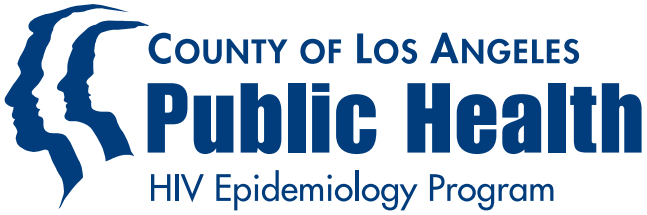
An Epidemiologic Profile of HIV & AIDS

2009 LOS ANGELES COUNTY

County of Los Angeles
Public Health
HIV Epidemiology Program

An Epidemiologic Profile of HIV and AIDS in Los Angeles County 2009



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An Epidemiologic Profile of HIV and AIDS in Los Angeles County 2009

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In memory of Sharon Lu, MPH

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Executive Summary

This integrated *HIV Epidemiologic Profile* provides updated information about HIV and AIDS in Los Angeles County (LAC). The *Profile* focuses predominantly on the social and demographic groups most affected by HIV and AIDS, the behaviors that increase the risk of contracting HIV, and information on co-infection and care services for persons living with HIV. The intent of the *Profile* is to synthesize recent research and surveillance data, as well as highlight changing patterns and emerging trends, in order to assist planning bodies and service organizations to target their HIV prevention and care efforts. Major findings include:

- As the largest local jurisdiction in the United States, LAC is diverse, both geographically and demographically. A higher proportion of Greater Los Angeles residents live in poverty than do residents of any other major metropolitan area in the US, with 21% of households living below 125% of the federal poverty level. LAC also has the nation's largest county jail.

- County residents face many challenges, including high unemployment and a lack of affordable housing which contributes to overcrowding and homelessness. LAC is the nation's 5th least affordable housing market and an estimated 88,000 persons are homeless on any given night and 240,000 homeless during the course of a year.

- LAC is challenged to deliver health care to a high proportion of residents without health insurance, and provide services to a population with diverse needs and backgrounds - e.g. 62% of LAC residents are foreign-born and 27% report that they do not speak English well.

- As of June 30, 2009, a cumulative total of 74,886 persons with HIV have been reported in LAC. Of these, a cumulative total of 55,738 persons have been diagnosed with AIDS, of which 31,391 have died, for a cumulative case-fatality rate of 56%.

- The HIV epidemic in LAC differs greatly compared with the national epidemic by race/ethnicity, gender, and mode of exposure. In LAC, Latinos comprise the largest number of LAC HIV/AIDS cases, while nationally, Blacks are the racial/ethnic group most affected. In the U.S., injection drug use accounted for 30% of reported HIV cases in the 1990's, and now, heterosexual transmission accounts for over 30%. Whereas in LAC, neither IDU nor heterosexual risk has ever accounted for more than 10% of HIV cases.

- While Latinos now account for the highest number and proportion of AIDS cases in LAC, Blacks have been more heavily impacted by AIDS than any other racial/ethnic group. The annual Black adult and adolescent AIDS rate for males, while decreasing over the past decade, continues to be more than twice that for White and Latino males. AIDS rates for Black females in LAC are 5 and 14 times higher than for Latinas and White females, respectively.

- AIDS has disproportionately impacted areas and communities in LAC. Localities with the greatest number of Persons Living with AIDS (PLWA) are Hollywood, West Hollywood and the Downtown area in the Metro Service Planning Area (SPA 4) and Long Beach in the South Bay (SPA 8). The Metro SPA (SPA 4) continues to have the highest number, proportion, and rate of persons living with HIV in the County, followed by the South Bay (SPA 8).

- South (SPA 6) is the service planning area with the highest proportion of HIV and AIDS cases that are female (25% and 21%, respectively), about twice that for the County overall, in which 12% of HIV and 11% of AIDS cases are female.

- In the *2008 LA Men's Survey,* the most recent cycle of National HIV Behavioral Surveillance among a gay-identified sample of MSM, significantly more Black participants tested HIV-positive (37%) than did Latinos (23%) or Whites (15%).

- In the *Straight 2 LA* study, data collected on heterosexual women showed unprotected sex was high for both Black (93%) and Latina (96%) women, but HIV seroprevalence was low, at 0.3%.

- In the *Sharps Study,* the majority of the participants using injection drugs reported injecting heroin (82%), with 66% specifying "black tar" heroin, while 27% of participants reported injecting amphetamine/methamphetamine.

- While transgender women in LAC represent only 1% of persons living with HIV, they are estimated to have the highest HIV seroprevalence (21%).

- Blacks represent 9% of LAC's population, yet make up 22% of persons with HIV/AIDS.

- In LAC, 6 out of every 1,000 Americans Indians/Alaska Natives are living with HIV/AIDS, a prevalence second to Black residents.

- Among persons with HIV in LAC, injection drug users had the highest odds of being co-infected with Tuberculosis (TB) – 3 to 4 times higher than MSM, who had the lowest prevalence of co-infection. Worldwide, TB is the leading killer of HIV-infected persons.

- In a multivariate analysis of Angelenos recently diagnosed with AIDS, MSM methamphetamine users were 3 times more likely to have reported ten or more sexual partners in the previous 12 months than were non-methamphetamine using MSM.

