Race and HIV: When Risky Behaviors Can’t Explain HIV Disparities

Findings from the Los Angeles Coordinated HIV/AIDS Needs Assessment (LACHNA)

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Square Miles: 4,086
Population: 10.3 Million
- Latino/a 47%
- White 28.9%
- Asian/PI 12.6%
- African-American 9.0%
- Native American 0.3%

Proportion of:
- California Population: 29%
- California AIDS Cases: 36%
- U.S. AIDS Cases: 5%

Living with HIV/AIDS: 60,000 (Estimated)

1United Way, Los Angeles (2008)
2U.S. Department of Commerce (2008)
3Los Angeles County HIV Epidemiology Program (2008)
Adjusted Mode of Exposure for Persons Living with AIDS in LAC*

Nationally, MSM exposure accounted for 71% of cumulative AIDS cases from 2003-2007.

As of December 31, 2007.
Male AIDS Rates among Persons Living with AIDS in LAC by Race*

* As of December 31, 2008.

Note. Data include persons with a diagnosis of HIV infection regardless of their AIDS status at diagnosis. Data from 25 states with confidential name-based HIV infection reporting since at least 1994. Data have been adjusted for reporting delays and missing risk-factor information. Data exclude cases among men who had sex with other men and injected drugs.

*Hispanics/Latinos can be of any race
†Includes Asian and Pacific Islander legacy cases.
Goals and Objectives

Why are African-American MSM disproportionately impacted by HIV/AIDS?

Goal: Characterize the effects that individual-level risk behaviors have on HIV risk among African-American MSM, Latino MSM, and White MSM.

Objectives:
- Compare HIV risk behaviors
- Model HIV status with risk

Hypothesis: High-levels of individual risk behaviors should result in higher risk for HIV, but other factors are driving the epidemic.
Los Angeles Coordinated HIV/AIDS Needs Assessment (LACHNA)
Survey Development

• Survey developed in collaboration with:
  – Commission on HIV (care planning body)
  – HIV Prevention Planning Committee
  – Office of AIDS Programs and Policy (OAPP)

• Topics included:
  • Demographics
  • HIV Care/Testing
  • Mental Status
  • HIV Knowledge
  • Drug/Alcohol Use
  • Sexual Risk Behaviors
  • Risk Perceptions
  • Oral Health
  • Prevention/Care Service Utilization
  • Health Insurance/Benefits
Methodology

• Estimated Sample Size: N = 2,085
• One-on-one interview (30-60 minutes)
  – English and Spanish language.
  – Participants compensation ($20-$30 gift card).
• Systematic random sampling (every n\textsuperscript{th} individual approached)
• Verbal consent required
Methodology (cont’d)

• Data collected from June 10 – December 14, 2007

• Eligibility Criteria:
  – 13 years or older
  – Los Angeles County resident
  – Didn’t interview before

• Data collection sites included:
  – 75 prevention venues
    • Prevention* surveys (n = 1,196)
  – 46 care venues
    • Care** surveys (n = 679)

TOTAL SAMPLE: N = 1,888

* Prevention surveys consist of participants who are HIV-negative or unknown status.

** Care surveys consist of HIV-positive participants.
LACHNA MSM* Demographics

MSM SAMPLE:
N = 461 (24%)

* MSM is defined by reported sex with a male or transgender MTF in the past 6 months (includes MSM, MSM/IDU, and MSM/W).
## MSM Demographics cont’d

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>%</th>
<th>Characteristic</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td><strong>Living Situation</strong></td>
<td></td>
</tr>
<tr>
<td>13-24</td>
<td>26%</td>
<td>Stable</td>
<td>89%</td>
</tr>
<tr>
<td>25-49</td>
<td>65%</td>
<td>Transitional</td>
<td>7%</td>
</tr>
<tr>
<td>50+</td>
<td>9%</td>
<td>Homeless</td>
<td>3%</td>
</tr>
<tr>
<td><strong>Employment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>65%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>32%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retired</td>
<td>3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Highest Education</strong></td>
<td></td>
<td><strong>Insurance</strong> ^1</td>
<td></td>
</tr>
<tr>
<td>Non H.S. Graduate</td>
<td>10%</td>
<td>Private</td>
<td>10%</td>
</tr>
<tr>
<td>H.S. Graduate/GED</td>
<td>61%</td>
<td>Public/Benefits</td>
<td>13%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Neither</td>
<td>77%</td>
</tr>
</tbody>
</table>

