Adults need immunizations too!

Medicaid coverage, cost sharing, and provider reimbursement for ACIP-recommended immunizations for adults

ABA Health Law Section Webinar
January 16, 2018
Adult immunization overview

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Millions of adults get diseases for which we have vaccines
Disclosure

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

- Burden of vaccine-preventable diseases
- Impact of vaccination among adults
- Challenges in vaccinating adults
Vaccine-preventable diseases disproportionately affect adults, particularly older adults
Burden of Influenza, United States

Deaths: 12,000 – 56,000
Hospitalizations: 140,000 – 710,000
Cases: 9,200,000 – 35,600,000

Direct medical cost $10.4 billion
With loss of work and life $87 billion

While the impact of flu varies, it places a substantial burden on the health of people in the United States each year. CDC estimates that influenza has resulted in between 9.2 million and 60.8 million illnesses, between 140,000 and 710,000 hospitalizations and between 12,000 and 56,000 deaths annually since 2010.

- CDC. Estimated Influenza Illnesses, Medical Visits, Hospitalizations, and Deaths Averted by Vaccination in the United States, 2017. Available at: www.cdc.gov/flu/about/disease/2015-16.htm
Laboratory-confirmed influenza hospitalizations, cumulative, October 1, 2016 – April 15, 2017
Flu Vaccine and Chronic Diseases

- Acute respiratory illness or influenza-like illness increases acute MI risk 2x\(^1\)
- Influenza vaccination 29%–36% effective against major cardiac events\(^1,2\)
- On par with statins (36%), anti-hypertensives (15–18%), quit smoking (26%)
- High risk medical conditions – 78% reduction in deaths due to any cause, 87% reduction in hospitalization due to acute respiratory or cardiovascular disease\(^3\)
- Diabetes – 56% reduction in any complication, 54% reduction in hospitalizations, 58% reduction in deaths\(^4\)
- Chronic obstructive lung disease – 76% vaccine effectiveness, reduced COPD exacerbation\(^5,6\)

Burden of Pneumococcal Disease

- 33,900 cases, 3,700 deaths reported in 2013
- Estimated 400,000 hospitalizations per year
- 89% cases, almost all deaths occur among adults

Incidence of invasive pneumococcal disease among adults age 18–64 years with select underlying conditions, United States, 2009

Kyaw. JID 2005;192:377–86
Active Bacterial Core Surveillance (ABCs) report: *Streptococcus pneumoniae*
Emerging Infections Program Network, United States, 2015

www.cdc.gov/abcs/reports-findings/survreports/spneu15.html
Pneumococcal Vaccination

- 23-valent pneumococcal polysaccharide vaccine (PPSV23)
  - 74% (95%CI 55,86) against invasive pneumococcal disease (IPD)
  - 11 unique serotypes (12 common serotypes with PCV13) causes 38% of IPD among adults ≥65y
  - **Not effective against non-IPD pneumonia**

- 13-valent pneumococcal conjugate vaccine (PCV13) for adults ≥65y
  - 45% against vaccine-type non-IPD pneumonia
  - 75% against vaccine-type IPD

Burden of Zoster

- **Herpes zoster (shingles)**
  - 1 million cases per year, lifetime risk 32%
  - 10–11/1,000 per year for adults ≥60y
  - Half of adults to age 85y will develop shingles

- **Post-herpetic neuralgia (PHN)**
  - Rare among adults <40y
  - 13% of adults ≥60y will get PHN
  - Risk of PHN after shingles increases with age

CDC. Prevention of Herpes Zoster. MMWR 2008;57(RR-5):1–30
Zoster and post-herpetic neuralgia on health-related quality of life

Figure 1: Impact of herpes zoster on health-related quality of life. Shown are the percentages of participants (n = 261) who reported problems in the EuroQol EQ-5D domains at the time of recruitment (< 14 days after rash onset) and after the pain stopped. Median duration of pain was 32.5 days. Error bars = 95% confidence intervals.

