Improving Adult Immunization Rates: Resources and Ideas for Medicare Providers

A Webinar from NAIIS Provider Workgroup in Support of QIN-QIOs

Susan Farrall and Aparna Ramakrishnan

National Adult and Influenza Immunization Summit

Goals of Presentation

To offer useful tips, resources and lessond learned for Medicare providers who seek to:

- **Make the assessment of their patients' immunization status more routine**
- **Improve immunization rates of their Medicare patients**
- **Increase documentation of their patients' immunization status in immunization registries.**

National Adult and Influenza Immunization Summit

National Adult and Influenza Immunization Summit

- This presentation: From the Provider Workgroup, one of five workgroups of the NAIIS.
- A synthesis of best practices, lessons learned and resources coming the workgroup members.
- Our Workgroup's Mission: How to make vaccines a "winning proposition" for healthcare providers.

National Adult and Influenza Immunization Summit

National Adult and Influenza Immunization Summit.

- Summit annual meeting in Atlanta, May 10 to 12, 2016.
- Summit awards, including publication award
- Best practices highlighted
- www.izsummitpartners.org

National Adult and Influenza Immunization Summit

Let’s hear from you:

RE: Adult Immunization

How is this progressing?

What are your challenges ?

National Adult and Influenza Immunization Summit

Segments of the Webinar

- Burden of Vaccine-Preventable Diseases in Adults.
- Assessing the Immunization Needs of Your Patients
- Talking with Your Patients About Vaccines: Resources and Lessons Learned
- Increasing Immunization Rates: Resources and Lessons Learned

National Adult and Influenza Immunization Summit

Burden of Disease among Adults from Vaccine-Preventable Diseases

National Adult and Influenza Immunization Summit

Burden of Disease Among U.S. Adults for Diseases with Vaccines Available

- **Influenza disease burden varies year to year**
  - Millions of cases and average of 226,000 hospitalizations annually with >75% among adults[1]
  - 3,000-49,000 deaths annually, >90% among adults[2]
- **Invasive pneumococcal disease (IPD)[3]**
  - 39,750 total cases and 4,000 total deaths in 2010
    - 86% of IPD cases and nearly all IPD deaths among adults
- **Pertussis (also known as whooping cough)[4]**
  - ~28,000 cases per year for 2013 and 2014
    - ~9,000 among adults
- **Hepatitis B[5]**
  - 3,350 acute cases reported 2010
    - 35,000 estimated cases
- **Zoster (also known as shingles)[6]**
  - About 1 million cases of zoster annually U.S.

National Adult and Influenza Immunization Summit

1. Thompson WW, et al. Influenza-Associated Hospitalizations in the United States. JAMA 2004; 292: 1333-1340
2. CDC. Estimates of deaths associated with seasonal influenza – United States, 1976-2007. MMWR. 2010;59(33):1057-1062.
3. CDC. Active Bacterial Core Surveillance. http://www.cdc.gov/abcs/reports-findings/survreports/spneu10.pdf.
4. CDC. Notifiable Diseases and Mortality Tables. MMWR 2013. 61(51&52): ND-719 – ND 732.
5. CDC. Viral Hepatitis Surveillance United States, 2010. National Center for HIV/AIDS, Viral Hepatitis, STD& TB Prevention/Division of Viral Hepatitis.
6. CDC. Prevention of Herpes Zoster. MMWR 2008. 57(RR-5): 1-30.

Influenza costs lives and money

- **Direct medical costs in U.S.: ~$10.4 billion**
- **Add in loss of work and life: ~$87 billion**
- **Vaccination (41% in 2013-14) prevented:**
  - 7+ million illnesses
  - 3+ million medically-attended illnesses
  - 90,000+ hospitalizations

National Adult and Influenza Immunization Summit

- Molinari, et al. The annual impact of seasonal influenza in the US: Measuring disease burden and costs. *Vaccine* 2007;25 :5086–5096.
- Reed, et al. Estimated Influenza Illnesses and Hospitalizations Averted by Vaccination — United States, 2013–14 Influenza Season *MMWR* 2014:63(49);1151-1154.

Key Adult Immunization Facts

- Challenges
  - Vaccine coverage among adults is unacceptably low
  - Limited patient awareness about need for vaccines among adults
  - Adult vaccinations less integrated into clinical practice
- Opportunities
  - Most patients willing to get vaccinated when recommended by medical providers
  - Primary care providers believe that immunizations are an important part of the services they provide to patients
  - Systematic offering and recommendations from clinicians result in higher uptake

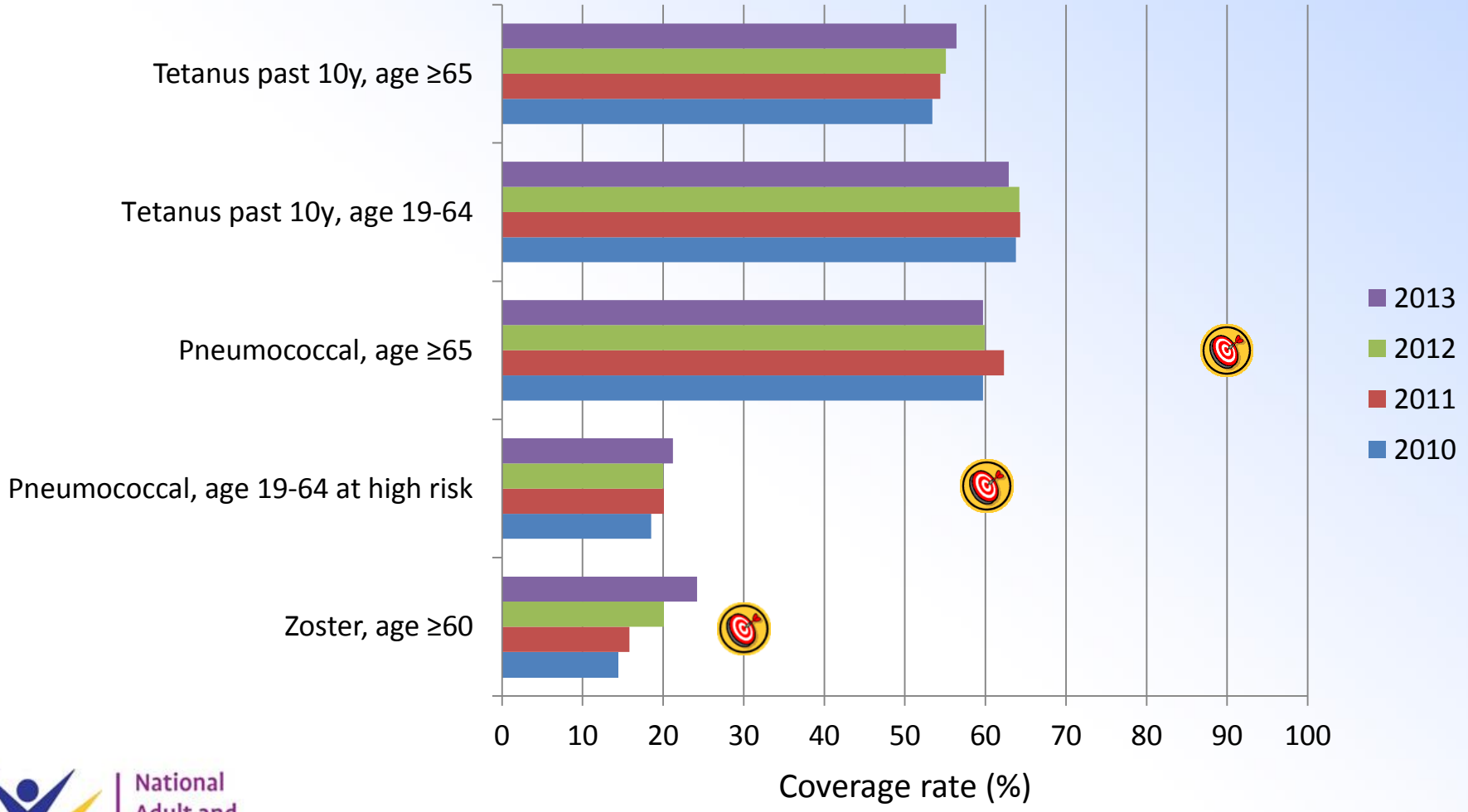
National Adult and Influenza Immunization Summit

- Hurley, et al. Annals of Internal Medicine, 2014.
- Guide to community preventive services: www.thecommunityguide.org/vaccines/index.html
- Adult non-influenza vaccine coverage: www.cdc.gov/mmwr/preview/mmwrhtml/mm6305a4.htm.

Vaccination Coverage Rates

National
Adult and
Influenza
Immunization
Summit

Adult Immunization Coverage Rates 2010 - 2013



Source: National Health Interview Surveys

: Healthy People 2020 target

National Adult and Influenza Immunization Summit

Disparities In Adult Immunization Rates

- Lower vaccine coverage among[1]
  - Hispanics and African Americans compared to non-Hispanic Caucasians
  - Uninsured
  - Lower incomes
- Disparities in zoster vaccination among older adults: Increasing
- For newly insured adults
  - Affordable Care Act (ACA) requires non-grandfathered private plans to include coverage for ACIP-recommended vaccines
  - Especially important to conduct assessment among newly insured

National Adult and Influenza Immunization Summit

1. Lu, P-J, et al. Am J Prev Med 2015 (in press)

Assessing Vaccination Status: Which Vaccines Does My Patient Need?

National Adult and Influenza Immunization Summit

Recommended Adult Vaccines

Recommended Adult Immunization Schedule—United States - 2015

Note: These recommendations must be read with the footnotes that follow containing number of doses, intervals between doses, and other important information.

Figure 1. Recommended adult immunization schedule, by vaccine and age group[1]

VACCINE ▼ / AGE GROUP ►	19-21 years	22-26 years	27-49 years	50-59 years	60-64 years	≥ 65 years
Influenza*,[2]	1 dose annually					
Tetanus, diphtheria, pertussis (Td/Tdap)*,[3]	Substitute 1-time dose of Tdap for Td booster; then boost with Td every 10 yrs					
Varicella*,[4]	2 doses					
Human papillomavirus (HPV) Female*,[5]	3 doses					
Human papillomavirus (HPV) Male*,[5]	3 doses					
Zoster[6]					1 dose	
Measles, mumps, rubella (MMR)*,[7]	1 or 2 doses					
Pneumococcal 13-valent conjugate (PCV13)*,[8]	1-time dose					
Pneumococcal polysaccharide (PPSV23)[8]	1 or 2 doses					1 dose
Meningococcal*,[9]	1 or more doses					
Hepatitis A*,[10]	2 doses					
Hepatitis B*,[11]	3 doses					
Haemophilus influenzae type b (Hib)*,[12]	1 or 3 doses					

*Covered by the Vaccine Injury Compensation Program

- For all persons in this category who meet the age requirements and who lack documentation of vaccination or have no evidence of previous infection; zoster vaccine recommended regardless of prior episode of zoster
- Recommended if some other risk factor is present (e.g., on the basis of medical, occupational, lifestyle, or other indication)
- No recommendation

Report all clinically significant postvaccination reactions to the Vaccine Adverse Event Reporting System (VAERS). Reporting forms and instructions on filing a VAERS report are available at www.vaers.hhs.gov or by telephone, 800-822-7967.

Information on how to file a Vaccine Injury Compensation Program claim is available at www.hrsa.gov/vaccinecompensation or by telephone, 800-338-2382. To file a claim for vaccine injury, contact the U.S. Court of Federal Claims, 717 Madison Place, N.W., Washington, D.C. 20005; telephone, 202-357-6400.

