



Guidance for Clinicians Caring for Patients in the Context of the Meningococcal Disease Outbreak at Rutgers University–New Brunswick, 2019

March 13, 2019

AUDIENCE: Clinicians

PURPOSE OF THIS DOCUMENT: Provide guidance for clinicians caring for patients who may be impacted by the meningococcal disease outbreak at Rutgers University–New Brunswick.

BACKGROUND: In February 2019, 2 cases of invasive serogroup B meningococcal disease were diagnosed in undergraduate students at Rutgers University–New Brunswick. Both patients had meningitis. Both students have since recovered. A public health investigation did not identify a common epidemiologic link between the 2 patients.

Molecular testing performed at the Centers for Disease Control and Prevention (CDC) determined that the two cases were caused by strains from the same clonal complex, a clonal complex that is uncommon among cases of invasive meningococcal disease. Additionally, the typing genes were identical between the two organisms.

Based upon the epidemiology and the laboratory testing results, the New Jersey Department of Health (NJDOH), in consultation with the CDC, is considering there to be an outbreak of serogroup B meningococcal disease associated with Rutgers University – New Brunswick.

Meningococcal bacteria are spread from person to person through exchange of respiratory secretions during close or lengthy contact. The bacteria are commonly carried in the nasopharynx, and most persons remain asymptomatic while carrying the bacteria. Asymptomatic nasopharyngeal carriage can last for several months.

The meningococcal conjugate vaccine routinely given to adolescents prior to college entry protects against 4 serogroups of meningococcus, A, C, W, and Y, but not against serogroup B.

Since immunization is the most effective way to protect against meningococcal disease, the NJDOH and Rutgers University, with support from the CDC, **strongly recommend** serogroup B meningococcal vaccination (MenB) using either of two licensed serogroup B meningococcal vaccines – Bexsero[®] or Trumenba[®] -- for populations at risk.

GUIDANCE FOR ASYMPTOMATIC PERSONS:

1. The campus populations at **highest risk** for developing invasive meningococcal disease in this outbreak are:
 - All current and incoming undergraduate students including transfer students at Rutgers University–New Brunswick, regardless of whether they live in campus housing
 - All individuals (including graduate students) who live in undergraduate on-campus housing at Rutgers University–New Brunswick
 - Persons at Rutgers University–New Brunswick with certain high-risk conditions as per usual Advisory Committee on Immunization Practices (ACIP) recommendations. The high-risk conditions include:
 - i. Having complement deficiency
 - ii. Taking Soliris® (eculizumab)
 - iii. Having functional or anatomic asplenia
 - Microbiologists who are routinely exposed to meningococcal bacteria.
2. Vaccination is the most important clinical intervention for preventing disease in the at-risk populations listed above. Among those populations above, it is recommended that the following groups be prioritized for vaccination:
 - Students who are active in Greek life
 - Students living in on-campus housing
 - Individuals with high-risk conditions as indicated above.
3. **The following primary vaccine schedules are recommended for the populations listed above:**
 - Trumenba® (MenB-FHbp)
 - i. Dose 1: 0 months
 - ii. Dose 2: 1–2 months after Dose 1
 - iii. Dose 3: 6 months after Dose 1 (minimum interval of 4 months between Dose 2 and 3)

NOTE: The 3- dose series is specifically recommended to rapidly induce immunity. Persons who received 2 doses of Trumenba® administered at 0 and 6 months may be considered to have completed a primary series. However, if the 2nd dose was given at an interval of less than 6 months from the 1st dose, a 3rd dose should be given at least 4 months after the 2nd dose.
 - Bexsero® (MenB-4C)
 - i. Dose 1: 0 months
 - ii. Dose 2: 1 month after Dose 1
4. **Public health officials are also recommending booster doses for the populations listed above if the MenB series was completed ≥1 year prior.** Immunity following receipt of MenB is short-lived. Evidence presented to ACIP suggests that vaccine recipients who completed a primary MenB vaccine series ≥1 year prior may no longer be protected against serogroup B meningococcal disease. For these individuals, a booster dose may be needed for protection during the outbreak. **If a booster dose is given, the booster should be the same product used to complete the primary series.** However, there is no official ACIP recommendation on MenB booster doses at this time. Providers should verify insurance coverage for vaccination as coverage is based on ACIP recommendations.

5. Persons for whom vaccination is not recommended in response to this outbreak:
 - Graduate students not living in undergraduate on-campus housing, faculty, and staff at Rutgers University–New Brunswick without high-risk medical conditions.
 - Persons not affiliated with Rutgers University–New Brunswick campus. Students at other Rutgers campuses are not recommended for vaccination in response to this outbreak.
6. Unrelated to this outbreak, for any person aged 16–23 years, vaccination against serogroup B meningococcal disease can be considered, as per the Category B recommendation by the ACIP.
7. Mass antibiotic prophylaxis is not effective for most meningococcal disease outbreaks. Therefore, antibiotic prophylaxis for asymptomatic persons is not recommended.
8. Screening for nasopharyngeal carriage of meningococcal bacteria in asymptomatic persons is not recommended.

GUIDANCE FOR SYMPTOMATIC PERSONS:

1. The most common clinical manifestations of invasive meningococcal disease are meningitis and bacteremia (which can occur without meningitis). Other forms of invasive disease are possible but less common.
2. A high index of suspicion is required to detect meningococcal disease, particularly in young, otherwise healthy patients.
3. Signs and symptoms of invasive meningococcal disease can include: fever, chills, malaise, headache, nuchal rigidity, nausea, and vomiting.
 - a. However, in the early stages of clinical disease, particularly when meningitis is absent, symptoms might be nonspecific.
4. If meningococcal disease is suspected, prompt administration of antibiotics is recommended. **Immediate notification (including outside of normal business hours) to public health authorities is required.**
5. If a patient has early signs or symptoms of meningococcal disease but the clinical diagnosis is unclear, consideration of ongoing monitoring is recommended. Patients with invasive meningococcal disease can deteriorate rapidly if untreated.

ADDITIONAL RESOURCES:

Rutgers Student Health
health.rutgers.edu/meningitis

NJDOH
<https://www.nj.gov/health/cd/topics/meningo.shtml>

Directory of Local Health Departments in New Jersey
<https://www.nj.gov/health/lh/community/index.shtml>

CDC
<http://www.cdc.gov/meningococcal/>