



STD



SEXUALLY TRANSMITTED DISEASES TESTING IN CALIFORNIA

2005 Clinical Laboratory Survey Summary

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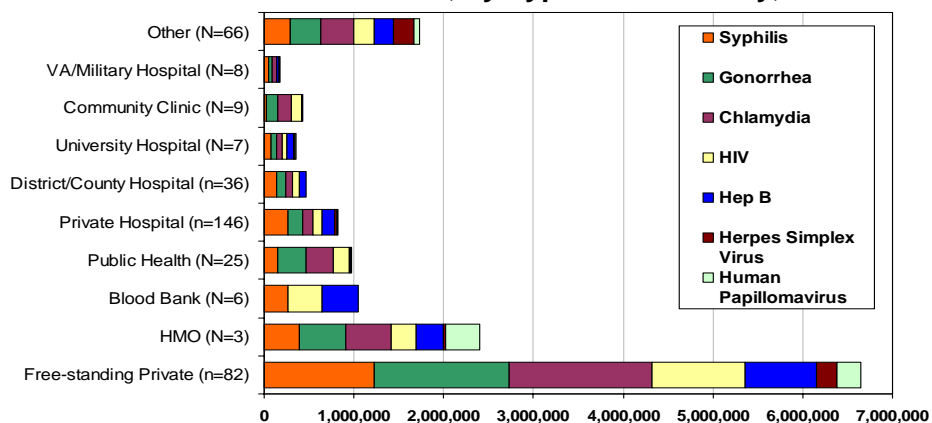
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EXECUTIVE SUMMARY

The 2005 Annual California Clinical Laboratory Survey was sent to 1,726 licensed California laboratories that potentially conducted testing for reportable sexually transmitted diseases (STDs). Of the 1,002 (58.1 percent) laboratories that responded to the survey, 414 (41.3 percent) reported conducting STD or Pap tests in 2005. The response rate was estimated at 63.4 percent (for further explanation of the survey methods, see Technical Notes, page 16).

In 2005, private sector laboratories (all non-public health laboratories) performed the majority of reported STD tests (Figure 1). Freestanding private facilities (a subset of all private sector laboratories) performed the largest proportion (44.2 percent) of all tests combined. Public health laboratories performed 6.4 percent of all tests.

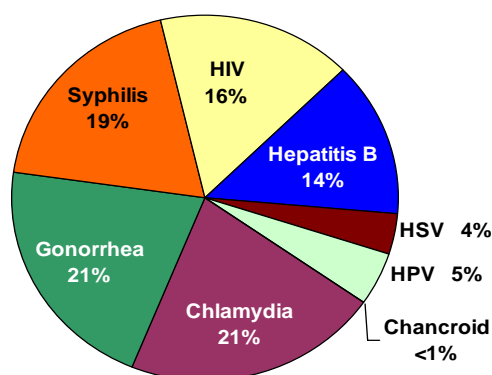
Figure 1. Number of STD Tests Performed, by Type of Laboratory, 2005



Prepared by the California Department of Public Health.

Of the approximately 15 million laboratory tests performed to detect STDs, the largest proportions were for chlamydia and gonorrhea (Figure 2). The relative distribution of STD tests in 2005 was similar to that for previous years, although tests for Herpes Simplex Virus (HSV) and Human Papillomavirus (HPV) are increasing.

Figure 2. STD Tests Performed, 2005 (N=15,031,123)

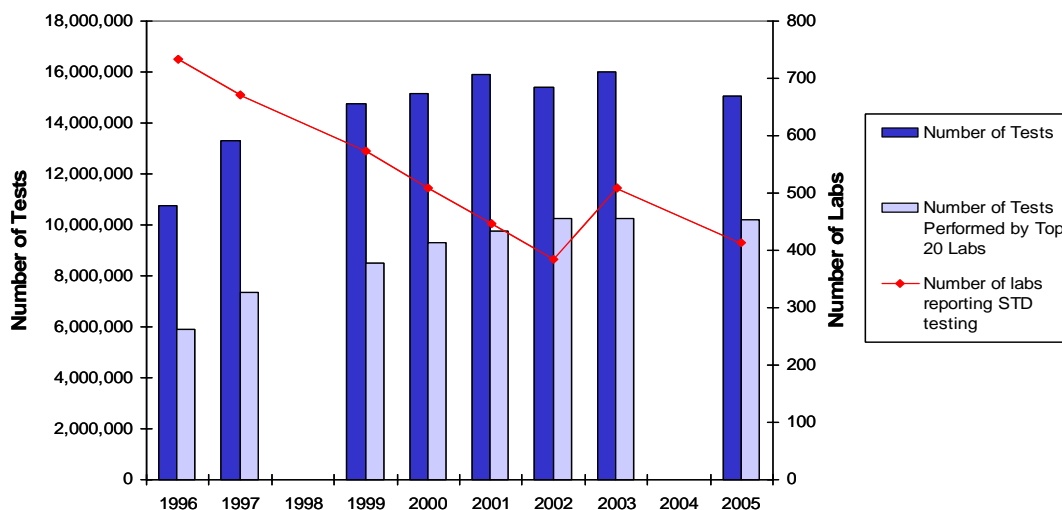


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Sexually Transmitted Disease Testing in California, 2005

Over the past decade, reported test volume has increased 39.8 percent from 10,754,426 total STD tests in 1996 to 15,031,123 in 2005 (NOTE: 1996 survey did not include hepatitis B tests). At the same time, the number of labs reporting testing has decreased 43.6 percent from 734 in 1996 to 414 in 2005 (Figure 3). The percentage of overall STD tests performed by the 20 highest-volume laboratories has increased from 55.0 percent in 1996 to 67.9 percent in 2005.