Additional information about the vaccines in this schedule, extent of available data, and contraindications for vaccination is also available at www.cdc.gov/vaccines or from the CDC-INFO Contact Center at 800-CDC-INFO (800-232-4636) in English and Spanish, 8:00 a.m. - 8:00 p.m. Eastern Time, Monday - Friday, excluding holidays.

Use of trade names and commercial sources is for identification only and does not imply endorsement by the U.S. Department of Health and Human Services.

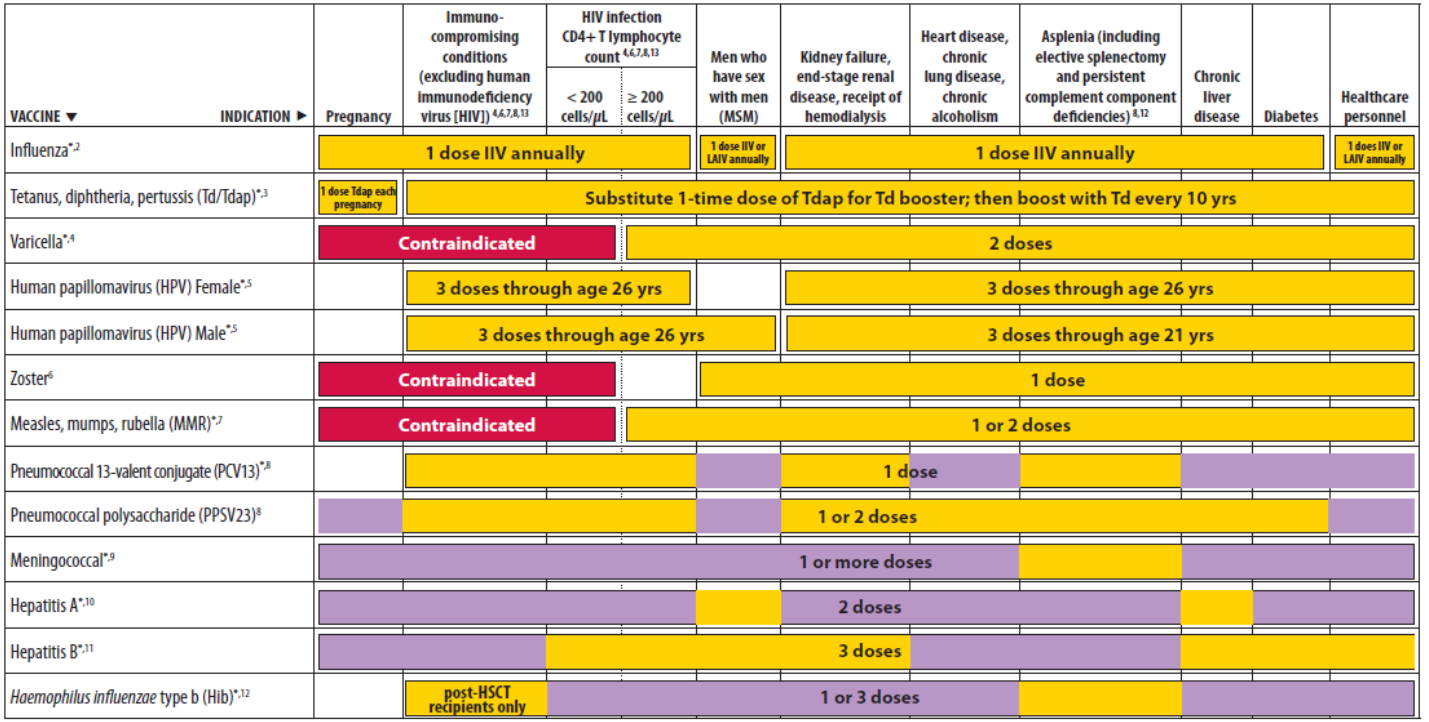
The recommendations in this schedule were approved by the Centers for Disease Control and Prevention's (CDC) Advisory Committee on Immunization Practices (ACIP), the American Academy of Family Physicians (AAFP), the America College of Physicians (ACP), American College of Obstetricians and Gynecologists (ACOG) and American College of Nurse-Midwives (ACNM).

National Adult and Influenza Immunization Summit

www.cdc.gov/vaccines/schedules/hcp/adult.html

Recommended Adult Vaccines

Figure 2. Vaccines that might be indicated for adults based on medical and other indications[1]



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

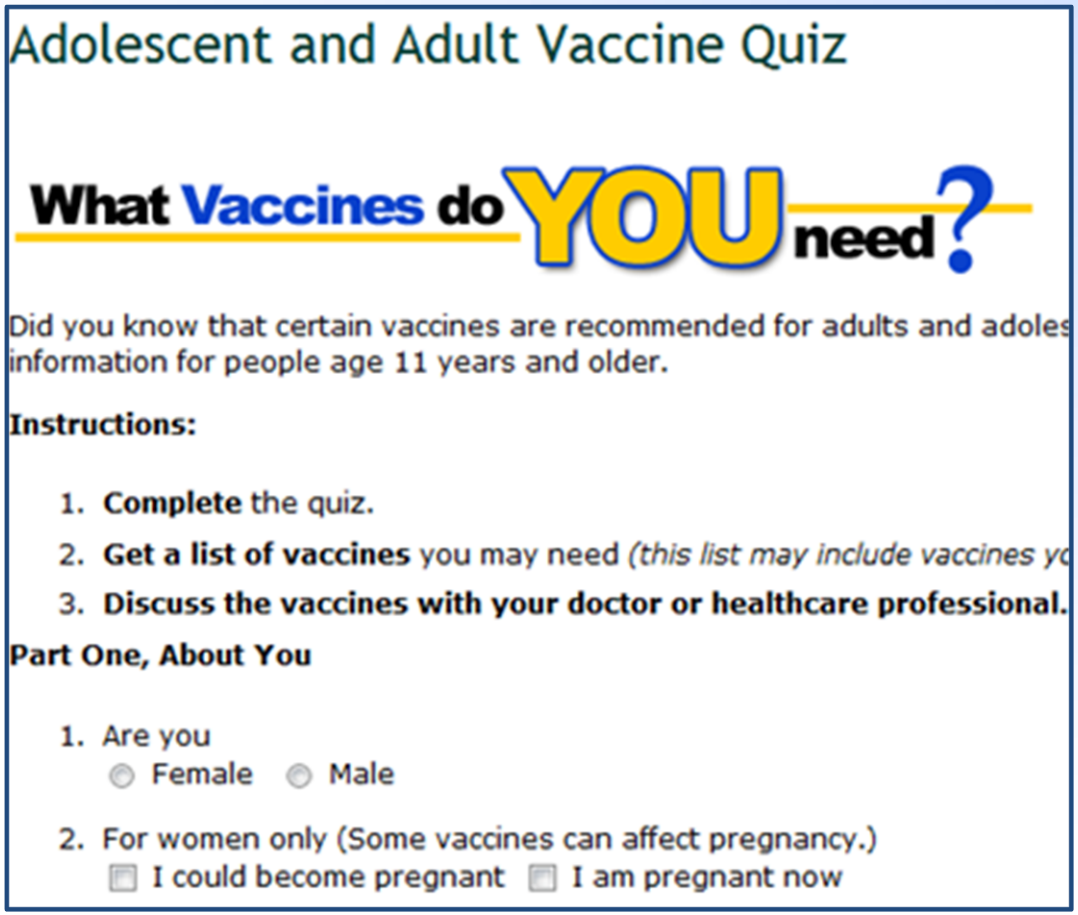
These schedules indicate the recommended age groups and medical indications for which administration of currently licensed vaccines is commonly recommended for adults ages 19 years and older, as of February 1, 2015. For all vaccines being recommended on the Adult Immunization Schedule: a vaccine series does not need to be restarted, regardless of the time that has elapsed between doses. Licensed combination vaccines may be used whenever any components of the combination are indicated and when the vaccine's other components are not contraindicated. For detailed recommendations on all vaccines, including those used primarily for travelers or that are issued during the year, consult the manufacturers' package inserts and the complete statements from the Advisory Committee on Immunization Practices (www.cdc.gov/vaccines/hcp/acip-recs/index.html). Use of trade names and commercial sources is for identification only and does not imply endorsement by the U.S. Department of Health and Human Services.

National Adult and Influenza Immunization Summit

www.cdc.gov/vaccines/schedules/hcp/adult.html

Good Starting Point: Adult Immunization Quiz

CDC offers an online quiz for patients:
http://www2.cdc.gov/nip/adultimmsched/



Adolescent and Adult Vaccine Quiz

What Vaccines do YOU need?

Did you know that certain vaccines are recommended for adults and adoles
information for people age 11 years and older.

Instructions:

1. **Complete** the quiz.
2. **Get a list of vaccines** you may need *(this list may include vaccines yo*
3. **Discuss the vaccines with your doctor or healthcare professional.**

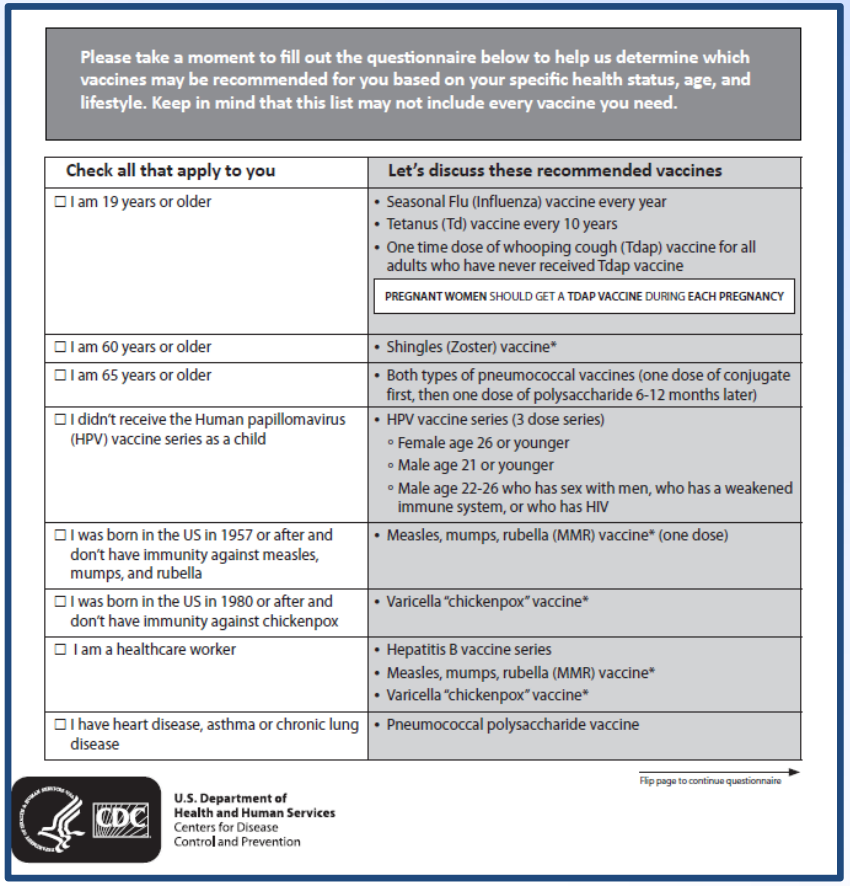
Part One, About You

1. Are you
   Female Male
2. For women only (Some vaccines can affect pregnancy.)
   I could become pregnant I am pregnant now

National Adult and Influenza Immunization Summit

Patient Intake Tool

This CDC tool will help you assess the immunization needs of your adult patients.



Please take a moment to fill out the questionnaire below to help us determine which vaccines may be recommended for you based on your specific health status, age, and lifestyle. Keep in mind that this list may not include every vaccine you need.

