



Adult vaccination - strategies and challenges

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Overview

- Contrasts with pediatric programs
- Adult vaccine preventable diseases
- Recommendations: ACIP
- Strategies
- Challenges



Background

- Vaccines are among the greatest public health achievements
- However, substantial gaps in vaccination coverage exist
 - Coverage among children is high
 - Coverage is suboptimal in adolescents, adults, and pregnant women
- Understanding the practical barriers for adult vaccination would be helpful to improve prevention

Immunization Contrasts - 1

Pediatric

- Well children
- Growth and development
- Fabulous protection
- Interrupt transmission
- Universal coverage

Adult

- Ill older patients
- Treatment of diseases / medications
- Good protection
- Personal protection
- Targeted populations

Immunization Contrasts - 2

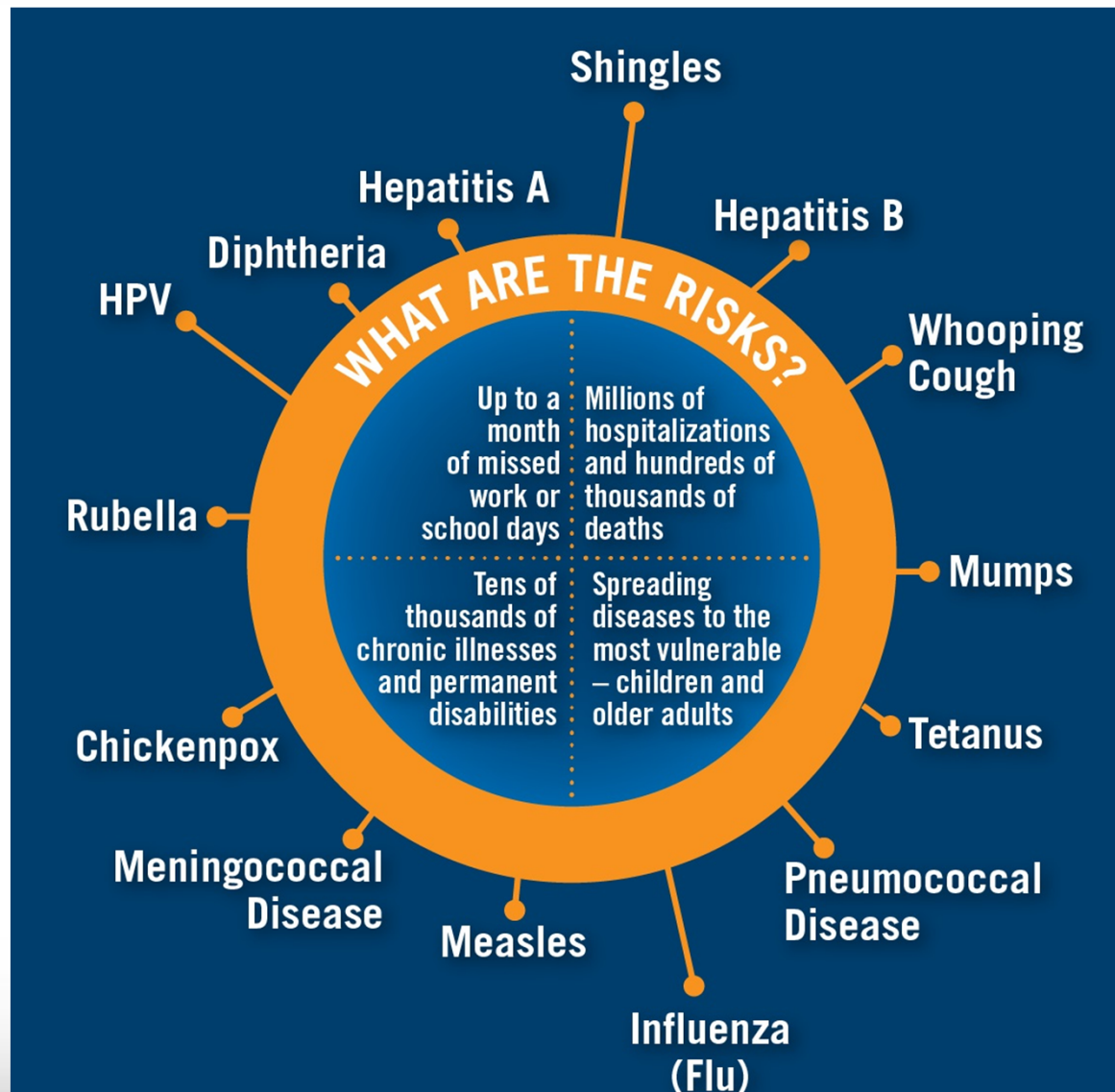
Pediatric

- Create hurdles: “no shots, no school”
- Functional state immunization registries
- Pediatricians are professional immunizers
- Funding rather secure

