

Set a Vacci-“Date”! Getting our Adult Patients on Track with Recommended Vaccinations

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Faculty Disclosure

I have nothing to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation.

Learning Objectives

- Discuss the impact that the COVID-19 pandemic has had on vaccination rates
- Interpret CDC adult immunization schedules
- Describe recommended adult vaccinations
- Examine reasons for vaccine hesitancy and how to address them

Adult Vaccination Decline During COVID-19 Pandemic

Compared timeframe in 2019 to same timeframe in 2020

- Non-influenza immunization rates decreased among all age groups
- During the week of April 6, 2020 the immunization rate in those 65 years of age and older decreased 83.1% when compared to the same week in 2019

What is going on Locally?

➤ ONE West Virginia Pharmacy

- Influenza vaccinations
 - 26% increase in vaccinations administered in 2020
 - Added 6 new off-site vaccination clinics
- Zoster, recombinant vaccinations
 - 62.3% decrease in vaccinations when comparing 2019-2020
- Total vaccinations
 - 13.4% decrease in total immunizations when comparing 2019 to 2020

ADULT IMMUNIZATION SCHEDULES

<https://www.cdc.gov/vaccines/schedules/downloads/adult/adult-combined-schedule.pdf>

Reading an Immunization Schedule

- Multiple schedules available:
 - Children and adolescents
 - Adults
 - Catch-up
- Determine recommended vaccinations by age
- Assess need for additional recommended vaccinations
- Review vaccine types, frequencies, intervals, and considerations for special circumstances

What do the colors mean?

Yellow- Recommended

Yellow with Dots- Vaccination is recommended and additional doses may be needed based on medical condition

Purple- Recommended for those with an additional risk factor/indication

Blue- Recommended based on shared clinical decision making

Teal- Recommended ages for catch-up immunization

Orange- Precaution (vaccination may be indicated if benefit of protection outweighs risk of adverse reaction)

Red- NOT recommended/contraindicated

Grey- No recommendation/not applicable

Table 1 Recommended Adult Immunization Schedule by Age Group, United States, 2021

| Vaccine | 19–26 years | 27–49 years | 50–64 years | ≥65 years |
|---|---|---------------------|-------------|-----------|
| Influenza inactivated (IIV) or Influenza recombinant (RIV4) ^{or} | 1 dose annually | | | |
| Influenza live, attenuated (LAIV4) | 1 dose annually | | | |
| Tetanus, diphtheria, pertussis (Tdap or Td) | 1 dose Tdap each pregnancy; 1 dose Td/Tdap for wound management (see notes) | | | |
| | 1 dose Tdap, then Td or Tdap booster every 10 years | | | |
| Measles, mumps, rubella (MMR) | 1 or 2 doses depending on indication (if born in 1957 or later) | | | |
| Varicella (VAR) | 2 doses (if born in 1980 or later) | | 2 doses | |
| Zoster recombinant (RZV) | 2 doses | | | |
| Human papillomavirus (HPV) | 2 or 3 doses depending on age at initial vaccination or condition | 27 through 45 years | | |
| Pneumococcal conjugate (PCV13) | 1 dose | | | 1 dose |
| Pneumococcal polysaccharide (PPSV23) | 1 or 2 doses depending on indication | | | 1 dose |
| Hepatitis A (HepA) | 2 or 3 doses depending on vaccine | | | |
| Hepatitis B (HepB) | 2 or 3 doses depending on vaccine | | | |
| Meningococcal A, C, W, Y (MenACWY) | 1 or 2 doses depending on indication, see notes for booster recommendations | | | |
| Meningococcal B (MenB) | 2 or 3 doses depending on vaccine and indication, see notes for booster recommendations | | | |
| | 19 through 23 years | | | |
| <i>Haemophilus influenzae</i> type b (Hib) | 1 or 3 doses depending on indication | | | |