Check all that apply to you	Let's discuss these recommended vaccines
☐ I am 19 years or older	• Seasonal Flu (Influenza) vaccine every year • Tetanus (Td) vaccine every 10 years • One time dose of whooping cough (Tdap) vaccine for all adults who have never received Tdap vaccine **PREGNANT WOMEN** SHOULD GET A **TDAP VACCINE** DURING **EACH PREGNANCY**
☐ I am 60 years or older	• Shingles (Zoster) vaccine*
☐ I am 65 years or older	• Both types of pneumococcal vaccines (one dose of conjugate first, then one dose of polysaccharide 6-12 months later)
☐ I didn't receive the Human papillomavirus (HPV) vaccine series as a child	• HPV vaccine series (3 dose series) ◦ Female age 26 or younger ◦ Male age 21 or younger ◦ Male age 22-26 who has sex with men, who has a weakened immune system, or who has HIV
☐ I was born in the US in 1957 or after and don't have immunity against measles, mumps, and rubella	• Measles, mumps, rubella (MMR) vaccine* (one dose)
☐ I was born in the US in 1980 or after and don't have immunity against chickenpox	• Varicella "chickenpox" vaccine*
☐ I am a healthcare worker	• Hepatitis B vaccine series • Measles, mumps, rubella (MMR) vaccine* • Varicella "chickenpox" vaccine*
☐ I have heart disease, asthma or chronic lung disease	• Pneumococcal polysaccharide vaccine

Flip page to continue questionnaire

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

National Adult and Influenza Immunization Summit

http://www.cdc.gov/vaccines/hcp/patient-ed/adults/downloads/patient-intake-

Examples of Assessment Tools

Patient vaccine needs- assessment form from Immunization Action Coalition at immunize.org.
Consider **H**ealth, **A**ge, **L**ifestyle and **O**ccupation/Other Factors

H-A-L-O

Before you vaccinate adults, consider their "H-A-L-O"!

What is H-A-L-O? As shown below, it's an easy-to-use chart that can help you make an *initial* decision about vaccinating a patient based on four factors—the patient's **H**ealth condition, **A**ge, **L**ifestyle, and **O**ccupation. In some situations, though, you can vaccinate a patient without considering these factors. For example, all adults need a dose of Tdap as well as annual vaccination against influenza, and any adult who wants protection against hepatitis A or hepatitis B can be vaccinated. Note that not all patients who mention one or more **H-A-L-O** factors will need to be vaccinated. Before you make a *definitive* decision about vaccinating your patient, it's important that you refer to the more detailed information found in the Immunization Action Coalition's "Summary of Recommendations for Adult Immunization," located at www.immunize.org/catg.d/p2011.pdf or the complete vaccine recommendations of the Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices (ACIP) at www.cdc.gov/vaccines/pubs/ACIP-list.htm.

How do I use H-A-L-O? Though some **H-A-L-O** factors can be easily determined (e.g., age, pregnancy), you will need to ask your patient about the presence or absence of others. Once you determine which of the factors apply, scan down each column of the chart to see at a glance which vaccinations are *possibly* indicated (they are shown with a check mark).

H-A-L-O checklist of factors that indicate a possible need for adult vaccination

Vaccine	**H**ealth factors									**A**ge factors	**L**ifestyle factors							**O**ccupational or other factors				
	Pregnant	Certain chronic diseases	Immunosuppressed (including HIV)	History of STD	Asplenia	Cochlear implant candidate/recipient	Organ transplant (for stem cell transplant see CDC guidelines; Recommendations on Immunization)	CSF leaks	Alcoholism		Born outside the U.S.	Men who have sex with men	Not in a long-term, mutually monogamous relationship	User of injecting or non-injecting drugs	International traveler	Close contact of international adoptee	Cigarette smoker	College students	Parent or caregiver of a young child	Healthcare worker	Certain lab workers	Adults in institutional settings (e.g., chronic care, correctional)
HepA		✔										✔		✔	✔	✔					✔	
HepB		✔	✔	✔							✔	✔	✔	✔	✔					✔		✔
Hib		✔	✔		✔																	
HPV (females)										Through 26 yrs												
HPV (males)			✔							Routine through 21 yrs; risk-based 22–26 yrs		✔										
IPV															✔						✔	
Influenza	Annual vaccination is recommended for all adults ····►																					
Meningococcal		✔			✔										✔			✔			✔	
MMR			?							Routine 1 dose if born after 1956; 2nd dose for some					✔			✔		✔		
PCV13		✔	✔		✔	✔	✔	✔														
PPSV23		✔	✔		✔	✔	✔	✔	✔	65 yrs & older							✔					✔
Tdap	A single dose is recommended for all adults; pregnant women should receive Tdap during each pregnancy ····►																					
Varicella	Completion of a 2-dose series is recommended for non-pregnant adults through age 59 years who do not have evidence of immunity to varicella ····►																					
Zoster										60 yrs & older												

? = Vaccination may be indicated depending on degree of immunosuppression.

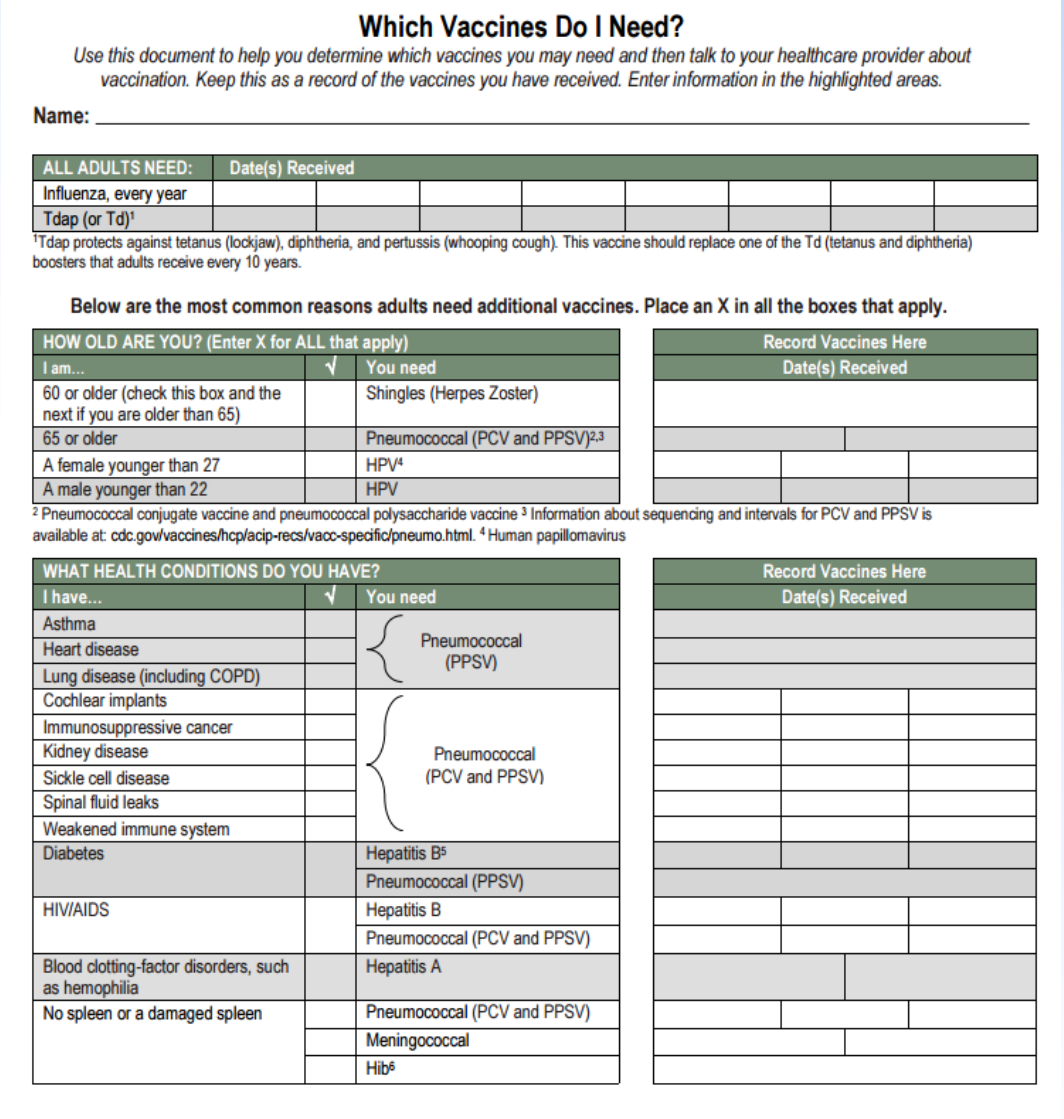
IMMUNIZATION ACTION COALITION 1573 Selby Avenue • St. Paul, MN 55104 • 651-647-9009 • www.immunize.org • www.vaccineinformation.org

Technical content reviewed by the Centers for Disease Control and Prevention
www.immunize.org/catg.d/p3070.pdf • Item #P3070 (11/13)

National Adult and Influenza Immunizat Summit

Examples of Assessment Tools

Adult patient vaccine needs-assessment form from National Foundation for Infectious Diseases at NFID.org



Which Vaccines Do I Need?

Use this document to help you determine which vaccines you may need and then talk to your healthcare provider about vaccination. Keep this as a record of the vaccines you have received. Enter information in the highlighted areas.

Name: _____

ALL ADULTS NEED:	Date(s) Received							
Influenza, every year								
Tdap (or Td)[1]								

[1]Tdap protects against tetanus (lockjaw), diphtheria, and pertussis (whooping cough). This vaccine should replace one of the Td (tetanus and diphtheria) boosters that adults receive every 10 years.

Below are the most common reasons adults need additional vaccines. Place an X in all the boxes that apply.

HOW OLD ARE YOU? (Enter X for ALL that apply)			Record Vaccines Here
I am...	√	You need	Date(s) Received
60 or older (check this box and the next if you are older than 65)		Shingles (Herpes Zoster)	
65 or older		Pneumococcal (PCV and PPSV)[2,3]	
A female younger than 27		HPV[4]	
A male younger than 22		HPV	

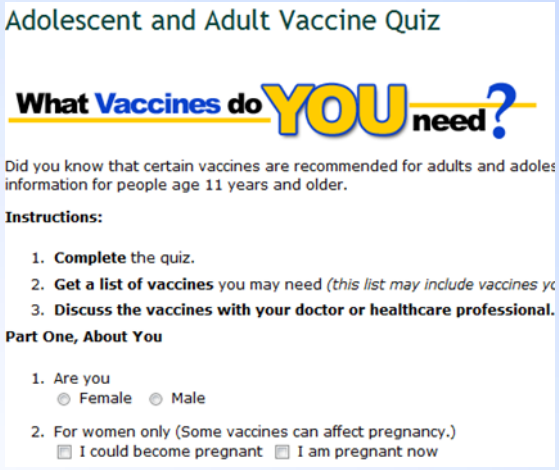
[2] Pneumococcal conjugate vaccine and pneumococcal polysaccharide vaccine [3] Information about sequencing and intervals for PCV and PPSV is available at: cdc.gov/vaccines/hcp/acip-recs/vacc-specific/pneumo.html. [4] Human papillomavirus

WHAT HEALTH CONDITIONS DO YOU HAVE?			Record Vaccines Here
I have...	√	You need	Date(s) Received
Asthma		Pneumococcal (PPSV)	
Heart disease			
Lung disease (including COPD)			
Cochlear implants		Pneumococcal (PCV and PPSV)	
Immunosuppressive cancer			
Kidney disease			
Sickle cell disease			
Spinal fluid leaks			
Weakened immune system			
Diabetes		Hepatitis B[5]	
		Pneumococcal (PPSV)	
HIV/AIDS		Hepatitis B	
		Pneumococcal (PCV and PPSV)	
Blood clotting-factor disorders, such as hemophilia		Hepatitis A	
No spleen or a damaged spleen		Pneumococcal (PCV and PPSV)	
		Meningococcal	
		Hib[6]	

National Adult and Influenza Immunization Summit

Resources For Assessing Immunization Status of Your Patients

- Patient **check-in vaccine questionnaire** to be used at clinics: http://www.cdc.gov/vaccines/hcp/patient-ed/adults/downloads/patient-intake-form.pdf.
- **H-A-L-O** – vaccine needs questionnaire based on your patient's **H**ealth condition, **A**ge, **L**ifestyle, and **O**ccupation at http://www.immunize.org/catg.d/p3070.pdf.
- Patient **on-line quiz** – direct patients to complete the quiz before coming to their appointment – gives them and you a starting point for talking about which vaccines they might need. http://www2.cdc.gov/nip/adultimmsched/.
- CDC adult **vaccine schedule app** at http://www.cdc.gov/vaccines/schedules/hcp/schedule-app.html.


