

# Financing Vaccination of Children and Adolescents: National Vaccine Advisory Committee Recommendations

Increases in the number and cost of vaccines routinely recommended for children and adolescents have raised concerns about the ability of the current systems for vaccine financing and delivery to ensure that all children and adolescents have access to all routinely recommended vaccinations without financial barriers. The National Vaccine Advisory Committee (NVAC) was chartered in 1988 to advise and to make recommendations to the director of the National Vaccine Program and the Assistant Secretary for Health at the US Department of Health and Human Services on matters related to the prevention of infectious diseases through vaccination. In October 2006, NVAC established a Vaccine Financing Working Group to explore approaches for child and adolescent vaccine financing. The Vaccine Financing Working Group was charged with establishing a process for obtaining stakeholder input regarding challenges to creating optimal approaches to vaccine financing in both the public and private sectors. The goal of this process was to develop recommendations to ensure that all children and adolescents have access to all routinely recommended vaccinations without financial barriers.

The NVAC considered several overarching principles in formulating its recommendations. First, vaccine-preventable diseases are not constrained by geographic boundaries, and policies on vaccine financing should be national in scope. Second, vaccine financing solutions should address near-term problems with vaccine financing and should anticipate continued changes in recommended child and adolescent immunization schedules and the health care delivery system. Third, because vaccine financing problems are multifactorial, their solutions also should be multifactorial and all stakeholders will need to participate in implementing the solutions. Finally, because it is difficult to achieve uniform national implementation of policies that require state-based legislative or budgetary action, legislative or policy actions at the federal level, when appropriate, are recommended for achieving vaccine financing goals.

## PROCESS

The background for these recommendations is presented in a literature review of the current US systems for vaccine financing and delivery and challenges in the financing of vaccines for children and adolescents.<sup>1</sup> This review includes results from several original research studies initiated specifically to provide the NVAC with a better understanding of the costs associated with provision of vaccination services. These studies suggest that financial strains have affected vaccination practices among private and public providers and have the potential to affect future vaccine availability for patients.

To inform NVAC about current issues in vaccine financing, key stake-

**AUTHOR:** National Vaccine Advisory Committee

### KEY WORDS

vaccination, health policy, adolescent, child

### ABBREVIATIONS

NVAC—National Vaccine Advisory Committee

VFC—Vaccines for Children

CDC—Centers for Disease Control and Prevention

CMS—Centers for Medicare and Medicaid Services

ACIP—Advisory Committee on Immunization Practices

Some of the contributors are employees of the US Department of Health and Human Services. Although they served as contributors on the basis of their areas of expertise, the views expressed in this article are those of the National Vaccine Advisory Committee. The positions expressed and the recommendations made in this article do not necessarily represent those of the US government or of departmental employees who contributed.

Dr Orenstein's current affiliation is the Bill and Melinda Gates Foundation, Seattle, WA.

[www.pediatrics.org/cgi/doi/10.1542/peds.2009-1542P](http://www.pediatrics.org/cgi/doi/10.1542/peds.2009-1542P)

doi:10.1542/peds.2009-1542P

Accepted for publication Aug 25, 2009

Address correspondence to Megan C. Lindley, MPH, Centers for Disease Control and Prevention, 1600 Clifton Road NE, Mail Stop E-52, Atlanta, GA 30333. E-mail: [mlindley@cdc.gov](mailto:mlindley@cdc.gov)

PEDIATRICS (ISSN Numbers: Print, 0031-4005; Online, 1098-4275).

Copyright © 2009 by the American Academy of Pediatrics

**FINANCIAL DISCLOSURE:** *The authors have indicated they have no financial relationships relevant to this article to disclose.*

holders, including federal, state, and local governments, providers, consumers, vaccine manufacturers, health insurers, and employer groups, met with the Vaccine Financing Working Group in April 2008. Panels of stakeholder representatives gave informational presentations and provided feedback on proposed recommendations, including identification of preferred solutions to support child and adolescent vaccine delivery. This input, along with comments received during public review, was used to identify a consensus set of proposed recommendations addressing financial challenges to child and adolescent vaccination. The following recommendations, developed by NVAC, were presented at a public meeting of the full committee on September 16–17, 2008.<sup>2</sup>

## RECOMMENDATIONS

### Public-Sector Vaccine Purchasing for Underinsured Children and Adolescents

#### *Recommendation 1*

The Vaccines for Children (VFC) program should be extended to include access for VFC-eligible, underinsured children and adolescents receiving immunizations in public health department clinics and thus should not be limited to access only at federally qualified health centers and rural health clinics.