■ Recommended vaccination for adults who meet age requirement, lack documentation of vaccination, or lack evidence of past infection
 ■ Recommended vaccination for adults with an additional risk factor or another indication
 ■ Recommended vaccination based on shared clinical decision-making
 ■ No recommendation/Not applicable

Table 2 Recommended Adult Immunization Schedule by Medical Condition and Other Indications, United States, 2021

| Vaccine | Pregnancy | Immuno-compromised (excluding HIV Infection) | HIV infection CD4 count | | Asplenia, complement deficiencies | End-stage renal disease; or on hemodialysis | Heart or lung disease, alcoholism ¹ | Chronic liver disease | Diabetes | Health care personnel ² | Men who have sex with men | |
|----------------------|---|---|--|----------------------|--|---|--|-----------------------|-----------|------------------------------------|---------------------------|--|
| | | | <200 mm ³ | ≥200 mm ³ | | | | | | | | |
| HIV or RIV4 or LAIV4 | 1 dose annually | | | | | | | | | | | |
| LAIV4 | Not Recommended | | | | | Precaution | | | | 1 dose annually | | |
| Tdap or Td | 1 dose Tdap each pregnancy | 1 dose Tdap, then Td or Tdap booster every 10 years | | | | | | | | | | |
| MMR | Not Recommended ³ | Not Recommended | 1 or 2 doses depending on indication | | | | | | | | | |
| VAR | Not Recommended ³ | Not Recommended | 2 doses | | | | | | | | | |
| RZV | | | 2 doses at age ≥50 years | | | | | | | | | |
| HPV | Not Recommended ³ | 3 doses through age 26 years | | | 2 or 3 doses through age 26 years depending on age at initial vaccination or condition | | | | | | | |
| PCV13 | 1 dose | | | | | | | | | | | |
| PPSV23 | 1, 2, or 3 doses depending on age and indication | | | | | | | | | | | |
| HepA | | | 2 or 3 doses depending on vaccine | | | | | | | | | |
| HepB | | | 2, 3, or 4 doses depending on vaccine or condition | | | | | | <60 years | | ≥60 years | |
| MenACWY | 1 or 2 doses depending on indication, see notes for booster recommendations | | | | | | | | | | | |
| MenB | Precaution | 2 or 3 doses depending on vaccine and indication, see notes for booster recommendations | | | | | | | | | | |
| Hib | | | 3 doses HSCT ³ recipients only | | 1 dose | | | | | | | |

 Recommended vaccination for adults who meet age requirement, lack documentation of vaccination, or lack evidence of past infection
 Recommended vaccination for adults with an additional risk factor or another indication
 Precaution—vaccination might be indicated if benefit of protection outweighs risk of adverse reaction
 Recommended vaccination based on shared clinical decision-making
 Not recommended/contraindicated—vaccine should not be administered.
 No recommendation/Not applicable

1. Precaution for LAIV4 does not apply to alcoholism. 2. See notes for influenza, hepatitis B, measles, mumps, and rubella, and varicella vaccinations. 3. Hematopoietic stem cell transplant.

Shared Clinical Decision-Making

- Vaccinations that are not recommended for everyone in a particular age group or for everyone in an identifiable risk group
- Individual based decision process between a health care provider and the patient or parent/guardian
- Based on best available evidence of who may benefit from vaccination, individual's characteristics, values, and preferences
- Health care provider's clinical discretion and characteristics of the vaccine are considered
- Patients may benefit, but unlikely to have population-level impacts

Shared Clinical Decision-Making

Applies to the following vaccinations:

- Meningococcal B (MenB) vaccination for adolescents and young adults aged 16 to 23 years
- Hepatitis B (HepB) vaccination for adults age 60 years and older with diabetes mellitus
- Human papillomavirus (HPV) vaccination for adults aged 27 to 45 years
- Pneumococcal conjugate vaccination (PCV13) for adults aged 65 years and older who do not have an immunocompromising condition, cerebrospinal fluid leak, or cochlear implant

