Los Angeles County’s HIV Epidemic: Current State and Future Directions

UCLA Fielding School of Public Health
Epidemiology 227: AIDS, A Major Public Health Challenge
Professor Roger Detels, MD MS
May 4, 2012

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Los Angeles County Department of Public Health
Division of HIV and STD Programs
Presentation Overview

• Brief Epidemiologic Overview
• A Rapidly Evolving Response HIV/STDs
  • Catalysts for Change
  • Syndemic Planning and Geospatial Analysis
  • LAC Treatment Cascade Data
• Scaling Up HIV Casefinding Efforts
• Funding Picture and Outlook
• Steps Moving Forward
Division of HIV and STD Programs

L.A. County Board of Supervisors

Jonathan E. Fielding

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Mario J. Pérez
Director
DIVISION OF HIV AND STD PROGRAMS

Sexually Transmitted Disease Program
HIV Epidemiology Program
Office of AIDS Programs and Policy
Brief Epidemiologic Overview
Diagnoses of HIV infection, 2009 - 40 states and 5 U.S. dependent areas
N = 42,959

Notes: Data include persons with a diagnosis of HIV infection regardless of the stage of disease at diagnosis. All displayed data have been statistically adjusted to account for reporting delays, but not for incomplete reporting.
Persons living with an AIDS diagnosis, by Metropolitan Statistical Area (MSA) of residence, year-end 2008 - United States and Puerto Rico

N = 410,146

Number
- 72.0 - 3,999.0
- 3,999.1 - 11,999.0
- 11,999.1 - 24,999.0
- 24,999.1 - 87,026.0

Data mapped using graduated circles, classed using natural breaks

Notes: Only MSAs with over 500,000 population included. All displayed data have been statistically adjusted to account for reporting delays, but not for incomplete reporting. Data source: HIV Surveillance Report, 2009. Vol. 21, table 24. Inset maps not to scale.
Estimated HIV Incidence, US, ‘06-’09

- 48,600 → 56,000 → 47,800 → 48,100

- 21% increase among 13-29 year olds, driven by.....

- 34% increase among young MSM, driven by...

- 48% increase among young African-American MSM!!!
## Leading Causes of Premature Death, Los Angeles County, 1997 and 2006

<table>
<thead>
<tr>
<th>Cause of death</th>
<th>1997</th>
<th>2006</th>
<th>Percent change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coronary heart disease</td>
<td>875</td>
<td>641</td>
<td>-28</td>
</tr>
<tr>
<td>Homicide</td>
<td>542</td>
<td>440</td>
<td>-19</td>
</tr>
<tr>
<td>Motor vehicle crash</td>
<td>310</td>
<td>309</td>
<td>0</td>
</tr>
<tr>
<td>Liver disease</td>
<td>227</td>
<td>195</td>
<td>-14</td>
</tr>
<tr>
<td>Suicide</td>
<td>236</td>
<td>183</td>
<td>-22</td>
</tr>
<tr>
<td>Lung cancer</td>
<td>291</td>
<td>189</td>
<td>-35</td>
</tr>
<tr>
<td>Stroke</td>
<td>212</td>
<td>176</td>
<td>-17</td>
</tr>
<tr>
<td>Drug overdose</td>
<td>169</td>
<td>165</td>
<td>-2</td>
</tr>
<tr>
<td>Diabetes</td>
<td>164</td>
<td>164</td>
<td>0</td>
</tr>
<tr>
<td>Breast cancer (female)</td>
<td>339</td>
<td>264</td>
<td>-22</td>
</tr>
<tr>
<td>HIV</td>
<td>241</td>
<td>113</td>
<td>-53</td>
</tr>
</tbody>
</table>

* YPLL= years of potential life lost before age 75, age-adjusted to year 2000 U.S. standard population
<table>
<thead>
<tr>
<th></th>
<th>Los Angeles County</th>
<th>California</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated living HIV/AIDS Cases</td>
<td>59,500</td>
<td>134,303*</td>
</tr>
<tr>
<td>Reported HIV/AIDS Cases</td>
<td>44,250</td>
<td>110,994</td>
</tr>
<tr>
<td>Estimated Undiagnosed HIV/AIDS Cases</td>
<td>12,800</td>
<td>23,309*</td>
</tr>
</tbody>
</table>

Data Source: Los Angeles County Department of Public Health, HIV Surveillance, 2011; California State Department of Public Health, State Surveillance Data, 2010

*133,705 calculated assuming 21% of HIV positive Californians are unaware of their status.
Los Angeles County

Data Source: U.S. Census Bureau, Topologically Integrated Geographic Encoding and Referencing system, 2009. Maps Drawn at 1:750,000 scale.
Population: 9,848,011
Estimated HIV/AIDS Cases: 59,500

