Supplement Article

Vaccinating Adolescents in High-Risk Settings: Lessons Learned From Experiences With Hepatitis B Vaccine

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**Abstract**

Meeting the health needs of adolescents who live in high-risk settings such as homeless shelters, migrant camps, juvenile detention centers, prisons, and other types of residential facilities presents many challenges. Although there is no doubt that adolescents in many high-risk settings are at increased risk for hepatitis B and human papillomavirus, acute medical and psychological problems may consume all of the provider’s time and resources. Potential health threats such as vaccine-preventable diseases must necessarily be given lower priority. Lack of vaccination expertise, supplies, and access to records further complicate delivery of vaccines. Since the 1990s, a number of approaches have been used to deliver hepatitis B vaccine to adolescents in many high-risk settings. Close collaboration among state and federal programs, local health departments, and community-based organizations has been necessary to introduce and sustain the delivery of vaccines to these young people. Medicaid, Statute 317 of the Public Health Service Act, the Vaccines for Children program, and State Children’s Health Insurance Program have been used to finance vaccinations for adolescents 18 years or younger, and the expanded Medicaid option in the Foster Care Independence Act of 1999 has been used for adolescents older than 18 years of age. A number of states allow adolescents under age 18 to consent to their own hepatitis B vaccination under laws passed to allow treatment of sexually transmitted infections without parental consent. In this article, we present the experiences of several model programs that developed successful hepatitis B vaccination programs in venues that serve adolescents at risk, the important role of state laws and state agencies in funding immunization and other preventive health services for adolescents in high-risk situations, and discuss barriers and means to resolve them.

In their Sentinel 1993 report, the National Research Council proposed that the focus for addressing high-risk behaviors by adolescents should move from the individual adolescents to the settings in which these adolescents live. These settings include those that serve adolescents who are unauthorized migrants or homeless and those who are in alternative schools, detention centers, jails, and prisons (Table 1). The populations served in these settings were formally defined in the McKinny-Vento Act, which was signed into law in 1987. Many of these settings have long been the focus of special efforts to deliver hepatitis B vaccine and serve populations especially likely to benefit from new vaccines for adolescents, including those against human papillomavirus, pertussis, and meningococcal meningitis. This report excludes adolescents who are displaced as a result of natural or man-made disasters, refugees, and foreign students.

Health care, including immunization, for the adolescents considered here is generally provided by local, state, and federal programs and their grantees. Unfortunately, missing vaccinations are but one of many health problems faced by adolescents in high-risk settings. These adolescents are likely to lack family support, be exposed to crowded...
The farm-worker population is racially and culturally diverse; 48% of migrant and seasonal farm workers are US citizens or permanent residents of the United States, but many are new to the United States and come from rural states in Mexico.

Runaway and homeless adolescents are 2 overlapping groups whose health care needs must often be addressed in high-risk settings. Runaways have been defined as juveniles “who leave and remain away from home without parental permission,” whereas the homeless have been defined as those “who lack a fixed, regular, and adequate nighttime residence.” The best estimate of the number of homeless adolescents may be the 1992–1993 Youth Risk Behavior Survey, which revealed that 6.9% to 8.3% of 12- to 17-year-olds questioned reported that they had spent at least 1 night in 1 of 6 homeless locations at least once in the previous 12 months. Boys were much more likely than girls to have experienced a homeless episode. Extrapolating to a national level, ~1.6 million youth are homeless at least once in a given year. Funding for health care is especially problematic for homeless people aged 18 years and older. In all but 3 states, 18-year-olds have reached the age of majority and become ineligible for certain programs that provide assistance to young runaways or “juveniles.”

In 2000, an estimated 2.2 million adolescents came in contact with juvenile residential facilities during their preadjudication period, and 100,000 remained in the system after they were adjudicated. Early sexual activity, injection drug use, and exchange of sex for money or drugs place adolescents in these settings at extremely high risk for hepatitis B virus and human papillomavirus infections. Congregate living may increase the risk of pertussis and meningococcal meningitis. These adolescents are less likely than their peers to be vaccinated or to have had appropriate health care.

