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
To offer useful tips, resources and lessons 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.
- 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.
Summit annual meeting in Atlanta, May 10 to 12, 2016.

Summit awards, including publication award

Best practices highlighted

www.izsummitpartners.org
Let’s hear from you:

**RE: Adult Immunization**

How is this progressing?

What are your challenges?
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
Burden of Disease among Adults from Vaccine-Preventable Diseases
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.

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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

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

- Guide to community preventive services: [www.thecommunityguide.org/vaccines/index.html](http://www.thecommunityguide.org/vaccines/index.html)
- Adult non-influenza vaccine coverage: [www.cdc.gov/mmwr/preview/mmwrhtml/mm6305a4.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6305a4.htm)
Vaccination Coverage Rates
Adult Immunization Coverage Rates 2010 - 2013

- Tetanus past 10y, age ≥65
- Tetanus past 10y, age 19-64
- Pneumococcal, age ≥65
- Pneumococcal, age 19-64 at high risk
- Zoster, age ≥60

Source: National Health Interview Surveys

Healthy People 2020 target

coverage rate (%)

2013
2012
2011
2010
Disparities In Adult Immunization Rates

- Lower vaccine coverage among
  - 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

Assessing Vaccination Status: Which Vaccines Does My Patient Need?
# 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**

<table>
<thead>
<tr>
<th>VACCINE</th>
<th>AGE GROUP</th>
<th>19-21 years</th>
<th>22-26 years</th>
<th>27-49 years</th>
<th>50-59 years</th>
<th>60-64 years</th>
<th>≥ 65 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flu</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 dose annually</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tetanus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Substitute Tdap for Td booster; then boost with Td every 10 yrs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VZV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2 doses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HPV</td>
<td>Female</td>
<td></td>
<td></td>
<td></td>
<td>3 doses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HPV</td>
<td>Male</td>
<td></td>
<td></td>
<td></td>
<td>3 doses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zoster</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 dose</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 or 2 doses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCV13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1-time dose</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hib</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 or more doses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hep A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2 doses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hep B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3 doses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hib A14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 or 3 doses</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Covered by the Vaccine Injury Compensation Program*

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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](http://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](http://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, 117 Madison Place, N.W., Washington, D.C. 20005; telephone, 202-357-6400.

Additional information about vaccines in this schedule, extent of available data, and contraindications for vaccination is also available at [www.cdc.gov/vaccines](http://www.cdc.gov/vaccines) or from the CDC-INFO Contact Center at 800-311-CDC1 (800-311-4321) 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 American College of Physicians (ACP), American College of Obstetricians and Gynecologists (ACOG) and American College of Nurse-Midwives (ACNM).

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[www.cdc.gov/vaccines/schedules/hcp/adult.html](http://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

<table>
<thead>
<tr>
<th>VACCINE</th>
<th>INDICATION</th>
<th>Immu-nocompromising conditions (excluding human Immunodeficiency virus (HIV))</th>
<th>HIV Infection</th>
<th>CD4+ T-lymphocyte count</th>
<th>Men who have sex with men (MSM)</th>
<th>Kidney failure, end-stage renal disease, receipt of hemodialysis</th>
<th>Heart disease, chronic lung disease, chronic alcoholism</th>
<th>Asplenia (including ineffective splenectomy and persistent complement component deficiencies)</th>
<th>Chronic liver disease</th>
<th>Diabetes</th>
<th>Healthcare personnel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influenza</td>
<td></td>
<td>1 dose ILV annually</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tetanus, diphthera, pertussis (Td/Tdap)</td>
<td>Substitute 1-time dose of Tdap for Td booster; then boost with Td every 10 yrs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Varicella</td>
<td>Contraindicated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Human papillomavirus (HPV) Female (HPV)</td>
<td>2 doses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Human papillomavirus (HPV) Male (HPV)</td>
<td>3 doses through age 26 yrs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zoster</td>
<td>Contraindicated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measles, mumps, rubella (MMR)</td>
<td>1 or 2 doses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pneumococcal 13-valent conjugate (PCV13)</td>
<td>1 dose</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pneumococcal polysaccharide (PPSV23)</td>
<td>1 or 2 doses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meningococcal</td>
<td>1 or more doses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatitis A</td>
<td>2 doses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>3 doses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Haemophilus influenza type b (Hib)</td>
<td>1 or 3 doses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*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 indications).

