COUNTY OF LOS ANGELES
DEPARTMENT OF HEALTH SERVICES
**Public Health**

SEXUALLY TRANSMITTED DISEASE PROGRAM

# Sexually Transmitted Disease Testing in Los Angeles County: Clinical Laboratory Survey Report, 2001








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March 10, 2003

Dear Colleague,

We are pleased to release our report, *STD Testing in Los Angeles County: Clinical Laboratory Survey Report, 2001.* Over the past several years, the survey has documented the reduction of laboratories that performed testing for sexually transmitted diseases (STDs) as the variety of assays and volume of tests has increased. This year 168 laboratories completed surveys. Your responses provide valuable information on STD testing in the County. We especially thank you for participating in this important project.

Laboratories in Los Angeles County performed over 4.6 million diagnostic tests for syphilis, chlamydia, and gonorrhea in 2001. Testing for these reportable STDs comprised 61% of diagnostic testing for all sexually transmitted diseases. Screening for syphilis has been increasing since 1999. Nearly 1,650,000 screening tests were performed in the year following the 2000 syphilis outbreak in Los Angeles County. Molecular diagnostic tests, such as the non-amplified DNA probe and nucleic acid amplification tests, now dominate gonorrhea and chlamydia testing.

The electronic version of this report may be accessed at the STD Program web site, **http://lapublichealth.org/std** under "Reports." The Sexually Transmitted Disease Program produces several surveillance and special reports. To receive these reports, we invite you to visit **http://ladhs.org/listserv** and register for STDInfo. You may also fax or mail the STD Program Surveillance Report Request at the end of this report.

We welcome your comments. If you have any suggestions for improving the survey, please call Giannina Donatoni, PhD, at (213) 744-3089 or Clarice Gillis at (213) 744-5979.

Sincerely,

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The *Clinical Laboratory Surveillance Report* is published on an annual basis by the Sexually Transmitted Disease Program of the Los Angeles County Department of Health Services. This report is also available in PDF format, online at **www.lapublichealth.org/std.**

If you would like to receive surveillance reports and other information from the STD Program, please fill out the form in appendix A and mail or fax it to the STD Program. You may also register for STDInfo online at **http://ladhs.org/listserv** to receive surveillance reports and other information from the STD Program via e-mail or call the STD Program at (213) 740-3070 and provide the attendant with your e-mail address.

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## INTRODUCTION

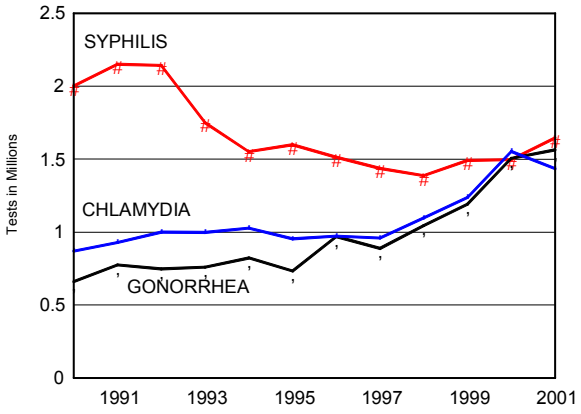
In 1987, the Los Angeles County Department of Health Services (DHS) Sexually Transmitted Disease (STD) Program initiated an annual survey of all clinical laboratories that test for any reportable STDs - syphilis, chlamydia, and gonorrhea - in Los Angeles County (LAC). Surveys of this kind, which ask respondents to provide the same information at set intervals, are the best way to detect and monitor trends and shifts over time. The STD Program developed the Clinical Laboratory Survey to assist disease control efforts through its laboratory surveillance activities.

The STD survey reports on the level of testing by disease, type of testing laboratory, and test methodology. It tracks the implementation of recommended tests and confirmatory procedures. It aids in the monitoring of laboratory compliance with reporting regulations. Finally, the Annual Laboratory Survey Report provides a yearly update on reporting issues and the state of STD testing in Los Angeles County.

The 2001 Annual Clinical Laboratory Survey was mailed to 192 laboratories in March 2002. Of these, 8 laboratories discontinued testing for sexually transmitted diseases and 26 closed during the previous year, leaving a final sample of 168. These facilities comprise about one third of all laboratories that test for reportable STDs in the State of California.

