Vaccinating Adults with Chronic Conditions: Recommendations and Lessons Learned

May 28, 2020

Today's Presenters

Tara Jatlaoui, MD, MPH
Medical Officer
National Center for Immunization and Respiratory Diseases
Centers for Disease Control and Prevention

Sarah Coles, MD
Family Physician and Assistant Professor
Department of Family, Community and Preventive Medicine
University of Arizona College of Medicine

Adult Immunization Schedule 2020: Focus on Adults with Chronic Medical Conditions

Tara C. Jatlaoui, MD, MPH
LCDR, USPHS
Immunization Services Division

Disclosure

- Presenter has no conflict of interest
- Discussions on unlicensed products and off-label uses are in the context of ACIP considerations
- The use of trade names is for identification purposes only and does not imply endorsement
- Disclaimer – The opinions expressed in this presentation are solely those of the presenter and do not necessarily represent official positions of CDC

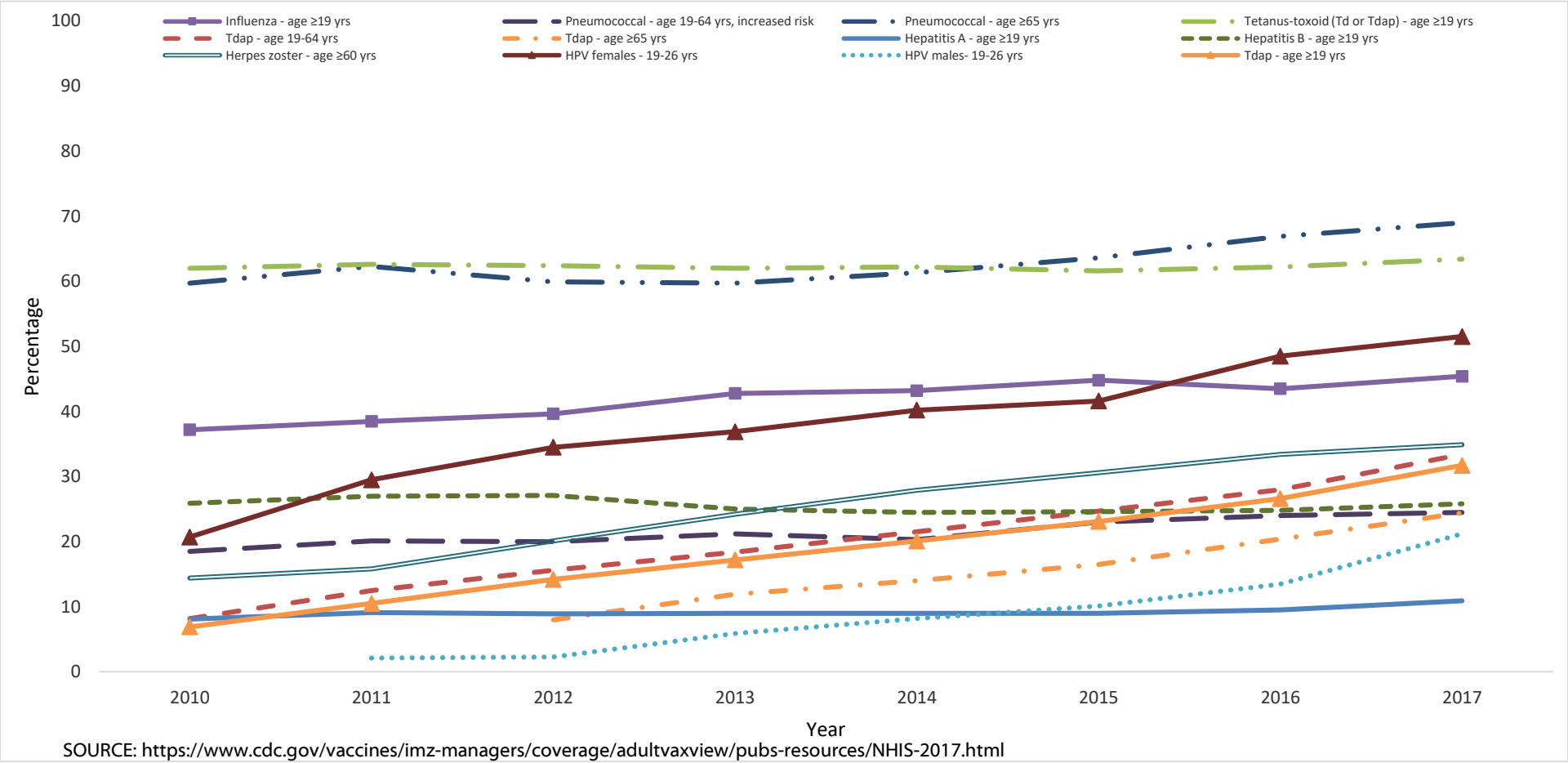
Objectives

- Provide an overview of adult vaccination coverage
- Review adult vaccine schedule focused on adults with chronic conditions
- Review guidance related to immunizations during the COVID pandemic
- Provide resources for healthcare professionals

*Information on other vaccine-preventable diseases not covered during this presentation can be found at https://www.cdc.gov/vaccines/acip/

Adult Vaccination Coverage in the United States

Trends in Adult Vaccination Coverage – NHIS, 2010-2017



SOURCE: https://www.cdc.gov/vaccines/imz-managers/coverage/adultvaxview/pubs-resources/NHIS-2017.html

Vaccination Decision-Making: General

Which of the following best describes you?	2015
I am not aware that I need any vaccines as an adult *besides the flu vaccine.*	**31%**
I am aware that I need a vaccine as an adult besides the flu vaccine, but haven't thought about getting it.	**11%**
I am considering getting vaccinated against a disease other than the flu but have not yet decided.	**6%**
I have decided to get vaccinated against a disease other than the flu, but have not yet gotten vaccinated.	**4%**
I have decided not to get vaccinated against a disease other than the flu.	**7%**
I have gotten vaccinated against a disease other than flu as an adult.	**13%**
I make sure I am up-to-date with recommended vaccinations.	**30%**

*All percentages are weighted.
SOURCE: Porter Novelli. 2015. ConsumerStyles (Fall). Unpublished.