No recommendation.

These schedules indicate the recommended ages and medical indications for which administration of currently licensed vaccines is commonly recommended for adults age 19 years and older, as of February 1, 2015. For all vaccines being recommended in this 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 or 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 Practice (www.cdc.gov/vaccines/acip/hcp/recs/vacc-recs.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.

[www.cdc.gov/vaccines/schedules/hcp/adult.html](http://www.cdc.gov/vaccines/schedules/hcp/adult.html)
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 adolescents?

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

Patient vaccine needs- assessment form from Immunization Action Coalition at immunize.org. Consider Health, Age, Lifestyle and Occupation/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 Health condition, Age, Lifestyle, and Occupation. 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/cdc/gp2011.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 if 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

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Health factors</th>
<th>Age factors</th>
<th>Lifestyle factors</th>
<th>Occupational or other factors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pregnant</td>
<td></td>
<td>Born outside U.S.</td>
<td>Parent of a young child</td>
</tr>
<tr>
<td></td>
<td>Chronic</td>
<td></td>
<td>Men who have sex</td>
<td>College student</td>
</tr>
<tr>
<td></td>
<td>diseases</td>
<td></td>
<td>Not in a long-term relationship</td>
<td>Healthcare worker</td>
</tr>
<tr>
<td></td>
<td>Immunocompromised (including HIV)</td>
<td></td>
<td>User of injectable drugs</td>
<td>Certain lab workers</td>
</tr>
<tr>
<td></td>
<td>History of STD</td>
<td></td>
<td>Interpersonal violence</td>
<td>Adults in institutional settings or correctional facilities</td>
</tr>
<tr>
<td></td>
<td>Age</td>
<td></td>
<td>Older than 1996, 2nd dose for some</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Circumcision</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HepA</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>HepB</td>
<td>✓</td>
<td>✓ ✓</td>
<td>✓ ✓ ✓</td>
<td></td>
</tr>
<tr>
<td>Hib</td>
<td>✓</td>
<td>✓ ✓</td>
<td>✓ ✓ ✓</td>
<td></td>
</tr>
<tr>
<td>HPV (females)</td>
<td>✓</td>
<td>✓</td>
<td>✓ ✓ ✓</td>
<td></td>
</tr>
<tr>
<td>HPV (males)</td>
<td>✓</td>
<td></td>
<td>✓ ✓ ✓</td>
<td></td>
</tr>
<tr>
<td>IPV</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Influenza</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Meningococcal</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>MMR</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>PCV13</td>
<td>✓</td>
<td>✓ ✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>PPSV23</td>
<td>✓</td>
<td>✓ ✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Tdip</td>
<td>✓</td>
<td>✓ ✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Varicella</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Zoster</td>
<td></td>
<td>✓ ✓</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

* ✓: Vaccination may be indicated depending on degree of immunocompromise

(1973 Selby Avenue • St. Paul, MN 55104 • 651-647-9009 • www.immunize.org • www.vaccines.org)
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:

<table>
<thead>
<tr>
<th>ALL ADULTS NEED: Date(s) Received</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influenza, every year</td>
</tr>
<tr>
<td>Tdap (or Td)*</td>
</tr>
</tbody>
</table>

*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.

<table>
<thead>
<tr>
<th>HOW OLD ARE YOU? (Enter X for ALL that apply)</th>
<th>You need</th>
<th>Record Vaccines Here</th>
</tr>
</thead>
<tbody>
<tr>
<td>60 or older (check this box and the next if you are older than 65)</td>
<td>Shingles (Herpes Zoster)</td>
<td></td>
</tr>
<tr>
<td>65 or older</td>
<td>Pneumococcal (PCV and PPSV)*</td>
<td></td>
</tr>
<tr>
<td>A female younger than 27</td>
<td>HPV*</td>
<td></td>
</tr>
<tr>
<td>A male younger than 22</td>
<td>HPV</td>
<td></td>
</tr>
</tbody>
</table>

*Pneumococcal conjugate vaccine and pneumococcal polysaccharide vaccine. Information about sequencing and intervals for PCV and PPSV is available at cdc.gov/vaccines/hcp/acip-recs/vacc-specific/pneumonia.html. Human papillomavirus.