- Among Latinos recently diagnosed with AIDS in LAC, completion of the *Supplemental HIV/AIDS Surveillance (SHAS)* interview in Spanish was the only statistically significant factor associated with having tested late in the course of HIV (that is, within 12 months of their AIDS diagnosis). Latinos testing late for HIV were also more likely than participants of other racial/ethnic groups to report testing because they were already ill.

- In a recent HIV Epidemiology Program Special Project of National Significance study, factors positively associated with an increased likelihood that young Black and Latino MSM would successfully be *retained* in HIV care included 1) having received more total hours of youth-focused case management and 2) having attended a higher number of appointments. This finding underscores the need for intensive case management for MSM minority youth.

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I. INTRODUCTION

This profile is the fourth edition of *An Epidemiologic Profile of HIV and AIDS in Los Angeles County* released by the HIV Epidemiology Program (HEP). The *Profile* contains updated epidemiologic information on HIV and AIDS in Los Angeles County (LAC). HEP provides this information to assist community-based organizations, planners, and policy-makers in the planning, implementation, and evaluation of programs and policies that involve HIV and AIDS care, prevention, education, and research in the County. It is our hope that in providing accurate and timely information, we can assist in reducing the spread and impact of HIV throughout LAC. This *Profile* supplements the information given through the program's *HIV/AIDS Semiannual Surveillance Summary* reports, data requests, Web site reports and presentations, oral presentations at grand rounds, professional meetings, community-based organizations, national conferences, as well as through peer-reviewed manuscripts and publications.

The *Profile* is consistent with the latest guidance from the Centers for Disease Control and Prevention (CDC) and Health Research Services Administration (HRSA). As was done in the previous editions, this *Profile* focuses on risk groups and other targeted groups identified by both the HIV Prevention Planning Committee (PPC) as well as the Commission on HIV. It includes a section on patterns of care service utilization and presents epidemic information by Service Planning Area (SPA) to help planners and policy-makers effectively address regional needs.

Although HIV reporting by name is now the law, information on non-AIDS HIV-infected persons collected thus far is not complete and is presented only in broad strokes in the *Profile*. We have also relied on AIDS surveillance data and estimates of HIV prevalence, as well as data from HIV seroprevalence studies of high-risk populations conducted by the HEP, in order to give the reader the fullest picture possible of the epidemic in the County using our surveillance and epidemiologic research data and analysis.

The *Profile* is divided into eight sections, beginning with *Section I*, which is this introduction. In *Section II*, we present a description of the geographic and socio-demographic characteristics of LAC. *Section III* provides information on epidemiologic trends in HIV/AIDS incidence, prevalence, and mortality countywide. *Section IV* describes the geographic distribution of HIV and AIDS by Service Planning Area. *Section V* describes HIV and AIDS cases in terms of Critical and Priority populations identified by the PPC. *Section VI* describes the epidemic as it impacts specific special populations as identified by the Commission on HIV. *Section VII* describes the population with co-morbid infections, including TB, STDs, and other diseases related to the treatment and transmission of HIV/AIDS. *Section VIII* describes the treatment and care of persons living with HIV and AIDS in LAC using data from local studies. Finally, appendices are presented, including: *Appendix A: Glossary,* that lists terms used in the *Profile* with which readers may not be familiar; *Appendix B: Technical Notes,* which contains an explanation of some of the methods, strengths, and limitations of the data cited in the *Profile;* and, *Appendix C: Project Summaries*, which provides information on the background, methods and main findings of the projects conducted by HEP that are included in the *Profile*.

II. DESCRIPTION OF LOS ANGELES COUNTY

Geography: Los Angeles County (LAC), which was established in 1850, encompasses 4,061 square miles and accounts for 3% of California's total land area. A diverse region, LAC contains 81 miles of ocean shoreline, mountain ranges with 10,000-foot peaks, densely populated valleys, and a sparsely populated desert.[1,2]

Population: LAC, with an estimated 9.8 million residents, is the most populous county in the United States.[3] In fact, it is more populous than 42 of the 50 states.[4] LAC composes about 28% of California's total population.[3] LAC's estimated population has increased 3.8% since the 2000 U.S. Census, continuing a growth trend taking place for decades (see Figure 2.1).[5] The City of Los Angeles represents 40% of all county residents with a population of 3.9 million, and is the largest of the County's 88 incorporated cities. Long Beach is next largest city with an estimated population of 470,000, representing 5% of all county residents.[6]