Drolet M et al. CMAJ 2010
Zoster Vaccination

- Zoster vaccine live (ZVL)
  - 51% against shingles, 66% against PHN
  - 80% against most prolonged and extreme cases of PHN
  - Efficacy wanes within 5y

- Recombinant zoster vaccine (RZV)
  - 96% (95%CI 93,98) effectiveness among 50-, 60-, 70-year olds
  - Subsequent 90% (95%CI 84,94) effectiveness among ≥70y
  - Immunogenicity persisted through 9y post-vaccination

- Recommendations
  - 2 doses RZV 2–6 mos apart for ≥50y regardless of shingles or ZVL history
  - RZV or ZVL for ≥60y (RZV preferred)

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4. Presented at February 2017 ACIP meeting
5. MMWR pending

“I watched my sister suffer with shingles, that’s why I made sure we both got vaccinated.”
Burden of Hepatitis B

- 3,050 cases reported in 2013
- Estimated 19,800 cases

CDC. Viral Hepatitis Surveillance United States, 2015. National Center for HIV/AIDS, Viral Hepatitis, STD & TB Prevention/Division of Viral Hepatitis
Incidence of acute hepatitis B, by age group, United States, 2000–2013

National Notifiable Diseases Surveillance System (NNDSS)
Hepatitis B Vaccination and Increasing Age

- >90% effective after completing 3-dose series for healthy adults
- However, decline in immunogenicity at vaccine administration by age\(^1\)
  - 90% protective antibody after age 40y
  - 75% protective antibody by age 60y
- Effectiveness lower in persons with diabetes and increasing age\(^2\)
  - 90% age <40y
  - 80% age 41–59y
  - 65% age 60–69y
  - <40% age ≥70y

1. CDC. A comprehensive immunization strategy to eliminate transmission of hepatitis B virus infection in the United States. Recommendations of the Advisory Committee on Immunization Practices (ACIP) Part II: Immunization of Adults. MMWR 2006;55(No. RR-16):1–33
Burden of Pertussis

- 21,000 cases in 2015, 22% among adults
- Transmission from adults to children
  - Disease most severe for infants
  - Among hospitalized
    - Apnea (61%)
    - Pneumonia (23%)
    - Death (1%)

CDC. National Notifiable Disease Surveillance System [www.cdc.gov/pertussis/surv-reporting.html](http://www.cdc.gov/pertussis/surv-reporting.html)
Pertussis among Older Adults

- Underdiagnosed and underreported
  - 10,000–50,000 cases per year

- Burden in older adults unknown
  - Under-recognized cause of cough illness
  - Atypical clinical presentation in adults
  - Low suspicion by providers

- Estimates for adults ≥65y
  - Ranges from 1–5 to 500 cases per 100,000

MMWR 2012;61(25):468–470
Tdap in Pregnancy

- Vaccinating pregnant women provides direct protection for mom, indirect protection for infant
- Infants of vaccinated moms were born with significantly higher anti-pertussis antibodies compared to infants of unvaccinated mothers
  - If given within the 27–36 weeks administration window
  - Concentration of anti-pertussis antibodies in infant higher when mothers vaccinated earlier in this window

CDC. MMWR 2012;61:ND:719–32
CDC. MMWR 2013;62(07):131–135
Vaccines are routinely recommended for adults based on age, medical condition, and other indications.
Recommended Immunization Schedule for Adults Aged 19 Years or Older, United States, 2017

In February 2017, the Recommended Immunization Schedule for Adults Aged 19 Years or Older, United States, 2017 became effective, as recommended by the Advisory Committee on Immunization Practices (ACIP) and approved by the Centers for Disease Control and Prevention (CDC). The 2017 adult immunization schedule was also reviewed and approved by the following professional medical organizations:

- American College of Physicians (www.acponline.org)
- American Academy of Family Physicians (www.aafp.org)
- American College of Obstetricians and Gynecologists (www.acog.org)
- American College of Nurse-Midwives (www.midwife.org)


