Gaps Seen in Doctors' Knowledge About HPV Shot

BY SHARON WORCESTER
Southeast Bureau

ATLANTA — Family physicians and pediatricians are knowledgeable about several key aspects of human papillomavirus epidemiology and have largely adopted use of the HPV vaccine in their practices, but some important knowledge gaps about the disease and vaccine remain, results of a survey suggest.

Findings from a national HPV vaccination practices survey of 331 family physicians and 349 pediatricians, which was conducted 18 months after licensure of the HPV vaccine Gardasil, indicate that both groups understand that most genital HPV infections are asymptomatic (86% and 85%, respectively, responded correctly on a related survey item), and that almost all cervical cancers are caused by HPV (95% and 85%, respectively, responded correctly).

However, only 58% of family physicians and 43% of pediatricians correctly answered "false" to an item stating that genital warts are caused by the same HPV types as cervical cancer.

The findings, reported at the Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices fall meeting by Dr. Matthew F. Daley, also show that 88% of family physicians, and 98% of pediatricians who responded are administering HPV vaccine to female patients.

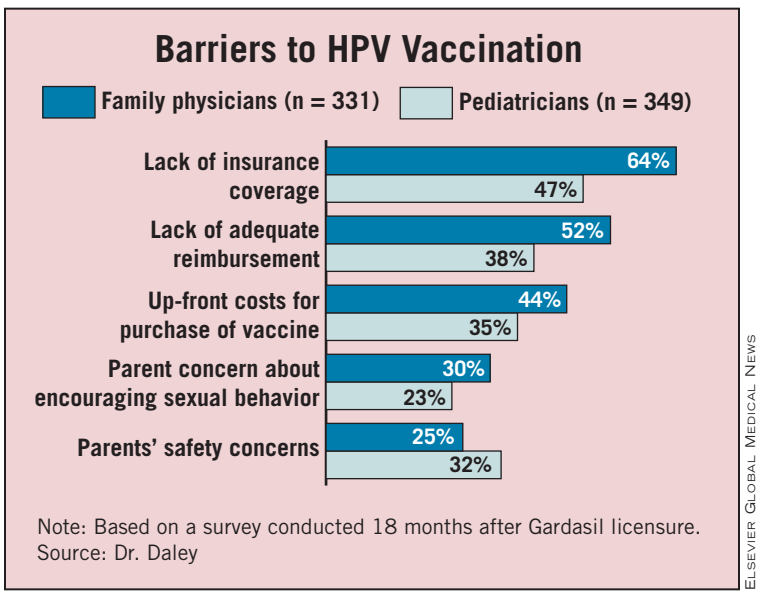
When surveyed about whether parents feel vaccination might encourage earlier or riskier sexual behavior, 49% of family physicians and 42% of pediatricians said they strongly agree or somewhat agree that parents have such concerns, but only 6% and 4%, respectively, had such concerns themselves.

As for which patient populations are targeted for vaccination, physicians (82% of family physicians and 89% of pediatricians) said they more strongly recommend vaccination for 13- to 15-year-olds than for 11- to 12-year-olds (49% and 56%, respectively), said Dr. Daley of the department of pediatrics at the University of Colorado at Denver.

After adjustment for respondents' specialty and region of the country, factors found to be associated with not strongly recommending vaccination in 11- to 12-year-olds were considering it necessary to discuss sexuality before recommending vaccination (odds ratio, 1.6); reporting that parents of 11- to 12-year-olds have been more likely to refuse vaccination than parents of 16- to 18-year-olds (odds ratio, 4.0); and believing that the time it takes to discuss HPV vaccination is definitely or somewhat of a barrier (odds ratio, 1.9).

Parents' refusal to have a child vaccinated and deferral of vaccination were also addressed in the survey. Parents are more likely to defer than to refuse vaccination, the results suggested. Also, refusal is most common for 11- to 12-year-olds, with about 25% of parents reportedly refusing vaccination in that age group, he noted (see box).

The most common reported reasons for refusal or deferral were the "newness" of the vaccine, patient age, lack of sexual activity on the patient's part, and lack of insurance coverage/inability to pay. Factors reported as definitely or somewhat of a barrier to vaccination included lack of insurance coverage, lack of adequate reimbursement, and up-front costs for purchase of vaccine. ■



ELSEVIER GLOBAL MEDICAL NEWS

Oral Rotavirus Vaccine Yields Better-Than-Expected Results

BY DENISE NAPOLI
Associate Editor

WASHINGTON — Two years after approval of an oral rotavirus vaccine, pediatric rotavirus cases and hospitalizations in U.S. hospitals have decreased dramatically, according to two national studies as well as a number of local analyses.

That decline is present in nonvaccinated age groups, likely because of reduced overall circulation and transmission of the virus in children of all ages, say researchers.