Adult

- Averse to hurdles
- Absent or barely functional registries
- Internists not so much
- Funding less certain

Vaccine preventable diseases: Adults



Advisory Committee on Immunization Practices (ACIP)

- 1962 - guide vaccination practices
- Advisory to CDC Director and DHHS Secretary
- Eliminate “two-tiered” (public vs private) approach
- In collaboration with professional societies



Morbidity and Mortality Weekly Report

Recommendations of the Advisory Committee on Immunization Practices for Use of Herpes Zoster Vaccines

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Introduction

On October 20, 2017, Zoster Vaccine Recombinant, Adjuvanted (Shingrix, GlaxoSmithKline, [GSK] Research Triangle Park, North Carolina), a 2-dose, subunit vaccine containing recombinant glycoprotein E in combination with a novel adjuvant (AS01g), was approved by the Food and Drug Administration for the prevention of herpes zoster in adults aged ≥50 years. The vaccine consists of 2 doses (0.5 mL each), administered intramuscularly, 2–6 months apart (1). On October 25, 2017, the Advisory Committee on Immunization Practices (ACIP) recommended the recombinant zoster vaccine (RZV) for use in immunocompetent adults aged ≥50 years.

Methods

From March 2015 to October 2017, the ACIP Herpes Zoster Vaccines Work Group (Work Group; see acknowledgments for members and their affiliations) participated in monthly or bimonthly teleconferences to review herpes zoster epidemiology and the evidence for the efficacy, safety, and programmatic factors of RZV and ZVL. According to the Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach, the Work Group defined critical and important outcomes, conducted a systematic review of the evidence, and subsequently reviewed and discussed findings and evidence quality (<https://www.cdc.gov/>

Centers for Disease Control and Prevention
MMWR
Morbidity and Mortality Weekly Report
Recommendations and Reports / Vol. 67 / No. 3
August 24, 2018

Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices—United States, 2018–19 Influenza Season

US adult vaccination schedule

Figure 1. Recommended immunization schedule for adults aged 19 years or older by age group, United States, 2018

This figure should be reviewed with the accompanying footnotes. This figure and the footnotes describe indications for which vaccines, if not previously administered, should be administered unless noted otherwise.

Vaccine	19-21 years	22-26 years	27-49 years	50-64 years	≥65 years
Influenza ¹	1 dose annually				
Tdap ² or Td ²	1 dose Tdap, then Td booster every 10 yrs				
MMR ³	1 or 2 doses depending on indication (if born in 1957 or later)				
VAR ⁴	2 doses				
RZV ⁵ (preferred) or ZVL ⁵	2 doses RZV (preferred) or 1 dose ZVL				
HPV-Female ⁶	2 or 3 doses depending on age at series initiation				
HPV-Male ⁶	2 or 3 doses depending on age at series initiation				
PCV13 ⁷	1 dose				
PPSV23 ⁷	1 or 2 doses depending on indication				
HepA ⁸	2 or 3 doses depending on vaccine				
HepB ⁸	3 doses				
MenACWY ¹⁰	1 or 2 doses depending on indication, then booster every 5 yrs if risk remains				
MenB ¹⁰	2 or 3 doses depending on vaccine				
Hib ¹¹	1 or 3 doses depending on indication				

Recommended for adults who meet the age requirement, lack documentation of vaccination, or lack evidence of past infection
 Recommended for adults with other indications
 No recommendation


Figure 2. Recommended immunization schedule for adults aged 19 years or older by medical condition and other indications, United States, 2018

This figure should be reviewed with the accompanying footnotes. This figure and the footnotes describe indications for which vaccines, if not previously administered, should be administered unless noted otherwise.

Vaccine	Pregnancy ¹⁴	Immuno-compromised (excluding HIV infection) ^{7,15,16}	HIV infection CD4+ count (cells/μL) ^{17,18,19}	Asplenia, complement deficiencies ^{7,14,19}	End-stage renal disease, on hemodialysis ²⁰	Heart or lung disease, alcoholism ⁷	Chronic liver disease ^{7,9}	Diabetes ^{7,9}	Health care personnel ^{8,49}	Men who have sex with men ^{49,50}
Influenza ¹	1 dose annually									
Tdap ² or Td ²	1 dose Tdap each pregnancy	1 dose Tdap, then Td booster every 10 yrs								
MMR ³	contraindicated		1 or 2 doses depending on indication							
VAR ⁴	contraindicated		2 doses							
RZV ⁵ (preferred) or ZVL ⁵	contraindicated		2 doses RZV at age ≥50 yrs (preferred) or 1 dose ZVL at age ≥60 yrs							
HPV-Female ⁶	3 doses through age 26 yrs		2 or 3 doses through age 26 yrs							
HPV-Male ⁶	3 doses through age 26 yrs		2 or 3 doses through age 21 yrs						2 or 3 doses through age 26 yrs	
PCV13 ⁷	1 dose									
PPSV23 ⁷	1, 2, or 3 doses depending on indication									
HepA ⁸	2 or 3 doses depending on vaccine									
HepB ⁸	3 doses									
MenACWY ¹⁰	1 or 2 doses depending on indication, then booster every 5 yrs if risk remains									
MenB ¹⁰	2 or 3 doses depending on vaccine									
Hib ¹¹	3 doses HSCT recipients only		1 dose							

