Childhood Immunization Under ACA: The Future is not What it Used to be

Alaska Immunization Conference
Anchorage, Alaska

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Director, Immunization Services Division
National Center for Immunization and Respiratory Diseases
Centers for Disease Control and Prevention
Topics

• Value of vaccines

• Vaccine financing

• Status of childhood immunization

• Future childhood program and Section 317 opportunities
# Recommended Immunization Schedule for Persons Aged 0 Through 6 Years—United States • 2011

For those who fall behind or start late, see the catch-up schedule.

<table>
<thead>
<tr>
<th>Vaccine ▼</th>
<th>Age ▼</th>
<th>Birth</th>
<th>1 month</th>
<th>2 months</th>
<th>4 months</th>
<th>6 months</th>
<th>12 months</th>
<th>15 months</th>
<th>18 months</th>
<th>19-23 months</th>
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</thead>
<tbody>
<tr>
<td>Hepatitis B</td>
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<td>RV</td>
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<td>Inactivated Poliovirus</td>
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<td>Influenza (Yearly)</td>
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<td>Measles, Mumps, Rubella</td>
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<td>Varicella</td>
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<td>Hepatitis A</td>
<td>HepA (2 doses)</td>
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<td>Meningococcal</td>
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<td>MCV4</td>
</tr>
</tbody>
</table>

# Recommended Immunization Schedule for Persons Aged 7 Through 18 Years—United States • 2011

For those who fall behind or start late, see the schedule below and the catch-up schedule.

<table>
<thead>
<tr>
<th>Vaccine ▼</th>
<th>Age ▼</th>
<th>7-10 years</th>
<th>11-12 years</th>
<th>13-18 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetanus, Diphtheria, Pertussis</td>
<td></td>
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<tr>
<td>Human Papillomavirus</td>
<td>see footnote</td>
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<td></td>
<td>HPV Series</td>
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<tr>
<td>Meningococcal</td>
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<td>MCV4</td>
<td>MCV4</td>
<td>MCV4</td>
</tr>
<tr>
<td>Influenza</td>
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<td></td>
<td>Influenza (Yearly)</td>
</tr>
<tr>
<td>Pneumococcal</td>
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<tr>
<td>Inactivated Poliovirus</td>
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<td>IPV Series</td>
</tr>
<tr>
<td>Measles, Mumps, Rubella</td>
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<td></td>
<td>MMR Series</td>
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<tr>
<td>Varicella</td>
<td></td>
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<td></td>
<td>Varicella Series</td>
</tr>
</tbody>
</table>
Advisory Committee on Immunization Practices (ACIP)

Welcome to...

ADVISORY COMMITTEE ON IMMUNIZATION PRACTICES

Chair & Executive Secretary

CHAIR
BAKER, Carol J., M.D.
Professor of Pediatrics
Molecular Virology & Microbiology
Baylor College of Medicine
1102 Bates Street, Suite 1120
Houston, Texas 77030
Term: 07/01/06-06/30/12

EXECUTIVE SECRETARY
PICKERING, Larry K., M.D.
Senior Advisor to the Director
National Center for Immunization & Respiratory Diseases
Centers for Disease Control & Prevention
1600 Clifton Road, NE, Mailstop E-05
Atlanta, Georgia 30333
The Immunization Schedule Saves Dollars as Well as Lives and Suffering

- Model-based analysis of vaccines recommended through varicella updated to include PCV7, rotavirus, hepatitis A (all vaccines in the 0 to 6 year schedule except influenza vaccine)

- Health impact for each birth cohort
  - Prevent 42,000 VPD deaths
  - Prevent 20 million VPD cases

- Economic impact for each birth cohort
  - $13 billion saving in direct medical costs
  - $68 billion in saving to society

Updated in 2011, preliminary analysis, prior to peer review
## Prioritizing Clinical Preventive Services: A Review and Framework with Implications for Community Preventive Services

