

Protecting Infants

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licensed for those aged 7-9 years or 64 years and older. The state also said that Tdap should be given without regard to the interval since the previous Td dose, said Dr. Harriman, who is also a registered nurse.

Dr. Jennifer Liang of the CDC's National Center for Immunization and Respiratory Diseases (NCIRD) presented similar draft document language for the ACIP to vote on. In 2005, the ACIP adolescent recommendation (for those aged 11-12 years) had said that an interval of at least 5 years between Td and Tdap was "encouraged" to reduce the risk for local and systemic reactions, particularly the limb swelling that – although usually benign – can be frightening for parents.

The new language, unanimously approved by ACIP (with one abstention), says that adolescents aged 11-18 years who have completed the recommended five-dose childhood diphtheria and tetanus toxoids and whole-cell pertussis vaccine (DTP)/diphtheria and tetanus toxoids and acellular pertussis vaccine (DTaP) vaccination series and adults age 19-64 years should receive a single dose of Tdap in place of one Td dose. Adolescents should receive Tdap at a preventive care visit at 11-12 years of age, Dr. Liang said.

In addition, adolescents or adults who have not received a dose of Tdap – or for whom the status is unknown – should be immunized as soon as feasible, regardless of the interval since the last tetanus- or diphtheria-containing vaccine.

The second vote, to recommend Tdap for adults aged 65 years and older, was taken following presentations by Dr. Wayne Weston of Glaxo-SmithKline and Dr. Michael Decker of Sanofi Pasteur, demonstrating immunogenicity and safety of Boostrix and Adacel, respectively, in adults aged 64 and older. GSK has filed an application with the Food and Drug Administration for an indication in that age group; Sanofi Pasteur is working on its application.

The recommendation says that adults aged 65 years and older who have or who anticipate having close contact with an infant aged younger than 12

months (such as a grandparent, child care provider, or health care provider) should receive a single dose of Tdap to protect against pertussis and to reduce the likelihood of transmission of pertussis to infants aged younger than 12 months (who are not yet fully immunized).

In addition, for adults aged 65 and older, a single dose of Tdap vaccine may be given in place of a Td vaccine in those who have not previously received Tdap.

Finally, the committee voted another off-label use of Tdap in children aged 7-10 years with incomplete or unknown pertussis vaccine history. For those children, a single dose of Tdap is recommended to protect against pertussis. If further doses of tetanus- and diphtheria-containing vaccines are needed, then children aged 7-10 years should be vaccinated according to catch-up guidance. Further guidance is forthcoming regarding revaccination.

Children aged 7-10 years who have never been vaccinated against tetanus, diphtheria, or pertussis or who have unknown vaccine status should receive a series of three vaccinations containing tetanus and diphtheria toxoids.

The preferred schedule is a single dose of Tdap, followed by a dose of Td more than 4 weeks after Tdap and another dose of Td 6-12 months later. If not given as the first dose, Tdap can be substituted for any of the other Td doses in the series.

Although the California pertussis outbreak has raised the urgency of these recommendations, the ACIP has actually been working on increasing pertussis immunization for at least 2 years, working group chair Dr. Mark H. Sawyer said in an interview.

"The main idea of all of this is to free up people's ability to receive vaccine in special circumstances, such as an outbreak. ... But this was already on our agenda. Pertussis has been a recognized problem for some time now. The California outbreak just illuminated its importance. But it's not unique to California. Other states are having significant problems with pertussis," said Dr. Sawyer, professor of pediatrics at the University of California, San Diego.

As a CDC employee, Dr. Liang has no financial conflicts. Dr. Harriman and Dr. Sawyer also stated that they had no financial conflicts. ■

Dr. Boulter Lauded By the AAP at Annual Meeting

Dr. Suzanne C. Boulter was honored at the annual American Academy of Pediatrics meeting with the Oral Health Service Award given by the Section on Pediatric Dentistry and Oral Health. It "recognizes an individual who, during the course of their career, has made significant contributions to the advancement of pediatric oral health through their activities within the American Academy of Pediatrics."

