

# Syphilis Update: Lessons Learned from an Outbreak Associated with the Adult Film Industry

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# Learning objectives

At the end of this presentation the participant will be able to:

- 1) Name the standard treatment for primary/secondary vs. early and late latent syphilis
- 2) Describe the post-treatment follow-up testing recommended for syphilis patients
- 3) Understand STI health risks among performers in the Adult Film Industry
- 4) Identify the roles of local public health agencies and CalOSHA, and the Blood Borne Pathogen Standard, in the protection of workers in the workplace.





# MMWR™

Morbidity and Mortality Weekly Report

www.cdc.gov/mmwr

Recommendations and Reports

December 17, 2010 / Vol. 59 / No. RR-12

## Sexually Transmitted Diseases Treatment Guidelines, 2010

DEPARTMENT OF HEALTH AND HUMAN SERVICES  
CENTERS FOR DISEASE CONTROL AND PREVENTION



<http://www.cdc.gov/std/treatment/2010/>

Centers for Disease Control and Prevention,  
MMWR 2010; 59 (RR 12)



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### Updates, Errata, Etc.

- [New Treatment Guidelines for Gonorrhea: Antibiotic Change](#) - CDC expert commentary featuring Dr. Robert Kirkcaldy (August 13, 2012)
- [Update to CDC's Sexually Transmitted Diseases Treatment 2010 Guidelines: Oral Cephalosporins No Longer a Recommended Treatment for Gonococcal Infections](#) - MMWR August 10, 2012 (August 9, 2012)

# Primary Syphilis

- Chancre:
  - Appears 10-90 days after infection
  - Typically single, painless, indurated, clean-based lesion with rolled edges
  - More likely to be multiple lesions (40%) and persisting at the time of secondary Sx in HIV-infected patients

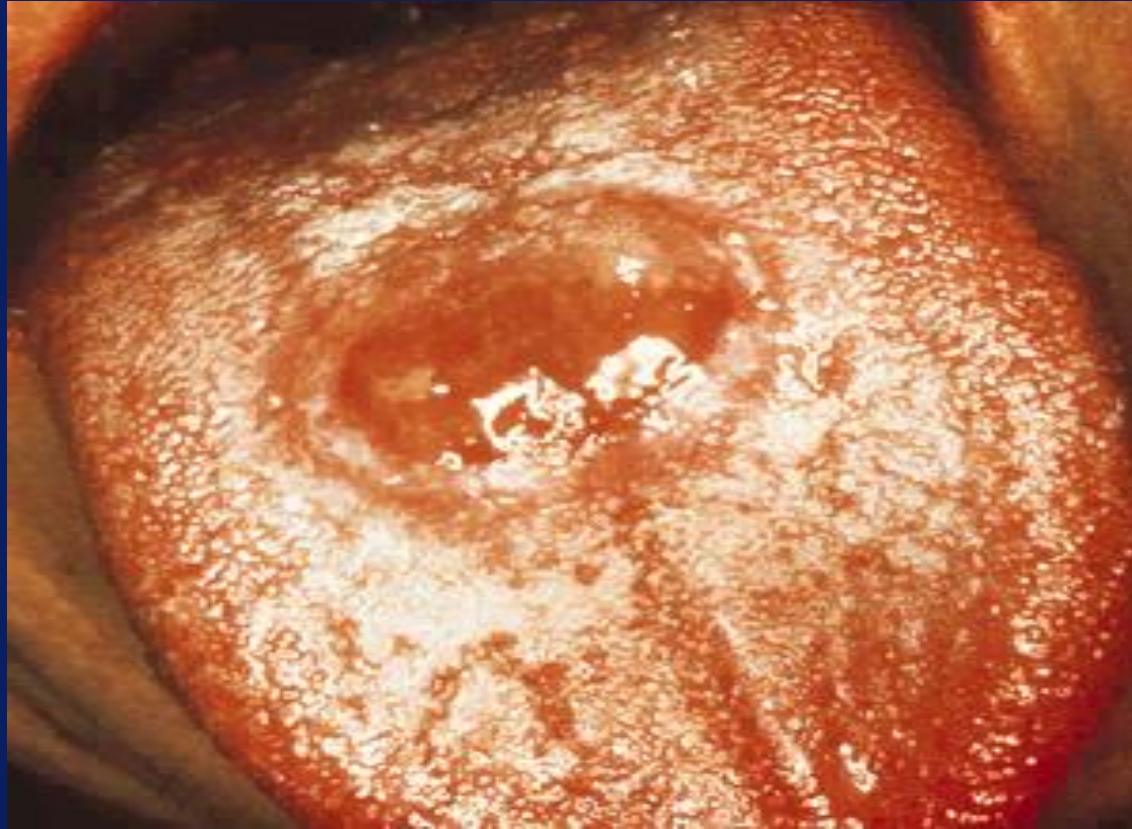


Dr. Joseph Engelman, San Francisco City Clinic

 Mosby *STD Atlas, 1997*



# Primary Syphilis Chancre, Tongue



 Mosby *STD Atlas, 1997*



# Rashes of Secondary Syphilis



Macular



Palmar

Dr. Joseph Engelman, San Francisco City Clinic



Papular

## DDx of the Rash of 2° Syphilis

- Tinea versicolor
- Pityriasis rosea
- Erythema multiforme
- ART Drug reaction

# Other Manifestations of 2° Syphilis



Condyloma lata



Condyloma lata

Dr. Joseph Engelman, San Francisco City Clinic



Mucous patches



Patchy Alopecia



STD Atlas, 1997



COUNTY OF LOS ANGELES  
Public Health



# Syphilis Staging Flowchart

Symptoms or Signs?

YES

NO

1° (Ulcer)

2° (Rash, etc)

PRIMARY

SECONDARY

LATENT

ANY IN PAST YEAR?

- Negative syphilis serology
- Known contact to early syphilis case
- Good history of typical signs/symptoms

YES

NO

EARLY LATENT

UNKNOWN  
or LATE LATENT



# Diagnosis of Syphilis

- Serology
  - Non-treponemal (non-specific, cardiolipin-based)
  - Treponemal (specific to *Treponema pallidum*)
- Darkfield microscopy
- Polymerase Chain Reaction
- Direct Immunofluorescence



# Syphilis Screening Paradigm

## TRADITIONAL

**Non-treponemal tests  
(i.e., RPR, VDRL)**

- **Non-specific to TP**
- **Quantitative**
- **Reactivity declines with time**



**Treponemal tests  
(i.e., TPPA, FTA-Abs)**

- **Specific to TP**
- **Qualitative**
- **Reactivity persists over time**

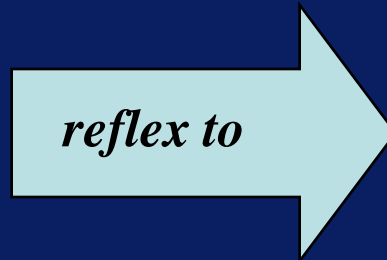


# Syphilis Screening Paradigm

## EMERGING / NEW...

**Treponemal tests  
(i.e., EIA, CLIA)**

- Specific to *TP*
- Qualitative
- Reactivity persists over time



**Non-treponemal tests  
(i.e., RPR, VDRL)**

- Non-specific to *TP*
- Quantitative
- Reactivity declines with time



# Syphilis Treatment

## Primary, Secondary & Early Latent

### Recommended regimen for adults:

- Benzathine penicillin G 2.4 million units IM in a single dose
- No enhanced efficacy of additional doses of BPG, amoxicillin or other antibiotics even if HIV infected

### Alternatives (non-pregnant\* penicillin-allergic adults):

- Doxycycline 100 mg po bid x 2 weeks
- Tetracycline 500 mg po qid x 2 weeks
- Ceftriaxone 1 g IV or IM qd x 10-14 d
- Azithromycin 2 g po in a single dose should be used with caution

\*Pregnant patients with PCN allergies need to be desensitized



# Syphilis Treatment

## Late Latent or Unknown Duration

### Recommended regimen for adults:

- Benzathine penicillin G 2.4 MU IM weekly x 3 weeks (7.2 MU total)

### Alternatives (non-pregnant\* penicillin-allergic adults):

- Doxycycline 100 mg po bid x 28 days
- Tetracycline 500 mg po qid x 28 days

\*Pregnant patients with PCN allergies need to be desensitized



# When is an LP indicated?

- Neurologic or ophthalmic/auditory symptoms/signs
- Evidence of tertiary disease (aortitis, gumma)
- Serologic treatment failure
- In HIV infection- unless there are neurologic symptoms there is **NO EVIDENCE** that an LP/CSF exam is associated with improved outcomes



# Follow-up and Serologic Response after Treatment for P&S Syphilis

- Follow-up titers should be compared to the nontreponemal titer obtained on day of treatment
- Clinical and serologic f/u:
  - HIV-negative at 6 and 12 months
  - HIV-infected at 3,6,9,12 and 24 months
- Serologic response is slower in HIV-infected patients and those with a previous history of syphilis





# Management of Suspected Syphilis Treatment Failures

- Treatment failure is defined as:
  - Slow resolution or relapse of mucocutaneous signs
  - Sustained (greater than 2 weeks) fourfold increase in nontreponemal titers
  - Failure of nontreponemal titers to decrease fourfold by 12 months
- Management of treatment failure includes:
  - LP to rule out neurologic site of infection
  - Benzathine Penicillin G 7.2 million units (2.4 mu weekly x 3)
  - Follow serofast titers annually but additional therapy/repeat LP not warranted
  - Fluctuating high titers have been observed in HIV infected patients