### Table 4  Ranking of clinical preventive services for the U.S. population

<table>
<thead>
<tr>
<th>Clinical preventive service</th>
<th>CPB</th>
<th>CE</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discuss daily aspirin use: men 40+, women 50+</td>
<td>5</td>
<td>5</td>
<td>10</td>
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<tr>
<td>Childhood immunizations</td>
<td>5</td>
<td>5</td>
<td>10</td>
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<tr>
<td>Smoking cessation advice and help to quit: adults</td>
<td>5</td>
<td>5</td>
<td>10</td>
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<tr>
<td>Alcohol screening and brief counseling: adults</td>
<td>4</td>
<td>5</td>
<td>9</td>
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<tr>
<td>Colorectal cancer screening: adults 50+</td>
<td>4</td>
<td>4</td>
<td>8</td>
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<tr>
<td>Hypertension screening and treatment: adults 18+</td>
<td>5</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Influenza immunization: adults 50+</td>
<td>4</td>
<td>4</td>
<td>8</td>
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<tr>
<td>Vision screening: adults 65+</td>
<td>3</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Cervical cancer screening: women</td>
<td>4</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Cholesterol screening and treatment: men 35+, women 45+</td>
<td>5</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Pneumococcal immunization: adults 65+</td>
<td>3</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Breast cancer screening: women 40+</td>
<td>4</td>
<td>2</td>
<td>6</td>
</tr>
</tbody>
</table>
## Annual Premiums for Routine Vaccines as a Percent of Total Premiums

<table>
<thead>
<tr>
<th>Coverage</th>
<th>2009 Premiums for Routine Vaccination</th>
<th>2009 Premiums for Large Plans</th>
<th>% of Premiums Due to Vaccines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Coverage</td>
<td>$107</td>
<td>$13,280</td>
<td>0.8%</td>
</tr>
<tr>
<td>Single Coverage</td>
<td>$8</td>
<td>$4,940</td>
<td>0.2%</td>
</tr>
</tbody>
</table>

Source: Rose Chu, ASPE presentation at NVAC, June 2, 2009
Available at: http://www.hhs.gov/nvpo/nvac/meetings/pastmeetings/ins_premiums_200906.pdf
Most Parents Select Insurance That Covers Vaccines

- Parents value prevention

- Rate of underinsurance has remained constant for past 7 years (about 11% of young children) despite rising vaccine costs

- Parents prefer to be vaccinated at medical home, which is easiest when the child is fully insured or VFC entitled
Pre-ACA Private Insurance Challenges

• Vaccine coverage variable and voluntary

• ERISA plans exempt from state mandates

• Approximately 45% to 50% of young children are covered by private insurance
Federal Vaccine Funding Characteristics

• **Vaccines for Children**
  – Mandatory program with mandatory federal funding
  – Does not compete with other funding priorities
  – Grows with need
  – Has restrictions on who can be vaccinated: 0 – 18 years and
    • Medicaid enrolled or
    • Uninsured or
    • AI/AN or
    • Underinsured at FQHC/RHC

• **Section 317**
  – Discretionary program, funding newly appropriated annually
  – Competes with other funding priorities
  – Does not grow with need
  – Few restrictions on who can be vaccinated
ACIP Controls VFC Formulary

• Evidence-based vaccine insurance

• Empowers ACIP with means to carry out its recommendations

• Public health evidence > economic evidence

• Federal funding is mandated for included vaccines

• CDC negotiates vaccine contracts, but cannot overrule ACIP’s inclusion of a vaccine into VFC
Insurance/VFC Status 19-35 Month Old Children; 2008 NIS Insurance Module

Totals add to > 100% because some AI/AN children are enrolled in Medicaid
Gaps in Vaccine Financing for Underinsured Children in the United States

Grace M. Lee, MD, MPH
Jeanne M. Santoli, MD
Claire Hannan, MPH
Mark L. Messonnier, PhD
James E. Sabin, MD
Donna Rusinak
Charlene Gay
Susan M. Lett, MD, MPH
Tracy A. Lieu, MD, MPH

Context  The number of new vaccines recommended for children and adolescents has nearly doubled during the past 5 years, and the cost of fully vaccinating a child has increased dramatically in the past decade. Anecdotal reports from state policy makers and clinicians suggest that new gaps have arisen in financial coverage of vaccines for children who are underinsured (ie, have private insurance that does not cover all recommended vaccines). In 2000, approximately 14% of children were underinsured for vaccines in the United States.

Objectives  To describe variation among states in the provision of new vaccines to underinsured children and to identify barriers to state purchase and distribution of new vaccines.

Design, Setting, and Participants  A 2-phase mixed-methods study of state immunization program managers in the United States. The first phase included 1-hour qualitative telephone interviews conducted from November to December 2005 with 9 program managers chosen to represent different state vaccine financing policies. The second phase incorporated findings from phase 1 to develop a national telephone and paper-based survey of state immunization program managers that was conducted from January to June 2006.
VFC and Section 317 Vaccine Funding, FY2006 – FY2011*

* Section 317 funding for FY2011 estimated as of May 2011
States Make Implementation Decisions Based on Financial Considerations

• Which vaccines are available for underinsured children and at which venues (public or private)?