### HEALTH CARE SERVICES IN HIGH-RISK SETTINGS

For many marginalized adolescents, shelters, day programs, residential facilities, and drug treatment programs are gateways that can potentially link them to needed services. Adolescents who participate in these programs may be able to obtain care at private doctor’s offices, hospital outpatient clinics, community health centers, public health clinics, shelter clinics, free youth clinics, clinics for runaway youth, family planning clinics, and emergency departments. Treatment for sexually transmitted infections and family planning are also often included in these settings because of the large proportion of youth who need these health care services.

Adolescents in different high-risk settings differ substantially in their actual and perceived access to health services. Health clinics that specifically target the needs of migrants exist in many migrant communities. Nearly half of so-called street youth and one third of adolescents who live in shelters have no regular source of health care, and few perceive shelter clinics, clinics for

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**TABLE 1** Estimates of Adolescents in High-Risk Settings

<table>
<thead>
<tr>
<th>Setting</th>
<th>Estimated No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unauthorized migrants</td>
<td>600,000</td>
</tr>
<tr>
<td>Runaways/homeless</td>
<td>500,000–1,600,000</td>
</tr>
<tr>
<td>Attending alternative high schools</td>
<td>280,000</td>
</tr>
<tr>
<td>Juvenile residential facilities</td>
<td>100,000–2,200,000</td>
</tr>
<tr>
<td>Juveniles in adult prisons and jails</td>
<td>107,000</td>
</tr>
</tbody>
</table>

* Of the 11.1 million unauthorized migrants, the report estimated that 1.8 million were children; we assumed that one third of these children were adolescents 12 to 17 years of age. An additional 3.1 million children are US citizens by birth living in families in which the head of the family or a spouse was unauthorized.

* Excluding facilities that are used exclusively for mental health or substance abuse treatment; the higher estimate (2.2 million) includes short-term detainees.

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This page provides estimates of adolescents in high-risk settings, detailing various categories including unauthorized migrants, runaway and homeless adolescents, and those in juvenile residential facilities. The text discusses the challenges these adolescents face, including unsafe sexual practices, substance abuse, and physical and psychological stressors.

The next sections explore the magnitude of the problem, emphasizing the roles of the federal, state, and local organizations in providing health care services. The text highlights the importance of addressing these adolescents' needs through collaborative efforts and the significance of vaccinating against vaccine-preventable diseases.
runaway youth, or free youth clinics to meet their health care needs. Many of these youth at high risk are not aware of the health care facilities in their neighborhood or the services these facilities offer. Street youth lack transportation, insurance, and confidence in using the health care system, and those in shelters or other facilities lack knowledge about how to use insurance or other financing available for health care services outside of the place in which they board. When they reach health care facilities, language barriers, behavior problems, or socialization difficulties may lead to poor communication about their health. Although these problems are faced by adults in the same settings, adolescents lack experience to overcome these barriers. For example, youth in shelters and street youth (as well as adolescents in general) often mistrust medical services providers and fear violation of confidentiality or involvement with police and social services.

Most health care facilities that street youth access depend on grants and public funding and may not be able to provide services aside from those for which they are funded. For this reason, the facilities can sometimes only address basic survival needs by focusing on medical emergencies, serious mental health problems, injury prevention, and addiction intervention.

Facilities with a detention period potentially provide a better opportunity to immunize at-risk and medically underserved youth. Medical care is frequently mandated for youth in shelters and juvenile residential facilities. Two common barriers to vaccination, cost and access, can be overcome because both health care professionals and programs that subsidize vaccine and vaccine-administration fees are generally available in these facilities.

A number of barriers exist to delivering vaccinations in high-risk settings. Competing priorities compromise the ability of these facilities to deliver the recommended vaccines. Lack of partnership between the facility and the local health departments may limit knowledge of staff about recommended preventive services for adolescents, lack of medical charts, lack of consent procedures, and unreliability of the funding stream for facilities and prevention programs.

**FINANCING VACCINATION IN HIGH-RISK SETTINGS**

Depending on the setting, the Vaccines for Children (VFC) program/Medicaid, Section 317 of the Public Health Service Act (42 USC §247b), state/local funds, and the State Children’s Health Insurance Program (SCHIP) are the cornerstones of public financing of vaccination for adolescents who are 18 years or younger. The VFC program, established by Section 1928 of the Social Security Act in 1994, provides immunizations for children through 18 years of age who are uninsured, Medicaid recipients, and Native Americans or Alaska Natives. The VFC program also provides vaccines for children and adolescents whose insurance does not cover vaccinations when they are seen at federally qualified health centers and rural health clinics. Therefore, it greatly expands the proportion of children who can receive the vaccines recommended by the Advisory Committee for Immunization Practices as part of routine care.