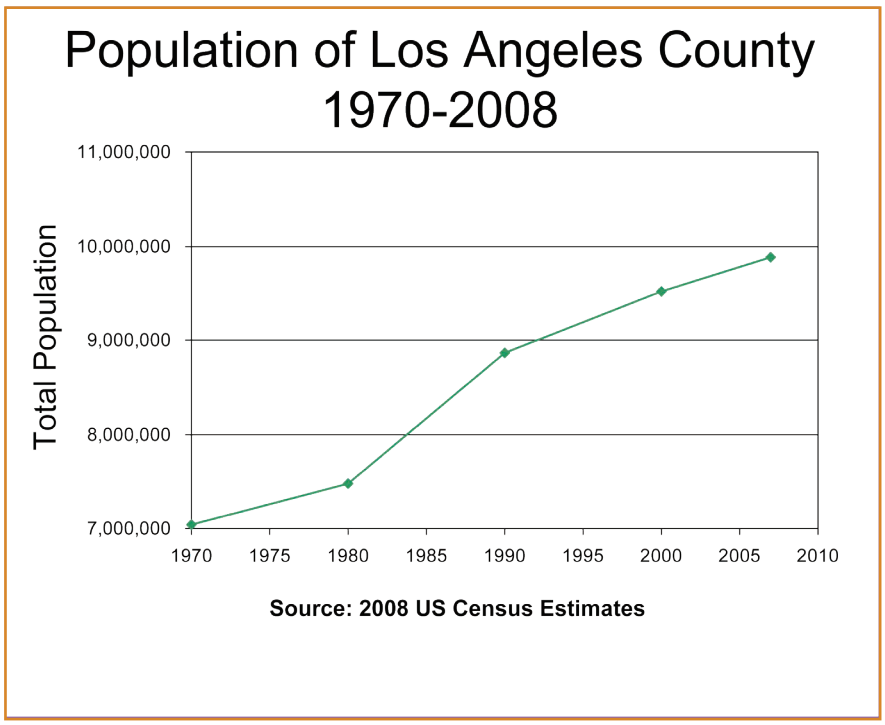

FIGURE 2.1

Age/Gender Composition: As in past years, females accounted for slightly more of the county population (50.5%) in 2008 than did males (49.5%).[7] The 2008 Census estimates of age distribution among LAC and US residents are shown in the population pyramid by gender in Figure 2.2. The wide base of the pyramid indicates that the LAC and U.S. populations are growing slowly (see Technical Note #1). Compared with the nation, LAC has a higher percentage of children and young adults and a lower percentage of people age 40 years and older, signifying that LAC is growing at a faster rate than the U.S. Similarly, LAC had proportionately fewer residents aged 65 years and older (11%) than the US (13%), and had more children under the age of 18 (26%) than did the US (24%).[7] While the median age has continued to increase slightly over the past several decades (30 years in 1980, 31 years in 1990, 32 years in 2000), the LAC median age in 2008, 34.8 years, was still lower than that of the U.S. (36.8 years).[8]

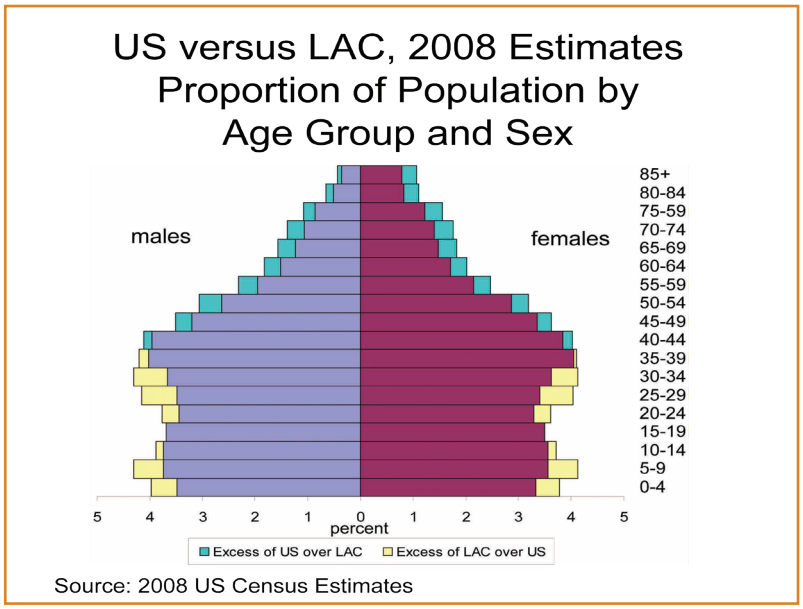

FIGURE 2.2

Within LAC, population pyramids vary greatly by race/ethnicity, ranging from a growing population of Latinos (47%), with a broad base of children and young adults, to an apparently declining White population (29%), with a higher proportion of older adults atop a narrower base of children and youth (Figure 2.3).[10] Accordingly, the ratio of children under the age of 15 years to persons over 65 years was lowest for Whites (0.75:1), followed by Asian/Pacific Islanders (1.22:1), Blacks (1.85:1), and was greatest for Latinos (4.87:1). The median age of LAC residents in 2007 ranged from a low of 28 years for Latinos, 36 years for Blacks, 37 years for American Indian/Alaska Natives, 37 years for Whites, to a high of 40 years for Asian/Pacific Islanders.[9]