Overall, Race/Ethnicity:
- Black: 35.0%
- Latino: 40.0%
- White: 21.0%
- Asian/PI: 1.0%
- NA/Al: 3.0%

Data Source: U.S. Department of Commerce, 2010; Los Angeles County Department of Public Health, HIV Surveillance, 2011
2012 Estimated Number of Persons Living with HIV and AIDS in LAC

- Estimate that 21.5% of HIV+ in LA County are unaware of their infection; modified from CDC estimate.
- Of 4,853 notifications pending investigation, estimate half of 2,400 who have detectable VL or confirmatory test to be unduplicated cases.
- Of 3,200 code cases reported, half are thought to represent unduplicated cases.

Source: LAC Division of HIV and STD Programs, reported as of 12/31/2011.
Annual Diagnoses of AIDS and HIV Infection and Deaths of Persons with HIV Infection, Los Angeles County, 1991-2010

* Data only available since 2007, the first complete year after the implementation of mandatory and named HIV reporting in California. Include both HIV or AIDS cases with an initial HIV diagnosis in the listed year.

** Data are provisional for 2008-2010.

Number of Persons Reported Living with HIV Infection and AIDS by Year, LAC, 1991-2010

AIDS Cases, AIDS Deaths and Persons living with AIDS, by Year – LAC, 1987-2008

1. Number of new cases diagnosed each year.
2. Number of deaths occurred each year among persons reported with AIDS.
3. Number of persons living with AIDS at the end of each calendar year.

Note: Data are provisional for 2006-2008.
Persons Living with HIV/AIDS in LAC per 100,000 population* by Race/Ethnicity, as of December 2010

- **Black**: 951
- **AI/AN**: 652
- **White**: 473
- **Latino**: 339
- **A/PI**: 94

*Sometimes called “Prevalence Rate”; it is really a proportion.

Source: HIV/AIDS Surveillance Summary, data as of December 2010
Proportion of LAC PLWH/A Cases by Race/Ethnicity* & Diagnosis Year, 2001-10

- **Latino**: 21% (2010) 18% (2001)
- **Black**: 4% (2010) 5% (2001)
- **Asian/PI**: 4% (2010) 5% (2001)

*American Indian and Alaska Native are not presented here but consistently comprise <1% of cases, including 0.4% in 2010.
*Data are provisional due to reporting delay.

Source: HIV Epidemiology Program, LAC-DPH; data as of December 31, 2010
LA COUNTY HIV EPIDEMIOLOGY PROGRAM

Persons with an undetermined transmission category are assigned a risk factor using multiple imputation (MI) methods (see technical notes in HIV/AIDS Surveillance Summary). Other risks include hemophilia or coagulation disorder, transfusion recipient, perinatal exposure, and confirmed other risk. Data are provisional due to reporting delay.

Source: HIV/AIDS Surveillance Summary, data as of December 2010
Trend in Proportion of Persons Living with AIDS by Age, 2001-2010

Note: Data for 2008, 2009, and 2010 are provisional.
Trend in Proportion of Persons Living with HIV by Age, 2002-2010

Data Source: HIV Surveillance Program. Note: Data for 2008, 2009, and 2010 are provisional.
Reported STIs and HIV/AIDS Cases Los Angeles County, 2009

- Over 55,000 STD /HIV were reported in 2009
  - 74% Chlamydia
  - 14% gonorrhea
  - 5% Syphilis
  - 7% HIV/AIDS

Source: STD Program/HIV Epidemiology Program Los Angeles County Department of Public Health
STI Rates per 100,000 Residents, 2009

Source: STD Program Los Angeles County Department of Public Health
HIV/STD Co-morbidity Among HIV Cases Reported for Partner Services: LAC, 2009

Total HIV/AIDS = 2,911
Total Early Syphilis = 1,032 (36%)
Total Chlamydia = 445 (15%)
Total Gonorrhea = 400 (14%)
Catalysts for Change
Catalysts for Change

- National HIV/AIDS Strategy
- Unsustainable disease burden
- ACA – LIHP - HWLA
- Improved Mapping
- Improved Use of Surveillance and Laboratory Information
- ECHPP and 12-City Initiative
Reducing HIV-Related Disparities and Health Inequities

The Opportunity

The transmission of HIV has long been concentrated in groups that have been marginalized or underserved. For persons living with HIV, this issue often transcends discrete measures such as incidence, morbidity and mortality rates, but speaks to a confluence of factors that lead to poorer health overall. In some communities, a major challenge is overcoming a sense of fatalism where people believe that they are destined to become infected with HIV. In other communities, although the threat of HIV is real, it is only one of many issues individuals face on a daily basis and...
National HIV/AIDS Strategy: Three Primary Goals

