

# Understanding Vaccination Needs for Adults and Seniors

Andrew JP Carroll MD  
FAAFP

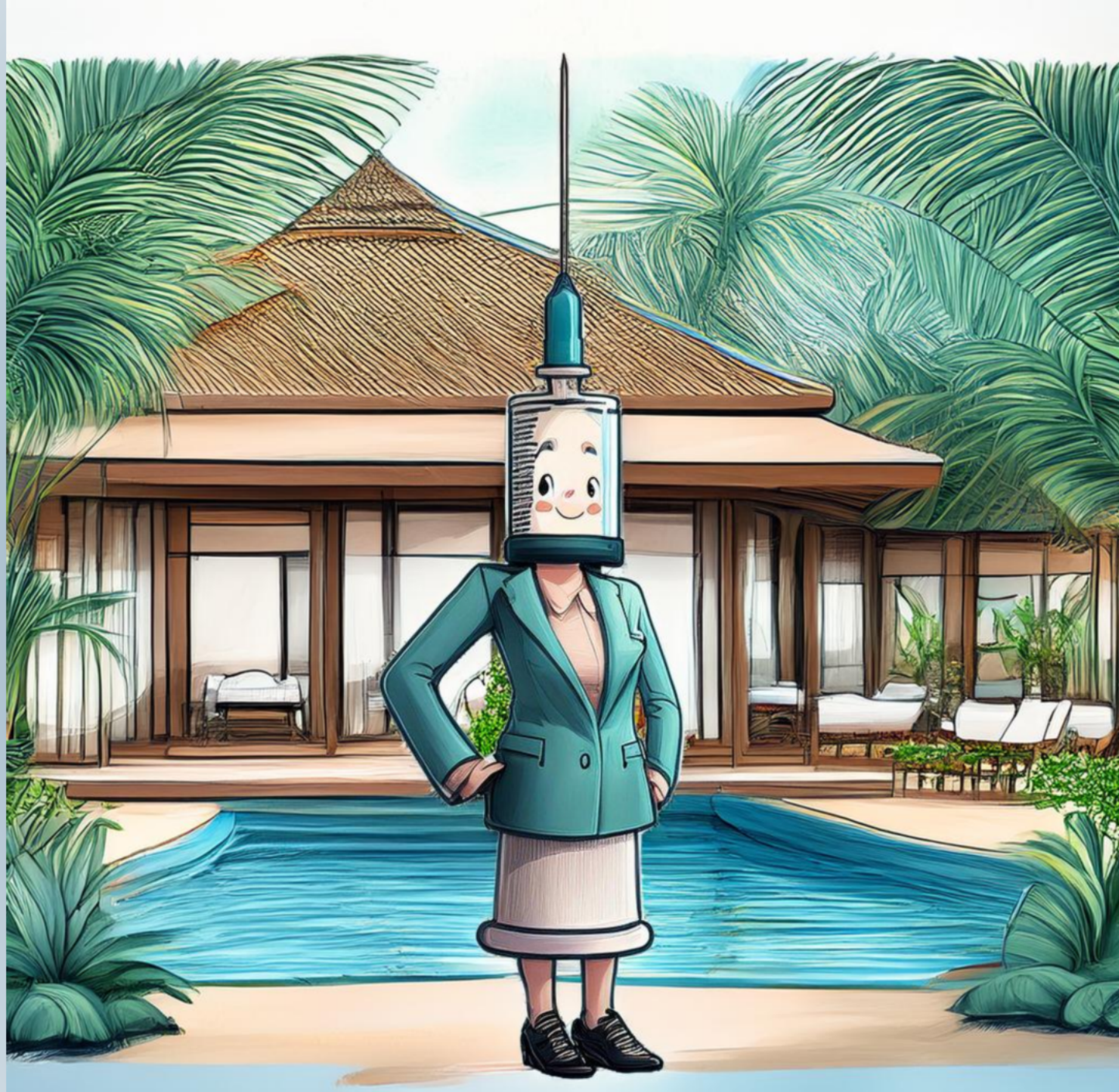
Senior Medical Director - Intracare



## Financial Disclosures

- Andrew Carroll, faculty for this CE activity, has no relevant financial relationship(s) with ineligible companies to disclose.
- None of the planners for this activity have relevant financial relationships to disclose with ineligible companies.
- The Arizona Alliance for Community Health Centers is accredited by the Arizona Medical Association to provide medical education for physicians.
- The Arizona Alliance for Community Health Centers designated the 2025 Arizona Immunization Conference educational activity for a maximum of 11 hours AMA PRA Category 1 Credits Physicians should only claim credit commensurate with the extent of their participation in the activity.
- The Arizona Pharmacy Association is accredited by the Accreditation Council for Pharmacy Education (ACPE) as a provider of continuing pharmacy education.









Slowly he would cruise the neighborhood, waiting for that occasional careless child who confused him with another vendor.



# Overview of Adult Vaccinations

## Seasonal Vaccines

Flu vaccines  
Covid  
RSV



## ADULT VACCINATIONS

- Tdap
- HPV
- Hepatitis A
- Hepatitis B
- Shingles
- Meningitis



## Senior Vaccines

- Pneumonia (Recommendations now start at 50 yo)
- RSV
- Shingles
- Tdap



# ADULT VACCINATIONS

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- Pneumonia (Recommendations now start at 50 yo)
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# Seasonal Vaccines

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Flu vaccines  
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# Adult Vaccinations

Understanding  
Vaccination Needs for  
Adults and Seniors

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## Others and Conclusions



### Travel and Personal Risks

- Travel to high-risk areas
- Exposure to high-risk populations
- Exposure to high-risk environments
- Exposure to high-risk events
- Exposure to high-risk activities
- Exposure to high-risk locations
- Exposure to high-risk times
- Exposure to high-risk people
- Exposure to high-risk places
- Exposure to high-risk things

## Touchpoints for Discussion

### When to Bring up Vaccines

- Wellness exams
- Sick visits
- Pre-travel consultations
- Pre-operative consultations
- Pre-procedure consultations
- Pre-discharge consultations
- Pre-admission consultations
- Pre-hospital consultations
- Pre-arrival consultations
- Pre-departure consultations
- Pre-arrival consultations
- Pre-departure consultations
- Pre-arrival consultations
- Pre-departure consultations



