

At a Glance:

Gonococcal Isolate Surveillance Project (GISP)

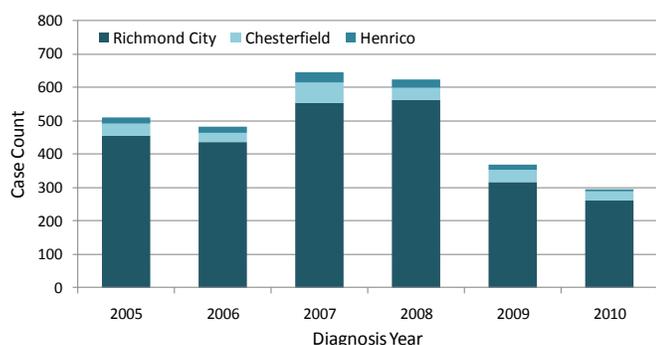
GISP OVERVIEW

The Centers for Disease Control and Prevention (CDC) established the Gonococcal Isolate Surveillance Project (GISP), a national sentinel surveillance system, in 1986 to monitor trends in antimicrobial susceptibilities of *Neisseria gonorrhoeae* (i.e. gonorrhea) strains in the United States.

GISP is a collaborative project among selected sexually transmitted diseases (STD) clinics, five regional laboratories, and the CDC. There are currently approximately 25-30 sentinel STD clinics participating in GISP. Data collected for this project are used to establish a rational basis for the selection of gonococcal therapies, and help inform CDC's STD Treatment recommendations.

Virginia became a GISP sentinel site in late 2007. The STD clinics in three Virginia localities participate in GISP activities: Richmond City, Henrico County, and Chesterfield County (hereafter the "Richmond area"). These three clinics diagnose approximately 300-600 cases of gonorrhea each year.

Gonorrhea Cases Diagnosed by Richmond Area STD Clinics, 2005-2010



CHARACTERISTICS OF GISP PATIENTS

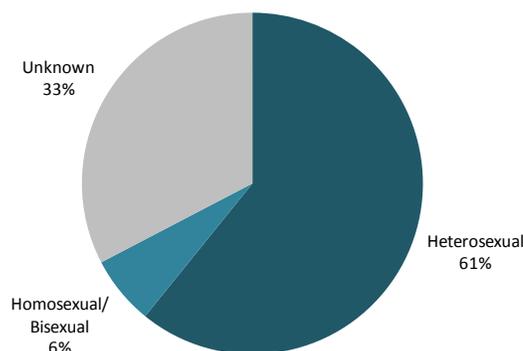
A total of 199 *N. gonorrhoeae* isolates were collected from symptomatic males who attended Richmond area STD clinics from 2007-2010. The majority of these GISP participants were non-Hispanic blacks (95%), between 20-24 years of age, and heterosexual (61%).

Approximately 40% of GISP patients reported a previous history of gonorrhea infection, and 11% had at least one episode of gonorrhea in the previous year.

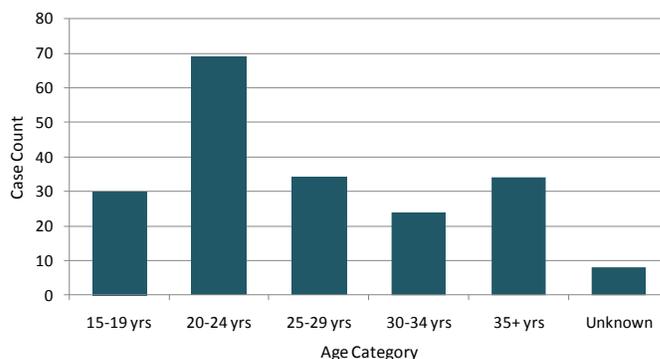
GISP participants reported the following risk behaviors:

- 40% used non-injection drugs in the previous 60 days (mostly marijuana)
- 4% gave or received drugs or money for sex in the previous 60 days
- 2% reported injection drug use in the previous 60 days

Sexual Orientation of GISP Participants in Virginia, 2007-2010



Age of GISP Participants in Virginia, 2007-2010



Antimicrobial Resistance

- Since April 2007, the CDC has advised against the use of fluoroquinolones (ciprofloxacin, ofloxacin, and levofloxacin) for the treatment of gonorrhea, based on data indicating widespread drug resistance in the U.S.
- In Virginia, approximately 19% of the isolates collected by Richmond area STD clinics from 2007-2010 have been resistant to ciprofloxacin.