The adult immunization schedule describes the age groups and indications for which licensed vaccines are recommended, consists of:

- Figure 1. Recommended immunization schedule
- Table. Immunization schedule
- Footnotes that accompany each vaccine contain considerations for special populations
- Table. Contraindications and precautions for vaccines

Consider the following information when reviewing the schedule:

- The figures in the adult immunization schedule do not contain important general information and inform patients.
- When indicated, administer recommended vaccines in complete or unknown.
- Increased interval between doses of a multi-dose vaccine is not necessary in general. Therefore, it is not necessary to restock doses because of an extended interval between doses.
- Adults with immunocompromising conditions such as e.g., measles, mumps, and rubella vaccine, inactivated influenza vaccines, are generally accessible.
- Combination vaccines may be used when any component is recommended and when the other components of the combination are not.
- The use of trade names in the adult immunization schedule only and does not imply endorsement by the ACIP.
- CDC.gov/vaccines/hcp/acip-recs/index.html. Additional information is available at www.cdc.gov.

Vaccine Information Statements that explain benefits and risks of vaccines are available at www.cdc.gov/vaccines/hcp/vs/iis/index.html.

Information and resources regarding vaccination of pregnant women are available at www.cdc.gov/vaccines/hcp/imnc/vacc-pregnant.html.

Information on travel vaccine requirements and recommendations is available at www.cdc.gov/travel/destinations/list.

CDC Vaccine Schedules App for clinicians and other immunization service providers to download is available at www.cdc.gov/vaccines/schedules/hcp/app.html.

Recommended Immunization Schedule for Children and Adolescents Aged 18 Years or Younger is available at www.cdc.gov/vaccines/schedules/hcp/index.html.

Report suspected cases of reportable vaccine-preventable diseases to the local or state health department.

Report all locally significant post-vaccination reactions to the Vaccine Adverse Event Reporting
Figures 1 and 2 should be read with the footnotes that contain important general information and considerations for special populations.

**Figure 1. Recommended immunization schedule for adults aged 19 years or older by age group, United States, 2017**

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>19–21 years</th>
<th>22–26 years</th>
<th>27–59 years</th>
<th>60–64 years</th>
<th>≥ 65 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influenza(^1)</td>
<td>1 dose annually</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Td/Tdap(^2)</td>
<td></td>
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<tr>
<td></td>
<td>Substitute Tdap for Td once, then Td booster every 10 yrs</td>
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</tr>
<tr>
<td>MMR(^3)</td>
<td></td>
<td></td>
<td>1 or 2 doses depending on indication</td>
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<tr>
<td>VAR(^4)</td>
<td></td>
<td></td>
<td></td>
<td>2 doses</td>
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<tr>
<td>HZV(^5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 dose</td>
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<tr>
<td>HPV – Female(^6)</td>
<td></td>
<td></td>
<td>3 doses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HPV – Male(^6)</td>
<td></td>
<td></td>
<td></td>
<td>3 doses</td>
<td></td>
</tr>
<tr>
<td>PCV13(^7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 dose</td>
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<tr>
<td>PPSV23(^7)</td>
<td></td>
<td></td>
<td>1 or 2 doses depending on indication</td>
<td></td>
<td>1 dose</td>
</tr>
<tr>
<td>HepA(^8)</td>
<td></td>
<td></td>
<td></td>
<td>2 or 3 doses depending on vaccine</td>
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<tr>
<td>HepB(^9)</td>
<td></td>
<td></td>
<td></td>
<td>3 doses</td>
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<tr>
<td>MenACWY or MPSV4(^10)</td>
<td></td>
<td></td>
<td></td>
<td>1 or more doses depending on indication</td>
<td></td>
</tr>
<tr>
<td>MenB(^11)</td>
<td></td>
<td></td>
<td></td>
<td>2 or 3 doses depending on vaccine</td>
<td></td>
</tr>
<tr>
<td>Hib(^11)</td>
<td></td>
<td></td>
<td></td>
<td>1 or 3 doses depending on indication</td>
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</tr>
</tbody>
</table>

