

# 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-

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### 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.

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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.

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## 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



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