• When are new VFC vaccines made available to VFC entitled children in the state?
Implementation of MCV4
It takes more than vaccine to vaccinate ...

IMMUNIZING CLINICIANS
It All Comes Together at the Doctors’ Offices and Other Provider Sites

• Identify sources of private vaccine and negotiate prices with supplier and insurer

• Order VFC/state vaccine from the immunization program

• Separately account for public and private vaccine

• Screen for program eligibility at every visit

• Bill appropriately and only for private vaccine
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<td>Hepatitis B³</td>
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<td>Rotavirus²</td>
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<tr>
<td>Diphtheria, Tetanus, Pertussis³</td>
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<td>DTaP</td>
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<td>PCV</td>
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<td>PPSV</td>
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<td>Inactivated Poliovirus⁶</td>
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<tr>
<td>Measles, Mumps, Rubella⁹</td>
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<tr>
<td>Meningococcal¹¹</td>
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<td></td>
<td></td>
<td>Tdap</td>
<td>Tdap</td>
</tr>
<tr>
<td>Human Papillomavirus²</td>
<td></td>
<td></td>
<td>HPV (3 doses)(females)</td>
<td>HPV Series</td>
</tr>
<tr>
<td>Meningococcal³</td>
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<td>MCV4</td>
<td>MCV4</td>
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</tbody>
</table>
1. Hepatitis B vaccine (HepB). (Minimum age: birth)
   At birth:
   - Administer monovalent HepB to all newborns before hospital discharge.
   - If mother is hepatitis B surface antigen (HBSAg)-positive, administer HepB and 0.5 mL of hepatitis B immune globulin (HBIG) within 12 hours of birth.
   - If mother’s HBSAg status is unknown, administer HepB within 12 hours of birth. Determine mother’s HBSAg status as soon as possible and, if HBSAg-positive, administer HBIG (no later than 1 week).

After the birth dose:
- The HepB series should be completed with either monovalent HepB or a combination vaccine containing HepB, administered at age 1 or 2 months. The no earlier than age 24 weeks.
- Infants born to HBSAg-positive mothers should be tested for HBSAg (anti-HBs) after completion of HepB series, at age 9 through 18 months (if indicated).
- Administration of 4 doses of HepB into infants containing HepB are administered at age 6 months.

2. Rotavirus vaccine (RV). (Minimum age: 6 weeks)
   - Administer the first dose at age 6 through 14 weeks (6 days). Vaccination should not be initiated before week 15 weeks of age (i.e., 15 weeks 0 days). If first dose has not been administered, administer second dose at first dose (i.e., 15 weeks 6 days). If first dose is administered, administer first dose at age 14 through 18 weeks but not earlier than 14 weeks.

3. Diphtheria and tetanus toxoids and acellular pertussis vaccine (DTaP), (Minimum age: 6 weeks)
   - The fourth dose may be administered at least 6 months have elapsed since the age 4 years or older dose.

4. Haemophilus influenzae type b conjugate vaccine (HiB) (Minimum age: 6 weeks)
   - If PEP-D (PedvaxHIB®) or Convar® is not administered at age 2 and 4 months, a dose at age 6 months.
   - HiB vaccine (DTPa-Hib) should not be used but can be used as the final dose in children.

5. Pneumococcal vaccine (MPSV) (Minimum age: 2 years for pneumococcal conjugate vaccine (PCV) and age 1 through 5 years for pneumococcal polysaccharide vaccine (PPSV)).
   - The age 6 months. The final dose may be administered at age 2 years or older.

6. Influenza vaccine. (Minimum age: 6 months)
   - For healthy children 6 through 18 months of age, influenza vaccine is recommended annually.
   - For children 19 through 59 years of age, influenza vaccine is recommended annually.
   - For elderly persons (65 years of age or older), influenza vaccine is recommended annually.

7. Tetanus and diphtheria toxoids and acellular pertussis vaccine (Tdap). (Minimum age: 10 years for BOOSTRIX® and 11 years for ADACEL®)
   - Administer at age 11 or 12 years for those who have not received the recommended childhood DTPa/DTaP vaccination series and have not received a tetanus and diphtheria toxoid (Td) booster dose.
   - Persons aged 13 through 18 years who have not received Tdap should receive a dose. A 5-year interval from the last Td dose is encouraged when Tdap is used as a booster dose; however, a shorter interval may be used if pertussis immunity is needed.