L.A. County STD Testing

1990-2001

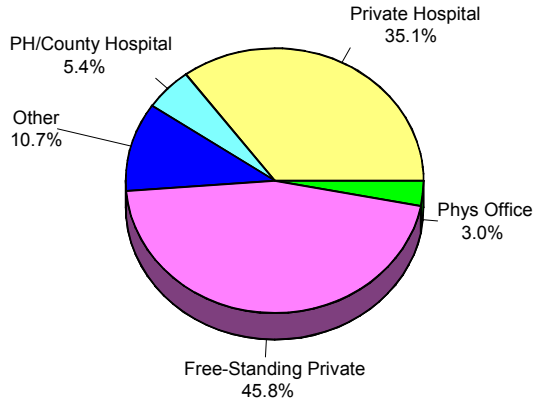



## OVERVIEW

One hundred sixty-eight laboratories performed STD testing in 2001, 11% fewer than in 2000. This represents a 46% decrease since 1990, when 314 laboratories reported testing. Several factors may explain the decline. One is the growth of managed care, which increased competition and reduced revenues. Higher operating expenses associated with the Clinical Laboratory Improvement Act of 1988 (CLIA 1988) added another disincentive to testing. Financial pressures also forced several start-up laboratories that had planned to perform STD testing in LAC to withdraw applications for California clinical laboratory licenses.

Most laboratories that performed STD testing in 2001 were either freestanding private laboratories or private hospital laboratories. Between 2000 and 2001, the number of physician's office and freestanding private laboratories declined from 5% to 3%, and 47% to 45% of testing laboratories, respectively. The proportion of private hospital laboratories increased from 30% to 35%.

STD Testing Labs, 2001




The percentages of specimens processed for providers outside Los Angeles County remained stable since last year. Laboratories based in Los Angeles County performed little work for providers outside of the County. Seventy-three percent processed specimens solely from county-based providers. Only 12% of laboratories received up to 5% of their STD workload from out-of-county providers. For 2% of laboratories, testing for providers outside of Los Angeles County comprised up to 90% of their workloads.

Reference laboratories comprised about 23% of laboratories. Sixty-nine percent of laboratories sent positive tests out for confirmatory testing, compared to 63% last year. These facilities usually relied on large reference laboratories within Los Angeles County. The proportion of laboratories that sent tests to facilities outside of the County also increased, from 18% to 23%. Fifty-four percent of these contracted with out-of-state laboratories.

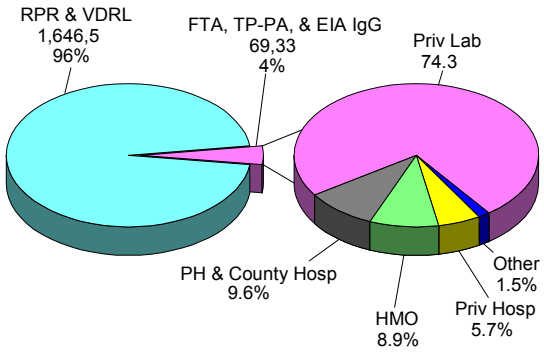
## SYPHILIS

Between 1998 and 1999, primary and secondary syphilis rates in LAC declined 29%, falling to levels below those achieved during the national campaign against the disease in the 1950s. Between 1999 and 2000, primary and secondary rates in California suddenly rose 9%, the first increase since 1988. In 2000, an outbreak of primary and secondary syphilis was identified largely among MSM (men having sex with men) in Los Angeles County.

The volume of syphilis screening tests in LAC declined from 1991 to 1994, to stabilize at about 1.5 million tests per year until 1997. Testing rates began to drop again in 1997, but the trend reversed in 1999 when the number of screening tests rose 7.5% over the previous year. The proportion of reactive nontreponemal tests has fluctuated between 2.0% and 3.1% throughout the past decade.

Syphilis screening increased 10% between 2000 and 2001 (Table 1). LAC laboratories performed 1,646,529 nontreponemal tests; 1.6% were reactive. Rapid Plasma Reagin (RPR) tests remained the screening test of choice, performed by 152 laboratories and totaling 99% of nontreponemal tests. Only 6 laboratories performed Venereal Disease Research Laboratory (VDRL) blood tests. Eighteen laboratories also ran CSF (cerebrospinal fluid) VDRL tests to rule out neurosyphilis. Less than 1%, or 144, of 15,188 CSF VDRL tests performed in 2001

Syphilis Serologies
By Type of Laboratory



were reactive. Eighty percent of screening laboratories diluted “rough” RPR and VDRL tests to rule out prozone reactions.