Figure 3. Total STD Tests, Tests Performed by 20 Highest-Volume Labs, and Number of Labs Reporting STD Testing, 1996-2005



Prepared by the California Department of Public Health.

The use of nucleic acid amplification tests (NAATs) continued to increase in 2005, accounting for 83.1 and 76.8 percent of all chlamydia and gonorrhea tests, respectively. NAATs provide the greatest sensitivity, use non-invasive specimen collection, and were recommended by the California Chlamydia Action Coalition (CCAC) beginning in 2001.¹

While NAAT testing has increased, culture testing has continued to decline. Culture testing for gonorrhea accounted for only 7.8 percent of gonorrhea tests in 2005, and only 7.7 percent of labs that tested cultures also reported performing antibiotic susceptibility testing on positive cultures. The decrease in culture testing by California laboratories may adversely affect future antibiotic resistance testing.

Reported syphilis testing decreased slightly since the last survey (2003), while syphilis rates have continued to increase in California. Enzyme immunoassay (EIA) tests have emerged as an important technology, and are being used as screening tests while other treponemal tests are used for confirmation.

The percentage of laboratories reporting readiness to migrate to a web-based reporting system has not increased since 2001; however, of labs with some electronic capability, the proportion using web-based data transmission has doubled since 2001.

Follow-up on the 2005 survey was not as comprehensive as in 2003, due to staffing shortages. Apparent decreases in some tests may therefore be due to a lower response rate, while, among tests with an apparent increase in volume, the true magnitude of the increase may be underestimated.

INTRODUCTION

Since 1996, the California Department of Public Health (CDPH)/Division of Communicable Disease Control (DCDC)/Sexually Transmitted Diseases (STD) Control Branch has surveyed clinical laboratories throughout California that perform testing for STDs.² The Clinical Laboratory Survey assists disease control efforts by identifying the number and types of laboratories performing STD testing, the number of tests performed, and trends in the use of test technologies over time.

Timely, accurate, and complete laboratory reporting of communicable diseases is essential to health department efforts to effectively identify public health problems and to design cost-effective interventions. California regulations require both healthcare providers and laboratories to report selected STDs to their local health departments; the majority of disease reports are initially received from laboratories.

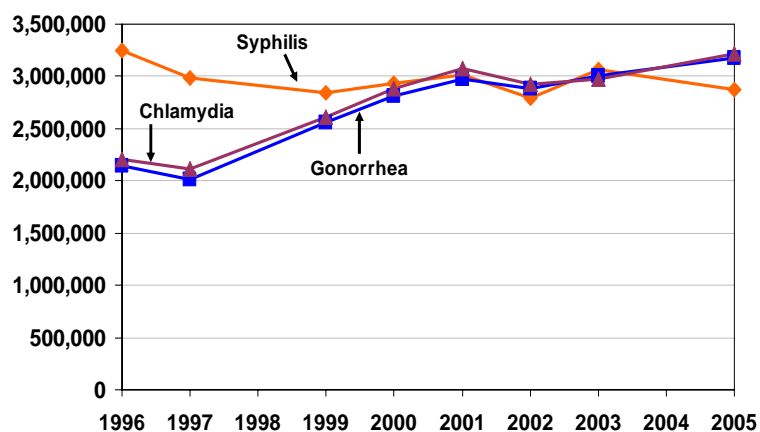
Laboratories and providers are legally mandated to report findings indicative of syphilis, gonorrhea, chlamydia, hepatitis B, and chancroid to local health departments for case follow-up activity and epidemiologic analysis.³ HIV infection and AIDS are also reportable conditions, with new reporting requirements for HIV infection as of April 2006.⁴ HSV and HPV are not reportable conditions but are included in this laboratory survey.

This report summarizes information from the 2005 Clinical Laboratory Survey. These data are presented along with 2005 STD trend information.²

BACTERIAL STDS

The total test volume in the period 1996 to 2005 for chlamydia, gonorrhea, and syphilis is shown in Figure 4. Reported syphilis testing declined slightly from 2003 to 2005 (6.3 percent), while gonorrhea and chlamydia testing increased slightly (5 percent and 8 percent, respectively).

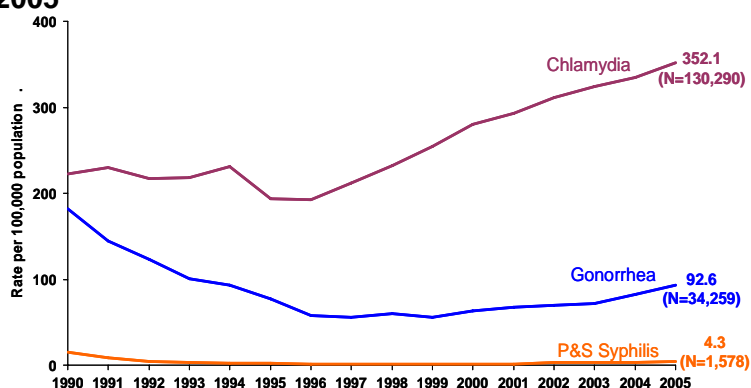
Figure 4. Chlamydia, Gonorrhea, and Syphilis: Total Number of Tests, 1996-2005



Sexually Transmitted Disease Testing in California, 2005

To provide a context for interpreting laboratory survey information, rates of each of the reportable bacterial STDs from California's case-based surveillance system² are shown in Figure 5. *Chlamydia trachomatis* remains the most commonly reported infectious disease in California and the United States. In 2005, the rate of chlamydia was 505.7 cases per 100,000 among females, and 197.7 cases per 100,000 among males. Higher chlamydia rates in females are associated with higher rates of screening among females compared to males. Gonorrhea rates were similar for males (99.5 per 100,000) and females (85.6 per 100,000), and have been increasing in all demographic groups. Rates of primary and secondary syphilis were 0.6 cases per 100,000 among females, and 7.9 cases per 100,000 among males. Higher rates of syphilis in men have been associated with increases among men who have sex with men (MSM).