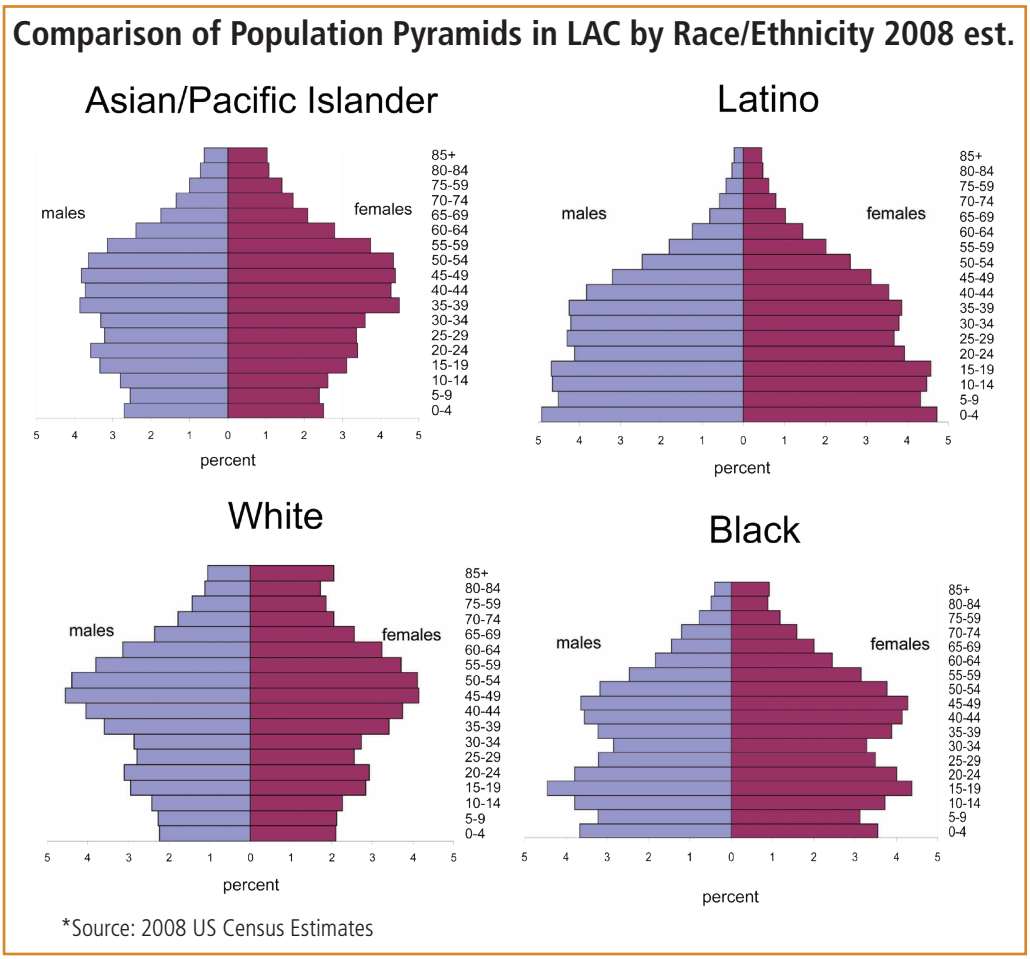

FIGURE 2.3

Growth Trends: There were 151,813 births recorded in LAC in 2007.[12] The birth rate (14.7 per 1,000 women in 2007) was similar to that of California as a whole (15 per 1,000). County birth rates have continued to decline since a peak of 23 per 1,000 in 1990.[11] In 2007, Latina mothers delivered 63% of all births; Whites, 17%; Asian/Pacific Islanders, 11%; and Blacks, 7%.[12] The infant death rate fell from 8 infant deaths per 1,000 births in 1990 to 5.3 in 2007.[12] Births to women 35 years and over increased from 14.6% in 1997 to 18.5% in 2007.[12]

Recent Immigrants: Constant in-migration continues to drive ethnic diversity in LAC's population. LAC residents hail from 6 continents and nearly 100 countries. According to 2007 Census estimates, over 3.5 million County residents are foreign born (36%), compared with 27% of California residents and 12.6% of U.S. residents.[13] Nearly half (45%) of all Latino LAC residents and over two-thirds (68%) of Asian/Pacific Islanders are foreign born.[14, 15] More than half (56%) of LAC's population speak a language other than English at home. Additionally, 62% of foreign-born LAC residents and over a quarter (27%) of all LAC residents admit they do not speak English "very well".[13]

Racial/Ethnic Composition: Los Angeles has been characterized by population changes since the 1700's. First settled by American Indians, subsequent Mexican, European, Chinese, and other immigration shaped a region that is today one of the most ethnically diverse in the nation. While people of European descent compose the majority (>50%) of the U.S. population, no racial or ethnic group constitutes a majority in LAC (see Figure 2.4).[16] However, Latinos made up 48% of the LAC population as of 2008 and are projected to be a majority by 2010. Non-Hispanic Whites account for 29% of LAC residents, Asian/Pacific Islanders account for 13.5%, Blacks for 9.4%, and American Indian/Alaska Natives for 1.0%.[10] Although American Indians represent less than 1% of the County's population, this group constitutes the largest urban concentration of American Indians in the U.S.[17] Latinos also represent the fastest-growing community with a 26% increase in population from 1990 to 2008.[16, 18]

