

Community Health Epidemiology & Disease Control 101 Grove Street, Room 408 San Francisco, CA 94102 Phone: (415) 554-2830 Fax: (415) 554-2848

ENHANCED SURVEILLANCE & TESTING FOR MENINGOCOCCAL DISEASE AND NEW CONJUGATE MENINGOCOCCAL VACCINE

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Public Health Departments in California are implementing enhanced surveillance and testing for invasive meningococcal disease to identify cases that would otherwise be missed and to identify outbreaks. Also, a new conjugate meningococcal vaccine has just been approved.

This Health Update is posted on the SFDPH website at www.sfdph.org/CDControl.

ACTIONS REQUESTED OF ALL CLINICIANS:

- **1. Immediately report** all cases of suspected **invasive meningococcal infection** to the SFDPH Communicable Disease Control Unit (CDCU) at **415-554-2830** (24/7).
- 2. If clinical suspicion is high, **label** clinical specimens "highly suspicious for invasive meningococcal infection", **submit** to your clinical laboratory and **request** specimens be forwarded to the public health laboratory system for advanced testing.
- **3.** Consider administration of meningococcal conjugate vaccine to adolescents and college freshmen.

Surveillance and Reporting

All suspected cases of invasive meningococcal infection should be reported *immediately* by health care providers to the SFDPH Communicable Disease Control Unit (CDCU) at **415-554-2830** (after hours follow prompts to reach the on-call physician), which is a legal requirement of the California Code of Regulations, Title 17, Section 2500. Although labs report cases to SFDPH, their reports do not substitute for clinician reporting, as CDCU will need immediate information about symptoms and family contacts that the lab cannot provide. Also, if clinical suspicion for invasive meningococcal disease is high, please <u>do not wait for laboratory confirmation to report</u> the suspected case, as CDCU will immediately begin identifying contacts who need antibiotic treatment even prior to lab confirmation. Criteria for high clinical suspicion may include fever or shock associated with petechial or purpuric rash, purpura fulminans, or suspected bacterial meningitis with petechial or purpuric rash or preliminary laboratory evidence of *N. meningitidis* infection (e.g., gram stain of cerebrospinal fluid with gram-negative diplococci).

The surveillance program has been expanded to include advanced testing at the state public health lab on cases whose diagnosis is based on high clinical suspicion as well as those cases with culture-confirmed *N*. *meningitidis* infection. Polymerase chain reaction (PCR) in culture-negative cases may help to identify cases that would otherwise be missed, particularly in patients treated with antibiotics prior to culture. Strain-typing can assist with outbreak investigation by identifying common strains and helping to link cases that may not have clear epidemiologic links. Finally, serogrouping will assist us in describing the current epidemiology of meningococcal disease and monitoring for any changes that may occur after introduction of the new conjugate vaccine.

Laboratory Testing

All initial diagnostic testing for possible *N. meningitidis* infections including blood and CSF cultures should be conducted at your clinical laboratory. If *N. meningitidis* grows in culture, your clinical lab will forward the isolate to the public health laboratory system for advanced testing (e.g., serogrouping). If cultures are negative then clinical specimens, ideally blood and CSF, will be forwarded for PCR testing. Serum is acceptable but has a lower yield.

Because the public health laboratories are now testing specimens from persons for whom clinical suspicion of meningococcal infection is high but cultures are negative, health care providers are asked to clearly mark on the laboratory form that a case is highly suspicious for *N. meningitidis* infection. Please emphasize to the laboratory that the culture isolate and a portion of the clinical specimen should be forwarded to the public health laboratory system. SFDPH is also communicating directly with clinical labs about this new requirement.

Approval of New Conjugate Vaccine

On January 17, 2005, the U.S. Food and Drug Administration (FDA) licensed MenactraTM, the first quadrivalent conjugate vaccine for the prevention of meningococcal disease. This intramuscularly administered vaccine contains *N. meningitidis* serogroups A, C, Y, and W-135 capsular polysaccharide antigens individually conjugated to diphtheria toxoid protein. Menactra vaccine is not indicated for the prevention of meningitis caused by other microorganisms or for the prevention of invasive meningococcal disease caused by *N. meningitidis* serogroup B, the serogroup that causes one-third of the US meningococcal cases. Menactra vaccine is approved for use in adolescents and adults, ages 11-55 years. There is a peak of meningococcal disease in adolescence and early adulthood.

In early February, 2005, the Advisory Committee on Immunization Practices (ACIP) recommended that children ages 11-12, be immunized with the meningococcal conjugate vaccine during their routine doctor's visit at which time they may also receive a tetanus booster. The committee also recommended vaccination for the next 2-3 years for teens entering high school as well as college freshmen who will be living in dormitories.

Contraindications to the vaccine include a known hypersensitivity to any component of the vaccine, including diphtheria toxoid as well as a known hypersensitivity to dry natural latex, which is used in the vial stopper.

In general, benefits of a conjugate vaccine include improved duration of protection, induction of immunologic memory, booster responses and reduction in nasopharyngeal bacterial carriage.

While a Vaccine Information Statement (VIS) has not yet been developed for Menactra, further information, including the package insert, is available at the Sanofi-Aventis purchasing website, http://www.vaccineshop.com. There is also information on the CDC website at http://www.vaccineshop.com. There is also information on the CDC website at http://www.vaccineshop.com. There is also information on the CDC website at http://www.cdc.gov/nip/vaccine/meningitis/mcv4/mcv4_acip.htm.

Disease Control Measures

CDCU will act on reports of suspected or confirmed meningococcal disease 24 hours a day, 7 days a week. Because post-exposure antibiotic treatment is most effective when given as soon as possible after exposure to the infectious case, upon receiving a report, CDCU staff will:

- Immediately interview family and household members to identify close contacts to the case and determine if they need post-exposure antibiotic treatment
- Assist in referring contacts who need antibiotics and who do not have a health care provider to appropriate sources of medical care
- Answer questions from other concerned persons (e.g., co-workers, family members, friends) who may have questions about their risk for acquiring meningococcal disease.

Categories of urgency levels

Health Alert: conveys the highest level of importance; warrants immediate action or attention

Health Advisory: provides important information for a specific incident or situation; may not require immediate action **Health Update:** provides updated information regarding an incident or situation; unlikely to require immediate action