Decision-Making by Vaccine Type
2015

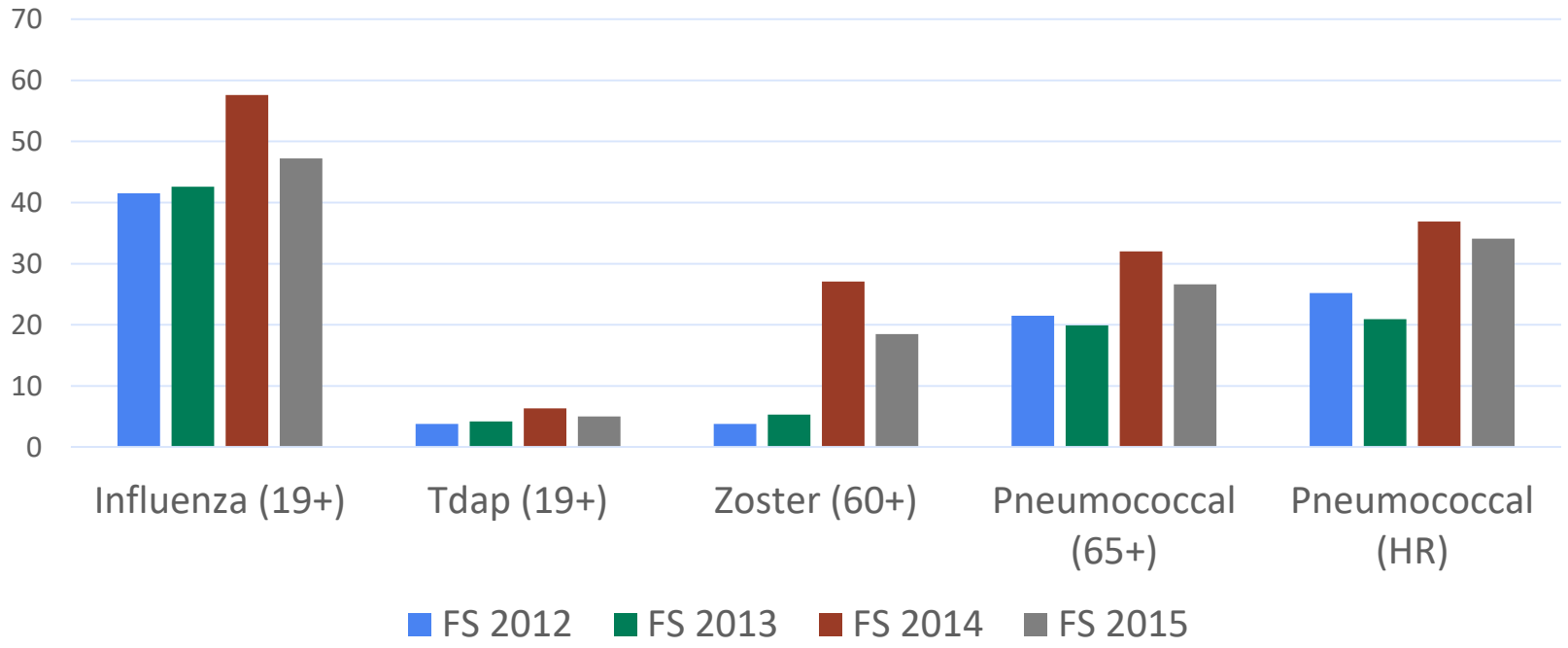
Which of the following best describes you?	Tdap (19+)	Pneumo (65+)	Zoster (60+)
I am not aware that I need this vaccine.	53%	22%	19%
I am aware that I need this vaccine, but haven't thought about getting it.	5%	3%	8%
I am considering getting this vaccine, but have not yet decided.	5%	4%	11%
I have decided to get this vaccine, but have not yet gotten vaccinated.	2%	4%	8%
I have decided not to get this vaccine.	14%	11%	18%
I have gotten this vaccine.	21%	56%	36%

*All percentages are weighted.
SOURCE: Porter Novelli. 2015. ConsumerStyles (Fall). Unpublished.

A Strong Recommendation Makes a Difference

Adults believe vaccines are important and are likely to get them if recommended by their healthcare provider.

In the past year, has this vaccine been recommended to you by a medical professional?

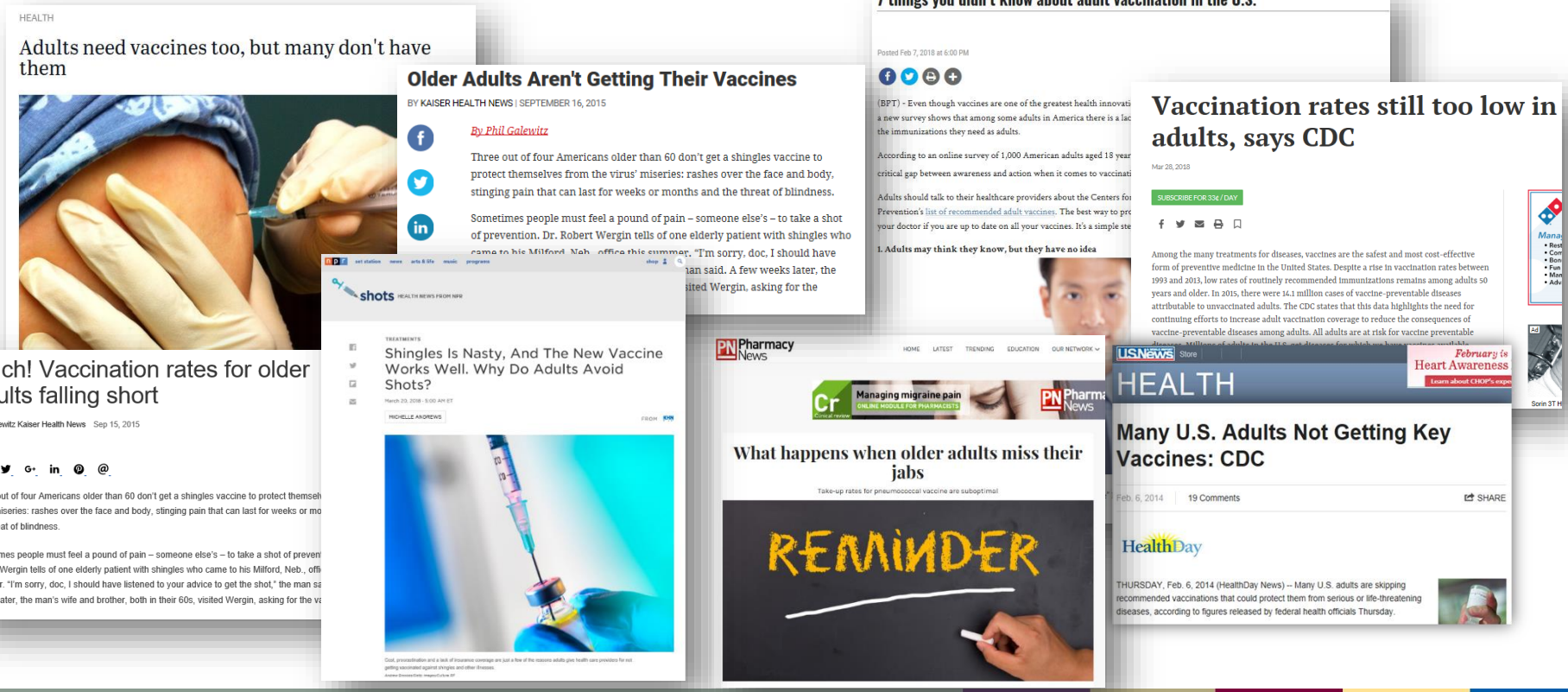


*All percentages are weighted.

