Notice to Readers: Recommendation from the Advisory Committee on Immunization Practices (ACIP) for Use of Quadrivalent Meningococcal Conjugate Vaccine (MCV4) in Children Aged 2--10 Years at Increased Risk for Invasive Meningococcal Disease

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On October 17, 2007, the Food and Drug Administration approved quadrivalent meningococcal conjugate vaccine (MCV4) (Menactra®, Sanofi Pasteur, Swiftwater, Pennsylvania) for use in children aged 2--10 years, in addition to its prior approval for use in persons aged 11--55 years (*1*). Previous Advisory Committee on Immunization Practices (ACIP) recommendations called for routine vaccination with meningococcal polysaccharide vaccine (MPSV4) (Menomune®, Sanofi Pasteur) of children aged 2--10 years who are at increased risk for meningococcal disease. These children include travelers to or residents of countries in which meningococcal disease is hyperendemic or epidemic, children who have terminal complement component deficiencies, and children who have anatomic or functional asplenia (*2*). This notice provides updated recommendations for meningococcal vaccination among children aged 2--10 years at increased risk for meningococcal disease.

In anticipation of possible licensure of MCV4 for children aged 2--10 years, during February 2007--October 2007, the ACIP meningococcal vaccine workgroup reviewed data on MCV4 immunogenicity and safety in children in that age group. On the basis of these data, opinions of workgroup members, and feedback from partner organizations, the workgroup proposed recommendations for use of MCV4 among children aged 2--10 years who are at increased risk for meningococcal disease. The recommendations were approved by ACIP at its October 24, 2007, meeting.

In a single, randomized, modified double-blind, controlled study of healthy U.S. children aged 2--10 years that compared MCV4 with MPSV4, serum bactericidal antibody geometric mean titers against all four serogroups were significantly higher at both 28 days and 6 months after vaccination in the children who received MCV4 (*3*). In the same study, rates of most solicited local and systemic adverse events after vaccination with MCV4 were comparable to rates observed after vaccination with MPSV4 (*3*). Although duration of protective immunity from MCV4 is not yet known, conjugate vaccines generally have a longer duration of protection than polysaccharide vaccines (*2*).

At its October meeting, ACIP revised its recommendation to state that MCV4 is preferable to MPSV4 for vaccination of children aged 2--10 years who are at increased risk for meningococcal disease. These children include travelers to or residents of countries in which meningococcal disease is hyperendemic or epidemic,

children who have terminal complement component deficiencies, and children who have anatomic or functional asplenia (2). Additionally, MCV4 is preferred to MPSV4 for use among children aged 2--10 years for control of meningococcal disease outbreaks. Providers may elect to vaccinate children aged 2--10 years who are infected with human immunodeficiency virus (HIV).* For children aged 2--10 years who have previously received MPSV4 and remain at increased risk for meningococcal disease, ACIP recommends vaccination with MCV4 at 3 years after receipt of MPSV4. Children who last received MPSV4 more than 3 years ago and remain at risk for meningococcal disease should be vaccinated with MCV4 as soon as possible. For children at lifelong increased risk for meningococcal disease, subsequent doses of MCV4 likely will be needed. ACIP will make recommendations for revaccination with MCV4 as more data on duration of protection become available.

Persons with a history of Guillain-Barré syndrome (GBS) might be at increased risk for GBS after MCV4 vaccination (4); therefore, a history of GBS is a precaution (5) to administering MCV4. For children with a history of GBS, MPSV4 is an acceptable alternative for short-term (i.e., 3--5 years) protection against meningococcal disease.

The ACIP meningococcal vaccine workgroup is considering options for general use of MCV4 among children aged 2--10 years. Recommendations will be presented at a future ACIP meeting. Recommendations for use of MCV4 in persons aged 11--55 years, including a recommendation for routine vaccination with MCV4 of persons aged 11--18 years, have been published previously and remain unchanged (3,6).

References

1. Food and Drug Administration. Product approval information-licensing action, package insert: Meningococcal (groups A, C, Y, W-135) polysaccharide diphtheria toxoid conjugate vaccine Menactra®. Sanofi Pasteur. Rockville, MD: US Department of Health and Human Services, Food and Drug Administration, Center for Biologics Evaluation and Research; 2005. Available at http://www.fda.gov/cber/label/menactralb.pdf.
2. CDC. Prevention and control of meningococcal disease: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 2005;54(No. RR-7).
3. Pichichero M, Casey J, Blatter M, et al. Comparative trial of the safety and immunogenicity of quadrivalent (A,C,Y,W-135) meningococcal polysaccharide-diphtheria conjugate vaccine versus quadrivalent polysaccharide vaccine in two- to ten-year-old children. Pediatr Infect Dis J 2005;24:57--62.
4. CDC. Update: Guillain-Barré syndrome among recipients of Menactra® meningococcal conjugate vaccine---United States, June 2005--September 2006. MMWR 2006;55:1120--4.
5. CDC. General recommendations on immunization: recommendations of the Advisory Committee on Immunization Practices (ACIP) and the American Academy of Family Physicians (AAFP). MMWR 2002;51(No. RR-2):10--11.
6. CDC. Revised recommendations of the Advisory Committee on Immunization Practices to vaccinate all persons aged 11--18 years with meningococcal conjugate vaccine. MMWR 2007;56:794--5.

* Children with HIV infection likely are at increased risk for meningococcal disease, although not to the extent that they are at risk for invasive *Streptococcus pneumoniae* infection. The efficacy of MCV4 among HIV-infected children is unknown.

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