Shared Clinical Decision-Making

Health care providers

- ANYONE who provides or administers vaccines
- Primary care physicians
- Specialists
- Physician assistants
- Nurse practitioners
- Registered nurses
- Pharmacists

RECOMMENDED VACCINATIONS

Focusing on Select Vaccination Recommendations for Adults

Tetanus, Diphtheria, and Pertussis

- Tetanus
 - Bacterial disease that causes painful tightening of the muscles
 - Can get from a cut or a wound
 - Three out of 10 people who get the disease die from it
- Diphtheria
 - Bacterial disease that affects the respiratory system
 - Can lead to swollen glands in the neck and even swelling of the heart muscles
- Pertussis
 - Bacterial respiratory tract infection
 - Leads to violent coughing and choking spells
 - Most severe in babies

Td/Tdap

Tdap

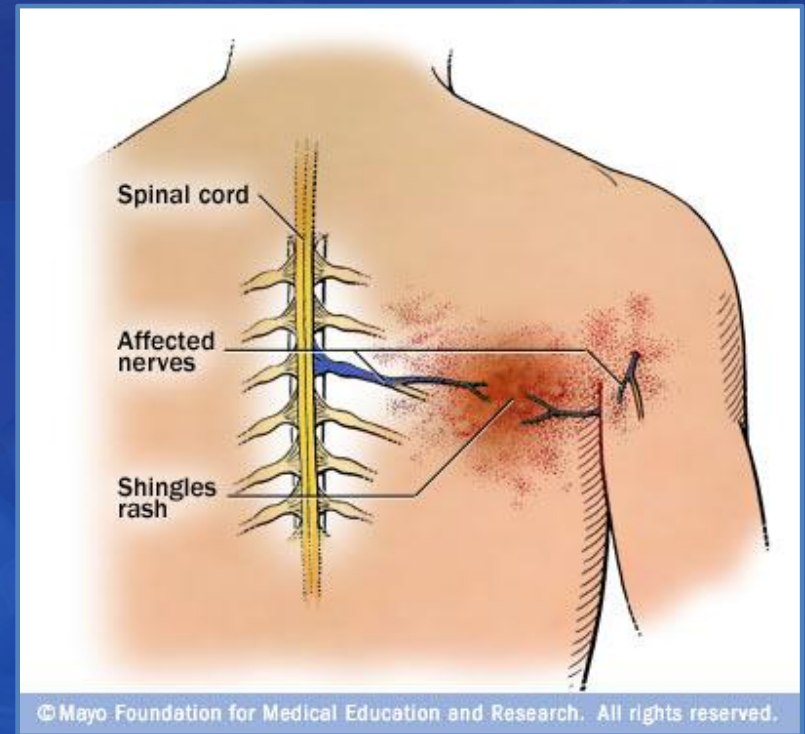
- Recommended for:
 - Adolescents 11-12 years of age
 - Adults who have not received a dose of Tdap previously
 - Women with each pregnancy between weeks 27-36

Booster doses of Td or Tdap

- Recommended for:
 - All adults every 10 years

Zoster

- 1 out of 3 people in U.S. will develop shingles during their lifetime
- Risk of shingles and having serious complications increases with age, especially over 50 years
- 10-18% of people who develop shingles will have post herpetic neuralgia



Zoster Vaccine Recombinant, Adjuvanted

- Indication:
 - For the prevention of herpes zoster in adults aged 50 years and older
 - NOT indicated for the prevention of primary varicella infection
- Contraindications:
 - History of severe allergic reaction to any component of the vaccine or after a previous dose of the Zoster Vaccine Recombinant, Adjuvanted vaccine
- Storage:
 - Both the antigen and adjuvant need to be stored between 36°F to 46°F (refrigerated)
 - Protect from light
 - Do not freeze

Zoster Vaccine Recombinant, Adjuvanted

- Dosage:
 - 0.5 mL
 - 2 dose series
 - Second dose administered 2-6 months after the first dose
 - Do NOT need to restart if more than 6 months elapsed since 1st dose
- Dosage Preparation:
 - Reconstitute with accompanying suspension
 - Reconstituted vaccine should be opalescent, colorless to pale brown liquid
 - After reconstitution can be stored in refrigerator for 6 hours and should be discarded if not used within that timeframe