OVERVIEW OF GISP

TESTING FOR ANTIMICROBIAL RESISTANCE

As part of GISP activities, urethral isolates are collected from the first 25 male patients with symptoms of gonorrhea who attend participating STD clinics each month. These *N. gonorrhoeae* isolates are sent to regional laboratories where the susceptibilities of these isolates to penicillin, tetracycline, spectinomycin, ciprofloxacin, ceftriaxone, cefixime, and azithromycin are determined by agar dilution.

ANTIMICROBIAL RESISTANCE IN VIRGINIA

Of the 199 isolates from Virginia tested for susceptibility to antimicrobial agents from 2007-2010, 19.1% were resistant to Ciprofloxacin, 2.0% were resistant to Penicillin, and 2.5% were resistant to Tetracycline.

ANTIMICROBIAL RESISTANCE IN THE UNITED STATES

A total of 16.1% (968/6,009) of isolates exhibited intermediate resistance or resistance to ciprofloxacin in 2007. The percentage of Penicillin resistant isolates was 2.2% in 2007, and the Tetracycline resistant prevalence was 5.1%. More information may be found at : www.cdc.gov/std/Gisp/

Treatment Recommendations

The current recommended treatment regimens for uncomplicated gonococcal infections of the cervix, urethra, and rectum are as follows:*

Recommended Regimens

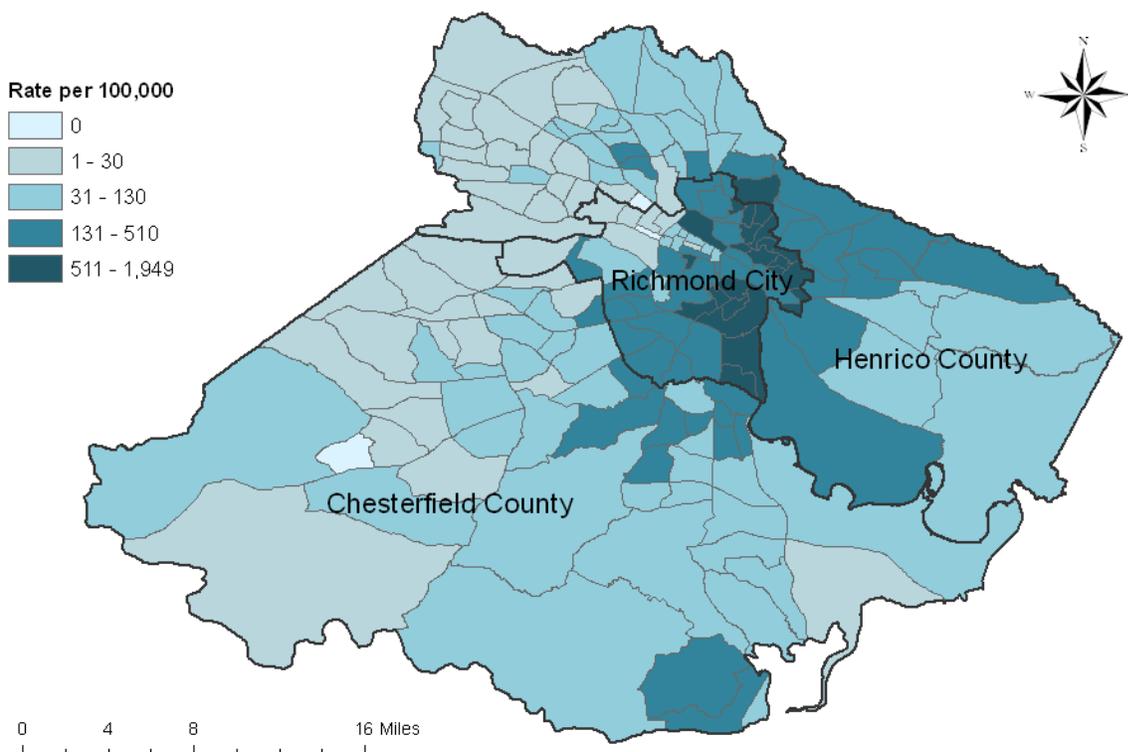
- **Ceftriaxone** - 250 mg IM in a single dose
OR
 - **Cefixime** - 400 mg orally in a single dose
- PLUS**
- **Azithromycin** - 1 g orally in a single dose
OR
 - **Doxycycline** - 100 mg orally twice daily for 7 days

For more information, see:

<http://www.cdc.gov/std/treatment/2010/gonococcal-infections.htm>

* These regimens are recommended for all adult and adolescent patients, regardless of travel history or sexual behavior.

Map of 5-Year Average Gonorrhea Rates by Census Tract in the Richmond Area, 2006-2010



For more information... <http://www.vdh.virginia.gov/epidemiology/DiseasePrevention/data/>