SOURCE: Porter Novelli. 2015. ConsumerStyles (Fall). Unpublished.

Bottom Line:

Adults are not getting the vaccines they need.



Flu vaccine and chronic diseases

- High risk medical conditions[1]
  - 78% ↓ deaths attributable to any cause, 87% ↓ hospitalization to acute respiratory or cardiovascular disease
- Diabetes[2]
  - 56% ↓ complications, 54% ↓ hospitalizations, 58% ↓ deaths
- Chronic obstructive lung disease[3,4]
  - 76% vaccine effectiveness against influenza-related respiratory illness
  - Reduced COPD exacerbation
- Heart Disease[5,6]
  - Vaccine effectiveness (29%–36%) comparable to statins (36%), anti-hypertensives (15–18%), smoking cessation (26%) against major cardiac events

1. Hak E et al. Arch Intern Med 2005;165:274–80
2. Looijmans-Van den AkkerI et al. Diabetes Care 2006;29:1771–6
3. Wongsurakiat P et al. Chest 2004;125:2011–20
4. Poole PJ et al. Cochrane Database SystRev 2006;(1):CD002733
5. Barnes et al. Heart 2015;101:1738–1747
6. Udell et al. JAMA 2013;310:1711–1720

Burden of pneumococcal disease

- >30,000 cases, >3000 deaths reported per year
- 89% cases, almost all deaths occur among adults
- Adults at increased risk for pneumococcal disease
  - Age ≥65y
  - Age 19–64y with following
    - Immunocompromised (HIV, cancer, asplenia) – at highest risk
    - Asplenia
    - Cochlear implants, cerebrospinal fluid leak
    - Chronic illnesses (heart, liver, kidney, lung disease; diabetes)
    - Alcoholism
    - Cigarette smoking

CDC. Active Bacterial Core Surveillance. http://www.cdc.gov/abcs/reports-findings/survreports/spneu13.pdf, https://www.cdc.gov/pneumococcal/surveillance.html

Adult Immunization Schedule

Table 1

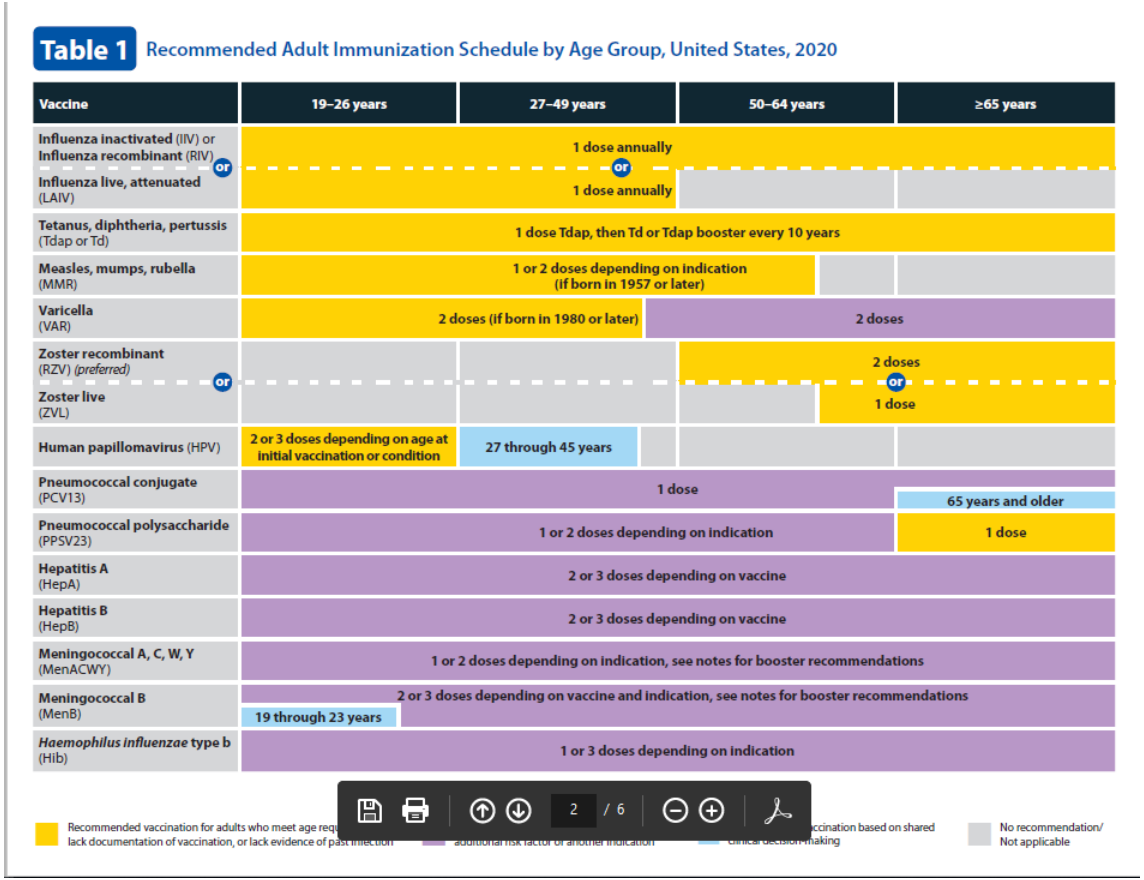


Table 1 Recommended Adult Immunization Schedule by Age Group, United States, 2020

Vaccine	19–26 years	27–49 years	50–64 years	≥65 years
Influenza inactivated (IIV) or **Influenza recombinant** (RIV)	1 dose annually			
or				
Influenza live, attenuated (LAIV)	1 dose annually			
Tetanus, diphtheria, pertussis (Tdap or Td)	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) *(preferred)*			2 doses	
or				
Zoster live (ZVL)				1 dose
Human papillomavirus (HPV)	2 or 3 doses depending on age at initial vaccination or condition	27 through 45 years		
Pneumococcal conjugate (PCV13)	1 dose			65 years and older
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			
***Haemophilus influenzae* type b** (Hib)	1 or 3 doses depending on indication			