8. Human papillomavirus vaccine (HPV). (Minimum age: 9 years)
   - Administer the first dose to females at age 11 or 12 years.
   - Administer the second dose 2 months after the first dose and the third dose 6 months after the first dose (at least 24 weeks after the first dose).
   - Administer the series to females at age 13 through 18 years if not previously vaccinated.

9. Meningococcal conjugate vaccine (MCV).
   - Administer at age 11 or 12 years, or at age 13 through 18 years if not previously vaccinated.
   - Administer to previously unvaccinated college dormitory.
   - MCV is recommended for children 2 through 18 years of age, and certain other groups at high risk. See MMWR 2005;54:No. RR-7.

10. Hepatitis A vaccine (HepA).
    - Administer the first dose at age 1 through 5 years, and the second dose at least 2 months after the first dose.
    - Administer the second dose at age 11 or 12 years.

11. Hepatitis B vaccine (HepB).
    - Administer the first dose at age 1 through 5 years, and the second dose at least 2 months after the first dose.

12. Varicella vaccine.
    - Administer the second dose at age 4 through 6 years.
    - Administer the second dose at age 11 through 12 years, and the second dose at least 2 months after the first dose.

13. Hepatitis C vaccine (HepC).
    - Administer the first dose at age 1 through 5 years, and the second dose at least 2 months after the first dose.

    - Administer the first dose at age 1 through 5 years, and the second dose at least 2 months after the first dose.

15. Human papillomavirus vaccine (HPV).
    - Administer the first dose at age 11 or 12 years, and the second dose at least 2 months after the first dose.

The Recommened Immunization Schedules for the American Academy of Pediatrics (AAP) and the American Academy of Family Physicians (AAFP).

The Recommened Immunization Schedules for the American Academy of Pediatrics (AAP) and the American Academy of Family Physicians (AAFP).
Number of Recommended Vaccinations Per Child, 1985 to 2009*

* Does not include recent combination vaccines
Best Life or Risky Advice?

Dr. Christiane Northrup:
A Gourmets' Choice: Dr. Christiane Northrup holds a special place in Oprah's constellation of regular guests. She stresses alternative therapies and connections between the soul and the body that she believes conventional doctors overlook, but that she can see. When Oprah had to surgeons her thyroid, she brought Northrup on the show to explain it to her audience. Northrup acknowledged that Oprah's 'pain' was using her thyroid to signal, 'What's going on with your spirit? It's your soul bringing it to your attention.' Northrup also warned Oprah's audience against a new vaccine that protects against HPV, a sexually transmitted virus.

Jenny McCarthy:
In 2007, Oprah invited Jenny McCarthy, the Playmate model and actress, to her stage to discuss her struggle to help her young son, who had been diagnosed with autism, as well as her controversial views about a possible link between autism and childhood vaccines. While Oprah praised McCarthy's bravery and plugged her book, she failed to invite a physician or scientist to provide balance by explaining the many studies that contradict the vaccine-autism link. McCarthy soon became a semiregular on Oprah's show and website, and she will soon launch her own talk show produced by Oprah's company.
The Vaccine Book by Dr. Sears Offers A Safer Vaccine Schedule

Written by Susie Kim
Published on April 25th, 2008 in Health

The big question for new parents was to either breastfeed or formula feed, but now a days with concern over side effects of vaccination and supposed link to autism; the bigger question remains, should you vaccinate your child? For some states such as Mississippi and West Virginia, there is no choice for parents to make, it's a resounding yes. But over 20 states allow children to be unvaccinated and almost all states allow unvaccination for religious reasons.

With my concern over recent controversy of vaccines (especially MMR) being linked to autism, I ordered The Vaccine Book by Dr. Robert Sears.

The book itself offer invaluable resource over each vaccination including:

- How common or rate, as well as how serious, each disease is.
- How each vaccine is made and what its ingredients are
- Which ingredients are potentially controversial
- Possible side effects
- Which brand is considered the safest
Parent’s Preferred Source of Immunization Information

- Primary Health Provider
- Family
- Child's Other Parent
- Friends

Number of Vaccines in the Routine Childhood and Adolescent Immunization Schedule

1985
Measles
Rubella
Mumps
Diphtheria
Tetanus
Pertussis
Polio

1994
Measles
Rubella
Mumps
Diphtheria
Tetanus
Pertussis
Polio
Hib (infant)
HepB

2010
Measles
Rubella
Mumps
Diphtheria
Tetanus
Pertussis
Polio
Hib (infant)
HepB
Varicella
Pneumococcal disease
Influenza
Meningococcal disease
HepA
Rotavirus
HPV
Cost to Vaccinate One Child with Vaccines Universally Recommended from Birth Through 18 Years of Age: 1990, 2000, and 2011

2011 represents minimum cost to vaccinate a child (birth through 18); exception is no preservative influenza vaccine, which is included for children 6-47 months of age.