#### WHAT HEALTH CONDITIONS DO YOU HAVE?

<table>
<thead>
<tr>
<th>I have...</th>
<th>You need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asthma</td>
<td>Pneumococcal (PPSV)</td>
</tr>
<tr>
<td>Heart disease</td>
<td></td>
</tr>
<tr>
<td>Lung disease (including COPD)</td>
<td>Pneumococcal (PCV and PPSV)</td>
</tr>
<tr>
<td>Cochlear implants</td>
<td></td>
</tr>
<tr>
<td>Immunosuppressive cancer</td>
<td></td>
</tr>
<tr>
<td>Kidney disease</td>
<td></td>
</tr>
<tr>
<td>Sickle cell disease</td>
<td></td>
</tr>
<tr>
<td>Spinal fluid leaks</td>
<td></td>
</tr>
<tr>
<td>Weakened immune system</td>
<td></td>
</tr>
<tr>
<td>Diabetes</td>
<td>Hepatitis B</td>
</tr>
<tr>
<td>HIV/AIDS</td>
<td>Hepatitis B</td>
</tr>
<tr>
<td>Pneumococcal (PPSV)</td>
<td></td>
</tr>
<tr>
<td>Blood clotting factor disorders, such as hemophilia</td>
<td>Hepatitis A</td>
</tr>
<tr>
<td>No spleen or a damaged spleen</td>
<td>Pneumococcal (PCV and PPSV)</td>
</tr>
<tr>
<td>Meningococcal</td>
<td></td>
</tr>
<tr>
<td>Hib*</td>
<td></td>
</tr>
</tbody>
</table>

Record Vaccines Here Date(s) Received
Resources For Assessing Immunization Status of Your Patients


- 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/](http://www2.cdc.gov/nip/adultimmsched/).

- CDC adult **vaccine schedule app** at [http://www.cdc.gov/vaccines/schedules/hcp/schedule-app.html](http://www.cdc.gov/vaccines/schedules/hcp/schedule-app.html).
Talking About Vaccines with Your Adult Patients

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

Recommended vaccines prompt more patients to get immunized.

Recommendation makes a difference: it can save lives. Don’t let the time to get them slip through your fingers.

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.

2.1 U.S. vaccination rates for adults are extremely low.
- For example:
  - Only 7% of adults 65 years or older received 3 herpes zoster vaccinations.
  - Only 4% of adults 65 years or older received 3 pneumococcal vaccinations.
  - Only 6% of adults 19 years or older received 3 hepatitis B vaccinations.

2.2 For more information and tips on vaccine enrolment, adobe,Adobe, adobe, or Adobe, visit:
- www.cdc.gov/vaccines/healthcare/adults/.

2.3 Don’t Wait. Vaccinate!

Tips For Addressing Common Questions About Adult Vaccination

Do I really need vaccines?
- All adults need time again to help prevent getting serious diseases that could result in long-term health problems, such as heart disease and cancer, or death. Not being able to get these vaccines may make you more susceptible to these diseases, even if you feel fine.
- You may not have received all of your recommended childhood vaccines. Also, the protection from your vaccines may not last forever. You may need a booster dose and regular checkups. Some vaccines are recommended based on your age, job, lifestyle, or the types of illnesses you have or are more likely to get.
- You may have received all of your recommended childhood vaccines, but the protection from those vaccines may not last forever. You may need a boost of other vaccines. When in doubt, ask your healthcare provider.
- Getting vaccinated is a voluntary choice but also reduces the chance that you will spread a serious disease to those around you—especially those who are more likely to suffer serious illness, death, and people with chronic medical conditions or weakened immune system.

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

Are adult vaccines safe?
- Vaccines are one of the safest ways to protect your health.
- Vaccines go through a strict process before they can be licensed by the Food and Drug Administration (FDA). Once a vaccine is licensed, it is assessed by the independent scientific advisory committee to make sure that it is safe and effective.
- Federal guidelines are in place to monitor the safety of vaccines.
- This is to ensure vaccines that are administered to adults are monitored for safety.

