

## **Many Pediatricians Are Reluctant to Vaccinate Young Females Against Human Papillomavirus**

Less than a year before a vaccine to prevent human papillomavirus (HPV) infection in females was approved and a federal advisory committee recommended that it be administered to all 11–12-year-old females, fewer than half of U.S. pediatricians surveyed said that they would offer such a vaccine for 10–12-year-old females if one were available.<sup>1</sup> A majority of respondents felt that parents would be upset if they offered to vaccinate a 10–12-year-old against an STD, and those who held this belief were significantly less likely than others to intend to do so (odds ratio, 0.3). Physicians who thought that parents' refusal to have their preadolescent daughters vaccinated would be a barrier also had reduced odds of intending to give 10–12-year-olds HPV vaccine (0.5).

The survey was conducted in August–October 2005 among a sample of physicians that was designed to be representative of the overall membership of the American Academy of Pediatrics. Participants, who chose whether to answer the survey on the Internet or by mail, provided information about their demographic characteristics, attitudes about adolescent patients and sexuality, HPV knowledge, and attitudes toward and perceived barriers to providing HPV vaccination. Researchers used multivariate analyses to identify characteristics associated with intention to provide HPV vaccination to 10–12-year-olds.

A total of 294 physicians completed the survey. Respondents were about evenly divided between males and females, and were, on average, 48 years old. Most worked

in private practices and in urban settings; one-third said that at least 25% of their patients were 13–18 years old.

Nearly all survey participants (98%) knew that HPV causes genital warts in females and males; the vast majority knew that HPV is fairly common (84%) and that genital HPV infections typically create no symptoms (83%). However, only 68% were aware that the virus causes most cervical cancer, and 80% did not know that different HPV strains are responsible for genital warts and cervical cancer.

Forty-six percent of physicians said that if an HPV vaccine were available, they would likely recommend it for 10–12-year-old female patients, 39% said that they would not likely do so and the rest were undecided. By contrast, 77% said that they would recommend it for 13–15-year-old females, and 89% for 16–18-year-olds. Lower proportions considered themselves likely to offer an HPV vaccine to males than to females of each age, and 10% reported being unlikely to offer it to anyone.

By and large, respondents did not think that being inoculated against HPV infection would encourage youngsters to engage in risky sexual behavior; only 11% expressed this belief. However, 61% thought that parents would have this concern. Although these proportions did not differ by whether physicians intended to offer the vaccine for 10–12-year-old females, significant differences emerged for other attitudinal variables: Greater proportions of respondents who would not recommend vaccination than of those who would consider it necessary to discuss sexuality-related issues before making such a recommendation (90% vs. 77%), thought that parents would be upset by a physician's recommending vaccination against an STD for a 10–12-year-old (84% vs. 55%) and thought that parents of children aged 10–12 would be more likely than parents of teenagers to refuse to have their children vaccinated (96% vs. 82%). Smaller proportions of physicians who would not offer a vaccine than of those who would thought that recent recommendations for other adolescent vaccinations would make it easier to introduce HPV vaccination into their practices (58% vs. 72%) and believed that discussing HPV vaccine with parents of 10–12-year-olds would be relatively easy because these youngsters presumably are not yet sexually active (22% vs. 39%).

Substantial proportions of physicians cited financial concerns as possible barriers

to provision of HPV vaccination—77% cited inadequate reimbursement, and 51% up-front costs of offering the service. Fifty-seven percent thought that parental refusal would prevent them from offering the vaccine to female patients, and 64% to males.

In the multivariate analyses, knowledge that HPV vaccines currently under development are highly effective and thinking that other vaccine recommendations for adolescents would facilitate the introduction of HPV vaccination were associated with significantly elevated odds that physicians would recommend an HPV vaccine for 10–12-year-old female patients (odds ratios, 2.3 and 1.9, respectively). Considering a discussion of sexuality a prerequisite to recommending HPV vaccine, thinking that parents of a 10–12-year-old would be upset at the suggestion of an STD vaccination and considering the refusal of young females' parents a barrier to providing the service were associated with reduced odds of this intention (0.3–0.5).

The researchers acknowledge that their findings apply only to pediatricians, that the survey asked about only one particular HPV vaccine and that it measured intentions rather than practice. Although they conjecture that providers' attitudes may change now that a vaccine has been licensed and the government has issued provisional guidelines for its use, they add that "provider concerns about parental vaccine acceptance and reimbursement issues will need to be addressed to ensure optimal implementation" of those guidelines. Perhaps most significant, they note that "providers will need to understand that the timing of HPV vaccination in early adolescence is not merely a matter of convenience but may be critically important to overall vaccine effectiveness."—*D. Hollander*

#### REFERENCE

1. Daley MF et al., A national survey of pediatrician knowledge and attitudes regarding human papillomavirus vaccination, *Pediatrics*, 2006, 118(6): 2280–2289.