



STD Prevalence Monitoring Among Self-Identified Men Who Have Sex With Men (MSM) Inmates in Los Angeles County Men's Central Jail Annual Report - 2005



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July 6, 2006

Dear Colleague,

We are pleased to release the 2005 annual report on the "STD Prevalence Monitoring Among Self-Identified Men Who Have Sex With Men (MSM) Inmates in Los Angeles County Men's Central Jail." The Los Angeles County STD Program, in collaboration with the Los Angeles County Sheriff's Department has participated in the STD prevalence monitoring project since March 2000. This report summarizes the results of voluntary chlamydia, gonorrhea, and HIV screening at the Los Angeles County Men's Central Jail from January1, 2005 through December 31, 2005. In addition, starting in April 2005, mandatory syphilis screening of all self-identified MSM inmates was instituted in response to increases in early syphilis among this group. Results are provided for self-identified MSM inmates as well as inmates from the general population.

Rates of chlamydia, gonorrhea, syphilis, and HIV among inmates at LAC Men's Central Jail, particularly among MSM inmates are among the highest of any group in the County. Given the elevated rates of STDs and the recent increase in high-risk behavior among MSM and outbreaks of STDs involving correctional inmates co-infected with HIV, this report reinforces the importance of surveillance within this community.

In 2005, 2,972 inmates were screened for chlamydia, gonorrhea, syphilis, or HIV. Overall, 198 cases of HIV (12.5%), 37 cases of chlamydia (3.2%), 21 cases of gonorrhea (1.8%), and 44 cases of early syphilis (1.6%) were identified. The seroprevalence of HIV was higher among MSM inmates (13.2%) as compared to general population inmates (0%). However, the prevalence of chlamydia was higher among general population inmates (10.9%) as compared to self-identified MSM inmates (2.7%). When interpreting these findings, it is important to note that the majority of screenings (97%) were conducted among MSM inmates.

We are grateful for the assistance and collaboration of the Los Angeles Sheriff's Department as this project demonstrates the need for continued surveillance among inmates. Testing inmates offers a unique opportunity to detect, treat, and educate these high-risk individuals.

Sincerely,

C.Kend

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If you would like to receive surveillance reports and other information from the STD Program, please call (213) 744-3070 or register for STDInfo online at <u>http://ladhs.org/listserv</u> to receive surveillance reports and other information from the STD Program via email.

SUGGESTED CITATION

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Table 1. Number of Tests and Positive Test Results
Men's Central Jail, Los Angeles, CAAll Inmates (Self-Identified MSM and General Population Inmates)
January 1 - December 31, 2005