1. Reduce New HIV Infections
2. Increase Access to Care and Improve Health Outcomes for People Living with HIV
3. Reduce HIV-Related Disparities and Health Inequities

To accomplish these goals, we must achieve a more coordinated national response to the HIV epidemic in the United States.
Unsustainable Disease Burden

- ~2,000 annual HIV infections
- ~12,800 HIV-undiagnosed persons
- ~55,000 annual STDs diagnosed
- Fewer resources
- Alarming health disparities, including diagnosis, linkage to care, retention and viral suppression
- High pharmaceutical and diagnostic costs
### Cost of Care for Persons Living with HIV/AIDS

<table>
<thead>
<tr>
<th>CD4 Count</th>
<th>&lt;50</th>
<th>51-200</th>
<th>201-500</th>
<th>&gt;500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Cost*</td>
<td>$60,000</td>
<td>$30,000</td>
<td>$23,000</td>
<td>$20,000</td>
</tr>
</tbody>
</table>

*Annual Cost of Care includes inpatient care, HIV medications, clinical visits, some ancillary services (home care)*

What’s Driving New Infections?

- High levels of undiagnosis
- Social and sexual networks
- Drug use, particularly alcohol and methamphetamine use
- Community viral load
- Poor economic and environmental conditions
- Homophobia, stigma, shame
Awareness of Serostatus Among People with HIV and Estimates of Transmission

- 25% Unaware of Infection
- 75% Aware of Infection

People Living with HIV/AIDS: 1,039,000-1,185,000

Accounting for:

- 54% of New Infections

New Sexual Infections Each Year: ~32,000

Marks, et al
AIDS 2006;20:1447-50

~46% of New Infections
Methamphetamine and HIV in MSM: A Time-to-Response Association

CM-PEP

Meth + Sex = PEP
Protect Your Negative Status

Are you...
- At least 18 years old?
- HIV-positive?

Have you...
- Had sex with a man recently?
- Used methamphetamine recently?

If so, you may qualify to participate in a research study to examine methamphetamine use and sexual risk behaviors.

If interested, you will be asked to...
- Submit 1-2 blood samples a week for 3 weeks.
- Attend one or two visits with a physician for a physical.

Your participation is voluntary and confidential. You may be able to earn up to $250 in exchange for your time and for submitting urine samples without evidence of methamphetamine use. You will also have access to free PEP (post-exposure prophylaxis) to be taken in case you have a sexual exposure to HIV during your study participation and to information on sexually transmitted infections.

If you are interested or have any questions, please call Payson at 323-387-6073.

Got PEP?
Having sex with Meth?
Are you keeping it safe?

Are you...
- At least 18 years old?
- HIV-negative?

Have you...
- Had sex with a man recently?
- Used methamphetamine recently?

If so, you may qualify to participate in a research study to examine methamphetamine use and sexual risk behaviors for HIV.

If interested, you will be asked to...
- Submit 1-2 blood samples a week for 3 weeks.
- Submit blood samples.
- Attend one or more visits with a physician for a physical.

Your participation is voluntary and confidential. You may be able to earn up to $250 in exchange for your time and for submitting urine samples without evidence of methamphetamine use. You will also have access to free PEP (post-exposure prophylaxis) to be taken in case you have a sexual exposure to HIV during your study participation and to information on sexually transmitted infections.

If you are interested or have any questions, please call Payson at 323-387-6073.
The Local Epidemics Through a Syndemic Lens
HIV/STD Syndemic Planning

- Focuses on connections among cofactors of disease
  - HIV
  - Syphilis
  - Gonorrhea

- Considers those connections when developing health policies

- Next Steps include analysis of “upstream” determinants, e.g., poverty, substance use
HIV Positivity Rates by Service Planning Area (SPA), DHSP Testing Sites, 2007

Legend
HIV New Positivity Rates
- 0.34 % - 0.73 %
- 0.74 % - 1.11 %
- 1.12 % - 1.50 %
- 1.51 % - 1.88 %
- SPA
Persons Living with an HIV Diagnosis in 2008, by Zip Code
Los Angeles County, CA

AIDSVu is an interactive, online map that allows users to visually explore the HIV epidemic in the U.S. alongside critical resources such as HIV testing center locations.