HPV excluded for boys because it is not routinely recommended by the ACIP.

Federal contract prices as of February 1, 1990, September 27, 2000, and April 1, 2011.
### Cash Value of Private-purchase Vaccine Inventories and Orders

<table>
<thead>
<tr>
<th></th>
<th>Cash Value of Inventories</th>
<th>Cash Value of Inventories and Orders</th>
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</thead>
<tbody>
<tr>
<td><strong>Average</strong>**</td>
<td>$133,644</td>
<td>$274,644</td>
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<tr>
<td><strong>Median</strong>**</td>
<td>$58,107</td>
<td>$123,500</td>
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<tr>
<td><strong>Maximum</strong></td>
<td>$846,704</td>
<td>$1,889,111</td>
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</tbody>
</table>

** Median and Average brought down by practices with high numbers of VFC-eligible patients.

Coleman M. *Pediatrics* 2009;124:S472–S491
Net Yield for Private Purchase Vaccines

Net Yield is insurance payment minus vaccine purchase price in dollars.

Legend:
- Green: max yield
- Blue: average yield
- Red: min yield

Weighted per patient net yield for ACIP schedule is $293.

Adapted from Gary Freed et al. *Pediatrics* 2008; 122:1325–1331
Private Insurance Vaccine Administration Payments

**TABLE 5** Vaccine Administration Fee Reimbursement From Most Common Payer

<table>
<thead>
<tr>
<th>Administration Fee Reimbursement</th>
<th>First Dose (CPT 90471)(^a)</th>
<th>Subsequent Doses (CPT 90472)(^b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean, $</td>
<td>16.62</td>
<td>11.63</td>
</tr>
<tr>
<td>Maximum, $</td>
<td>26.55</td>
<td>37.20</td>
</tr>
<tr>
<td>Minimum, $</td>
<td>3.87</td>
<td>3.36</td>
</tr>
</tbody>
</table>


\(^a\) Calculations exclude one instance where the most common payer did not reimburse for first dose administration.

\(^b\) Calculations exclude three instances where the most common payer did not reimburse for administration of subsequent doses.
VFC, average private insurance, and average Medicare vaccine administration rates

*2011 FMAP rates used to identify the maximum CMS contribution

Association Between Medicaid Reimbursement and Child Influenza Vaccination Rates

**WHAT’S KNOWN ON THIS SUBJECT:** Although experts have suggested that provider reimbursement rates may affect childhood vaccination levels, this relationship is not well understood.

**WHAT THIS STUDY ADDS:** This is the first study, to our knowledge, estimating the association between Medicaid provider reimbursement rates (for vaccine administration) and childhood influenza vaccination rates.

**AUTHORS:** Byung-Kwang Yoo, MD, PhD, Andrea Berry, MS, Megumi Kasajima, BS, and Peter G. Szilagyi, MD, MPH

Departments of Community and Preventive Medicine and Pediatrics, School of Medicine and Dentistry, University of Rochester, Rochester, New York

**KEY WORDS**
Medicaid reimbursement, influenza vaccination

**ABBREVIATIONS**
ACIP—Advisory Committee on Immunization Practices
NIS—National Immunization Survey
OR—odds ratio
CI—confidence interval

www.pediatrics.org/cgi/doi/10.1542/peds.2009-3514

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A $10 increase, from $8 per influenza vaccination (the US average) to $18 (the highest state reimbursement), in the Medicaid reimbursement rate was associated with 6.0-, 9.2-, and 6.4-percentage point increases in full vaccination rates among poor children in the 2006, 2007, and 2008 NIS analyses, respectively.

