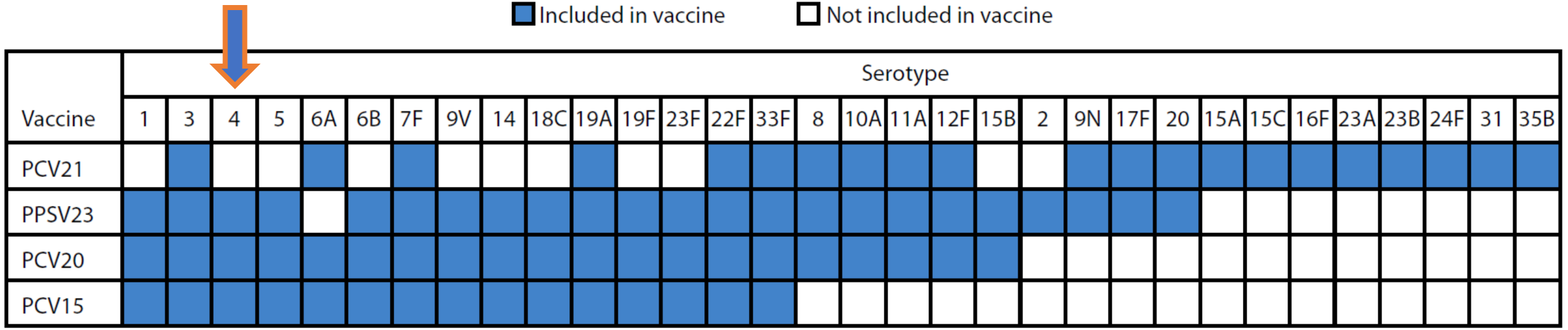
† PCV21 contains serotype 20A.

Kobayashi, et al. MMWR 2024

Morbidity and Mortality Weekly Report

Use of 21-Valent Pneumococcal Conjugate Vaccine Among U.S. Adults: Recommendations of the Advisory Committee on Immunization Practices — United States, 2024

FIGURE. Serotypes*,† included in pneumococcal vaccines currently recommended for adults — United States, 2024



Abbreviations: PCV = pneumococcal conjugate vaccine; PCV15 = 15-valent PCV; PCV20 = 20-valent PCV; PCV21 = 21-valent PCV; PPSV23 = 23-valent pneumococcal polysaccharide vaccine.

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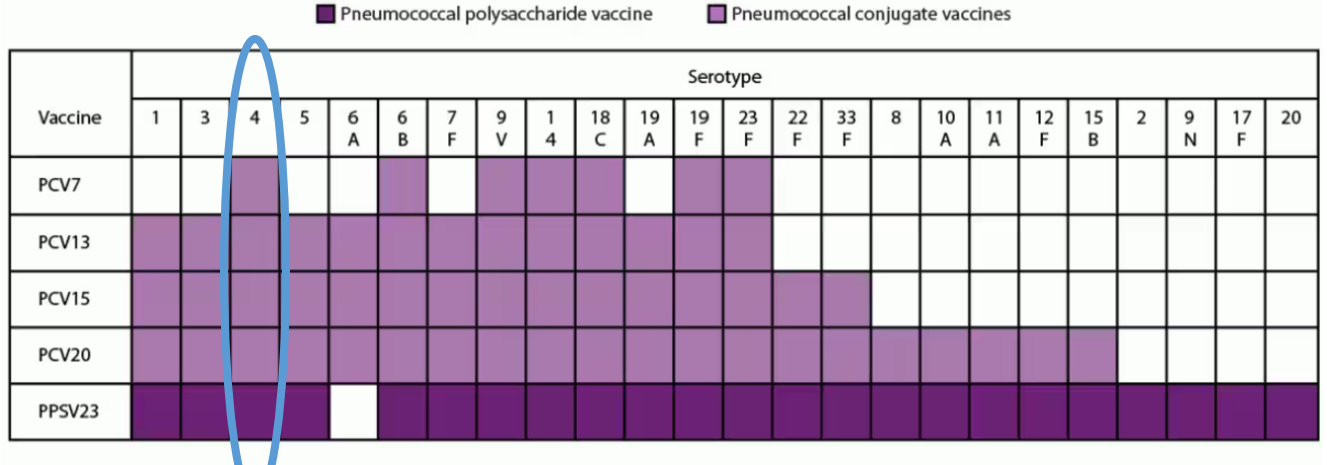
† PCV21 contains serotype 20A.

