County of San Diego

PHYSICIANS' BULLETIN

Health and Human Services Agency ◆ P.O. Box 85222, San Diego, CA ◆ 92186-5222 www.co.san-diego.ca.us/cnty/cntydepts/health

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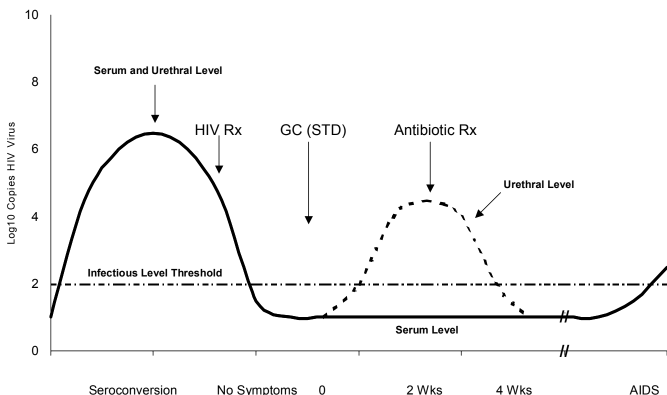
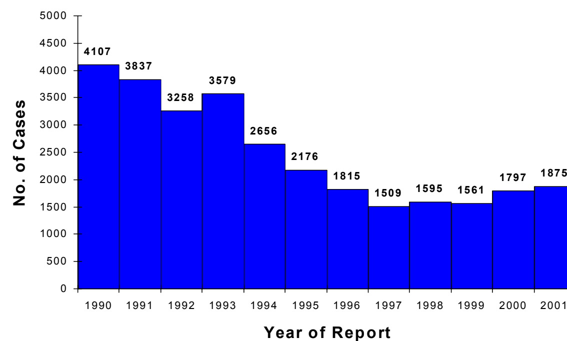
Gonorrhea Update

Trends and Risk Factors

After years of decline, the number of reported gonorrhea (GC) cases in San Diego County increased 20% over the last two years, from 1561 cases in 1999 to 1875 cases in 2001. Although easily treated with antibiotics, untreated gonorrhea can have serious sequelae, including pelvic inflammatory disease, infertility, disseminated gonococcemia, and **increased susceptibility to and transmission of HIV infection**. Through ulceration and inflammation resulting in increased genital HIV shedding, the presence of sexually transmitted diseases has been estimated to increase the risk of HIV transmission two- to fivefold. A recent study showed that among HIV-infected men with symptomatic GC, urethral secretions contained a 10-fold higher concentration of HIV compared to baseline. Levels did not return to baseline until 1-2 weeks after treatment completion.

Effect of Symptomatic Gonorrhea Infection on Urethral HIV Viral Load



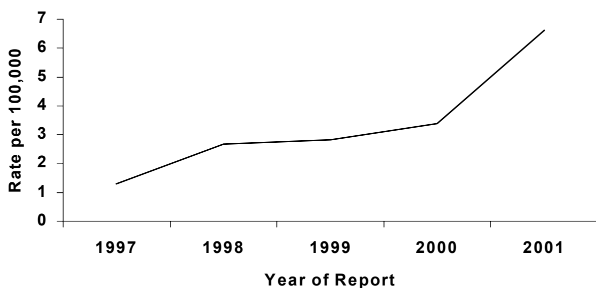


Gonorrhea is most common in persons 15-25 years of age (52% of all cases) and among men (62% men). African Americans disproportionally acquire gonorrhea: reported rates are almost 10 times the rates in other racial/ethnic groups. However, the number of cases among African Americans dropped 6% over the last two years, from 660 cases in 1999 to 620 cases in 2001, while the numbers increased in all other racial/ethnic groups. Thus, the recent rise in gonorrhea cases appears to be largely among non-African-Americans.

Gonorrhea rates among men who have sex with men (MSM) appear to be increasing, as evidenced by an increase in the number of gonorrhea infections of the rectum or pharynx among men, yielding a rate of 1.3 cases of male rectal/pharyngeal GC per 100,000 men in 1997 compared to 6.6 cases per 100,000 men in 2001.