![Map of LA County showing HIV diagnoses by zip code](image)

2008 Rate of persons living with an HIV diagnosis per 100,000 population:
- 521+ per 100,000 population
- 304 to 520 per 100,000 population
- 190 to 303 per 100,000 population
- 130 to 189 per 100,000 population
- 0 to 129 per 100,000 population
- Data not shown
HIV Case Density, 2009, SPA 8

Cases per 2 Square Miles
- <0.5
- 0.5 - 1.7
- 1.8 - 3.6
- 3.7 - 6.6
- 6.7 - 10.8
- 10.9 - 15.2
- 15.3 - 21.8
- 21.9 - 42.0
- >42.0

Source: 2009 New HIV Cases, HIV Epidemiology Program
Nearest Neighbor Hierarchical Clustering Summary

HIV/STI Clusters
- HIV Cases
- Syphilis and HIV co-Infection
- Syphilis, no HIV
- GC and HIV co-Infection
- GC, no HIV
- Los Angeles County

83.9% of HIV Cases in LAC

¹Nearest Neighbor Hierarchical Clusters output at 1.0 standard deviations using fixed-distance band threshold
Los Angeles County

- HIV
- Syphilis+HIV
- Syphilis, no HIV
- GC + HIV
- GC, No HIV

% of HIV/STI Cases Within 5 Cluster Areas

Race/Ethnicity

- Black: 45.2%
- White: 25.8%
- Latino: 24.6%
- API: 4.0%
- Nat. Am.: 0.3%
Disease Burden Summary

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV</td>
<td>861</td>
<td>46.3%</td>
</tr>
<tr>
<td>Syphilis + HIV</td>
<td>642</td>
<td>58.5%</td>
</tr>
<tr>
<td>Syphilis no HIV</td>
<td>712</td>
<td>44.6%</td>
</tr>
<tr>
<td>Gonorrhea</td>
<td>3,330</td>
<td>42.1%</td>
</tr>
</tbody>
</table>

Race/Ethnicity

- Black: 27.8%
- White: 23.9%
- Latino: 44.4%
- API: 3.3%
- Nat. Am.: 0.3%
PLWHA by Residence Zip Code

- <5
- 6 - 74
- 75 - 163
- 164 - 259
- 260 - 404
- 405 - 911
- 912 - 2,012

No PLWHA Reported

Data Source: eHARS as of September 30, 2011
New HIV Cases by Resident Zip Code, 2009

Data Source: eHARS as of January 1, 2011
New Chlamydia Cases by Resident Zip Code, 2009

Data Source: STD Surveillance, 2011
Examining Care and Treatment from Multiple Data Sources
The Spectrum of Engagement in HIV Care and its Relevance to Test-and-Treat Strategies for Prevention of HIV Infection

Edward M. Gardner,1,3 Margaret P. McLees,1,3 John F. Steiner,2 Carlos del Rio,4,5 and William J. Burman1,3

1Denver Public Health and 2Kaiser Permanente Colorado, Denver, 3University of Colorado Denver, Aurora, Colorado, and 4Rollins School of Public Health of Emory University, and 5Emory Center for AIDS Research, Atlanta, Georgia

(See the editorial commentary by Lange, on pages 801–802.)

For individuals with human immunodeficiency virus (HIV) infection to fully benefit from potent combination antiretroviral therapy, they need to know that they are HIV infected, be engaged in regular HIV care, and receive and adhere to effective antiretroviral therapy. Test-and-treat strategies for HIV prevention posit that expanded testing and earlier treatment of HIV infection could markedly decrease ongoing HIV transmission, stemming the HIV epidemic. However, poor engagement in care for HIV-infected individuals will substantially limit the effectiveness of test-and-treat strategies. We review the spectrum of engagement in care for HIV-infected individuals in the United States and apply this information to help understand the magnitude of the challenges that poor engagement in care will pose to test-and-treat strategies for HIV prevention.
Spectrum of Engagement in Care in the United States

- HIV Infected: 1,106,400
- HIV Diagnosed: 79%
- In HIV Care: 59%
- Retained in HIV Care: 40%
- Need ART: 32%
- On ART: 24%
- Undetectable VL: 19%

Gardner et al. Clinical Infectious Diseases 2011;52(6):793-800
Spectrum of Engagement in Care: US vs. Los Angeles County

**USA**
- 1,106,400 HIV Infected
- 79% HIV Diagnosed
- 59% In HIV Care
- 40% Retained in HIV Care
- 32% Need ART
- 24% On ART
- 19% Undetectable VL

**Los Angeles County**
- 61,700 HIV Infected
- 79% HIV Diagnosed
- 44% In HIV Care
- 35% Retained in HIV Care
- Not Applicable Need ART
- 39% On ART
- 26% Undetectable VL

Gardner et al. CID 2011

Los Angeles County HIV Surveillance Data 2009-2010
Los Angeles County Conceptual Model for Continuum of HIV Services