Almost all incarcerated youth are eligible for the VFC program. In addition, some states have “universal vaccination purchase” policies under which the state purchases and supplies all recommended vaccines for anyone <19 years of age. Vaccinations for adolescents aged 19 to 21 years who were formerly in foster care or are homeless can be provided if a given state uses the Medicaid Expansion Option in the Foster Care Independence Act of 1999. The act created a new optional Medicaid eligibility group: “independent foster care adolescents . . . or any . . . reasonable categories of such adolescents specified by the State.” It is each state’s choice of whether to use this Medicaid Expansion Option.

Sustainable funding is essential for maintaining staff and vaccination programs. Securing sustainable funding is an ongoing challenge for nongovernment and public agencies that provide services for high-risk youth. Even public agencies such as local and state health departments, which are charged with immunization services to the community, depend on renewable grants to support staff in community outreach clinics. For example, loss of grant funds forced the San Diego County Health Department to reduce the scope of its hepatitis B vaccination program after 5 years of providing services (see “San Diego County, California”). Grant-funded programs in public and nongovernmental agencies have a high rate of staff turnover because they often are unable to offer either job security or benefits. Insufficient funding also forces programs to operate with inadequate staffing and insufficient hours of service to meet the acute needs of their clients.

**STATE IMMUNIZATION REQUIREMENTS**

School-entry requirements for immunization are arguably the most effective way of ensuring that vaccines are received by adolescents. Most of the evidence is based on evaluations of middle school immunization requirements for hepatitis B vaccination (see also the article by Horlick et al in this issue). State laws and accreditation incentives can be effective, but inconsistencies in the interpretation and implementation of school immunization laws contribute to variability in rates of exemptions and overall immunization rates. Thus, immunization rates even among school-enrolled adolescents are significantly below the Healthy People 2010 goal of 90%. However, because the high-risk settings we discuss here serve adolescents who are temporarily or permanently out of the educational system, school laws may not be as beneficial, unless they are put in place and enforced to reach as many young adolescents as possible before the onset of high-risk behavior.

**MODEL PROGRAMS DESIGNED TO VACCINATE YOUTH AT HIGH RISK IN ALTERNATIVE SETTINGS**

Efforts to deliver hepatitis B vaccine to adolescents in high-risk settings exemplify the challenges that programs will face in trying to deliver new vaccines to adolescents in such settings. To better reach these ado-
lescents, recommendations for hepatitis B vaccination have changed since introduction of the vaccine. When hepatitis B vaccine was introduced in the 1980s, it was specifically recommended for persons at increased risk of infection, including those who injected drugs or had multiple sexual partners. Despite the fact that adolescents with these behaviors were frequently found in high-risk settings, there were great difficulties in implementing programs that actually vaccinated these adolescents, and the “high-risk” strategy met with limited success. Therefore, in 1991, hepatitis B vaccine was recommended for all infants in the United States.43 In 1995, to reach adolescents who did not receive the vaccine as infants, recommendations were expanded to include adolescents at a routine preventive visit at 11 to 12 years of age.44 In 1999, these recommendations were expanded to include all children up to 19 years of age.45

The remaining portion of this report, we review 5 model programs that were designed to deliver the hepatitis B vaccination series to youth at high risk in different communities. The first 4 of the 5 programs highlighted here were supported by grants from the Centers for Disease Control and Prevention (CDC) to provide hepatitis B vaccination services to adolescents in high-risk settings.46

San Diego County, California

Hepatitis B vaccination programs were begun in the county health department’s sexually transmitted disease (STD) clinics in 1998.47 In 2002, on the basis of the success of previous hepatitis B vaccination programs, San Diego initiated a project to assess the feasibility and effectiveness of integrating viral hepatitis prevention services into programs that serve adolescents in high-risk settings.48 The goals of the project were to provide vaccinations against hepatitis A and B in high-risk settings and estimate the proportion of adolescents who are infected with hepatitis C virus. San Diego juvenile correctional facilities (2 secured facilities and 2 rural camp sites) were primary sites for this project.48,49 Challenges to implementing this intervention included (1) differing eligibilities for federally funded vaccine of incarcerated and detained adolescents, (2) competing priorities in the correctional system, (3) a primary concern for security, (4) lack of agreement among the medical staff that vaccination was a priority, (5) inadequate record-keeping systems.