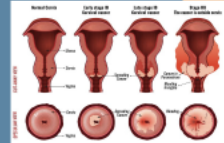
### How to Have the Discussion

- Ask about the patient's travel plans
- Ask about the patient's exposure to high-risk populations
- Ask about the patient's exposure to high-risk environments
- Ask about the patient's exposure to high-risk events
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## HPV - The Only Vaccine Against Cancer

- Emphasis about attempting to vaccinate prior to first sexual activity, but is okay to receive at any time
- Discussion about safety, efficacy, long-term studies
- Reduction of cervical screening intervals
- Study in Lancet showed 80% reduction in cervical neoplasia in immunized cohort



## Overview of Adult Vaccinations



Pneumococcal Vaccine Timing for Adults			
Adults 65 years and older			
Vaccine	Timing	Notes	Source
PPSV23	Once	For all adults 65 years and older	CDC
PCV13	Once	For adults 65 years and older with certain medical conditions	CDC
PPSV23	Once	For adults 65 years and older with certain medical conditions	CDC

## Pneumonia Vaccines

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[https://www.cdc.gov/pneumococcal/downloads/Vaccine-Timing-Adults-101414.pdf?rm\\_medium=email&rm\\_source=godaddy](https://www.cdc.gov/pneumococcal/downloads/Vaccine-Timing-Adults-101414.pdf?rm_medium=email&rm_source=godaddy)

INFLUENZA VACCINE PRODUCT GUIDE 2024-2025	
Vaccine	Timing
Fluad	Once
Flucelvax	Once
Fluzone	Once
Fluzone Quadrivalent	Once
Fluzone High-Dose	Once
Fluzone High-Dose Quadrivalent	Once
Fluzone Intranasal	Once
Fluzone Intranasal Quadrivalent	Once

## Flu and Covid

COVID-19 Vaccine Timing 2024-25	
Vaccine	Timing
Moderna	Once
Pfizer	Once
Novavax	Once
Johnson & Johnson	Once
Astrazeneca	Once
Sanofi	Once
Novartis	Once
Novartis	Once

## Seasonal Vaccinations



# Pneumococcal Vaccine Timing for Adults

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

## 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 <b>may choose</b> 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.

[www.cdc.gov/pneumococcal/index.html](https://www.cdc.gov/pneumococcal/index.html)



# Pneumonia Vaccines

## Adults 19–49 years old with specified immunocompromising conditions

### Complete pneumococcal vaccine schedules

Prior vaccines	Option A	Option B
None*	PCV20 or PCV21	PCV15 → ≥8 weeks → PPSV23‡
PPSV23 only	→ ≥1 year → PCV20 or PCV21	→ ≥1 year → PCV15
PCV13 only	→ ≥1 year → PCV20 or PCV21	NO OPTION B
PCV13 and 1 dose of PPSV23	→ ≥5 years → PCV20 or PCV21	
PCV13 and 2 doses of PPSV23	→ ≥5 years → PCV20 or PCV21	<b>No vaccines</b> recommended at this time. Review pneumococcal vaccine recommendations again when your patient turns 50 years old.
Immunocompromising conditions	<ul style="list-style-type: none"><li>Chronic renal failure</li><li>Congenital or acquired asplenia</li><li>Congenital or acquired immunodeficiency§</li><li>Generalized malignancy</li><li>HIV infection</li><li>Hodgkin disease</li><li>Iatrogenic immunosuppression¶</li><li>Leukemia</li><li>Lymphoma</li><li>Multiple myeloma</li><li>Nephrotic syndrome</li><li>Sickle cell disease/other hemoglobinopathies</li><li>Solid organ transplant</li></ul>	

\* 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

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§ 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

[https://www.cdc.gov/pneumococcal/downloads/Vaccine-Timing-Adults-JobAid.pdf?utm\\_medium=email&utm\\_source=govdelivery](https://www.cdc.gov/pneumococcal/downloads/Vaccine-Timing-Adults-JobAid.pdf?utm_medium=email&utm_source=govdelivery)



# Pneumococcal Vaccine Timing for Adults

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

## Adults ≥50 years old

### Complete pneumococcal vaccine schedules

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

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<sup>‡</sup> If PPSV23 is not available, PCV20 or PCV21 may be used

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Prior vaccines	Shared clinical decision-making option for adults ≥65 years old	
Complete series: PCV13 at any age & PPSV23 at ≥65 yrs	→ <sup>‡</sup> ≥5 years <sup>‡</sup> → PCV20 or PCV21	Together, with the patient, vaccine providers <b>may choose</b> 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 specified immunocompromising conditions

### Complete pneumococcal vaccine schedules

Prior vaccines	Option A	Option B
None*	PCV20 or PCV21	PCV15 $\xrightarrow{\geq 8 \text{ weeks}}$ PPSV23 <sup>†</sup>
PPSV23 only	$\xrightarrow{\geq 1 \text{ year}}$ PCV20 or PCV21	$\xrightarrow{\geq 1 \text{ year}}$ PCV15
PCV13 only	$\xrightarrow{\geq 1 \text{ year}}$ PCV20 or PCV21	NO OPTION B
PCV13 and 1 dose of PPSV23	$\xrightarrow{\geq 5 \text{ years}}$ PCV20 or PCV21	
PCV13 and 2 doses of PPSV23	$\xrightarrow{\geq 5 \text{ years}}$ PCV20 or PCV21	<b>No vaccines</b> recommended at this time. Review pneumococcal vaccine recommendations again when your patient turns 50 years old.
Immunocompromising conditions	<div> <ul style="list-style-type: none"> <li>Chronic renal failure</li> <li>Congenital or acquired asplenia</li> <li>Congenital or acquired immunodeficiency<sup>§</sup></li> <li>Generalized malignancy</li> </ul> </div> <div> <ul style="list-style-type: none"> <li>HIV infection</li> <li>Hodgkin disease</li> <li>Iatrogenic immunosuppression<sup>¶</sup></li> <li>Leukemia</li> <li>Lymphoma</li> </ul> </div> <div> <ul style="list-style-type: none"> <li>Multiple myeloma</li> <li>Nephrotic syndrome</li> <li>Sickle cell disease/other hemoglobinopathies</li> <li>Solid organ transplant</li> </ul> </div>	