### Funding Vaccine Administration Reimbursement for All VFC-Eligible Children and Adolescents

#### *Recommendation 2*

The VFC program should be expanded to cover vaccine administration reimbursement for all VFC-eligible children and adolescents. (Currently, the vaccine administration fee is not covered by the VFC program.) This should include children covered by Medicaid,

because this would provide for a single system and uniform vaccine administration fee. The vaccine administration reimbursement should be sufficient to cover the costs of vaccine administration (as referenced elsewhere in these recommendations).

Recommendation 2 and recommendations 3 to 5 are designed to accomplish similar goals with respect to improving vaccine administration reimbursement in the VFC program. NVAC voted to approve both sets of recommendations with the understanding that the latter would not be needed if legislation were passed to cover administration fees for all VFC-eligible children through the VFC program, as in recommendation 2.

### Improving Vaccine Administration Reimbursement for VFC-Eligible Children and Adolescents Enrolled in Medicaid

#### *Recommendation 3*

The Centers for Disease Control and Prevention (CDC) and the Centers for Medicare and Medicaid Services (CMS) should annually update, publish, and disseminate actual Medicaid vaccine administration reimbursement rates according to state.

#### *Recommendation 4*

CMS should update the maximal allowable Medicaid administration reimbursement amounts for each state and should include all appropriate non-vaccine-related costs, as determined in current studies. These efforts should be coordinated with the American Medical Association review of relative value unit coding (recommendation 6).

#### *Recommendation 5*

The federal matching rate for vaccine administration reimbursement in Medicaid should be increased (ie, larger federal proportion) to levels for

other services of public health importance (eg, family-planning services).

### Supporting Vaccine Delivery in the Medical Home by Improving Business Practices in Private Provider Offices

#### *Recommendation 6*

The American Medical Association Relative Value Scale Update Committee should review its relative value unit coding to ensure that it reflects accurately the nonvaccine costs of vaccination, including the potential costs and savings with the use of combination vaccines.

#### *Recommendation 7*

Vaccine manufacturers and third-party vaccine distributors should work with providers on an individual basis to reduce the financial burden for initial and ongoing vaccine inventories, particularly for new vaccines. This might include extending payment periods (eg, from 60 days to 90 or >120 days, or until vaccine has been administered and reimbursed). It also might include options not related to payment terms for vaccine inventory.

#### *Recommendation 8*

Professional medical organizations should provide their members with technical assistance regarding efficient business practices associated with providing immunizations, such as how to contract and to bill appropriately. Medical organizations should identify best business practices to ensure efficient, appropriate use of Advisory Committee on Immunization Practices (ACIP)-recommended vaccines and appropriate use of Current Procedural Terminology codes, including evaluation and management codes, in claims for vaccines and vaccine administration. These organizations may receive federal assistance from CMS or other relevant agencies.

### *Recommendation 9*

Medical providers, particularly in smaller practices, should participate in pools of vaccine purchasers to obtain volume ordering discounts. This might be accomplished through purchasing collaboratives formed by individual providers or through regional vaccine purchasing contracts held by professional medical organizations on behalf of providers.

## **Reducing Underinsurance Rates and Financial Barriers to Vaccination Through Voluntary Quality Standards for Health Insurance Plans**

### *Recommendation 10*

The CDC, professional medical organizations, and other relevant stakeholders should develop and support additional employer health education efforts. These efforts should communicate the value of good preventive care, including recommended vaccinations.

### *Recommendation 11*

Health insurers and all private health care purchasers should adopt contract benefit language that is flexible enough to permit coverage and reimbursement for new or recently altered ACIP recommendations as well as vaccine price changes that occur in the middle of a contract period.

### *Recommendation 12*

All public and private health insurance plans should voluntarily provide first-dollar coverage (ie, no deductibles or copayments) for all ACIP-recommended vaccines and their administration for children and adolescents.