Figure 5. Chlamydia, Gonorrhea, and Primary & Secondary (P&S) Syphilis, California Rates, 1990-2005



Prepared by the California Department of Public Health.

Rates of chlamydia and gonorrhea in California are highest among 15- to 24-year olds. Rates of all bacterial STDs are highest among African Americans, with gonorrhea in particular occurring approximately ten times as frequently in African Americans as in other racial/ethnic groups.

Chlamydia

- ◆ Laboratories surveyed reported performing a total of 3,215,086 chlamydia tests in 2005 (Table 1), an increase of 8.2 percent from 2003 (Figure 4). Overall, 3.8 percent of all reported lab tests for chlamydia were positive (Table 1).
- ◆ In 2005, the tests most commonly used for chlamydia were NAATs (83.1 percent), followed by DNA probe (13.8 percent). Culture, direct fluorescent antibody (DFA), EIA, hybrid capture, and serologic tests accounted for the remaining 3.1 percent (Table 1, Figure 6).
- ◆ The most frequently used NAAT was strand displacement amplification (SDA), accounting for 52.3 percent of all NAATs performed in 2005. Also commonly used were transcription mediated amplification (TMA) and polymerase chain reaction (PCR), accounting for 29.4 and 18.2 percent of NAATs, respectively (Table 1).

Sexually Transmitted Disease Testing in California, 2005

Table 1. Chlamydia (CT) Tests Reported by California Laboratories, 2005

Chlamydia Test Type	Number of Labs	Number of Tests Performed	Percentage of all CT Tests*	Number of Tests Positive	Percent Positive**
Culture	20	19,359	0.6%	367	1.9%
DFA	23	9,068	0.3%	371	4.1%
EIA	25	38,230	1.2%	848	2.2%
DNA Probe	50	443,358	13.8%	12,080	2.7%
Hybrid Capture	3	6,550	0.2%	4	<0.1%
<i>Nucleic Acid Amplification Tests (NAATs)</i>					
PCR	35	485,505	15.1%	15,919	3.3%
TMA	25	785,146	24.4%	33,747	4.3%
SDA	69	1,396,896	43.4%	58,059	4.2%
Other NAATs	1	4,196	0.1%	70	1.7%
Total NAATs	124	2,671,743	83.1%	107,795	4.0%
<i>Serologic Tests</i>					
MIF [†]	2	26,478	0.8%	638	2.4%
CF [‡]	0	0	-	0	-
Other Serology	0	0	-	0	-
Total Serology	2	26,478	0.8%	638	2.4%
Other CT Tests	1	300	<0.1%	0	-
Total CT Tests	188	3,215,086	100.0%	122,103	3.8%

* $(\text{Number of Tests Performed} / \text{Total Number of CT Tests}) * 100$

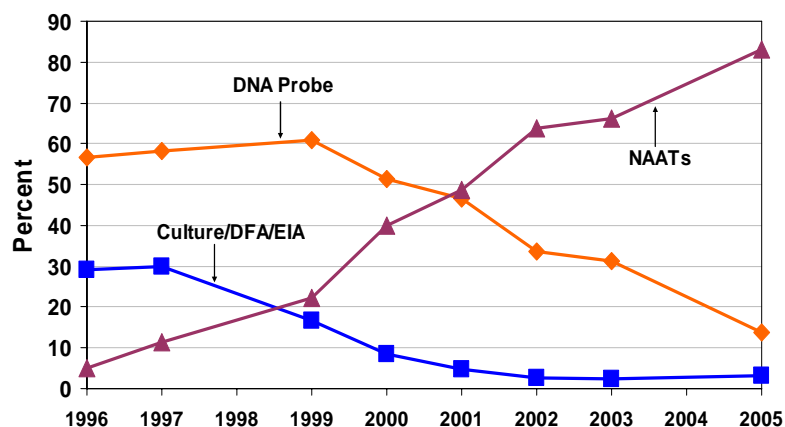
** $(\text{Number of Tests Positive} / \text{Number of Tests Performed}) * 100$

[†]Microimmunofluorescence test [‡]Complement Fixation test

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- ◆ NAAT use has increased over the past decade from 4.9 percent of chlamydia tests in 1996 to 83.1 percent in 2005 (Figure 6).

Figure 6. Percent of Chlamydia Tests by Test Type, 1996-2005



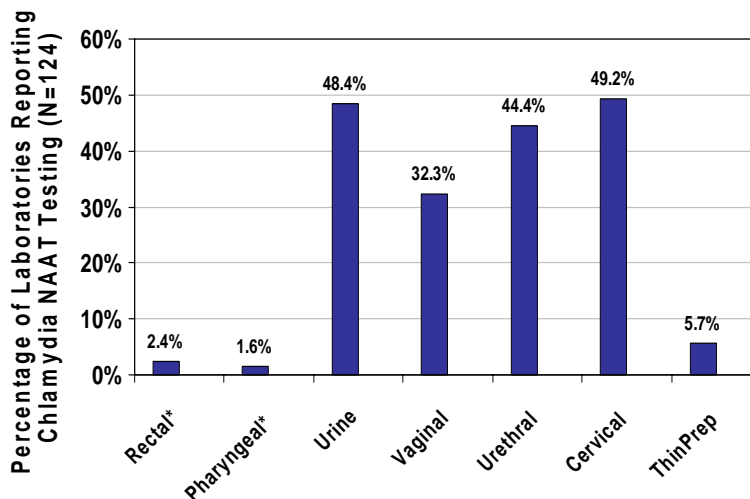
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- ◆ Of the 124 laboratories reporting chlamydia NAAT testing, 35 (28.2 percent) reported confirming all positive NAATs, while an additional 11 (8.9 percent) performed confirmatory testing on low positives only.