Kobayashi, et al. MMWR 2024

Serotype 4

- Significantly decreased prevalence after pediatric vaccination
- Recent increases
  - Adults <65 with risk factors
  - Alcohol use
  - Homelessness
  - Western US
  - Native American
- Not included in PCV21

FIGURE. Serotypes contained in pneumococcal vaccines previously and currently used in the United States*



Abbreviations: PCV7 = 7-valent pneumococcal conjugate vaccine; PCV13 = 13-valent pneumococcal conjugate vaccine; PCV15 = 15-valent pneumoc vaccine; PCV20 = 20-valent pneumococcal conjugate vaccine; PPSV23 = 23-valent pneumococcal polysaccharide vaccine.

* PCV7 is no longer manufactured.

Kobayashi, et al. MMWR 2024

Kobayashi, et al. MMWR 2023

State of Alaska Epidemiology

Bulletin

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Robert Lawrence, MD, Chief Medical Officer

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Editors:
Joe McLaughlin, MD, MPH
Louisa Castrodale, DVM, MPH

Bulletin No. 11
September 17, 2024

Updated Adult Pneumococcal Conjugate Vaccine Recommendations

Table. Reported and Typed IPD Cases, by Age Group and Proportion Covered by PCV20 and PCV21 — Alaska 2019–2023

Age group (years)	19–49		50–64		≥65		All adults >18	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)
PCV20-covered strain	338	(88)	287	(81)	141	(72)	766	(82)
PCV21-covered strain	185	(48)	179	(50)	127	(64)	491	(52)
Covered by neither	7	(2)	15	(4)	7	(4)	30	(3)
Total number of cases*	383		356		197		936	

**Some cases involved strains covered by both PCV20 and PCV21.*

https://www.cdc.gov/pneumococcal/hcp/vaccine-recommendations/risk-indications.html
Accessed 2/15/2025

NJ?

- No available data
- Serotypes not tracked

Serotype 4 considerations

PCV21 contains eight new pneumococcal serotypes not included in PCV15, PCV20, or PPSV23. However, PCV21 doesn't contain certain pneumococcal serotypes (e.g., serotype 4) included in other pneumococcal vaccines.

Populations at risk

In certain adult populations in the Western United States with data (Alaska, Colorado, New Mexico, Navajo Nation, and Oregon), serotype 4 has caused high percentages (i.e., ≥30%) of invasive pneumococcal disease (IPD). CDC currently doesn't know if this is seen in other parts of the Western United States that don't routinely monitor IPD data.

Typically, individuals living within these geographic areas who develop serotype 4 IPD are adults aged <65 years with specific underlying conditions or risk factors such as:

- Alcoholism
- Chronic lung disease
- Cigarette smoking
- Homelessness
- Injection drug use

Importantly, these individuals usually haven't received a PCV containing serotype 4.

Serotype 4 coverage and vaccine choice

In such populations, other recommended pneumococcal vaccines (e.g., PCV20 alone or both PCV15 and PPSV23) are expected to provide broader serotype coverage against locally circulating strains compared to PCV21 alone.