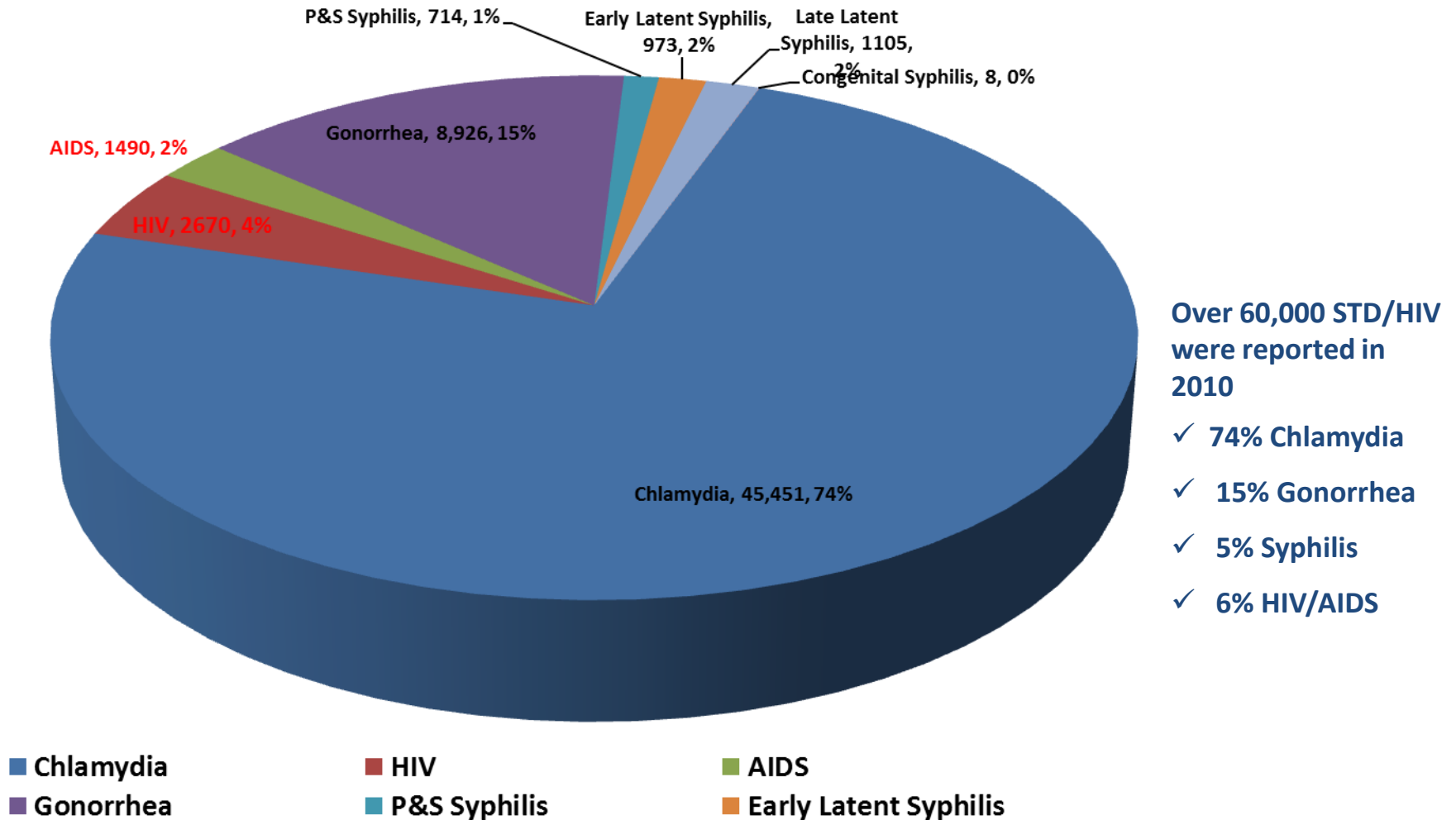


# Public Health Management of Infectious Syphilis Cases

- Report all suspected or confirmed syphilis cases to the local Public Health Department within 24 hours of diagnosis
- Evaluate contacts:
  - All contacts should receive an exam and serology
  - If possible exposure within the past 3 months should be treated empirically on day of visit

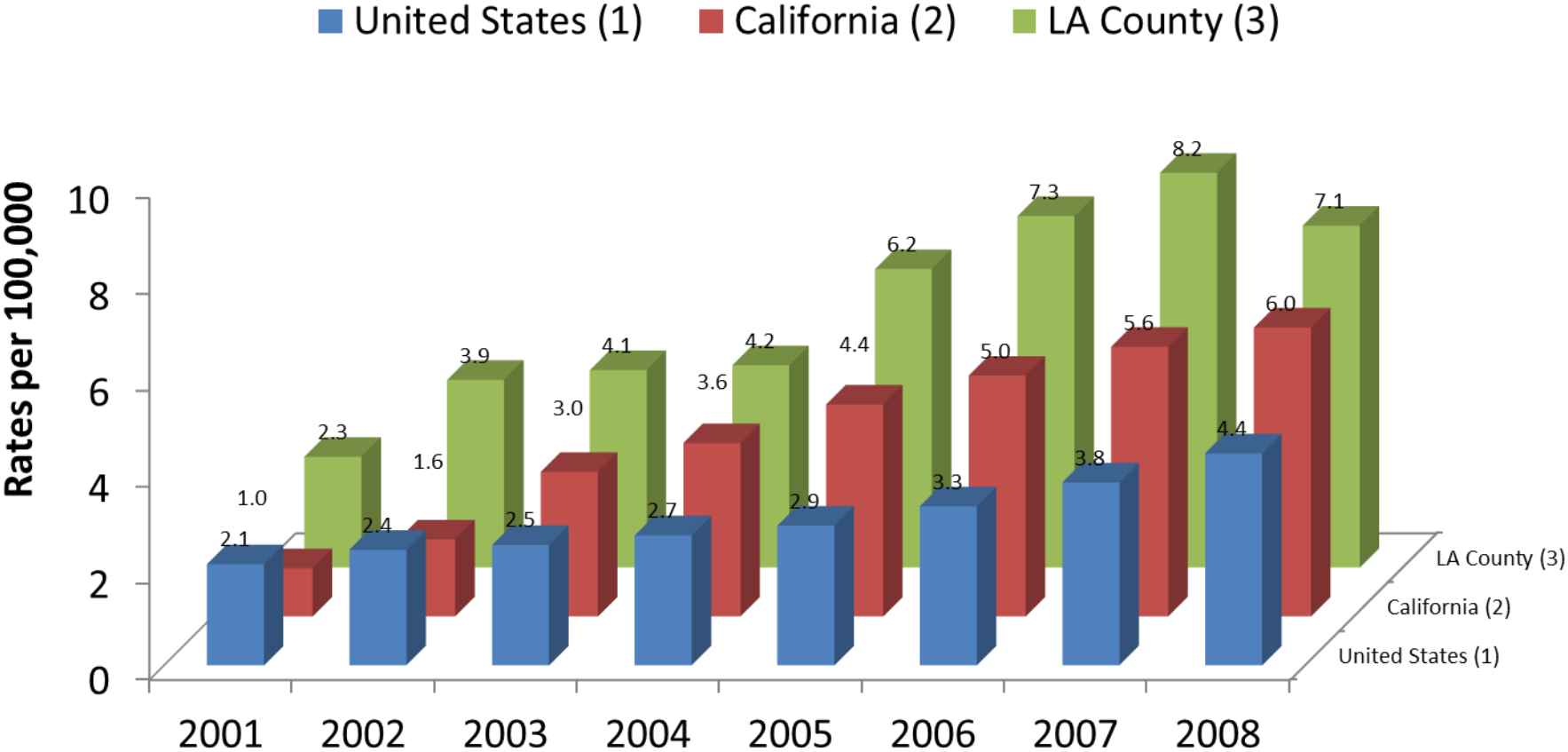


# Reported STD and HIV to Health Department in Los Angeles County, 2010\*

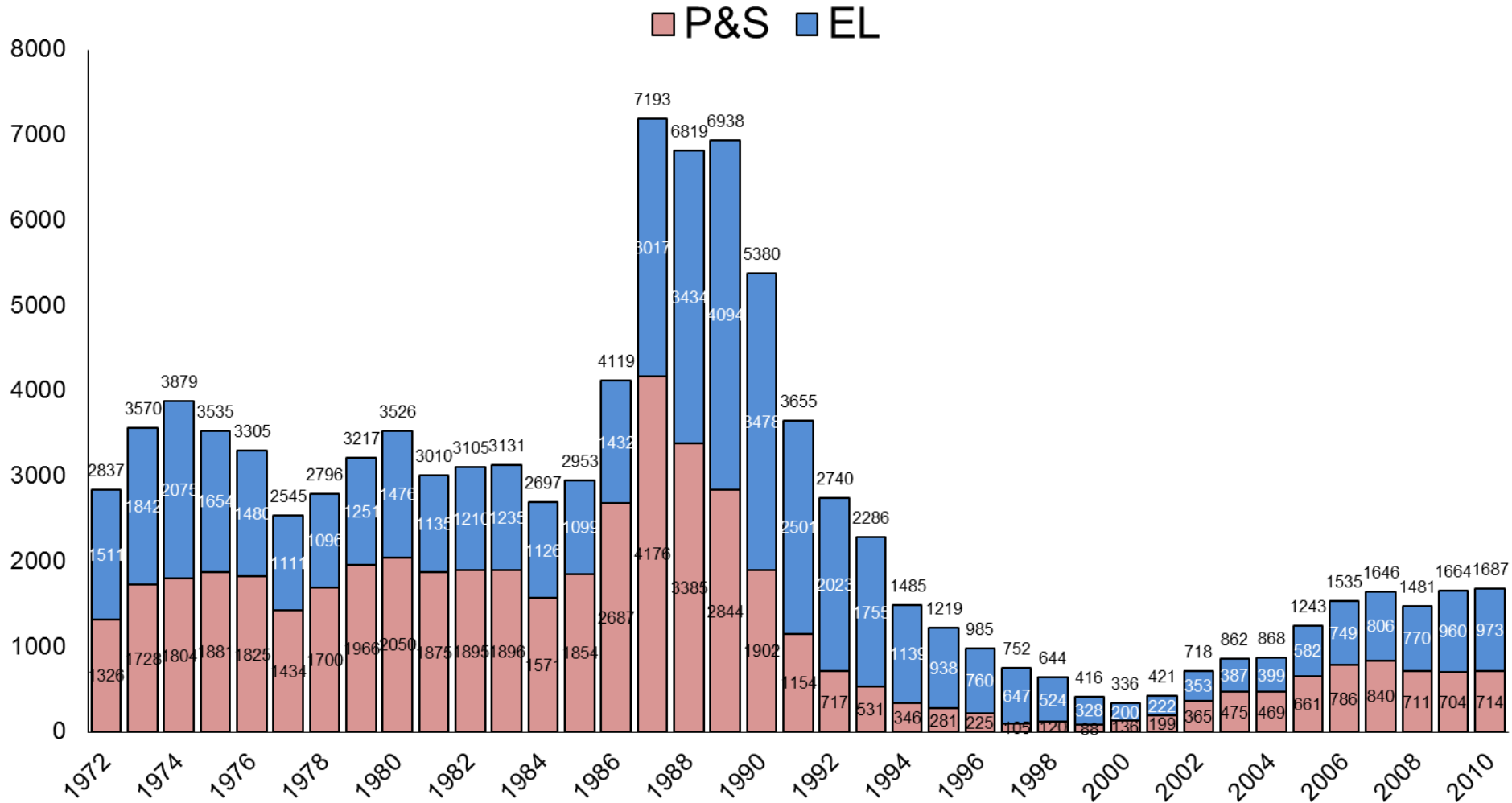


\* Provisional data

# Primary & Secondary Syphilis Rates per 100,000 Population, US, CA, LAC, 2001 - 2009



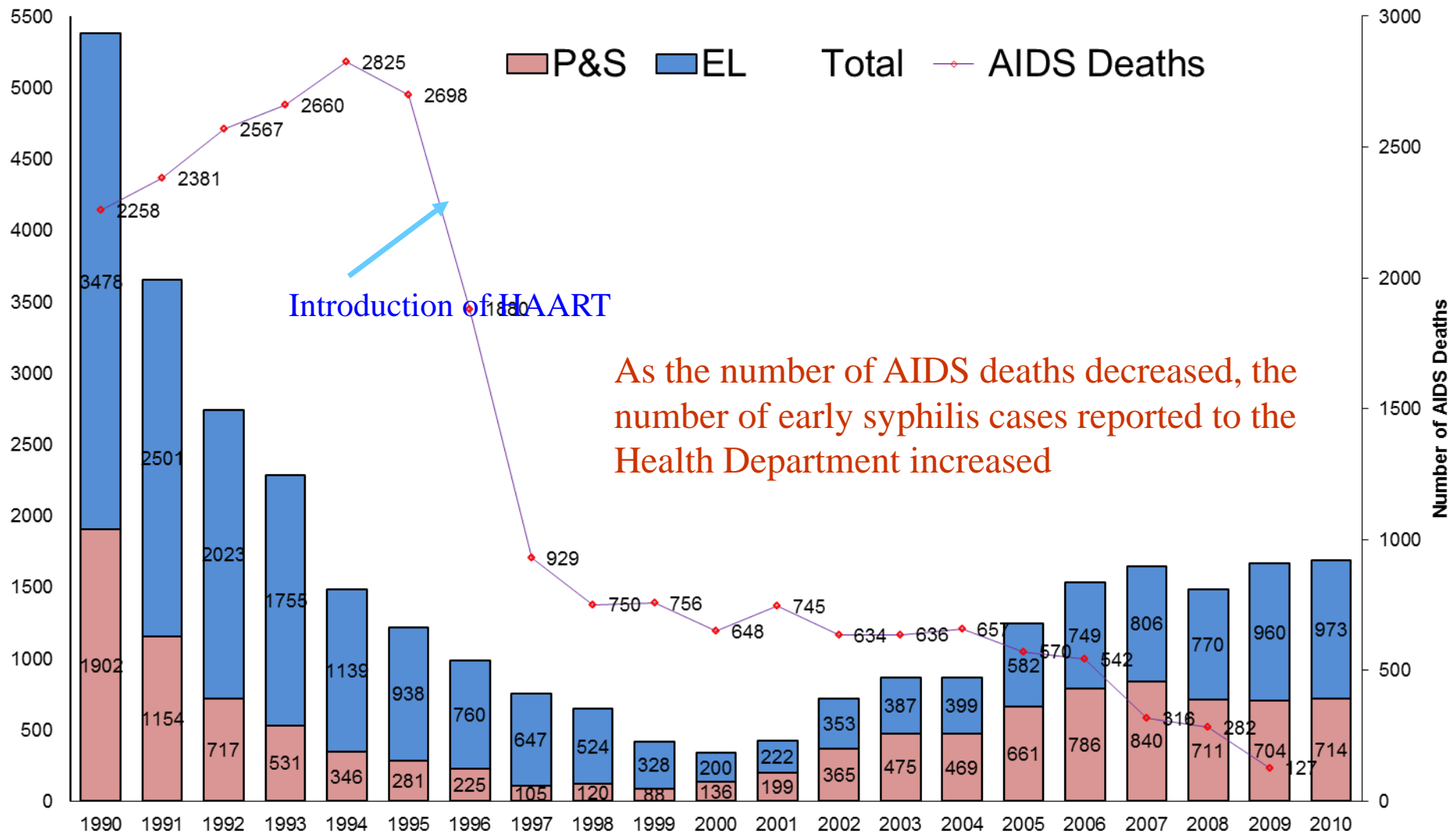
# Primary, Secondary, and Early Latent Syphilis Cases, Los Angeles County, 1972-2010