Structural Changes to Table 1

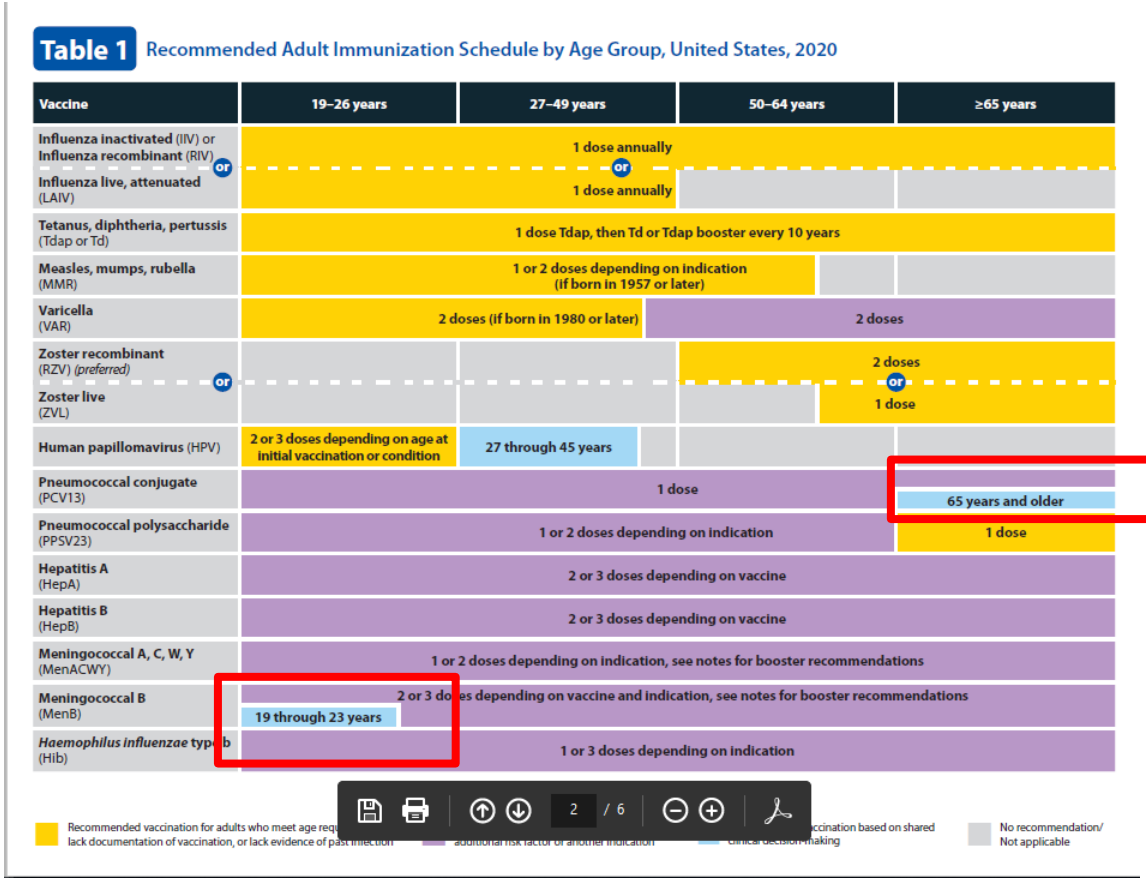


Table 1 Recommended Adult Immunization Schedule by Age Group, United States, 2020

Vaccine	19–26 years	27–49 years	50–64 years	≥65 years
Influenza inactivated (IIV) or **Influenza recombinant** (RIV)	1 dose annually			
Influenza live, attenuated (LAIV)	1 dose annually			
Tetanus, diphtheria, pertussis (Tdap or Td)	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) *(preferred)*			2 doses	
Zoster live (ZVL)			1 dose	
Human papillomavirus (HPV)	2 or 3 doses depending on age at initial vaccination or condition	27 through 45 years		
Pneumococcal conjugate (PCV13)	1 dose			65 years and older
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			
***Haemophilus influenzae* type b** (Hib)	1 or 3 doses depending on indication			

Recommended vaccination for adults who meet age req… lack documentation of vaccination, or lack evidence of past infection

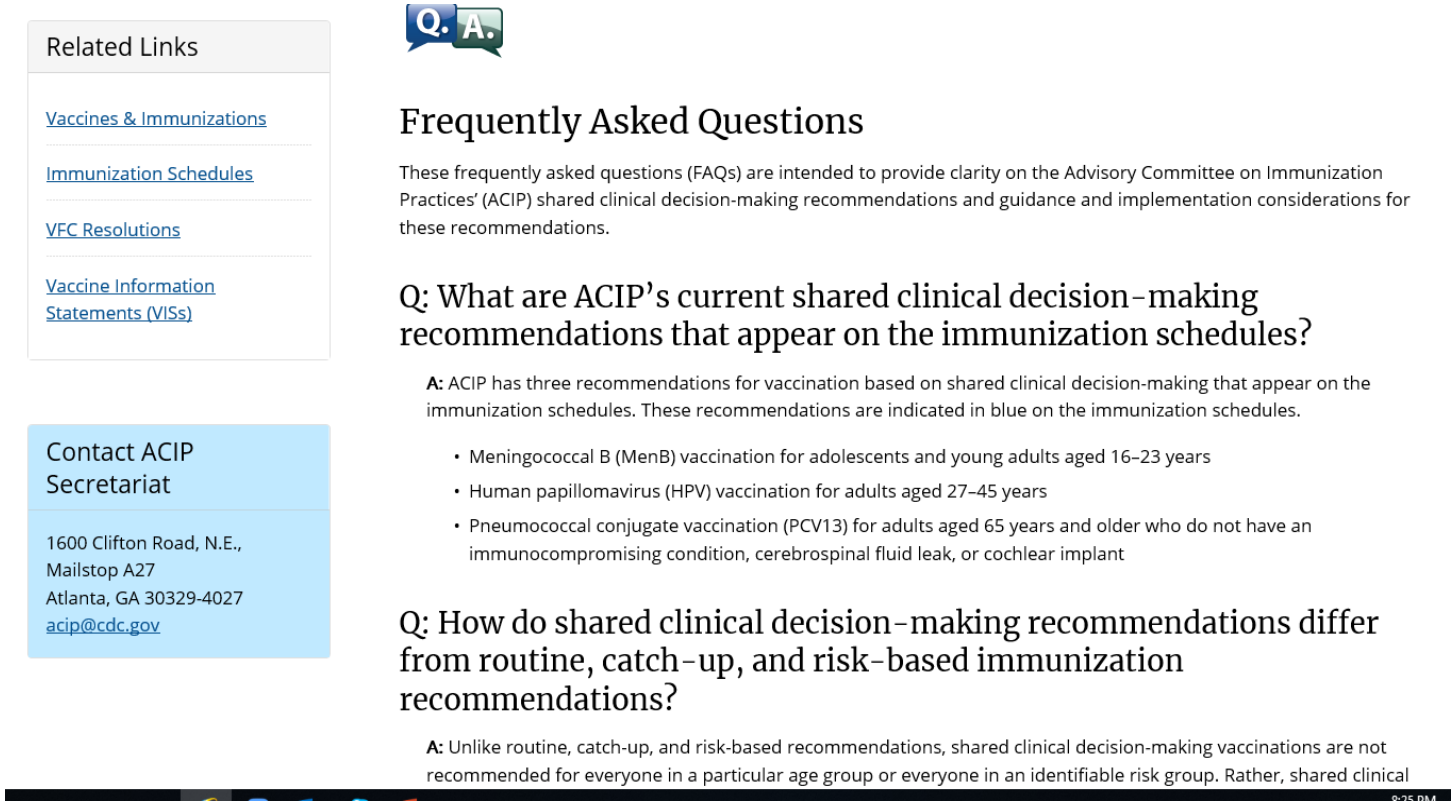
…additional risk factor or another indication

…ccination based on shared clinical decision-making

No recommendation/ Not applicable

2 / 6

Shared Clinical Decision-making



Related Links

Vaccines & Immunizations

Immunization Schedules

VFC Resolutions

Vaccine Information Statements (VISs)

Contact ACIP Secretariat

1600 Clifton Road, N.E.,
Mailstop A27
Atlanta, GA 30329-4027
acip@cdc.gov

Frequently Asked Questions

These frequently asked questions (FAQs) are intended to provide clarity on the Advisory Committee on Immunization Practices' (ACIP) shared clinical decision-making recommendations and guidance and implementation considerations for these recommendations.