Fewer than 27% of syphilis screening laboratories performed confirmatory testing. Twenty-four laboratories performed 33,156 Fluorescent Treponemal Antibody Absorption (FTA-ABS) tests; 14,465 (44%) were reactive. Twenty-one also performed 17,147 Treponema Pallidum Particle Aggutination (TP-PA) confirmatory tests (48% reactive). Two laboratories performed 19,030 enzyme immunoassay / Immunoglobulin G tests (EIA/IgG); 1,040 (5%) tested positive. Fifteen darkfield examinations were performed Countywide; two were positive. Nine laboratories screened 52,852 blood bank specimens for syphilis. Less than 1% of these tests were reactive.

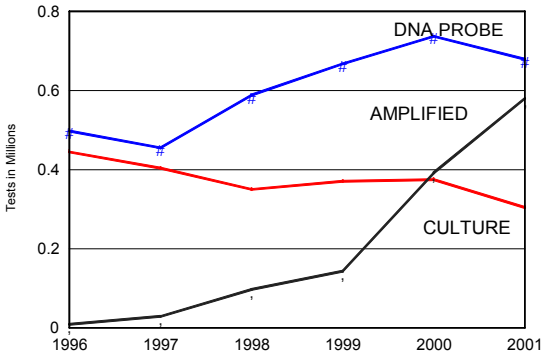
## GONORRHEA

Laboratories performed 1,573,040 tests for *N. gonorrhoeae* in 2001, 4% more than in 2000 (Table 1). Positive results were obtained in 1.6% of tests performed. The non-amplified DNA probe has become the preferred method for gonorrhea testing over the past decade, used for 7% of all gonorrhea tests in 1990, and stabilizing at 56% of tests in 1998 and 1999. The proportion of non-amplified probe testing began to decline in 2000 and dropped to 43% of gonorrhea tests in 2001.

The decline in non-amplified probe testing mirrored an increase in nucleic acid amplification testing (NAAT). Between 1990 and 1999, the rate of NAAT increased from 9 to 12% of tests. NAAT testing more than doubled in 2000, to 26% of tests. By 2001, NAAT assays comprised 37% of gonorrhea tests. Laboratories performed 579,821 nucleic acid amplification tests, yielding 14,931 (3%) positive results.

Growth in Amplified Testing

Gonorrhea, 1996-2001




Despite the popularity of nonculture tests for gonorrhea, isolation of *N. gonorrhoeae* in culture remains the diagnostic gold standard. One hundred eleven laboratories performed 304,170 cultures, or 19% of gonorrhea tests performed last year. Less than one percent of the 2,446 cultures were positive, fewer than 10% of all positive tests.

Urethral Gram stains continue to be underreported. Accurate report records are often difficult to locate. In addition, some laboratories do not realize that gram-negative intracellular diplococci in a male urethral smear should be reported as a presumptive diagnosis of gonorrhea to the Health Department. In 2001, 78 laboratories performed 8,152 urethral Gram stains; 2% were positive.

## CHLAMYDIA

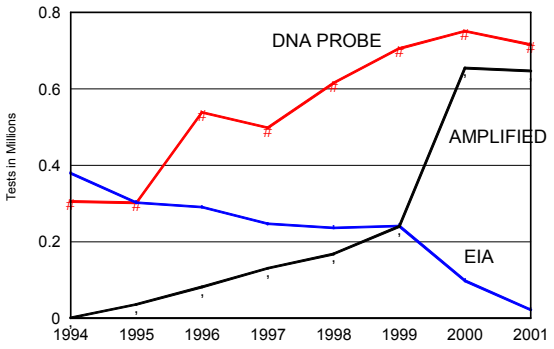
County laboratories performed 1,434,617 chlamydia tests in 2001 (Table 2). Positive findings were obtained in 4% of these tests. Culture and direct fluorescent antibody tests were among the least preferred methods, used in only 3% of tests. The use of these tests has been declining since 1992.

Nucleic acid amplification methods, which offer superior sensitivity and specificity over conventional methods, have shown growing popularity over the past five years. Four amplification assays, polymerase chain reaction (PCR), ligase chain reaction (LCR), strand displacement amplification assay (SDA), and transcription mediated amplification (TMA) comprised 45% of chlamydia tests performed in 2001, up from 19% in 1999. LCR and SDA tests accounted for 94% of all amplified tests.