### *Recommendation 13*

Insurers and health care purchasers should develop reimbursement policies for vaccinations that are based on methodologically sound cost

studies of efficient practices. These cost studies should factor in all costs associated with vaccine administration (including, for example, purchase of the vaccine, handling, storage, labor, patient or parent education, and record-keeping).

## **Activities of Federal Agencies and Offices Related to Financing of Vaccines for Children and Adolescents**

### *Recommendation 14*

Congress should request an annual report on the professional judgment of the CDC regarding the size and scope of the Section 317 program appropriation needed for vaccine purchase, vaccination infrastructure, and vaccine administration. Congress should ensure that Section 317 funding is provided at levels specified in the CDC annual report to Congress.

### *Recommendation 15*

CDC and CMS should continue to collect and to publish data on the costs and reimbursements associated with public- and private-sector vaccine administration according to NVAC standards for vaccinating children and adolescents.<sup>3</sup> These costs include those associated with the delivery of vaccines, such as purchase of the vaccine, handling, storage, labor, patient or parent education, and record-keeping. These published data should be updated every 5 years and should include information about reimbursement according to provider type, geographic region, and insurance status. State governments should use this information in determining vaccine administration reimbursement rates for Medicaid.

### *Recommendation 16*

The National Vaccine Program Office should calculate the marginal increase in insurance premiums if insurance plans were to provide coverage

for all vaccines routinely recommended by the ACIP.

### *Recommendation 17*

The NVAC should convene  $\geq 1$  expert panel representing all affected stakeholders, to consider whether tax credits could be a tool to reduce or to eliminate underinsurance. The panel should determine whether policy options that would be acceptable to stakeholders could be developed to address the burden of financing for private-sector child and adolescent vaccinations by using tax credits as incentives for insurers, employers, and/or employees (consumers) and whether those credits would provide added value for vaccination of children and adolescents.

### *Recommendation 18*

The CDC should substantially decrease the time from creation to official publication of ACIP recommendations, to expedite decisions by payers related to covering new vaccines and new indications for currently available vaccines.

### *Recommendation 19*

Congress should expand Section 317 funding to support the additional national, state, and local public health infrastructure (eg, widespread, effective education and promotion for health care providers, adolescents, and parents; coordination of complementary and alternative venues for adolescent vaccinations; record-keeping and immunization information systems; vaccine safety surveillance; and disease surveillance) needed for adolescent vaccination programs, as well as child vaccination programs for new recommendations such as universal influenza vaccination.

### *Recommendation 20*

Federal funding for cost/benefit studies of vaccinations targeted to children and adolescents should be continued.

## Activities of State Agencies and Offices Related to Financing of Vaccines for Children and Adolescents

### *Recommendation 21*

State, local, and federal governments and professional organizations should conduct outreach to physicians and nonphysician providers who serve VFC-eligible children and adolescents, to encourage those providers to participate in the VFC program if they currently do not. Outreach directed toward providers who serve adolescents and might not have provided vaccinations in the past (eg, obstetrician/gynecologists) is a particular priority.

### *Recommendation 22*

States and localities should develop mechanisms for billing insured children and adolescents served in the public sector. The CDC should provide support to states and localities by disseminating best practices and providing technical assistance to develop these billing mechanisms (which may require additional resources not currently in the CDC immunization program budget). Furthermore, the NVAC urges states and localities to reinvest reimbursements from public and private payers in immunization programs.

## Strategies to Support Child and Adolescent Vaccination in Complementary Venues

### *Recommendation 23*

Adequate funding should be ensured to cover all costs (including those incurred by schools) arising from ensuring compliance with child and adolescent immunization requirements for school attendance.

### *Recommendation 24*

Shared public/private-sector approaches to help fund school-based and other complementary-venue child and ado-

lescent immunization efforts should be promoted.

## STATUS AND NEXT STEPS

The NVAC approved these recommendations unanimously on September 16, 2008, and they have been forwarded to the Assistant Secretary for Health within the US Department of Health and Human Services for consideration. A fiscal analysis of the adopted recommendations has been prepared, and the NVAC will evaluate the extent to which its recommendations for financing child and adolescent vaccinations have been implemented by requesting a report detailing the implementation status of each recommendation 1 year after their formal adoption.