Q: What are ACIP's current shared clinical decision-making recommendations that appear on the immunization schedules?

A: ACIP has three recommendations for vaccination based on shared clinical decision-making that appear on the immunization schedules. These recommendations are indicated in blue on the immunization schedules.

- Meningococcal B (MenB) vaccination for adolescents and young adults aged 16–23 years
- Human papillomavirus (HPV) vaccination for adults aged 27–45 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

Q: How do shared clinical decision-making recommendations differ from routine, catch-up, and risk-based immunization recommendations?

A: Unlike routine, catch-up, and risk-based recommendations, shared clinical decision-making vaccinations are not recommended for everyone in a particular age group or everyone in an identifiable risk group. Rather, shared clinical

https://www.cdc.gov/vaccines/acip/acip-scdm-faqs.html

Vaccination during the COVID pandemic

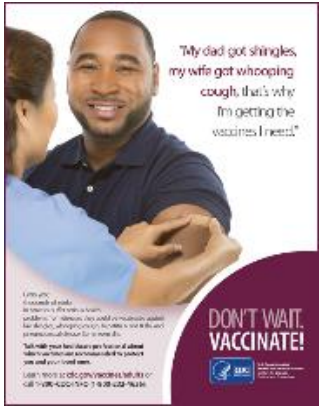
Provider Resources for Adult Vaccination

Resources

- State and local health department immunization programs https://www.colorado.gov/pacific/cdphe/categories/services-and-information/health/prevention-and-wellness/immunization
- Centers for Disease Control and Prevention www.cdc.gov/vaccines/
- Advisory Committee on Immunization Practices www.cdc.gov/vaccines/acip/
- Office of Infectious Disease and HIV/AIDS Policy National Vaccine Program https://www.hhs.gov/vaccines/index.html
- Immunization Action Coalition www.immunize.org/
- National Adult and Influenza Immunization Summit www.izsummitpartners.org/

Adult Patient Education Resources

- **Patient Education Portal: www.cdc.gov/vaccines/AdultPatientEd**
  - Posters and Flyers
  - Educational factsheets and easy to read schedule
  - Matte articles and web features
  - Radio PSAs
  - Web buttons and banners
- **Vaccine Quiz: www.cdc.gov/vaccines/adultquiz**
- **Website: www.cdc.gov/vaccines/adults**



Adult Vaccine Schedule App

Download "CDC Vaccine Schedules" free for iOS and Android devices.

Product Specs

Version: 6.0.1

Requirements: Requires iOS 9.0 or later and Android 8.0 or later; optimized for tablets and useful on smartphones.

Updates: Changes in the app are released through app updates.

Download app free for **iOS**

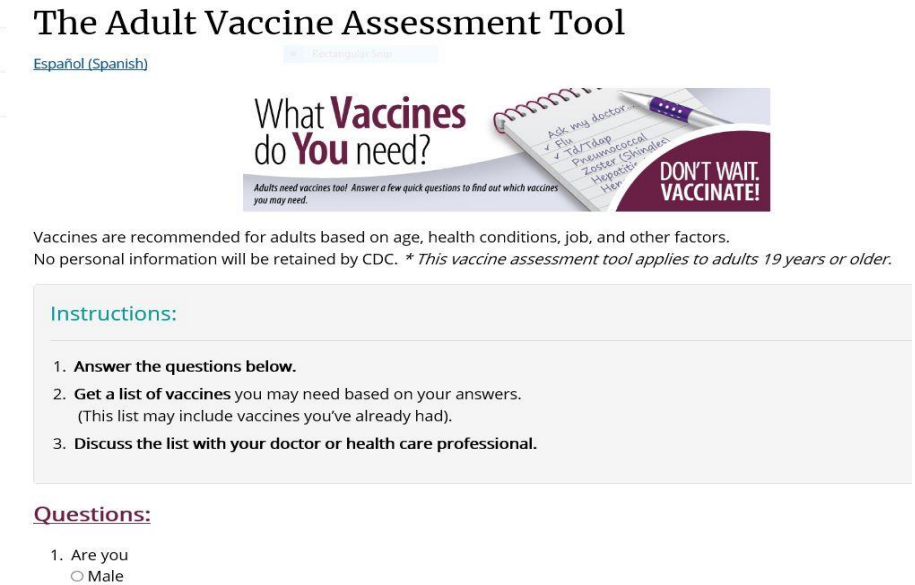
Available on the App Store

Download app free for **Android**

ANDROID APP ON Google play

www.cdc.gov/vaccines/schedules/hcp/schedule-app.html

Adult Vaccine Assessment Tool



The Adult Vaccine Assessment Tool

Español (Spanish)

Vaccines are recommended for adults based on age, health conditions, job, and other factors.
No personal information will be retained by CDC. ** This vaccine assessment tool applies to adults 19 years or older.*

Instructions:

1. **Answer the questions below.**
2. **Get a list of vaccines** you may need based on your answers.
   (This list may include vaccines you've already had).
3. **Discuss the list with your doctor or health care professional.**

Questions:

1. Are you
   ○ Male

www2.cdc.gov/nip/adultimmsched/

Making a Strong Vaccine Recommendation: #HowIRecommend Videos

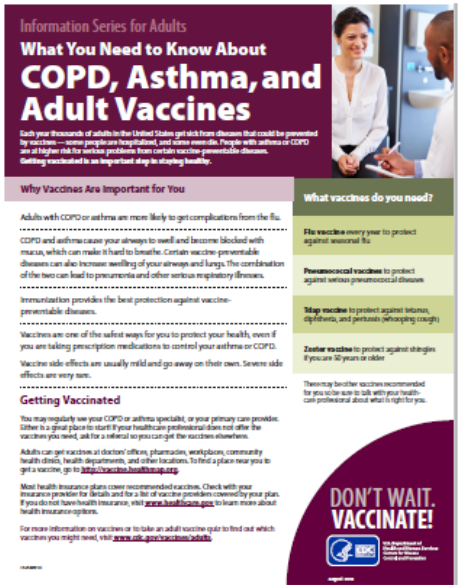
www.cdc.gov/vaccines/howirecommend/adult-vacc-videos.html

Medscape Module: How to Give a Strong Recommendation to Adult Patients Who Require Vaccination

- Case Presentations/Videos
- Older Adult
  - Zoster
  - PCV13
- Adult with Diabetes
  - Hep B
  - Influenza
- Pregnant Woman
  - Tdap
  - Influenza

www.medscape.com/viewarticle/842874

Fact Sheets: Vaccines and Chronic Diseases



https://www.cdc.gov/vaccines/adults/resources.html

THANK YOU!