Pneumococcal Vaccine Timing for Adults

Make sure your patients are up to date with pneumococcal vaccination.

https://www.cdc.gov/pneumococcal/downloads/Vaccine-Timing-Adults-JobAid.pdf Accessed 2/14/2025

Adults ≥50 years old
Complete pneumococcal vaccine schedules

Prior vaccines	Option A	Option B
None*	PCV20 or PCV21	PCV15 → ≥1 year† → PPSV23¶
PPSV23 only at any age	≥1 year → PCV20 or PCV21	≥1 year → PCV15
PCV13 only at any age	≥1 year → PCV20 or PCV21	NO OPTION B
PCV13 at any age & **PPSV23** at <65 yrs	≥5 years → PCV20 or PCV21	

* Also applies to people who received PCV7 at any age and no other pneumococcal vaccines
¶ If PPSV23 is not available, PCV20 or PCV21 may be used
† Consider minimum interval (8 weeks) for adults with an immunocompromising condition, cochlear implant, or cerebrospinal fluid leak (CSF) leak
§ For adults with an immunocompromising condition, cochlear implant, or CSF leak, the minimum interval for PPSV23 is ≥8 weeks since last PCV13 dose and ≥5 years since last PPSV23 dose; for others, the minimum interval for PPSV23 is ≥1 year since last PCV13 dose and ≥5 years since last PPSV23 dose

Shared clinical decision-making for those who already completed the series with PCV13 and PPSV23

Prior vaccines	Shared clinical decision-making option for adults ≥65 years old
Complete series: PCV13 at any age & **PPSV23** at ≥65 yrs	≥5 years → PCV20 or PCV21 — Together, with the patient, vaccine providers **may choose** to administer PCV20 or PCV21 to adults ≥65 years old who have already received PCV13 (but not PCV15, PCV20, or PCV21) at any age and PPSV23 at or after the age of 65 years old.

Adults 19–49 years old with chronic health conditions
Complete pneumococcal vaccine schedules

Prior vaccines	Option A	Option B
None*	**PCV20 or PCV21**	**PCV15** → ≥1 year → **PPSV23¶**
PPSV23 only	≥1 year → **PCV20 or PCV21**	≥1 year → **PCV15**
PCV13† only	≥1 year → **PCV20 or PCV21**	NO OPTION B
PCV13† and PPSV23	**No vaccines** are recommended at this time. Review pneumococcal vaccine recommendations again when your patient turns 50 years old.	
Chronic health conditions	▪ Alcoholism ▪ Chronic heart disease, including congestive heart failure and cardiomyopathies ▪ Chronic liver disease	▪ Chronic lung disease, including chronic obstructive pulmonary disease, emphysema, and asthma ▪ Cigarette smoking ▪ Diabetes mellitus

* Also applies to people who received PCV7 at any age and no other pneumococcal vaccines
¶ If PPSV23 is not available, PCV20 or PCV21 may be used
† Adults with chronic medical conditions were previously not recommended to receive PCV13

https://www.cdc.gov/pneumococcal/downloads/Vaccine-Timing-Adults-JobAid.pdf Accessed 2/14/2025

Boosters??

- Stay tuned

Future Research and Monitoring Priorities

CDC and ACIP will continue to assess safety and public health impact of pneumococcal vaccines among adults. This includes monitoring the duration of vaccine-conferred immunity from PCV to determine the need for a booster to ensure that older adults continue to be protected under the updated vaccine recommendation and to measure any indirect effects on incidence in adults from routine childhood vaccination.

Kobayashi, et al. MMWR 2024

Measles

Who Is Immune

Evidence of Immunity	Healthcare Workers	General Public
Written documentation of one or more age appropriate MMR vaccinations or for low risk individuals		✓
Written documentation of two doses of MMR vaccination for high risk individuals, administered 28 days apart.	✓	✓
Laboratory evidence of disease	✓	✓
Laboratory evidence of immunity	✓	✓
Birth before 1957		✓

- Considered Protected
  - 2 doses of vaccine
    - **Low risk adults can be OK with 1 dose (not travelers, HCW, school exposed)**
  - Seropositive
  - Lab confirmed infection
  - Born before 1957 (not for HCW)
- Vaccinated with killed measles vaccine
  - 1963-1967
  - Significantly less effective vaccine
  - Consider vaccination vs. testing

https://www.cdc.gov/measles/about/questions.html Accessed 4/15/2025

https://www.azdhs.gov/documents/preparedness/epidemiology-disease-control/measles/measles-surveillance-toolkit.pdf Accessed 4/20/2025

Should we be vaccinating infants?

https://www.cdc.gov/measles/plan-for-travel.html

Which travelers are at risk?

