Combo Vaccine Shaves Little Off the Bottom Line

BY HEIDI SPLETE
Senior Writer

Less than 12% of 312 pediatricians experienced or expected a notable decrease in revenue from using Pediarix, the combined vaccine from GlaxoSmithKline, based on a nationwide survey.

About 11% of the practices reported a moderate decrease in revenue and less than 1% reported a significant decrease, said Dr. Gary L. Freed and his colleagues at the University of Michigan in Ann Arbor (Pediatrics 2006;118:251-7). The researchers had no financial relationships related to the study.

Pediarix, which includes diphtheria, tetanus, acellular pertussis, hepatitis B, and inactivated polio vaccines, was licensed by the Food and Drug Administration in December 2002 and accounted for more than 30% of all diphtheria, tetanus, acellular pertussis vaccine administered in the United States by the end of 2003. The researchers conducted the survey to determine factors that influenced Pediarix use.

Overall, 123 pediatricians (39%) reported purchasing Pediarix for in-office use. Another 18% were considering a Pediarix purchase, and 40% were not considering a purchase. The remaining 3% said they did not know, or left the question blank.

Fewer administration fees and a decreased profit from the Pediarix vaccine itself were the most common reasons for decreased revenue (69% and 51%, respectively), and 74 practices had raised or planned to raise fees to recoup their losses. Some practices simply charged more for the vaccine—23% of practices charged payers more for the vaccine, while 12% charged patients more for it. In addition, 16% of practices charged payers higher administration fees, 9% charged patients higher administration fees, 7% charged payers more for office visits, and 3% charged patients more for office visits.

Despite the increased costs in some practices, combination vaccines were generally popular with patients and providers because they reduced the number of injections given to a child at a single visit.

Overall, 51% of the 241 pediatricians who reported factors that influenced their vaccine purchase decisions said that parent and provider interest in decreasing the number of injections was a factor.

"The study nicely depicts the multiple factors involved in making that decision [about combined vaccine use], and different physicians and parents will weigh the factors differently," said Dr. Edgar K. Marcuse, a professor of pediatrics at the University of Washington, Seattle, and a member of the Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices.

The combination vaccines can decrease missed opportunities and missed vaccine coverage, which is something of importance to all pediatricians, he added.

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The financial impact of combined vaccine use is likely to vary by region and by payer contracts. Some state and private insurance programs limit the number of administrative fees that physicians can charge, which may reduce the impact of combination vaccine use on total practice revenue.

For some, "given the circumstances of their practice and the socioeconomic status of their patients, the price is not off-putting; for others price may be the key driver," Dr. Marcuse said.

"Parents and physicians will look at the factors identified in the study, and those who are enthusiastic about this particular combination and who value the decreased injections will use it, while those who are hesitant may look at the increased cost and refrain for now," he said.

But some practices are reluctant to maintain two supplies of vaccine and two standards of care: one for those covered by state-funded vaccine programs and one for those funded by private purchasers.

The practices surveyed were less likely to purchase Pediarix when they did not order it through the federal Vaccines for Children program, which highlights the reluctance of most physicians to use one vaccine for certain patients and not for others, the researchers noted. ■

Pneumococcal Immunization Coverage Has Jumped to 80%

BY ALICIA AULT
Associate Editor, Practice Trends

At least 80% of children aged 19-35 months received three or more of the four required doses of pneumococcal vaccine in 2005—a big jump from 40% coverage 3 years ago, according to results of the National Immunization Survey released in a Centers for Disease Control and Prevention press briefing.

CDC officials also reported that, for the first time in a decade, there was no significant difference in coverage among ethnic groups. "We have immunization coverage rates that are at or near record highs," Dr. Anne Schuchat said in the briefing, adding, "We are very close to closing the gap in coverage between racial and ethnic minority groups and others."

Overall, 76% of children received all the required doses of six vaccines: diphtheria, pertussis, and tetanus; polio; measles-mumps-rubella; *Haemophilus influenzae* type b; hepatitis B; and varicella. This was the first year that varicella was added into the report, said Dr. Schuchat, director of the National Center for Immunization and Respiratory Diseases, Atlanta. Results are reported in the Morbidity and Mortality Weekly Report (MMWR 2006;55:988-93).

