Prevnar Inappropriately Withheld in High-Risk Kids

BY MIRIAM E. TUCKER
Senior Writer

WASHINGTON — Physicians inappropriately delayed giving the third and fourth doses of pneumococcal conjugate vaccine to high-risk children during the 2004 shortage, Stephen M. Tannenbaum, M.D., reported at the National Immunization Conference sponsored by the Centers for Disease Control and Prevention.

During last year's shortfall of 7-valent pneumococcal conjugate vaccine (marketed as Prevnar), the CDC issued two sets of interim guidelines to ensure optimal distribution of available vaccine. First, on Feb. 13, the CDC advised that routine administration of the fourth dose be temporarily suspended for healthy children (MMWR 2004;53:108-9). Then, as manufacturing problems continued, on March 5 the CDC issued another notice calling for suspension of both the third and fourth doses to healthy children (MMWR 2004;53:177-8).

In both documents, the CDC specified that both vaccine doses should be continued in children at high risk for pneumococcal disease, including those with sickle cell disease and other hemoglobinopathies, chronic cardiac or pulmonary disease, diabetes, and HIV or other immunosuppressive conditions.

However, a review of Southern California Kaiser Permanente's Immunization Tracking System—which contains more than 3 million current members plus previous members—revealed that physicians were withholding the doses equally among high- and low-risk children, said Dr. Tannenbaum, a staff pediatrician at Kaiser Permanente, Los Angeles.

Following the first CDC notice, coverage rates for dose 4—measured at 16 months of age—dropped slowly and similarly in both high- and low-risk groups.

The review covered all doses of pneumococcal conjugate vaccine (PCV) administered by 437 pediatricians and 706 family physicians to children younger than 17 months of age during January-December 2004. The study had a birth cohort design: For each month, 2,073-3,180 healthy children and 0-37 high-risk children turned 3, 5, 7, and 16 months of age. Among the 633 high-risk children, the most common ICD-9 diagnoses listed were congenital heart anomalies (77%), sickle cell anemia (5%), and pulmonary conditions (4.5%), he reported.

Coverage for the first dose—assessed at 3 months of age—remained consistently high for both groups throughout 2004, in the 90%-95% range for low-risk children, and close to 100% for high-risk children. Coverage rates dropped slightly for the second dose, measured at 5 months, but remained relatively high in both groups throughout the year.

Following the first CDC notice, coverage rates for dose 4—measured at 16 months of age—dropped slowly and similarly in both high- and low-risk groups. By May, receipt of the fourth dose was nearly identical in both groups, at 41% of high-risk and 45% of low-risk children. By the time the CDC reinstated dose 4 on Sept. 17, coverage was just 6% for the high-risk and 4% for low-risk children, said Dr. Tannenbaum, who conducted the study with Maureen S. Kolasa, R.N., of the CDC.

Physicians were quicker in withholding dose 3 when that recommendation came out. Overall coverage—measured at 7 months—dropped from 55% in March to just 15% in April. It continued to fall to a low of 7% in June before rising again after the CDC reinstated it on July 9.

Although dose 3 coverage was slightly greater for high-risk vs. low-risk children during the period of its deferral, at no time were the differences significant. In April, for example, only 19% of high-risk children received dose 3, compared with 15% of low-risk children. In May, while the proportion of low-risk children receiving dose 3 dropped to just 8%, it remained at only 19% among the high-risk children, Dr. Tannenbaum reported.

By December 2004, after resumption of all doses, coverage had still not returned to preshortage levels, at just 16% of low-risk and 25% of high-risk children for dose 4, and 68% and 69%, respectively, for dose 3. ■

States' Vaccine Financing Policy Impacts Receipt of PCV7

BY MIRIAM E. TUCKER
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WASHINGTON — Whether or not a child receives at least three doses of pneumococcal conjugate vaccine depends upon the vaccine financing policy of the state he or she resides in, Shannon Stokley and her associates reported in a poster at the National Immunization Conference sponsored by the Centers for Disease Control and Prevention.

All states receive federal funds to purchase vaccine for children eligible for the Vaccines for Children (VFC) program, which covers all routine childhood vaccines for children who are Medicaid eligible, uninsured, Native American or Alaska Native, and those who are underinsured and receive vaccine at a federally qualified health clinic, said Ms. Stokley, an epidemiologist with the national immunization branch of the Centers for Disease Control and Prevention, Atlanta.

States also have the ability to use other state and federal funds to purchase additional vaccine for children who aren't VFC eligible. But because PCV7 is so expensive, some states have specifically excluded it from that additional coverage, she explained.

Ms. Stokley said that data were analyzed from the 2001-2003 National Immunization Survey for children aged 19-35 months living in 34 states plus one city with the following vaccine financing policies:

► **VFC only (Ala., Colo., Ind., Iowa, La., Miss., Neb., N.J., Ohio, Ore., Pa., Tenn., Wis.).** Supplies only VFC vaccine to all VFC-enrolled providers. However, public health clinics may provide all vaccines to all children who present for immunization.

► **VFC and underinsured (Ariz., Fla., Ga., Md., Mich., Minn., N.Y., S.C., San Antonio).** Supplies all vaccines for VFC-eligible and underinsured children to all VFC-enrolled providers.

► **VFC and underinsured-select (Ill.).** Supplies all vaccines for VFC eligible and all vaccines *except* PCV7 for underinsured children to all VFC-enrolled providers.

► **Universal (Ark., Idaho, Mass., Maine, N.H., N.M., R.I., Wash.).** Supplies all vaccines to all providers.

► **Universal-select (Conn., Nev., S.D., Vt.).** Supplies all vaccines *except* PCV7 for children who are underinsured or fully insured, to all providers.

Overall, the proportion of children who received one or more doses of PCV7 increased from 37.3% in 2001 (the year after it was licensed) to 88.5% in 2003. The proportion receiving at least the first three doses (recommended at 2, 4, and 6 months of age) increased from 6.7% in 2001 to 69% in 2003.

The likelihood of receiving three or more doses of PCV7 for children living in universal purchase states was 1.73 times greater than for children living in universal-select states, while the odds of receiving three or more doses of PCV7 for children in the VFC and underinsured states (plus San Antonio) were 1.06 times higher than for children in the VFC and underinsured-select states, Ms. Stokley and her associates reported.

After adjustment for a variety of child and provider factors, children living in universal-select or VFC and underinsured states had significantly lower odds of receiving three or more doses of PCV7, compared with children living in VFC-only states. ■