\*Data reported prior to 1986 include Pasadena and Long Beach cases.

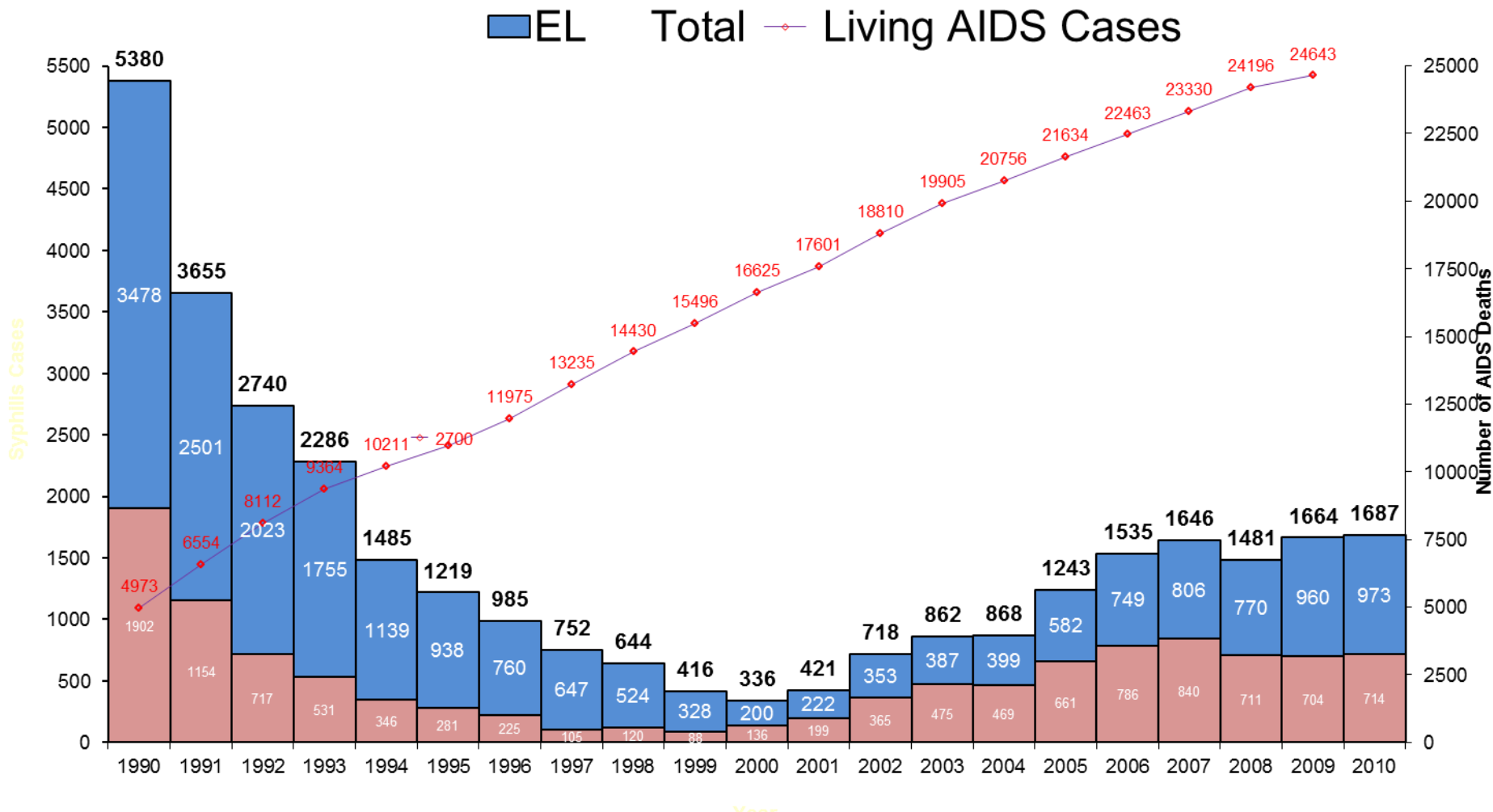
Source: State of California, Department of Health Services Morbidity Report, 1972-1997 and Los Angeles County Department of Public Health, Sexually Transmitted Disease Program, 1998-2010. 2010 data provisional

# Trends of Early Syphilis Cases and AIDS Death in Los Angeles County, 1990 – 2010



Source: Los Angeles County Department of Public Health, Sexually Transmitted Disease Program/HIV Epidemiology Program

# Trends of Early Syphilis Cases and AIDS Death in Los Angeles County, 1990 – 2010



Source: Los Angeles County Department of Public Health, Sexually Transmitted Disease Program/HIV Epidemiology Program

# Background

## Adult Film Industry (AFI)

- Large revenues:
  - Estimated gross revenue from up to 11,000 films annually: as high as \$13 billion (estimated retail value of product produced in LA County in 2002: \$3 billion)
- In LAC: ~ 200 AFI production companies
  - An estimated 5-10 large companies make >40% of films
  - Approximately 5 major film distributors
- In LAC: 6,000 workers (total)
  - 1,200-1,500 sex performers (based on 2004 estimates)
  - An estimated 75% of performers are female
  - Only 30-100 regular male performers
  - Many female performers make only one film





# Background

## Current AFI workplace practices increase risk:

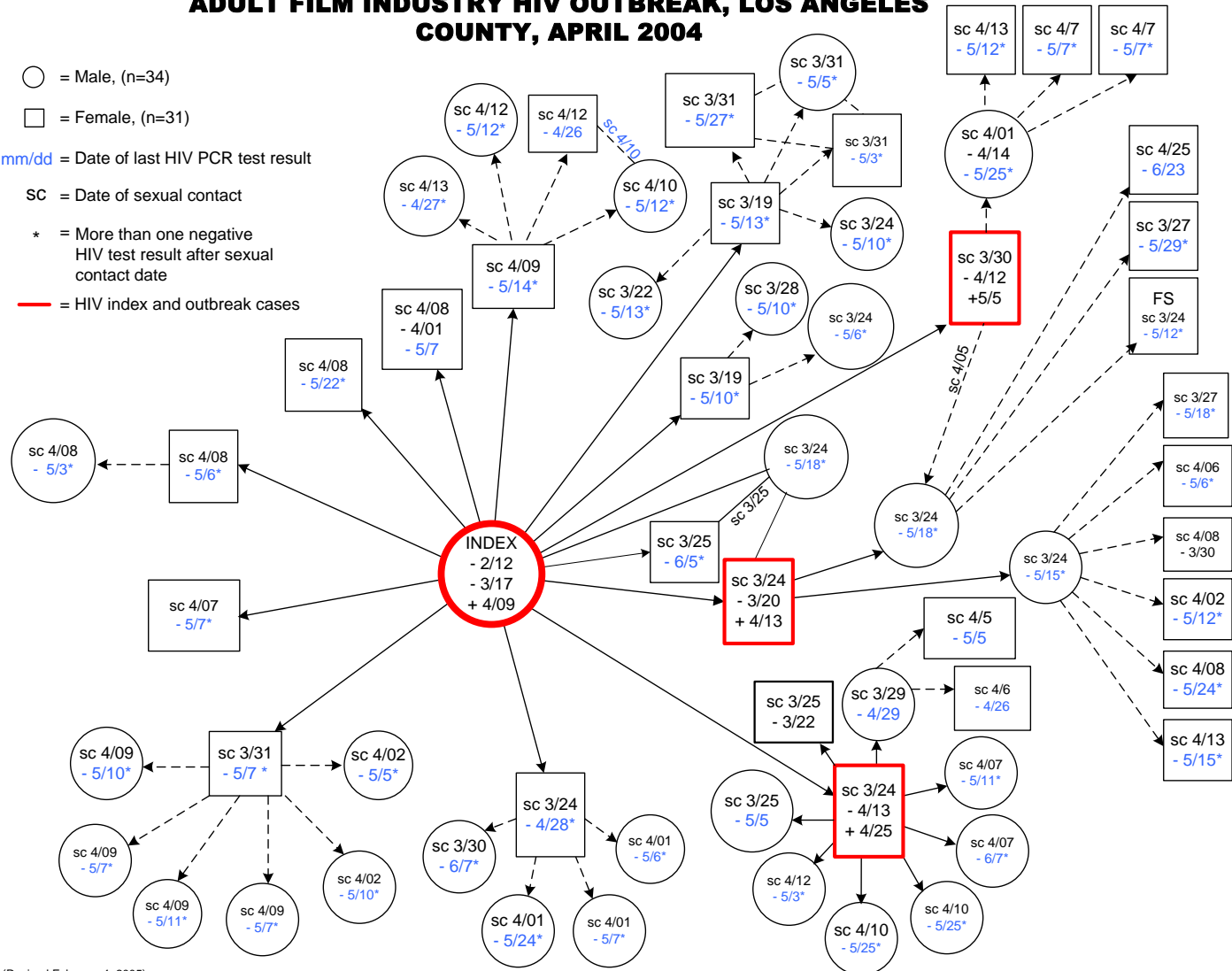
- Multiple partners over short time periods
  - increases risk of STD/HIV
  - increases potential for rapid spread
- Prolonged intercourse
  - inadequate lubrication
  - anogenital trauma w/ bleeding or menstruation, resulting in exposure to semen, seminal and vaginal fluids, and blood
- Lack of protective equipment
  - Condoms, dental dams/barriers, lubricants



# AFI Past Outbreaks

**ADULT FILM INDUSTRY HIV OUTBREAK, LOS ANGELES COUNTY, APRIL 2004**

○ = Male, (n=34)  
 □ = Female, (n=31)  
 mm/dd = Date of last HIV PCR test result  
 SC = Date of sexual contact  
 \* = More than one negative HIV test result after sexual contact date  
 — = HIV index and outbreak cases



(Revised February 4, 2005)

# New HIV case in 2009

Los Angeles Times

CALIFORNIA

## Porn HIV case renews concerns

Health officials again question the industry's safety practices after an actress tests positive for the virus.