	Total Chlamydia			Gonorrhea			Ear	ly Syph	ilis*		HIV		Inm	eleased			
	Scre	ened		Positiv	e Tests		Positive	Tests		Positiv	e Tests		Positive	Tests			
			No.			No.			No.			No.				U U	Stay in Days
	n	%	Tests	n	%	Tests	n	%	Tests	n	%	Tests	n	%	n	(F	Range) [#]
Total	2,972	100.0	1,166	37	3.2	1,166	21	1.8	2,789	44	1.6	1,584	198	12.5	2,394	64	(1 - 777)
Age Group																	
16-19	77	2.6	31	3	9.7	31	3	9.7	73	3	4.1	48	4	8.3	67	39	(2 - 221)
20-29	1,063	35.8	440	20	4.5	440	13	3.0	992	21	2.1	616	64	10.4	885	62	(1 - 656)
30-39	1,029	34.6	388	12	3.1	388	3	0.8	970	11	1.1	533	71	13.3	804	66	(1 - 651)
40-49	668	22.5	255	2	0.8	255	1	0.4	632	8	1.3	314	51	16.2	537	69	(1 - 777)
50+	135	4.5	52	0	0.0	52	1	1.9	122	1	0.8	73	8	11.0	101	66	(5 - 273)
Race/Ethnicity																	
African American	1,175	39.5	462	21	4.5	462	10	2.2	1,105	13	1.2	602	76	12.6	931	63	(1 - 777)
Asian	17	0.6	8	1	12.5	8	0	0.0	17	0	0.0	9	3	33.3	13	60	(3 - 180)
Hispanic	793	26.7	318	5	1.6	318	6	1.9	747	15	2.0	424	57	13.4	656	58	(1 - 651)
White	910	30.6	342	7	2.0	342	4	1.2	848	16	1.9	508	58	11.4	744	73	(1 - 656)
Other	63	2.1	32	1	3.1	32	1	3.1	61	0	0.0	33	3	9.1	50	58	(3 - 342)
Unknown	14	0.5	4	2	50.0	4	0	0.0	11	0	0.0	8	1	12.5	0		
Month																	
January	92	3.1	54	1	1.9	54	2	3.7	58	0	0.0	77	13	16.9	81	112	(10 - 656)
February	118	4.0	74	5	6.8	74	3	4.1	80	3	3.8	101	12	11.9	112	85	(7 - 313)
March	171	5.8	137	5	3.6	137	0	0.0	146	10	6.8	132	15	11.4	150	118	(4 - 656)
April	528	17.8	12	0	0.0	12	0	0.0	520	11	2.1	279	34	12.2	490	93	(1 - 777)
May	309	10.4	126	5	4.0	126	2	1.6	298	6	2.0	158	11	7.0	290	55	(1 - 403)
June	292	9.8	174	6	3.4	174	2	1.1	281	1	0.4	181	21	11.6	261	65	(1 - 382)
July	217	7.3	93	0	0.0	93	3	3.2	213	0	0.0	100	19	19.0	188	45	(2 - 365)
August	296	10.0	122	2	1.6	122	4	3.3	281	4	1.4	138	23	16.7	223	42	(1 - 312)
September	239	8.0	99	5	5.1	99	2	2.0	220	3	1.4	111	18	16.2	188	46	(1 - 368)
October	242	8.1	84	3	3.6	84	1	1.2	234	1	0.4	99	5	5.1	175	39	(1 - 365)
November	240	8.1	113	5	4.4	113	2	1.8	234	2	0.9	103	10	9.7	153	31	(2 - 651)
December	228	7.7	78	0	0.0	78	0	0.0	224	3	1.3	105	17	16.2	83	11	(1 - 63)

*Includes primary, secondary, and early latent cases; Excludes cases pending review by Public Health Investigator

 $^{\rm #}Length$ of stay in days among 2,394 inmates tested between 1/1/05 - 12/31/05

Coinfections: 17 inmates with coinfections; 5 chlamydia and gonorrhea, 1 chlamydia and early syphilis, 3 chlamydia and HIV, 1 gonorrhea and early syphilis; 2 gonorrhea and HIV, 5 early syphilis and HIV

Table 2. Number of Tests and Positive Test ResultsMen's Central Jail, Los Angeles, CASelf-Identified MSM InmatesJanuary 1 - December 31, 2005