Adolescent and Adult Vaccine Quiz

What Vaccines do YOU need?

Did you know that certain vaccines are recommended for adults and adoles
information for people age 11 years and older.

Instructions:

1. **Complete** the quiz.
2. **Get a list of vaccines** you may need *(this list may include vaccines yo*
3. **Discuss the vaccines with your doctor or healthcare professional.**

Part One, About You

1. Are you
   Female Male
2. For women only (Some vaccines can affect pregnancy.)
   I could become pregnant I am pregnant now

National Adult and Influenza Immunization Summit

Talking About Vaccines with Your Adult Patients

Aparna Ramakrishnan
Senior Health Communication Specialist, Northrup Grumman Contractor
for CDC NCIRD Health Communication Science Office

National Adult and Influenza Immunization Summit

Key Research Findings

- Adults believe VPDs can be serious and vaccines are important, especially for certain groups.
- Awareness and knowledge of vaccines recommended for adults besides influenza is low.
- **HCP recommendation is #1 reported factor in influencing vaccination decisions, but adults perceive receiving few vaccine recommendations**.
- Adults are motivated to get vaccines to protect their own health and many would get a vaccine in order to protect loved ones as well.
- Adults do have some concerns about the safety and side effects of vaccines as well as questions about vaccine effectiveness and cost.

What Adult Patients Want to Know

- How likely am I to get the disease?
- How serious could the disease be for me?
- How well the vaccine would work? Could I still get the disease?
- What are the side effects?
- How much will this cost me?

IS THE VACCINE RIGHT FOR ME?

Adults want TAILORED information to make an informed decision.

National Adult and Influenza Immunization Summit

Vaccine Recommendation: Facilitating Factors

- Tailoring recommendations
- Providers sharing that they have been vaccinated
- Ongoing conversation about vaccines and continued reminders/recommendations
- Timing of recommendation
- Patient awareness and knowledge about vaccines

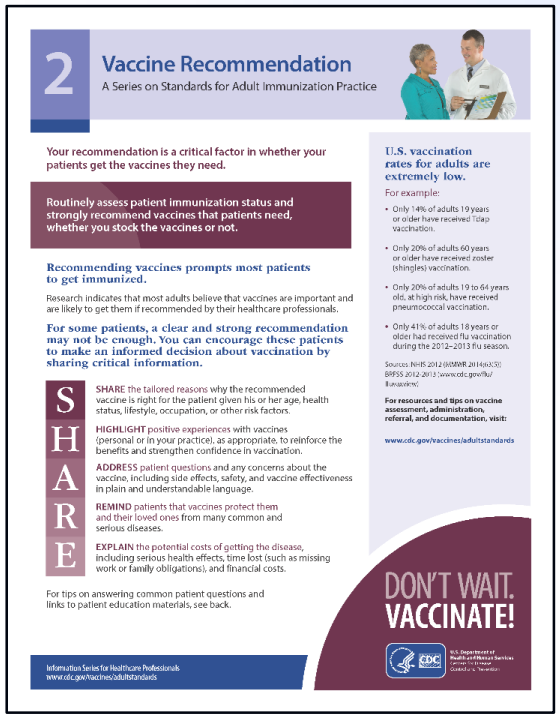
Communication with Adults

- Stress the **relevance and importance** of timely vaccination for protection.
  - Highlight susceptibility: All adults are at risk for VPDs.
  - Explain severity and potential costs of getting VPDs.
- Use **empowering** messages and highlight the **benefits** of vaccination.
  - Getting vaccinated is part of staying healthy.
- Provide **transparent and plain language** information on VPDs and vaccines, including safety, efficacy, and how to get vaccinated.
- **Tailor** information as much as possible.

SHARE Critical Information

- **S**hare the tailored reasons why the recommended vaccine is right for the patient given age, health status, lifestyle, job, or other risk factors.
- **H**ighlight positive experiences with vaccines to reinforce benefits and strengthen confidence in vaccination.
- **A**ddress patient questions and any concerns about vaccines, including side effects, safety, and vaccine effectiveness, in plain and understandable language.
- **R**emind patients that vaccines protect them and their loved ones from many common and serious diseases.
- **E**xplain the potential costs of getting VPDs, including serious health effects, time lost (such as missing work or family obligations), and financial costs.

VACCINE RECOMMENDATION TIP SHEET



2 Vaccine Recommendation

A Series on Standards for Adult Immunization Practice

Your recommendation is a critical factor in whether your patients get the vaccines they need.

Routinely assess patient immunization status and strongly recommend vaccines that patients need, whether you stock the vaccines or not.

Recommending vaccines prompts most patients to get immunized.

Research indicates that most adults believe that vaccines are important and are likely to get them if recommended by their healthcare professionals.

For some patients, a clear and strong recommendation may not be enough. You can encourage these patients to make an informed decision about vaccination by sharing critical information.

S H A R E

SHARE the tailored reasons why the recommended vaccine is right for the patient given his or her age, health status, lifestyle, occupation, or other risk factors.

HIGHLIGHT positive experiences with vaccines (personal or in your practice), as appropriate, to reinforce the benefits and strengthen confidence in vaccination.

ADDRESS patient questions and any concerns about the vaccine, including side effects, safety, and vaccine effectiveness in plain and understandable language.

REMIND patients that vaccines protect them and their loved ones from many common and serious diseases.

EXPLAIN the potential costs of getting the disease, including serious health effects, time lost (such as missing work or family obligations), and financial costs.

For tips on answering common patient questions and links to patient education materials, see back.

U.S. vaccination rates for adults are extremely low.

For example:

- Only 14% of adults 19 years or older have received Tdap vaccination.
- Only 20% of adults 60 years or older have received zoster (shingles) vaccination.
- Only 20% of adults 19 to 64 years old, at high risk, have received pneumococcal vaccination.
- Only 41% of adults 18 years or older had received flu vaccination during the 2012–2013 flu season.

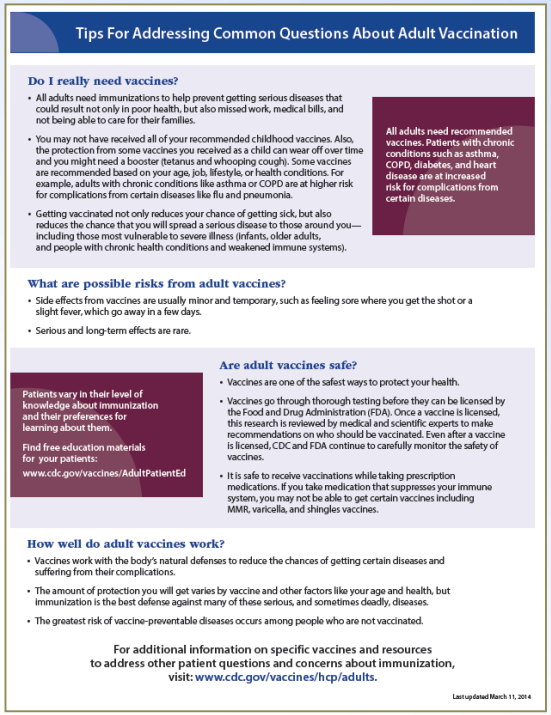
Sources: NHIS 2012 (MMWR 2014;63); BRFSS 2012-2013 (www.cdc.gov/flu/fluvaxview/

For resources and tips on vaccine assessment, administration, referral, and documentation, visit:

www.cdc.gov/vaccines/adultstandards

DON'T WAIT. VACCINATE!

Information Series for Healthcare Professionals
www.cdc.gov/vaccines/adultstandards



Tips For Addressing Common Questions About Adult Vaccination

Do I really need vaccines?

- All adults need immunizations to help prevent getting serious diseases that could result not only in poor health, but also missed work, medical bills, and not being able to care for their families.
- You may not have received all of your recommended childhood vaccines. Also, the protection from some vaccines you received as a child can wear off over time and you might need a booster (tetanus and whooping cough). Some vaccines are recommended based on your age, job, lifestyle, or health conditions. For example, adults with chronic conditions like asthma or COPD are at higher risk for complications from certain diseases like flu and pneumonia.
- Getting vaccinated not only reduces your chance of getting sick, but also reduces the chance that you will spread a serious disease to those around you—including those most vulnerable to severe illness (infants, older adults, and people with chronic health conditions and weakened immune systems).

All adults need recommended vaccines. Patients with chronic conditions such as asthma, COPD, diabetes, and heart disease are at increased risk for complications from certain diseases.

What are possible risks from adult vaccines?

- Side effects from vaccines are usually minor and temporary, such as feeling sore where you get the shot or a slight fever, which go away in a few days.
- Serious and long-term effects are rare.

Patients vary in their level of knowledge about immunization and their preferences for learning about them.

Find free education materials for your patients:
www.cdc.gov/vaccines/AdultPatientEd

Are adult vaccines safe?

- Vaccines are one of the safest ways to protect your health.
- Vaccines go through thorough testing before they can be licensed by the Food and Drug Administration (FDA). Once a vaccine is licensed, this research is reviewed by medical and scientific experts to make recommendations on who should be vaccinated. Even after a vaccine is licensed, CDC and FDA continue to carefully monitor the safety of vaccines.
- It is safe to receive vaccinations while taking prescription medications. If you take medication that suppresses your immune system, you may not be able to get certain vaccines including MMR, varicella, and shingles vaccines.

How well do adult vaccines work?

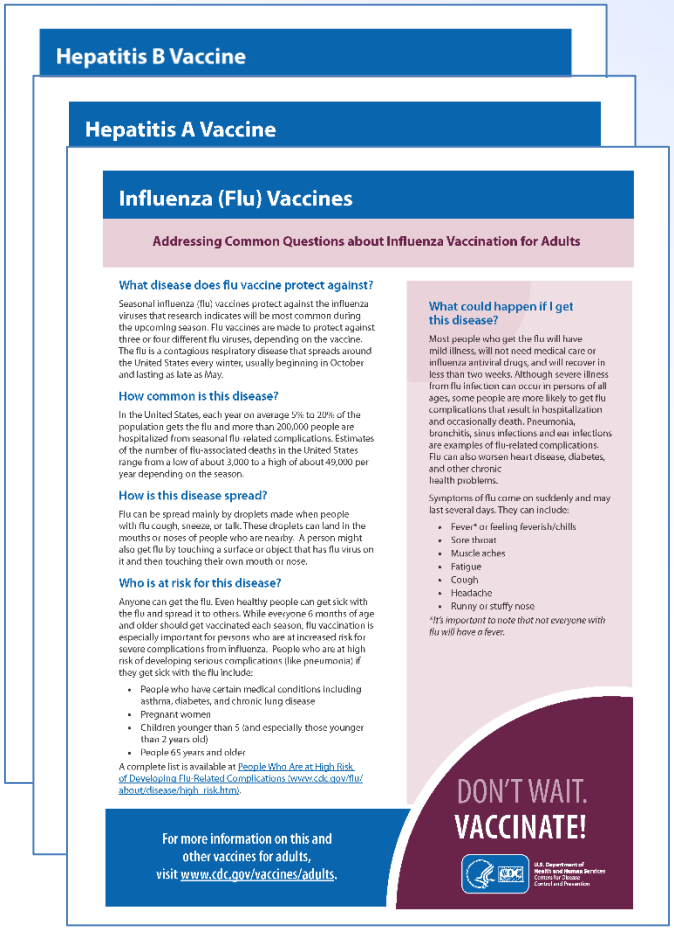
- Vaccines work with the body's natural defenses to reduce the chances of getting certain diseases and suffering from their complications.
- The amount of protection you will get varies by vaccine and other factors like your age and health, but immunization is the best defense against many of these serious, and sometimes deadly, diseases.
- The greatest risk of vaccine-preventable diseases occurs among people who are not vaccinated.