No HIV, Low Risk
• Social marketing
• Capacity building
• Routine HIV testing

High Risk for HIV
• Targeted & Routine HIV Testing
• HE/RR
• Social Marketing
• Syringe Exchange Programs
• Biomedical (PEP)
• Partner Services
• STI Screening and Treatment
• Substance use programs

HIV+, Unaware
• Targeted & Routine HIV Testing
• Social Marketing
• Partner Services
• Substance use programs

HIV+ Aware, But Not in Care
• Outreach
• Early Intervention Programs
• Mental health and substance use programs
• Ancillary support services
• Social Marketing

PLWHA Linked to Care
• STI screening and treatment
• HIV medical care and ART
• Treatment adherence
• Ancillary services
• Mental health and substance use programs
• PS
• HE/RR
• Social marketing

PLWHA Retained in Care
LAC Spectrum of Engagement in HIV Care

Customized Prevention Program:
- Behavioral Risk Reduction
- Linkage to SA/MH Service
- Additional Prevention Service
- STI Diagnosis/Treatment
- Biomedical Prevention (nPEP, PrEP)

Medical Home:
- Medical Care Coordination
- Retention Case Management
- Youth Case Management

Jails:
- Transitional Case Management
- Peer NAV
- HIV Nurse Liaison

Suppressed VL and Reduced Transmission
Prevention of HIV-1 Infection with Early Antiretroviral Therapy

Los Angeles County Treatment Cascade among PLWH in Care, 2009

Number of Individuals

- **HIV Diagnosed**: 41,059
- **In Care**: 27,396
- **Retained in HIV Care**: 80%
- **On ART**: Unknown at the County-level
- **Undetectable VL**: 58%

Los Angeles County HIV Surveillance Data 2009-2010
Ryan White “in Care” Treatment Cascade, 2009

Number of Individuals

-  5,000  10,000  15,000  20,000

RW System of Care: 18,345
RW Medical Care: 12,752
On ART: 90%
Retained in HIV Care: 74%
Undetectable VL: 65%

Ryan White Casewatch Data, January – December 2009 (CY2009)
Ryan White “in Care” Treatment
Cascade, FY2010

Number of Individuals

- 5,000 10,000 15,000 20,000

RW System of Care: 19,228
RW Medical Care: 14,753
On ART: 90%
Retained in HIV Care: 87%
Undetectable VL: 75%

Ryan White Casewatch Data, March 2010 – February 2011 (Year 20)
## Linkage to Care by Test Year, 2006-08

Linked to Care by Test Year, Jan 2006 - Dec 2008\(^1\) (n = 807)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linked to Care(^2)</td>
<td>528</td>
<td>65.4%</td>
</tr>
<tr>
<td>2006 (n=273)</td>
<td>164</td>
<td>60.1%</td>
</tr>
<tr>
<td>Within 3 months</td>
<td>123</td>
<td>45.1%</td>
</tr>
<tr>
<td>Within 6 months</td>
<td>18</td>
<td>6.6%</td>
</tr>
<tr>
<td>Within 1 year</td>
<td>23</td>
<td>8.4%</td>
</tr>
<tr>
<td>2007 (n=237)</td>
<td>163</td>
<td>68.8%</td>
</tr>
<tr>
<td>Within 3 months</td>
<td>138</td>
<td>58.2%</td>
</tr>
<tr>
<td>Within 6 months</td>
<td>17</td>
<td>7.2%</td>
</tr>
<tr>
<td>Within 1 year</td>
<td>8</td>
<td>3.4%</td>
</tr>
<tr>
<td>2008 (n=297)</td>
<td>201</td>
<td>67.7%</td>
</tr>
<tr>
<td>Within 3 months</td>
<td>177</td>
<td>59.6%</td>
</tr>
<tr>
<td>Within 6 months</td>
<td>13</td>
<td>4.4%</td>
</tr>
<tr>
<td>Within 1 year</td>
<td>11</td>
<td>3.7%</td>
</tr>
</tbody>
</table>
HIV-positive Individuals\(^1\) Linked to Care\(^2\), 2006-08 by Zip Code

\(^1\) Newly-diagnosed individuals tested at OAPP-funded sites, identified in HIV surveillance data

\(^2\) Matched cases in surveillance data not having a CD4 or viral load laboratory record, zip codes with small numbers not included in analysis

Linked to Care

\begin{itemize}
  \item \textcolor{white}{>88%}
  \item \textcolor{yellow}{71 - 88%}
  \item \textcolor{orange}{58 - 70%}
  \item \textcolor{red}{40 - 57%}
  \item \textcolor{purple}{<40%}
\end{itemize}

\begin{itemize}
  \item \textcolor{white}{<5 New Positive Tests}
\end{itemize}

Data Source: HIV Epidemiology Program, 2010

1 Newly-diagnosed individuals tested at OAPP-funded sites, identified in HIV surveillance data 2 Matched cases in surveillance data not having a CD4 or viral load laboratory record
Newly-diagnosed individuals tested at OAPP-funded sites, identified in HIV surveillance data