You are at risk of measles infection if you have not been fully vaccinated or have not had measles in the past and you travel internationally to areas where measles is spreading.

Planning a trip outside the U.S.?
Find out if you need measles vaccine

Before international travel: Make sure you're protected against measles

The best way to protect yourself and your loved ones from measles is by getting vaccinated. You should plan to be fully vaccinated at least 2 weeks before you depart. If your trip is less than 2 weeks away and you're not protected against measles, you should still get a dose of the measles-mumps-rubella (MMR) vaccine. The MMR vaccine protects against all 3 diseases.

- Two doses of MMR vaccine provide 97% protection against measles.
- One dose provides 93% protection.

Call your doctor, your local health department, or locate a pharmacy or clinic near you to schedule an appointment for a MMR vaccine. CDC does not recommend measles vaccine for infants younger than 6 months of age.

Infants under 12 months old who are traveling

- Get **an early dose at 6 through 11 months**
- Follow the recommended schedule and get another dose at 12 through 15 months and a final dose at 4 through 6 years

Children over 12 months old

- Get **first dose immediately**
- Get second **dose 28 days after first dose**

Teens and adults with no evidence of immunity*

- Get **first dose immediately**
- Get second **dose 28 days after first dose**

Groups at increased risk for measles because of a measles outbreak

During measles outbreaks, health departments may provide additional recommendations to protect their communities. The at-risk population is defined by local and state health departments and depends on the epidemiology of the outbreak (e.g., only specific age groups are affected). In addition to the routine recommendations for MMR vaccine, health departments may recommend a second dose for adults or an earlier second dose for children 1 to 4 years of age who are residing in or visiting the affected areas, with the second dose given at least 28 days after the first dose.

If there is ongoing community-wide transmission affecting young infants, health departments may recommend an early dose for infants 6 to 11 months of age. The decision to vaccinate should be made carefully after weighing the risks of the potential long-term impact of lower immune responses when infants are vaccinated less than 12 months of age (versus greater than or equal to 12 months of age) compared to the benefit of early protection when measles is circulating in the community. Infants who get one dose of MMR vaccine before their first birthday should get two more doses according to the routinely recommended schedule (first dose should be given at 12 through 15 months of age and the second dose at 4 through 6 years of age. The second dose can be administered earlier as long as at least 28 days have elapsed since the first dose).

During an outbreak of measles in a healthcare facility, or in healthcare facilities serving a measles outbreak area, two doses of MMR vaccine are *recommended* for healthcare personnel, regardless of birth year, who lack other presumptive evidence of measles immunity

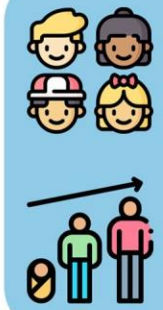
There are no recommendations to receive a third dose of MMR vaccine during measles outbreaks.

https://www.cdc.gov/vaccines/vpd/mmr/hcp/recommendations.html Accessed 4/15/2025

Long-term dynamics of measles virus-specific neutralizing antibodies in children vaccinated before 12 months of age

van der Staak et al., 2024 | *Clinical Infectious Diseases*

IDSA
Infectious Diseases Society of America



Prospective cohort study

14 months - 7 years

Inclusion

Children that received an additional MMR vaccination (MMR-0) before routine vaccination (MMR-1) at 14 months (n=79) versus children that only received MMR-1 (n=44).

MMR: Measles, Mumps, Rubella

Methods

Measles-specific neutralizing antibody levels were evaluated right before MMR-1 and 6 weeks, 1 year, 3 years and 6 years thereafter.