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Recommended for adults who meet the age requirement, lack documentation of vaccination, or lack evidence of past infection

Recommended for adults with additional medical conditions or other indications

No recommendation
Figure 2. Recommended immunization schedule for adults aged 19 years or older by medical condition and other indications, United States, 2017

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Influenza[^1]</td>
<td>1 dose annually</td>
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<tr>
<td>Td/Tdap[^2]</td>
<td>Substitute Tdap forTd once, then Td booster every 10 yrs</td>
<td>1 dose Tdap each pregnancy</td>
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<tr>
<td>MMR[^3]</td>
<td>contraindicated</td>
<td>1 or 2 doses depending on indication</td>
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<tr>
<td>VAR[^4]</td>
<td>contraindicated</td>
<td>2 doses</td>
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<tr>
<td>HZV[^5]</td>
<td>contraindicated</td>
<td>1 dose</td>
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<tr>
<td>HPV--Female[^6]</td>
<td>3 doses through age 26 yrs</td>
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<tr>
<td>HPV--Male[^6]</td>
<td>3 doses through age 26 yrs</td>
<td>3 doses through age 21 yrs</td>
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<tr>
<td>PCV13[^7]</td>
<td>1 dose</td>
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<tr>
<td>PPSV23[^7]</td>
<td>1, 2, or 3 doses depending on indication</td>
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<tr>
<td>HepA[^8]</td>
<td>2 or 3 doses depending on vaccine</td>
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<tr>
<td>HepB[^9]</td>
<td>3 doses</td>
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<tr>
<td>MenACWY or MPSV[^10]</td>
<td>1 or more doses depending on indication</td>
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<tr>
<td>MenB[^11]</td>
<td>2 or 3 doses depending on vaccine</td>
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<tr>
<td>Hib[^11]</td>
<td>1 dose</td>
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</tbody>
</table>

[^1]: Recommended for adults who meet the age requirement, lack documentation of vaccination, or lack evidence of past infection.
[^2]: Recommended for adults with additional medical conditions or other indications.
[^3]: Contraindicated.
[^4]: No recommendation.
Adult immunization coverage rates are persistently low.
Adult Vaccination Rates 2015

- Influenza – 44.8%
- Tdap – 23.1%
- Pneumococcal age ≥65 – 63.9%, age 19 – 64 at increased risk – 23.0%
- Zoster age ≥60 – 30.6%
- Hepatitis B age 19–59 with diabetes – 24.4%
- Race and ethnicity disparities persist
- Adults with health insurance 2x–5x higher
- Even among insured with 10 or more physician contacts in last 12 months, 18% to 86% missing recommended vaccine

## Adults’ Knowledge and Interest in Vaccination

<table>
<thead>
<tr>
<th>Response</th>
<th>Tdap (19+)</th>
<th>Pneumo (65+)</th>
<th>Zoster (60+)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am not aware that I need this vaccine.</td>
<td>52%</td>
<td>22%</td>
<td>18%</td>
</tr>
<tr>
<td>I am aware that I need this vaccine, but haven’t thought about getting it.</td>
<td>6%</td>
<td>3%</td>
<td>6%</td>
</tr>
<tr>
<td>I am considering getting this vaccine, but have not yet decided.</td>
<td>5%</td>
<td>3%</td>
<td>9%</td>
</tr>
<tr>
<td>I have decided to get this vaccine, but have not yet gotten vaccinated.</td>
<td>3%</td>
<td>4%</td>
<td>8%</td>
</tr>
<tr>
<td>I have decided not to get this vaccine.</td>
<td>13%</td>
<td>13%</td>
<td>19%</td>
</tr>
<tr>
<td>I have gotten this vaccine.</td>
<td>22%</td>
<td>56%</td>
<td>39%</td>
</tr>
</tbody>
</table>

Porter Novelli 2015. ConsumerStyles (Fall) unpublished
Challenges in Vaccinating Adults – Provider Perspectives