How well do adult vaccines work?
- Vaccines work with the body’s natural defenses to reduce the chances of getting certain diseases and reducing their severity.
- The amount of protection you get varies from vaccine to vaccine and from age to age, and it may be different for people who are more likely to get the disease than those who are not.
- For additional information on specific vaccines and resources to address other patient questions and concerns about immunization, visit: www.cdc.gov/vaccines/imunize/adults.
Addressing FAQs about Adult Vaccines

### Hepatitis B Vaccine

**What disease does the vaccine protect against?**
Hepatitis B is a liver infection caused by the hepatitis B virus (HBV). Hepatitis B can range from a mild illness to a serious liver disease. In some cases, it can cause liver failure and death.

**Who should be vaccinated?**
- Adults who are at high risk for occupational exposure to HBV, such as healthcare workers. (CDC, 2021)
- Adults who are at high risk for HBV transmission, such as persons with multiple partners, intravenous drug users (IVDU), and persons in correctional facilities. (CDC, 2021)
- Adults who are at high risk for HBV infection due to behavior or lifestyle factors, such as injection drug use, multiple sexual partners, and persons with sexually transmitted infections. (CDC, 2021)
- Adults who are at high risk for HBV infection due to medical or household contact with an HBV-infected person, such as persons with HIV infection or transplant patients. (CDC, 2021)

**Where can I get the vaccine?**
Vaccines are available at healthcare providers, pharmacies, and health departments.

**What could happen if I get hepatitis B?**
- Mild infection:％
- Severe infection:％
- Death:％

**How well does the vaccine work?**
The vaccine is highly effective. After completing the vaccination series, around 94–98% of people develop antibodies to HBV. (CDC, 2021)

### Hepatitis A Vaccine

**What disease does the vaccine protect against?**
Hepatitis A is a liver infection caused by the hepatitis A virus (HAV). Hepatitis A is spread through the fecal–oral route, usually through the consumption of contaminated food or water.

**Who should be vaccinated?**
- Adults who are at high risk for exposure to HAV, such as travelers to areas with high or intermediate HAV endemicity, persons with multiple sexual partners, and persons in correctional facilities. (CDC, 2021)
- Adults who are at high risk for HAV infection due to behavior or lifestyle factors, such as injection drug use, multiple sexual partners, and persons with sexually transmitted infections. (CDC, 2021)

**Where can I get the vaccine?**
Vaccines are available at healthcare providers, pharmacies, and health departments.

**What could happen if I get hepatitis A?**
- Mild infection:％
- Severe infection:％
- Death:％

**How well does the vaccine work?**
The vaccine is highly effective. After completing the vaccination series, around 90–95% of people develop antibodies to HAV. (CDC, 2021)

### Influenza (Flu) Vaccine

**What disease does flu vaccine protect against?**
Flu vaccines are made to protect against strains of the flu virus that are expected to be most common during the flu season. The flu vaccine cannot prevent all strains of the flu virus, and some people may still get the flu even if vaccinated.

**Who should be vaccinated?**
- Adults who are at high risk for serious flu complications, such as persons with certain medical conditions, and persons 65 years of age or older. (CDC, 2021)
- Adults who do not have a high risk for serious flu complications, but who would like to be vaccinated, such as persons with household contacts who are at high risk for severe flu complications. (CDC, 2021)

**Where can I get the vaccine?**
Vaccines are available at healthcare providers, pharmacies, and health departments.

**What could happen if I get the flu?**
- Mild illness:％
- Severe illness:％
- Death:％

**How well does the vaccine work?**
The flu vaccine is not always 100% effective, and some people who are vaccinated may still get the flu. However, the flu vaccine can help prevent serious complications from the flu, such as hospitalization or death. (CDC, 2021)

### Pneumococcal Vaccines (PCV13 and PPV23)

**What disease does this vaccine protect against?**
Pneumococcal disease is a group of diseases caused by Streptococcus pneumoniae bacteria. These diseases include pneumonia, bacteremia, meningitis, and otitis media.