Meeting these challenges required developing collaborations between the San Diego County Probation Department, Mental Health Services, and Children’s Hospital and Medical Center of San Diego. New practices and procedures were established to accommodate the hepatitis virus prevention project within the juvenile correctional system. Specifically, (1) a standardized form that identified 12- to 18-year-olds at risk for hepatitis A, B, or C was completed during medical intake, (2) all at-risk, susceptible youth were vaccinated against hepatitis A and B, and (3) serologic testing for hepatitis B and C was offered if indicated by a risk assessment.49,50

During 2003 and 2006, >28 000 youth were assessed for hepatitis risk and vaccination status at intake. Only a small percentage of all detainees were vaccinated, because vaccine was given only to juveniles known to be unvaccinated and those who had been in the system for >14 days. Approximately 7565 doses of the 3-dose hepatitis B vaccine regimen and 9504 doses of the 2-dose hepatitis A vaccine regimen were administered (CDC-San Diego County Health Department, Program Announcement 02086 Prevention of Viral Hepatitis Among High-Risk Youth, Year 4, Semi-annual Progress Report, May 2006, unpublished data).47

Connecticut

The state of Connecticut uses both federal and state funds for the purchase of vaccines for children younger than 19 years. In 2000, Connecticut law mandated that before 7th-grade school entry, youths need documentation of receipt of at least the first hepatitis B vaccine dose with completion of the series by 8th-grade entry. In 2003, 11th- and 12th-grade youths were identified as an unvaccinated cohort that had not been subject to the hepatitis B vaccine mandate. Therefore, the Connecticut Department of Public Health (DPH) viral hepatitis program implemented a vaccination catch-up initiative funded by a CDC cooperative agreement. The DPH conducted focus-group sessions and collaborated with school nurses, school administrators, health care providers, students, and an informatics specialist to develop a “Vaccinate Before You Graduate” campaign. Public, private, correctional, alternative, magnet, and technical schools were included in this initiative. The approach combined both unique and traditional educational techniques and public health strategies. Program components included the development of an informational poster, an interactive scratch-off brochure to help youths make decisions about safe, protective, and high-risk behaviors, an interactive “Stop Hepatitis Mobile Theater” (with a preevaluation and postevaluation tool), and a hepatitis B vaccination-status survey (baseline and follow-up) administered before and after the hepatitis B vaccination initiatives.

Initially, 52 (16%) schools volunteered to participate. After enhanced outreach to school nurses, participation increased to 165 (52%) schools. On the basis of an evaluation completed by approximately half of the participating schools, 4759 doses of hepatitis B vaccination were administered, and 1222 students completed the 3-dose hepatitis B vaccination series during the 3-year project. In the first year of the program, only 1 school succeeded in vaccinating all of its students who needed doses of vaccine. During the second year, 32 schools vaccinated all of their students.

The program was expanded to include state juvenile detention centers, STD clinics (where state law allows youths presenting for an evaluation to receive hepatitis B vaccine as preventive treatment without parental consent), community health centers, and other sites. In youth detention facilities, the Connecticut DPH facilitated a policy change, offering the hepatitis B vaccine series to all youth offenders regardless of the length of sentence and implementing a tracking system that would enable facilities to continue the hepatitis B vac-
cination rates increased from 40% to 50% in 1997 to nearly 100% during this initiative.

Challenges to implementation of expanded hepatitis B vaccinations included competing priorities of partners; inadequate, limited, or restricted funding; lack of access to the at-risk population; language barriers; and lack of policies.

**Georgia Department of Human Resources, Division of Public Health**

In 2001, Georgia implemented and evaluated an immunization program for unvaccinated adolescents at high risk in 31 juvenile correctional facilities across the state. A dedicated program coordinator visited all facilities in the state, enrolled them into the VFC program, and assisted them in implementing a hepatitis B vaccination program. Because Georgia laws allowed children younger than 18 years to consent to hepatitis B vaccination in the context of STD/HIV evaluation, consent for vaccination was not an obstacle. In this setting, all adolescents who lacked immunization records were assumed to be susceptible. In 2004, an electronic statewide immunization registry became accessible to the juvenile justice system, which facilitated record keeping.