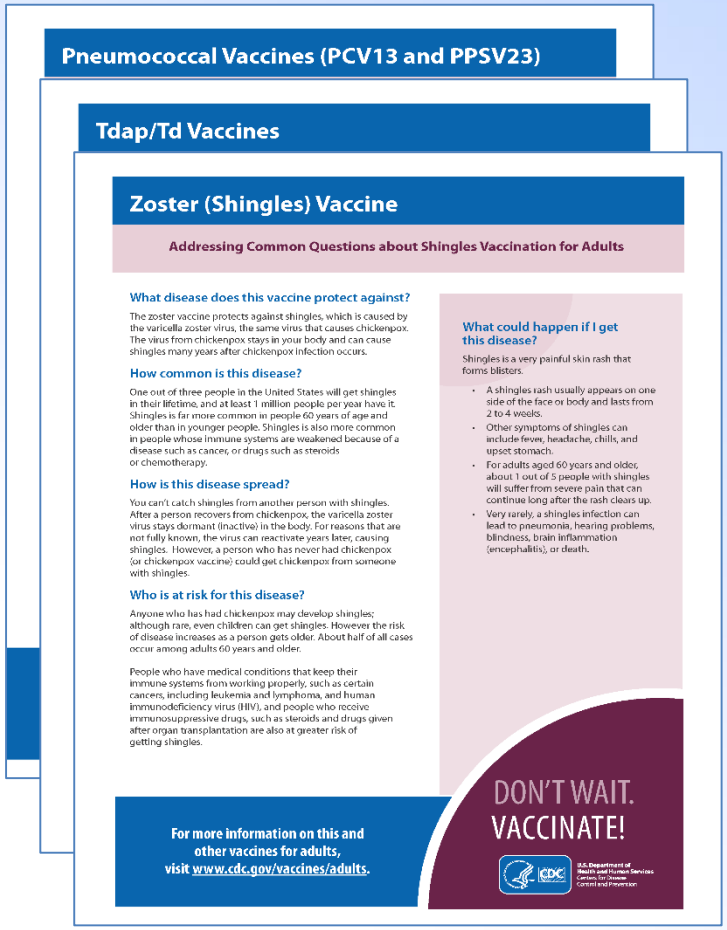
For additional information on specific vaccines and resources to address other patient questions and concerns about immunization, visit: **www.cdc.gov/vaccines/hcp/adults.**

Last updated March 11, 2014

National Adult and Influenza Immunization Summit

Addressing FAQs about Adult Vaccines



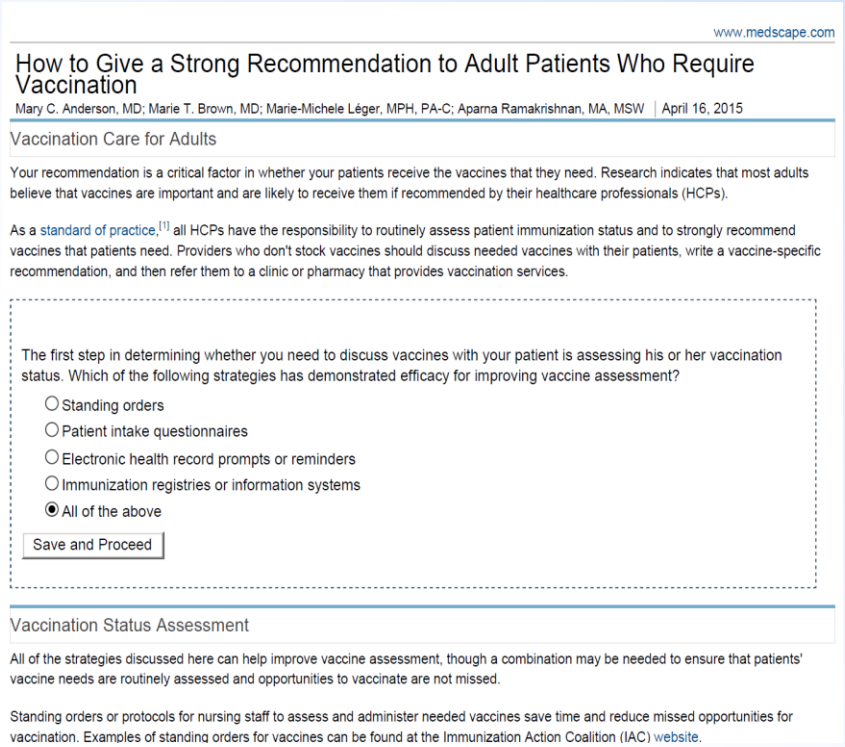


National Adult and Influenza Immunization Summit

Medscape Module

Case Presentations/Videos

1. Older Adult
   - Zoster
   - PCV13
2. Adult with Diabetes
   - Hep B
   - Influenza
3. Pregnant Woman
   - Tdap
   - Influenza



www.medscape.com

How to Give a Strong Recommendation to Adult Patients Who Require Vaccination

Mary C. Anderson, MD; Marie T. Brown, MD; Marie-Michele Léger, MPH, PA-C; Aparna Ramakrishnan, MA, MSW | April 16, 2015

Vaccination Care for Adults

Your recommendation is a critical factor in whether your patients receive the vaccines that they need. Research indicates that most adults believe that vaccines are important and are likely to receive them if recommended by their healthcare professionals (HCPs).

As a standard of practice,[1] all HCPs have the responsibility to routinely assess patient immunization status and to strongly recommend vaccines that patients need. Providers who don't stock vaccines should discuss needed vaccines with their patients, write a vaccine-specific recommendation, and then refer them to a clinic or pharmacy that provides vaccination services.

The first step in determining whether you need to discuss vaccines with your patient is assessing his or her vaccination status. Which of the following strategies has demonstrated efficacy for improving vaccine assessment?

- ○ Standing orders
- ○ Patient intake questionnaires
- ○ Electronic health record prompts or reminders
- ○ Immunization registries or information systems
- ◉ All of the above

Save and Proceed

Vaccination Status Assessment

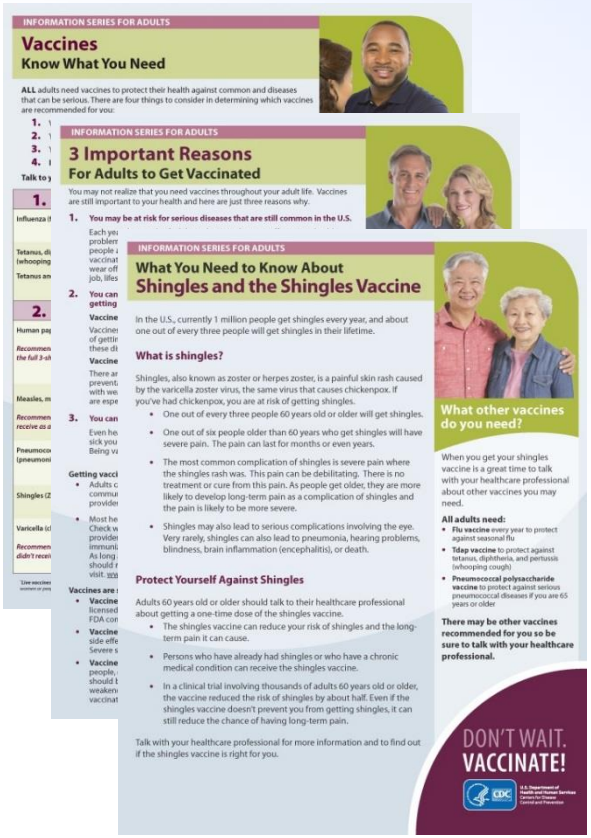
All of the strategies discussed here can help improve vaccine assessment, though a combination may be needed to ensure that patients' vaccine needs are routinely assessed and opportunities to vaccinate are not missed.

Standing orders or protocols for nursing staff to assess and administer needed vaccines save time and reduce missed opportunities for vaccination. Examples of standing orders for vaccines can be found at the Immunization Action Coalition (IAC) website.