Sexually Transmitted Disease Testing in California, 2005

- ◆ Urine, urethral, and cervical specimens were most commonly accepted for NAAT testing. Three labs accepted rectal specimens and two accepted pharyngeal specimens (Figure 7).

Figure 7. Specimen Types Accepted by Labs Performing Chlamydia NAAT Testing, 2005



NOTE: Categories are not mutually exclusive.

*Rectal and pharyngeal sites are not Food and Drug Administration (FDA)-cleared for NAAT testing; of the three labs reporting testing of these sites, two based testing on internal verification studies.

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- ◆ The National Chlamydia Laboratory Committee recommends performing negative gray zone supplemental testing to enhance the sensitivity of non-amplification test technologies.⁵ In 2005, 68.0 percent of laboratories that reported DNA probe testing reported performing supplemental testing of gray zone findings.
- ◆ False-positive STD test results cause unnecessary healthcare and emotional costs for patients and their partners. The Centers for Disease Control and Prevention (CDC) strongly recommends using verification assays to increase the specificity of DNA probes and EIA testing.⁶ Only 12.3 percent of laboratories that performed DNA or EIA testing reported performing verification assays in 2005.

Gonorrhea

- ◆ Laboratories surveyed reported performing a total of 3,174,283 gonorrhea tests in 2005 (Table 2), an increase of 5.6 percent from 2003 (Figure 4). Overall, 1.2 percent of all reported lab tests for gonorrhea were positive (Table 2).
- ◆ In 2005, NAATs were the most commonly used test for gonorrhea (76.8 percent), followed by DNA probe (14.5 percent). Culture accounted for an additional 7.8 percent of gonorrhea tests (Table 2, Figure 8).
- ◆ SDA accounted for 49.6 percent of all gonorrhea NAATs performed in 2005. TMA and PCR accounted for 31.6 and 18.7 percent, respectively (Table 2).

Sexually Transmitted Disease Testing in California, 2005

Table 2. Gonorrhea (GC) Tests Reported by California Laboratories, 2005

Gonorrhea Test Type	Number of Labs	Number of Tests Performed	Percentage of all GC Tests*	Number of Tests Positive	Percent Positive**
Urethral Gram Stain	135	18,694	0.6%	720	3.9%
Culture	247	247,385	7.8%	2,421	1.0%
DNA Probe	53	460,705	14.5%	5,519	1.2%
Hybrid Capture	3	6,150	0.2%	22	0.4%
<i>Nucleic Acid Amplification Tests (NAATs)</i>					
PCR	34	456,180	14.4%	4,759	1.0%
TMA	26	770,954	24.3%	11,619	1.5%
SDA	67	1,209,772	38.1%	12,178	1.0%
Total NAATs	121	2,436,906	76.8%	28,556	1.2%
Other GC Tests	3	4,443	0.1%	4	0.1%
Total GC Tests	309	3,174,283	100.0%	37,242	1.2%

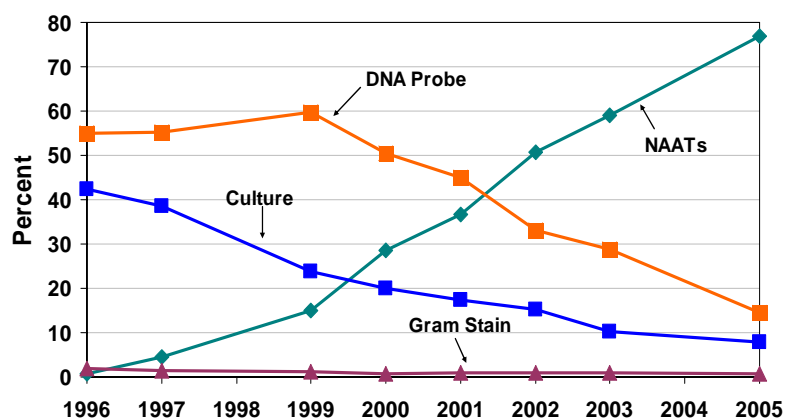
*(Number of Tests Performed/Total Number of GC Tests)*100

** (Number of Tests Positive/Number of Tests Performed)*100

Prepared by the California Department of Public Health.

- ◆ NAAT use has increased over the past decade from 0.6 percent of gonorrhea tests in 1996 to 76.8 percent in 2005 (Figure 8).

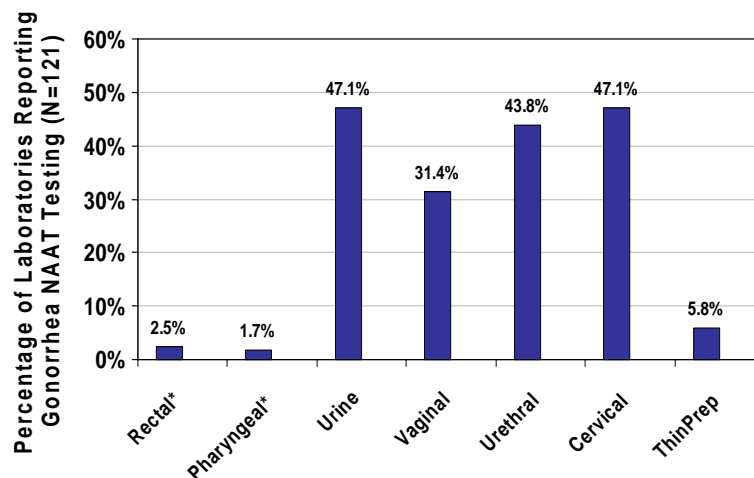
Figure 8. Percent of Gonorrhea Tests by Test Type, 1996-2005



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- ◆ Of the 121 laboratories reporting gonorrhea NAAT testing, 36 (29.8 percent) reported confirming all positive NAATs and 10 (8.3 percent) confirmed low positives only.
- ◆ Urine, urethral, and cervical specimens were most commonly accepted for NAAT testing. Three labs accepted rectal specimens, and two accepted pharyngeal specimens (Figure 9).