Dr. Boulter chairs the AAP Oral Health Initiative, and is also chair of the Section on Pediatric Dentistry and Oral Health. She has been an AAP chapter president, and was named Pediatrician of the Year for New Hampshire in 1999. She has won many local and regional awards and several national awards, including the Founders of Adolescent Health Award from the AAP Section on Adolescent Health and the Local Heroes Award from the AAP Council on Community Pediatrics.



DR. BOULTER

Dr. Martha Ann Keels, a board-certified pediatric dentist who is also associate professor of pediatrics and surgery at Duke University, said in an interview, "Dr. Boulter is well deserving of the AAP Oral Health Service Award as she has been the pioneering role model for pediatricians across the country, being one of the first pediatricians in the United States to provide her patients oral health screening, caries risk assessment, and fluoride varnish treatments. She has worked tirelessly, leading the national Oral Health Initiative efforts of the AAP, including one of the most successful PEDS 21 lecture series. There are more children in America growing healthy smiles thanks to her!"

Dr. Boulter said in an interview, "Pediatricians and other health care providers for children are being encouraged to 'sink their teeth' into oral health risk assessment, fluoride varnish application, oral hygiene promotion, and referral to establish a dental home to combat the most prevalent infectious disease of childhood – early childhood caries." ■

Maternal DTaP Vaccine Protected Newborns From Pertussis

BY M. ALEXANDER OTTO

FROM THE ANNUAL MEETING OF THE INFECTIOUS DISEASES SOCIETY OF AMERICA

VANCOUVER, B.C. – Infants born to women who receive diphtheria-tetanus-acellular pertussis vaccine during pregnancy have higher pertussis antibody levels during their first few months of life than infants born to unvaccinated women, Dr. Abbey Hardy-Fairbanks reported.

The levels are sufficient to protect infants against pertussis prior to their first diphtheria-tetanus-acellular pertussis (DTaP) shot at around 2 months, a period of "significant pertussis morbidity and mortality," said Dr. Hardy-Fairbanks, an ob.gyn. at the University of Iowa, Iowa City. "This is the first evidence to document that pertussis immunization during pregnancy is likely to be beneficial to infants when they are most vulnerable to pertussis disease. [Physicians] should consider vaccination of women during pregnancy with DTaP," she said at the meeting.

In the prospective cohort study, 16 (23%) of 70 pregnant women received DTaP vaccine; 54 (77%) pregnant women selected as controls did not and had not been vaccinated for at least 2 years.

Four of the women (25%) in the DTaP group were vaccinated in the first trimester, eight (50%) in the

second, and four (25%) in the third. Vaccination did not cause any adverse pregnancy outcomes.

Maternal blood and cord blood were collected at

delivery. Blood was also collected from children before and after their primary DTaP series and toddler booster doses at 12-18 months.

Blood samples were measured for pertussis antigens, including pertussis toxoid, filamentous hemagglutinin, pertactin, and fimbriae, by enzyme-linked immunosorbent assay.

Newborns in the DTaP group had higher pertussis antibody concentrations than their mothers, "showing efficient placental transfer of antibodies to the infant," Dr. Hardy-Fairbanks said.

They also had substantially higher concentrations than infants in the control group prior to the start of the primary DTaP series, and the differences were statistically significant.

However, at month 7, following completion of the DTaP series, infants born to vaccinated mothers had slightly lower antibody levels than infants in the control group. The differences were not statistically significant, but "may represent some blunting of the infant immune response to the [vaccine]," Dr. Hardy-Fairbanks said. By the time they got their toddler booster doses, however, antibody levels "were essentially equivalent" in the two groups, she said.

Dr. Hardy-Fairbanks said she had no conflicts of interest. The study was funded by Sanofi-Pasteur, maker of Daptacel DTaP vaccine. ■

Possible Blunted Immune Response?

Dr. Sarah Long thanked the study authors for their work. "Your findings are so very helpful. We don't have this kind of information."

She was concerned, however, that infants born to vaccinated mothers mounted only a blunted immune response to their primary DTaP vaccine series, and wondered if responses would be blunted to other vaccines. The study's presenter said the question is currently being investigated, but so far that does not appear to be the case.

DR. LONG is the chief of the section of infectious diseases at St. Christopher's Hospital for Children in Philadelphia. She said she had no conflicts of interest.

VIEW ON THE NEWS