## ACKNOWLEDGMENTS

Members of the NVAC and its Vaccine Financing Working Group were as follows: NVAC: Guthrie S. Birkhead, MD, MPH (chair), New York State Department of Health; Jon R. Almquist, MD, Virginia Mason Medical Center; Richard D. Clover, MD, University of Louisville, Kentucky School of Public Health; Cornelia Dekker, MD, Stanford University School of Medicine; Mark Feinberg, MD, Merck; Jaime Fergie, MD, FAAP, Driscoll Children's Hospital; Lance K. Gordon, PhD, vaccine research and development consultant; Sharon G. Humiston, MD, MPH, Strong Memorial Hospital; Lisa A. Jackson, MD, MPH, University of Washington School of Public Health; Charles Lovell, Jr, MD, MACP, York Clinical Research; James O. Mason, MD, MPH, health care consultant; Marie McCormick, MD, ScD, Harvard Medical School; Christine Nevin-Woods, DO, MPH, Pueblo (Colorado) City-County Health Department; Trish Parnell, Parents of Kids with Infectious Diseases; Andrew Pavia, MD, University of Utah School of Medicine; Laura E. Riley, MD, Massachusetts General Hospital; Vaccine Financing Working Group

of the NVAC: Guthrie S. Birkhead, MD, MPH (chair), New York State Department of Health; Jon S. Abramson, MD, Wake Forest University School of Medicine; Jon R. Almquist, MD, Virginia Mason Medical Center; Margaret S. Coleman, PhD, CDC, National Center for Immunization and Respiratory Diseases; Barbara Edwards, National Association of State Medicaid Directors; Mark Feinberg, MD, Merck; Gary L. Freed, MD, MPH, University of Michigan Health Systems; Bruce Gellin, MD, MPH, US Department of Health and Human Services, National Vaccine Program Office; Lance K. Gordon, PhD, vaccine research and development consultant; Elizabeth Greenbaum, MPH, National Business Group on Health; Anne C. Haddix, PhD, CDC, Office of the Director; Alan R. Hinman, MD, MPH, Task Force for Child Survival and Development; Calvin B. Johnson, MD, MPH, Pennsylvania Department of Health; Jeffrey Kelman, MD, CMS; Jerome O. Klein, MD, Boston University School of Medicine; Megan C. Lindley, MPH, CDC, National Center for Immunization and Respiratory Diseases; Walter A. Orenstein, MD, Emory University; Mark Pauly, PhD, University of Pennsylvania Wharton School; Amy A. Pisani, MS, Every Child by Two; Lance E. Rodewald, MD, CDC, National Center for Immunization and Respiratory Diseases; Alan Rosenberg, MD, WellPoint; Jenny Salesa, LLB, University of Michigan Health Systems; Angela K. Shen, MPH, US Department of Health and Human Services, National Vaccine Program Office; Gregory Wallace, MD, MS, MPH, CDC, National Center for Immunization and Respiratory Diseases; Joy Johnson Wilson, MRP, National Conference of State Legislatures; Anthony C. Wisniewski, JD, US Chamber of Commerce. Organizations represented at the NVAC Vaccine Financing Stakeholders Meeting, April 29–30, 2008, were as follows: 317 Coalition; Acambis; Aetna; Akorn; American

Academy of Family Physicians; American Academy of Pediatrics; American Academy of Physician Assistants; American College of Obstetricians and Gynecologists; American Medical Association; American Pharmacists Association; America's Health Insurance Plans; Association of Immunization Managers; Association of State and Territorial Health Officials; Baxter Healthcare; Becton, Dickinson; Biotechnology Industry Organization; CDC; Connecticut Department of Public Health; CSL Biotherapies; Dalrymple & Associates; Dean & Co; Every Child by Two; George Washington University; GlaxoSmithKline; Health Industry Distribu-

tors Association; Henry Schein; Immunization Action Coalition; Infectious Diseases Society of America; Institute of Medicine; Louisiana State University Health Sciences Center-Shreveport; March of Dimes; Maxim Health Systems; McKesson Corp; MedImmune; Merck; National Association of County and City Health Officials; National Association of State Medicaid Directors; National Business Group on Health; National Conference of State Legislatures; NVAC; National Vaccine Program Office; New Hampshire Department of Health and Human Services; Novartis Vaccines and Diagnostics; Office of the Assistant Secretary for Planning and