Matched cases in surveillance data not having a CD4 or viral load laboratory record, zip codes with small numbers not included in analysis

Linked to Care

Range by Provider:
58% – 92%

Retention in Care* by Resident Zip Code

< 60% 61-72% 73-79% 80-86% > 86%

<= 10 RW Clients
Medical Outpatient Sites

Source: Casewatch YR 19 (Feb. '09 – Mar. '10):
Limited to Zip-Codes w/ > 10 RW clients.
* Defined as 2 MOP visits at least 90 days apart in a span of one year.
Summary: Not Linked to Care in LAC

- Characteristics/factors associated with being unlinked to care:\(^1\):
  - African American and Latino
  - Homeless
  - Transgender
  - Tested at Mobile Testing Unit (vs. fixed)

- Only 2/3 of those diagnosed w/ HIV in LAC are linked to care within 1 year of diagnosis

- Improving linkage to care = strategy to improve individual health outcomes as well as reduce HIV transmission

PLWHA Not in Care, FY2010

Data Source: eHARS, ADAP, Medicare, and MediCal and Casewatch, Jul09-Jun10
Scaling Up HIV Casefinding Efforts
# HIV Testing by Modality, 2010

<table>
<thead>
<tr>
<th></th>
<th>Number of HIV Tests N</th>
<th>HIV Positivity Rate n (%)</th>
<th>HIV New Positivity Rate n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grand Total</td>
<td>100,686</td>
<td>1,203</td>
<td>1,024</td>
</tr>
<tr>
<td>Public Health STD Clinics</td>
<td>24,776</td>
<td>184</td>
<td>154</td>
</tr>
<tr>
<td>Routine Testing in Healthcare Settings</td>
<td>17,799</td>
<td>354</td>
<td>348</td>
</tr>
<tr>
<td>Testing within Jail Settings</td>
<td>12,932</td>
<td>73</td>
<td>25</td>
</tr>
<tr>
<td>Targeted Testing</td>
<td>45,179</td>
<td>592</td>
<td>497</td>
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### HIV Testing by Modality, 2010 cont.

<table>
<thead>
<tr>
<th>Modality</th>
<th>Number of HIV Tests</th>
<th>HIV Positivity Rate</th>
<th>HIV New Positivity Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>n (%)</td>
<td>n (%)</td>
</tr>
<tr>
<td><strong>Targeted Testing cont.</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storefront</td>
<td>45,382</td>
<td>594</td>
<td>1.31%</td>
</tr>
<tr>
<td>Mobile Testing Unit Program</td>
<td>27,829</td>
<td>334</td>
<td>1.20%</td>
</tr>
<tr>
<td>Multiple Morbidity Mobile Testing Units Programs</td>
<td>9,262</td>
<td>90</td>
<td>0.97%</td>
</tr>
<tr>
<td>Social Network Testing Program</td>
<td>3,565</td>
<td>44</td>
<td>1.23%</td>
</tr>
<tr>
<td>Bathhouses and Sex Clubs</td>
<td>707</td>
<td>55</td>
<td>7.78%</td>
</tr>
<tr>
<td>Court Ordered and Drug Expansion</td>
<td>1,984</td>
<td>33</td>
<td>1.66%</td>
</tr>
<tr>
<td></td>
<td>1,832</td>
<td>36</td>
<td>1.97%</td>
</tr>
</tbody>
</table>

Data Source: HIV Testing System (HTS) as of 10/1/11

Indentation shows that the characteristic is a subset (sample) of the characteristic above it.
DPH HIV Testing Projections 2010-2015, Former HIV Testing Model

Data Source: Office of AIDS Programs and Policy, HIV Counseling and Testing Data, 2009
DHSP HIV Testing Projections 2010-2015, New Directions in HIV Testing

Data Source: Division of HIV and STD Programs, HIV Testing Services Data, 2011
Division of HIV and STD Programs
HIV Tests and New Positive Tests By Year*

Data Source: Division of HIV and STD Programs, HIV Testing Services, 2011
*Includes all HIV testing supported by Public Health, HIV and STD Programs with projected numbers based on NHAS implementation (2011-15)
The nPEP Pilot: Comprehensive Biomedical HIV Prevention for LAC