Figure 9. Specimen Types Accepted by Labs Performing Gonorrhea NAAT Testing, 2005



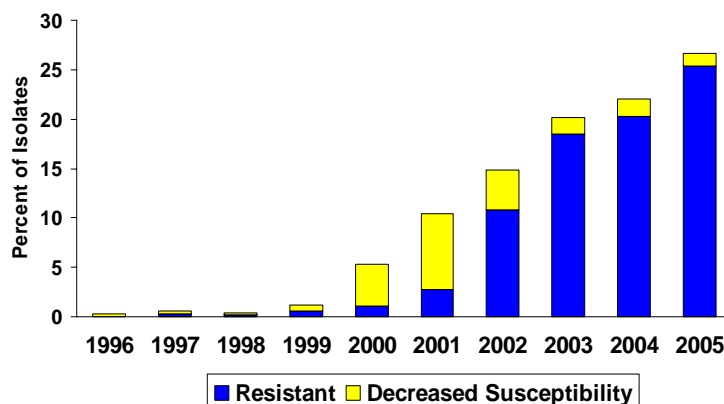
NOTE: Categories are not mutually exclusive

*Rectal and pharyngeal sites are not FDA-cleared for NAATs testing; of the three labs reporting testing of these sites, two based testing on internal verification studies

Prepared by the California Department of Public Health.

- ◆ Use of culture decreased 81.6 percent between 1996 and 2005 (Figure 8). Because culture specimens are required to test for antibiotic susceptibility, decreases in cultures collected may impact laboratories' ability to monitor antibiotic resistance.
- ◆ 7.7 percent of laboratories reporting culture testing for gonorrhea also reported performing antibiotic susceptibility testing on positive cultures.
- ◆ Since 1999, California's Gonococcal Isolate Surveillance Project (GISP) has observed substantial increases in antibiotic resistance among isolates from men visiting four public STD clinics across the state (Figure 10). This increasing prevalence of fluoroquinolone-resistant gonorrhea prompted new treatment guidelines in California in 2002.⁷

Figure 10. Percent of *Neisseria Gonorrhoeae* Isolates with Decreased Susceptibility or Resistance to Ciprofloxacin in Four California STD Clinics, 1996-2005



Prepared by the California Department of Public Health.

Sexually Transmitted Disease Testing in California, 2005

- ◆ Of laboratories that reported culture testing for gonorrhea, 55.1 percent reported beta-lactamase testing of isolates. Based on findings from GISP, penicillinase-producing *N. gonorrhoeae* is endemic at such levels that penicillin is no longer included as recommended treatment for gonorrhea.⁷ Thus, monitoring beta-lactamase levels is of little clinical value.

Syphilis

- ◆ Laboratories surveyed in California reported 2,876,526 tests for syphilis in 2005 (Table 3), a 13.5 percent decrease in testing volume from 2003 (Figure 4).
- ◆ Of all tests for syphilis, 80.3 percent were non-treponemal serology tests, and 13.3 percent were treponemal serology or other tests. Few (224) were darkfield or direct fluorescent antibody *Treponema pallidum* (DFA-TP) tests (Table 3).
- ◆ Rapid plasma reagin (RPR) and Venereal Disease Research Laboratory (VDRL) tests accounted for 96.6 percent and 2.5 percent, respectively, of all non-treponemal serology tests performed.

Table 3. Syphilis Tests Reported by California Laboratories, 2005

Syphilis Test Type	Number of Labs	Number of Tests Performed	Percent of All Tests*	Number of Tests Positive	Percent Positive**
Blood Bank Specimens	10	185,693	6.5%	534	0.3%
<i>Direct Detection</i>					
Darkfield	16	179	<0.1%	3	1.7%
DFA-TP	3	45	<0.1%	2	4.4%
Other Direct Detection	0	-	-	-	-
Total Direct Detection	19	224	<0.1%	5	2.2%
<i>Non-Treponemal Serology</i> [†]					
RPR (Qualitative)	277	2,231,248	77.6%	37,915	1.3%
VDRL (Qualitative)	15	56,632	2.0%	2,738	4.8%
VDRL on CSF	37	17,547	0.6%	235	1.3%
Other Non-Treponemal	1	3,558	0.1%	102	2.9%
Total Non-Treponemal	285	2,308,985	80.3%	40,990	1.8%
<i>Treponemal Serology</i>					
FTA-Abs [‡]	35	25,375	0.9%	9,471	37.3%
TP-PA [‡]	44	35,554	1.2%	15,517	43.6%
EIA (IgG/IgM) [‡]	6	320,640	11.1%	7,851	2.4%
Other Treponemal	1	55	<0.1%	55	100.0%
Total Treponemal	74	381,624	13.3%	32,894	8.6%
Total Syphilis Tests	293	2,876,526	100.0%	74,423	2.6%

* (Number of Tests Performed/Total Number of Syphilis Tests)*100

** (Number of Tests Positive/Number of Tests Performed)*100

[†] Quantitative (Titer) tests not included in table.