Evaluation; Office of the Assistant Secretary for Resources and Technology; Parents of Kids with Infectious Diseases; Pediatric Infectious Diseases Society; Pharmaceutical Research and Manufacturers of America; Rand; RPM Report; RTI International; sanofi pasteur; Task Force on Child Survival and Development; University of Colorado Health Sciences; University of Michigan Health System; University of Rochester; US Chamber of Commerce; US House of Representatives, Committee on Oversight and Government Relations; Virginia Department of Medical Assistance Services; WellPoint; World Vaccine Technologies; and Wyeth.

## REFERENCES

1. Lindley MC, Shen AK, Orenstein WA, Rodewald LE, Birkhead GS. Financing the delivery of vaccines to children and adolescents: challenges to the current system. *Pediatrics*. 2009;124(suppl 5):S548–S557
2. National Vaccine Program Office. *National Vaccine Advisory Committee (NVAC) September 16–17, 2008, Meeting Minutes*. Washington, DC: US Department of Health and Human Services; 2008. Available at: [www.hhs.gov/nvpo/nvac/minutes200809.pdf](http://www.hhs.gov/nvpo/nvac/minutes200809.pdf). Accessed February 10, 2009
3. National Vaccine Advisory Committee. Standards for child and adolescent immunization practices. *Pediatrics*. 2003;112(4):958–963

## Financing Vaccination of Children and Adolescents: National Vaccine Advisory Committee Recommendations

National Vaccine Advisory Committee

*Pediatrics* 2009;124;S558

DOI: 10.1542/peds.2009-1542P

<b>Updated Information &amp; Services</b>	including high resolution figures, can be found at: <a href="http://pediatrics.aappublications.org/content/124/Supplement_5/S558">http://pediatrics.aappublications.org/content/124/Supplement_5/S558</a>
<b>References</b>	This article cites 2 articles, 2 of which you can access for free at: <a href="http://pediatrics.aappublications.org/content/124/Supplement_5/S558#BIBL">http://pediatrics.aappublications.org/content/124/Supplement_5/S558#BIBL</a>
<b>Subspecialty Collections</b>	This article, along with others on similar topics, appears in the following collection(s): <b>Infectious Disease</b> <a href="http://www.aappublications.org/cgi/collection/infectious_diseases_sub">http://www.aappublications.org/cgi/collection/infectious_diseases_sub</a> <b>Vaccine/Immunization</b> <a href="http://www.aappublications.org/cgi/collection/vaccine:immunization_sub">http://www.aappublications.org/cgi/collection/vaccine:immunization_sub</a>
<b>Permissions &amp; Licensing</b>	Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at: <a href="http://www.aappublications.org/site/misc/Permissions.xhtml">http://www.aappublications.org/site/misc/Permissions.xhtml</a>
<b>Reprints</b>	Information about ordering reprints can be found online: <a href="http://www.aappublications.org/site/misc/reprints.xhtml">http://www.aappublications.org/site/misc/reprints.xhtml</a>

# American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN®



# PEDIATRICS®

OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

## **Financing Vaccination of Children and Adolescents: National Vaccine Advisory Committee Recommendations**

National Vaccine Advisory Committee

*Pediatrics* 2009;124;S558

DOI: 10.1542/peds.2009-1542P

The online version of this article, along with updated information and services, is located on the World Wide Web at:

[http://pediatrics.aappublications.org/content/124/Supplement\\_5/S558](http://pediatrics.aappublications.org/content/124/Supplement_5/S558)

Pediatrics is the official journal of the American Academy of Pediatrics. A monthly publication, it has been published continuously since 1948. Pediatrics is owned, published, and trademarked by the American Academy of Pediatrics, 345 Park Avenue, Itasca, Illinois, 60143. Copyright © 2009 by the American Academy of Pediatrics. All rights reserved. Print ISSN: 1073-0397.

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN®