For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

Vaccinating Adults with Chronic Conditions: Recommendations and Lessons Learned

SARAH COLES, MD
ASSISTANT PROFESSOR, DEPARTMENT OF FAMILY, COMMUNITY AND PREVENTIVE MEDICINE
UNIVERSITY OF ARIZONA COLLEGE OF MEDICINE – PHOENIX FAMILY MEDICINE RESIDENCY
BANNER UNIVERSITY MEDICAL CENTER – PHOENIX

Disclosures

- I participate on the ACIP Influenza and Child/Adolescent Schedule workgroups.
- I participate with the American Academy of Family Physicians Commission on Health of the Public and Science.
- I do not receive any financial compensation for these activities.

Case

M is a 59 year old with insulin dependent diabetes, heart failure with preserved ejection fraction, and fatty liver disease who presents for routine chronic disease follow up. He has not had any recent wellness examination. He does not know when he last had any vaccines. He says, “Maybe in the 90s?”

Needs Vaccines:

Influenza, Tdap or Td, MMR, RZV, PPSV23, Hepatitis A, Hepatitis B

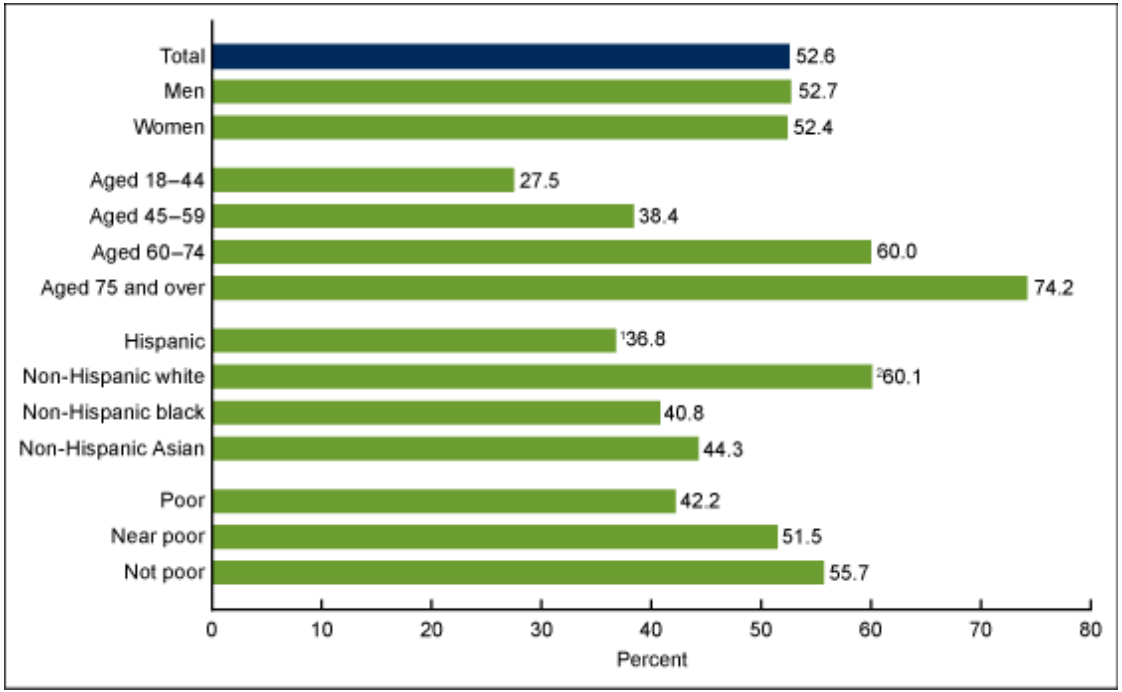
Challenges

PATIENTS	CLINICIANS
Poor access	Limited time for preventive care
Health literacy	Cost and Storage
Vaccine misconceptions and attitude	Reimbursement
Difficulty navigating the healthcare system	Knowledge and attitude
Cost	EHR
Lack of clear, strong recommendations from clinicians	Unaware of vaccine status
Needle fear	Competing priorities

Disparities

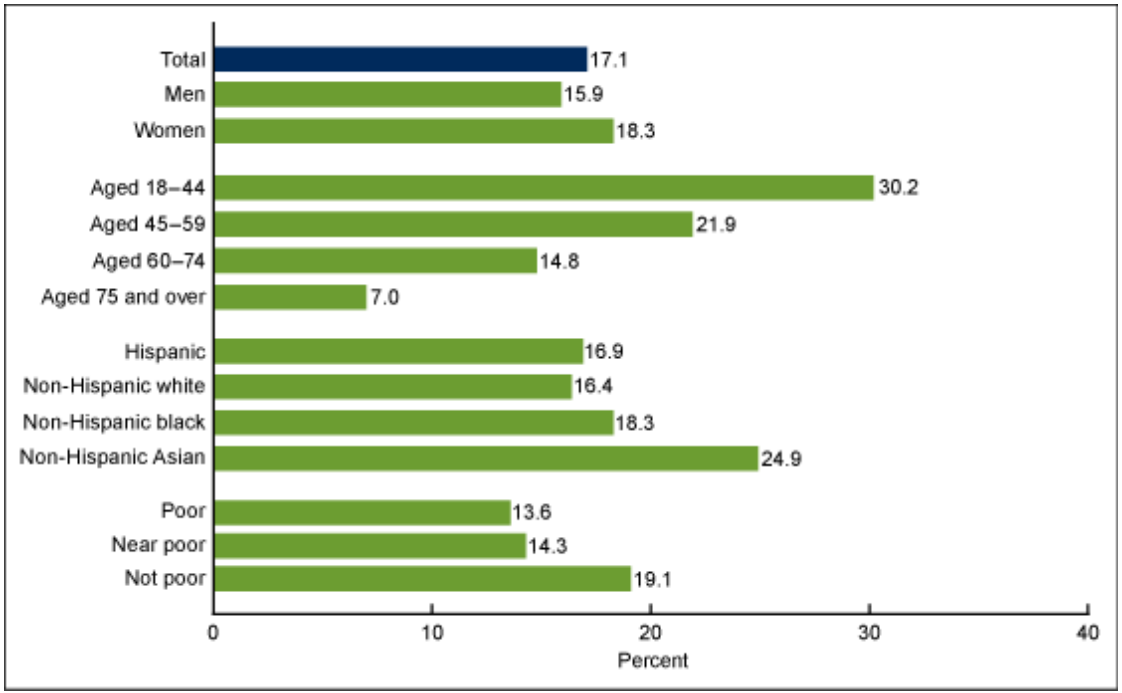
- With few exceptions, Black, Hispanic, and Asian adults have lower vaccination rates than White adults for routinely recommended vaccines
- Vaccine coverage is lower for those without health insurance
- Vaccine coverage is lower for those with public health insurance vs private health insurance
- Vaccine coverage is lower for rural individuals
- Vaccine coverage is lower for individuals living below the poverty line