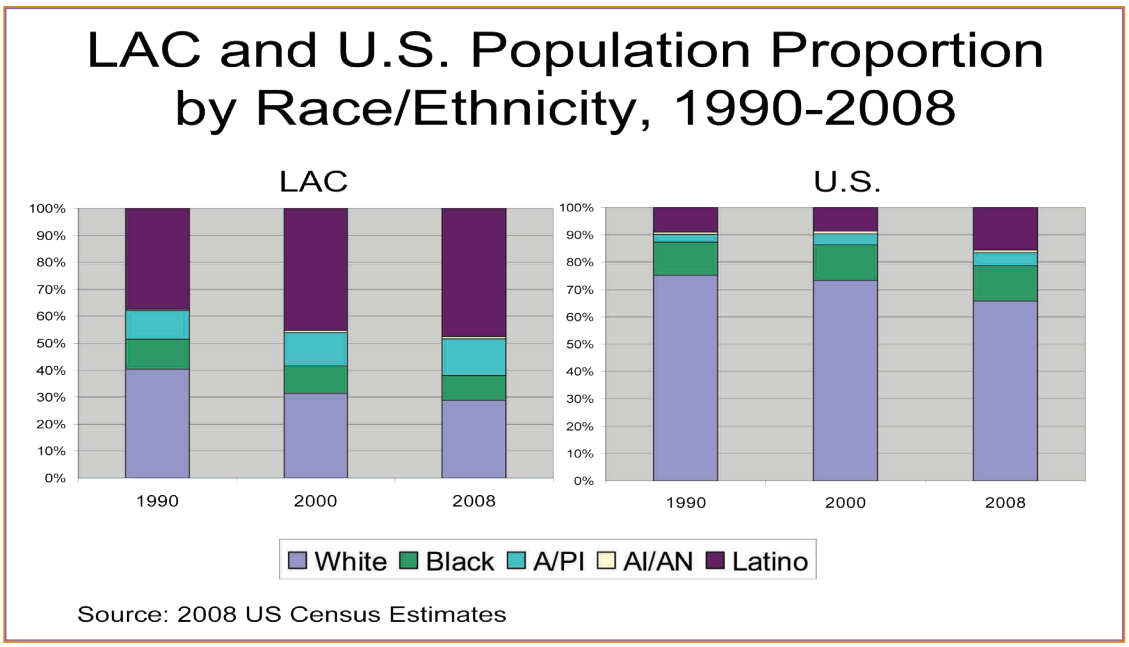

FIGURE 2.4

These broad racial/ethnic categories mask an even greater diversity of ethnic sub-groups in LAC, composed of many nationalities with distinct cultures and languages. As of 2007, Latino residents listed numerous places of origin including Mexico (77%), Central America (14.4%), South America (2.5%), Cuba (0.9%), Puerto Rico (0.9%), while other and unspecified regions accounted for 4.3%.[19] The Asian and Pacific Islander population is composed of 97.9% Asians and 2.1% Pacific Islanders and contains a diverse background. Asian/Pacific Islander residents originate from China/Taiwan (29.4%), the Philippines (23.6%), Korea (15.6%), Japan (8.9%), Vietnam (7.2%), India (5.9%), and many other and unspecified countries account for another 9.1%.[20]

Industry and Employment: Once the leading farming region in the nation, 45 years later agriculture accounts for only 0.18% of jobs in LAC.[21] Leading industries in LAC currently include trade, transportation, and utility services (19%), government (15.5%), professional and business services, (14%), educational and health services (13%) and manufacturing (9%). From 1990 to 2009, large changes were seen in the manufacturing industry (a 53% relative decrease) and in educational and health services (a 33% relative increase).[21] The manufacturing industry employed nearly 420,000 fewer workers in May 2009 than it did in 1990. [21] The seasonally adjusted unemployment rate in LAC was up from a recent low of 6.8% in May 2008 to 11.4% in May 2009, nearly identical to California (11.5%), but higher than the U.S. (9.4%).[21] Unemployment rates vary among racial/ethnic groups, with the highest rates among Black workers, followed by Latinos, Asian/Pacific Islanders, American Indian/Alaska Natives, and the lowest rates for Whites.[13]

Income and Poverty: Between 2000 and 2007, the median household income for county residents, adjusted for inflation, rose 22% from $41,135 to $52,628.[22, 23] There are significant disparities in income among racial/ethnic groups. The median household income for Asian/Pacific Islander residents was $61,518, Whites $58,906, American Indians/Alaska Natives, $45,915, Latinos, $42,315 and Blacks $31,905.[13] Twenty-one percent (21%) of households were below 125% of the federal poverty level—while 23% of county households reported an income above $100,000 (see Technical Note #2).[24, 25] The highest poverty levels were found in female head-of-household families (35%), compared with 20% among all family households, and 15% among married-couple families.[26] Among racial/ethnic groups in LAC, 27% of Blacks, 29% of Latinos and 21% of American Indians/Alaska Natives were living with incomes below 125% of the Federal Poverty Level, compared with 15% of Asian/Pacific Islanders and 18% of Whites.[13] In early 2009, about 2.2 million LAC residents received some sort of public assistance, 73% of whom received medical assistance only.[27]

Housing and Homelessness: LAC has the nation's 5th least affordable housing market.[28] While federal guidelines suggest spending less than 30% of household income on housing, 53% of renters and 44% of homeowners spend 30% or more.[29] The housing vacancy rate is very low (5.4%) and fewer housing units are owned (47%) than in either California (58%) or the US (67%).[29-31] With only about 18,500 homeless shelter beds available, there are an estimated 88,000 persons who are homeless on any given night in LAC and 240,000 homeless during the course of a year.[32, 33] The average homeless family has two children. Thirty-two percent (32%) of homeless persons reported that the emergency room was their primary form of healthcare, and more than half had been to the emergency room in the past year.[32, 33] An estimated 46% of the LAC homeless population has a disabling condition and, of these individuals, 35% have a physical disability.[33]