More than 16 000 vaccine doses were administered in the 31 juvenile correctional facilities over a 2-year period. The Georgia Department of Human Resources, Division of Public Health, provided technical support for vaccine administration, follow-up on issues, and contacting guardians of the detained juveniles by telephone to reinforce the importance of follow-up doses. Nevertheless, the increased demands placed on the facilities and their staff during the implementation resulted in resistance for continuing the program beyond the year. Close collaboration between juvenile detention centers, public health departments, and private health providers proved to be an essential component in overcoming the challenges of dose completion among detained adolescents.

**Miami-Dade County Public Schools (Florida)**

Miami-Dade County public schools’ alternative education centers offered hepatitis B vaccination as a part of their services, which also included free HIV and STD tests, antibiotic treatments, pregnancy tests, referral assistance for family planning needs, gynecologic care, and condoms for persons 13 to 24 years of age. Collaborators and partners included the Florida Department of Health, the Miami-Dade County Public Health Department, Miami-Dade County Public Schools, and the Miami Family Care Program (Ryan White Title IV grant at University of Miami). Major challenges included monitoring completion of hepatitis B vaccination series; providing hepatitis A vaccine for clients at high risk; and increasing demand for preventive services by the target population. Passing a state law that required hepatitis B vaccine for school entry, offering multiple services at an STD clinic, and providing comprehensive health education in middle and high schools all supported vaccination efforts.

Because this project focused on increasing points of service for hepatitis B vaccinations for adolescents, it did not collect data on the impact or acceptability of the hepatitis B vaccinations.

**Migrant Clinicians Network**

The Migrant Clinicians Network is a national network of clinics that is funded through governmental and nongovernmental grants to serve the health needs of the migrant farm workers and other populations and was established by the Health Resources and Services Administration, Bureau of Primary Health Care’s Migrant Health Program. The National Migrant Clinicians Network Adolescent Immunization Initiative began in 2003. It initially developed health education materials that matched the reading ability of the target population and distributed these materials through health care providers, immunization program managers, state immunization coordinators, migrant and community health centers, Head Start programs, schools, universities, state migrant councils, and organizations that serve Hispanics in 45 states. Promotoras (lay health promoters from the community) and mobile clinics provided outreach to distribute health education materials to migrant farm workers at migrant camps, farms, the local public education system, and churches. Incentives were given when clients visited health centers and completed immunization series or physical examinations. Special promotions (offering photograph identification cards, recreation programs, English-as-a-second-language classes) targeted adolescents, and additional adolescents were reached when their families presented for medical care from existing programs (eg, Supplemental Nutrition Program for Women, Infants, and Children [WIC], preschool, maternity care).

Barriers to vaccinating migrant adolescents and children included lack of insurance, inability to communicate in English, high mobility, long work hours that extended beyond clinic hours, absence of health records, and the fact that many were emancipated minors. As in the other programs, collaboration with other organizations was essential.

Passive evaluation of the health education materials is being conducted through a survey available online (www.migrantclinician.org/excellence/immunizations). Eighty-one percent of clinicians who have responded to this online survey stated that the educational materials facilitated discussions regarding immunizations with their patients and increased acceptance of required vaccinations (I. Hargrove, MCN, Migrant Clinicians Network, Austin, TX, personal communication, 2006). Impact evaluation of the educational materials on the number of vaccinations delivered to migrant farm workers is currently in progress (I. Hargrove, MCN, personal communication, 2006).

**BARRIERS AND STRATEGIES TO OVERCOME THEM**

Table 2 summarizes other barriers encountered at specific settings and strategies used to overcome them. Clinical staff licensed to deliver injections in the staffing of mobile or community-based counseling and testing sites
were provided to augment insufficient staff. Coalition-building was essential, as was demonstrated in Connecticut, where the health department championed state legislation that required hepatitis B vaccination for entry into middle school or 7th grade. A key to success in delivering hepatitis B vaccination services in settings that serve youth at high risk was collaboration between health departments and organizations primarily responsible for the care of the adolescents, involvement with local health departments or state health department staff, and a secure funding stream.

**DISCUSSION**

A number of studies have demonstrated that, with sufficient resources, vaccinations and other recommended prevention services can be effectively delivered to adolescents in some settings that serve high-risk populations. Although the importance of vaccination in these settings cannot be overstated, our ability to vaccinate a large proportion of adolescents in either traditional or high-risk settings remains unproven. Indeed, a recent study concluded that most progress toward population-based hepatitis B vaccination has been made through infant immunization programs, and a small proportion of this progress is attributable to childhood vaccination programs.

