



To: CAHAN San Diego Participants  
Date: April 22, 2013

## UPDATE #2 – Invasive Meningococcal Disease (IMD) in the California/Baja California Border Region

This alert updates the information provided in the CAHAN dated March 27, 2013 on IMD cases in the local binational region.

Five confirmed and two probable IMD cases have been reported in San Diego County in 2013. Reports to date this year are still within the expected range for a county with 3.2 million residents. In 2012, seven confirmed and one probable IMD cases were reported. Since 2003, the average number of confirmed IMD cases annually is 12, with a range of four to 19 cases in any given year. New cases admitted to local hospitals since the last report include:

- A 22-year-old male was admitted on April 9 with fever, vomiting, and petechial rash. He died on April 10. This is a confirmed case because his CSF and blood cultures grew *Neisseria meningitidis* serogroup C.
- A 31-year-old male was admitted on April 9 with meningitis and a petechial rash. This is a probable case because his blood and CSF cultures had no growth and latex agglutination testing was negative, but PCR testing of blood was positive for *N. meningitidis* serogroup Y.
- A 44-year-old female was admitted on April 9 with meningitis and a petechial rash. This is a probable case because her blood and CSF cultures had no growth and latex agglutination testing was negative, but PCR testing was positive for *N. meningitidis* serogroup C.
- A 47-year-old male was admitted on April 14 with fever and altered mental status. This is a confirmed case because his blood cultures grew *N. meningitidis* (serogroup pending).

The County Health and Human Services Agency (HHS) has identified and contacted all known close contacts of the confirmed and probable San Diego County cases to assess exposure risk. Those at risk were provided prophylaxis or advised to obtain prophylactic antibiotics from their health care providers.

Since October 2012, eight cases of *N. meningitidis* serogroup C have been reported in San Diego. Of these cases, three had recently traveled to Tijuana and three others had close contacts with recent travel to Tijuana. One individual had an epidemiologic link to an IMD case in Los Angeles through a close contact who had recently been in Tijuana. No other cases have any identified epidemiologic links to any other cases in the binational region. Available isolates from four serogroup C cases analyzed by the Centers for Disease Control and Prevention (CDC) using pulsed-field gel electrophoresis (PFGE) have the same pattern. This PFGE pattern is identical to the PFGE pattern seen in the linked Los Angeles case and to the PFGE pattern noted in one other case in Los Angeles who had recently traveled to Tijuana. This PFGE pattern is closely related to others that have been detected in Southern California since 2010. The PFGE pattern seen in the San Diego cases is not closely related to the PFGE pattern detected in men who have sex with men (MSM) in New York City or in other parts of the country, nor is it closely related to the recent fatal case in Los Angeles. No confirmed or probable IMD case in San Diego has been identified in MSM.

In 2013, IMD has been confirmed in 20 individuals in Tijuana, Mexico. Seven deaths have been reported. The age range of cases is 1 to 47 years and the median age is 15 years. A 22-year-old male who died on March 23 was the last reported case. The number of IMD cases reported in Tijuana is higher than expected; an average of six cases has been reported annually in the last five years. The cases have been geographically spread across the municipality and Mexican public health officials have calculated that the recent IMD case rate is 1.13/100,000 based on the population of Tijuana. The highest age-specific case rate is 2.76/100,000 in the 10- to 14-year-old age group. These rates are below the 10/100,000 attack rate that defines an outbreak using the standards of the World Health Organization and CDC.

All but one of the confirmed cases in Tijuana had infections due to *N. meningitidis* serogroup C. Ten of the serogroup C isolates have been analyzed in Mexico by PFGE and nine are identical. The PFGE pattern is apparently the same as the PFGE pattern noted in the recent San Diego County cases; however, confirmation of a definitive match is pending at CDC.