Health Insurance: The percentage of residents without health insurance has been stable over the past five years. The 2007 LAC Health Survey estimates that 22% of adults and 7% of children in LAC did not have health insurance, compared with 25% of adults and 10% of children in the 2002-2003 wave of the LAC Health Survey.[34] Among adults surveyed, Latinos had the highest proportion of uninsured (32%), followed by Asian/Pacific Islanders (17%), Blacks (16%), American Indian/Alaska Natives (10%) and Whites (6%). According to the 2007 California Health Interview Survey, an estimated 9% of Latino

children, and 6.4% of Asian/Pacific Islander children had no health insurance compared with only 1% of White and Black children.[35] According to the County's 2009 "Key Indicators of Public Health," 19% of adult and 7% of child residents reported having no regular source of health care.[36]

Infant Health: The vast majority of LAC women (86%) received prenatal care in their first trimester in 2007 and nearly all (96%) received care by the second trimester.[12] Since 1990, approximately 7% of women have given birth to low or very low birth weight babies each year.[37] Historically, Black women have the highest occurrence of low birth weight babies (12.7 per 100 live births in 2004), a rate nearly twice that of White (6.8 per 100 live births), or Latina women (6.4 per 100 live births).[37] From 1997 to 2007, LAC's infant mortality rate decreased from 5.9 per 1,000 live births to 5.3 per 1,000 live births in 2007, a trend similar to California's decreasing infant mortality rate of 5.9 to 5.2 per 1,000 live births in 1997 and 2007, respectively.[12] The national Healthy People 2010 goal is 4.5 deaths per 1,000 live births.[37]

Mortality and Cause of Death: In 2007, the overall age-adjusted death rate for LAC was 621 deaths per 100,000 population.[12] Nearly half of all deaths in LAC were due to heart disease, cancer, or stroke, which are the leading causes of death in both California and the U.S. (Figure 2.5).[38,39] Between 2002 and 2007, the death rates for heart disease, cancer, and stroke decreased by 15%, 5%, and 20%, respectively.[40] However, from 2001 to 2005, diabetes rose from the 7th to the 6th leading cause of all deaths in LAC, and rose from the 8th to the 5th leading cause of death in LAC males. AIDS was the 6th leading cause of death in the County in 1995, but was not in the top ten in 2005.[12] AIDS is the 7th leading cause of premature death in LAC males; however, this is a decrease from the 6th leading cause of premature death in 2001.[39,41] AIDS was the leading cause of death for LAC men aged 25 to 44 years in 1996, and remains the 2nd and 3rd leading cause of death in 25-44 year old Black and Hispanic males, respectively.[39]

Ten Leading Causes of Mortality LAC, CA, U.S. 2005

LAC 1995	LAC 2005	California 2005	US 2005
1. Heart Disease	1. Heart Disease	1. Heart Disease	1. Heart Disease
2. Cancer	2. Cancer	2. Cancer	2. Cancer
3. Stroke	3. Stroke	3. Stroke	3. Stroke
4. Chronic Lower Respiratory Disease	4. Chronic Lower Respiratory Disease	4. Chronic Lower Respiratory Disease	4. Chronic Lower Respiratory Disease
5. Influenza/ Pneumonia	5. Influenza/ Pneumonia	5. Accidents	5. Accidents
6. AIDS	6. Diabetes	6. Alzheimer's Disease	6. Diabetes
7. Accidents	7. Accidents	7. Diabetes	7. Alzheimer's Disease
8. Homicide	8. Alzheimer's Disease	8. Influenza/ Pneumonia	8. Influenza/ Pneumonia
9. Diabetes	9. Liver Disease	9. Liver Disease	9. Kidney Disease/Disorder
10. Liver Disease	10. Suicide	10. Suicide	10. Septicemia

Source: California Department of Health Service, Vital Statistics Data Query and National Vital Statistics Report, April 2009, CDC

FIGURE 2.5

Education: The LAC Office of Education is the nation's largest regional education agency.[42] In 2007-2008, there were 1.7 million students enrolled in 2,011 public schools in 93 school districts in the County.[42] Over one-fourth of all California students were enrolled in LAC public schools.[42] Forty-two percent (42%) of enrolled public school students attend within Los Angeles Unified School District, the largest in the County. Latinos represent 62% of all students in county public schools followed by Whites (15%), Blacks (10%), Asians/Pacific Islanders (10.5%) and American Indians/Alaska Natives (0.3%). Students in LAC schools speak 56 different languages.[42] In 2005, calculations for LAC high school graduation rates range between 60-80%.[43, 44] These rates also reflect significant disparities between racial/ethnic groups, with 2005 graduation rates for Latino students at 52%, Black and American Indian/Alaska Native at 55%, compared with White at 75% and Asian (not Pacific Islander) students at 92%.[44] Additionally, dropout rates are highest among Blacks (37%) followed by American Indian/Alaska Natives (33%), Latinos (29%), Pacific Islanders (23%), Whites (13%), Filipinos (11%), and Asians (7%).[45] Among LAC adults over 25 years of age, 25% did not graduate from high school.[46]