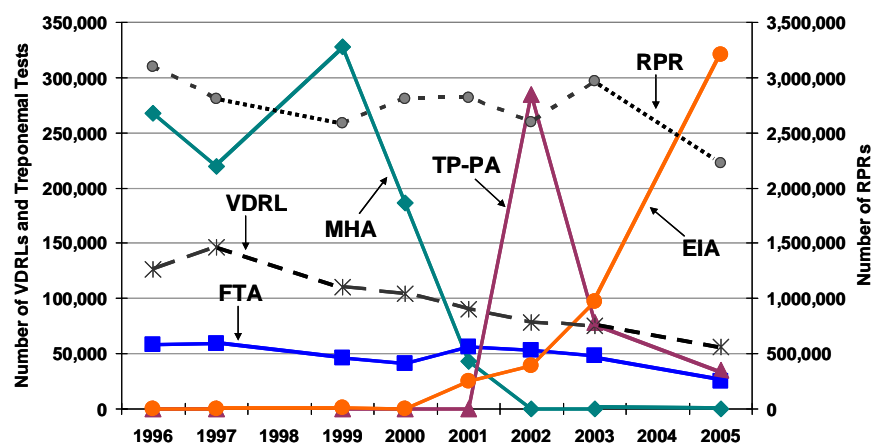
[‡] FTA-Abs=Fluorescent Treponemal Antibody Absorption; TP-PA=Treponema Pallidum Particle Agglutination; IgG=Immunoglobulin G; IgM=Immunoglobulin M

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Sexually Transmitted Disease Testing in California, 2005

- ◆ Of the 277 laboratories that performed RPR tests, 173 performed a total of 37,218 RPR titers. All 15 labs that performed VDRL tests also ran VDRL titers (4,290 total).
- ◆ Of the 284 laboratories that performed RPR or VDRL non-treponemal serology tests, 151 (53.2 percent) reported diluting “rough” tests to rule out prozone reactions. This practice is recommended by CDC to increase the sensitivity of these tests in early syphilis and to reduce false-negative test results.⁸
- ◆ EIA tests accounted for 84.0 percent of treponemal serology tests in 2005, increasing from 0.2 percent in 1999. Use of non-treponemal serologic tests (RPR and VDRL) decreased in the same time period, indicating that EIAs are increasingly used for syphilis testing in lieu of the non-treponemal tests (Figure 11). No laboratory has reported use of microhemagglutination (MHA) since 2002.

Figure 11. Syphilis Tests by Test Type, 1996-2005



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- ◆ Other treponemal tests used included TP-PA, which accounted for 9.3 percent of treponemal tests, and FTA-ABS, accounting for 6.6 percent of all treponemal tests (Table 3, Figure 11).

Chancroid

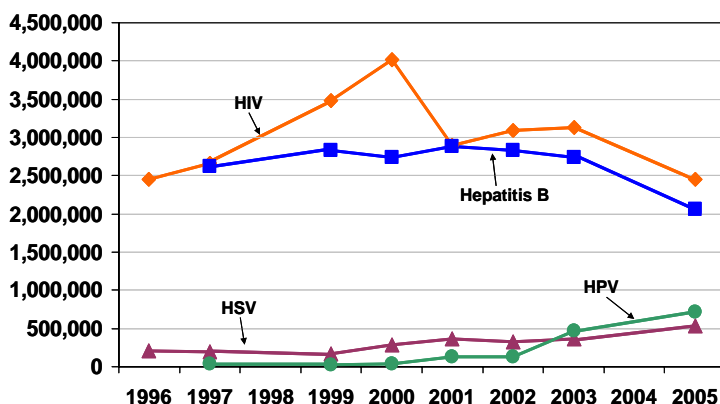
- ◆ Fourteen laboratories reported 66 tests for chancroid in 2005, all of which were cultures. None of the tests were reported positive. No cases of chancroid were reported in California in 2005.

VIRAL STDs

The total volume of reported tests in the period 1996 through 2005 for HIV, Hepatitis B, HSV, and HPV are displayed in Figure 12. From 2003 to 2005, HIV test volume decreased by 22.0 percent and Hepatitis B decreased by 24.6 percent, while test volumes for HSV and HPV increased (46.8 and 52.1 percent, respectively). This survey emphasizes bacterial STDs, so viral STD testing activities may be underestimated.

Sexually Transmitted Disease Testing in California, 2005

Figure 12. HIV, Hepatitis B, HSV, and HPV: Total Number of Tests, 1996-2005



Prepared by the California Department of Public Health.

HIV

- ◆ Of the laboratories surveyed, 215 performed a total of 2,446,949 HIV tests, of which 46,553 were positive (Table 4).
- ◆ The majority (91.9 percent) of the tests performed were EIA screening tests. Confirmatory testing (Western blot and immunofluorescent assay [IFA] accounted for 1.4 percent of all tests). Qualitative PCR testing comprised 6.7 percent of all HIV testing (Table 4).

Table 4. HIV Tests Reported by California Laboratories, 2005

HIV Test Type	Number of Labs	Number of Tests Performed	Percentage of all HIV Tests*	Number of Tests Positive	Percent Positive**
<i>HIV EIA Tests</i>					
Oral EIA Tests	21	84,393	3.4%	3,102	3.7%
Serum EIA Tests	167	2,144,257	87.6%	20,824	1.0%
Urine EIA Tests	3	6,757	0.3%	232	3.4%
Rapid Tests	60	13,103	0.5%	136	1.0%
Total EIA Tests	211	2,248,510	91.9%	24,294	1.1%
<i>Other HIV Tests</i>					
Western Blot	31	32,136	1.3%	20,184	62.8%
IFA	12	1,876	0.1%	1,622	86.5%
Qualitative PCR/ Qualitative RNA	5	164,305	6.7%	453	0.3%
Other Tests	1	122	<0.1%	0	-
Total HIV Tests	215	2,446,949	100.0%	46,553	1.9%

*(Number of Tests Performed/Total Number of HIV Tests)*100

** (Number of Tests Positive/Number of Tests Performed)*100

Prepared by the California Department of Public Health.