				CI			lia	Ģ	Gonorrhe	a	Ear	ly Syph	ilis*		HIV		Inmates Releas		eleased				
	Total S	Total Screened		Fotal Screened		Total Screened		otal Screened		Positiv	e Tests		Positiv	e Tests		Positiv	/e Tests		Positive Tests			_	
			No.			No.			No.			No.				-	Stay in Days						
	n	%	Tests	n	%	Tests	n	%	Tests	n	%	Tests	n	%	n	(Range) [#]						
Total	2,875	100.0	1,102	30	2.7	1,102	19	1.7	2,707	43	1.6	1,496	198	13.2	2,304	63	(1 - 777)						
Age Group																							
16-19	74	2.6	30	3	10.0	30	3	10.0	70	3	4.3	45	4	8.9	64	37	(2 - 221)						
20-29	1,024	35.6	411	15	3.6	411	11	2.7	959	21	2.2	582	64	11.0	848	61	(1 - 656)						
30-39	999	34.7	365	10	2.7	365	3	0.8	945	11	1.2	506	71	14.0	777	66	(1 - 651)						
40-49	649	22.6	247	2	0.8	247	1	0.4	616	7	1.1	296	51	17.2	519	67	(1 - 777)						
50+	129	4.5	49	0	0.0	49	1	2.0	117	1	0.9	67	8	11.9	96	67	(5 - 273)						
Race/Ethnicity																							
African American	1,130	39.3	434	18	4.1	434	9	2.1	1,070	12	1.1	563	76	13.5	887	31	(1 - 777)						
Asian	17	0.6	8	1	12.5	8	0	0.0	[′] 17	0	0.0	9	3	33.3	13	60	(3 - 180)						
Hispanic	766	26.6	302	4	1.3	302	5	1.7	722	15	2.1	399	57	14.3	632	57	(1 - 651)						
White	890	31.0	326	5	1.5	326	4	1.2	831	16	1.9	489	58	11.9	725	73	(1 - 656)						
Other	60	2.1	29	1	3.4	29	1	3.4	58	0	0.0	30	3	10.0	47	52	(3 - 342)						
Unknown	12	0.4	3	1	33.3	3	0	0.0	9	0	0.0	6	1	16.7	0								
Month																							
January	92	3.2	54	1	1.9	54	2	3.7	58	0	0.0	77	13	16.9	81	112	(10 - 656)						
February	76	2.6	46	1	2.2	46	1	2.2	46	3	6.5	63	12	19.0	72	93	(7 - 313)						
March	137	4.8	104	3	2.9	104	0	0.0	116	10	8.6	101	15	14.9	118	120	(4 - 656)						
April	511	17.8	12	0	0.0	12	0	0.0	504	10	2.0	263	34	12.9	476	93	(1 - 777)						
Мау	309	10.7	126	5	4.0	126	2	1.6	298	6	2.0	158	11	7.0	290	55	(1 - 403)						
June	291	10.1	173	6	3.5	173	2	1.2	281	1	0.4	181	21	11.6	260	66	(1 - 382)						
July	215	7.5	92	0	0.0	92	3	3.3	212	0	0.0	98	19	19.4	186	44	(2 - 365)						
August	296	10.3	122	2	1.6	122	4	3.3	281	4	1.4	138	23	16.7	223	43	(1 - 312)						
September	238	8.3	98	4	4.1	98	2	2.0	219	3	1.4	110	18	16.4	187	46	(1 - 368)						
October	242	8.4	84	3	3.6	84	1	1.2	234	1	0.4	99	5	5.1	175	39	(1 - 365)						
November	240	8.3	113	5	4.4	113	2	1.8	234	2	0.9	103	10	9.7	153	32	(2 - 651)						
December	228	7.9	78	0	0.0	78	0	0.0	224	3	1.3	105	17	16.2	83	11	(1 - 63)						

*Includes primary, secondary, and early latent cases; Excludes cases pending review by Public Health Investigator

[#]Length of stay in days among 2,304 inmates tested between 1/1/05 - 12/31/05

Coinfections: 15 inmates with coinfections; 3 chlamydia and gonorrhea, 1 chlamydia and early syphilis, 3 chlamydia and HIV, 1 gonorrhea and early syphilis, 2 gonorrhea and HIV, 5 early syphilis and HIV

Table 3. Number of Tests and Positive Test Results Men's Central Jail, Los Angeles, CA General Population Inmates January 1 - December 31, 2005