\* Also applies to people who received PCV7 at any age and no other pneumococcal vaccines

<sup>†</sup> If PPSV23 is not available, PCV20 or PCV21 may be used

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<sup>§</sup> Includes B- (humoral) or T-lymphocyte deficiency, complement deficiencies (particularly C1, C2, C3, and C4 deficiencies), and phagocytic disorders (excluding chronic granulomatous disease)

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## Others and Conclusions



### Travel and Personal Risks

- Travel to high-risk areas
- Exposure to high-risk environments
- Exposure to high-risk people
- Exposure to high-risk animals
- Exposure to high-risk plants
- Exposure to high-risk insects
- Exposure to high-risk food
- Exposure to high-risk water
- Exposure to high-risk air
- Exposure to high-risk soil
- Exposure to high-risk dust
- Exposure to high-risk noise
- Exposure to high-risk light
- Exposure to high-risk heat
- Exposure to high-risk cold
- Exposure to high-risk humidity
- Exposure to high-risk dryness
- Exposure to high-risk wind
- Exposure to high-risk rain
- Exposure to high-risk snow
- Exposure to high-risk ice
- Exposure to high-risk fog
- Exposure to high-risk clouds
- Exposure to high-risk sun
- Exposure to high-risk moon
- Exposure to high-risk stars
- Exposure to high-risk planets
- Exposure to high-risk galaxies
- Exposure to high-risk universe

## Overview of Adult Vaccinations



### Seasonal Vaccines

Flu and Covid

## Touchpoints for Discussion

### When to Bring up Vaccines

- Wellness exams
- Sick visits
- Pre-travel consultations
- Pre-operative consultations
- Hospital admissions
- Chronic disease management
- Geriatric assessments



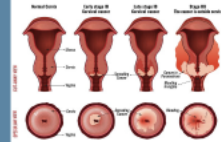
### How to Have the Discussion

- Ask about a patient's vaccination status
- Ask about a patient's travel plans
- Ask about a patient's upcoming surgery
- Ask about a patient's upcoming hospital admission
- Ask about a patient's upcoming chronic disease management
- Ask about a patient's upcoming geriatric assessment



## HPV - The Only Vaccine Against Cancer

- Emphasis about attempting to vaccinate prior to first sexual activity, but is okay to receive at any time
- Discussion about safety, efficacy, long-term studies
- Reduction of cervical screening intervals
- Study in Lancet showed 80% reduction in cervical neoplasia in immunized cohort



Pneumococcal Vaccine Timing for Adults

Adults should get pneumococcal polysaccharide vaccine (PPSV23) at least once in their lifetime.

Age Group	Timing
19-64 years	Once
65 years and older	Once
Adults with certain medical conditions	Once
Adults with certain medical conditions	Once

## Pneumonia Vaccines

Adults 19 years and older should get pneumococcal polysaccharide vaccine (PPSV23) at least once in their lifetime.

Age Group	Timing
19-64 years	Once
65 years and older	Once
Adults with certain medical conditions	Once
Adults with certain medical conditions	Once

<https://www.cdc.gov/pneumococcal/downloads/Vaccine-Timing-Adults-19-64.pdf>

INFLUENZA VACCINE PRODUCT GUIDE 2024-2025

Product	Age Group	Timing
Flucelvax	6 months and older	Once
Flucelvax	6 months and older	Once
Flucelvax	6 months and older	Once
Flucelvax	6 months and older	Once

## Flu and Covid

COVID-19 Vaccine Timing 2024-25

Age Group	Timing
18 years and older	Once
18 years and older	Once
18 years and older	Once
18 years and older	Once



twindemic



## INFLUENZA VACCINE PRODUCT GUIDE 2024-2025

6 MONTHS & OLDER	 <b>Fluarix® Trivalent</b> GlaxoSmithKline Biologicals 0.5 mL single-dose syringe	 <b>FluLaval® Trivalent</b> GlaxoSmithKline Biologicals 0.5 mL single-dose syringe
	 <b>Flucelvax® Trivalent</b> Seqirus 0.5 mL single-dose syringe	 <b>Fluzone® Trivalent</b> Sanofi Pasteur, Inc. 0.5 mL single-dose
	 <b>Afluria® Trivalent</b> Seqirus 5.0 mL multi-dose vial*	 <b>Flucelvax® Trivalent</b> Seqirus 5.0 mL multi-dose vial*
3 YEARS & OLDER	 <b>Afluria® Trivalent</b> Seqirus 0.5 mL single-dose syringe	 <b>Fluzone® Trivalent</b> Sanofi Pasteur, Inc. 5.0 mL multi-dose vial*
2-49 YEARS OLD & HEALTHY	 <b>FluMist® Trivalent</b> Astrazeneca 0.2 mL single-dose nasal sprayer	
18 YEARS & OLDER	 <b>FluBlok® Trivalent</b> Sanofi Pasteur, Inc. 0.5 mL single-dose syringe	 <b>FLUAD® Adjuvanted Trivalent</b> Seqirus 0.5 mL single-dose syringe
		 <b>Fluzone® High-Dose Trivalent</b> Sanofi Pasteur, Inc. 0.5 mL single-dose syringe

**STORE ALL INFLUENZA VACCINES IN THE REFRIGERATOR.**

**VFC Questions:**  
Call 877-2Get-VFC  
(877-243-8832)

State General Fund (SGF) Flu  
Program participants can contact:  
sgfvaccine@cdph.ca.gov

Children under 9 years of age with a history of fewer than 2 doses of influenza vaccine are recommended to receive 2 doses this flu season. See [CDC Website](#)

Vaccines available through the Vaccines for Children Program in 2024-25 should only be used for VFC-eligible children 18 years of age or younger.