Recommended for adults who meet the age requirement, lack documentation of vaccination, or lack evidence of past infection
 Recommended for adults with other indications
 Contraindicated
 No recommendation

Adult vaccination gaps & disparities

Vaccine	2015 coverage	Healthy People 2020 goals	
Influenza			
65 or +	73.5		
50 – 64	48.7		
19 - 49	32.5		
19 or + (overall)	44.8		70
19 or + (HCP)	68.9		90
Pneumococcal			
65 or +	63.6	90	
AA	50.2		
White	68.1		
19-64 (high risk)	23.0	60	
Zoster			
60 or +	34.2	30	

Standards for adults immunization practices

- Assess vaccination status at every encounter
- Strongly recommend needed vaccines
- Administer vaccines recommended to patients (or refer patients)
- Document vaccines administered

Are vaccines needed?

Strategy

- Improve awareness of burden of vaccine preventable diseases in population
- Information campaigns e.g. influenza, pneumococcal diseases, zoster, etc.

Challenge

- Vaccination has led to low disease incidence
- Increased focus on risks associated with vaccination
- Patients may lack interest

Hurley, et al. Annals of Internal Medicine, 2014.

AHIP. Stakeholder roundtable. 2015

Guide to community preventive services: www.thecommunityguide.org/vaccines/index.html

Adult non-influenza vaccine coverage: www.cdc.gov/mmwr/preview/mmwrhtml/mm6305a4.htm.

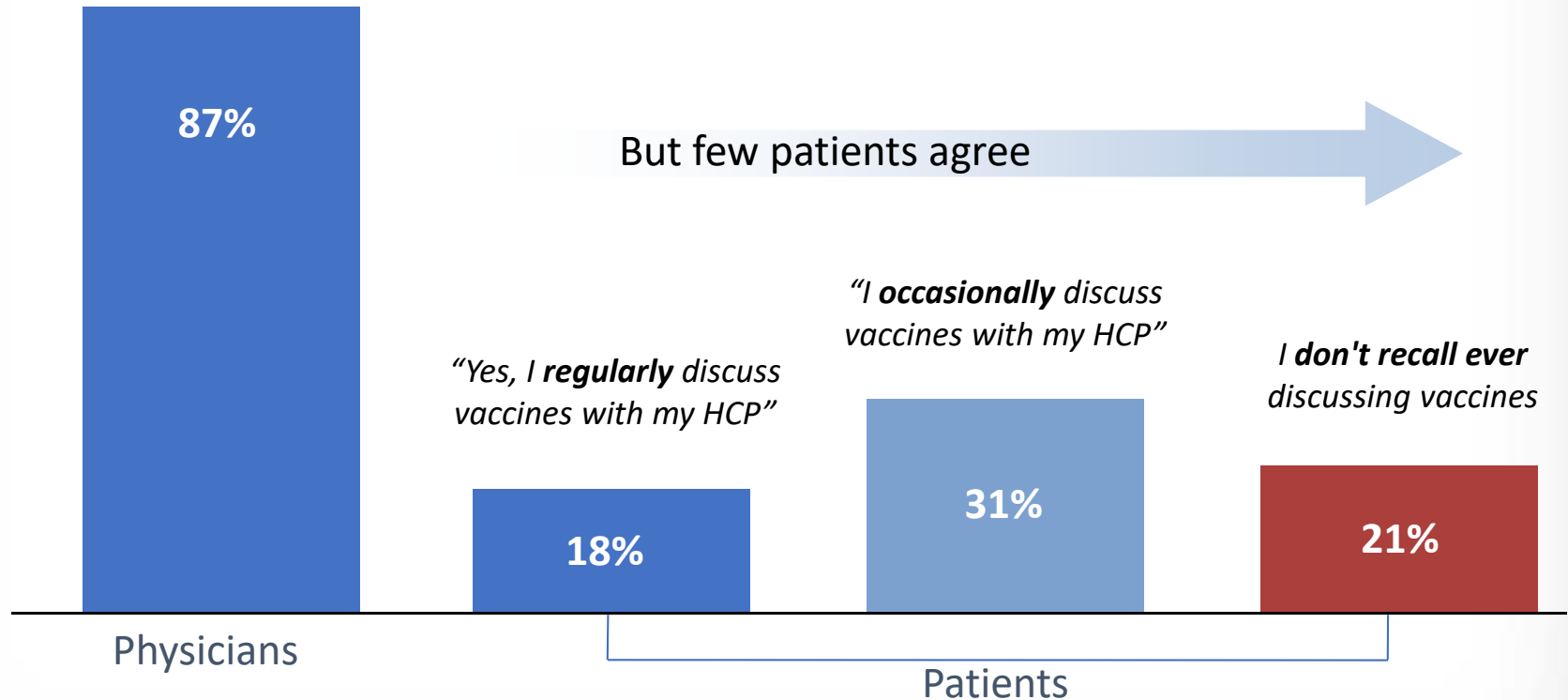
Who Most Influences Adults' Decisions to Get Immunized?