- 2 demonstration sites; 28 days of ART
- IRB and FDA regulatory oversight
- Structured Protocol and Manual of Procedures
- Demonstration site preparation and training
- Safety labs and serial HIV and STI testing
- Sexual/substance use risk-reduction counseling
- Planned transition to Public Health Service Model
HIV/STI Clusters

- HIV Cases
- Syphilis and HIV co-Infection
- Syphilis, no HIV
- GC and HIV co-Infection
- GC, no HIV
- Los Angeles County

83.9% of HIV Cases in LAC

Nearest Neighbor Hierarchical Clustering Summary

¹Nearest Neighbor Hierarchical Clusters output at 1.0 standard deviations using fixed-distance band threshold
HIV/STI Cluster Areas
HIV Cases, 2009

- 1.3%
- 6.6%
- 9.2%
- 18.4%
- 46.3%

Source: DHSP Research and Evaluation
nPEP Inclusion Criteria

1. 18 yrs of age and ability to provide consent
2. High-risk exposure (unprotected or with failed condom):
   - Receptive/Insertive anal intercourse
   - Receptive/Insertive vaginal intercourse
   - Receptive oral intercourse w/ejaculation with HIV+ source
   - Sharing intravascular injection drug works
3. High-risk source (one or more):
   - Known HIV+, MSM, MSM/W, IDU, CSW, sexual perpetrator, history of incarceration, from an endemic country (prevalence >1%), partner of one of the above
4. Exposure within 72-hrs of presentation
5. Not known to be HIV+
6. No countermanding concomitant medications or allergies
nPEP Medication Regimens

Standard ART Regimen for high-risk exposures:
  • Truvada
  • Combivir – for intolerance to Truvada

Expanded ART Regimen:
  • For highest-risk exposures or suspected source drug resistance; added to the above medication administration
  • Kaletra or Raltegravir
nPEP Preliminary Findings

Presentation data as of March 1, 2012

- Screened 302, Enrolled 283
- Data to follow N=283 (260 at Site 1, 23 at Site 2)
- N=38 had already initiated PEP at another location (ED, Primary Care, HIV clinic)

Site 1: LAGLC – Los Angeles Gay and Lesbian Ctr
- Screened 269, enrolled 260

Site 2: OASIS
- Screened 33, enrolled 23
nPEP Pilot Summary

• Demonstrated feasibility of implementation of nPEP in clinical settings for high risk populations
• Good example of how to develop and implement comprehensive biomedical and behavioral HIV prevention interventions
• Cost of ART is significant and can be an obstacle to scaling up service delivery
nPEP Pilot Summary

• Education for primary care (non-HIV-specialty) needed to support providers to deliver nPEP more broadly

• Jurisdictional and Departmental nPEP intervention champions (Landovitz, Sayles) are crucial for launch, implementation and oversight
Sustaining an nPEP Program

Public health program premised on the findings from pilot with few modifications:

• 2 drug regimen (Truvada) except in cases of documented drug resistance from source patient (3rd drug Raltegravir/Kaletra)
• Integrated hepatitis screening and vaccination
• Streamlined data reporting
• PEP coordinator to do follow up visits
• Full 28-day ART dispensed at intake
• Integrated risk-reduction counseling via DHSP funded behavioral programs
PEP Public Health Program

- Referred to as PEP-LA

- Launched
  - May 2011 at LAGLC; and
  - March 2012 at OASIS Clinic

- To date, PEP services delivered to approx N=350 high-risk HIV negative patients
CHRP: PrEP and TLC+ for Prevention (PATH)

• **Goal PrEP arm**
  – Deliver “Combination HIV prevention” at two community-based sites in LAC
    • health education and risk reduction counseling
    • resolution of social, drug use, and MH barriers
    • medication based strategies such as pre- and post-exposure prophylaxis

• **Objective PrEP arm**
  – Demonstrate feasibility of delivery of PrEP project core elements
PrEP – Project Design

• Conceptualized as a *Customized Prevention Package (CPP)* model stratified by level of HIV risk
  
  • Low-Moderate Risk
    • availability of appropriate use of PEP and behavioral risk reduction

  • High Risk
    • daily *PrEP* medication (Truvada) and intensive behavioral risk reduction
PrEP: Core Elements and Measurements

- Stratify 375 MSM and MTF transgenders
- 48-week evaluation period
- IRB and FDA regulatory oversight
- Structured Protocol and Manual of Procedures
- Behavioral assessments and intervention
PrEP: Core Elements and Measurements

- Adherence assessments and intervention
- Safety labs and STD assessments
- Support service referrals
- Linkage to HIV treatment