Disparities: Pneumococcal Vaccine in Diabetes

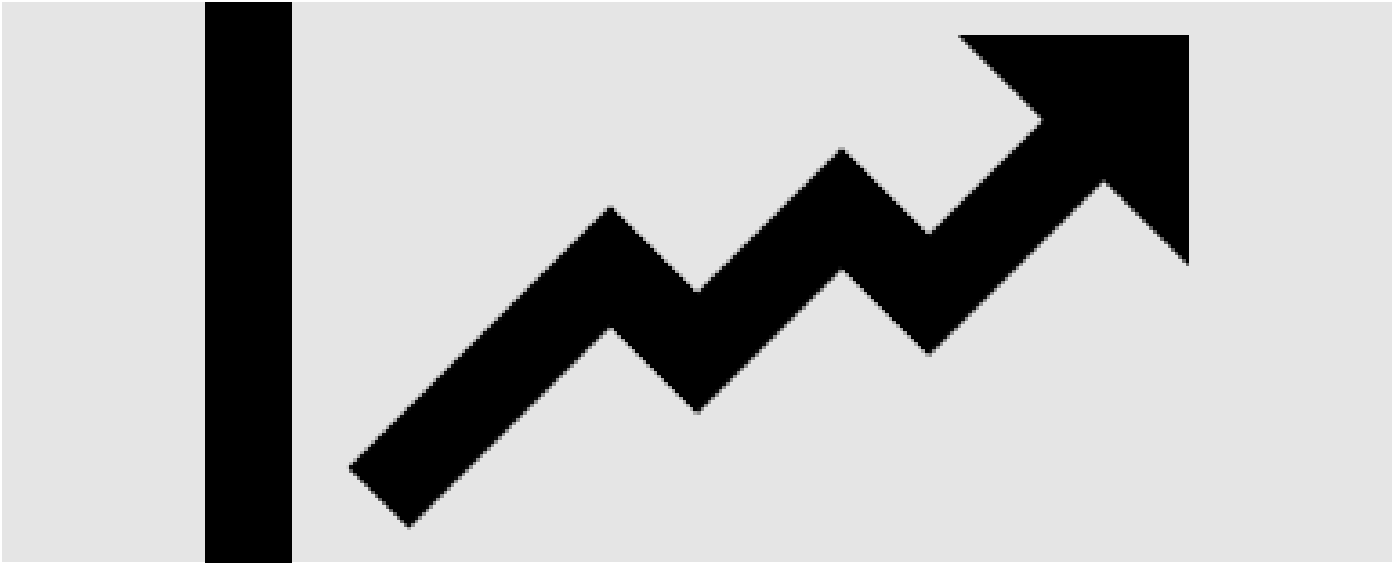


Villarroel MA, Vahratian A. Vaccination coverage among adults with diagnosed diabetes: United States, 2015. NCHS data brief, no. 265. Hyattsville, MD: National Center for Health Statistics. 2016.

Disparities: HepB Vaccine in Diabetes



Villarroel MA, Vahratian A. Vaccination coverage among adults with diagnosed diabetes: United States, 2015. NCHS data brief, no. 265. Hyattsville, MD: National Center for Health Statistics. 2016.



Strategies

Strong Recommendations

Every visit, every time	Give strong, favorable recommendation	Every team member participates
Use presumptive approach	Be persistent	Address concerns

Case

You give M a strong recommendation for vaccines. But M hesitates…

Address Hesitancy

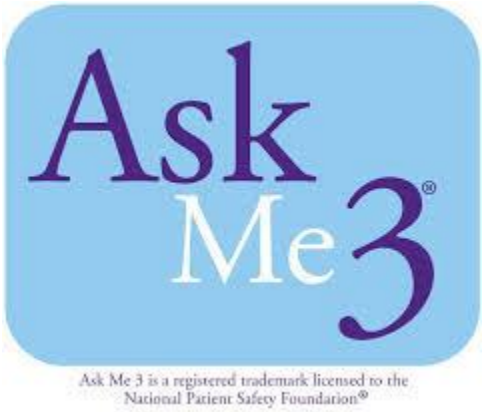
- Play It Cool:
  - Don’t anticipate push back or disagreements
  - Seek to understand their concerns before pressing your point
  - Be aware of and recognize misinformation in the community
  - Address specific safety concerns
  - Provide accurate education and resources: Educate on disease risks and vaccine safety
- Don’t Shut the Door:
  - Readdress over time
  - Avoid dismissing patients for not vaccinating
  - Invite questions and discussion

Shared decision making

FRAMEWORK	BEST PRACTICES
Identify options, including risks, benefits, and cost Check for understanding Elicit the patient's perspective Understand the psychosocial context – "It seems like…" Identify patient's goals Develop strategy to meet those goals	Be nonjudgmental Listen actively Focus on the patient Empathize Summarize Use nonverbal cues: Eye contact, facial expressions, open posture

Health Literacy Best Practices

- Written and spoken material at or below 8th grade reading level
- Utilize Teach Back technique
- “Ask Me 3”
  1. What is the problem?
  2. What do I need to do?
  3. Why is it important to do this?
- Avoid technical jargon



Make It Easy For Patients

- Increase access:
  - Open Access Scheduling
  - Extended hours
  - Home Visits
  - Group Visits
- Have stock on site of common vaccines
- Provide Reminders: Calls, letter, leaflets, postcard
- Review and recommend vaccines: Every visit, every time

Case

After engage in shared decision making, M agrees to vaccination (Phew!).

When you go to do your charting later that day, you noticed that M managed to leave your office without receiving HepA and HepB vaccines.

Make It Easy for Care Teams

Clinician incentives

- Reward for performance

Clinician education

- Get everyone comfortable with recommendations, safety, and adverse effects

Technology

- Utilize EHR, State Immunization Information Systems

Standing orders

- Develop protocols for vaccination without physician order

Team Based Care

- Engage entire team to meet vaccination goal

Physician Incentives

- Simple Strategies Work:
  - Reminding physicians to vaccinate all patients (OR 2.47, 1.53-3.99)
  - Posters in clinics presenting vaccination rates and encouraging competition between doctors (OR 2.03, 1.86-2.22)
  - Chart reviews and benchmarking to the rates achieved by the top 10% of physicians (OR 3.43, CI 2.37-4.97)