CDC recently published updated recommendations on the prevention and control of meningococcal disease: <http://www.cdc.gov/mmwr/pdf/rr/rr6202.pdf>. **Specific recommendations for San Diego health care providers are:**

**1. Immediately report suspect meningococcal disease to HHS by telephone.** Providers should not wait for culture results, but should immediately report suspected clinical cases, including invasive disease (meningitis, meningococcemia, arthritis, pericarditis) and non-invasive disease (pneumonia, conjunctivitis). Laboratories should immediately report culture-positive *Neisseria meningitidis* from a normally sterile site (blood, CSF, pericardial fluid, synovial fluid) as well as sterile-site specimens positive for gram-negative diplococci. The HHS Epidemiology Program takes reports at 619-692-8499 during normal business hours (Monday-Friday 8 AM-5 PM) or 858-565-5255 after hours and weekends.

**2. Recognize that PCR testing can be more sensitive in detecting *Neisseria meningitidis*** than routine cultures or latex agglutination testing. This is demonstrated in the two recently reported probable IMD cases. PCR testing can be arranged for clinically compatible suspect cases by contacting the HHS Epidemiology Program at the numbers above.

**3. Strongly encourage routine vaccination to prevent meningococcal disease.** Two types of vaccine, MCV4 and MPSV4, are available in the United States. These vaccines protect against most, but not all, serogroups of *N. meningitidis*, including serogroups C and Y. MCV4 vaccination is routinely recommended for children and adolescents 11-18 years of age, with an initial dose recommended at age 11-12 and a booster at age 16. The MCV4 coverage rate for 13-17 year olds in San Diego was only 52% in 2010 (latest local data available). This is well below the Healthy People 2020 target rate of at least 80% and represents a significant opportunity to improve community protection. Vaccination is also recommended for other populations at risk (e.g., military recruits, college freshman in dormitories, asplenic individuals and those with terminal complement deficiencies, and travelers to specific countries). Information about meningococcal vaccination may be found at <http://www.cdc.gov/meningococcal/vaccine-info.html>.

**4. Educate patients on the symptoms suggestive of meningococcal disease.** Anyone with suggestive signs and symptoms should immediately seek medical care. Symptoms include fever, intense headache, lethargy, stiff neck, and/or rash that does not blanch under pressure. Routine hygiene recommendations should be followed, noting that bacteria can be spread through the exchange of respiratory and throat secretions. Sharing food or beverages, eating utensils, toothbrushes, cigarettes, pipes, lipstick, and lip balm should be avoided. More information about meningococcal disease is available at <http://www.cdc.gov/meningococcal/>.

**5. Be aware of meningococcal disease cases in Tijuana.** Obtain 10-day travel histories on patients and their families when evaluating individuals with symptoms suggestive of meningococcal disease. Atypical presentations may include pneumonia, septic arthritis, or orbital cellulitis. Advise patients who travel to Tijuana that although there are no changes in routine travel recommendations, they should be aware of recent reports of IMD in Tijuana and should practice good hygiene. Information on travel recommendations to Mexico may be found at <http://wwwnc.cdc.gov/travel/destinations/mexico.htm>

**6. Be aware of meningococcal disease cases in men who have sex with men (MSM) in New York City (NYC).** The NYC Department of Health and Mental Hygiene (NYC-DOHMH) has reported 4 new cases of IMD in MSM in 2013, bringing the total to 22 since 2010. NYC-DOHMH currently recommends meningococcal vaccination for all NYC residents who are HIV-infected MSM, and MSM, regardless of HIV status, who regularly have close or intimate contact with other men met either through an online website, digital application ("app"), or at a bar or party. Meningococcal vaccination is recommended for San Diego MSM and male-to-female transgender persons, regardless of HIV status, whose travel plans include visiting NYC with an expectation of close or intimate contact with MSM there. To achieve protection, vaccination should be completed at least 7-10 days prior to potential exposure. There is no recommendation to vaccinate individuals in these groups who do not travel, but any concerned person without a contraindication may be offered meningococcal vaccination. The most recent information and recommendations related to the NYC cases can be found on the NYC-DOHMH webpage: <http://www.nyc.gov/html/doh/html/diseases/cdmn.shtml>.

HHS continues to work with Mexican and U.S. federal, state, and local agencies to closely monitor IMD in the region. Thank you for your continued participation.

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