- Almost all agreed they have responsibility to vaccinate adults
- But only 31% family physicians, 20% general internists stocked all vaccines routinely recommended for adults
- Financial barrier cited as most important barrier
- Most referred patients to pharmacy or public health department
  - Lack of insurance coverage for vaccine
  - Inadequate reimbursement

Thank you

For more information, contact CDC
1-800-CDC-INFO (232-4636)

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Influenza

- Respiratory illness caused by influenza viruses
- Fever, cough, sore throat, congestion, aches, fatigue
- Transmitted by respiratory droplets, direct or indirect contact
- Contagious 1 day before symptoms to 5–7 days after illness started
- Incubation period 1–4 days (average 2 days)
- Complications – pneumonia, sinus/ear infection, exacerbation of chronic conditions
- High risk – older adults, young children, pregnant women, chronic conditions
- Treatment – influenza antiviral meds, supportive care
- Prevention – hand hygiene, personal hygiene, sick leave/home stay, flu shot
Pneumococcal Disease

- Caused by bacterium *Streptococcus pneumoniae*, 5%–90% of healthy are carriers
- Causes pneumonia, meningitis, otitis media, bacteremia
- Transmitted by direct person-to-person contact with respiratory droplets
- Duration of contagiousness unknown
- Incubation period 1–3 days
- Complications – pneumonia, sinus/ear infection, exacerbation of chronic conditions
- High risk – older age, immunocompromised, asplenia, chronic conditions, smoking
- Treatment – antibiotics
- Prevention – pneumococcal conjugate vaccine (PCV13) and pneumococcal polysaccharide vaccine (PPSV23)
Zoster (Shingles)

- Caused by varicella zoster virus
- Primary infection causes varicella (chickenpox), reactivation causes zoster (shingles)
- Causes rash on one side of face or body; rash scabs over in 7–10 days, clears in 2–4 weeks
- Shingles is not transmitted but virus can spread from person to person and cause chickenpox in susceptible people
- Complications – post-herpetic neuralgia (PHN), eye problems, pneumonia
- High risk – older age, immunocompromised
- Treatment – antivirals, supportive care
- Prevention – zoster vaccination
Adult Vaccination and Medicaid
Medicaid program structure

Federal $$

State $$

State Medicaid Agency $$$$$$$$

Fee for Service Providers

Managed care Organization (MCO)

Managed care Organization (MCO)

Managed care Organization (MCO)

Network Providers
Stakeholder Alignment

• Working Theory- effective vaccine program lessens frequency/severity of disease
• Gov’t payers save $$$$$
• MCO payers save $$$$$
• Providers reduced admin burden [no Prior Auths required]
• Enrollees stay healthier, save $$$$ [reduction in missed work]
Understand your State’s program

• FIRST STEP: FIND THE STATE MEDICAID AGENCY WEBSITE

• Is it fee for service for some areas, populations, or services?
• Which MCOs are present in my location?
• Is my state an “any willing provider” state?
Provider types frequently involved in vaccine programs

• Physicians
• Pharmacists
• Mid level providers- Nurse Practitioners/Physician Assistants
Incentivizing patient participation

• **WARNING: INDUCING PATIENTS TO PURCHASE MEDICAL CARE MAY VIOLATE FEDERAL LAW**

• Have any incentive program thoroughly vetted by your attorney.

• Clinical evidence around using incentives for life style changes [weight loss, quit smoking] shows minimal effectiveness.

• Clinical evidence for using incentives for short term, discrete behavior like getting a vaccination is more promising.
Remember

• “ADULT” in the Medicaid program frequently means 21 and over NOT over 18. This is important because in many states benefits provided for children are different than those provided for adults. Therefore a 19 year old may be entitled to a benefits as a child to which an “adult” would not be entitled.
A National Assessment of Medicaid Coverage, Cost Sharing, and Provider Reimbursement for Advisory Committee on Immunization Practices Recommended Adult Vaccinations

ABA Webinar

Alexandra Bhatti, JD, MPH

January 16, 2018
Public Health Law Program
Office for State, Tribal, Local and Territorial Support
Centers for Disease Control and Prevention
Financial Disclosures

- Nothing to Disclose
CDC Disclaimer

- The contents of this presentation have not been formally disseminated by the Centers for Disease Control and Prevention (CDC) and should not be construed to represent any agency determination or policy.