Yoo BK et al. *Pediatrics* 2010;126:e998–e1010
Reimbursement for vaccine purchase is adequate

Reimbursement for vaccine Administration is adequate

We would not give a vaccine if reimbursement was less than the purchase price

Adapted from Gary Freed et al. *Pediatrics* 2008; 122:1319–1324
Pediatrician and Family Physician Attitudes and Practices Toward the Business Side of Vaccination

• Results from a 2008 survey of pediatricians and family physicians by Gary Freed (University of Michigan)
  – Half of practices delayed purchase of new vaccine for financial reason
  – Half of practices reported decreasing vaccination revenues during previous three years
  – One fifth of practices said reimbursement was adequate
  – One tenth of practices indicated that they have seriously considered stopping providing immunizations during the previous year
Program Performance

STATUS OF CHILDHOOD IMMUNIZATION
### Comparison of 20th Century Annual Morbidity and Current Morbidity: Vaccine-Preventable Diseases

<table>
<thead>
<tr>
<th>Disease</th>
<th>20th Century Annual Morbidity†</th>
<th>2010 Reported Cases † †</th>
<th>Percent Decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smallpox</td>
<td>29,005</td>
<td>0</td>
<td>100%</td>
</tr>
<tr>
<td>Diphtheria</td>
<td>21,053</td>
<td>0</td>
<td>100%</td>
</tr>
<tr>
<td>Measles</td>
<td>530,217</td>
<td>61</td>
<td>&gt; 99%</td>
</tr>
<tr>
<td>Mumps</td>
<td>162,344</td>
<td>2,528</td>
<td>98%</td>
</tr>
<tr>
<td>Pertussis</td>
<td>200,752</td>
<td>21,291</td>
<td>89%</td>
</tr>
<tr>
<td>Polio (paralytic)</td>
<td>16,316</td>
<td>0</td>
<td>100%</td>
</tr>
<tr>
<td>Rubella</td>
<td>47,745</td>
<td>6</td>
<td>&gt; 99%</td>
</tr>
<tr>
<td>Congenital Rubella Syndrome</td>
<td>152</td>
<td>0</td>
<td>100%</td>
</tr>
<tr>
<td>Tetanus</td>
<td>580</td>
<td>8</td>
<td>99%</td>
</tr>
<tr>
<td><em>Haemophilus influenzae</em></td>
<td>20,000</td>
<td>270*</td>
<td>99%</td>
</tr>
</tbody>
</table>

†Source: JAMA. 2007;298(18):2155-2163
† † Source: CDC. MMWR January 7, 2011;59(52);1704-1716. (provisional MMWR week 52 data)
* 16 type b and 254 unknown serotype (< 5 years of age)
### Comparison of Pre-Vaccine Era Estimated Annual Morbidity or Mortality with Current Estimate: Vaccine-Preventable Diseases

<table>
<thead>
<tr>
<th>Disease</th>
<th>Pre-Vaccine Era Annual Estimate</th>
<th>2009 Estimate</th>
<th>Percent Decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatitis A</td>
<td>117,333 †</td>
<td>8,493</td>
<td>93%</td>
</tr>
<tr>
<td>Hepatitis B (acute)</td>
<td>66,232 †</td>
<td>9,419</td>
<td>86%</td>
</tr>
<tr>
<td>Pneumococcus (invasive)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>all ages</td>
<td>63,067 †</td>
<td>44,000 #</td>
<td>30%</td>
</tr>
<tr>
<td>&lt; 5 years of age</td>
<td>16,069 †</td>
<td>4,700##</td>
<td>72%</td>
</tr>
<tr>
<td>Rotavirus (hospitalizations, &lt; 3 years of age)</td>
<td>62,500 † ††</td>
<td>28,125###</td>
<td>55%</td>
</tr>
<tr>
<td>Varicella</td>
<td>4,085,120 †</td>
<td>408,512</td>
<td>90%</td>
</tr>
</tbody>
</table>

† Source: JAMA. 2007;298(18):2155-2163  
†† Source: CDC. MMWR. February 6, 2009 / 58(RR02);1-25  
## Source: 2009 Active Bacterial Core surveillance  
### Source: New Vaccine Surveillance Network (unpublished)

† DTP(3+) is not a Healthy People 2010 objective. DTaP(4) is used to assess Healthy People 2010 objectives.

Note: Children in the USIS and NHIS were 24-35 months of age. Children in the NIS were 19-35 months of age.

