MENINGITIS

POLICY: To provide guidance regarding infectious agents, modes of transmission, communicability, and methods of control of meningitis.

DEFINITIONS

Meningitis is inflammation of the meninges (covering) of the brain. It is classified into two groups (aseptic and bacterial), each of which has several organisms which can cause disease. Symptomatology may be characterized by sudden onset of fever with intense headache, nausea and vomiting, stiff neck, and frequently a petechial rash with pink macules or very rarely vesicles. Delirium and coma may often appear.

A. **Aseptic Meningitis** - Usually caused by enteroviruses and more common in the late summer and fall, but sporadic cases may occur year round. No etiologic agent is found in about 50% of cases. Transmission is by the fecal-oral route, and respiratory droplets.

B. **Bacterial Meningitis** - Although many agents may cause disease, our principal concern is with meningococcal meningitis and hemophilus meningitis. Transmission occurs via respiratory droplets from the nose or throat of an infected person which are transmitted by direct contact or airborne within a radius of about 3 feet of the infected person. A person is considered communicable until the discharges from the nose and throat no longer have bacteria present, usually 24 hours after starting on an effective antibiotic. Disease incubation ranges from 2-10 days.

While other bacterial agents may cause meningitis, only cases involving *Neisseria meningitides* or *Haemophilus influenzae* type b require special precautions outside the medical facility. Invasive disease from *Neisseria meningitidis* or *Haemophilus influenzae* type b other than meningitis requires the same infection control measures as outlined in this policy.

PROCEDURES

**I. METHODS OF CONTROL**

A. Inpatients with meningitis should be placed under appropriate isolation precautions:
   1. Meningitis, etiology unknown - contact and droplet isolation
   2. Aseptic meningitis - contact isolation until 7 days after onset of symptoms
   3. Bacterial meningitis - droplet isolation until 24 hours of appropriate antibiotic therapy has been given.

B. Besides culture of the CSF, a **Bacterial Antigen Test** on CSF should be considered, particularly if the patient was on antibiotics prior to lumbar
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puncture.

C. Cases of meningitis may return to the general population when clinically well enough to be discharged from the inpatient facility. Offenders with aseptic meningitis should be single-celled until 7 days after the onset of their symptoms if they are in the general population.

D. Educate staff and offenders to increase awareness and seek early medical attention for signs and symptoms of meningitis for 1-2 weeks after a case is diagnosed.

II. MANAGEMENT OF CONTACTS

A. **Contact investigation** is necessary for cases of invasive *Neisseria meningitides* or *Haemophilus influenzae* type b including meningitis.

B. **Close contacts** are cellmates of a case housed on a cellblock, or those in the immediately adjacent bunks of the cases housed in a dormitory. Other offenders may be considered close contacts if they shared eating utensils with the case. Staff who provide respiratory care or CPR before the patient has been on effective therapy for 24 hours should also be considered close contacts.

C. Provide **chemoprophylaxis** to close contacts ASAP, preferably within 24 hours. The value of chemoprophylaxis started more than 14 days after exposure is uncertain. The source case should also receive chemoprophylaxis, because the disease treatment may not eradicate the carrier state. Chemoprophylaxis against *Haemophilus influenzae* type b is only indicated for close contact staff who have household members under 4 years old who are incompletely immunized against *Haemophilus influenzae* type b.

1. **Preferred regimens:**
   a. *Neisseria meningitides* - Rifampin 600 mg p.o. **bid** for **two** days. (Usually avoided in pregnant women)
   b. *Haemophilus influenzae* type b - Rifampin 600 mg p.o. **daily** for **four** days (Usually avoided in pregnant women)

2. **Alternative regimens for Neisseria meningitides:**
   a. Ciprofloxacin 500 mg p.o. in one single dose; or,
   b. Ceftriaxone 250 mg IM in one single dose. (Preferred regimen for pregnant women)

3. Closely monitor close contacts for early signs of illness for 1-2 weeks after exposure.
III. **REPORT** suspected cases of bacterial meningitis to the Office of Public Health by telephone immediately. After hours, report cases to the Texas Department of State Health Services Reporting Hot Line, (800) 705-8868, and follow-up with a report to the Office of Public Health the next working day.

Reference: Prevention and Control of Meningococcal Disease, MMWR, March 22, 2013/ 62 (RR02); 1-22.