	Total Chlar			Chlamydia Gonorrhea					Ear	ly Syphi	ilis*		HIV		Inn	Released	
	Scre	ened		ositi	ve Tests		Positive	Tests		Positiv	e Tests		Positive	Tests		-	
			No.			No.			No.			No.				•	Stay in Days
	n	%	Tests	n	%	Tests	n	%	Tests	n	%	Tests	n	%	n	(Range) [#]
Total	97	100.0	64	7	10.9	64	2	3.1	82	1	1.2	88	0	0.0	90	95	(8 - 364)
Age Group																	
16-19	3	3.1	1	0	0.0	1	0	0.0	3	0	0.0	3	0	0.0	3	75	(35 - 146)
20-29	39	40.2	29	5	17.2	29	2	6.9	33	0	0.0	34	0	0.0	37	94	(12 - 364)
30-39	30	30.9	23	2	8.7	23	0	0.0	25	0	0.0	27	0	0.0	27	92	(8 - 229)
40-49	19	19.6	8	0	0.0	8	0	0.0	16	1	6.3	18	0	0.0	18	115	(11 - 234)
50+	6	6.2	3	0	0.0	3	0	0.0	5	0	0.0	6	0	0.0	5	54	(11 - 153)
Race/Ethnicity																	
African American	45	46.4	28	3	10.7	28	1	3.6	35	1	2.9	39	0	0.0	44	109	(11 - 364)
Asian	0	0.0	0			0			0			0			0		,
Hispanic	27	27.8	15	1	6.7	16	1	6.3	25	0	0.0	25	0	0.0	24	89	(12 - 234)
White	20	20.6	16	2	12.5	16	0	0.0	17	0	0.0	19	0	0.0	19	59	(8 - 161)
Other	3	3.1	3	0	0.0	3	0	0.0	3	0	0.0	3	0	0.0	3	153	(62 - 229)
Unknown	2	2.1	1	1	100.0	1	0	0.0	2	0	0.0	2	0	0.0	0		
Month																	
January	0	0.0	0			0			0			0			0		
February	42	43.3	28	4	14.3	28	2	7.1	34	0	0.0	38	0	0.0	40	71	(11 - 212)
March	34	35.1	33	2	6.1	33	0	0.0	30	0	0.0	31	0	0.0	32	112	(22 - 243)
April	17	17.5	0			0			16	1	6.3	16	0	0.0	14	113	(8 - 364)
May	0	0.0	0			0			0			0			0		
June	1	1.0	1	0	0.0	1	0	0.0	0			0			1	72	(72 - 72)
July	2	2.1	1	0	0.0	1	0	0.0	1	0	0.0	2	0	0.0	2	183	(161 - 205)
August	0	0.0	0			0			0			0			0		
September	1	1.0	1	1	100.0	1	0	0.0	1	0	0.0	1	0	0.0	1	56	(56 - 56)
October	0	0.0	0			0			0			0			0		
November	0	0.0	0			0			0			0			0		
December	0	0.0	0			0			0			0			0		

*Includes primary, secondary, and early latent cases; Excludes cases pending review by Public Health Investigator

[#]Length of stay in days among 90 inmates tested between 1/1/05 - 12/31/05

Coinfections: 2 inmates with coinfections; 2 chlamydia and gonorrhea

Table 4. Treatment Status Among those with Positive Test ResultsMen's Central Jail, Los Angeles, CAAll Inmates (Self-Identified MSM and General Population Inmates)January 1 - December 31, 2005

