

# Program Helps Get High-Risk Teens Immunized

BY SUSAN LONDON

FROM THE ANNUAL MEETING OF THE  
PEDIATRIC ACADEMIC SOCIETIES

VANCOUVER, B.C. — A stepped intervention in primary care practices can improve rates of immunization and well-child visits among urban adolescents at high risk for poor health outcomes.

Data from a randomized trial conducted in Rochester, N.Y., showed that adolescents assigned to the intervention were 1.8 times more likely to receive new vaccines than were their peers assigned to usual care. In addition, they were 1.7 times more likely to have made a well-child visit in the past year.

"A stepped tracking-reminder-recall-outreach program can improve immunization rates for high-risk urban adolescents, and it has spillover benefits on improving preventive care visits," lead investigator Dr. Peter G. Szilagyi said.

"The bottom line, I think, is that a public health approach within primary care can measurably improve the quality of care for urban adolescents," he added.

National immunization guidelines recommend reminders, recalls, and out-

reach for very high-risk groups, but "for urban adolescents, these interventions have not been tested. And there are virtually no studies that have been shown to improve well-child care visit rates for urban adolescents," noted Dr. Szilagyi, professor and chief of the division of general pediatrics and professor at the center for community health at the University of Rochester.

The 15-month trial was conducted in

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**Major Finding:** Adolescents assigned to a stepped intervention were 1.8 times more likely to receive new vaccines and 1.7 times more likely to have a recent well-child visit than those given usual care.

**Data Source:** Randomized, controlled trial involving 6,684 high-risk adolescents.

**Disclosures:** Dr. Szilagyi reported that he had no conflicts of interest related to the study.

eight primary care practices among adolescents aged 11-15 years. Within each practice, the adolescents were randomized to an intervention group or a control group given usual care.

In the intervention group, outreach workers tracked all adolescents to monitor their immunization status. For those identified as being behind, progressively intense measures were used until they

were up to date: reminders, then recalls, and finally outreach in the form of a home visit, which was used to assess barriers to care and link the families with social services.

The investigators assessed rates of receipt for three new vaccines for adolescents—meningococcal conjugate (MCV4); tetanus, diphtheria, and pertussis (Tdap); and human papillomavirus (HPV) vaccines—and rates of well-child care visits in the past year.

Analyses were based on 3,365 adolescents in the intervention group and 3,319 adolescents in the control group. They were a mean 13.5 years old, and half were male. Most were black (63%) or Hispanic (23%), and most had Medicaid (73%).

Results showed that in the intervention group, 71% of adolescents needed reminders and recall, and 12% needed home visits.

After adjustment for potential confounders, relative to their peers in the control group, adolescents in the intervention group were a significant 1.8 times more likely to have received all three vaccines at the study's end, Dr. Szilagyi said.

In absolute terms, 44% of adolescents in the intervention group were fully immunized at that point, compared with 32% in the control group. Differences were significant for each vaccine as well.

Similarly, after statistical adjustment, adolescents in the intervention group were a significant 1.7 times more likely to have had a well-child visit in the past year at the study's end, he said.

In absolute terms, 67% in the intervention group had made such a visit, compared with 55% in the control group.

Improvements in rates of these outcomes were similar by age, sex, race/ethnicity, and type of insurance, he noted.

The cost of the intervention (excluding research costs) was \$43 per year per adolescent. The cost per additional fully vaccinated adolescent was \$465, and the cost per additional adolescent with a recent well-child visit was \$417.

"I think the costs are somewhat high, although we have debated this hotly within our group," he commented. "We need to improve the efficiencies of this program and reduce the costs."

The percentage of adolescents who were up to date on all three vaccines at baseline was low (12%-13%) in the study population, so the intervention might have a smaller impact in populations with higher baseline rates, Dr. Szilagyi cautioned.

The multifaceted nature of the intervention is likely to be important in this setting. Studies have shown that reminders and recalls work in the general population, but not in disadvantaged groups. ■

## Half of Parents Will Get HPV Vaccine for Sons

BY ROXANNA  
GUILFORD-BLAKE

FROM THE NATIONAL  
IMMUNIZATION CONFERENCE

ATLANTA — Although most parents in a national survey say that they believe the male HPV vaccine is important, only about half said they would have their own sons vaccinated.

Of the 1,178 parents of boys aged 18 years and younger who responded, 90% said they believed the male HPV vaccination was important in general, Dr. Amanda Dempsey of the University of Michigan, Ann Arbor, reported in a poster.

However, only 52% of parents of boys aged 9-17 years indicated that they would have their own son vaccinated in the near future, and only 48% of the parents of boys aged 8 years and younger said they would do so when their son was older.

Parents appeared to be more motivated by the possibility of transmission than by disease protection, even though there is no evidence that the vaccine protects against transmission, Dr. Dempsey noted in an interview. In data not reported on the

poster, 100% of parents cited decreased transmission as a reason to get the vaccine—more than those who cited preventing male cancers (93%) or genital warts (91%).

Perceived benefits to vaccination had the largest impact on parental vaccination intention; perceived susceptibility—but not perceived severity—was also a factor.

Parents having less than a high school education were associated with decreased vaccination intention for older, but not younger, boys, Dr. Dempsey and her colleagues reported at the conference sponsored by the Centers for Disease Control and Prevention.

The study was conducted before the vaccine was licensed for males, and that may have had an impact on parental decisions, the researchers noted.

The research is a starting point, she explained; it may help clinicians identify key messages that resonate with parents. Intervention studies are underway to explore ways to tailor effective messages. ■

**Disclosures:** Dr. Dempsey serves on an advisory board for Merck.

## Race Is a Factor in Completing Three-Dose HPV Vaccine Series

BY DEBRA L. BECK

FROM THE ANNUAL MEETING OF THE SOCIETY FOR  
ADOLESCENT HEALTH AND MEDICINE

TORONTO — Girls and women who identified themselves as white were twice as likely as those who identified themselves as black to complete the three-shot vaccination series against the human papillomavirus, according to a retrospective review of medical records.

"This is concerning because, historically, black women have had lower rates of cervical cancer screening and been more at risk from dying of cervical cancer. With unequal distribution of the vaccine, the racial disparity in cervical cancer may worsen," said Dr. Lea Widdice, an assistant professor of pediatrics at the Cincinnati Children's Hospital Medical Center. Dr. Widdice presented her results in a poster at the meeting.

Moreover, only 14% of females initiating the HPV vaccine series actually completed the three-shot series within 7 months of the first dose. Clinical recommendations for the vaccine are to get the third shot 6 months after the first.

Dr. Widdice and her colleagues conducted a retrospective review of medical records from 3,297 females, aged 9-26 years, who received the first HPV vaccine dose between June 2006 and June 2008 from an urban, academic, pediatric medical center with multiple primary care and specialty clinics.

Overall, 11% of the black girls and women received all three doses of the vaccine, compared with 22% of the white females and 15% of those identified as other races.

Patients were predominately from primary care (95%), and 65% used Medicaid. The majority (67%) self-identified as black, 29% said they were white, and 4% were classified as other races.

Interestingly, even after controlling for factors such as type of insurance and the different types of clinics giving the vaccine (primary care pediatrics, adolescent primary care, ado-

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**Disclosures:** Dr. Widdice said she had no conflicts of interest.

lescent specialty clinics, or other specialty clinics), race was still strongly associated with getting all three doses on schedule.

Dr. Widdice said that to maximize the public health benefits of the vaccine, interventions to improve adherence are needed. "School-based clinics, in addition to doctor's clinics, may be an effective way to get the vaccine to more people," she said in an interview. ■