

# Meningitis Vaccine: Targeting Teens Makes Sense

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CAMBRIDGE, MASS. — Although adolescents are not the pediatric population at greatest risk for invasive meningococcal disease, advocating the use of the conjugate meningococcal vaccine in this patient population “makes perfect sense,” said Dr. Richard F. Jacobs, the Horace C. Caba Professor of Pediatrics at the University of Arkansas, Little Rock.

That population still is at risk, although the majority of meningococcal infections occur in children younger than 5 years of age.

“Ideally, we would like a conjugated vaccine against bacterial meningitis that we would use as an infant strategy in the first 6 months, with a booster dose at 1 year, that would have the same effect as the *Haemophilus influenzae* type b and pneumococcal conjugate vaccines, but the conjugated vaccine that is available does not tar-

get the *Neisseria meningitidis* serogroup responsible for the majority of meningococcal disease in this population,” Dr. Jacobs said at a conference on pediatric infectious diseases sponsored by Boston University, PEDIATRIC NEWS, and FAMILY PRACTICE NEWS.

According to the Centers for Disease Control and Prevention, fewer than half of all cases of meningococcal disease in children younger than 5 years are potentially vaccine preventable because they are caused by *N. meningitidis* serogroup B.


“The quadrivalent vaccines in this country [nonconjugated MPSV4 and conjugated MCV4] cover serogroups A, C, Y, and W-135,” said Dr. Jacobs. “Serogroup B was only sequenced within the last 3 years. It has a different outer membrane than the other serogroups, and it has multiple subtypes, making it difficult to develop a vaccine that provides protective immunity.”

In contrast, the majority of cases of meningococcal disease that occur in adolescents and young adults—most often caused by serogroups C and Y—are potentially vaccine preventable.

This age group is also especially likely to engage in behaviors that could put them at increased risk for infection. “A number of studies have identified cigarette smoking, alcohol consumption, and bar patronage as risk factors for meningococcal disease,” said Dr. Jacobs.

Together with the fact that these populations are more likely to be living in close contact with each other at school or in dormitories, the risk of becoming infected and spreading infection is substantial, he said. Because meningococcal disease can be a serious, rapidly progressive infection leaving little time for diagnosis and treatment, and because early meningococcal disease can be difficult to diagnose, often presenting with symptoms similar to those

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of common viral illnesses, prevention wherever possible should be the order of the day, added Dr. Jacobs.

“The American Academy of Pediatrics has been advocating the adolescent health visit for children who are 11-12 years old, and it makes sense to include the conjugate meningococcal vaccine in that visit,” Dr. Jacobs said. “The visit is important, according to the AAP, not only for the meningococcal vaccine, but also for the pertussis booster, for the varicella vaccine in kids who never received it or who never had chicken pox, and for kids who never got their second MMR.

“The timing is also right because it is at this visit that the AAP recommends discussions of such issues as sexuality, teen pregnancy, smoking, drinking, and drugs—all behaviors that could contribute to increased risk of spreading infection,” he said.

Recent reports linking the MPV4 (Menactra) vaccine to Guillain-Barré syndrome may cause some hesitation about vaccination among some parents. “Even though there is not enough evidence to substantiate the link, some parents will express concern and may refuse the vaccination,” said Dr. Jacobs. “Advise these parents that the nonconjugated vaccine, which has not been associated with Guillain-Barré, can also provide protection, although the protection is not expected to last as long as that offered by Menactra.”

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