The use of enzyme immunoassay (EIA), once one of the most commonly performed chlamydia tests, has been declining over the past five years while the use of nucleic acid amplification assays has grown. In 1999, 19% of chlamydia tests were performed using EIA; that percentage dropped to less than 2% in 2001. EIA tests for chlamydia lipopolysaccharide (LPS) are not specific for *C. trachomatis* and cross-react with some bacteria: positive tests should be verified with a blocking assay. Last year, 83% of LAC laboratories ran verification assays on presumptively positive tests to increase test specificity.

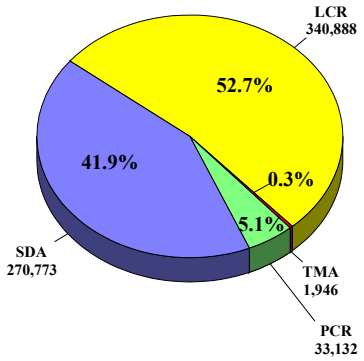
Growth in Amplified Testing

Chlamydia, 1994-2001




Amplified Methods

2001 Chlamydia Tests




The non-amplified DNA probe assay has dominated chlamydia testing in Los Angeles County since 1996. Laboratories used the assay for 50% of chlamydia tests in 2001, up from 48% the previous year. The majority of laboratories, 92%, repeated DNA probe findings in the "gray zone." Seventy-three percent of laboratories also checked presumptively positive results by verification assay.

Rapid or "stat" antibody tests for the presumptive identification of chlamydia can generate qualitative results within half an hour. While these single-unit test packages do not require expensive or complex equipment to perform, they are labor-intensive and impractical for mass screening. Rapid tests, like LPS-based EIAs, are nonspecific and cross-react with some microorganisms. They also may be more or less sensitive than reported: test performance has not been extensively evaluated in studies incorporating large sample sizes, low-prevalence populations, or outpatient settings. Laboratories used rapid tests to perform less than 1% of chlamydia tests in 2001.

## CHANCROID

Although endemic in tropical countries, this clinician-reportable bacterial STD is comparatively rare in the United States. Laboratory diagnosis of *Haemophilus ducreyi* infection is difficult. Gram stains are unreliable, the classic "school of fish" formation of organisms often difficult to interpret in clinical specimens. EIA and PCR methods are not currently available. Culture remains the method of choice for definitive diagnosis, and this requires special media and incubation conditions.

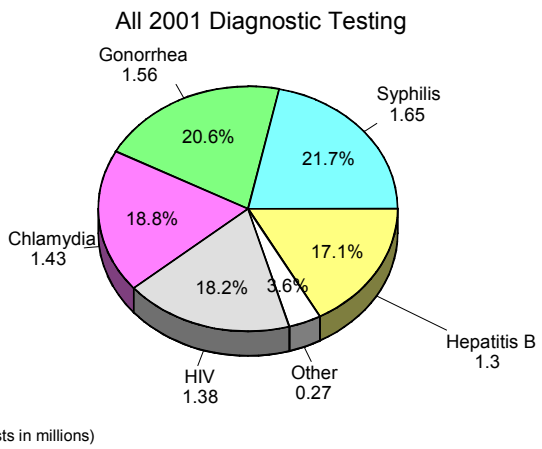
Four laboratories processed 33 chancroid cultures during 2001, none of which were positive.

## NON-REPORTABLE STDs: TESTING FOR HIV, HPV, HSV, & HEPATITIS B

Tests for non-reportable STDs comprised about 39% of the STD testing performed in LA County during 2001. During the year, 98 laboratories performed 1,377,076 HIV EIA screenings on oral, serum, and urine specimens (Table 3). About 1% (15,235) tested positive. Confirmatory testing by Western Blot and indirect fluorescent antibody (IFA) were performed on 26,917 and 305 specimens, respectively. Only 21 laboratories monitored CD4 counts and viral loads, performing 132,631 CD4 counts and 213,572 branched DNA (bDNA) and PCR assays. Ten laboratories tested blood bank specimens for HIV. One hundred eight of 152,288 units were positive.

Seven laboratories performed Human Papillomavirus (HPV) typing using Hybrid Capture II in 2001. High-risk HPV types were reported in 42% of 48,648 tests, and low risk types were identified in 17% of

L.A. County STD Testing




(tests in millions)

1,292 tests. Four laboratories obtained 5,009 (44%) positive results from 11,371 combined tests. The combined test does not differentiate high and low risk HPV types.