- These materials are for instructional use only and are not intended as a substitute for professional legal or other advice.

- Always seek the advice of an attorney or other qualified professional with any questions you may have regarding a legal matter.
Overview

- Introduction
- CDC’s Public Health Law Program
- Assessment Overview
- Fee Schedule Results
- Semi-Structured Interview Design
- Summary
CDC’s Public Health Law Program (PHLP)
PHLP’s Mission: To advance the understanding and use of law as a public health tool.
- Whom we serve
  - CDC programs and state, tribal, local, and territorial communities
- For more information
  - To submit a request or to learn more, visit us at www.cdc.gov/phlp
A National Assessment of Medicaid Coverage, Cost Sharing, and Provider Reimbursement for ACIP-Recommended Adult Vaccinations
Assessment Overview

- Adults need immunizations, too
- Medicaid is the largest source of funding for medical and health-related services for America’s poorest people
- Medicaid enrollees have greater healthcare needs and higher health risks
- Evidence shows that pregnant women with private health insurance have higher Tdap (tetanus, diphtheria, pertussis) vaccination coverage than women with public insurance

https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6419a4.htm, Tetanus, Diphtheria, Pertussis Vaccination Coverage Before, During, and After Pregnancy — 16 States and New York City, 2011
Federal Medicaid rules permit each state program to determine:
- Which adult vaccines, if any, will be covered
- Cost-sharing policies for adult vaccination services
- Provider reimbursement policies for adult vaccination services
- Settings where vaccines may be administered to adults

States generally pay for services through fee-for-service (FFS) or managed care arrangements.
- Under FFS, states pay providers directly for services
- Under managed care arrangements, providers are paid on a monthly capitation payment rate

Enrollment in Managed Care Organizations (MCOs) increased by 24% from 2013 to 2014—and continues to grow
Assessment History

Earlier studies

– 2003: Medicaid Coverage of Immunizations for Non-Institutionalized Adults
– 2012: Medicaid Vaccinations for Non-Institutionalized Adult Enrollees

https://publichealth.gwu.edu/departments/healthpolicy/CHPR/downloads/Medicaid_Immunization_Study.pdf
https://publichealth.gwu.edu/pdf/hp/medicaid_vaccinations_benefit_design_2013.pdf
Assessment Methods

**Objective:** Conduct a 50-state and DC assessment of Medicaid policies identifying: 1) coverage of ACIP-recommended vaccinations for adults; 2) cost-sharing policies; 3) vaccine provider reimbursement policies

- Sources assessed:
  - Relevant statutes and regulations
  - Medicaid state plans
  - Medicaid provider manuals
  - Medicaid fee schedules
- Conduct semi-structured interview with state Medicaid program staff to verify and supplement document review.
- Create a database of law and policy characteristics and compare to adult immunization data available
- Perform historical assessment of coverage and reimbursement policies
Fee Schedule Results
Fee-For-Service Arrangement Fee Schedule Results

Reviewed available fee schedules for all 50 states and DC

- Hawaii (<0.1% Medicaid enrollees in FFS)
- Massachusetts (20.5% Medicaid enrollees in FFS)
- Pennsylvania (17.2% Medicaid enrollees in FFS)
- Tennessee (0% Medicaid enrollees in FFS)
- Wisconsin (33% Medicaid enrollees in FFS)