\* Multi-dose flu vaccines, which contain thimerosal, should NOT be given to pregnant women and children under 3 years of age unless Secretary of the Health and Human Services Agency issues an exemption (CA Health & Safety Code 124172).

65+ Preferred vaccine product for persons 65 or older. If not available, any other age-appropriate inactivated product may be given.



## Flu and Covid

## COVID-19 Vaccine Timing 2024-25 –Routine Schedule

For online version and details view [Interim Clinical Considerations for Use of COVID-19 Vaccines](#).  
Schedule is subject to change.

Age*	Vaccine	If unvaccinated:	If had any prior doses, give 2024-25 doses:
6 months–4 years†	Pfizer–Infant/Toddler	1st Dose → 3-8 weeks → 2nd Dose → ≥8 weeks → 3rd Dose	If 1 prior dose, then: 3-8** weeks 1 ≥8 weeks 2 If ≥2 prior doses, then: ≥8 weeks 1
	Moderna–Pediatric‡	1st Dose → 4-8 weeks → 2nd Dose	If 1 prior dose, then: 4-8 weeks 1 If ≥2 prior doses then: ≥8 weeks 1
5–11 years	Moderna–Pediatric‡	1 Dose	If 1 or more prior doses (of any of the brands), then‡: ≥2 months 1 2024-25 Moderna/Pfizer/Novavax
	Pfizer–Pediatric	1 Dose	
12+ years	Pfizer–Adol/Adult (Comirnaty)	1 Dose	If 1 or more prior doses (of any of the brands), then‡: Ages 12-64 years: ≥2 months 1 2024-25 Moderna/Pfizer/Novavax Ages 65+ years: ≥2 months 1 6 months§ 2
	Moderna–Adol/Adult (Spikevax)	1 Dose	
	Novavax	1st Dose → 3-8 weeks → 2nd Dose§	

\* See [CDC recommendations](#) for children transitioning from a younger to older age group

† Children 6 months – 4 years should receive the same brand of the updated vaccine as the prior doses they received.

\*\* An 8-week interval may be preferable for some people, especially for males 12-39 years.

‡ All Moderna doses 6 months – 11 years are 0.25 mL (25 mcg).

^ Janssen (J & J) vaccine has been deauthorized. Follow schedule for 12+ years for any prior doses.

§ Minimum interval 2 months.

¶ If >8 weeks passed since the first Novavax dose, any 2024–25 COVID-19 vaccine (Moderna/Pfizer/Novavax) may be given.





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# Flu and Covid

## COVID-19

For online version a Schedule is subject

Age\*

6 months-4 years†

5-11 years

12+ years

\* See [CDC recomm](https://www.cdc.gov)

† Children 6 months

\*\* An 8-week interv

≠ All Moderna dose

^ Janssen (J & J) va

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### Travel and Personal Risks

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- Exposure to high-risk people
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- Exposure to high-risk things

## Touchpoints for Discussion

### When to Bring up Vaccines

- Wellness exams
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- Pre-operative consultations
- Pre-discharge consultations
- Pre-admission consultations
- Pre-discharge consultations
- Pre-admission consultations



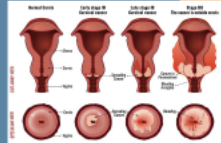
### How to Have the Discussion

- Ask about a patient's travel plans
- Ask about a patient's exposure to high-risk populations
- Ask about a patient's exposure to high-risk environments
- Ask about a patient's exposure to high-risk events
- Ask about a patient's exposure to high-risk activities
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- Exposure to high-risk activities
- Exposure to high-risk locations
- Exposure to high-risk times
- Exposure to high-risk people
- Exposure to high-risk places
- Exposure to high-risk things

Pneumococcal Vaccine Timing for Adults			
Adults (65 years and older)			
Age	PCV13	PPV23	PCV15
65-74	Yes	Yes	Yes
75+	Yes	Yes	Yes

## Pneumonia Vaccines

Adults (65 years and older)			
Age	PCV13	PPV23	PCV15
65-74	Yes	Yes	Yes
75+	Yes	Yes	Yes

[https://www.cdc.gov/pneumococcal/downloads/Vaccine-Timing-Adults-101414.pdf?rm\\_medium=email\\_source=advisory](https://www.cdc.gov/pneumococcal/downloads/Vaccine-Timing-Adults-101414.pdf?rm_medium=email_source=advisory)

INFLUENZA VACCINE PRODUCT GUIDE 2024-2025			
Age	Fluad	Flucelvax	Fluzone
65+	Yes	Yes	Yes
64	Yes	Yes	Yes
63	Yes	Yes	Yes
62	Yes	Yes	Yes
61	Yes	Yes	Yes
60	Yes	Yes	Yes
59	Yes	Yes	Yes
58	Yes	Yes	Yes
57	Yes	Yes	Yes
56	Yes	Yes	Yes
55	Yes	Yes	Yes
54	Yes	Yes	Yes
53	Yes	Yes	Yes
52	Yes	Yes	Yes
51	Yes	Yes	Yes
50	Yes	Yes	Yes
49	Yes	Yes	Yes
48	Yes	Yes	Yes
47	Yes	Yes	Yes
46	Yes	Yes	Yes
45	Yes	Yes	Yes
44	Yes	Yes	Yes
43	Yes	Yes	Yes
42	Yes	Yes	Yes
41	Yes	Yes	Yes
40	Yes	Yes	Yes
39	Yes	Yes	Yes
38	Yes	Yes	Yes
37	Yes	Yes	Yes
36	Yes	Yes	Yes
35	Yes	Yes	Yes
34	Yes	Yes	Yes
33	Yes	Yes	Yes
32	Yes	Yes	Yes
31	Yes	Yes	Yes
30	Yes	Yes	Yes
29	Yes	Yes	Yes
28	Yes	Yes	Yes
27	Yes	Yes	Yes
26	Yes	Yes	Yes
25	Yes	Yes	Yes
24	Yes	Yes	Yes
23	Yes	Yes	Yes
22	Yes	Yes	Yes
21	Yes	Yes	Yes
20	Yes	Yes	Yes
19	Yes	Yes	Yes
18	Yes	Yes	Yes
17	Yes	Yes	Yes
16	Yes	Yes	Yes
15	Yes	Yes	Yes
14	Yes	Yes	Yes
13	Yes	Yes	Yes
12	Yes	Yes	Yes
11	Yes	Yes	Yes
10	Yes	Yes	Yes
9	Yes	Yes	Yes
8	Yes	Yes	Yes
7	Yes	Yes	Yes
6	Yes	Yes	Yes
5	Yes	Yes	Yes
4	Yes	Yes	Yes
3	Yes	Yes	Yes
2	Yes	Yes	Yes
1	Yes	Yes	Yes

