

Gonorrhea (*Neisseria gonorrhoeae*)

February 2003

1) THE DISEASE AND ITS EPIDEMIOLOGY

A. Etiologic Agent

Gonorrhea is caused by the gram-negative, intracellular diplococcus *Neisseria gonorrhoeae*.

B. Clinical Description and Laboratory Diagnosis

A sexually transmitted bacterial disease that differs in males and females in course, severity and ease of diagnosis. Heterosexual males most commonly present with dysuria and a purulent discharge from the anterior urethra. Females experience an initial urethritis or cervicitis that may be so mild as to pass unnoticed. About 20% of infected females experience uterine invasion, often at first, second or later menstrual periods, with symptoms of endometritis, salpingitis, or pelvic peritonitis and subsequent risk of infertility and ectopic pregnancy. Asymptomatic endocervical infection is common. In females and homosexual males, pharyngeal and anorectal infections are common. Rectal infection is usually asymptomatic but may cause pruritus, tenesmus and discharge. Conjunctivitis occurs in newborns and rarely in adults. It may cause blindness if not rapidly and adequately treated. Septicemia may occur in 0.5%- 1% of all gonococcal infections, as well as arthritis, skin lesions and rarely endocarditis and meningitis. Arthritis can produce permanent joint damage if treatment is delayed.

Laboratory diagnosis is based on identification of bacteria on smears from discharges, by bacteriological culture on selective media or by detection of bacterial nucleic acid.

C. Vectors and Reservoirs

Humans.

D. Modes of Transmission

By contact with exudates from mucous membranes of infected people, almost always as a result of sexual activity. Through perinatal exposure to the mother's infected cervix.

E. Incubation Period

The incubation period ranges from 2 to 14 days.

F. Period of Communicability or Infectious Period

May extend for months in untreated individuals. Adequate antibiotic therapy ends infectivity within hours.

G. Epidemiology

Gonorrhea is distributed worldwide affecting both genders especially sexually active adolescents and younger adults in the 15 to 24 year-old age group. Actual incidence is difficult to determine due to the asymptomatic nature of the disease as well as underreporting of cases. Frequency is increased in the poor and minorities of any population. In the year 2000, 7,232 cases of gonorrhea were reported to the New Jersey Department of Health and Senior Services.

2) REPORTING CRITERIA AND LABORATORY TESTING SERVICES

A. New Jersey Department of Health and Senior Services (NJDHSS) Case Definition

CASE CLASSIFICATION

A. CONFIRMED

A case that is laboratory confirmed by:

- Isolation of typical gram-negative, oxidase-positive diplococci (presumptive *N. gonorrhoeae*) from a clinical specimen, **OR**
- Demonstration of *N. gonorrhoeae* in a clinical specimen by detection of antigen or nucleic acid, **OR**
- Demonstration of gram-negative intracellular diplococci in a urethral smear obtained from the male.

B. PROBABLE

- Demonstration of gram-negative intracellular diplococci in an endocervical smear obtained from a female, **OR**
- A written morbidity report of gonorrhea submitted by a physician.

C. POSSIBLE

Not used.

B. Laboratory Testing Services Available

Laboratory testing for gonorrhea is available on site at the Public Health and Environmental Laboratories (PHEL). For additional information on submitting samples, contact the PHEL at 609.292.7368.

3) DISEASE REPORTING AND CASE INVESTIGATION

A. Purpose of Surveillance and Reporting

- To identify the prevalence of gonorrhea in New Jersey.
- To identify where gonorrhea occurs in New Jersey.
- To recognize areas in New Jersey where gonorrhea incidence has increased or decreased.
- To focus preventive education.

B. Laboratory and Healthcare Provider Reporting Requirements

The New Jersey Administrative Code (N.J.A.C. 8:57-1.8) stipulates that laboratories and health care providers report all cases of gonorrhea **to the NJDHSS Sexually Transmitted Diseases Program** by telephone (609.588.7526), confidential fax (609.588.7462) or in writing using the STD-11 form. The STD-11 form can be obtained from the Sexually Transmitted Diseases Program (at phone 609.588.7526).

C. Health Officer's Reporting and Follow-up Responsibilities

1. Reporting Requirements

The New Jersey Administrative Code (N.J.A.C. 8:57-1.6) stipulates that positive tests for gonorrhea and/or cases of gonorrhea, as defined by the criteria in Section 2A, be reported directly to the Department of Health and Senior Services using a STD-11 form. Forms may be mailed or faxed (fax 609.588.7462) to the STD

Program. A local health officer who is notified of the existence of positive tests for gonorrhea and/or cases of gonorrhea shall forward the case report to the NJDHSS Sexually Transmitted Diseases Program.

The mailing address is:

NJDHSS
Division of Epidemiology, Environmental and Occupational Health
Sexually Transmitted Diseases Program
P.O.Box 369
Trenton, NJ 08625-0369

2. Case Investigation

Institution of disease control measures is an integral part of case the investigation. It is the local health officer's responsibility to understand, and, if necessary, institute the control guidelines listed below in Section 4, "Controlling Further Spread."

4) CONTROLLING FURTHER SPREAD

A. Isolation and Quarantine Requirements

Minimum Period of Isolation of Patient

Patients should refrain from sexual intercourse until treatment is completed and refrain from sexual contact with recent sexual partners until they have been treated. Contact isolation for all newborns and prepubertal children with gonococcal infection until treatment has been administered for 24 hours.

Minimum Period of Quarantine of Contacts

No restrictions.

B. Protection of Contacts of a Case

All sex partners of patients who have *N. gonorrhoeae* infection should be evaluated and treated for *N. gonorrhoeae* and *C. trachomatis* infections if their last sexual contact with the patient was within 60 days before the onset of symptoms or diagnosis of infection in the patient. If a patient's last sexual intercourse was >60 days before onset of symptoms or diagnosis, the patient's most recent sex partner should be treated.

C. Managing Special Situations

None.

D. Preventive Measures

Personal Preventive Measures/Education

In general, the following preventive measures are applicable to all sexually transmitted diseases (STD):

- The patient should be strongly advised to avoid sexual contact while symptoms are present as they can be highly infectious.
- The patient should be strongly encouraged to ensure that their recent sexual partners (see Section B above) be tested and treated if necessary.
- The patient should be strongly advised to avoid high-risk sexual behaviors, wear condoms and avoid having multiple sexual partners.

ADDITIONAL INFORMATION

The CDC surveillance definition for gonorrhea is the same as the criteria in Section 2A of this chapter. CDC case definitions are used by state health departments and CDC to maintain uniform standards for national reporting. For reporting to the NJDHSS, always refer to the criteria in Section 2A.

REFERENCES

- CDC. Case Definitions for Infectious Conditions Under Public Health Surveillance. MMWR. 1997; 46:RR-10.
- CDC. Sexually Transmitted Diseases Treatment Guidelines 2002. MMWR 2002, 51:RR-6
- Chin, J., ed., Control of Communicable Diseases Manual, 17th Edition. Washington, DC, American Public Health Association, 2000.
- Grella, M, Gonorrhea, eMedicine Journal November 2001; Volume 2, Number 11.
- Holmes, K., Sparling, P., et al, Sexually Transmitted Diseases, 3rd Edition, New York, NY, McGraw-Hill, 1999.
- Mandel, G., Bennett, J., Dolin, R., Principles and Practices of Infectious Diseases, Churchill Livingstone, 2000.