Number of States That Reimburse for Specific Vaccines

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Reimbursement Ranges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zoster</td>
<td>$9.56 – $270.49</td>
</tr>
<tr>
<td>HPV-9</td>
<td>$9.56 – $464.41</td>
</tr>
<tr>
<td>HPV-4</td>
<td>$9.45 – $352.51</td>
</tr>
<tr>
<td>MMR (90707)</td>
<td>$9.56 – $84.82</td>
</tr>
<tr>
<td>PCV 13</td>
<td>$9.45 – $267.74</td>
</tr>
<tr>
<td>PPSV 23</td>
<td>$9.56 – $98.95</td>
</tr>
<tr>
<td>Tdap (90715)</td>
<td>$10.71 – $99.71</td>
</tr>
</tbody>
</table>

herpes zoster (Zoster); human papillomavirus (HPV); measles, mumps, & rubella (MMR); pneumococcal conjugate vaccine (PCV); pneumococcal polysaccharide vaccine (PPSV); tetanus, diphtheria, and pertussis (Tdap)
Reimbursement Ranges

**Tdap (90715)**
- N = 45
- Median: $52.22
- Mode: $47.47
- Average: $52.89
- Local Minimum: $22.05
- Local Maximum: $52.61
- Cost: $43.42

**MMR (90707)**
- N = 40
- Median: $52.89
- Mode: $47.47
- Average: $52.22
- Local Minimum: $9.56
- Local Maximum: $84.82
- Cost: $70.92

**PPSV 23 (90732)**
- N = 44
- Median: $80.60
- Mode: $74.55
- Average: $98.85
- Local Minimum: $42.55
- Local Maximum: $136.43
- Cost: $94.51
Reimbursement Ranges

Zoster (90736)
N = 34

- Local Minimum: $87.35
- Local Maximum: $270.49
- Median: $182.73
- Average: $172.32
- Mode: $196.91
- Cost: $212.66

HPV9 (90651)
N = 35

- Local Minimum: $140.45
- Local Maximum: $254.99
- Median & Mode: $189.32
- Average: $204.87
- Cost: $204.87

- $464.41
- $5.35
Semi-Structured Interview Design
Interview Objectives

Objectives for the interview with State Medicaid programs that pay for services through FFS and managed care arrangements:

1) Understand how adult beneficiary population is divided between FFS and managed care
2) Confirm which adult vaccinations are covered in FFS arrangement
3) Learn which providers are considered “in network”
4) Validate cost-sharing policy for adult vaccination services
5) Learn how coverage is determined in managed care arrangements for adult vaccines
6) Learn which providers are considered “in network” for managed care arrangements or how that is determined
7) Learn about provider reimbursement policies for managed care arrangements
8) Understand cost-sharing policy and how determined for managed care arrangements
Interview Details

- Participants
  - Includes state Medicaid program designated representative. Participants could include state Medicaid director, state Medicaid attorney, reimbursement services director, Medicaid policy and quality personnel, and others
- Data collection period: September 2017 through February 2018
Interview Topics

- Medicaid eligibility beyond mandated groups
- Share of Medicaid population covered under different payment arrangements
- FFS
  - Coverage
  - Reimbursement for administration, vaccine, and counseling (by provider type)
- Managed care
  - Contractual limitations
  - Coverage
  - Provider reimbursement
Interview Topics (Continued)

- Interview topics:
  - Financing (e.g., percentage and dollar value of total Medicaid budget that is used for immunization services)
  - Determinations of coverage
  - Access and utilization
    - Promotion of adult vaccinations to beneficiaries
    - Promote adult vaccinations by healthcare providers
    - Reimbursement for administration, vaccine, and counseling (by provider type)
  - Data collection and reporting
    - Immunization Information System (IIS) requirements
    - Data sources
- Introduction
- CDC’s Public Health Law Program
- Assessment Overview
- Fee Schedule Results
- Semi-Structured Interview Design
Public Health Law Program
  - Director, Matthew Penn, JD, MLIS

CDC- Immunization Services Division
  - Megan C. Lindley, MPH
  - Shannon Stokley, DrPH
Thank you!

Alexandra Bhatti, JD, MPH
Abhatti@cdc.gov

For more information, contact CDC
1-800-CDC-INFO (232-4636)

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.