- Anticipated launch October 2012
PrEP - Aims

- Assess safety and feasibility of daily Truvada based PrEP
- Assess adherence to regimen as part of an open-label demonstration project
- Assess changes in sexual risk behavior in the context of an intensive risk-reduction intervention
- Estimate per-participant costs for the CPP model
- Assess sero-conversions during PrEP CPP treatment
Dramatic Funding Shifts
Changes in the Way We Finance Our Response

• CDC FOA-mandated shifts
• Section 1115 Medicaid Waiver
  – Low Income Health Programs (LIHPs)/Healthy Way LA
• Redistribution of RW resources
• Blending of service categories across funding streams
CDC Funding Shifts

• Redistribution of funding
  – Increased allocation to MSA
  – Discontinue MSA funding via State

• 75% funding for required core components
  – HIV testing
  – Comprehensive Prevention with Positives
  – Condom distribution
  – Policy initiatives
California’s Section 1115 Medicaid Waiver and Federal Health Care Reform
Section 1115 Waiver Overview

- November 2010: 1115 Waiver approved by CMS
- Waiver is designed to be a bridge to implementation of health care reform in 2014
  - Attempts to stabilize safety net provider systems
  - Improves care coordination for certain vulnerable populations
  - Expands coverage to uninsured adults
Implementation of the Patient Protection and Affordable Care Act

- **<133% FPL**
  - Full Scope Medi-Cal

- **134%-400% FPL**
  - Subsidized insurance coverage through the insurance exchange

- **>401% FPL**
  - Insurance coverage through the insurance exchange (No Subsidy)
Healthy Way LA Transition Review

Medical Provider
- We expect that clients will be able to continue to be seen by their current HIV medical providers
- Medical Home

Prescription Drug Coverage
- Clients will have expanded access to medications
- DHS is creating an HIV pharmacy program (clinic and community pharmacies)
- Some clients will have to change pharmacies

Improved access to medical care
- Medical specialty
- Inpatient (hospital) coverage
- Access to non-HIV related care and treatment
- Emergency Care
- Urgent Care
- Ambulance
Local ECHPP Activities

• Syndemic Planning
  – Integrated use of HIV and STI surveillance data

• Identify optimal mix of HIV programming
  – Robust Decision Making to inform prioritization, scale, and optimal mix of HIV prevention interventions for LAC

Where should we focus our prevention efforts to make the largest impact with resources we have?
Paradigm Shifts, Pilot Projects and Next Steps
Evolving a Local Response

- Integrating HIV/STD prevention & treatment
- Integrating the prevention/care continuum
- Adopting the National HIV/AIDS Strategy
- Early detection, LTC and RIC
- Viral suppression for individuals in HIV care
- Evidence-based programming
- Changes in community planning
What is ECHPP?

• CDC-funded initiative intended to enhance the impact of HIV prevention efforts in 12 MSAs that represent 44% of the domestic epidemic

• Expectations of ECHPP grantees:
  – Align their prevention strategies with the NHAS
  – Develop a plan that addresses gaps and better supports strategies that have the greatest impact on reducing HIV incidence
What is the 12-Cities Project?

• A DHHS-supported project to accelerate comprehensive HIV/AIDS planning and cross-agency response in the 12 jurisdictions that bear 44% of HIV burden.

• Will serve as a proving ground to demonstrate how broad range of federally-supported HIV prevention, care and treatment activities can work together more effectively across organizational and program boundaries.
Pilot Projects

• TLC+
• Delivering Partner Services through multiple models (ARTAS, CEDIS)
• non-occupational Post-exposure Prophylaxis (nPEP)
• Jails Peer Navigation
• Integrating Mental Health and Substance Use Treatment into Primary Care Settings
Future of HIV Testing in Los Angeles County

• Increased Testing (Public/Private Sector)
• Performance Measure Enforcement
• Testing, Linkage to Care + (TLC+)
• Progressive Testing Algorithms
• Enhanced Partner Services and LTC
• Use of HIV Surveillance
Future of HIV Testing in Los Angeles County

- Decrease Repeat Positive Testers
- Enlist Private Sector Partners
- Expand Payer Base
- Change HEDIS Measures
- Mandatory Opt-Out Screening in CA?
- Diversify Testing Modalities
Broad Goals for Near Term

- Program redesign/evolution
  - Multiple morbidity screening and treatment
  - Improved casefinding capacity
  - Oral health expansion
  - Improved medical care coordination and other care wrap-around services
  - Holistic substance abuse treatment
  - Improved mental health treatment access
Broad Goals for Near Term

- **System Changes**
  - RWP/HWLA Migration
  - RWP Investment Refinement
  - Integrated Care, Prevention and Housing Planning

- **Policy Items**
  - RWP Continuation
  - Preservation of CA Investment Levels
Gracias

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Questions and Answers