Human Papillomavirus (HPV)

- Common virus especially among people in their teens and early 20's
- Most common sexually transmitted infection in U.S.
- Major cause of:
 - Cervical cancer in women
 - Anal cancer and genital warts in women and men
- Some can cause cancers of:
 - Penis
 - Oropharynx

HPV Dosing

- Recommended for males and females 11 to 12 years of age
 - Can be administered as early as 9 years of age
- Shared clinical decision making: men & women 27 to 45 years of age
- 2-dose schedule if series started before age 15
 - Second dose 6 to 12 months after the first dose
- 3-dose schedule if series started on or after 15th birthday
 - Second dose 1 to 2 months after the first dose
 - Third dose 6 months after the first dose

Pneumococcal Disease

- Bacterial disease
- When bacteria spread to lungs, bloodstream and the lining of the brain and spinal cord serious health problems can occur
- 2 vaccinations available to offer protection

Pneumococcal Conjugate (PCV13)

Recommended for:

- Adults 19 years of age and older with immunocompromising conditions, cerebrospinal leak, cochlear implant, or anatomical or functional asplenia
- Some adults 65 years of age and older based on shared clinical decision-making

Pneumococcal Polysaccharide (PPSV23)

Recommended for:

- Adults 19 to 64 years of age with immunocompromising conditions or anatomical or functional asplenia
- Dosing:
 - 1st dose given at least 8 weeks after dose of PCV 13
 - 2nd dose given at least 5 years after first dose of PPSV23

Recommended for:

- Adults 19 to 64 years of age with cerebrospinal leak or cochlear implant
- Dosing:
 - 1st dose given at least 8 weeks after dose of PCV 13

Pneumococcal Polysaccharide (PPSV23)

Recommended for:

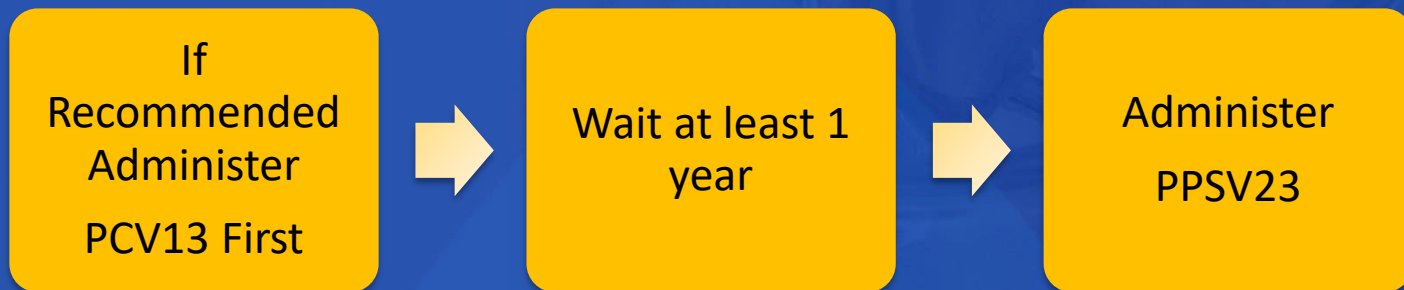
- Adults 19 to 64 years of age with chronic diseases such as asthma, COPD, congestive heart failure, cardiomyopathies, chronic liver disease, alcoholism, diabetes, and those who smoke cigarettes
- Dosing:
 - 1 dose after diagnosis of one of the listed conditions

Recommended for:

- All adults 65 years of age and older
- Dosing:
 - Will be discussed on following slides