RONG-GONG LIN II  
AND KIMI YOSHINO

An actress who works in Southern California's pornography industry has tested positive for HIV, renewing county and state health officials' concerns that the adult entertainment industry lacks sufficient safety measures to prevent the spread of AIDS and other sexually transmitted diseases.

The new case was confirmed to The Times and pornography industry websites

had recently changed its policies on disclosure of new cases. "What we do is just handle everything privately unless there's a widespread problem," she said.

As the clinic downplayed the positive test, public health officials cited their ongoing battle with the porn industry over the use of condoms during filming. The two sides have been at odds for years, and despite the intense scrutiny, Fielding said he is concerned that condoms are still not being used.

"You wouldn't send someone to work on a high-rise building without a hard-hat, so why are we allowing these performers to perform without condoms?" Fielding said.

Deborah Gold, a senior safety engineer with the state Occupational Safety and Health

# Investigation of HIV and Gonorrhea Transmission in the Adult Film Industry – Los Angeles, CA 2010



# AFI HIV outbreak Los Angeles, October 2010

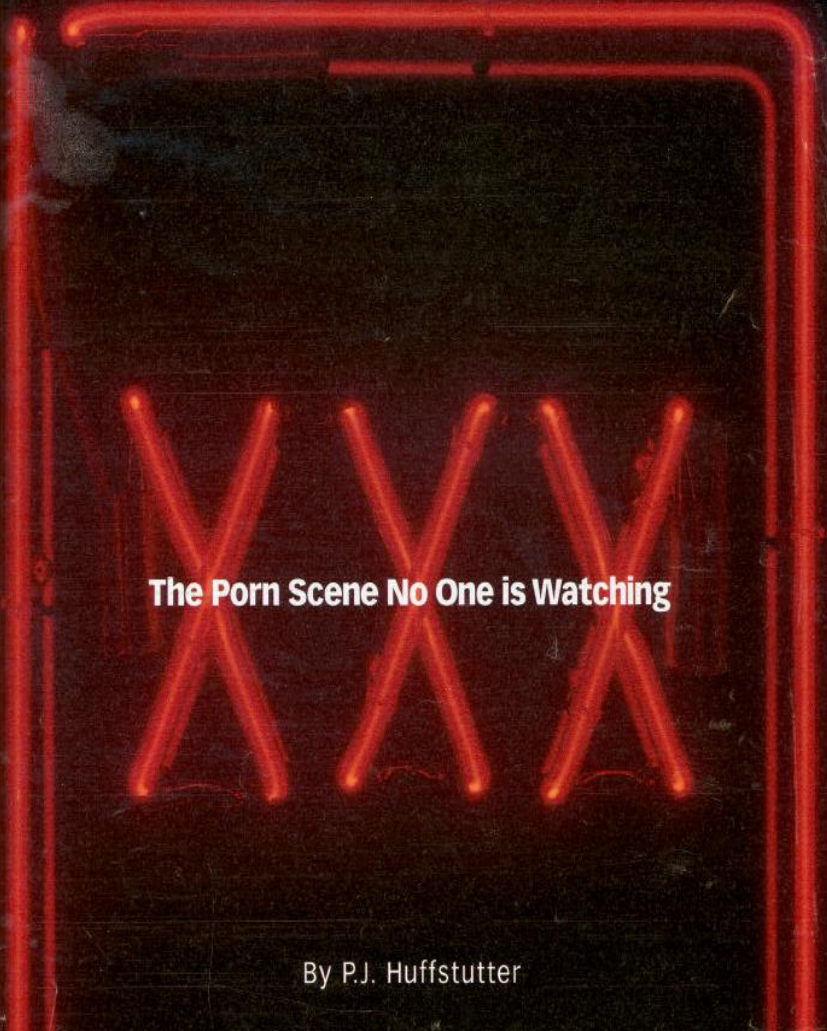
- 15 sexual contacts w/in 8 wk period (5 male;10 female)
- 12 filming locations
- 10 production companies
- Condom use
  - During anal sex
  - Not used during vaginal or oral

Contacts N=15	Infection status
1	pharyngeal gonorrhea
2	acute HIV infection
3	HIV uninfected
9	unknown status



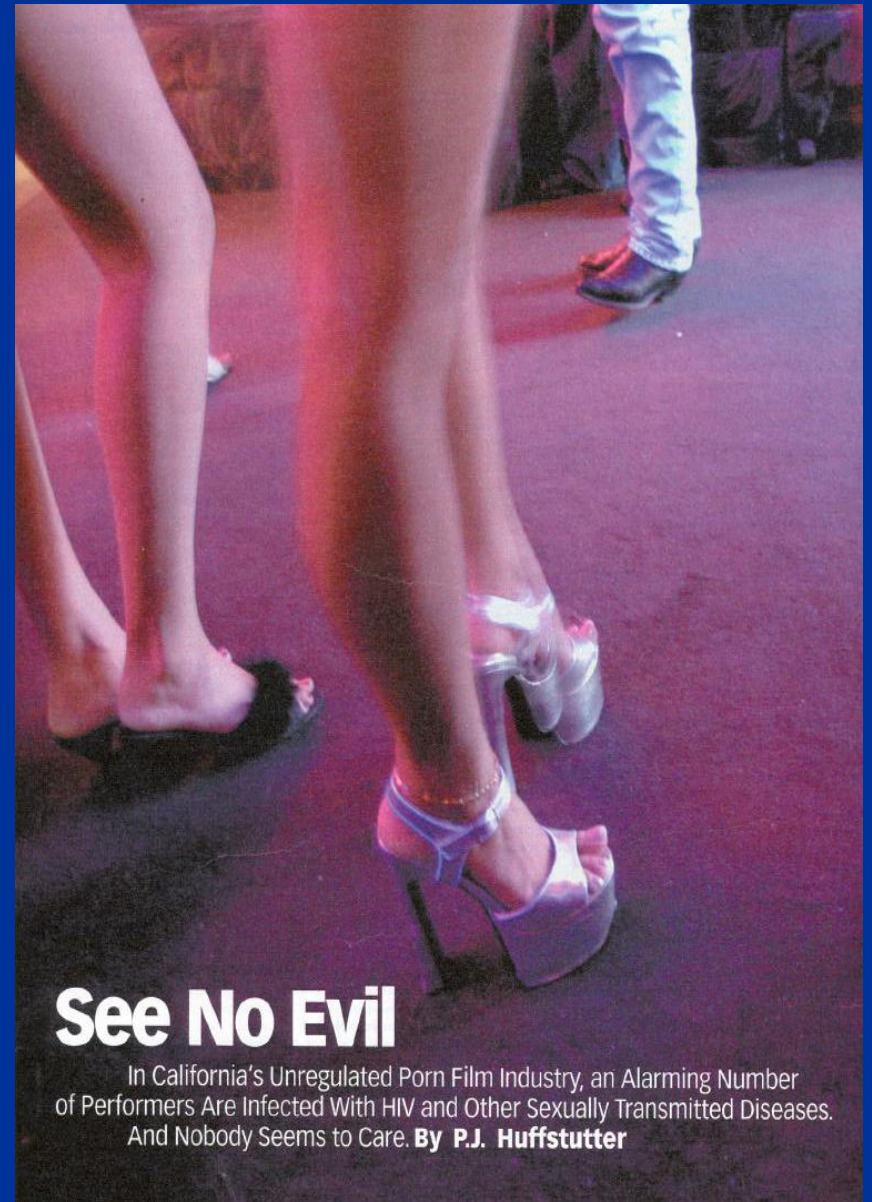
# Los Angeles Times Magazine

January 12, 2003



The Porn Scene No One is Watching

By P.J. Huffstutter



## See No Evil

In California's Unregulated Porn Film Industry, an Alarming Number of Performers Are Infected With HIV and Other Sexually Transmitted Diseases. And Nobody Seems to Care. **By P.J. Huffstutter**

Who protects workers?



**EMPLOYER!!**

## In the "Mainstream":



AFTRA - Your Voice in  
Music, Entertainment and  
News & Information -  
Your Union



Motion Picture  
& Television Fund

Taking Care of our Own

# Worker Protection: OSHA

- 1970 Occupational Safety and Health Act established OSHA and NIOSH
  - Permitted State Plans, if as effective as OSHA
- 1973 California Occupational Safety and Health Act established Cal/OSHA from existing programs.

# “Occupational Exposure” as defined by OSHA

“Occupational Exposure” means reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials (OPIM) that may result from the performance of an employee's duties.” (8 CCR 5193)

# Cal/OSHA Response to AFI

Cal/OSHA has determined that if there is an employer/employee relationship, employers must comply with:

- Injury and Illness Prevention Program regulation (8 CCR 3203) requiring a written health and safety program
- Bloodborne Pathogens (8 CCR 5193)
- Sanitation codes (8 CCR 3360-3367)

# Cal/OSHA's Enforcement Team

- Cal/OSHA has a hotline for employer questions and employee complaints  
**(213) 237-9958**
- Enforcement activities in Southern CA are assigned through the Anaheim High Hazard Unit

Legal support from Cal/OSHA and DLSE legal units

# Cal/OSHA on the Web

- Cal/OSHA: <http://www.dir.ca.gov/dosh/>
- Cal/OSHA Adult Film Industry Webpage:  
<http://www.dir.ca.gov/dosh/adultfilmindustry.html>
- Bloodborne Pathogens Standard:  
<http://www.dir.ca.gov/Title8/5193.html>

Cal/OSHA

## Vital information for workers and employers in the adult film industry

A recent cluster of HIV infections in the adult film industry in Southern California has drawn attention to [health hazards](#) in these work places.

Workers in this industry need to know there are laws written to protect them from injury and illness on the job, and where to go for help if their employer doesn't follow those laws. Employers in the adult film industry must know how to protect their employees from health and safety hazards and understand the consequences of failing to comply with state regulations.

[Click here for information on how to file a complaint with Cal/OSHA if you work in the adult film industry.](#)

The [California Occupational Safety and Health Act](#) requires employers to provide a safe and healthful workplace for employees, and pay the costs of their health and safety program. This same act gives Cal/OSHA jurisdiction over virtually all private employers in California, including employers in the adult film industry. Employers must comply with all relevant regulations, which are contained in Title 8 of the [California Code of Regulations](#).

In the adult film industry, these requirements include:

Cal/OSHA

### Quick Links

- ▶ [Index of Cal/OSHA services](#)
- ▶ [File a workplace safety complaint](#)
- ▶ [Learn about worker rights](#)
- ▶ [Obtain a free consultation](#)
- ▶ [Report an accident or injury](#)

### Educational Materials

- ▶ [Cal/OSHA publications](#)
- ▶ [Consultation eTools](#)

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- Controlling exposures, developing an exposure control plan
- Use of personal protective equipment and engineering controls
- Hepatitis B vaccine at no cost to employee
- Confidential medical record
- Training employees in health and safety hazards



# Current AFI Regulation and Oversight

- Child pornography statutes
  - 18 USC §§ 2252, 2256-2257
  - California Penal Code §§ 311.3 - 312.7
  - Strictly adhered to by industry
- Filming permits required
  - By LA city ordinances now Measure B
  - Obtained through multiple agencies, e.g., EIDC in Los Angeles
  - Currently not often obtained in L.A.