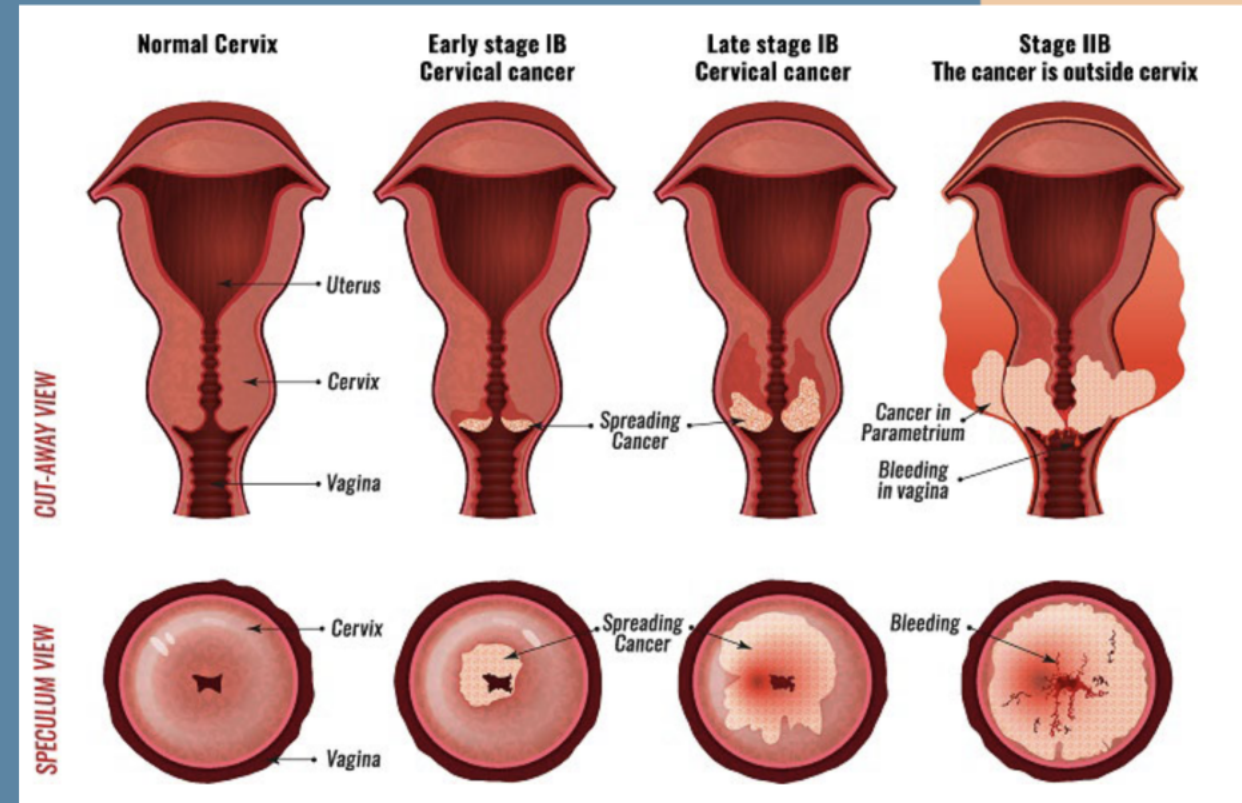
## Flu and Covid

COVID-19 Vaccine Timing 2024-25			
Age	Moderna	Pfizer	Novavax
65+	Yes	Yes	Yes
64	Yes	Yes	Yes
63	Yes	Yes	Yes
62	Yes	Yes	Yes
61	Yes	Yes	Yes
60	Yes	Yes	Yes
59	Yes	Yes	Yes
58	Yes	Yes	Yes
57	Yes	Yes	Yes
56	Yes	Yes	Yes
55	Yes	Yes	Yes
54	Yes	Yes	Yes
53	Yes	Yes	Yes
52	Yes	Yes	Yes
51	Yes	Yes	Yes
50	Yes	Yes	Yes
49	Yes	Yes	Yes
48	Yes	Yes	Yes
47	Yes	Yes	Yes
46	Yes	Yes	Yes
45	Yes	Yes	Yes
44	Yes	Yes	Yes
43	Yes	Yes	Yes
42	Yes	Yes	Yes
41	Yes	Yes	Yes
40	Yes	Yes	Yes
39	Yes	Yes	Yes
38	Yes	Yes	Yes
37	Yes	Yes	Yes
36	Yes	Yes	Yes
35	Yes	Yes	Yes
34	Yes	Yes	Yes
33	Yes	Yes	Yes
32	Yes	Yes	Yes
31	Yes	Yes	Yes
30	Yes	Yes	Yes
29	Yes	Yes	Yes
28	Yes	Yes	Yes
27	Yes	Yes	Yes
26	Yes	Yes	Yes
25	Yes	Yes	Yes
24	Yes	Yes	Yes
23	Yes	Yes	Yes
22	Yes	Yes	Yes
21	Yes	Yes	Yes
20	Yes	Yes	Yes
19	Yes	Yes	Yes
18	Yes	Yes	Yes
17	Yes	Yes	Yes
16	Yes	Yes	Yes
15	Yes	Yes	Yes
14	Yes	Yes	Yes
13	Yes	Yes	Yes
12	Yes	Yes	Yes
11	Yes	Yes	Yes
10	Yes	Yes	Yes
9	Yes	Yes	Yes
8	Yes	Yes	Yes
7	Yes	Yes	Yes
6	Yes	Yes	Yes
5	Yes	Yes	Yes
4	Yes	Yes	Yes
3	Yes	Yes	Yes
2	Yes	Yes	Yes
1	Yes	Yes	Yes