MMR Coverage Levels by State, 19-35 Months of Age; NIS 2009
4+PCV Coverage Levels by State, 19-35 Months of Age; NIS 2009
Hepatitis A Coverage Levels by State, 19-35 Months of Age; NIS 2009
Hepatitis B Birth Dose Levels by State; NIS 2009

U.S. National Average: Alaska

Blue

Red
Rotavirus Coverage Levels by State, 19-35 Months of Age; NIS 2009
431x314 Coverage Levels by State, 19-35 Months of Age; NIS 2009
Vaccination Coverage Levels by Race and Ethnicity: NIS 2009

http://www.cdc.gov/vaccines/stats-surv/nis/data/tables_2009.htm#demographics
Vaccination Coverage Levels by Race and Ethnicity: NIS 2009

http://www.cdc.gov/vaccines/stats-surv/nis/data/tables_2009.htm#demographics


Adolescent Immunization by Poverty, U.S., 2009

Adolescent Immunization by Race/Ethnicity, U.S., 2009

Td/Tdap Coverage, 13-17 Years Old; NIS-Teen 2009

U.S. National Average: Alaska

Blue
Red
Tdap Coverage, 13-17 Years Old; NIS-Teen 2009
MCV4 Coverage, 13-17 Years Old; NIS-Teen 2009
1+HPV Coverage, 13-17 Years Old; NIS-Teen 2009

U.S. National Average:
Alaska

Blue
Red
3+HPV Coverage, 13-17 Years Old; NIS-Teen 2009

U.S. National Average: Alaska

Blue
Red
Affordable Care Act Defines the Limits of Federal Support

LOOKING FORWARD
Omnibus Budget Reconciliation Act
(Medicaid -- Immunizations)
13.B4-1
PART IV- Immunizations

SEC. 13631. MEDICAID PEDIATRIC IMMUNIZATION PROVISIONS.

(g) TERMINATION --- This section, and the requirement of section 1902(a)(62), shall cease to be in effect beginning on such date as may be prescribed in Federal law providing for immunizations services for all children as part of a broad-based reform of the national health care system.
Future of VFC

• VFC not included in ACA
  – Authorities unchanged

• VFC impacted indirectly
  – Uninsured population to decrease
  – Underinsured population to decrease
  – Medicaid population to increase
  – Net estimated effect
    • Approximately 3% increase in VFC size
    • Higher proportion Medicaid
We must remind federal officials that administration fees within the Vaccines for Children Program (VFC) have not increased since 1993, such that pediatricians are losing money by participating in VFC. VFC administration fees should be consistent with the Medicare vaccine administration fee of approximately $20 per vaccine. Many at-risk children have access to comprehensive health services in pediatricians’ practices because of VFC.

We must advise federal officials that they cannot expect Medicaid, SCHIP and VFC to give all eligible children access to comprehensive health services when most states are treating pediatricians like second-rate doctors, paying them 70% of Medicare rates. The feds must enforce the Equal Access clause of the Medicaid statutes and insist that states pay pediatricians the Medicare rate when they provide medical homes for Medicaid/SCHIP/VFC-eligible children.
SEC. 1202. PAYMENTS TO PRIMARY CARE PHYSICIANS.

...(C) payment for primary care services (as defined in subsection (jj)) furnished in 2013 and 2014 by a physician with a primary specialty designation of family medicine, general internal medicine, or pediatric medicine at a rate not less than 100 percent of the payment rate that applies to such services and physician under part B of title XVIII (or, if greater, the payment rate that would be applicable under such part if the conversion factor under section 1848(d) for the year involved were the conversion factor under such section for 2009);”;

......

“(2) services related to immunization administration for vaccines and toxoids for which CPT codes 90465, 90466, 90467, 90468, 90471, 90472, 90473, or 90474 (as subsequently modified) apply under such System.”

......

“(dd) INCREASED FMAP FOR ADDITIONAL EXPENDITURES FOR PRIMARY CARE SERVICES.—...the Federal medical assistance percentage for a State that is one of the 50 States or the District of Columbia shall be equal to 100 percent. The preceding sentence does not prohibit the payment of Federal financial participation based on the Federal medical assistance percentage for amounts in excess of those specified in such sentence.”

Source: Affordable Care Act
Section 317 Immunization Program
Vaccine Funding

• Vaccine targets varied over years: polio, measles, rubella, back to measles ...

• Section 317 changed dramatically when VFC started in 1994 with the program emphasis squarely on children

• Primary use for Section 317 vaccine since 1994 has been to fill structural gap in VFC program: underinsured children outside of FQHC/RHCs
VFC and Section 317 Vaccine Funding, FY2006 – FY2011*

* Section 317 funding for FY2011 estimated due to Continuing Resolution
## 10-Year Vaccine Purchase Contrast: VFC and Section 317 Programs

<table>
<thead>
<tr>
<th>Changes between 2001 and 2010</th>
<th>Section 317</th>
<th>VFC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vaccine purchase budget</td>
<td>$48 M</td>
<td>$2,594 M</td>
</tr>
<tr>
<td>Percent increase in vaccine purchase budget</td>
<td>24%</td>
<td>423%</td>
</tr>
<tr>
<td>Average annual growth in vaccine purchase budget</td>
<td>$5 M</td>
<td>$288 M</td>
</tr>
</tbody>
</table>