The programs described in this report are not unique. Through concerted federal, state, and local efforts, many different types of facilities developed hepatitis B vaccination programs. One systematic survey of vaccination practices evaluated the availability of hepatitis B vaccine for adolescents who receive care in alternative health care settings. This study found that directors of teen clinics, school-based health centers, youth correctional facilities, sexually transmitted infection clinics, family planning clinics, and Planned Parenthood facilities considered offering immunizations important, and many of these facilities had been linked with vaccination services in the public sector. Hepatitis B vaccination was most likely to be provided by those facilities that only serve adolescents and those that participated in the VFC program. Other reports have described interventions that significantly reduced drug dependence, reduced incidence of sexually transmitted infections, and delivered the complete hepatitis B vaccination series for homeless and runaway youth in residential care facilities.

Understanding of the structure and resource requirements of hepatitis B vaccination programs in high-risk settings may further clarify what was required to succeed. All 5 model hepatitis B programs showcased in this report owed their success to multiagency collaborations. The vaccination services were successfully implemented because they were integrated into existing health care services. Laws were also instrumental in enabling vaccination programs for adolescents (eg, in Connecticut, which enacted public health statues to support the introduction of hepatitis B vaccination). In addition, a working group of diverse local stakeholders such as health departments, community-based organizations, and administrators specific to each setting was essential for ensuring the integration of vaccinations as a component of existing health services.

In the 5 model programs described in this report, appropriate training and a commitment from the project staff to introduce the new services were also crucial for the introduction and ultimate integration of the new service into existing programs at each site.

Despite successes in delivering hepatitis B vaccinations in high-risk settings, these 5 programs were funded through time-limited federal grants with no assurance of continuity beyond the grant term. Sustainable funding is an essential requirement to ensure that vaccinations and other preventive health services continue to be provided in concert with other services available for adolescents in high-risk settings.

State governments play a crucial role in facilitating the delivery of vaccinations to adolescents in high-risk settings, and many have used both state and federal resources to reach marginalized adolescents. Since 1962, the federal government has supported vaccination services for adolescents through the Vaccines for Children program.
through a grant program administered by the CDC (Statute 317 of the Public Health Service Act, 42 USC §247b). These “317” grants, named for the authorizing statute, support purchase of vaccine for free administration at local health departments and support immunization delivery, surveillance, and communication and education. Section 317 funds may be used by states to buy vaccine for administration to adults, and they may also be used to buy vaccine for children who do not qualify for vaccine from another, larger source—the VFC program, which began in 1994. However, 317 funding has fallen far behind the costs of the new vaccines and the infrastructure required to deliver them. Under the VFC program (an entitlement program), all Medicaid-eligible children, all children who are uninsured, all American Indian and Alaska Native children, and insured children whose coverage does not include vaccinations (with limitations on the locations where this last group can receive VFC vaccine) qualify to receive routine childhood vaccines at no cost for the vaccine. The VFC program operates in both public health clinics and private provider offices. Additional federal assistance for vaccination is provided by the State Children’s Health Insurance Program through expanded Medicaid eligibility for low-income children. States can also use the expanded Medicaid option of the Foster Care Independence Act of 1999.

Many obstacles were overcome to enable the projects described in this report to deliver hepatitis B vaccine to adolescents at increased risk of infection, a population that was frequently found in high-risk settings. Developing new programs and extending existing ones will necessitate funding, collaboration, and partnership. Engaging local public and private stakeholders, improving the technical capacity of service providers, and engaging the adolescents who use the services to demand vaccinations are essential for preventing vaccine-preventable diseases in marginalized populations. If we hope to deliver the recommended adolescent vaccines to a substantial proportion of adolescents in high-risk settings, we will need sustainable funding and reform of the barriers to service.

CONCLUSIONS

Three new vaccines licensed for use in adolescents and adults can reduce meningitis, prevent cervical cancer in women, and reduce the incidence and severity of cough illnesses in these hard-to-reach populations. Delivering not 1 but all recommended doses of each vaccination can be facilitated by state governments by expanding access to youth at risk by using approaches such as those described in this article. However, until the shortfalls we discussed are addressed and 317 funding is increased, adolescents in high-risk settings will continue to fall through the cracks.

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