# Bloodborne Pathogens Requirements

- Written exposure control plan
- Control measures including engineering controls and personal protective equipment
- Training
- HBV vaccination and post-exposure follow-up
- Confidential records

# Current Industry Practice

- Mostly “business as usual”
- No widespread changes in industry norms regarding:
  - Non-use of condoms
  - Lack of employer financing of HIV/STD testing, vaccine
  - Risky work practices
  - Lack of regular training and education of workers
  - Lack of posted materials on worker rights, health information at worksites
- Though Cal/OSHA holds that AFI must comply with BP:
  - Most citations held after appeal
  - Several subsequent enforcement efforts
  - No apparent self compliance by industry

# Employment Relationship

- Employer exercises all necessary control by direct or indirect means over the work details of the individual *(DLSE publication citing S.G. Borello & Sons, Inc. v. Department of Industrial Relations (1989) 48 Cal.3d 341)*
- Even where there is an absence of control over the details, an employer-employee relationship will be found if the principal retains pervasive control over the operation of the whole, the worker's duties are an integral part of the operation, and the nature of the work makes detailed control unnecessary. *(DLSE publication citing Yellow Cab Cooperative v. Workers Compensation Appeals Board (1991) 226 Cal.App.3d 1288)*

# Exposure Control Plan is Key

- Written ECP establishes a matrix of controls
- Engineering controls
  - Simulation
  - Barrier protection
  - Production techniques
- Personal Protective Equipment
  - Does not need to appear on screen
  - Use in combination with production techniques (cut-aways, etc.)

# Exposure Control Plan: Medical Surveillance

- Confidential
- Mandatory that employer offer
- Voluntary that employee participate
- Employer bears all costs
- Provide HBV vaccine
- Follow-up for exposure incidents including source testing

# Exposure Control Plan: Training

- 14 required elements
- Done initially and annually
- Must include specific controls being used on the set

# Challenges to Enforcement of Standards in the AFI

- Lack of perceived need, free speech vs. worker health and safety matter
- Resistance from employers, mobility of employees, anti-government views makes a highly contentious environment



# AFI : Lack of Compliance

- Some AFI employers claim that compliance with safety requirements is not feasible
- Some AFI employers see safety requirements as an unacceptable increase in their costs
- Some AFI employers point out that employees face risks outside of the workplace
- Some AFI employers don't want government "interference."

AFI HIV STD

# High Chlamydia and Gonorrhea Incidence and Reinfection Among Performers in the Adult Film Industry

Binh Y. Goldstein, PhD, Jane K. Steinberg, PhD, Getahun Aynalem, MD, MPH, and Peter R. Kerndt, MD, MPH

**Background:** Adult film industry (AFI) performers engage in unprotected oral, vaginal, and anal sex with multiple partners, increasing the likelihood of acquisition and transmission of human immunodeficiency virus and other sexually transmitted diseases. Current industry practice does not require condom use; instead it relies upon limited testing. We sought to estimate the annual cumulative incidence of chlamydia (CT) and gonorrhea (GC) and assess the rate of reinfection among AFI performers. **Methods:** We retrieved all CT and GC cases diagnosed among performers between 2004 and 2008 in Los Angeles, CA and reported to the health department surveillance registry. Using 2008 data, we estimated ranges for CT and GC annual cumulative incidences based on assumptions of the population size of performers. For cases reported between 2004 and 2007, we determined the CT and/or GC reinfection rate within 1 year. **Results:** Lower bounds for the annual cumulative incidences of CT and GC among AFI performers were estimated to be 14.3% and 5.1%, respectively. The reinfection rate within 1 year was 26.1%. Female performers were 27% more likely to be reinfected as compared with male performers (prevalence ratio, 1.27; 95% confidence interval, 1.09–1.48). **Conclusion:** CT and GC infections are common and recurrent among performers. Control strategies, including promotion of condom use, are needed to protect workers in this industry, as testing alone will not effectively prevent workplace acquisition and transmission. Additional legislation that places more responsibility on the production companies is needed to ensure the safety and health of performers.

Since the legalization of adult (X-rated) film production in the State of California in 1988 with the California Supreme Court's ruling in *People v. Freeman*,<sup>1</sup> the adult film industry (AFI) has expanded tremendously and is estimated to have gross revenues to a maximum of \$13 billion annually.<sup>2</sup> It is estimated that 2000 to 3000 performers (of whom 2000 are in California) are employed by approximately 200 production companies in Los Angeles County (LAC), CA.<sup>3–5</sup> The career of a performer is generally short-lived, with an average duration

estimated at just 18 months.<sup>6</sup> Although many production centers have arisen throughout the world, for example, in Florida, Brazil, Hungary, Czech Republic, and Japan, the largest production center for the AFI remains in LAC.

Although adult film has gained acceptance with expanding audiences through its availability on the internet, cable TV, and in major hotel chains, industry standards for protecting adult film performers lag far behind established worker health and safety standards. Adult film performers routinely engage in anal and vaginal sex without condoms, including prolonged and repeated sexual acts with multiple sexual partners over short periods.<sup>7</sup> These practices often lead to rectal and/or vaginal mucosal trauma with exposure to seminal and vaginal fluids, fecal material, and blood, a combination that is ideal for transmission of human immunodeficiency virus (HIV), other sexually transmitted diseases (STDs), and fecal pathogens. The director of a clinic, which provides the majority of STD testing for performers, made the following statement: "An average popular male in the industry, through partner-to-partner-to-partner transmission, reaches approximately 198 people in 3 days. Those are epidemic proportions." Although the total population of performers at any one time may appear small, they have a very large sexual network and serve as a bridge population for STD transmission to and from the general population.<sup>8</sup>

The current industry standard for performers in the heterosexual segment of the AFI is voluntary STD and HIV testing every 30 days, as recommended by clinics serving AFI performers. This standard is implemented by requiring performers to provide a negative test result within the previous 30 days in order to work.<sup>9</sup> Testing facilities that serve the majority of the heterosexual performer population typically provide a urisub-based nucleic acid amplification test for chlamydia (CT) and gonorrhea (GC). Performers are not routinely screened orally or rectally, and performers pay for the testing costs.<sup>9</sup>

Between 1998 and 2008, 17 HIV cases were reported among performers.<sup>4</sup> The need for improvements in AFI policies was illuminated by the latest HIV outbreak in April 2004, when 3 of 14 female performers exposed to HIV became infected from a single-infected male performer. The index case had 61 primary and secondary sexual contacts within 23 days, and the attack rate was 23%.<sup>8,9</sup> The infected male performer had consistently followed the industry standard of voluntary, monthly HIV testing. In response to the outbreak, the California Occupational Safety and Health Administration (Cal/OSHA) issued citations to 2 production companies for not complying with the Bloodborne Pathogens Standard.<sup>8,10</sup>

Despite the extremely high risks for STD acquisition and transmission among AFI performers, there exists little published data on STD morbidity within this population. The goals of this study are to assess (1) the annual cumulative incidences

From the Sexually Transmitted Disease Program, Los Angeles County Department of Public Health, Los Angeles, CA.

The authors thank Ruel Torres of the Los Angeles County Department of Public Health, Public Health Laboratory. They also thank Elda Keng, Michael W. Chien, Ellen T. Rudy, Kai-Jen Cheng, and Joadene Samson of the Los Angeles County Department of Public Health, Sexually Transmitted Disease Program.

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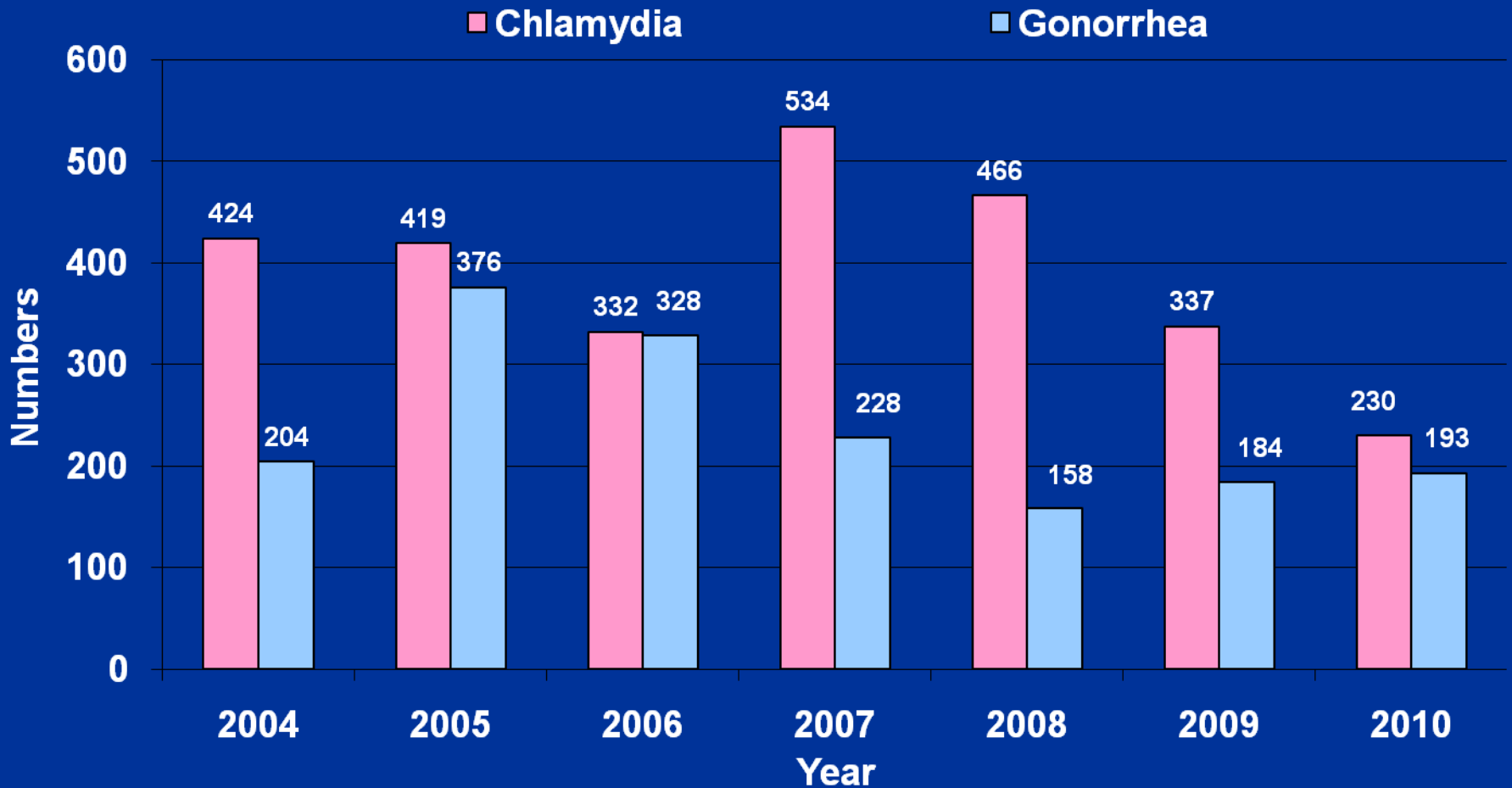
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# STI Repeat Infection Within One Year among AFI Performers: 2004-2007

- 2,633 STIs were diagnosed among 1,849 performers.
- 72% of infections occurred in female performers.
- 26% (n=687) had repeat infections within one year of the previous infection.
- Median time to repeat infection: 154 days (~5 mos)
- Females were generally reinfected earlier than males (median 146 vs. 166 days,  $p=0.11$ ).
- Female performers were 27% more likely to have a repeat infection within one year of their previous infection compared to males (prevalence ratio 95% CI=1.09-1.48).