Preliminary analysis of a representative sample (~10%) of all reported GC cases in 2001 shows that MSM accounted for 24% of all reported cases and had an estimated GC rate that was 5 times that of heterosexual males (data available upon request). A limited survey of San Diego HIV care providers in 1999 estimated a GC rate among HIV-infected clients, most of whom were MSM, that was 35 times higher than the general 20-45 year old age group rate in San Diego. **Increasing gonorrhea among MSM is a worrisome trend since it indicates unsafe sexual behavior and increased risk of HIV transmission.**

Male Rectal/Pharyngeal GC Rate San Diego County, 1997-2001



Fluoroquinolone Resistance

Fluoroquinolone-resistant *N. gonorrhoeae* has arrived in San Diego. In 2001 there were 22 cases of fluoroquinolone-resistant GC in southern California, with 9 of these cases occurring in San Diego. Of these 9 patients, 8 were MSM and 4 were diagnosed in December 2001. Of these 4 MSM, only one had any possible overseas link. As a result, we recommend that **MSM with gonorrhea should no longer be treated with fluoroquinolones.** Treat with ceftriaxone (Rocephin) 125 mg IM once or cefixime (Suprax) 400 mg po once. For patients with cephalosporin allergies, alternatives include quinolones with adequate follow-up for possible treatment failure or spectinomycin 2 grams IM once. Azithromycin 2 grams po once is also effective against gonorrhea but is expensive and associated with a high rate of gastrointestinal upset; 1 gram is not effective.

Since there is a **high prevalence of fluoroquinolone-resistant GC in Asia and the Pacific Islands** [including the Philippines and Hawaii (>10%)], **patients who may have acquired their infection in these areas (either directly or through a sex partner) should also NOT be treated with fluoroquinolones.**

Gonorrhea Testing

Specimens for laboratory testing should be collected from all exposed sites—oral, vaginal, urethral, and rectal—determined by sexual history. Gonorrhea tests currently available include culture, DNA probe (Gen-Probe PACE® 2 and Digene Hybrid Capture® II assays), and nucleic acid amplification tests (Roche PCR, Abbott LCx, BDProbeTec ET, and Gen-Probe APTIMA™ Combo 2). **Culture is currently the only approved laboratory test for pharyngeal and rectal specimens** (use transgrow media to transport to laboratory); however, initial (unpublished) studies suggest that amplification tests are effective for diagnosing rectal and pharyngeal GC. **Urine specimens, which eliminate the need for pelvic examination or urethral swab, should be tested only with amplification tests**. The sensitivity of GC testing on endocervical swab specimens is as follows: culture, 85%; DNA probe, 85%; and amplification tests, 90%. The specificity of culture is 100%, and that of non-culture tests is 97-99.5%. Therefore, for urine, urethral, and endocervical specimens, amplification tests are recommended.

Screening

There are no national gonorrhea screening guidelines. However, there is general agreement that persons with high-risk sexual behaviors should be screened, especially in high prevalence areas. **Risk assessment is important**; patients should be asked about number and gender of sex partners, use of condoms, and past history of

STDs (within the last 5 years). Suggested screening criteria are shown in the box below. A simple self-administered risk assessment form is available upon request*. Providing information about STD symptom recognition and the location of STD clinic services that can be utilized if a timely appointment with the primary provider is unavailable, are also important.

Suggested GC Screening Criteria
(every 6-12 months)
Screening for HIV infection
should also be encouraged.

- Past history (within last 5 years) of bacterial STD
- Pay for sex or exchange sex for money or drugs
- Sexually active HIV-infected patients
- Men with >1 male partner in the last 3 months
- Persons with unprotected, high-risk sexual behavior (i.e. multiple partners, inconsistent condom use)

It is important to note that in spite of high test sensitivity and specificity, in low prevalence (<=1%) populations the positive predictive value of non-culture GC screening tests can be as low as 50% (meaning that in **asymptomatic** patients, half of all positives are false positives). Therefore, screening asymptomatic patients with minimal risk of GC infection with non-culture tests is not recommended. Repetition of a positive screening test may be advisable if the likelihood of a true positive result, based on history/risk factor assessment, appears low and substantial psycho-social or legal consequences might ensue from a positive result. Treatment can still be offered while awaiting the results of additional testing.

*We would like to collaborate with any clinician interested in evaluating the risk assessment form. If interested, please call Robert A. Gunn, M.D., STD Control Officer, at (619) 692-8614 or email: rgunnxhe@co.san-diego.ca.us.