Abnormal Pap smears are another indicator of HPV infection. During 2001, 52 laboratories performed 4,606,302 Pap smears. The number of abnormal smears increased from 6% in 2000 to 7% in 2001.

Ninety-six laboratories performed 1,305,046 tests for Hepatitis B surface antigen. Positive results were obtained in 46,724 tests (3%).

LAC laboratories performed 206,465 tests for genital Herpes Simplex Virus (HSV) in 2001, with 25% testing positive. The number of HSV cultures decreased from 103,941 in 2000 to 76,449 in 2001. Positive tests also decreased slightly, from 25% to 23%, respectively. Other tests, including direct antigen, direct fluorescent antibody, and PCR tests, comprised 6% of tests for genital HSV. Twenty-five laboratories performed serological testing for HSV2. Positive results were reported in 22,121 (36%) of 61,413 IgG tests and 5,500 (10%) of 56,905 IgM tests.

## LIMITATIONS TO DATA

The Annual Clinical Laboratory Survey reports on testing for sexually transmitted diseases performed in LAC. It does not attempt to count tests performed for LAC providers by out-of-jurisdiction laboratories. In reporting the total number of tests and positives for the year, the survey likely underestimated tests performed in the County.

One should be cautious interpreting these findings because all laboratories that performed STD testing could not be sampled and the number of reported tests included tests performed for providers located outside of the County. One limitation to the study was the ability to identify all STD testing laboratories in Los Angeles County. The study sample was chosen by calling all licensed laboratories in Los Angeles County to verify testing status. Laboratories selected performed gonorrhea, chlamydia, or syphilis testing during 2001. Laboratories that tested for non-reportable STDs only were excluded from the sample. Another limitation was the difficulty obtaining responses on all testing laboratories that closed during the year. Only those that were located through forwarding addresses completed surveys. A final limitation to the survey was the inability to separate testing performed for providers within and outside of Los Angeles County. The survey asked respondents to estimate the proportion of tests performed for providers within the County. The estimation factor for a given laboratory was not used to adjust the number of reported tests for two reasons. First, the reported proportion of tests performed within Los Angeles County was prone to estimation error. Second, it was impossible to judge the proportion of positive tests obtained solely for Los Angeles County tests.

## SUMMARY

Testing for sexually transmitted diseases in Los Angeles County continues to increase annually, with fewer laboratories performing such tests. Los Angeles laboratories performed over 4.6 million diagnostic tests for syphilis, gonorrhea, and chlamydia in 2001. Testing for these reportable diseases comprised 61% of diagnostic testing for all sexually transmitted diseases.

## STD PROGRAM ACTIVITIES SUPPORTING LABORATORY REPORTING

To encourage the present level of reporting demonstrated by most laboratories and to assist laboratories that have deficiencies, STD Program staff performs routine laboratory visits. These meetings are meant to improve cooperation between laboratories and the STD Program, increase compliance with reporting laws, and answer individual questions.

STD Program staff have developed a comprehensive information packet to help laboratories meet their reporting requirements. The packet provides reporting instructions and discusses the role of laboratories in disease control and intervention. Copies are available from the STD Program. Please call Clarice Gillis, Surveillance Branch Manager, at (213) 744-5979.

Please direct questions about the survey or laboratory reporting issues to Giannina Donatoni, Ph.D., MT (ASCP), Laboratory Surveillance Coordinator, at (213) 744-3089.

## GLOSSARY

**bDNA:** branched DNA. Measures HIV RNA. Used to monitor infection progression, monitor response to therapy, and evaluate prognosis.

***Chlamydia trachomatis*:** the causative agent of chlamydia.

**Culture:** grow bacteria or viruses using media or cells. Agent is then isolated and identified. Highly specific.

**DFA:** Direct Fluorescent Antibody. Direct detection of organism in a clinical specimen using monoclonal antibodies and immunofluorescent microscopy.

**DNA Probe:** non-amplified probe. Detects organism nucleic acid directly from specimen.

**EIA/IgG:** Enzyme Immunoassay/ Immunoglobulin G. Assay for the indirect detection of IgG antibody to *Treponema pallidum.*

**FTA-ABS:** Fluorescent Treponemal Antibody Absorption. A confirmatory test for syphilis.

**IFA:** Indirect Fluorescent Antibody.

**LCR:** Ligase Chain Reaction. Test combines amplification and detection of organism DNA in a clinical specimen.

***Neisseria gonorrhoeae*:** the causative agent of gonorrhea.

**PCR:** Polymerase Chain Reaction. A nucleic acid amplification technique. The amplified product is then identified using another test.