At the joint annual Interscience Conference on Antimicrobial Agents and Chemotherapy and annual meeting of the Infectious Diseases Society of America, T. Christopher Mast, Ph.D., associate director of the department of epidemiology at Merck & Co. (maker of the oral RotaTeq vaccine), reported on 33,135 infants who received all three vaccine doses between Jan. 1, 2007, and April 30, 2007, and 27,954 infants who had received multiple vaccines—but not the rotavirus vaccine—during that time.

The nonrandomized, claims-based observational study data showed a 100% reduction in combined hospital and emergency department (ED) visits in the vaccinated group during the 2007 and 2008 seasons (from January through May). Physician visits were cut by 96% in the vaccinated group, compared with the unvaccinated group. Associated medical costs resulting from hospitalization and ED visits were cut by $12,000 in the vaccinated group, compared with those in the unvaccinated group.

In a second presentation, Dr. Jay Lieberman, medical director for infectious disease for Quest Diagnostics Inc., reported on national rotavirus testing data from Quest's information data warehouse. In the three seasons before licensure of the vaccine (December through June of 2003-2004, 2004-2005, and 2005-2006), 27,625 rotavirus tests on average were performed during the peak disease season, of which 7,162 (26%) were positive. In contrast, in the most recent peak season (from December 2007 through June 2008), 1,703 (8%) of the 21,873 tests performed were found to be positive—a highly significant reduction.

Moreover, "the number of positive tests and the positivity rate declined after vaccine licensure in every age group, including those [aged] 2-5 years, who are unlikely to have been vaccinated," he wrote in a poster, evidencing herd immunity.

The decline in rotavirus also was shown in several regional studies on the efficacy of RotaTeq. In one of at least eight such posters, Dr. Irini Daskalaki of Drexel University in Philadelphia found a decrease in hospitalizations at St. Christopher's Hospital for Children (also in Philadelphia) ranging from 20% to 94% among different age groups at 1 full year after vaccine implementation. And, as in Dr. Lieberman's study, prominent decreases were seen even in unvaccinated age groups.

Neither Dr. Lieberman nor Dr. Daskalaki disclosed any conflicts of interest.

Data from the U.S. VAERS (Vaccine Adverse Event Reporting System) also presented in a poster at the meeting, confirmed the results of prelicensure studies of the vaccine's safety: Of 21,093,180 doses administered between Feb. 1, 2006, and Aug. 30, 2008, according to Merck, 2,600 adverse event reports were filed with VAERS, 683 (26%) of which were serious. Of the serious reports, 328 (48%) involved cases of intussusception, a rate that was not considered sufficient to cause concern. The other adverse events were vomiting and diarrhea. There was one death.

RotaTeq—a live, oral, human-bovine reassortment rotavirus vaccine—was licensed in February 2006, and routine vaccination was recommended by the Centers for Disease Control's Advisory Committee on Immunization Practices (ACIP) later that year. It is administered in three doses before 32 weeks of age. It is the second rotavirus vaccine to be approved in the United States. The first, RotaShield, was removed from the market in 1999 because of a detected increase in intussusceptions.

A two-dose oral rotavirus vaccine, Rotarix (from GlaxoSmithKline) also was approved by the Food and Drug Administration in April of this year. ■

Hospitals in Two States Confirm Cost Savings in Wake of Vaccine Coverage

ATLANTA — Hospital-based data from New York and Texas underscore the importance of rotavirus vaccination for reducing disease burden and related hospitalization rates and costs.

The findings were reported at the fall meeting of the Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices. Data from 11 sentinel hospitals in New York indicate that in children aged 1 month to 3 years, there was a 56% reduction in hospital admissions for diarrhea, and an 85% reduction in hospital admissions for rotavirus in 2008, compared with 2003-2005—a change that coincides with increasing rotavirus vaccination coverage. Total charges for diarrhea and rotavirus-associated hospitalizations decreased by $22 million and $12 million, respectively, in 2008, compared with 2005-2007, Dr. Hwa-Gan Chang of the New York State Department of Health reported.

He noted that significant reductions in rotavirus-related hospitalizations also were seen in New York among nonimmunized older age groups, which suggests possible herd immunity following the introduction of the oral three-dose pentavalent rotavirus vaccine RotaTeq (Merck & Co.), which was licensed in February 2006.

A project at Texas Children's Hospital in Houston, which was funded by a CDC grant, showed that in children aged 15 days through 23 months, vaccine effectiveness was 85%-89% in both case patients (including 400 children who presented to the hospital emergency department with acute gastroenteritis) and controls (including 115 rotavirus-negative acute gastroenteritis patients, 228 concurrently enrolled patients with acute respiratory infection symptoms). The effectiveness rates, based on findings from February to June 2008, were comparable with prelicensure estimates, Dr. Julie A. Boom, director of infant and childhood immunizations at the Center for Vaccine Awareness and Research of Texas Children's Hospital, reported.

—Sharon Worcester