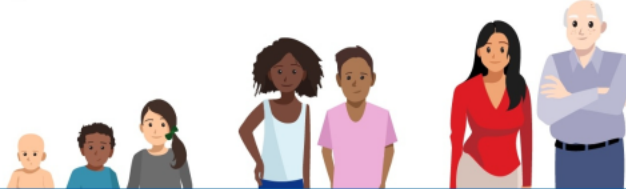
# HPV - The Only Vaccine Against Cancer

- Emphasis about attempting to vaccinate prior to first sexual activity, but is okay to receive at any time
- Discussion about safety, efficacy, long-term studies
- Reduction of cervical screening intervals
- Study in Lancet showed 80% reduction in cervical neoplasia in immunized cohort




# Interval Vaccines

People of all ages need **DIPHTHERIA VACCINES**



DTaP for young children	Tdap for preteens	Td or Tdap for adults
<ul style="list-style-type: none"> <li>✓ 2, 4, and 6 months</li> <li>✓ 15 through 18 months</li> <li>✓ 4 through 6 years</li> </ul>	<ul style="list-style-type: none"> <li>✓ 11 through 12 years</li> </ul>	<ul style="list-style-type: none"> <li>✓ Every 10 years</li> </ul>

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

CS090294



What You Can Expect After Getting **Shingrix**

**MORE THAN 90% PROTECTION AGAINST SHINGLES**

**Common Side Effects**

**Where you got the shot:**

- redness
- swelling
- pain



**The rest of your body:**

- muscle aches
- tiredness
- headache
- shivering
- fever
- stomach pain
- nausea




These side effects may affect your ability to do daily activities, but they should go away on their own in a few days.


**Remember**

- Get the second dose of Shingrix even if you have a reaction after the first dose.
- Taking an over-the-counter pain medicine such as ibuprofen or acetaminophen after getting Shingrix can help ease discomfort from side effects.
- Contact your doctor if you have serious side effects.

 Centers for Disease Control and Prevention  
National Center for Immunization and Respiratory Diseases

**Immunizations to Protect Against Severe RSV**

Who Does It Protect?	Type of Product	Who Is It Recommended For?	When Is It Available?
 Adults 60 and over	RSV vaccine	Adults ages 60-74 who are at increased risk of severe RSV AND Everyone ages 75 and older	Available any time, but best time to get vaccinated is late summer and early fall
 Babies	RSV antibody (nirsevimab) given to baby	All Infants whose mother did not receive RSV vaccine during pregnancy, and some children ages 8-19 months who are at increased risk for severe RSV	October through March*
 Babies	OR RSV vaccine (Pfizer's ABRYVO) given to mother during pregnancy	All pregnant women during weeks 32-36 of their pregnancy	September through January

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

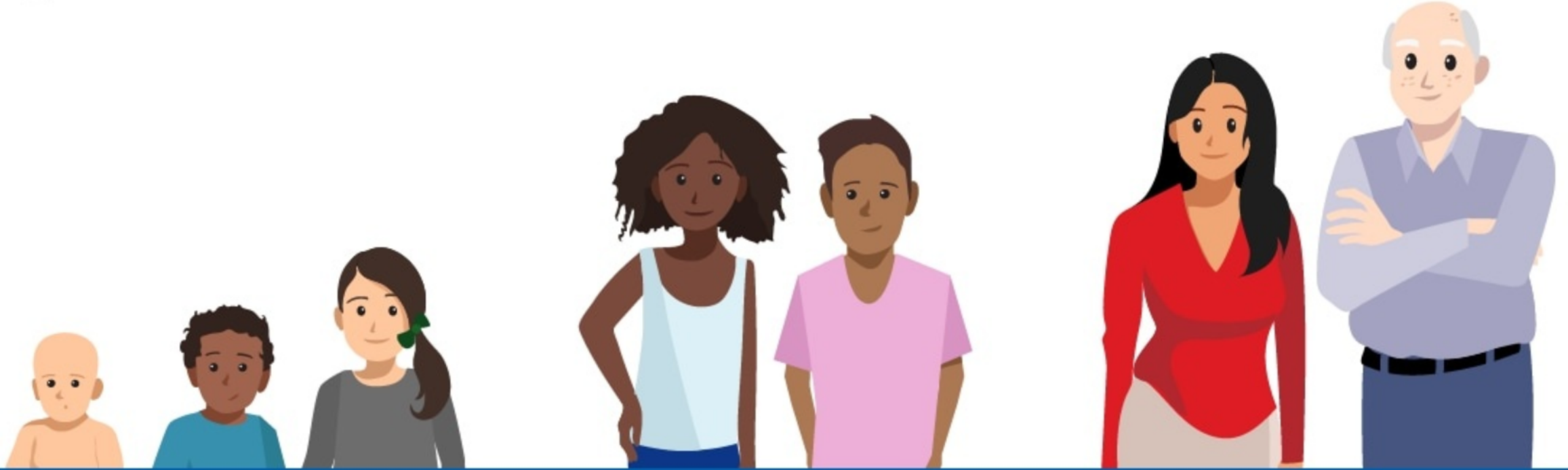
\*Recommended timing of administration in most of the continental United States. Recommended timing of administration may differ in some areas; consult your state, local, or territorial health department.