			Chlamy	dia				Gonorrhe	ea		Early Syphilis*						
	No.	No.	%	Media	n Days to	No.	No.	%	Median	Days to	No.	No.	%	Median	Days to		
	Positive	Treated	Treated	Treatme	nt (Range)	Positive	Treated	Treated	Treatmen	t (Range)	Positive	Treated	Treated	Treatmen	t (Range)		
Total	37	21	56.8	13	(7 - 42)	21	13	61.9	8	(0 - 74)	44	43	97.7	14	(0 - 85)		
Age Group																	
16-19	3	3	100.0	22	(21 - 42)	3	2	66.7	11	(0 - 22)	3	3	100.0	17	(9 - 63)		
20-29	20	11	55.0	10	(7 - 20)	13	9	69.2	8	(2 - 74)	21	21	100.0	15	(1 - 85)		
30-39	12	6	50.0	13	(10 - 21)	3		33.3	0	(0 - 0)	11	10	90.9	16	(8 - 48)		
40-49	2	1	50.0	7	(7 - 7)	1	1	100.0	15	(15 - 15)	8	8	100.0	9	(0 - 16)		
50+	0					1	0	0.0			1	1	100.0	15	(15 - 15)		
Race/Ethnicity																	
African American	21	14	66.7	11	(7 - 42)	10	6	60.0	5	(0 - 22)	13	12	92.3	11	(1 - 85)		
Asian	1	0	0.0			0				` ´	0				/		
Hispanic	5	1	20.0	10	(10 - 10)	6	4	66.7	7	(2 - 15)	15	15	100.0	16	(0 - 63)		
White	7	4	57.1	17	(11 - 20)	4	2	50.0	15	(15 - 15)	16	16	100.0	14	(0 - 29)		
Other	1	1	100.0	21	(21 - 21)	1	1	100.0	74	(74 - 74)	0						
Unknown	2	1	50.0	15	(15 - 15)	0					0						
Month																	
January	1	1	100.0	22	(22 - 22)	2	2	100.0	12	(2 - 22)	0						
February	5	2	40.0	9	(7 - 10)	3	2	66.7	9	(7 - 10)	3	3	100.0	10	(2 - 29)		
March	5	3	60.0	10	(10 - 10)	0					10	10	100.0	11	(7 - 85)		
April	0					0					11	11	100.0	11	(1 - 63)		
May	5	4	80.0	21	(8 - 42)	2		0.0			6	6	100.0	20	(8 - 77)		
June	6	1	16.7	19	(19 - 19)	2	1	50.0	8	(8 - 8)	1	1	100.0	0	(0 - 0)		
July	0					3	2	66.7	45	(15 - 74)	0						
August	2	0	0.0			4	3	75.0	6	(2 - 15)	4	4	100.0	26	(6 - 31)		
September	5	3	60.0	11	(11 - 20)	2	1	50.0	0	(0 - 0)	3	2	66.7	8	(0 - 16)		
October	3	3	100.0	10	(7 - 15)	1	1	100.0	15	(15 - 15)	1	1	100.0	10	(10 - 10)		
November	5	4	80.0	13	(10 -16)	2	1	50.0	0	(0 - 0)	2	2	100.0	24	(15 - 32)		
December	0					0					3	3	100.0	16	(9 - 16)		

*Includes primary, secondary, and early latent cases; Excludes cases pending review by Public Health Investigator



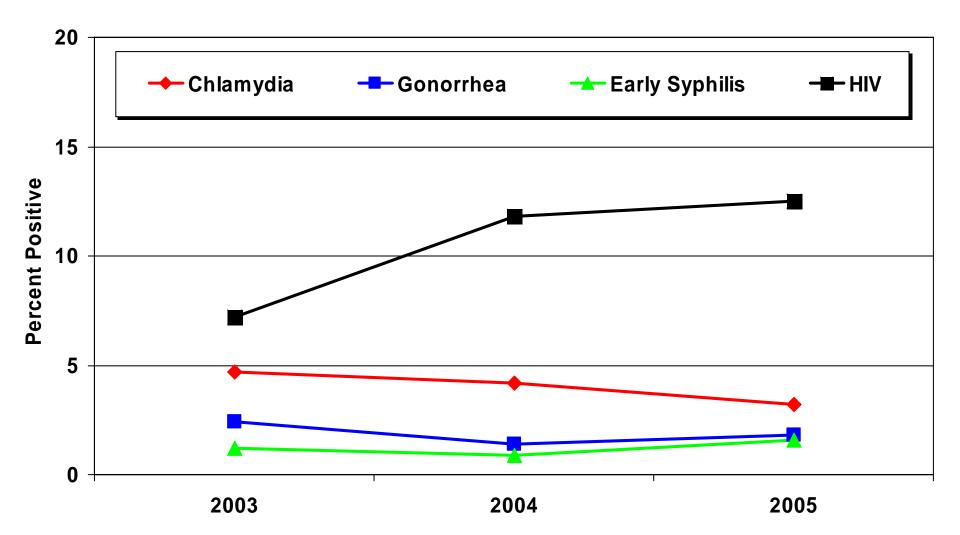


Figure 1. Prevalence of Chlamydia, Gonorrhea, Early Syphilis and HIV Among Inmates Screened in Men's Central Jail, 2003-2005.