**Who should be vaccinated?**
- Adults who are 19 years of age or older. (CDC, 2021)
- Adults who have underlying medical conditions, such as chronic lung disease, diabetes, or heart disease, and are at increased risk for pneumococcal disease. (CDC, 2021)

**Where can I get the vaccine?**
Vaccines are available at healthcare providers, pharmacies, and health departments.

**What could happen if I get pneumococcal disease?**
- Mild illness:％
- Severe illness:％
- Death:％

**How well does the vaccine work?**
The pneumococcal vaccine is highly effective. After completing the vaccination series, around 90–95% of people develop antibodies to pneumococcal bacteria. (CDC, 2021)

### Tdap/Td Vaccine

**What disease does this vaccine protect against?**
Tdap/Td vaccine is a combination vaccine that protects against tetanus, diphtheria, and pertussis. It also provides immunity to influenza for up to 24 months.

**Who should be vaccinated?**
- Adults who have not been vaccinated in the past. (CDC, 2021)
- Adults who are at high risk for tetanus, such as persons with chronic medical conditions, and persons with no immunity to tetanus. (CDC, 2021)

**Where can I get the vaccine?**
Vaccines are available at healthcare providers, pharmacies, and health departments.

**What could happen if I get tetanus?**
- Mild infection:％
- Severe infection:％
- Death:％

**How well does the vaccine work?**
The Tdap/Td vaccine is highly effective. After completing the vaccination series, around 90–95% of people develop antibodies to tetanus, diphtheria, and pertussis. (CDC, 2021)

### Zoster (Shingles) Vaccine

**What disease does this vaccine protect against?**
The zoster vaccine protects against shingles, which is caused by the varicella-zoster virus, the same virus that causes chickenpox.

**Who should be vaccinated?**
- Adults who are 50 years of age or older. (CDC, 2021)
- Adults who are younger than 50 years of age who are at increased risk for complications from shingles, such as persons with HIV infection, and persons with medical conditions that affect the immune system. (CDC, 2021)

**Where can I get the vaccine?**
Vaccines are available at healthcare providers, pharmacies, and health departments.

**What could happen if I get shingles?**
- Mild infection:％
- Severe infection:％
- Death:％

**How well does the vaccine work?**
The zoster vaccine is highly effective. After completing the vaccination series, around 90–95% of people develop immunity to shingles. (CDC, 2021)
Case Presentations/Videos

1. Older Adult
   - Zoster
   - PCV13

2. Adult with Diabetes
   - Hep B
   - Influenza

3. Pregnant Woman
   - Tdap
   - Influenza

Patient Education Materials: Factsheets

www.cdc.gov/vaccines/AdultPatientEd
Patient Education Materials: Posters

www.cdc.gov/vaccines/AdultPatientEd
Patient Education Materials: Spanish Language

Me vacuno porque es una parte importante de preservar la salud.

“Me vacuno para mantenerme saludable para mi familia.”

INFORMACIÓN PARA ADULTOS
3 razones importantes por las que los adultos deben vacunarse

1. Usted podría estar en riesgo de enfermedades graves que todavía son comunes en los Estados Unidos.
2. Cada año, miles de adultos mueren o padecen discapacidades debido a enfermedades previamente prevenibles. Algunos adultos están en mayor riesgo de infecciones importantes.

3. Usted puede protegerse si se pone a paso de las vacunas.

Las vacunas reducen el riesgo de enfermedades o de sufrir complicaciones. Las vacunas reducen su enfermedad.

Hay muchas cosas que una enfermedad que sí es. Los bebés, los niños, el inmunodeprimido, el adulto mayor, con enfermedades crónicas pueden prevalecer con un vacuna.

No puede darse el cáncer si está vacunado, es posible que el tratamiento con la vacuna no se dé.

Vacunas para adultos.

Vacunas para adultos.