Who	Percentage
Personal physician	69%
Family member	19%
Celebrity physician, public figure, other	7%
None of the above	4%
No answer	1%

Source: National Foundation for Infectious Diseases. 2009 National Adult Immunization Consumer Survey.
In: Landers SJ. Physicians asked to persuade adults to get immunized. *American Medical News*. 2009.
Available at: <http://amednews.com/article/20090803/profession/308039978/7/>.

When It Comes to Vaccines: Doctors and Patients Aren't Hearing One Another

Most physicians say *"I talk to all of my patients about vaccines"*



Results are based on surveys by the National Foundation for Infectious Diseases.

November 2010

Slide courtesy of Dr. William Schaffner

Recommend and administer vaccines

Strategy

- Address vaccination questions and concerns during a clinic visit
- Delegation of functions
- Standing orders



Challenge

- Limited time for personalized discussion (increasing administrative tasks)
- Patient/provider forget or may chose not to discuss vaccination
- May not be comfortable risking apparent 'rejection'

Hurley, et al. Annals of Internal Medicine, 2014.

AHIP. Stakeholder roundtable. 2015

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Alternate sources of vaccination

Strategy

- Adults get their vaccination from their primary care physician or are referred

Challenge

- Alternate sites of care enhance convenient access to vaccines
 - Walk in clinics
 - Pharmacies, etc.
- Real 'team work' needed
- May have inconsistent documentation

Hurley, et al. Annals of Internal Medicine, 2014.

AHIP. Stakeholder roundtable. 2015

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Access: health insurance

Strategy

- Health insurance to pay for vaccination



Challenge

- Several insurance systems
- ACA requires coverage of routinely recommended vaccines at no cost share but do not apply to those covered by transitional or grandfathered health plans, Medicare, and some state Medicaid plans.
- Uninsured remains an issue

Hurley, et al. Annals of Internal Medicine, 2014.

AHIP. Stakeholder roundtable. 2015

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Payment for vaccination

Strategy

- Facilitate payment for the administration of vaccines: patients and providers



"You'll feel a pinch now and another one when the bill comes."

Challenge

- Management and administrative complexity, costs, and workflow challenges.
- Medicare B vs D, Medicaid, private insurance, etc.
- Vaccination payments from programs are set at fixed rates - may not appeal providers – stop offering service

Hurley, et al. Annals of Internal Medicine, 2014.
AHIP. Stakeholder roundtable. 2015

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Documentation: registries and EHRs

Strategy

- Use of electronic health records (EHRs) and immunization information systems (IIS)

Challenge

- Several EHR and IIS platforms
- Difficult to electronically exchange information among disparate EHRs, varying state laws, and lack of standard protocols and data elements used by state immunization registries.
- Confidentiality concerns

Hurley, et al. Annals of Internal Medicine, 2014.

AHIP. Stakeholder roundtable. 2015

Guide to community preventive services: www.thecommunityguide.org/vaccines/index.html

Adult non-influenza vaccine coverage: www.cdc.gov/mmwr/preview/mmwrhtml/mm6305a4.htm.

Standardized quality metrics

- 2002 - 2014, in-hospital vaccination with PPV23 was a standardized quality metric for US hospitals

In-Hospital Pneumococcal
Polysaccharide Vaccination Is
Associated With Detection of
Pneumococcal Vaccine Serotypes
in Adults Hospitalized for
Community-Acquired Pneumonia

← False positives

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Summary

- Adult vaccination is complicated
- Complex vaccination schedule
- Strategies to improve coverage are in place but challenges remain
- Securing access to / payment for vaccines is very important
- Need to adapt strategies to changing healthcare delivery system



Thank you!