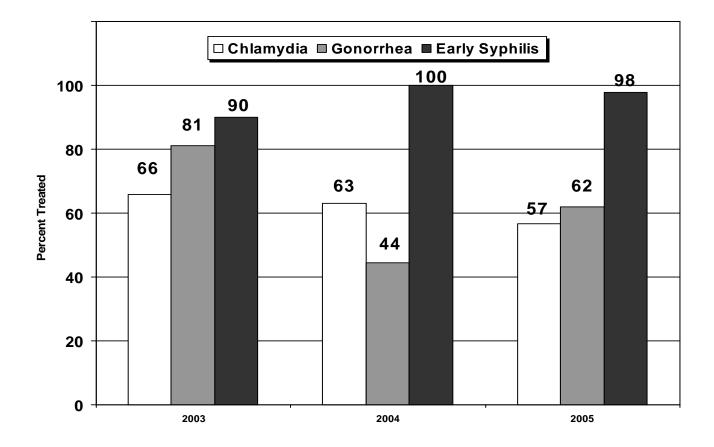


Figure 2. Treatment Status of Inmates Diagnosed with Chlamydia, Gonorrhea and Early Syphilis in Men's Central Jail, 2003-2005.

APPENDIX A: CASE DEFINITIONS FOR REPORTABLE STDs

California State law (California Administrative Code, Title 17, Public Health, Section 2500, 1996) requires all health care providers to report selected communicable diseases to local health departments. Six of these diseases are reported directly to the County STD Program using the STD Confidential Morbidity Report (STD CMR, Rev. 1/94). These six include: chlamydia, gonorrhea, syphilis, non-gonococcal/non-chlamydial urethritis (NGU), non-gonococcal/non-chlamydial pelvic inflammatory disease, and chancroid. The following case definitions should assist physicians and other health care providers in the reporting process. The clinical description for each disease is brief; a more thorough discussion can be found in Sexually Transmitted Diseases (3rd Edition, 1998) by Holmes, et al. STD Program staff are available to answer any questions you may have concerning STD case definitions and STD reporting requirements. Three of the six most frequently reported STDs are diagnosed as follows:

CHLAMYDIAL INFECTION

1. Clinical description

Presence of mucopurulent cervical, urethral, or rectal discharge; epididymitis, salpingitis, or PID in adults; conjunctivitis or pneumonia in infants born to mothers with untreated infection. Asymptomatic infections are common.

2. Criteria for diagnosis

Laboratory identification of *Chlamydia trachomatis* infection by culture, antigen detection, or nucleic acid detection (amplified or non-amplified) methods.

GONORRHEA

1. Clinical description

Presence of purulent cervical, urethral, or rectal discharge; epididymitis, pharyngitis, salpingitis, or PID in adults; conjunctivitis in neonates born to mothers with untreated infection. Asymptomatic infections are common.

2. Criteria for diagnosis

Compatible clinical picture and sexual exposure to a person infected with *N. gonorrhoeae*, OR a, b, or c.

- a. Observation of Gram negative intracellular diplococci in urethral specimen from a male,
- b. Isolation of typical gram-negative, oxidase positive diplococci from a clinical specimen,

c. Laboratory identification of *N. gonorrhoeae* infection by culture, antigen detection, or nucleic acid detection (amplified or non-amplified) methods.

APPENDIX A: CASE DEFINITIONS FOR REPORTABLE STDs

EARLY SYPHILIS

Early syphilis includes primary, secondary, and early latent cases reported within less than one year from the date of infection.

PRIMARY SYPHILIS

1. Clinical description

One or more painless indurated ulcers at the site of exposure. Lymphadenopathy is common.

2. Criteria for diagnosis

Compatible clinical picture AND laboratory confirmation by either a or b:

- a. Demonstration of T. *pallidum* in clinical specimen by darkfield, fluorescent antibody or equivalent microscopic methods,
- b. Reactive serologic test for syphilis

Note: Nontreponemal tests often do not become reactive until 7-10 days following lesion onset.

SECONDARY SYPHILIS

1. Clinical description

Clinical manifestations are many, including localized or diffuse often bilateral mucocutaneous lesions and generalized lymphadenopathy. Flu-like symptoms are common.