**LET'S TALK ID** **THE CURB SIDERS INTERNAL MEDICINE** **THE CURB SIDERS PEDIATRIC MEDICINE**

**New RSV Immunizations Comparison**

	Beyfortus (Nirsevimab)	Arexvy (GSK)	Abrysvo (Pfizer)
Indicated Age	All infants < 8mo High risk < 19mo	60yo+	60yo+ (or pregnancy)
Effectiveness	75% decrease in medically-attended LTRI	75% reduction in 2+ symptoms	75% reduction in 2+ symptoms
Safe in Pregnancy?	N/A	Untested	Yes; reduces newborn infxns
Mechanism	Monoclonal Ab	pre-fusion F protein w/ adjuvant	pre-fusion F protein

# People of all ages need DIPHTHERIA VACCINES



## **DTaP** for young children

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

## **Tdap** for preteens

- ✓ 11 through 12 years

## **Td or Tdap** for adults




- ✓ Every 10 years

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# What You Can Expect After Getting **Shingrix**

MORE THAN **90%**  
PROTECTION  
AGAINST SHINGLES



## Common Side Effects

### Where you got the shot:

- redness
- swelling
- pain



### The rest of your body:

- muscle aches
- fever
- tiredness
- stomach pain
- headache
- nausea
- shivering

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Centers for Disease  
Control and Prevention  
National Center for Immunization  
and Respiratory Diseases

# Understanding Vaccination Needs for Adults and Seniors

Andrew JP Carroll MD  
FAAFP

Senior Medical Director - Intracare



# Touchpoints for Discussion

## When to Bring up Vaccines

- Wellness exams
- Biometric exams
- Participation exams
- Travel consultations
- Seasonal
- Injuries
- Prenatal discussions-  
parents and grandparents



## How to have the discussion

- Make it part of a normal assessment of their preventive health
- Have staff work as a team to flank the patient with assessments
- Empower staff to encourage patients to be updated on vaccines
- Ask about life events--new children, grandchildren, etc
- Ask about upcoming vacation plans





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# Adult Vaccinations

Understanding  
Vaccination Needs for  
Adults and Seniors

Andrew JP Carroll MD  
FAAFP

Clinical Assistant Professor, Dept of Family and  
Community Medicine, University of Arizona College  
of Medicine - Phoenix

Senior Medical Director - Intracare



## Others and Conclusions



### Travel and Personal Risks

- Travel to high-risk areas
- Exposure to high-risk environments
- Exposure to high-risk populations
- Exposure to high-risk activities
- Exposure to high-risk events
- Exposure to high-risk locations
- Exposure to high-risk times
- Exposure to high-risk people
- Exposure to high-risk places
- Exposure to high-risk things

## Touchpoints for Discussion

### When to Bring up Vaccines

- Wellness exams
- Sick visits
- Pre-travel consultations
- Pre-operative consultations
- Pre-procedure consultations
- Pre-discharge consultations
- Pre-admission consultations
- Pre-hospital consultations
- Pre-transport consultations
- Pre-arrival consultations
- Pre-departure consultations
- Pre-arrival consultations
- Pre-departure consultations
- Pre-arrival consultations
- Pre-departure consultations



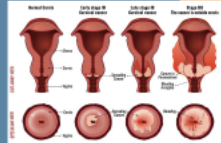
### How to Have the Discussion

- Ask about a patient's travel history
- Ask about a patient's exposure to high-risk environments
- Ask about a patient's exposure to high-risk populations
- Ask about a patient's exposure to high-risk activities
- Ask about a patient's exposure to high-risk events
- Ask about a patient's exposure to high-risk locations
- Ask about a patient's exposure to high-risk times
- Ask about a patient's exposure to high-risk people
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## HPV - The Only Vaccine Against Cancer

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- Discussion about safety, efficacy, long-term studies
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## Overview of Adult Vaccinations



### Pneumococcal Vaccine Timing for Adults

Recommendations for timing of pneumococcal vaccination for adults

Age Group	PCV13	PPSV23
18-64 years	1 dose	1 dose
65-74 years	1 dose	1 dose
≥75 years	1 dose	1 dose

## Pneumonia Vaccines

### Adults 18-64 years with certain underlying medical conditions

Condition	PCV13	PPSV23
Chronic heart disease	1 dose	1 dose
Chronic lung disease	1 dose	1 dose
Chronic liver disease	1 dose	1 dose
Chronic kidney disease	1 dose	1 dose
Chronic alcoholism	1 dose	1 dose
Chronic immunosuppression	1 dose	1 dose
Chronic asplenia	1 dose	1 dose
Chronic splenectomy	1 dose	1 dose
Chronic diabetes	1 dose	1 dose
Chronic HIV infection	1 dose	1 dose
Chronic smoking	1 dose	1 dose
Chronic use of corticosteroids	1 dose	1 dose
Chronic use of immunosuppressive drugs	1 dose	1 dose
Chronic use of chemotherapy	1 dose	1 dose
Chronic use of radiation therapy	1 dose	1 dose
Chronic use of biologics	1 dose	1 dose
Chronic use of anti-TNF agents	1 dose	1 dose
Chronic use of anti-CD4 agents	1 dose	1 dose
Chronic use of anti-IL-6 agents	1 dose	1 dose
Chronic use of anti-IL-17 agents	1 dose	1 dose
Chronic use of anti-IL-23 agents	1 dose	1 dose
Chronic use of anti-IL-36 agents	1 dose	1 dose
Chronic use of anti-IL-37 agents	1 dose	1 dose
Chronic use of anti-IL-38 agents	1 dose	1 dose
Chronic use of anti-IL-39 agents	1 dose	1 dose
Chronic use of anti-IL-40 agents	1 dose	1 dose
Chronic use of anti-IL-41 agents	1 dose	1 dose
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Chronic use of anti-IL-44 agents	1 dose	1 dose
Chronic use of anti-IL-45 agents	1 dose	1 dose
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Chronic use of anti-IL-50 agents	1 dose	1 dose
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Chronic use of anti-IL-67 agents	1 dose	1 dose
Chronic use of anti-IL-68 agents	1 dose	1 dose
Chronic use of anti-IL-69 agents	1 dose	1 dose
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Chronic use of anti-IL-71 agents	1 dose	1 dose
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Chronic use of anti-IL-74 agents	1 dose	1 dose
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Chronic use of anti-IL-85 agents	1 dose	1 dose
Chronic use of anti-IL-86 agents	1 dose	1 dose
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Chronic use of anti-IL-88 agents	1 dose	1 dose
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Chronic use of anti-IL-94 agents	1 dose	1 dose
Chronic use of anti-IL-95 agents	1 dose	1 dose
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Chronic use of anti-IL-97 agents	1 dose	1 dose
Chronic use of anti-IL-98 agents	1 dose	1 dose
Chronic use of anti-IL-99 agents	1 dose	1 dose
Chronic use of anti-IL-100 agents	1 dose	1 dose