^1 Not mutually exclusive categories.
MSM HIV Status Breakdown

MSM (all races): N = 461

- HIV-Negative/Unknown Status - 64%
- HIV-Positive - 36%
# HIV-Negative MSM Risk Profile

<table>
<thead>
<tr>
<th>Risk Behaviors</th>
<th>AA MSM (n = 49)</th>
<th>Latino MSM (n = 127)</th>
<th>White MSM (n = 41)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inconsistent Condom Use</td>
<td>20%</td>
<td>27%</td>
<td>34%</td>
</tr>
<tr>
<td>Serodiscordant Partner</td>
<td>2%*</td>
<td>17%</td>
<td>17%</td>
</tr>
<tr>
<td>Sex while Drunk</td>
<td>47%*</td>
<td>59%</td>
<td>71%</td>
</tr>
<tr>
<td>Sex while High (meth)</td>
<td>4%</td>
<td>9%</td>
<td>10%</td>
</tr>
<tr>
<td>Sharing Needles</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>STD Diagnosis</td>
<td>8%</td>
<td>13%</td>
<td>7%</td>
</tr>
<tr>
<td>Sex Trade</td>
<td>6%</td>
<td>8%</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Any Risk</strong></td>
<td><strong>55%</strong></td>
<td><strong>75%</strong></td>
<td><strong>85%</strong></td>
</tr>
</tbody>
</table>

* Significantly different from White MSM - reference (p-value < 0.05).

** Any risk is defined as: at least 1 (out of 7) reported risk behaviors.
# HIV-Positive MSM Risk Profile

<table>
<thead>
<tr>
<th>Risk Behaviors</th>
<th>AA MSM (n = 32)</th>
<th>Latino MSM (n = 84)</th>
<th>White MSM (n = 34)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inconsistent Condom Use</td>
<td>38%</td>
<td>33%*</td>
<td>59%</td>
</tr>
<tr>
<td>Serodiscordant Partner</td>
<td>44%</td>
<td>46%</td>
<td>32%</td>
</tr>
<tr>
<td>Sex while Drunk</td>
<td>34%</td>
<td>21%</td>
<td>38%</td>
</tr>
<tr>
<td>Sex while High (meth)</td>
<td>6%*</td>
<td>16%</td>
<td>24%</td>
</tr>
<tr>
<td>Sharing Needles</td>
<td>3%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>STD Diagnosis</td>
<td>19%</td>
<td>12%</td>
<td>12%</td>
</tr>
<tr>
<td>Sex Trade</td>
<td>9%</td>
<td>7%</td>
<td>15%</td>
</tr>
</tbody>
</table>

**Any Risk**

<table>
<thead>
<tr>
<th></th>
<th>AA MSM (n = 32)</th>
<th>Latino MSM (n = 84)</th>
<th>White MSM (n = 34)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Any Risk</strong></td>
<td>81%</td>
<td>79%</td>
<td>85%</td>
</tr>
</tbody>
</table>

* Significantly different from White MSM - reference (p-value < 0.05).
** Any risk is defined as: at least 1 (out of 7) reported risk behaviors.
MSM Prevention* Service Utilization

Testing Frequency

- AA: 58%
- Latino: 52%
- White: 44%

Prevention Services** Utilized

- AA: 89%
- Latino: 86%
- White: 68%

* Only among HIV-negative or unknown status (n = 295).
** Includes ILI, GLI, HIV information, public HIV test, or needle exchange.
MSM Care* Services Utilization

**Time until Care Sought**
- AA: 68%
- Latino: 81%
- White: 82%

**Interruption in Care (1 yr.)**
- 36% of AA MSM
- 22% of Latino MSM
- 12% of White MSM

**% with AIDS Diagnosis**
- AA: 53%
- Latino: 51%
- White: 38%

* Only among HIV-positive individuals.
Modeling HIV Status Using Risk

BIVARIATE MODEL: HIV-Positive Status = Any Risk*

• Any Risk: reporting at least 1 out of 7 risk behaviors.