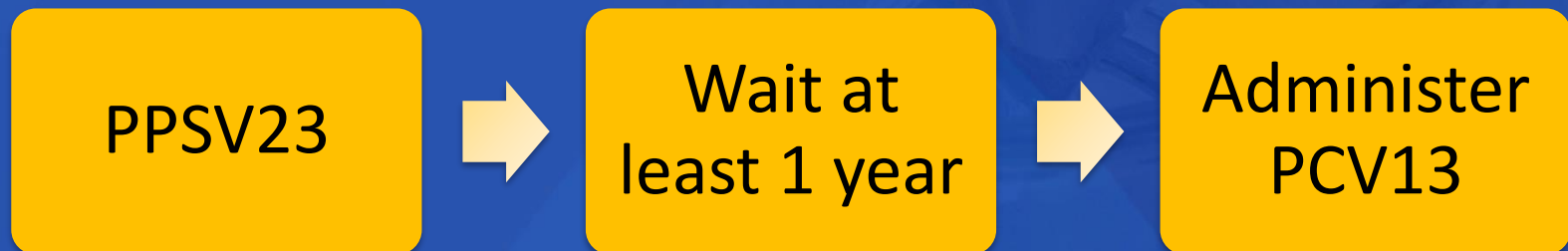
Pneumococcal Recommendations

Adults 65 years of age and older who have not received pneumococcal vaccination previously and PCV13 is recommended through shared clinical decision-making



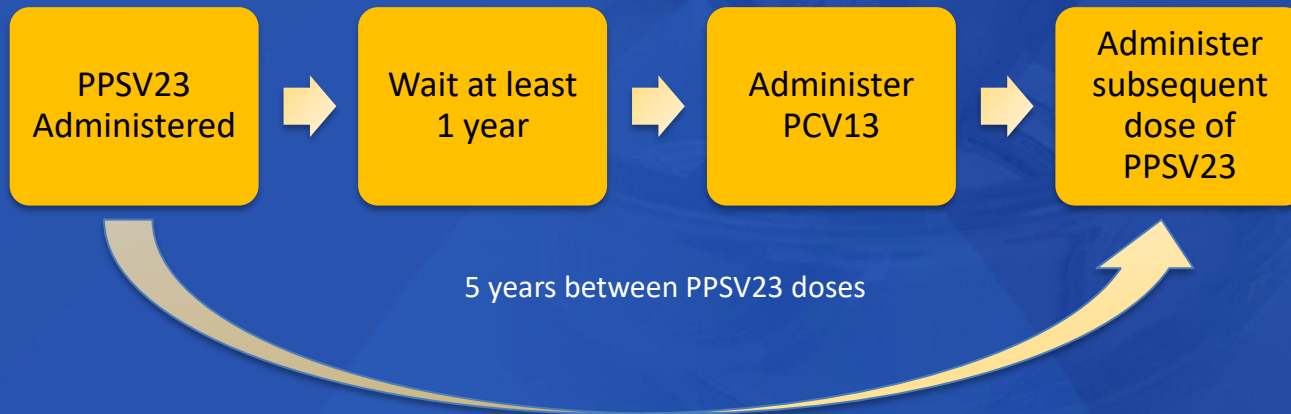
Pneumococcal Recommendations Continued

Adults 65 years of age and older who have received the PPSV23 vaccination AFTER the age of 65 and PCV13 is recommended through shared clinical decision-making



Pneumococcal Recommendations Continued

Adults 65 years of age and older who have previously received pneumococcal vaccination with PPSV23 BEFORE age 65 AND PCV13 is recommended through shared clinical decision-making



Meningococcal Disease

- Bacterial disease
- Leading cause of bacterial meningitis
- Spread through close contact with others
- One out of 10 people who contract die
- Survivors may lose their arms/legs or have other long term problems
- 2 different vaccinations available that cover:
 - Serogroups ACWY
 - Serogroup B

Meningococcal ACWY Vaccines

- Menactra[®], Menveo[®], and MenQuadfi[®]
- Recommended for:
 - Adolescents:
 - Dose 1: 11-12 years of age
 - Dose 2: 16 years of age
 - Adults:
 - 1 or 2 doses depending on indication