Incarcerated Persons: The correctional system in LAC includes federal, state, and county facilities. Currently, the two federal facilities house just over 2,000 inmates, the California Department of Corrections facility houses over 4,500 inmates, and the nine LAC facilities have a daily census of about 18,000 inmates.[47-49] The LAC Men's Central Jail, one of the 9 county facilities, is the largest in the world, with an operating cost of $50 million per year.[50] In 2008, the Los Angeles Sheriff's Department (LASD) made 138,341 arrests, of which juvenile offenders accounted for 9.2%, representing a decrease from 11.4% in 2006.[51] According to 2007 California Department of Justice statistics for LAC, 48% of all adults arrested were Latino, 25% Black, 21% White, and 6% other.[52] Juvenile arrests mirrored this trend, with Latino youth accounting for 60% of juvenile arrests, Blacks 22%, Whites 13%, and other races/ethnicities 5%.[52] As of 2007, 61,235 individuals were on probation in Los Angeles County.[53]

Mental Illness: Serious mental illness (SMI) describes mental disorders that interfere with normal social functioning. This term also includes disorders categorized as severe and persistent mental illness, psychological conditions such as chronic schizophrenia, bipolar disorder, major depression, and dementia, which may lead to persistent disability.[54] An estimated 6.7% of LAC residents suffer from SMI and are thought to make up one-third of those suffering from mental illness in California.[55] In addition, according to the 2007 LAC Health Survey, 13.6% of LAC residents have diagnosed depression, and 4.6% are at risk for severe mental illness. The 2007 California Health Interview Survey estimated 8.4% of all LAC residents saw a health professional for a mental/emotional health issue in the past year.[35] Based on these estimates, a higher proportion of White residents saw a mental health professional (12.6%) compared with Blacks (8.3%), Latinos (6.2%), or Asian/Pacific Islanders (4.2%).[35]

Service Planning Areas: In 1998, LAC aggregated its 26 health districts into eight service planning areas or SPAs. SPAs were created by the Children's Planning Council and approved by the County Board of Supervisors in 1993 to make public health service more responsive to local needs.[56] The service planning areas for LAC are: Antelope Valley, SPA 1; San Fernando Valley, SPA 2; San Gabriel Valley, SPA 3; Metro, SPA 4; West, SPA 5; South, SPA 6; East, SPA 7; and South Bay, SPA 8 (see Figure 2.6). Information presented in this Profile is often displayed by SPA.

Table 2.1 gives a brief overview of geographic and socio-demographic characteristics by SPA. As is seen in the table, the size and composition of the SPAs varies greatly. For example, Metro and South have a population density of over 12,000 persons per square mile, while Antelope Valley's population density is less than 200 persons per square mile.[2] Latinos make up the majority of the population in the Metro (55%), South (64%), and East (71%) SPAs, while Whites predominate in the West (61%), San Fernando Valley (45%) and Antelope Valley (45%).[2] The SPA with the greatest proportion of Blacks is South (30%), while the greatest proportion of Asian/Pacific Islanders is in San Gabriel Valley (25%).[2] American Indians/Alaska Natives are spread throughout the County with no apparent concentration in any specific SPA.[2]

The greatest proportions of youth are found in Antelope Valley (32%) and South SPA (34%). South SPA has the greatest percentage of people living at less than 100% of the federal poverty level (45%), followed by Metro (34%) and East SPA (31%). South SPA (6) also has the highest unemployment rate as of 2007, at 10.3%.[36] In SPA 6, just 47% of residents have a high school diploma, and only 8% have a college degree, a striking difference from SPA 5 (West), where 89% of residents have a high school diploma, and 52% have a college degree.[2] The highest teen birthrates are in South and East SPAs, where 145 and 105 per 1,000 live births, respectively, are to mothers less than 20 years of age.[2]