The most striking figure was the increase in coverage for the six-vaccine series from 2002 to 2005 for African American children—from 62% to 77%—said Dr. Schuchat. During the same time period, coverage increased for Hispanics from 66% to 76%, and for whites from 66% to 76%.

There were some differences in uptake for specific vaccines. Blacks and Hispanics had lower coverage for the DTP/DT/DTaP and pneumococcal vaccines, compared with whites, but they had more coverage for varicella. In the MMWR report, the authors suggest that monitoring coverage for blacks and Hispanics for DTP and pneumococcal vaccine especially is important, given that there is a higher incidence of pneumococcal disease in black children.

There still are significant differences in coverage among the states. It is highest in Massachusetts, at 91% coverage overall, and lowest in Vermont, at 63%. Dr. Schuchat said differences in coverage might be caused by varying rates of commitment by localities and pediatricians, and strength of immunization programs.

Uptake of vaccines is tracked, but generally not reported in the first few years a product has been added to the vaccination schedule, said Dr. Schuchat. The varicella vaccine was added to the recommended list in 2000, so its uptake has been recorded but not reported until this year.

Pneumococcal vaccine use is being tracked but is not included as part of the formal overall coverage target for 2005, said Dr. Schuchat. There were concerns that uptake would be slowed by both expense and a shortage during February to September 2004, but that has not proven to be the case, she said. In 2005, more than 50% of children received four doses, and more than 80% had three or more doses.

The annual NIS is compiled from quarterly random-digit dialing to sample parents of children aged 19-35 months. Immunization coverage is confirmed with providers' records. In 2005, records were obtained for 17,563 children. ■

Low-Dose, Whole-Virion Vaccine For Avian Flu Looks Promising

BY ROBERT FINN
San Francisco Bureau

A whole-virion vaccine for the H5N1 avian influenza virus produces acceptable levels of immunity even at low doses, researchers found in a preliminary study.

The vaccine, developed at the Sinovac Biotech Co. in Beijing, seems to be effective when delivered in two 10-mcg doses 28 days apart. A different whole-virion vaccine required two 90-mcg doses, and a split-virion vaccine required two 30-mcg doses.

Given current manufacturing constraints, supplies of that split-virion vaccine would be limited to about 225 million people, far lower than worldwide demand in the event of an avian flu pandemic. A much greater number of people could be treated if the new dosage-sparing vaccine is found effective in larger clinical trials.

Dr. Jiangtao Lin of the Chinese-Japanese Friendship Hospital, Beijing, and colleagues reported on a placebo-controlled, double-blind, phase I trial of 120 volunteers aged 18-60 years. The participants were given either two injections of placebo or two injections of an inactivated, whole-virion influenza A (H5N1) vaccine at four doses between 1.25 mcg and 10 mcg. Aluminum hydroxide was added as an adjuvant, a practice previously shown to reduce the dosage needed to produce immunogenicity.

Although all four doses produced immune responses, the 10-mcg dose produced 78% seropositivity, significantly higher than that produced by the other doses (Lancet 2006 Sept. 7 [Epub DOI:10.1016/S0140-6736(06)69294-5]).

No serious adverse events were reported at any dose level up to 56 days after the first injection. Local and systemic reactions were all rated as mild and transient. Pain at the injection site in the deltoid muscle was more frequently reported in the vaccine groups than in the placebo group, but there were no significant differences in systemic reactions, the most common of which were fever, headache, myalgia, and nausea.

In an accompanying editorial, Dr. Iain Stephenson, of the Leicester (England) Royal Infirmary, noted that vaccination will be central to any response to an avian flu pandemic (Lancet 2006 Sept. 7 [Epub DOI:10.1016/S0140-6736(06)69340-9]). The 1918 influenza pandemic—also derived from an avian virus—caused up to 50 million deaths. Dr. Stephenson said that the dose-sparing approach described by Dr. Lin could be crucial for obtaining a global supply of the vaccine.

He also noted that earlier whole-virion vaccines were associated with febrile reactions, especially in children. Although larger clinical trials will be necessary before widespread immunization, Dr. Stephenson said a modest amount of reactogenicity might be acceptable in the face of the threat of a global pandemic.

The authors of the study acknowledged that funding came from the Sinovac Biotech Co., which had a role in both study design and monitoring. They said the company had no role in data collection or in writing the report. ■