• MSM who reported at least 1 risk factor were 1.7 (CL: 1.1 – 2.8) times more likely to have a HIV-positive serostatus than MSM that didn’t report any risk factors.
### Bivariate Model by Race

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>AA MSM (n = 81)</th>
<th>Latino MSM (n = 211)</th>
<th>White MSM (n = 75)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any Risk*</td>
<td>3.5 (1.2 – 10.1)</td>
<td>1.2 (0.6 – 2.4)</td>
<td>1.0 (0.3 – 3.6)</td>
</tr>
</tbody>
</table>

- Association between HIV risk and HIV-positive status is not significant among Latino and White MSM.
Modeling HIV Status Using Risk

MULTIVARIATE MODEL:
HIV-Positive Status = Any Risk + Age + Education + Race + Employment + Service Utilization

• MSM who reported any risk (at least 1 risk factor), were 2.1 (CL: 1.1 – 3.9) times more likely to self-report a positive serostatus compared to those with no reported risk.

• Race* was not significant in the analysis.

* Included all races (AA, A/PI, Latino, AI/AN, Other, and White (reference) ).
# Multivariate Analysis by Race

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>AA MSM (n = 81)</th>
<th>Latino MSM (n = 211)</th>
<th>White MSM* (n = 75)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjusted OR (CL)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any Risk</td>
<td>10.0</td>
<td>1.4</td>
<td>0.8</td>
</tr>
<tr>
<td></td>
<td>(1.9 – 52.0)</td>
<td>(0.6 – 3.1)</td>
<td>(0.2 – 4.0)</td>
</tr>
</tbody>
</table>

AA MSM: Risk Strong Assoc. HIV-Positive

Latino MSM: Risk No Assoc.? HIV-Positive

White MSM: Risk No Assoc.? HIV-Positive

* Education was not controlled for due to questionable model fit.
Discussion

Summary of Results:

1) AA MSM (HIV-) had significantly lower levels of risk compared to White MSM (HIV-).
   • Risk levels among HIV+ MSM were not significantly different between races.

2) AA MSM who reported any risk exhibited strong associations to HIV+ status.
   • White MSM did not have a significant association.

Conclusion: HIV risk factors do not explain the disproportionate impact AA MSM experience in LAC.
Findings from Literature

• Numerous studies have found similar results:
  - Similar or lower levels of risk for Black MSM compared to White MSM.*
  - AA MSM are more likely to have a HIV-positive status compared to White MSM.**

• Potential hypotheses that may explain paradox:
  - Higher STD prevalence
  - Disclosure of sexual identity
  - Higher HIV background prevalence
  - Lower ART usage
  - Undiagnosed Infection/Testing Patterns
  - Partner Selection/Sexual Mixing

** NT Harawa (2004).
Context of HIV Transmission among Black MSM

HIV Risk Behaviors

- Sexual Mixing (Race/Age)
- Identity Disclosure
- Undiagnosed Infection
- High Background Prevalence

Differences in Social/Sexual Networks

Social Factors
- Racism/Stigma (homophobia)

Structural Factors
- Healthcare Access Issues

HIV Risk
Prevention Implications

• Even though prevention (HE/RR) programs that focus on reducing individual-level risk behaviors are important, more emphasis should be placed on innovative ways to influence the context and environment in which HIV transmission occurs.
  - Focus on community-level or structural interventions.
Study Limitations

• Cross-sectional study design:
  – No causal inferences can be made using the data (only associations).

• Small sample sizes:
  – Associations that truly exist may appear statistically insignificant or vice-versa.

• Non-representative sample?

• Data is self-report:
  – Data may be unreliable if one population were to over or under-report specific behaviors compared to other groups because it is “socially desirable”.
Next Steps

• Further studies need to investigate which of these hypotheses are relevant to and can explain the disproportionate impact AA MSM experience in LAC and nationwide.

Social Network Testing Project (SNTP):
• Currently, a peer-recruitment testing project is being conducted in LAC among young MSM as an effective strategy to identify undiagnosed infection.
• Preliminary findings are encouraging (5 fold increase in positivity rate).
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