1. Vacunas que necesitan todos los adultos:
   - Contra la influenza (gripe)
   - Contra el tétanos, la difteria y la tosferina (tétanos, difteria, tosferina)
   - Contra el tétanos y la difteria (vacuna)

2. Vacunas que puede necesitar de acuerdo a su edad:
   - Contra la enfermedad meningocócica (meningitis)
   - Contra el sarampión, la rubéola y la parotiditis (Sabin)
   - Contra la enfermedad neurologica (encefalitis)

SÉ AL DÍA: Vacuna contra el VIH.

Inmunidad con vacunas.

DOIS PASOS PARA AFINARSE EN LAS VACUNAS.
Resources & Lessons Learned for Increasing Immunization Rates
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

## Meta-Analysis of Interventions to Increase Use of Adult Immunization

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Odds Ratio*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational change (e.g., standing orders, separate clinics devoted to prevention)</td>
<td>16.0</td>
</tr>
<tr>
<td>Provider reminder</td>
<td>3.8</td>
</tr>
<tr>
<td>Patient financial incentive</td>
<td>3.4</td>
</tr>
<tr>
<td>Provider education</td>
<td>3.2</td>
</tr>
<tr>
<td>Patient reminder</td>
<td>2.5</td>
</tr>
<tr>
<td>Patient education</td>
<td>1.3</td>
</tr>
</tbody>
</table>

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

Evidence-based strategies
+ human champion(s)
= Results

“It’s hard.”
Know Your Immunization Rates

Automatic, no more chart-pulls.

Watching rates over time

“Determined to have been vaccinated”
Working the Data Sources

Electronic health records

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

Billing Data
Coding Resources:

Practices are always shocked that their rates aren’t higher.
Percentage of adults aged ≥19 years participating* in an Immunization Information System (IIS) – United States, five cities†, and the District of Columbia, 2012

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

National adult participation: 25% (57.8 M)

*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
People Power

The Champion
The IT Specialist
The Naysayer
The Team

One Example:
American Pharmacists Association Immunization Champion Awards
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
Immunization as a Winning Proposition for Providers

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

American Board of Medical Specialties

Maintenance of Certification Part IV
Practice Performance Assessment
www.abms.org

Patient-Centered Medical Home
aafp.org/practice-management
What’s Motivating?

Learning Collaboratives and Peer-to-peer Learning

Healthy Competition: High Performers and Low Performers
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/
Resources From Professional Provider Organizations on Adult Immunization

- **American Academy of Family Physicians**
  

- **American College of Obstetricians and Gynecologists**
  
  [www.immunizationforwomen.org](http://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/](http://immunization.acponline.org/) “Doctors for adults”, quality improvement, resources for practical application

- **American Pharmacists Association**
  
  [http://www.pharmacist.com/immunization-resources](http://www.pharmacist.com/immunization-resources). Multiple resources, training and tools for pharmacists on immunizations, including immunization certificate training

- **Infectious Diseases Society of America**
  
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/

Adults Only Vaccination:
A Step-by-Step Guide
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
Supplemental Slides

Extra slide which may be useful for some audiences
Influenza Vaccination Rates by Age Group and Risk Group, BRFSS 2011-14

Healthy People 2020 Goal
Adults 18 and older

- 18-49 yrs, all
- 18-49 yrs, high risk
- 50-64 yrs
- ≥ 65 yrs
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).

![Image of shingles](https://example.com/shingles_image)

**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

![Image of hepatitis B](https://example.com/hepatitisB_image)

**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."

![Image of pertussis](https://example.com/pertussis_image)

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.”

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.

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.

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

“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.”
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**
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
  - 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
  - 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
  - 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. CDC. Use of hepatitis B vaccine for adults with diabetes mellitus. MMWR 2011;60:1709-1711.
Vaccination Coverage Rates
Hepatitis B Vaccination for Adults Living with Diabetes

Adults with diabetes who received ≥3 doses hepatitis B vaccine by age, National Health Interview Surveys, 2010-2013

Source: National Health Interview Surveys
Improvements in Some Adult Immunizations

- **HPV (≥1 dose), Women 19-26 yrs**
  - Coverage rates increased from 2011 to 2013 (16% to 24%), though still below Healthy People 2020 target of 30%

- **Tdap, HCP 19-64 yrs**
  - Coverage rates also increased from 2011 to 2013

Source: National Health Interview Surveys