**prozone reaction:** effect of antibody excess in immunological reactions. The antibody-antigen reaction may be partially or completely inhibited when the antibody level is greater than the amount required for the reaction.

**Reference laboratory:** a laboratory that performs STD testing for another laboratory. Laboratories that use reference laboratories often perform screening tests themselves and send positive specimens to reference laboratories for confirmatory testing.

**RPR:** Rapid Plasma Reagin. A sensitive but nonspecific screening test for syphilis. Positive tests must be confirmed with a test that is specific for antibodies to the treponemal antigen.

**SDA:** Strand Displacement Amplification. Amplification and detection of organism DNA in a clinical specimen.

**TMA:** Transcription Mediated Amplification. Amplification and detection of organism DNA or RNA in a clinical specimen.

**TP-PA:** Treponema Pallidum Particle Aggutination test. A confirmatory test for syphilis.

***Treponema pallidum***: the causative agent of syphilis.

**VDRL:** Venereal Disease Research Laboratory. A nonspecific test for syphilis. Positive tests must be confirmed with a test that is specific for antibodies to the treponemal antigen.

## TABLE 1: SYPHILIS & GONORRHEA TESTING IN LOS ANGELES COUNTY, 1993 - 2001

| STD & Type of Test | Test Characteristics | Testing Year (# of responding laboratories*) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 1993 (258) | 1994 (237) | 1995 (266) | 1996 (256) | 1997 (239) | 1998 (222) | 1999 (216) | 2000 (189) | 2001 (168) |
| **SYPHILIS** RPR & VDRL | # of tests | 1,749,296 | 1,551,815 | 1,598,538 | 1,514,451 | 1,437,280 | 1,386,799 | 1,491,257 | 1,496,517 | 1,646,529 |
| | # pos. tests | 53,420 | 44,309 | 49,291 | 37,215 | 29,036 | 27,920 | 30,072 | 30,799 | 27,015 |
| | % positive | 3.1 | 2.9 | 3.1 | 2.5 | 2.0 | 2.0 | 2.0 | 2.0 | 1.6 |
| **GONORRHEA** Culture | # of tests | 516,388 | 516,309 | 478,694 | 445,075 | 403,899 | 349,793 | 370,748 | 375,194 | 304,170 |
| | # pos. tests | 11,511 | 5,931 | 7,380 | 4,864 | 4,245 | 3,001 | 2,449 | 2,651 | 2,446 |
| | % positive | 2.2 | 1.1 | 1.5 | 1.1 | 1.0 | 0.9 | 0.6 | 0.7 | 0.8 |
| **GONORRHEA** DNA Probe | # of tests | 242,532 | 306,931 | 255,218 | 498,400 | 455,124 | 588,176 | 667,401 | 737,419 | 679,081 |
| | # pos. tests | 2,717 | 2,394 | 1,926 | 3,212 | 3,376 | 4,673 | 4,504 | 8,202 | 7,934 |
| | % positive | 1.1 | 0.8 | 0.8 | 0.6 | 0.7 | 0.8 | 0.7 | 1.1 | 1.2 |
| **TOTAL** Gonorrhea Tests** | # of tests | 758,920 | 823,278 | 733,912 | 968,994 | 888,059 | 1,044,196 | 1,191,150 | 1,513,515 | 1,573,040 |
| | # pos. tests | 14,228 | 8,327 | 9,306 | 8,919 | 7,955 | 9,721 | 9,997 | 15,835 | 25,574 |
| | % positive | 1.9 | 1.0 | 1.3 | 0.9 | 0.9 | 0.9 | 0.8 | 1.0 | 1.6 |

** Number of responding laboratories represents all laboratories known to be performing at least one type of test for a reportable STD.*