Clinician Education

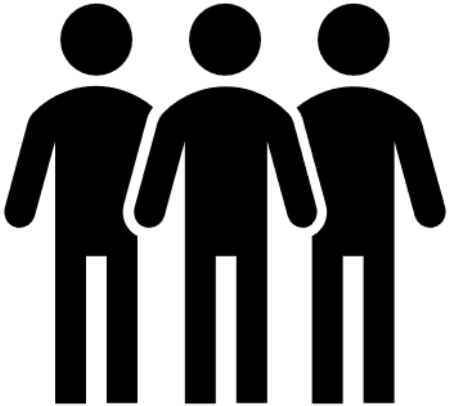
- Clinician knowledge may vary widely. May lack knowledge in:
  - Vaccine preventable illness
  - Indications, administration, side effects, safety
  - Storage and handling
  - Vaccine development
  - Adverse events reporting
  - Approval and evaluation process
  - Billing, coding, and documentation
  - Laws and regulations
- About 25% of physicians believe that recommendations for adults are difficult to follow

Standing Orders

- Written protocols that authorize designated members of the team to complete clinical task without obtaining physician order first
- Increases immunization rates
- To Implement:
  - Get support of clinical and administrative team
  - Carefully choose the targeted order
  - Have a champion
  - Write the standing order
    - Identify who is responsible for the task, which patient group it applies to, contraindications, and specific information including dose, route of administration
  - Implement the order
  - Reassess and update order as needed

Team Based Care

- Train all team members on:
  - Vaccine fundamentals
  - Giving strong recommendations
  - Communicating that vaccines are safe, necessary and effective
- Population Health Team
  - Case managers, nursing staff, medical assistants
- Registries
  - Identify target populations
  - Develop registry through EHR
  - Track and follow up patients



Office Champion Model

- Champion:
  - Identifies barriers
  - Develops workflows
  - Provides training
  - Creates a shared mission to build culture of vaccination
  - Is the “Go to” person for questions/concerns
  - Provides leadership opportunities

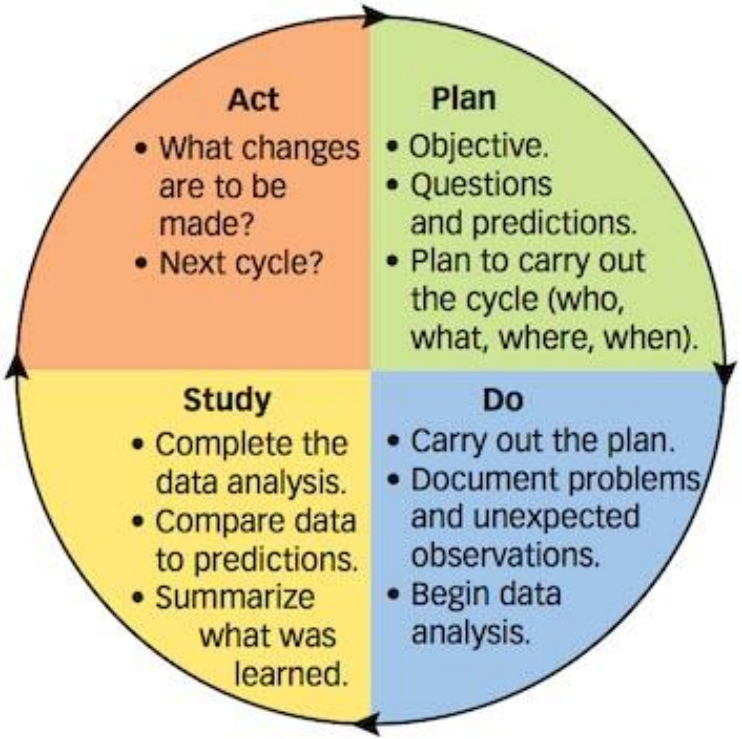
Technology

- EHR
  - Reminders and Prompts
  - Disease specific algorithms
    - Requires clinicians to code diagnoses appropriately
- Participate in the state immunization information systems
  - Ideally, EHR compatibility
  - No national IIS
  - Not as widely used for adults

Community Based Strategies for Offices

- Culturally sensitive programs and recommendations
  - Tailor to population being served
  - Utilize preferred language
- Engage partner organizations and respected community leaders
- Patient advisory council

Reduce Missed Opportunities and Improve Rates!



Case

Your population health team reaches out to M to arrange vaccination. M is going to make an appointment with you.

COVID-19

COVID-19

- Clinical preventive services reduced
- Wellness visits postponed
- Telemedicine prioritized over face to face encounters when possible
- Vaccinate when:
  - An in-person visit must be scheduled for another purpose
  - Compelling need for in-person visit and potential benefit outweighs the risk from COVID-19
- Keep track and readdress once safe

References

- Centers for Disease Control and Prevention. Vaccine-preventable diseases: improving vaccination coverage in children, adolescents, and adults. A report on recommendations of the Task Force on Community Preventive Services. *Morb Mortal Wkly Rep*. 1999;48.
- Center for Health Statistics N. *Table 69. Pneumococcal Vaccination among Adults Aged 18 and over, by Selected Characteristics: United States, Selected Years 1989–2016*. 2017. https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6140a4.htm
- Hashim MJ. Patient-Centered Communication: Basic Skills. *Am Fam Physician*. 2017;95(1):29-34.
- Dubé E, Gagnon D, MacDonald NE; the SAGE Working Group on Vaccine Hesitancy. Strategies intended to address vaccine hesitancy: review of published reviews. *Vaccine*. 2015;33(34):4191–4203.
- IHI Ask Me 3: http://www.ihi.org/resources/Pages/Tools/Ask-Me-3-Good-Questions-for-Your-Good-Health.aspx
- Immunization Action Coalition. 10 steps to implementing standing orders for immunization in your practice setting. https://bit.ly/1S5qFTe
- Institute for Safe Medication Practices. Guidelines for standard order sets. http://bit.ly/2FVwEQh. January 12, 2010. Accessed March 15, 2018.
- Norris T, Vahratian A, Cohen RA. Vaccination Coverage Among Adults Aged 65 and Over: United States, 2015. *NCHS Data Brief*. 2017;(281):1-8.
- Thomas RE, Lorenzetti DL. Interventions to increase influenza vaccination rates of those 60 years and older in the community. *Cochrane Database of Systematic Reviews* 2018, Issue 5. Art. No.: CD005188. DOI: 10.1002/14651858.CD005188.pub4.
- Villarroel MA, Vahratian A. Vaccination coverage among adults with diagnosed diabetes: United States, 2015. NCHS data brief, no. 265. Hyattsville, MD: National Center for Health Statistics. 2016.
- Vlahov et al. “Strategies for Improving Influenza Immunization Rates among Hard to Reach Populations.” *Journal of Urban Health: Bulletin of the New York Academy of Medicine. Vol 84. No 4. 2007.*
- Williams WW, Lu P-J, O’Halloran A, et al. Surveillance of Vaccination Coverage among Adult Populations — United States, 2015. *MMWR Surveill Summ*. 2017;66(11):1-28. doi:10.15585/mmwr.ss6611a1.

Questions?

Dr. Tara Jatlaoui

Dr. Sarah Coles

Thank You!

Webinar archive will be available at:

www.phf.org/immunization

Questions or comments?

immunization@phf.org