% Change in cost to fully vaccinate a child from 0 through 19 years old during same time: 362%
Section 317 Cannot Fill the Underinsured Childhood Gap

- 10-year pace of need has been 10 times the growth of Section 317 vaccine funding
  - Size of underinsured population did not shrink in past 10 years
  - VFC-induced new vaccines have created ever widening need for discretionary funding
  - State/local vaccine funding has not increased with increased need, either

- Implications
  - Need to abandon thinking that discretionary funding will ever fill the VFC gap
  - More realistic strategy is needed – one that uses the Affordable Care Act’s immunization requirements
Affordable Care Act, Immunizations, and Health Insurance

• Key provisions: private insurance
  – Immunizations included in prevention benefit
  – ACIP sets standard requirements
  – Private insurance coverage of ACIP recommendations with no co-payment
  – ERISA plans included in requirement

• Potential challenges
  – Grandfathered plans
  – Medicaid for adults
  – Silent on immunization reimbursement levels

• Bottom line – Private sector pays for immunizations
Insurance / VFC Status and Vaccination Venue, 19-35 Months of Age: 2006 NIS

Insurance / VFC Category

- Medicaid: 37.7%
- None: 6.7%
- AI / AN: 3.3%
- Underinsured’s Venues: 11.7%
- Private: 41.3%

Underinsured’s Venues

- FQHC: 8%
- HDC: 4%
- Other: 15%
- Private: 73%
- Full: 4%
- Underinsured’s Venues: 8%
Long-Term Sources of Pediatric Vaccines

• VFC and private insurance; nothing more is needed ultimately

• Fully insured children
  – Private providers
  – Health department clinics that bill insurance plan
  – FQHC/RHCs that bill insurance plan

• Medicaid, uninsured, AI/AN children
  – VFC vaccine
  – Any VFC provider

• Section 317 vaccine could be repurposed
  – Uninsured adults
  – Outbreak control
  – Other priorities
How to Get From Here to There: Transition Principles

• Provide programmatically accountable basis for all federal purchase vaccine

• Provide disincentive to grandfathered plans to continue unchanged

• Provide accountable vaccine for underinsured children in public sector settings while grandfathered plans exist (deputization as a bridge)

• Facilitate dose-level accountability

• Strengthen health department clinics – important for preparedness

• Evaluate progress to improve transition
Programs During Transition: Two Important Changes

• Underinsured
  – Declining population
  – VFC vaccine at FQHC/RHCs and, possibly, deputized providers as temporary bridge (if allowed)

• Fully insured children
  – Private insurance pays, regardless of venue
  – No Section 317 vaccine except special situations, e.g., mass clinics for outbreak control
Critically Important Question

• Can your vaccine financing policy be completely supported by your access to discretionary vaccine funding (Section 317 and state/local)?

• Question is most germane to any grantee with greater than a VFC-only vaccine financing policy

• Answering this question will be a shared responsibility between CDC and the grantee
<table>
<thead>
<tr>
<th></th>
<th>(1) VFC Only</th>
<th>(2) VFC &amp; Underinsured</th>
<th>(3) VFC &amp; Underinsured Select</th>
<th>(4) Universal</th>
<th>(5) Universal Select</th>
<th>(6) Other</th>
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Source: 2009 VFC Management Survey

Transition Funding Opportunity Announcement

• One-time funding to help transition into future immunization environment
  – IT solutions for accountability
  – Revenue stream for local health departments
  – Strategic use of Section 317 vaccine when no longer needed for underinsured children

• CDC has not yet received funding for the FOA
Conclusions

• Childhood immunization continues to be a great investment by society in the health of children

• Vaccine financing challenges are huge and will require substantial program change

• Childhood vaccination coverage levels are holding steady, but challenge is with new vaccines, especially adolescent vaccines

• Future childhood program is streamlined, but getting there will require action
Have a great conference.

THANK YOU!
EXTRA SLIDES
Insurance/VFC Status 13-17 Year Olds; 2008 NIS-Teen Insurance Module

- 48% Insured
- 23.8% Medicaid
- 18.5% VFC
- 6.9% Under/FQHC
- 2.9% Under/Not FQHC
- 0.8% AI/AN
- 2008 NIS-Teen Insurance Module

Totals add to > 100% because some AI/AN children are enrolled in Medicaid