***Includes GC testing by urethral Gram stain, GC culture, DNA probe, and nucleic acid amplification tests (NAAT).*

**TABLE 2: CHLAMYDIA TESTING IN LOS ANGELES COUNTY, 1993 - 2001**

| STD & Type of Test | Test Characteristics | Testing Year (# of responding laboratories*) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 1993 (258) | 1994 (237) | 1995 (266) | 1996 (256) | 1997 (239) | 1998 (222) | 1999 (216) | 2,000 (189) | 2,001 (168) |
| **CHLAMYDIA** Culture | # of tests | 41,043 | 47,719 | 32,705 | 26,555 | 26,814 | 28,701 | 24,241 | 24,543 | 20,298 |
| | # pos. tests | 1,222 | 818 | 606 | 721 | 630 | 502 | 485 | 470 | 354 |
| | % positive | 3.0 | 1.7 | 1.9 | 2.7 | 2.3 | 1.7 | 2.0 | 1.9 | 1.7 |
| **CHLAMYDIA** Direct Fluorescent Antibody (DFA) | # of tests | 329,366 | 294,701 | 278,764 | 31,086 | 54,615 | 40,796 | 27,858 | 22,297 | 28,686 |
| | # pos. tests | 13,458 | 10,082 | 9,191 | 1,315 | 1,591 | 1,096 | 744 | 475 | 556 |
| | % positive | 4.1 | 3.4 | 3.3 | 4.2 | 2.9 | 2.7 | 2.7 | 2.1 | 1.9 |
| **CHLAMYDIA** Enzyme Immunoassay (EIA) | # of tests | 326,171 | 379,635 | 302,336 | 290,603 | 246,453 | 235,996 | 240,999 | 97,577 | 21,943 |
| | # pos. tests | 19,006 | 19,171 | 14,416 | 8,916 | 8,443 | 6,059 | 8,825 | 5,575 | 1,676 |
| | % positive | 5.8 | 5.0 | 4.8 | 3.1 | 3.4 | 2.6 | 3.7 | 5.7 | 7.6 |
| **CHLAMYDIA** DNA Probe | # of tests | 301,158 | 305,302 | 301,590 | 538,607 | 498,075 | 615,193 | 705,445 | 751,016 | 715,393 |
| | # pos. tests | 11,560 | 12,615 | 11,173 | 13,902 | 16,833 | 17,944 | 22,546 | 26,119 | 23,517 |
| | % positive | 3.8 | 4.1 | 3.7 | 2.6 | 3.4 | 2.9 | 3.2 | 3.5 | 3.3 |
| **CHLAMYDIA** Amplified Tests | # of tests | ** | 654 | 35,608 | 81,682 | 130,530 | 168,000 | 239,802 | 654,658 | 646,739 |
| | # pos. tests | ** | 18 | 2,599 | 5,964 | 9,263 | 9,480 | 12,913 | 28,543 | 30,672 |
| | % positive | ** | 2.8 | 7.3 | 7.3 | 7.1 | 5.6 | 5.4 | 4.3 | 4.7 |
| **TOTAL** Chlamydia Tests | # of tests | 997,738 | 1,028,033 | 954,213 | 971,900 | 958,922 | 1,097,055 | 1,238,989 | 1,553,570 | 1,434,617 |
| | # pos. tests | 45,246 | 42,707 | 38,138 | 30,915 | 36,822 | 35,327 | 45,532 | 61,356 | 56,806 |
| | % positive | 4.5 | 4.2 | 4.0 | 3.2 | 3.8 | 3.2 | 3.7 | 3.9 | 3.9 |

**Number of responding laboratories represents all laboratories known to be performing at least one type of test for a reportable STD.*
***Laboratories did not report use of amplified testing for chlamydia prior to 1994.*