# STIs among AFI performers: 2004-2010



# Reported Chlamydia and Gonorrhea Infections among AFI Performers (2004-2007)

STD	Total		Males		Females	
	N	%	N	% <sup>^</sup>	N	% <sup>^</sup>
Chlamydia	1,497	56.9%	529	72.7%	966	50.8%
Gonorrhea	924	35.1%	161	22.1%	763	40.1%
Chlamydia*Gonorrhea	212	8.1%	38	5.2%	174	9.1%
Total	2,633	100.0%	728	27.6%	1,903	72.3%

<sup>^</sup>Percent by gender; \*Percent of total

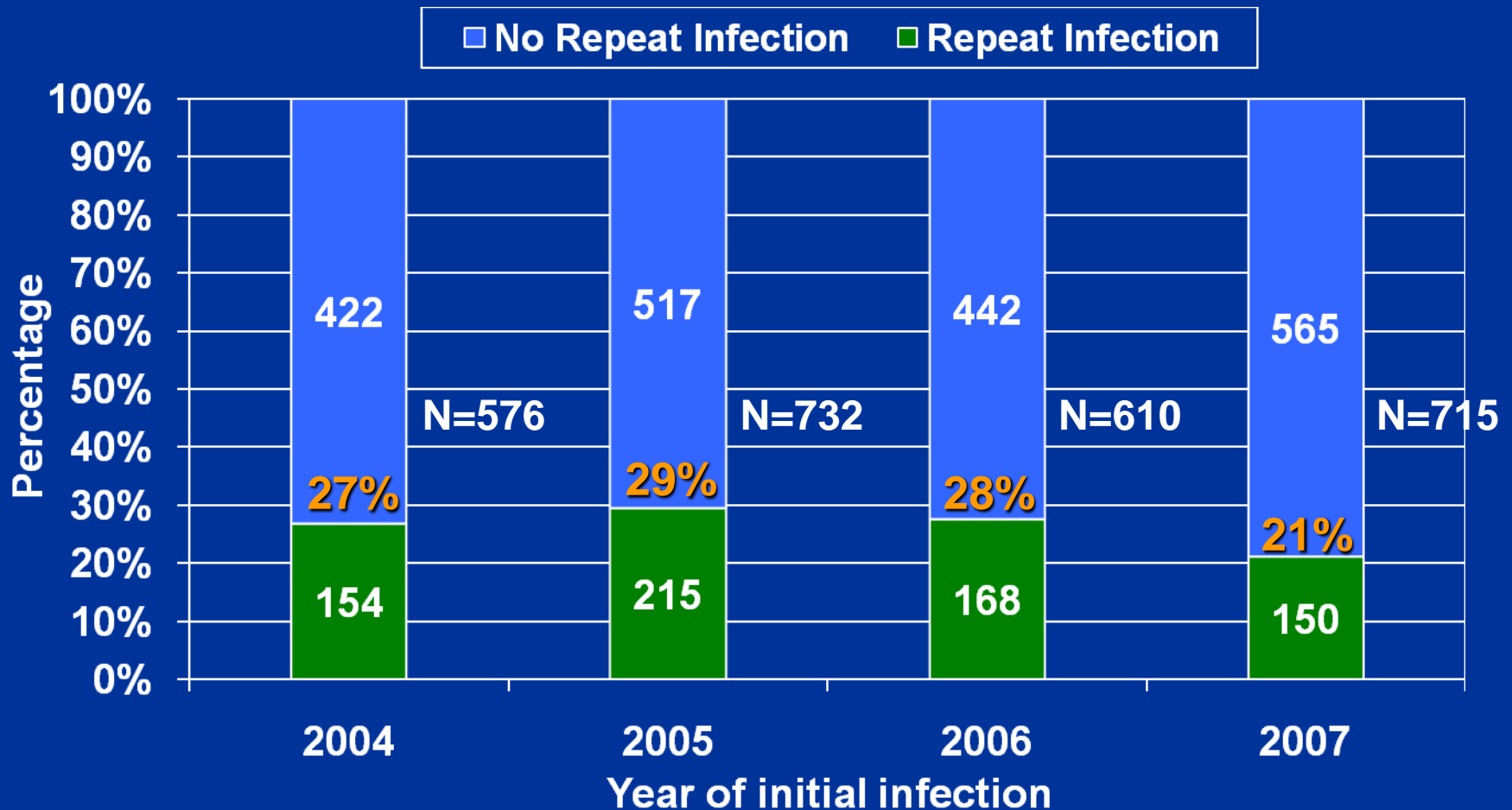


# STI Repeat Infection among AFI Performers (2004-2007)

	Females		Males		Both genders	
	N	%	N	%	N	%
All cases	1,903	72.3%	728	27.6%	2,633	100.0%
Time to next infection <sup>^</sup> :						
< 3 months	122	6.4%	29	4.0%	151	5.7%
< 6 months	327	17.2%	87	12.0%	414	15.7%
< 9 months	445	23.4%	133	18.3%	578	22.0%
< 12 months	528	27.7%	159	21.8%	687	26.1%
Prevalence ratio (95% CI)	1.27 (1.09-1.48)					
Mean time (days)	167.1		178.5*		170	
Median time (days)	145.5		166*		154	

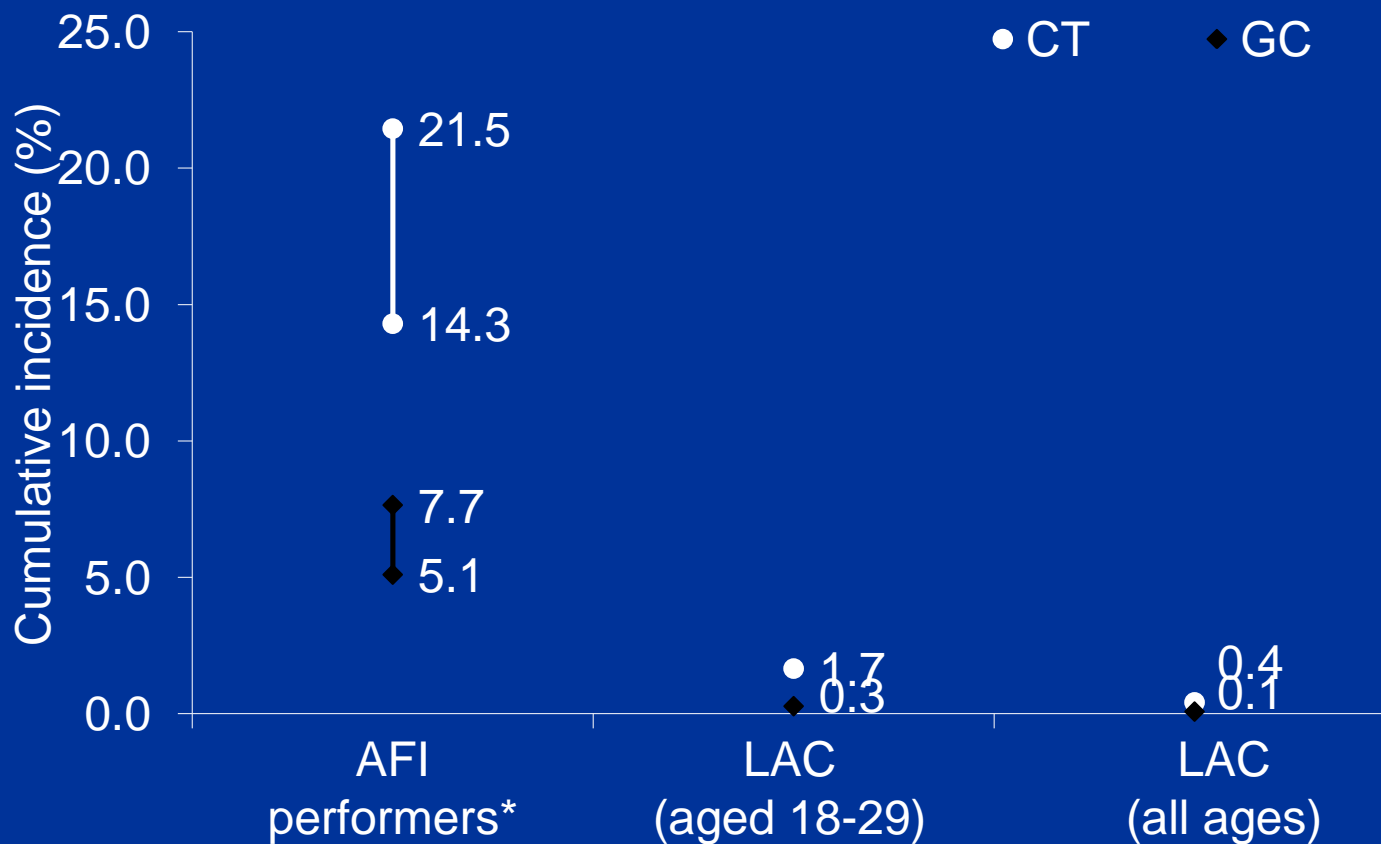
<sup>^</sup>Percentage of all infections; \*T test (of log[time]) for gender p-value = 0.09 ; \*\*Wilcoxin test for gender p-value = 0.11

# Percentage of Infections with a Repeat Infection within One Year





# CT and GC Annual Cumulative Incidence Among AFI Performers and the General Population



\*Range based on population of 2,000-3,000 performers



## Sexually Transmitted Infection Testing of Adult Film Performers: Is Disease Being Missed?

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**Background:** Undiagnosed sexually transmitted infections (STIs) may be common in the adult film industry because performers frequently engage in unprotected oral and anal intercourse. STIs are often asymptomatic, and the industry relies on urine-based testing.

**Methods:** Between mid-May and mid-September 2010, a consecutive sample of adult film industry performers recruited from a clinic in Los Angeles, California, that provides medical care to performers was offered oropharyngeal, rectal, and urogenital testing for *Gonorrhea*, and rectal and urogenital testing for *Chlamydia*.

**Results:** During the 4-month study period, 168 participants were enrolled: 112 (67%) were female and 56 (33%) were male. Of the 47 (28%) who tested positive for *Gonorrhea* and/or *Chlamydia*, 11 (23%) cases had been detected through urogenital testing alone. *Gonorrhea* was the most common STI (42/168; 25%) and the oropharynx the most common site of infection (37/47; 79%). Thirty-five (95%) oropharyngeal and 21 (91%) rectal infections were asymptomatic. Few participants reported using condoms consistently while performing or with their personal sex partners.

**Conclusions:** Adult film industry performers had a high burden of STIs. Undiagnosed asymptomatic rectal and oropharyngeal STIs were common and are likely reservoirs for transmission to sexual partners inside and outside the workplace. Performers should be tested at all anatomical sites irrespective of symptoms, and condom use should be enforced to protect workers in this industry.

Adult film production was established in California as a legal activity in 1988, after the California Supreme Court ruled that filming sexual activity for sale did not meet the criminal definitions of pandering or prostitution and therefore should be protected under the First Amendment.<sup>1</sup> Since this ruling, Los Angeles County (LAC) has become a worldwide center for the production of adult films. In 2005, an estimated 80% of all adult film production occurred in LAC,<sup>2</sup> where an estimated 200

production companies currently employ 2000 to 3000 performers, of whom approximately 75% are female.<sup>3-5</sup>

Adult film industry (AFI) performers face a myriad of risks to their emotional and physical health, suggesting a lack of adequate measures to protect this occupational group. One study found that the risks performers face are very similar to that of sex workers in illegal industries such as in prostitution.<sup>6</sup> A study of the mental health of female performers concluded that they have significantly worse mental health than do female nonperformers of a similar age living in California.<sup>7</sup> Adult film industry performers are routinely exposed to extreme and unhealthy working conditions including prolonged unprotected vaginal and/or anal intercourse with multiple partners over short periods, often resulting in traumatic mucosal injury and direct exposures to potentially infectious bodily fluids from blood, semen, and fecal pathogens.<sup>3,8</sup> Performers' use of condoms on adult film sets is rare. In a systematic review of condom use among a randomly selected sample of adult films released between 2005 and 2006, penile-vaginal and penile-anal intercourses were protected in just 3% and 10% of heterosexual scenes, respectively.<sup>9</sup>

During the 1990s, there were multiple anecdotal reports of HIV infection among performers, and in 1998, the Adult Industry Medical Health Care Foundation was founded to provide HIV testing for the industry after 1 performer allegedly infected 5 female performers.<sup>10</sup> In April 2004, a male performer infected 3 of 14 female performers with HIV within days after testing negative for HIV DNA by polymerase chain reaction.<sup>4,8</sup> After an investigation of this outbreak, the California Occupational Safety and Health Administration determined that the Bloodborne Pathogen Standard applied to the industry and created a Web site to inform AFI workers of their rights and employers of their responsibilities, including having an exposure control plan, an injury and illness prevention plan, providing worker training and any required medical monitoring or vaccination.<sup>11</sup> Despite this determination, the industry has not adopted the required measures, and the California Occupational Safety and Health Administration has begun a process to promulgate regulations specific to the industry.