Meningococcal ACWY Vaccines

- Booster doses of meningococcal ACWY vaccines recommended every 5 years for high risk groups
- MenQuadfi[®] is the only FDA approved vaccine for those over 55 years of age, but ACIP recommends using any of the available products to vaccinate those 56 years of age and older who are a risk of contracting meningococcal disease

Meningococcal ACWY

- Adults with asplenia or persistent complement component deficiencies
 - Receive 2 dose primary series of MenACWY vaccine
 - Doses at least 2 months apart
 - Revaccinate every 5 years
- Adults with HIV
 - Receive 2 dose primary series of MenACWY vaccine
 - Doses at least 2 months apart
 - Revaccinate every 5 years

Meningococcal ACWY

- Microbiologists exposed to isolates of *Neisseria meningitidis*
 - Receive 1 dose of MenACWY vaccine
 - Revaccinate every 5 years
- Adults at risk during outbreak
 - Receive 1 dose of MenACWY vaccine
- Adults traveling or residing in a country where disease is prevalent
 - Receive 1 dose of MenACWY vaccine
- College freshman living in dorms and U.S. military recruits.
(if not previously vaccinated at 16 years of age)
 - Receive 1 dose of MenACWY vaccine

Meningococcal Serogroup B Vaccines Available

- MenB-FHbp (Trumenba[®])
 - 2-dose series (0, 6 months from first dose)
 - 3-dose series (0, 1-2 months later, 6 months from first dose)
 - For patients in the “special situations” category
- MenB-4C (Bexsero[®])
 - 2-dose series (0, at least 1 month later)
- Both vaccines were approved for those aged 10–25 years

Meningococcal B Recommendations

- Adults with asplenia or persistent complement component deficiencies
 - Receive series of MenB vaccine
- Microbiologists exposed to isolates of *Neisseria meningitidis*
 - Receive series of MenB vaccine
- Adults at risk during outbreak
 - Receive series of MenB vaccine
- Young adults aged 16 to 23 years
 - Healthy and not at an increased risk for serogroup B meningococcal disease
 - Can receive 2 dose series based on shared clinical decision-making
 - Offers short term protection

COVID-19 Vaccine Recommendations

- Pfizer-BioNTech COVID-19 Vaccine
 - 2 doses given 21 days apart
 - Emergency Use Authorization (EUA) for those 12 years of age and older
- Moderna COVID-19 Vaccine
 - 2 doses given 28 days apart
 - EUA for those 18 years of age and older
- Johnson & Johnson/Janssen COVID-19 Vaccine
 - 1 dose
 - EUA for those 18 years of age and older

Adult Vaccines **NOT** Covered Today

- Hepatitis A
- Hepatitis B
- Influenza

- WIN has other webinars dedicated specifically to these vaccines

ADDRESSING VACCINE HESITANCY

Vaccination Rates Lower in Rural Counties

- Prior studies have shown that rural communities are at an increased risk for severe COVID-19-associated morbidity and mortality
- COVID-19 vaccination coverage was lower in rural counties than urban counties
 - Rural: 38.9% vaccinated
 - Urban: 45.7% vaccinated
- Opportunities exist for providing education and taking vaccinations to those in rural areas

Addressing Vaccine Hesitancy

- Patients have different reasons for being hesitant
- Messaging needs tailored to fit the needs of each patient
- Patients may be hesitant towards a certain vaccine or all vaccines
- Patients may be hesitant to healthcare in general

Tips for Addressing Vaccine Hesitancy

- Listen to your patients' concerns
- Ask why they are hesitant
- Tailor your message based on the patient
- Counter any misinformation
- Know that you are a trusted source of information
- Discuss the benefits of vaccination
- Address concerns related to side effects
- Share success stories

Prepare to Share in the Chat Box

- What have you seen in your patients regarding vaccine hesitancy?
- What tools can be provided to assist with educating patients?
- Success stories to share?



Questions?