**TABLE 3: HIV TESTING IN LOS ANGELES COUNTY, 1993 - 2001**

| Type of Test | | Testing Year (# labs performing HIV testing) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| (# of labs that performed test in 2001) | Test Characteristics | 1993 (104) | 1994 (100) | 1995 (130) | 1996 (133) | 1997 (126) | 1998 (125) | 1999 (128) | 2000 (120) | 2001 (100) |
| HIV Enzyme Immunoassay (EIA) (98) | # of tests | 863,857 | 1,004,676 | 945,853 | 791,567 | 849,755 | 888,264 | 1,179,935 | 1,088,549 | 1,377,076 |
| | # pos. tests | 16,337 | 15,480 | 12,119 | 27,175 | 14,556 | 15,804 | 13,257 | 14,937 | 15,235 |
| | % positive | 1.9 | 1.5 | 1.3 | 3.4 | 1.7 | 1.8 | 1.1 | 1.4 | 1.1 |
| HIV Rapid Tests (SUDS Murex, etc.) | # of tests | 1,492 | 9,319 | 1,626 | 2,544 | 1,698 | 553 | 631 | None reported | None reported |
| | # pos. tests | 69 | 600 | 14 | 24 | 7 | 0 | 8 | - | - |
| | % positive | 4.6 | 6.4 | 0.2 | 0.9 | 0.4 | 0.0 | 1.3 | - | - |
| HIV Indirect Fluorescent Antibody (IFA) (2) | # of tests | 2,196 | 2,007 | 1,399 | 790 | 1,045 | 538 | 339 | 288 | 305 |
| | # pos. tests | 1,376 | 1,089 | 846 | 477 | 466 | 350 | 260 | 221 | 247 |
| | % positive | 62.6 | 54.3 | 60.5 | 60.4 | 44.6 | 65.0 | 76.7 | 76.7 | 81.0 |
| HIV Western Blot (14) | # of tests | 9,803 | 13,439 | 11,263 | 30,653 | 15,307 | 23,010 | 20,202 | 21,029 | 26,917 |
| | # pos. tests | 7,993 | 11,497 | 7,998 | 27,343 | 12,348 | 16,483 | 12,989 | 13,978 | 16,310 |
| | % positive | 81.5 | 85.6 | 71.0 | 89.2 | 80.7 | 71.6 | 64.3 | 66.5 | 60.6 |
| HIV Polymerase Chain Reaction (PCR) (2) | # of tests | 1,818 | 6,811 | 5,981 | 13,807 | 10,477 | 25,693 | 8,110 | 6,248 | 3,449 |
| | # pos. tests | 334 | 1,922 | 2,137 | 1,981 | 7,106 | 11,762 | 2,064 | 355 | 314 |
| | % positive | 18.4 | 28.2 | 35.7 | 14.3 | 67.8 | 45.8 | 25.4 | 5.7 | 9.1 |
| CD4 (17) | # of tests | n/a | n/a | 34,530 | 99,689 | 89,934 | 104,465 | 98,309 | 78,650 | 132,631 |
| Viral Load: PCR (9) | # of tests | n/a | n/a | 57,385 | 8,475 | n/a | 44,138 | 25,218 | 61,391 | 104,447 |
| Viral Load:bDNA (5) | # of tests | n/a | n/a | n/a | n/a | n/a | 22,615 | 16,430 | 41,930 | 85,419 |
| Viral Load: PCR and bDNA* (5) | # of tests | n/a | n/a | n/a | n/a | n/a | 317,303 | 149,043 | 19,921 | 23,706 |

*Branched DNA

## APPENDIX A: STD PROGRAM SURVEILLANCE REPORT REQUEST

To continue to receive sexually transmitted disease surveillance reports for Los Angeles County and other information from the STD Program, please fill out this form and fax or mail it in to the phone number and address provided. **This information will only be used by the STD Program to disseminate surveillance reports and other information to interested parties.** Please be sure to include,

- **e-mail address,**
- **name and mailing address,**
- **and, phone number (to help us keep our distribution list updated)**

[ ]MD [ ]PA/NP [ ]RN [ ]PhD [ ]Clinic Admin. [ ]Other:

| First Name: | Last Name: | Title (i.e., Director, Coordinator, etc.): |
|---|---|---|
| | | |

| Organization Name: | Street Address: |
|---|---|
| | |

| City: | State: | Zip Code: | Phone: |
|---|---|---|---|
| | | | |

| E-mail: | Type of Organization (i.e., CBO, MCO, OPP, etc.): |
|---|---|
| | |

Please select the surveillance reports you would like to receive by checking off the appropriate boxes:

- ❑ **All Surveillance and Special Reports from the STD Program**
  - ❑ **Annual STD Morbidity Report**
  - ❑ **Quarterly STD Morbidity Report (Planned for 2003)**
  - ❑ **Monthly Early Syphilis Surveillance Summary**
  - ❑ **Syphilis Elimination Weekly Activity Report (Available only via e-mail)**
  - ❑ **Special Morbidity and Project Reports (Periodic)**
  - ❑ **STD Treatment Updates (Periodic)**

**Fax to (No cover page needed):**

(213) 749-9606

**OR**

**Mail to:**

Attn: Maria Venzor
STD Program
2615 S. Grand Avenue, Rm. 500
Los Angeles, CA 90007


COUNTY OF LOS ANGELES
DEPARTMENT OF HEALTH SERVICES
**Public Health**

# SEXUALLY TRANSMITTED DISEASE PROGRAM

2615 South Grand Avenue, Room 500
Los Angeles, California 90007