www.medscape.com/viewarticle/842874

National Adult and Influenza Immunization Summit

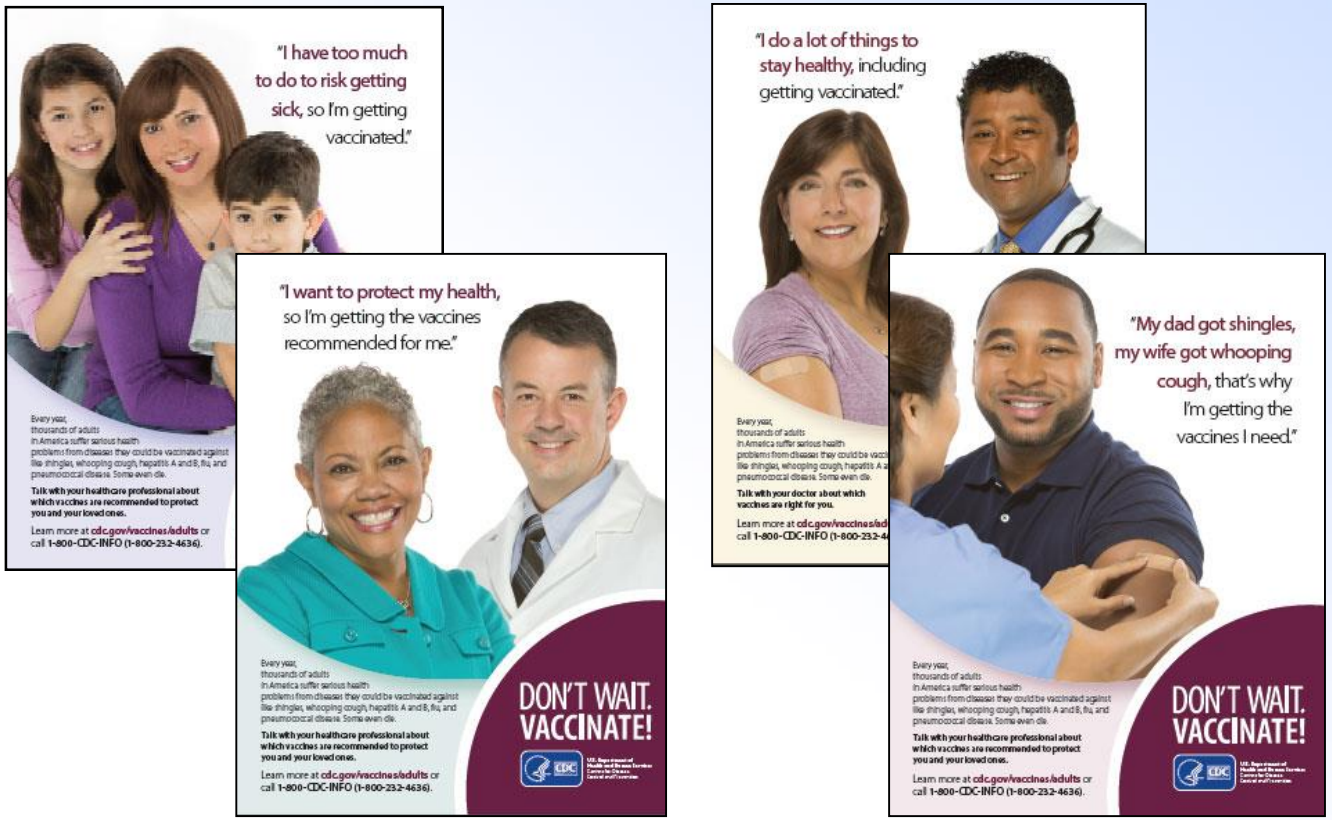
Patient Education Materials: Factsheets



www.cdc.gov/vaccines/AdultPatientEd

National Adult and Influenza Immunization Summit

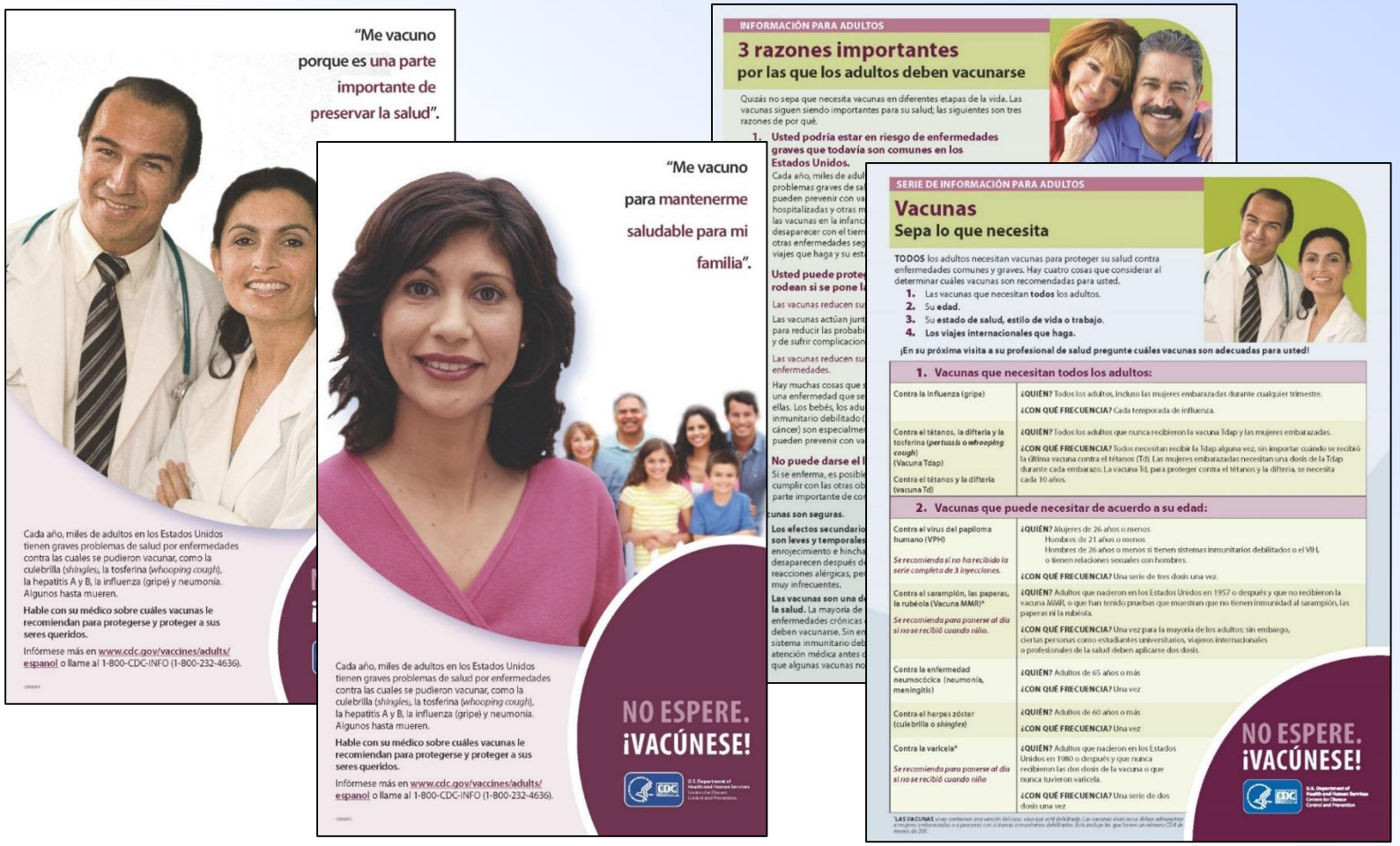
Patient Education Materials: Posters



www.cdc.gov/vaccines/AdultPatientEd

National Adult and Influenza Immunization Summit

Patient Education Materials: Spanish Language



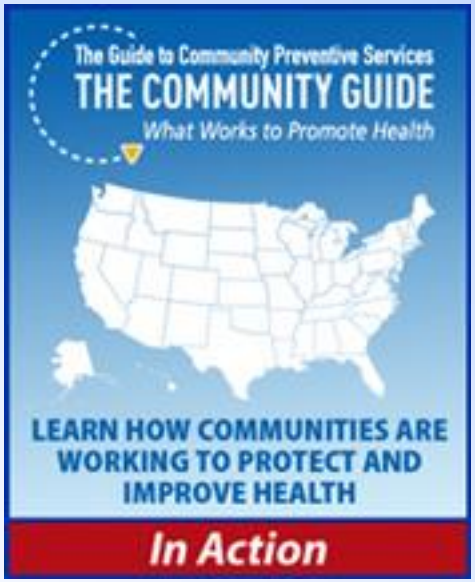
National Adult and Influenza Immunization Summit

Resources & Lessons Learned for Increasing Immunization Rates

National Adult and Influenza Immunization Summit

Evidence-Based Strategies for Increasing Immunization Rates

- **Strategies shown to improve vaccine uptake in healthcare settings:**
  - Patient education (e.g. email reminders from providers plus provider recommendations)
  - Use of standing orders
  - Use of reminder-recall systems
  - Efforts to remove administrative barriers
  - Provider and practice assessment of vaccination and feedback
  - Use of immunization registries



National Adult and Influenza Immunization Summit

http://www.thecommunityguide.org/vaccines/index.html.

Meta-Analysis of Interventions to Increase Use of Adult Immunization

Intervention	Odds Ratio*
Organizational change (e.g., standing orders, separate clinics devoted to prevention)	16.0
Provider reminder	3.8
Patient financial incentive	3.4
Provider education	3.2
Patient reminder	2.5
Patient education	1.3

*Compared to usual care or control group, adjusted for all remaining interventions

National Adult and Influenza Immunization Summit

Stone E. Interventions that increase use of adult immunization and cancer screening services. Ann Intern Med. 2002; 136:641-51.

Practices are always shocked that their rates aren't higher

Raising Immunization Rates: Lessons Learned

Evidence-based strategies

+ human champion(s)

= Results

"It's hard."

National Adult and Influenza Immunization Summit

Practices are always shocked that their rates aren't higher

Know Your Immunization Rates

Automatic, no more chart-pulls.

Watching rates over time

"Determined to have been vaccinated"

National Adult and Influenza Immunization Summit

Practices are always shocked that their rates aren't higher

Working the Data Sources

Electronic health records

Immunization Information Systems

http://www.cdc.gov/vaccines/programs/iis/index.html

Billing Data

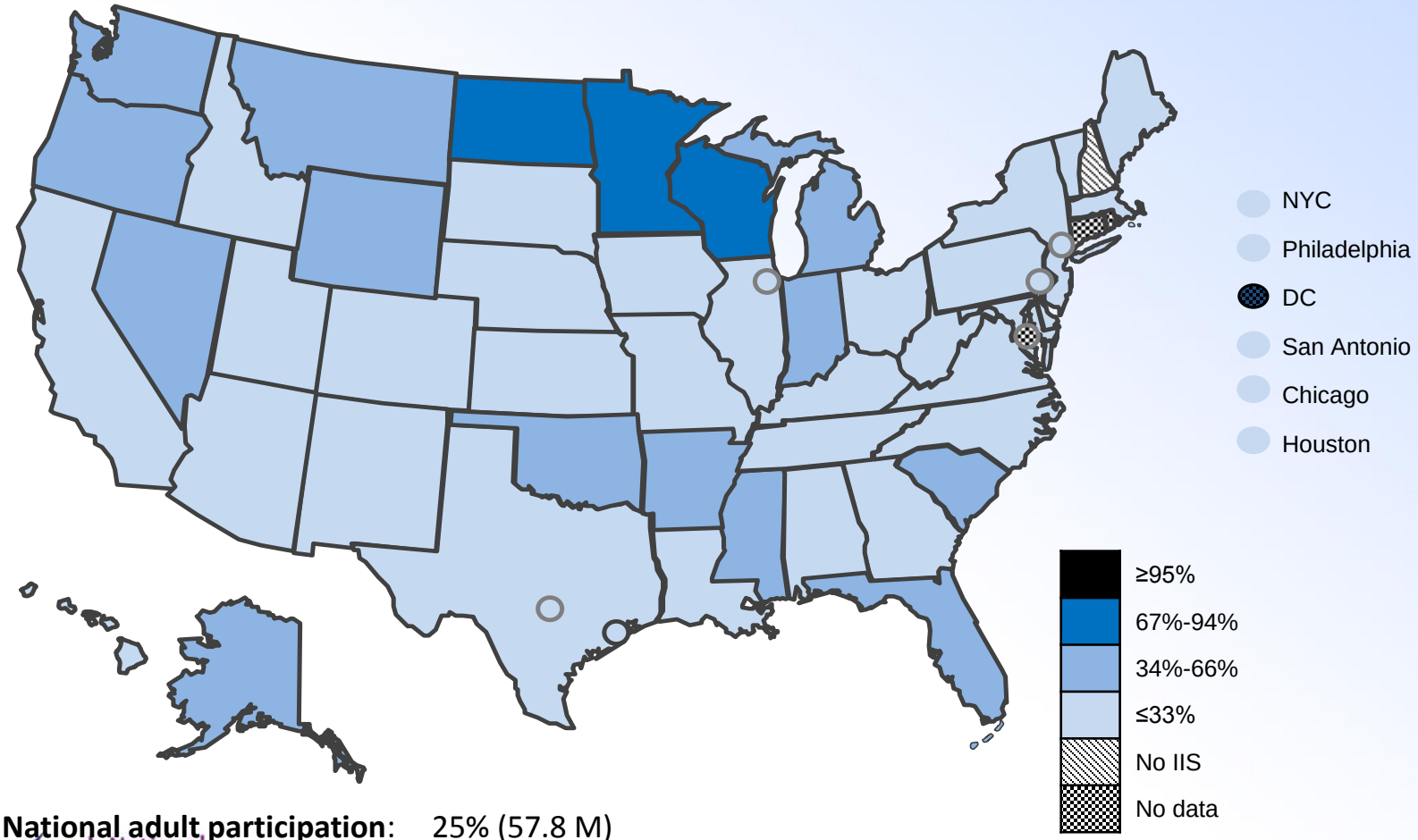
Coding Resources:

http://immunizationforwomen.org/providers/practice-management/coding.php

http://www.aafp.org/practice-management/payment/coding/admin.html

National Adult and Influenza Immunization Summit

Percentage of adults aged ≥19 years participating* in an Immunization Information System (IIS) – United States, five cities⁺, and the District of Columbia, 2012



National adult participation: 25% (57.8 M)

National Adult and Influenza Immunization Summit

*Participation is defined as having one or more vaccinations administered during adulthood recorded in the IIS

⁺Chicago, Illinois; Houston, Texas; New York, New York; Philadelphia, Pennsylvania; and San Antonio, Texas.