Conclusion

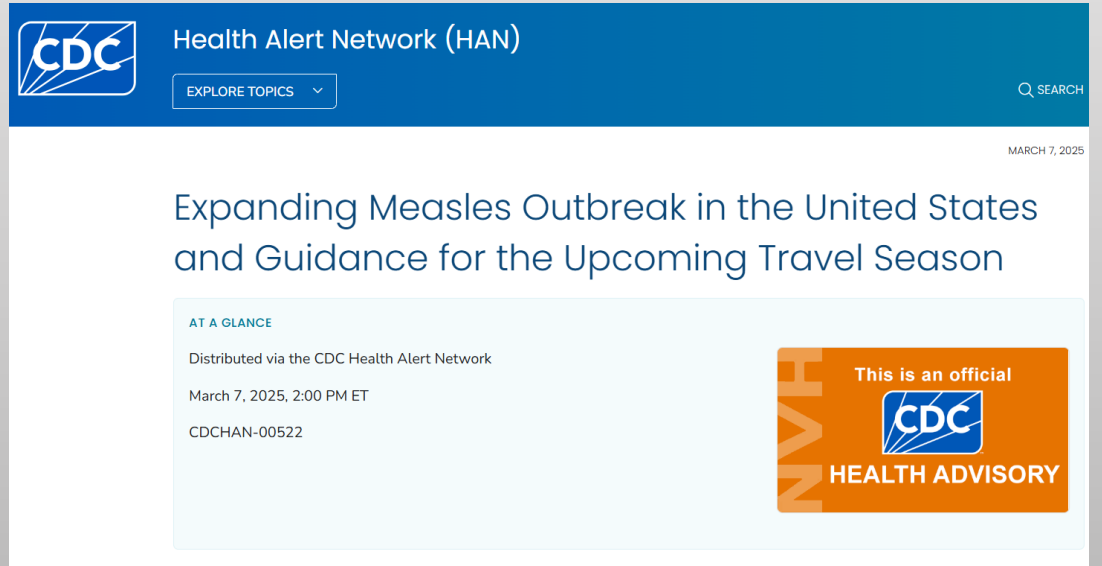
There is a significant association between age of first MMR administration and loss of measles virus-specific neutralizing antibodies later in life.

	MMR-0 6-8.5 months	MMR-0 8.5-12 months	No MMR-0
Seroconversion after first MMR	80%	100%	98%
Long-term protection	30%	91%	88%

Clinical Infectious Diseases https://doi.org/10.1093/cid/ciae537

Not currently recommended in NJ

- Texas DSHS recommends
  - MMR #0 @ 6-11 months
  - MMR #1 @12-15 months
  - MMR #2 28 days later for children >12 mo

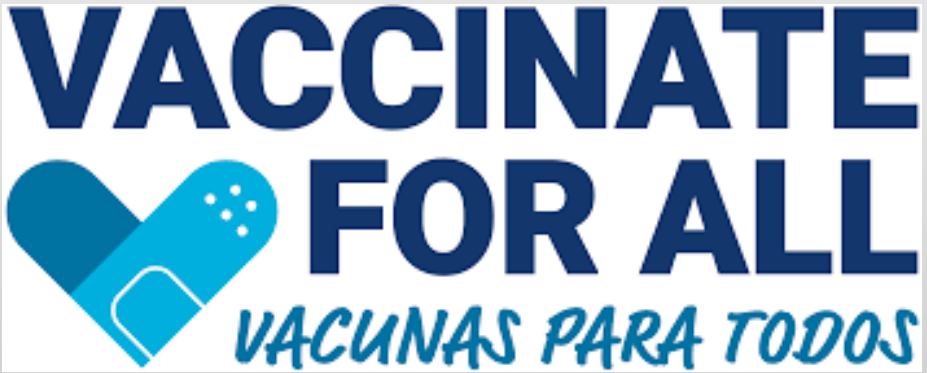


https://www.dshs.texas.gov/news-alerts/measles-outbreak-case-definition Accessed 4/15/2025


HPV VACCINE
IS CANCER PREVENTION
Champion
www.cdc.gov/hpv/champions


NJIN


VACCINE
CHAMPION


VACCINATE
FOR ALL
VACUNAS PARA TODOS