Treatment

Treatment of uncomplicated gonococcal infection of the cervix, urethra, and rectum:

- Cefixime (Suprax) 400 mg orally (single dose)
- Ceftriaxone (Rocephin) 125 mg IM (single dose)
- Ciprofloxacin (Cipro) 500 mg orally (single dose)*
- Ofloxacin (Floxin) 400 mg orally (single dose)*
- Levofloxacin (Levoquin) 250 mg orally (single dose)*

** Should not be used in men who have sex with men in San Diego County or in anyone who may have acquired their infection in Asia or the Pacific (including Hawaii).*

Recommended treatments for uncomplicated gonococcal infection of the pharynx include single dose therapy with ceftriaxone 125 mg IM, or ciprofloxacin 500 mg orally. Cefixime should also be effective, but insufficient pharyngeal efficacy data have been collected to date. **Azithromycin 1 gram orally alone is NOT sufficient treatment for gonorrhea, nor is penicillin.**

Since patients with gonorrhea are **frequently co-infected with chlamydia** (15-30%), they should be either **tested or empirically co-treated** (with either azithromycin 1 gram orally as a single dose or doxycycline 100 mg orally twice a day for 7 days). Patients should also be tested for syphilis, offered and encouraged to accept HIV testing, and counseled about risk reduction strategies such as condom use and/or decreasing the number of sex partners. In addition, all patients with a STD should be vaccinated against hepatitis B, unless previously infected.

Whenever possible, treatment for gonorrhea should be directly observed in the clinician's office, to ensure patient compliance.

How To Get Partners Treated

Assuring current sex partner treatment is an essential component of patient management. Without this, re-infection is common. **Contrary to popular belief, the San Diego County Health and Human Services Agency (HHSA) does NOT routinely investigate, follow-up, or notify sex partners of reported cases of gonorrhea (or chlamydia). The responsibility of assuring that sex partners are notified of the exposure and obtain treatment rests with the treating physician and the patient.** All sex partners within the last 60 days should be presumptively treated for gonorrhea and chlamydia. If the patient's last sexual contact was >60 days before the onset of symptoms or diagnosis, then the most recent sex partner should be treated. Patients should be encouraged to notify their partners of the need for treatment. Partners can be referred to any of the County STD Clinics (below) for evaluation and treatment. In addition, a new law allows clinicians who diagnose a sexually transmitted chlamydia infection to prescribe medication for that patient's sex partner(s) without examination of the partner(s). In special circumstances, a clinician can request assistance with partner notification from the STD Program, HHSA.

Patients should be instructed to avoid sexual intercourse for 7 days after starting treatment and until they and their sex partners no longer have symptoms. Patients with uncomplicated gonorrhea treated with a recommended regimen do not require a test of cure. **Persistent or recurrent symptoms after treatment should be evaluated by culture and tested for antimicrobial susceptibility** (the San Diego County Public Health Laboratory can provide assistance). After recommended treatment, re-infection is more common than treatment failure, indicating the need for improved patient education and treatment of sex partners.

Clinicians and laboratories are required to report all patients with gonorrhea to the STD Program, HHSA.

Public Health STD Services

STD clinic services include physical exam, STD screening, confidential HIV counseling and testing, risk-based hepatitis A & B vaccination, and risk-based selective hepatitis C screening. Patients are charged $14 for the visit but no one is turned away for lack of funds. No appointment is necessary. The main STD clinic at 3851 Rosecrans Street in San Diego provides services 5 days a week. Call (619) 692-8550 for hours and for the location and hours of STD clinics located in other public health centers (many with evening hours). For anonymous HIV counseling and testing sites, call 619-296-2120 for locations and hours. To report a case of gonorrhea or request help with partner notification/treatment, call STD Field Services at (619) 692-8501 or fax CMR reports to (619) 692-8541. For clinical questions regarding STD management, call (619) 692-8082.

If you would like to receive periodic **e-mail updates** on STDs from the County of San Diego, Division of STD and Hepatitis Prevention, please send an e-mail to: stdhep@co.san-diego.ca.us and you will be placed on the distribution list.

The *Physicians' Bulletin* is published on an as-needed basis by the County of San Diego Health and Human Services Agency to provide updated information on health issues of concern to San Diego County's medical community.

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