2. Criteria for diagnosis

Identification of T. *pallidum* from a lesion compatible with secondary syphilis OR compatible clinical picture with laboratory confirmation by either a or b:

- a. Reactive nontreponemal test (>1:4) with no prior diagnosis of syphilis,
- b. Four-fold or greater increase in nontreponemal test titer compared with most recent test for individuals with prior history of syphilis

Note: Treponemal test (FTA-ABS or MHA-TP) will be reactive.

EARLY LATENT SYPHILIS

1. Clinical description

No clinical signs or symptoms of syphilis.

2. Criteria for diagnosis

Reactive treponmeal and nontreponemal test AND initial infection that has occurred within previous 12 months as demonstrated by a, b, or c.

- a. Nonreactive or four-fold lower titer nontreponemal test wihin past 12 months,
- b. History consistent with untreated primary or secondary syphilis in the past 12 months,

APPENDIX A: CASE DEFINITIONS FOR REPORTABLE STDs

c. Sexual exposure to a partner with primary or secondary syphilis in the past 12 months, or probable early latent syphilis (documented independently as duration < 1 year) and no history of treatment for syphilis following the exposure.

APPENDIX B: LABORATORY DIAGNOSTIC TESTS USED FOR THE DIAGNOSIS OF SEXUALLY TRANSMITTED DISEASES

All specimens sent from the Los Angeles County STD Clinics for gonorrhea, chlamydia, syphilis and HIV are tested at the Department of Health Services Public Health Laboratory.

Testing for urogenital gonorrhea and Chlamydia trachomatis

Chlamydia trachomatis and Neisseria gonorrhoeae are detected from urine and endocervical swabs using a nucleic acid amplification test (NAAT) Aptima Combo 2 Assay (Gen-Probe, Inc., San Diego, CA). The Aptima Combo 2 Assay is approved for first-catch male and female urines, and endocervical and urethral swab specimens. This assay simultaneously tests for chlamydia and gonorrhea in the same specimen. It detects and exponentially amplifies as few as one copy of rRNA in a clinical specimen using three technologies: target capture, transcription-mediated amplification (TMA), and dual kinetic assay (DKA). Target capture is used to separate the target sequence from other substances. Amplification is accomplished by TMA. Hybridization Protection Assay is used to label the amplified product with a molecule that emits a chemiluminescent signal. The light that is produced is detected using DKA. Urine specimens must be added to the Gen-Probe transport tube, which contains a preservative. Specimens may be held at room temperature up to 30 days before testing. Frozen specimens may be held up to 90 days after collection. The Public Health Laboratory processes specimens within 3 days after the specimen arrives in the laboratory. Compared to culture, the nearest "Gold Standard", the test is more sensitive and comparatively specific.

Testing for rectal and pharyngeal gonorrhea

Neisseria gonorrhoeae is detected from rectal and pharyngeal swabs using a non-amplified DNA probe (Gen-Probe PACE 2 (Gen-Probe, Inc., San Diego, CA). The GEN-PROBE PACE 2 System for Neisseria gonorrhoeae is a rapid DNA probe test that utilizes the technique of nucleic acid hybridization for the detection of Neisseria gonorrhoeae from female endocervical and male urethral specimens collected from the urogenital tract using the GEN-PROBE PACE SPECIMEN COLLECTION KITS. Rectal and pharyngeal specimens have been added to the list of specimens as a result of a validation study. The sensitivity of PACE 2 is comparable to culture for detection of Neisseria gonorrhoeae in rectal specimens. The sensitivity of PACE 2 exceeds that of culture for detection of Neisseria gonorrhoeae in pharyngeal specimens. Nucleic acid hybridization tests are based on the ability of complementary nucleic strands to specifically align and associate to form stable double-stranded complexes. The GEN-PROBE PACE 2 System uses a chemiluminescently labeled single stranded DNA probe that is complementary to the ribosomal RNA of the target organism. After the ribosomal RNA is released from the organism, the labeled DNA probe combines with the target organism's ribosomal RNA to form a stable DNA:RNA hybrid. The labeled DNA:RNA hybrid is separated from the non-hybridized probe and is measured in the GEN-PROBE LEADER luminometer. The test results are calculated as the difference between the response of the specimen and the mean response of the Negative Reference. Only swabs contained in the PACE SPECIMEN COLLECTION KIT can be used to collect patient specimens. The swabs collected from patients must be transported to the laboratory in the GEN-PROBE transport medium.