[https://www.cdc.gov/pneumococcal/downloads/Vaccine-Timing-Adults-18-64.pdf?rm\\_medium=email\\_source=advisory](https://www.cdc.gov/pneumococcal/downloads/Vaccine-Timing-Adults-18-64.pdf?rm_medium=email_source=advisory)

## Seasonal Vaccinations



### INFLUENZA VACCINE PRODUCT GUIDE 2024-2025

Product	Age Group	Timing
Flucelvax	6 months and older	Annually
Fluzone	6 months and older	Annually
Fluad	65 years and older	Annually
FluBivalent	6 months and older	Annually
FluMist	2-49 years	Annually

## Flu and Covid

### COVID-19 Vaccine Timing 2024-25

Age Group	Vaccine	Timing
18-64 years	Moderna	Annually
18-64 years	Pfizer	Annually
18-64 years	Novavax	Annually
65-74 years	Moderna	Annually
65-74 years	Pfizer	Annually
65-74 years	Novavax	Annually
≥75 years	Moderna	Annually
≥75 years	Pfizer	Annually
≥75 years	Novavax	Annually





# Travel and Personal Risks

- MMR
- Hepatitis A
- Hepatitis B
- Typhoid (Typhim and Vivotif Berna)
- Japanese Encephalitis
- mPox
- Yellow Fever
- Meningococcal vaccines
- Cholera
- Chikungunya

## Others and Conclusions



### Travel and Personal Risks

- MMR
- Hepatitis A
- Hepatitis B
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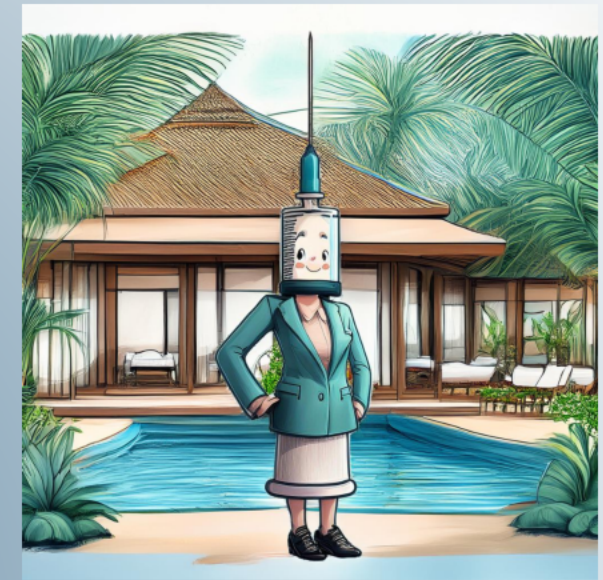
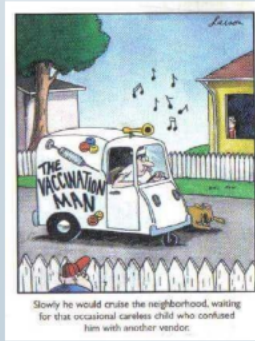
# Understanding Vaccination Needs for Adults and Seniors

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Senior Medical Director - Intracare







## Financial Disclosures

- Andrew Carroll, faculty for this CE activity, has no relevant financial relationship(s) with ineligible companies to disclose.
- None of the planners for this activity have relevant financial relationships to disclose with ineligible companies.
- The Arizona Alliance for Community Health Centers is accredited by the Arizona Medical Association to provide medical education for physicians.
- The Arizona Alliance for Community Health Centers designated the 2025 Arizona Immunization Conference educational activity for a maximum of 11 hours AMA PRA Category 1 Credits Physicians should only claim credit commensurate with the extent of their participation in the activity.
- The Arizona Pharmacy Association is accredited by the Accreditation Council for Pharmacy Education (ACPE) as a provider of continuing pharmacy education.



**01**

Effective Approaches to Combat Vaccine Hesitancy -  
Tuckerman, et al. The Pediatric Infectious Disease  
Journal 41(5):p e243-e245, May 2022.

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**02**

Nonstructural barriers to adult vaccination -  
Doherty, et al. Hum Vaccin Immunother. 2024 Apr  
17;20(1):2334475.

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**03**

[https://www.cdc.gov/pneumococcal/downloads/Vaccine-  
Timing-Adults-JobAid.pdf?  
utm\\_medium=email&utm\\_source=govdelivery](https://www.cdc.gov/pneumococcal/downloads/Vaccine-Timing-Adults-JobAid.pdf?utm_medium=email&utm_source=govdelivery)

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**04** <https://eziz.org/assets/docs/IMM-859.pdf>

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**05** <https://eziz.org/assets/docs/COVID19/IMM-1396.pdf>

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**06** <https://www.cdc.gov/diphtheria>

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**07** <https://www.cdc.gov/rsv>

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**08** <https://thecurbsiders.com/cribsiders-podcast/102>

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**09** <https://www.cdc.gov/shingles/downloads/shingrix-factsheet-adults-508.pdf>

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**10**

Association between HPV vaccination and cervical screening policy changes and cervical cancer incidence and grade-3 cervical intraepithelial neoplasia incidence in England, 2006–2020: a population-based trends analysis  
Falcaro, Milena et al. The Lancet Regional Health – Europe, Volume 49, 101157

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Information sharing and motivational interviewing techniques can build trust and make vaccine-hesitant patients more open to getting the shot.  
SURASRI PRAPASIRI, MD, MPH, et al. Fam Pract Manag. 2023;30(2):19-23.

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[https://www.aafp.org/pubs/fpm/blogs/inpractice/entry/vaccine\\_reluctancy.html?cmpid=em\\_FPM\\_20200909](https://www.aafp.org/pubs/fpm/blogs/inpractice/entry/vaccine_reluctancy.html?cmpid=em_FPM_20200909)

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