

# **The Gonococcal Isolate Surveillance Project (GISP)**

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## **Site-Specific Profiles**

Antimicrobial resistance remains an important consideration in the treatment of gonorrhea. The Gonococcal Isolate Surveillance Project (GISP), a national sentinel surveillance system, was established in 1986 to monitor trends in antimicrobial susceptibilities of *Neisseria gonorrhoeae* strains in the United States among selected sexually transmitted diseases (STD) clinics in approximately 25-30 GISP sentinel sites. Data from GISP provide a scientific basis for the selection of gonococcal therapies for the US and have directly contributed to the CDC STD Treatment Guidelines. GISP is a collaborative project between sentinel site STD clinics and their respective state/local public health authorities, GISP regional laboratories, and the Centers for Disease Control and Prevention (CDC).

The following site-specific profiles consist of figures depicting the demographic and clinical data of the men with gonorrhea enrolled in GISP and the antimicrobial susceptibility results of the *Neisseria gonorrhoeae* isolates submitted. Each figure is labeled with the participating site and the number of isolates on which the site's data are based. The maximum number of isolates submitted by each site is 300 when the full sample of 25 isolates per month is obtained. The number of isolates submitted is lower for many sites located in areas with low gonorrhea rates.

Additional information about GISP may be found in the CDC STD Surveillance Report: <http://www.cdc.gov/std/stats/default.htm>

## **2011 GISP Sites and Regional Labs**

In 2011, 29 sentinel sites participated in GISP. Of these sites, 14 current sites have participated continuously since 1987: Albuquerque, Atlanta, Baltimore, Birmingham, Cincinnati, Denver, Honolulu, New Orleans, Philadelphia, Phoenix, Portland, San Diego, San Francisco, and Seattle. The other 15 current sites participated during the following years: Chicago (1996–2011), Cleveland (1991–2011), Dallas (2000–2011), Detroit (2003–2011), Greensboro (2002–2011), Kansas City (1991–2001, 2007–2011), Los Angeles (2003–2011), Las Vegas (2002–2011), Miami (1998–2011), Minneapolis (1992–2011), New York City (2006–2011), Oklahoma City (2003–2011), Orange County (1991–2011), Richmond (2007–2011), and Tripler Army Medical Center (2001–2006, 2009–2011).

The five GISP regional laboratories in 2011 were located in Atlanta, Georgia at Emory University, Birmingham, Alabama at the University of Alabama, Cleveland, Ohio at the Cleveland Clinic Foundation, Seattle, Washington at the University of Washington, and Austin, Texas at the Texas Department of State Health Services.

## **Susceptibility to Antimicrobial Agents**

For 2011, the antimicrobial agents tested in GISP were: cefixime, cefpodoxime, ceftriaxone, azithromycin, spectinomycin, ciprofloxacin, penicillin, and tetracycline.

Below are the susceptibility criteria used in GISP for 2011. The majority of the susceptibility criteria are also recommended by the Clinical and Laboratory Standards Institute (CLSI):

- \*Cefixime, MIC  $\geq$  0.5  $\mu\text{g/ml}$  (decreased susceptibility)
- \*Cefpodoxime, MIC  $\geq$  1.0  $\mu\text{g/ml}$  (decreased susceptibility)

- \*Ceftriaxone, MIC  $\geq 0.5$   $\mu\text{g/ml}$  (decreased susceptibility)
- \*Azithromycin, MIC  $\geq 2.0$   $\mu\text{g/ml}$  (decreased susceptibility)
- Spectinomycin, MIC  $\geq 128.0$   $\mu\text{g/ml}$  (resistance)
- Ciprofloxacin, MIC 0.125 - 0.5  $\mu\text{g/ml}$  (intermediate resistance)
- Ciprofloxacin, MIC  $\geq 1.0$   $\mu\text{g/ml}$  (resistance)
- Penicillin, MIC  $\geq 2.0$   $\mu\text{g/ml}$  (resistance)
- Tetracycline, MIC  $\geq 2.0$   $\mu\text{g/ml}$  (resistance)

\*Note: CLSI criteria for decreased susceptibility to cefixime, cefpodoxime, ceftriaxone and azithromycin; and for susceptibility to azithromycin have not been established for *N. gonorrhoeae*.

(MIC = Minimum Inhibitory Concentration: the lowest concentration of antibiotic needed to inhibit visible growth of a microorganism in a laboratory)

## **Definitions of terms and abbreviations used in the site-specific figures**

**Figure A:** Cases with unknown age were excluded.

**Figure B:** Cases with unknown race were excluded. The “Asian” category includes Native Hawaiians and the “Other” category includes participants who selected more than one race category. The “Other” category is not used in national gonorrhea reporting; Native Am. = Native Americans

**Figure D:** Other Cephalo.= cefoxitin, cefpodoxime, ceftizoxime, ceftibuten, cefdinir, and cefotaxime; Other=other less frequently used drugs, including azithromycin

**Figure E:** Doxy/Tet=doxycycline/tetracycline; Azi/Ery=azithromycin/erythromycin

**Figure F:** PenR= penicillinase-producing *N. gonorrhoeae* and chromosomally mediated penicillin-resistant *N. gonorrhoeae*; TetR=chromosomally and plasmid-mediated tetracycline-resistant *N. gonorrhoeae*; QRNG=ciprofloxacin-resistant *N. gonorrhoeae*