- ◆ In addition to HIV detection tests, other HIV-related tests were reported by laboratories surveyed. These included 234,399 viral load tests (performed by 36

Sexually Transmitted Disease Testing in California, 2005

labs) and 196,279 CD4 count tests (34 labs). Because the sampling for this survey emphasized testing for detection of infections, these totals may be an underestimate of HIV viral load and CD4 count testing.

Hepatitis B

- ◆ Of the surveyed laboratories, 195 reported a total of 2,061,992 hepatitis B surface antigen tests.
- ◆ 2.3 percent of reported hepatitis B surface antigen tests were positive.

HSV

- ◆ Of the laboratories included in the survey, 65 performed 534,013 HSV tests. Of these, 74.8 percent were serologic tests, 18.8 percent were cultures, 6.3 percent were direct antigen tests, and <1 percent were other types (Table 5).

Table 5. HSV Tests Reported by California Laboratories, 2005

HSV Test Type	Number of Labs	Number of Tests Performed	Percentage of all HSV Tests*	Number of Tests Positive	Percent Positive**
Culture	47	100,144	18.8%	30,868	30.8%
<i>Direct Antigen Tests</i>					
EIA	4	5,241	1.0%	2,166	41.3%
DFA	27	28,444	5.3%	6,491	22.8%
Other Direct Antigen	1	10	<0.1%	4	40.0%
Total Direct Antigen	31	33,695	6.3%	8,661	25.7%
<i>Serologic Tests</i>					
Non-type-specific Ab	12	93,301	17.5%	36,895	39.5%
Type-spec. HSV2 IgG	26	151,461	28.4%	41,361	27.3%
Type-spec. HSV2 IgM	7	37,370	7.0%	3,655	9.9%
Type-specific HSV1	19	117,093	21.9%	67,558	57.7%
Total Serology	35	399,225	74.8%	149,469	37.4%
Other HSV Tests	4	949	0.2%	200	21.1%
Total HSV Tests	65	534,013	100.0%	189,198	35.4%

*(Number of Tests Performed/Total Number of HSV Tests)*100

** (Number of Tests Positive/Number of Tests Performed)*100

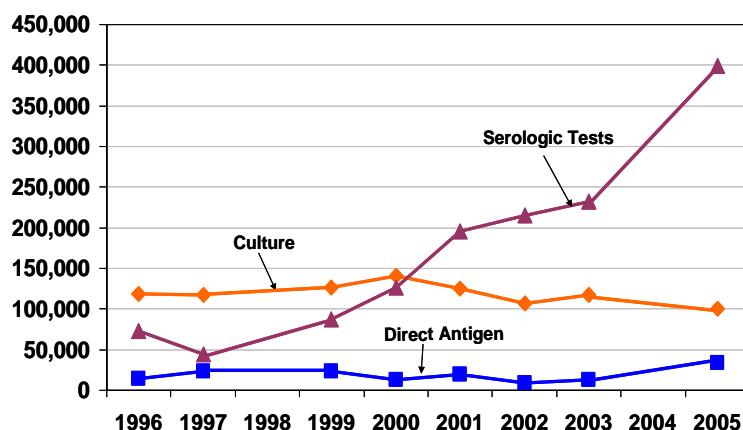
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- ◆ 47.3 percent of HSV serologic tests were HSV-2 type-specific; 23.8 percent of those were positive. An additional 17.5 percent of HSV serology tests were non-type-specific (Table 5); tests that do not distinguish between HSV-1 and HSV-2 have limited clinical value.⁹
- ◆ Reported HSV test volume increased by 158 percent from 1996 to 2005, most of which consisted of an increase in serologic tests (Figure 13). This increase is

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consistent with 2003 guidelines recommending availability of type-specific serology for diagnostic testing in conjunction with virologic tests.⁹

Figure 13. HSV Test Volume by Test Type, 1996-2005



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HPV

- ◆ HPV testing increased 52.1 percent between 2003 and 2005. Thirty-five laboratories included in the survey offered HPV DNA testing in 2005, performing a total of 722,208 tests. Of these, 99.3 percent were hybrid capture assays (Table 6).
- ◆ Of HPV tests performed, 18.6 percent were positive (Table 6).

Table 6. HPV Tests Reported by California Laboratories, 2005

HPV Test Type	Number of Labs	Number of Tests Performed	Percentage of all HPV Tests*	Number of Tests Positive	Percent Positive**
<i>Hybrid Capture Tests</i>					
High Risk	26	664,347	92.0%	118,862	17.9%
Low Risk	7	17,558	2.4%	2,615	14.9%
Combined	5	35,070	4.9%	10,826	30.9%
Total Hybrid Capture	28	716,975	99.3%	132,303	18.5%
Other HPV Tests	7	5,233	0.7%	2,110	40.3%
Total HPV Tests	35	722,208	100.0%	134,413	18.6%

*(Number of Tests Performed/Total Number of HPV Tests)*100

** (Number of Tests Positive/Number of Tests Performed)*100

Prepared by the California Department of Public Health.

CERVICAL CYTOLOGY

- ◆ Of the laboratories included in the survey, 111 reported performing 4,484,720 Pap tests.
- ◆ Of Pap tests performed, 184,420 (4.1 percent) were classified with an abnormal result. Of these, most were classified as Low-Grade Squamous Intraepithelial

Sexually Transmitted Disease Testing in California, 2005

Lesion (LSIL) (58.7 percent) and Atypical Squamous Cells of Undetermined Significance (ASC-US) (36.4 percent) (Table 7).