Contact Your State IIS

Contact your state's immunization information system:

http://www.cdc.gov/vaccines/programs/iis/contacts-registry-staff.html

For instructions on how to access the IIS

For help and troubleshooting

For tips and techniques specific to your state.

Clinical Decision Support

http://www.cdc.gov/vaccines/programs/iis/cdsi.html

National Adult and Influenza Immunization Summit

Practices are always shocked that their rates aren't higher

People Power

The Champion

The IT Specialist

The Naysayer

The Team

One Example:

American Pharmacists Association Immunization Champion Awards

National Adult and Influenza Immunization Summit

Practices are always shocked that their rates aren't higher

Carrots and Sticks

Incentives that Resonate:

e.g. meeting maintenance of certification requirements,

patient centered medical home certification.

Penalties to Avoid:

Not just financial.

Avoid negative patient outcomes like reduced hospitalization

Unnecessary or not-billable immunizations

National Adult and Influenza Immunization Summit

Immunization as a Winning Proposition for Providers

medconcert®

from American College of Physicians with CE City
https://www.medconcert.com/Signin

American Board of Medical Specialties
Higher standards. Better care.®

Maintenance of Certification Part IV
Practice Performance Assessment

www.abms.org

Patient-Centered Medical Home

aafp.org/practice-management

National Adult and Influenza Immunization Summit

Practices are always shocked that their rates aren't higher

What's Motivating?

Learning Collaboratives and Peer-to-peer Learning

Healthy Competition: High Performers and Low Performers

National Adult and Influenza Immunization Summit

Practices are always shocked that their rates aren't higher

Multiple Approaches

- **The Community Guide tells us multiple approaches work better than a single approach.**

One example:

The 4 Pillars ™ Immunization Toolkit

from University of Pittsburgh
http://www.4pillarstoolkit.pitt.edu/

National Adult and Influenza Immunization Summit

Resources From Professional Provider Organizations on Adult Immunization

- **American Academy of Family Physicians**

  http://www.aafp.org/patient-care/immunizations/schedules.html: vaccination info plus CME opportunities

- **American College of Obstetricians and Gynecologists**

  www.immunizationforwomen.org information about vaccines for pregnant and non-pregnant women, vaccine coding and other business practices

- **American College of Physicians**

  http://immunization.acponline.org/ "Doctors for adults", quality improvement, resources for practical application

- **American Pharmacists Association**

  http://www.pharmacist.com/immunization-resources. Multiple resources, training and tools for pharmacists on immunizations, including immunization certificate training

- **Infectious Diseases Society of America**

  http://www.idsociety.org/Immunization/. Recommendations specifically for immune compromised persons.

National Adult and Influenza Immunization Summit

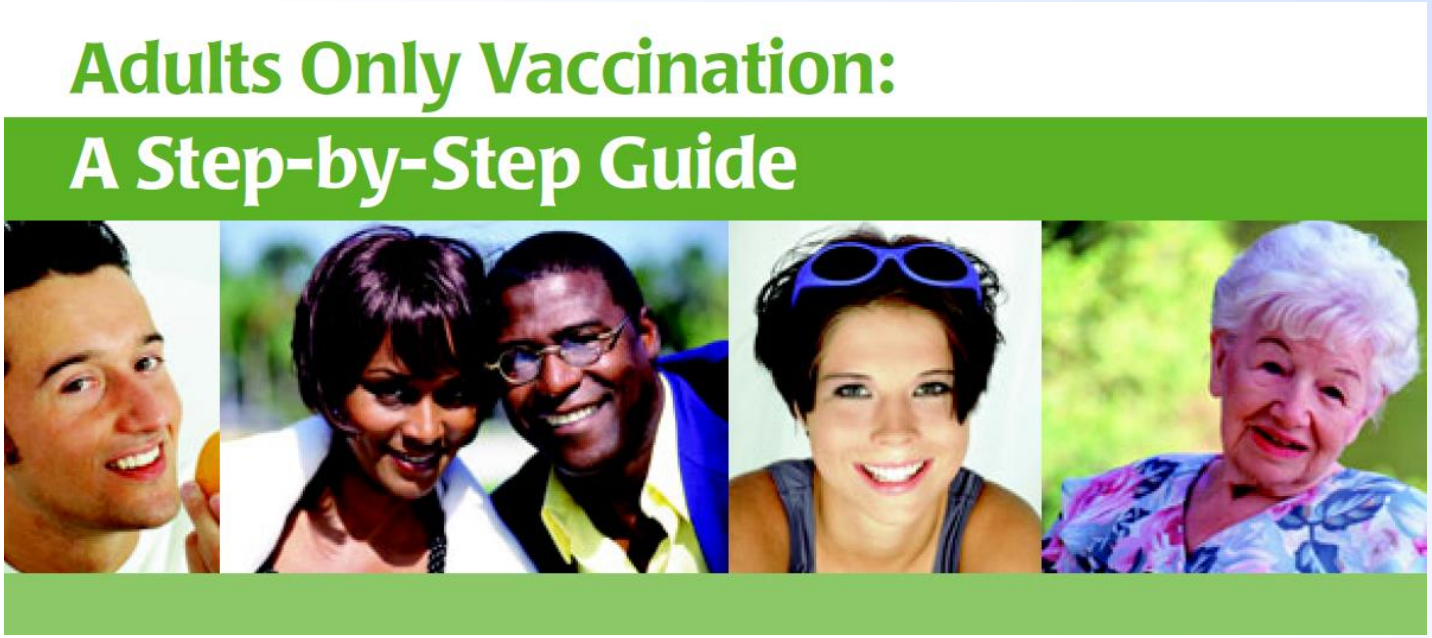
Resources From Immunization Action Coalition www.immunize.org

Clinic Resources: Coding, Billing, Scheduling, Documenting

www.immunize.org/clinic

Adult Vaccination Guide:

www.immunize.org/guide/



National Adult and Influenza Immunization Summit

Discussion Questions

- What is going to help you increase adult immunization rates?

- Are there specific challenges that providers are facing in communicating about vaccines with adult patients?

Thank you.

For more information: sfarrall@cdc.gov

National Adult and Influenza Immunization Summit

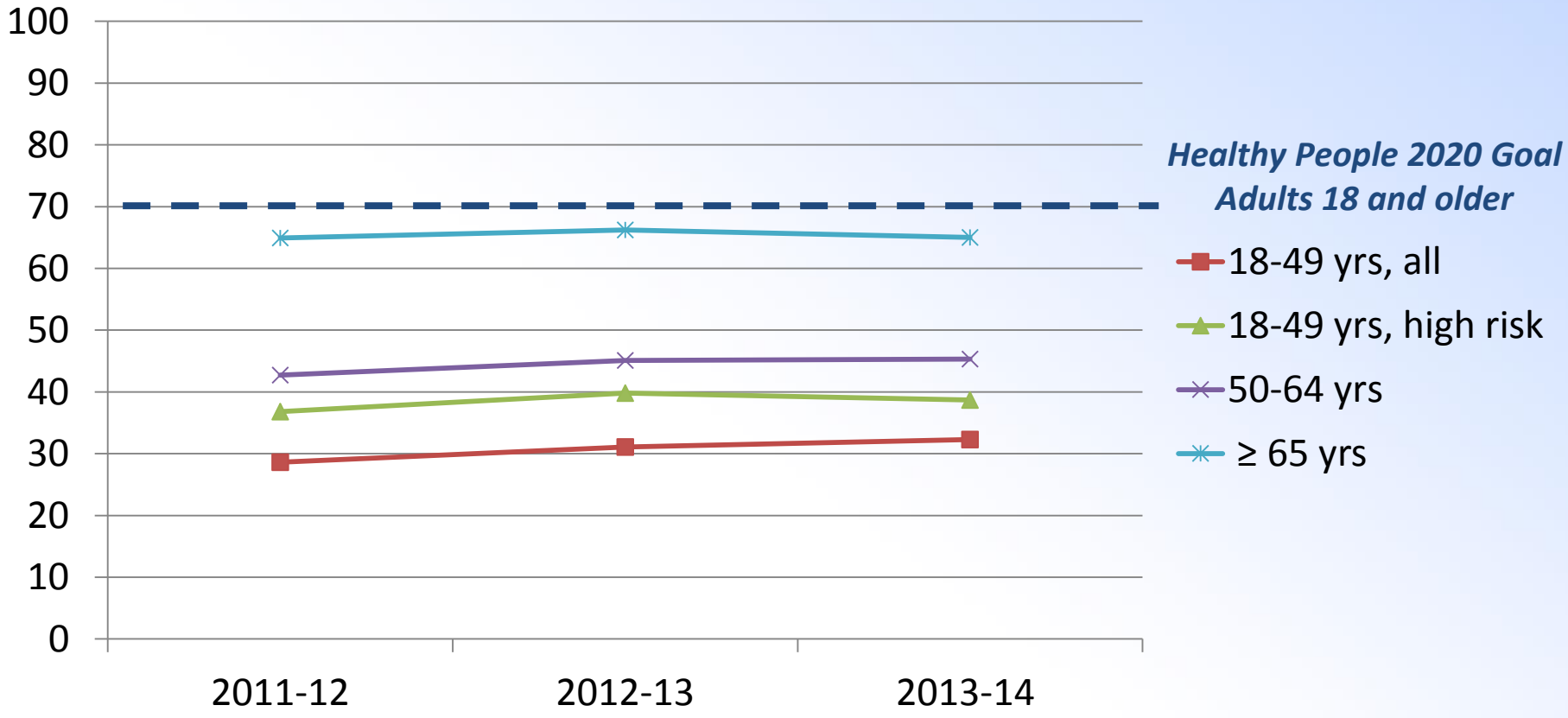
Supplemental Slides

Extra slide which may be useful for some audiences

National Adult and Influenza Immunization Summit

National
Adult and
Influenza
Immunization
Summit

Influenza Vaccination Rates by Age Group and Risk Group, BRFSS 2011-14



National Adult and Influenza Immunization Summit

Impact of Vaccine Preventable Diseases in People

Shingles: "I would rather have ten babies than the pain I've endured for the past ten years," says 87-year-old Etta Watson Zukerman of Bethesda, Md., who has lost partial use of her right arm and hand due to nerve damage from postherpetic neuralgia (PHN).

Courtesy MN Oxman San Diego VAMC

CDC/ Patricia Walker, M.D., Regions Hospital, MN

Hepatitis B: “One day without warning, my brother, who was 18, woke up with severe pain in his abdomen. When we took him to the doctor, we were told that he and my mother were hepatitis B carriers. My brother passed away a year later. One month after his death, my mother was diagnosed with liver cancer.” Leslie D. Hsu

Pertussis: Callie stopped breathing again. Family members watched helplessly from behind a glass wall as doctors tried for 45 minutes to revive her. Tragically, Callie could not be saved. She was only 5 weeks old. "We never dreamed we'd lose her," Katie said. "Callie was a more loved, more wanted baby than you'd ever find."

CDC website

National Adult and Influenza Immunization Summit

Testimonials from Immunization Action Coalition and CDC websites

Meet Joan:
Special Education Teacher

"The Pain of Shingles"

- Joan developed severe pain in her back and the doctors could not initially figure out what was wrong then the rash started several days later.
- She had contracted shingles, but not the traditional rash that is common to many at disease onset.
  - In some cases, rash happens after the pain
- The pain was so severe it kept her awake at night. Joan says that she would have sought vaccination if she had known it was recommended.

"If I had known that a vaccine is recommended for everyone my age, I would have gotten it. Believe me, if you could understand the pain of shingles, you'd get the vaccine, too."