The Adult Industry Medical Health Care Foundation, which was founded to provide monthly testing for HIV to the heterosexual AFI, added urine-based screening for *Gonorrhea* (GC) and *Chlamydia* (CT) in 2003.<sup>8</sup> However, owing to the voluntary nature of the screening, the extent to which it is performed or the results checked before employment in the industry is unknown. Screening for HIV and other sexually transmitted infections (STIs) occurs even less frequently in the homosexual AFI, and screening for rectal or oropharyngeal STIs has not been established to date as a routine part of any preemployment medical monitoring in the industry.

The LAC Department of Public Health receives reports of positive cases of STIs in the AFI<sup>5</sup> but does not receive reports on the total number of performers tested, and most cases are identified through urine-based screening. Given these limitations, we undertook the present study (1) to estimate the amount of GC and CT being missed by urine-based testing alone and (2) to assess

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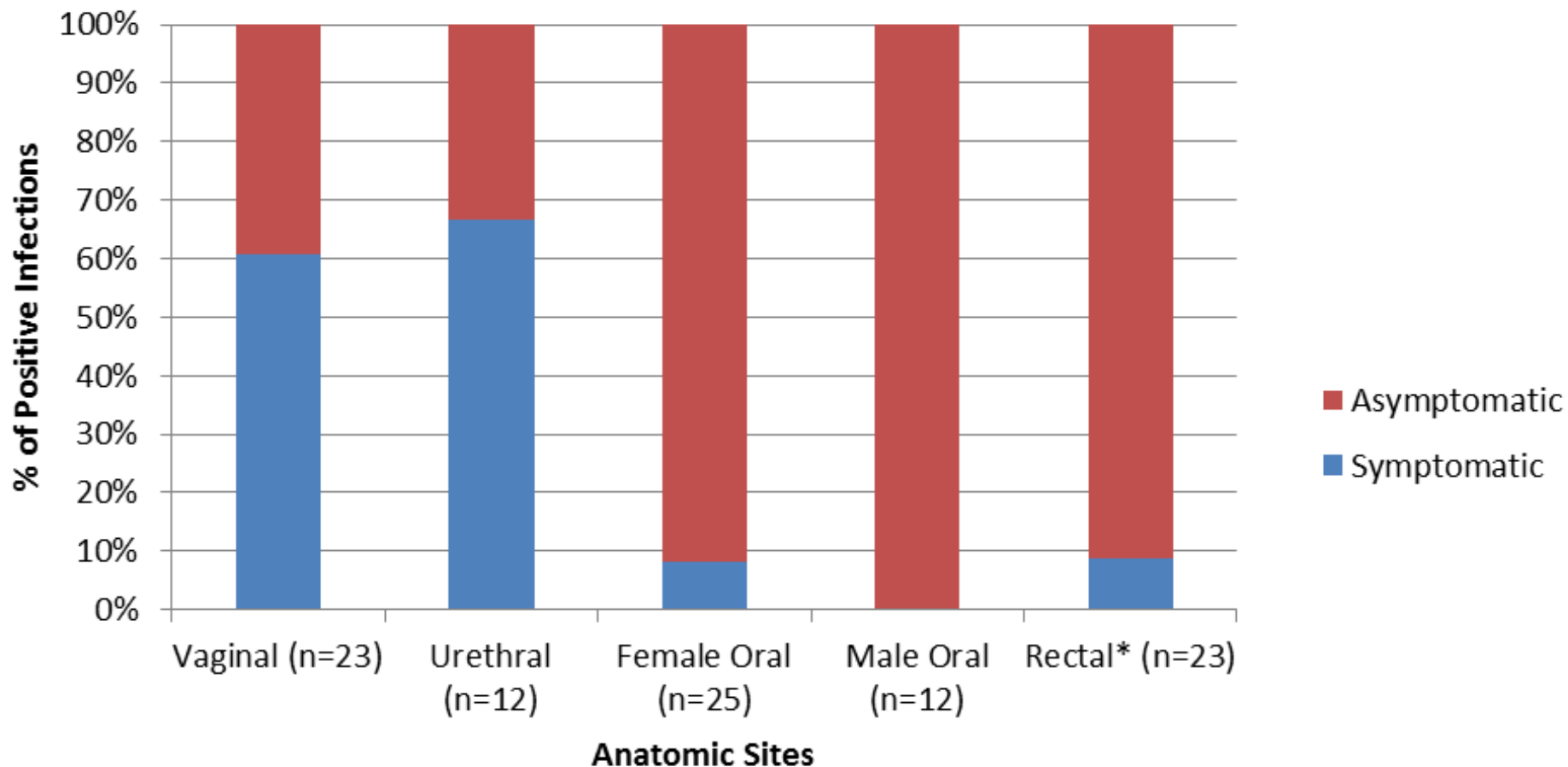
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# Multi-Anatomic Site Study

- Recent study of AFI clinic users (Rodriguez et al, 2012) assessed prevalence of symptomatic and asymptomatic CT and GC infections at all three anatomic sites (urogenital, oropharynx, rectum)
- 168 participants enrolled:
  - 112 (67%) female, 56 (33%) male
  - 47 participants (28%) diagnosed for a total of 96 infections
  - 30 women (64%) and 17 men (36%) were infected with either CT and/or GC. Over ½ (61%) were under 30 years of age
  - The most common infection pattern was CT and/or gonorrhea infection at all 3 anatomic sites (n=18; 38%)
  - Thirty-five (95%) oropharyngeal, 21 (91%) rectal and 13 (37%) urogenital chlamydia and/or gonorrhea infections were asymptomatic
  - Of the 47 infected with GC and/or CT, 60 (63%) of the 96 total infections would have been missed with uro-genital-only screening.

Participant Characteristics	Total		Female		Male	
	No.	%	No.	%	No.	%
<b>Total Participants</b>	<b>168</b>	<b>100</b>	<b>112</b>	<b>67</b>	<b>56</b>	<b>33</b>
<b>Age, years</b>						
18-19	17	10	17*	15	0	0
20-24	48	29	46*	41	2	4
25-29	37	22	26	23	11	20
30-34	27	16	16	14	11	20
35+	39	23	7*	6	32	57
Median (Range)	27 (18-54)		23* (18-42)		36 (22-54)	
<b>Race/Ethnicity <sup>a</sup></b>						
Caucasian	128	79	85	79	43	77
Latino	13	8	8	7	5	9
Black	9	6	3*	3	6	11
Asian	6	4	6	6	0	0
Other <sup>b</sup>	7	4	5	5	2	4
<b>Gonorrhea and/or Chlamydia</b>	47	28	30	27	17	30
Gonorrhea only	39	23	26	23	13	23
Chlamydia only	5	3	4	4	1	2
Chlamydia + Gonorrhea	3	2	0	0	3	5
Median years in the Adult Film Industry (Range)	3 (1-18)		3* (1-18)		7 (1-18)	
<b>Time since last worked in an adult film, days <sup>c</sup></b>						
< 30	115	69	80	72	35	64
30-60	34	20	20	18	14	26
>60	17	10	11	10	6	11
<b>Condoms on adult film sets <sup>d</sup></b>						
Never	46	27	25*	22	21	38
Sometimes	121	72	86**	77	35	63
Always	1	1	1	1	0	0
<b>Condoms off adult film sets <sup>d</sup></b>						
Never	38	23	23	21	15	27
Sometimes	122	73	81	72	41	73
Always	8	5	8**	7	0	0

**Figure 3. Distribution of site-specific symptomatic and asymptomatic gonococcal and/or chlamydial infections among adult film industry workers by anatomic site: Los Angeles, CA, May-September 2010**



\* Excludes males as all but one male refused rectal testing.

# Conclusions

- Infection/re-infection estimates for AFI performers are likely to be underestimated:
  - Performers are tested at clinics other than performer testing centers (personal doctor or STD clinic)
  - STIs underreported
  - Self-medication/empiric treatment
  - Current screening limited in scope and excludes rectal and oral pharyngeal testing



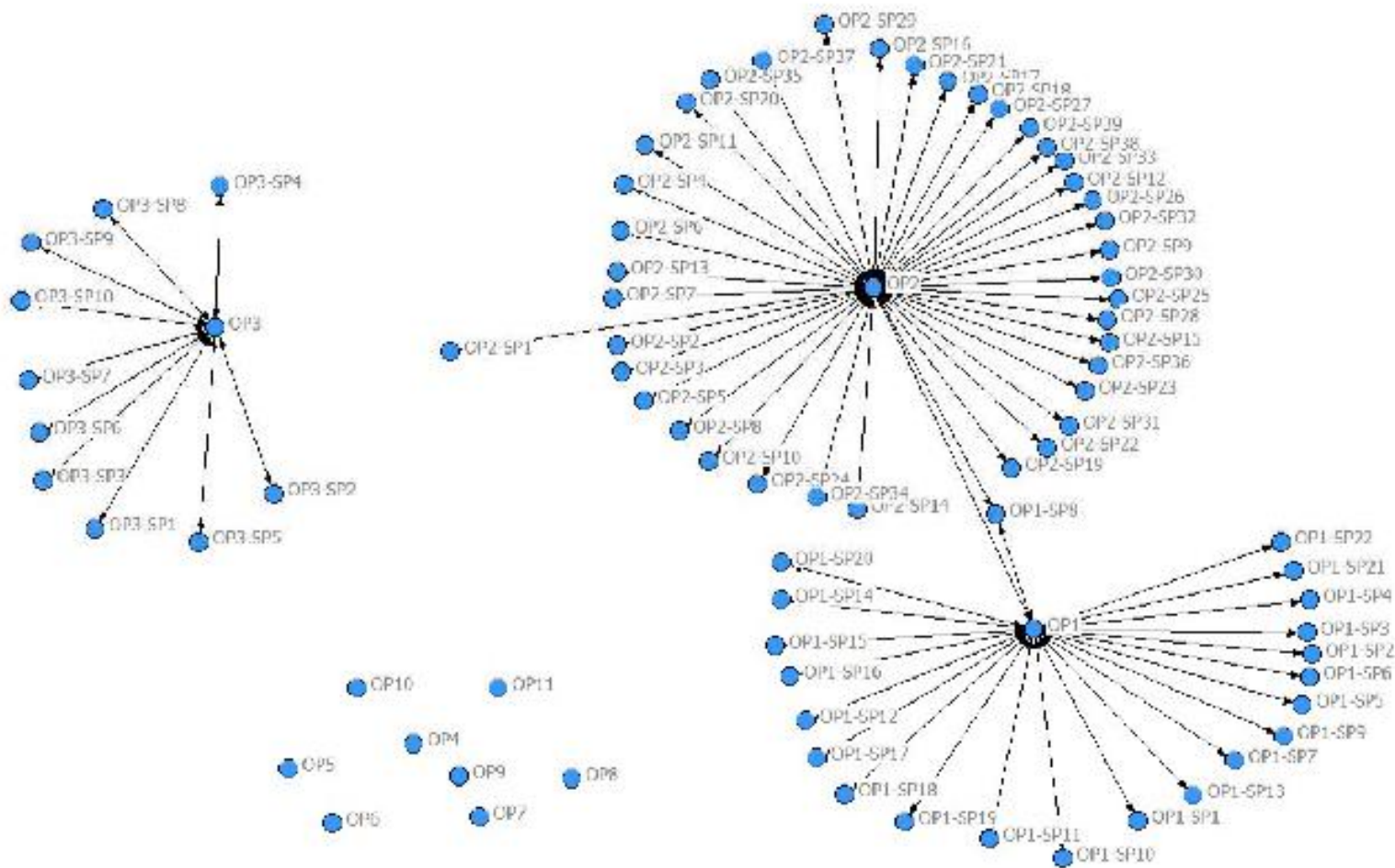
# Conclusions

- **Screening** does not prevent infection
  - Provides an opportunity to diagnosis and treat infected performers, preventing further spread to co-workers and other sex partners
  - Must be combined with barrier protection
- Risk and burden of STIs among AFI performers are unacceptably high