Table 7. Pap Results Reported by California Laboratories, 2005

Classification	Number Reported	Percentage of all Paps*
No Evidence of Dysplasia	4,300,300	95.8%
<i>Abnormal Result</i>		
Atypical Squamous Cells of Undetermined Significance (ASC-US)	67,147	1.5%
Atypical Squamous Cells, Cannot Exclude HSIL (ASC-H)	2,630	<0.1%
Low Grade Squamous Intraepithelial Lesion (LSIL)	108,256	2.4%
High Grade Squamous Intraepithelial Lesion (HSIL)	6,034	0.1%
Atypical Glandular Cells (AGC)	301	<0.1%
Cancer (Squamous Cell Carcinoma or Adenocarcinoma)	52	<0.1%
Total Abnormal Results	184,420	4.1%
Total Paps	4,484,720	100.0%

Prepared by the California Department of Public Health.

ELECTRONIC READINESS

- ◆ Of the 407 laboratories that responded to the electronic capabilities questions in 2005, 32 (7.9 percent) reported that their electronic capability was fully developed, 58 (14.3 percent) reported that it was partially developed, 80 (19.7 percent) reported that it was planned but not developed, 223 (54.8 percent) reported that it was neither planned nor developed, and 14 (1.4 percent) were unknown.

TECHNICAL NOTES

The 2005 California Clinical Laboratory Survey was sent out to all licensed laboratories in California in 2006. This differed from years prior to 2003, when the survey was mailed only to laboratories reporting STD testing.

Los Angeles County Department of Health Services' STD Control Program conducted the laboratory survey for laboratories located in Los Angeles County. All other laboratories in California were surveyed by the California Department of Public Health/Division of Communicable Disease Control/STD Control Branch. Data from both Los Angeles and California surveys were merged for analysis.

Follow-up contact was attempted with all laboratories that did not respond to the survey, but was not as comprehensive in 2005 compared to previous years, due to staffing shortages. Comparisons of 2005 data with that of previous years should therefore be interpreted with caution.

Of the 1,726 laboratories that were sent surveys in 2005, 1,002 returned the survey (58.1 percent). Of the 724 non-responders, 108 (14.9 percent) were draw stations only, 377 (52.1 percent) were known from previous surveys to not perform STD tests, 110 (15.2 percent) had unknown STD testing status, and 129 (17.8 percent) were known from previous surveys to perform STD tests. Of the 1,002 responders, 14 (1.4 percent) indicated that they had closed since the previous survey, 96 (9.6 percent) were draw stations only, 478 (47.7 percent) did not perform STD or Pap testing, and 414 (41.3 percent) reported either STD testing, Pap testing, or both. These 414 laboratories were included in this survey summary.

The response rate was calculated by dividing the number of laboratories that responded and reported STD or Pap testing (N=414) by the number of laboratories considered eligible or potentially eligible (N=653). Eligible laboratories included those known to perform STD or Pap testing; potentially eligible laboratories included those with unknown STD testing status. The response rate was 63.4 percent.

Additional follow-up contact was attempted with laboratories that reported performing tests but failed to report numbers of tests performed or numbers positive. Contact was achieved and numbers obtained for all but 25 laboratories. These 25 laboratories remained in the analysis and were counted towards the number of laboratories performing tests; however, numbers of tests performed and/or numbers of positives may be underestimated due to missing information.

ADDITIONAL RESOURCES

¹California Chlamydia Action Coalition (CCAC) Recommendations for Screening:
<http://www.ucsf.edu/castd/downloadable/uspstfct.pdf>

²Current laboratory reports and disease trend information are available on the CDPH/DCDC/STD Control Branch website: <http://www.dhs.ca.gov/ps/dcdc/STD/stdindex.htm>. Information on previous laboratory reports and disease trends may be requested from the California Department of Public Health, STD Control Branch, Epidemiology Unit at stdepi@cdph.ca.gov or 510-620-3400.

³Information about infectious disease reporting, including a list of reportable diseases and reporting laws, can be found at the CDPH/DCDC website. See “Reporting Guidelines”: <http://www.dhs.ca.gov/ps/dcdc/html/publicat.htm>

⁴Information about HIV reporting can be found at the CDPH Office of AIDS website: <http://www.dhs.ca.gov/aids/HIVReporting/Default.htm>

⁵National Chlamydia Laboratory Committee, “Negative Grey Zone Supplemental Testing to Enhance Sensitivity of Chlamydia Enzyme Immunoassays and Nucleic Acid Probe Assays”:
http://www.aphl.org/programs/infectious_diseases/std/Documents/NCC_NGZ_Testing.pdf

⁶Recent CDC guidelines for chlamydia and gonorrhea testing: MMWR Oct 18, 2002; 51(RR-15): 1-27. <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5115a1.htm>

⁷California Gonorrhea Treatment Guidelines:
<http://www.cdph.ca.gov/HealthInfo/discond/Documents/Gonorrhea-Treatment-Guides-Dec-2006.pdf>

⁸Recent CDC guidelines for syphilis laboratory testing can be found on the CDC website: <http://www.cdc.gov/std/program/medlab/ApE-PGmedlab.htm>

⁹California Guidelines for the Use of Herpes Simplex Virus (HSV) Type 2 Serologies:
<http://www.cdph.ca.gov/HealthInfo/discond/Documents/Herpes-Full-Guide.pdf>

For further information, contact:

Sarah Hendlish, M.P.H.
Epidemiologist
CDPH/DCDC/STD Control Branch
sarah.hendlish@cdph.ca.gov
(510) 620-3411

Gail Gould
Public Health Advisor
CDPH/DCDC/STD Control Branch
gail.gould@cdph.ca.gov
(916) 552-9811