Testing for syphilis

Blood is screened for syphilis using the Rapid Plasma Reagin (RPR) test which detects antibodies to *Treponema pallidum*, the causative agent of syphilis. Antibodies against *Treponema pallidum*, become detectable one to four weeks after the formation of the chancre. The RPR is a nontreponemal test that detects IgM & IgG antibodies using cardiolipin-lecithin-cholesterol antigen. Quantitative RPR tests may be used to monitor treatment for syphilis; a four-fold change in titer is clinically meaningful. RPR testing is non-specific and may yield false positive results in chicken pox, drug use, hepatitis, immunizations, connective tissue/autoimmune diseases, aging, leprosy, malignancy, viral pneumonia, malaria, measles, pinta, yaws, and rarely in pregnancy.

APPENDIX B: LABORATORY DIAGNOSTIC TESTS USED FOR THE DIAGNOSIS OF SEXUALLY TRANSMITTED DISEASES

All positive RPR tests are followed by a confirmatory, or treponemal, test that is specific for antibodies to *T. pallidum*. The confirmatory test currently being used by the Public Health Laboratory is the Treponema pallidum-particle agglutination (TP-PA) test, a gelatin particle agglutination assay. Tests that produce inconclusive or minimally reactive results are redrawn and repeated within 2 weeks after the first sample. Treponemal tests are not used to monitor treatment. The tests can result in false positives with age, autoimmune diseases, drug use, lyme disease, pinta, & yaws.

Testing for HIV

Blood is screened for antibody to HIV-1 using an enzyme-linked immunosorbent assay (ELISA), Vironostika HIV-1 Microelisa System (Organon Teknika). This provides a qualitative determination of antibody to HIV-1 in human serum, plasma, and dried blood spots on filter paper, and for use with the Home Access- HIV-1 Test System. H1V-1 antigen is derived from HIV-1 virus propagated in T-lymphocyte culture. After the virus is purified by ultracentrifugation and inactivated by disruption, it is used to coat the microelisa wells contained in the Vironostika HIV-1 Microelisa System. With the addition of a diluted test sample containing HIV-1 antibodies, immune complexes are formed by the interaction of HIV-1 antibodies in the sample and the solid phase HIV-1 antigens. Following incubation, the sample is aspirated and the well is washed with buffer. Subsequently, anti-human immunoglobulin (goat) conjugated with horseradish peroxidase (HAP) is added which binds the antibody-antigen complex during a second incubation. Following a wash and incubation with ABTS (2,2.-azino-di-[3-ethylbenzthiazoline-6-sulfonatel) substrate, a green cob is produced. The enzyme reaction is stopped by the addition of a fluoride solution. The amount of HIV-1 antibody bound to the plate is proportional to color development.

Positive sera are confirmed using an alternative methodology, i.e. Western Blot (Genetic Systems Bio-Rad Laboratories). In the Western blot assay, disrupted proteins of HIV-1 are fractionated by electrophoresis according to the molecular weight using a polyacrylamide gel. The resolved protein bands are transblotted to a nitrocellulose sheet. These sheets are then reacted with serum or plasma specimen. If HIV specific antibodies are present, they bind to their corresponding viral protein bands. The bands are visualized by using a phosphatase-labeled goat anti-human immunoglobulin conjugate, followed by a substrate for the enzyme. The presence of HIV-1 specific immunoglobulins in the specimen is indicated by labeling of HIV-1 specific proteins on the strip. Recognized HIV-1 viral antigens produce bands at gp160, gp120, p65, p55, p51, gp41, p40, p31, p24, and p18.





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