National Adult and Influenza Immunization Summit

For Joan's full story, visit:
http://www.nfid.org/real-stories-real-people/joan-shingles.html

Jacob Ryan Schmidt: A competitive martial arts expert

"A Son's Life Cut Short by Influenza"

- Jacob was strong as a bull and enjoying life.
- In 2010, at the age of 27, he succumbed to complications from H1N1 influenza.
- His lungs collapsed; he developed an infection. His organs were shutting down. After about five weeks of influenza ravaging his body, Jacob died.

"Jacob was not someone you'd expect to fall ill to influenza. He was healthy and athletic, and built like a freight train."

National Adult and Influenza Immunization Summit

For Jacob's full story, visit:
http://www.nfid.org/real-stories-real-people/jacob-influenza.html#sthash.qbrBJ6AE.dpuf

Meet Dr. William Cochran: A Pediatric Gastroenterologist

"A Doctor's Personal Experience with Whooping Cough"

- Dr. Cochrane came down with a severe cough where he could not catch his breath and would even pass out.
- He coughed so long and hard that he cracked several ribs.
- He learned that he had pertussis or "whooping cough"
- It took him three months to recover.

"Anyone – doctor, parent, grandparent, caregiver, who comes into contact with infants should be sure they are up to date on their immunizations to spare those too young to be protected through vaccination ."

National Adult and Influenza Immunization Summit

For Dr. Cochrane's full story, visit:
http://www.nfid.org/real-stories-real-people/cochran-pertussis.html

Raising awareness about disparities in adult immunizations

- **Overall coverage remains below HP2020 targets**
  - 90% for 65+ years for pneumococcal vaccine
  - 60% for high risk 19-64 years for pneumococcal vaccine
  - 30% for 60+ years for Zoster vaccine
  - 90% for hepatitis B vaccine for healthcare personnel
- **Some improvement from 2012**
  - Modest increases for HPV (men, 19-26), Tdap (≥19 year olds), and herpes zoster (≥60 year olds) vaccines
  - No improvements for other vaccines
- **Racial and ethnic disparities remain**
- **Much remains to be done to increase vaccine utilization among adults and to eliminate disparities**

National Adult and Influenza Immunization Summit

Impact of Vaccination

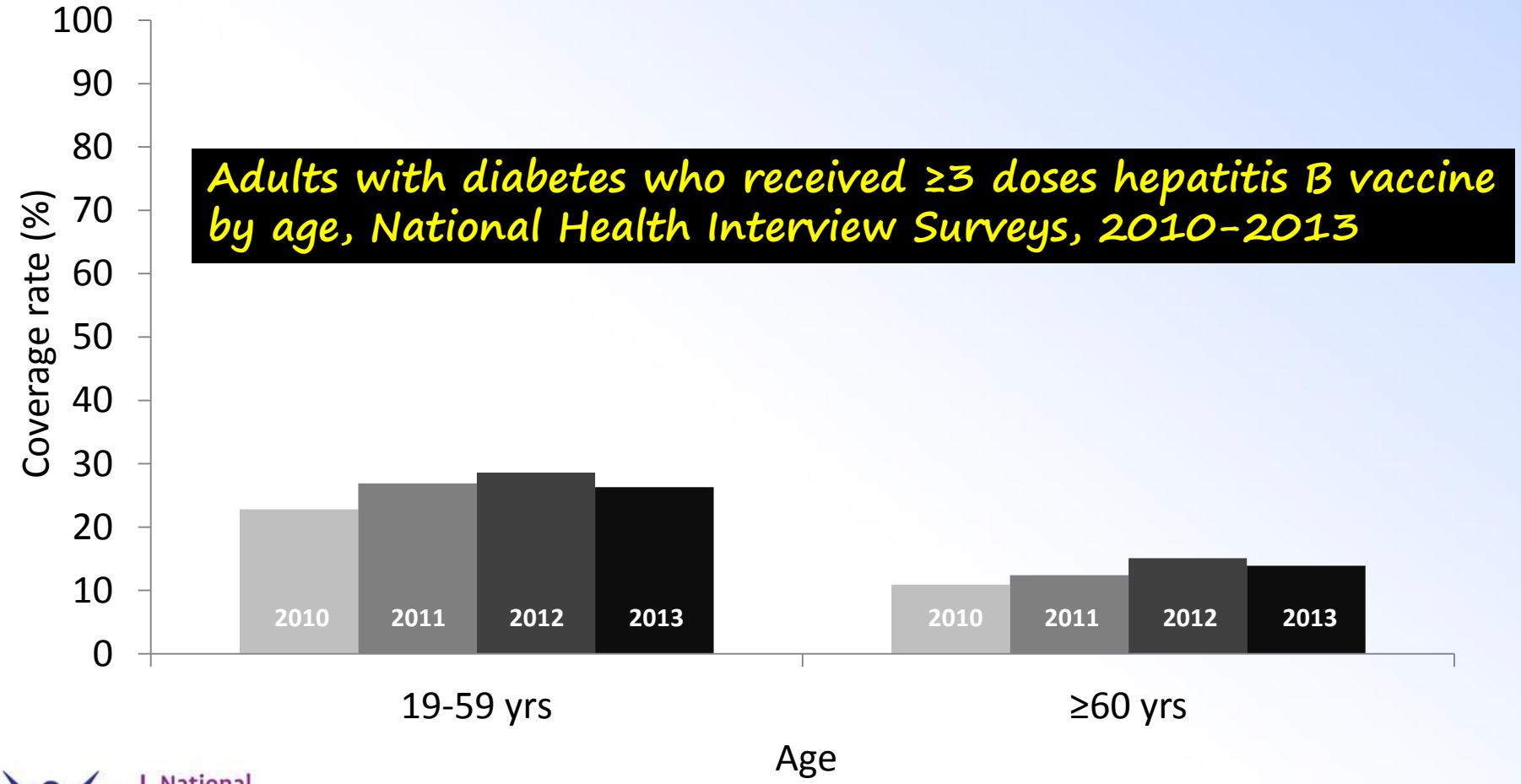
- **Vaccine effectiveness varies by vaccine type, the disease outcome, and the age or health of the person vaccinated**
  - Zoster (Shingles) vaccine effectiveness: 51% against shingles, 66% against post-herpetic neuralgia (PHN), and almost 80% against most prolonged and extreme cases of PHN[1]
  - PCV13 (pneumococcal conjugate vaccine): 45% efficacy against vaccine-type pneumococcal pneumonia, and 75% efficacy against vaccine-type invasive pneumococcal disease among adults aged ≥65 years[2]
  - Influenza vaccine: varies annually based on antigenic match and also age and health of person being vaccinated – about 60–70% in younger adults and about 30% in adults 65 years and older against medically attended influenza when good match[3]
  - Hepatitis B vaccine: 90% effectiveness after completing a 3-dose series, though lower in persons with diabetes, e.g. 90% with diabetes and age <40 years, 80% with diabetes and 41–59 years, 65% if 60–69 years and <40% if 70 years or older[4]

1. Oxman MN, et al. NEJM 2005;352:2271-84.
2. Bonten MJ, et al. NEJM 2015;372:1114-25.
3. CDC. Prevention and Control of Seasonal Influenza: Recommendations of the ACIP – U.S., 2014-15 Influenza Season. MMWR 2014; 63(32); 691-697.
4. CDC. Use of hepatitis B vaccine for adults with diabetes mellitus. MMWR 2011;60:1709-1711.

Vaccination Coverage Rates

National
Adult and
Influenza
Immunization
Summit

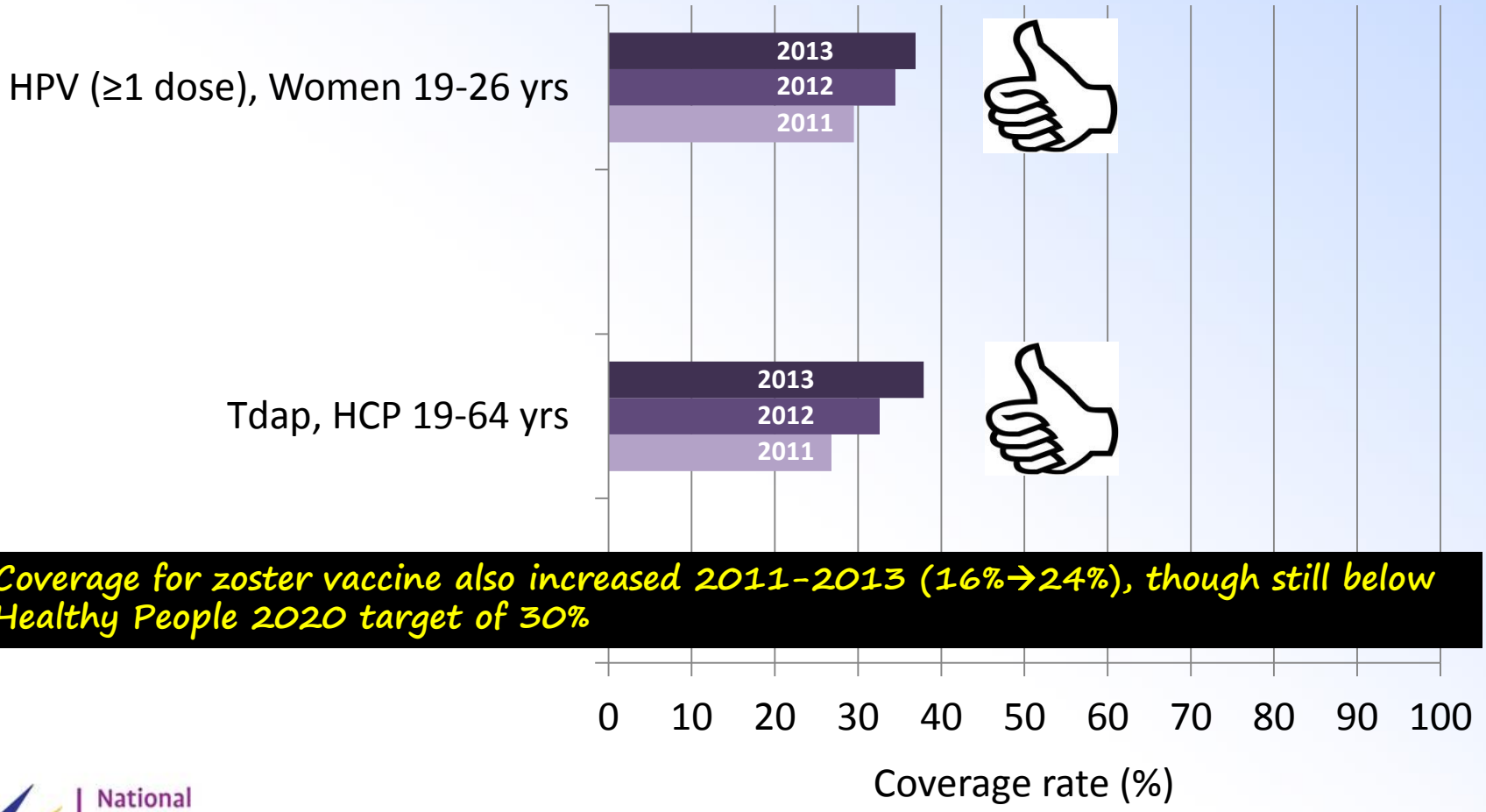
Hepatitis B Vaccination for Adults Living with Diabetes



National Adult and Influenza Immunization Summit

Source: National Health Interview Surveys

Improvements in Some Adult Immunizations



Coverage for zoster vaccine also increased 2011–2013 (16%→24%), though still below Healthy People 2020 target of 30%

Source: National Health Interview Surveys

National Adult and Influenza Immunization Summit