# AFI Syphilis Outbreak Los Angeles, August -- October 2012

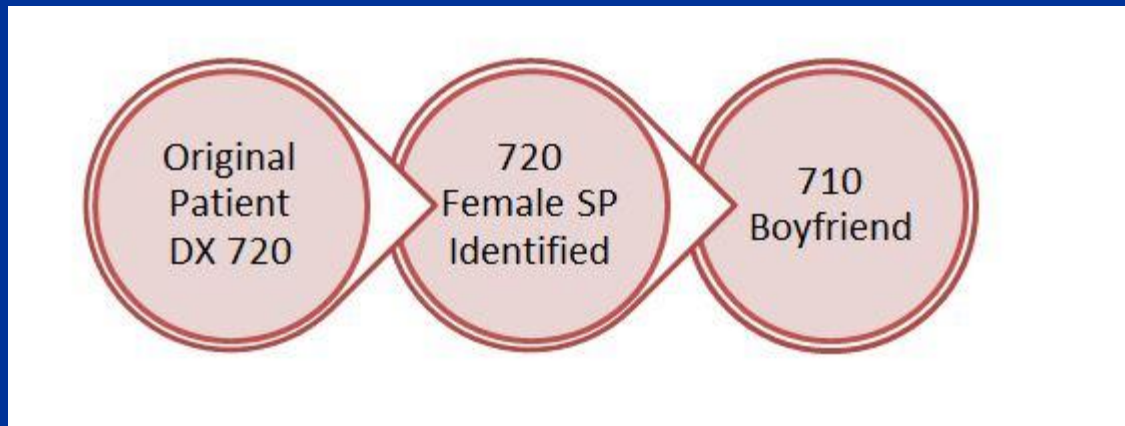
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# AFI SYPHILIS OUTBREAK LOS ANGELES, AUGUST -- OCTOBER 2012

- As of September 12<sup>th</sup>, there were 8 confirmed cases, including:
  - 1 case of primary syphilis;
  - 3 cases of secondary syphilis; and
  - 1 case of early latent; others are latent of unknown duration.
- Six of these cases are residents of LAC; others reside elsewhere in the U.S., including Texas and Florida



**\*Male Index: 25 Contacts.**

- 1 Female performer w/ Secondary Syphilis
- 14 Epi-Tx: 5 Not infected; 4 Unable to contact; 1 Refused testing/Tx

**\*Female Index: 27 Contacts.**

- 1 Male Index (Secondary above) Not the source of the infection
- 1 Male partner w/ Primary Syphilis

**Able to identify 52 contacts using:**

- Stage names provided from the Index patient's interviews
- Stage names provided from Talent agencies contacted
- Multimedia sources
- Established communication with AFI clinics



## Able to identify Production and Talent Agencies

### Production Companies:

Total Production Companies Named: 23

Total Production Companies Contacted: 8 (Of these, 1 responded)

Total Production Companies Not Contacted: 3

Production Companies Not Contacted Because OOJ: 4

Production Companies Not Contacted Because Out of Window Period: 2

Production Companies Not Contacted Because No Locating Info: 6

### Talent Agencies:

Total Talent Agencies Named: 5

Total Talent Agencies Contacted: 3 (Of these, 3 responded)

# Policy Recommendations

- To date, eight state/national organizations have issued policy statements supporting improved worker safety and health in the AFI
  - American Medical Association
  - American Public Health Association
  - American Sexual Health Association
  - Beyond AIDS
  - CA Conference of Local AIDS Directors
  - California Medical Association
  - CA STD Controllers Association
  - Communicable Disease Committee, CCLHO
  - National Coalition of STD Directors

# CA STD Controller Association Position Statement: Worker Health and Safety in the Adult Film Industry\*

- State and federal regulatory or legislative actions that would mandate the use of condoms in the production of adult films.
- Mandatory medical monitoring and worker health and safety training paid for by the industry.
- Creation of an amendment to Section 5193, Bloodborne Pathogens, CA H&S Code to require protections for AFI workers to prevent occupational exposures to bloodborne and fecal pathogens and STDs.
- Require AFI production companies maintain records available for inspection with their *Custodian of Record* that includes their OSHA-compliant exposure control plan that documents that condoms were used in each production and that worker health and safety training was provided.

# CA STD Controller Association Position Statement: Worker Health and Safety in the Adult Film Industry

- Require AFI companies to provide employment records to the state or local health department in the course of any investigation of workplace transmission or exposure to an infectious disease.
- Increase federal, state, and local resources and support for local, state and national legislation that would improve the ability of local health departments, state health departments and OSHA (Cal/OSHA) to investigate and control occupational exposures to infectious diseases and enforce workplace regulations in a timely manner.
- Prohibit distribution and/or sales of adult films where condoms were not used by performers to hotels, cable television content providers and others in commercial setting that make available to customers to the viewing, sale, or distribution of films.
- Mandatory labeling at the beginning of each film that states that the adult film was produced pursuant to OSHA (Cal/OSHA) requirements and that condoms were used in the production of the film.
- Vigorous enforcement of existing OSHA (Cal/OSHA) standards, i.e., the bloodborne pathogen standard, and other occupational standards to reduce exposure to infectious diseases within the adult film industry.



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- Reports
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• Data Requests

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#### Health & Safety in the Adult Film Industry

##### Policy Statements

- [American Medical Association \(AMA\)](#)
- [American Public Health Association \(APHA\)](#)
- [American Social Health Association \(ASHA\)](#)
- [California Conference of Local AIDS Directors \(CCLAD\)](#)
- [California STD Controllers Association \(CSTDCA\)](#)
- [National Coalition of STD Directors \(NCSD\)](#)
- [San Francisco Department of Public Health](#)

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##### Correspondence

- [02/27/03](#)
- [08/07/03](#)
- [05/18/04](#)
- [07/27/04](#)
- [10/27/04](#)

##### Motions

- [01/21/03](#)
- [03/25/03](#)
- [04/20/04](#)

##### Resolutions



<http://publichealth.lacounty.gov/std/afi.htm>



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### California State Assembly

- [Press Release: Assemblyman Koretz to the Adult Entertainment Industry: Use Condoms or Risk Legislative Action, 08/16/04](#)
- [Legislative Hearing -- 06/04/04](#)  
Committee on Labor and Employment -- Paul Koretz, Chair  
"Worker Health and Safety in the Adult Film Industry"

### California Division of Occupational Safety and Health (Cal/OSHA)

- [DPH Statement to the Occupational Safety and Health Standards Board, 06/29/10](#)
- [DPH Statement to the Occupational Safety and Health Standards Board, 03/18/10](#)
- [Cal/OSHA Requirements: Adult Film Industry](#)
  - [How to file a complaint with Cal/OSHA](#)

### Related Journal Articles

- [Condom Use and High-Risk Sexual Acts in Adult Films: A Comparison of Heterosexual and Homosexual Films](#), *American Journal of Public Health*, 2/09
- [Sexual health of adults working in pornographic films](#), *International Journal of STD & AIDS*, 2009
- [Pathways to Health Risk Exposure in Adult Film Performers](#), *Journal of Urban Health*, 2008
- [The Adult Film Industry: Time to Regulate?](#), *PLOS Medicine*, 6/07
- [The Changing Face of Occupational Medicine](#), *PLOS Medicine*, 6/07
- [Epidemiologic Investigation of a Cluster of Workplace HIV Infections in the Adult Film Industry: Los Angeles, California, 2004](#), *HIV/AIDS*, 1/07
- [Resolving the Problem of Performer Health and Safety in the Adult Film Industry](#), *USC Law Review*, 3/06

health,



# AHF Policy Advocacy

City of Los Angeles

County of Los Angeles: Measure B





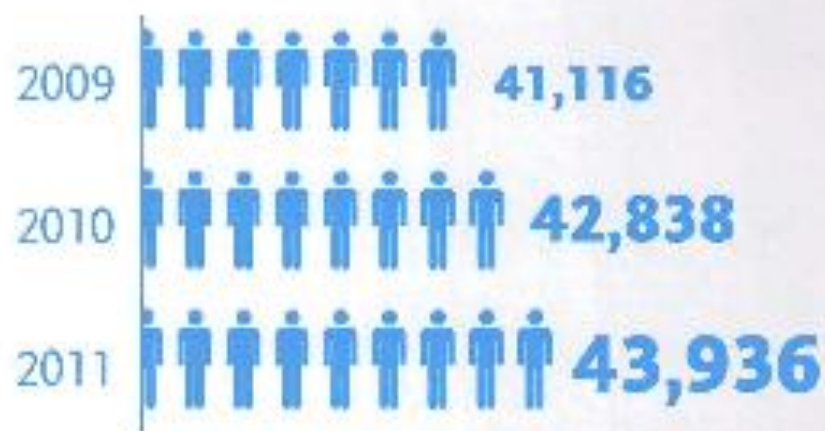
**VOTE  
YES ON  
MEASURE B**

Los Angeles County Medical  
Association Supports Measure B.

It's a Matter of Life or Death.

# IN 2011

**43,936** PEOPLE WERE  
LIVING WITH HIV/AIDS  
IN LOS ANGELES COUNTY<sup>1</sup>



<sup>1</sup> Source: L.A. County Department of Public Health's 2011 Annual HIV Surveillance Report

## FACTS THE PORN INDUSTRY DO NOT WANT YOU TO KNOW:

- Enforcement of Measure B Will Be Paid 100% by the Adult Film Industry
- Measure B Will Provide a Safer Working Environment
- Measure B Will Help Stop the Spread of AIDS/HIV and Other Diseases in L.A. County

Adult performers would be **REQUIRED** to use condoms, gloves, dental dams and other "protective gear".



# VOTE NO ON B

**PROTECT THE  
FREEDOM  
OF CHOICE**

On November 6  
Vote No on Measure B.

**SAVE PORN!**

Register to vote  
before October 22.



**MY BODY  
MY CHOICE!**  
TERA PATRICK

**THIS IS HOW  
YOUR PORN  
WILL LOOK**

**NO  
ON**

**B**

**AHF**

**STOP GOVERNMENT WASTE**

**AIDS HEALTHCARE  
FOUNDATION**

# Measure B

Support for the condom requirement was strongest in non-white, working class neighborhoods, while the upper income mostly white districts in the city preferred leaving this question to the actors and producers themselves. As the *Times* puts it:

Countywide, Measure B won by 56% to 42%, but the ballot initiative requiring condoms to be used during porn filming racked up huge margins in lower-income neighborhoods that are either heavily Latino, black or both, like East Los Angeles (67%); Inglewood (75%); Compton (76%); Los Angeles' 8th City Council District in South L.A (76%); and Willowbrook, south of Watts (77%).

In contrast, neighborhoods voicing the most opposition to a condom requirement were higher-income areas that have significant white majorities. The “no” vote for the measure rose to 54% in Malibu, Rancho Palos Verdes, Westlake Village and Sierra Madre; 55% in Calabasas, La Crescenta, and Topanga; 56% in Redondo Beach; 57% in Hidden Hills and Rolling Hills Estates; 58% in El Segundo; 59% in Manhattan Beach; and 60% in Hermosa Beach.



# Questions?

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