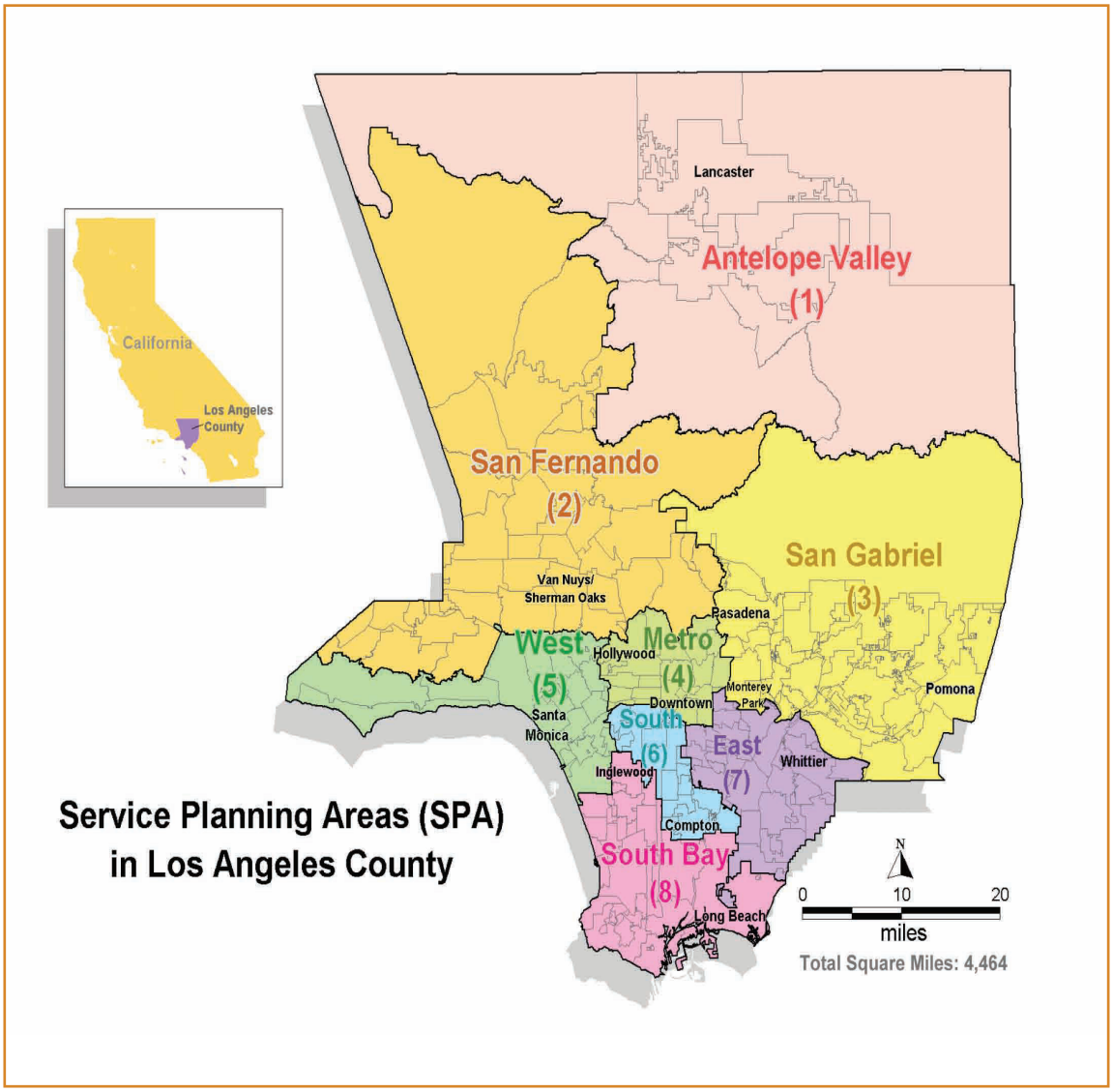

FIGURE 2.6

Table 2.1

LAC Population Characteristics by Service Planning Area 2005 Estimates

SPA	1 Antelope Valley	2 San Fernando Valley	3 San Gabriel Valley	4 Metro	5 West	6 South	7 East	8 South Bay
Population	333,276	2,129,333	1,834,677	1,190,448	651,084	1,078,548	1,405,922	1,545,275
Area (square miles)	1,743.2	1,122.6	432.4	93.1	210.9	77.3	164.0	327.0
Population Density (per square mile)	191	1,897	4,243	12,786	3,087	13,948	8,570	4,726
Age under 18 years	32%	26%	27%	24%	17%	34%	30%	27%
Age 65+ years	8%	11%	11%	10%	13%	7%	9%	10%
Latino	33%	38%	45%	55%	17%	64%	71%	38%
White	45%	45%	24%	22%	61%	3%	17%	31%
Black	15%	4%	4%	5%	7%	30%	3%	15%
Asian/ Pacific Islander	3%	10%	25%	15%	11%	2%	8%	14%
American Indian/ Alaska Native	0.6%	0.3%	0.3%	0.3%	0.2%	0.2%	0.3%	0.3%
Adults with high school diploma	77%	76%	72%	61%	89%	47%	60%	75%
Adults with college degree	15%	28%	26%	24%	52%	8%	13%	27%
Unemployment rate of working pop. (2007 estimates)†	7.2%	4.5%	5.1%	5.9%	3.1%	10.3%	5.4%	5.4%
Living below 100% federal poverty level†	22%	18%	22%	34%	8%	45%	31%	23%
Living between 100% and 199% federal poverty level†	25%	17%	25%	21%	13%	31%	26%	19%
Teen birth rate (per 1000 live births)*	125	69	84	102	19	145	105	87
Prenatal care by 1st trimester**	81%	93%	90%	92%	94%	87%	90%	92%
Adults (18-64) without health insurance†	12%	15%	19%	28%	10%	29%	21%	16%
Adults with no regular source of medical care†	16%	17%	19%	26%	19%	21%	19%	17%

Source: 2007 United Way Zip Code Data Books
† 2007 LAC Health Survey
** Teen indicates a mother of less than 20 years of age at delivery.*
*** Percent of total births.*

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III. EPIDEMIOLOGY OF HIV AND AIDS IN LOS ANGELES COUNTY

Overview

HIV/AIDS surveillance in Los Angeles County (LAC) is conducted through active and passive surveillance to identify and collect information on cases of HIV and AIDS diagnosed at hospitals, clinics, private physician offices, laboratories, community-based organizations (CBOs), and hospices. Active surveillance requires HIV Epidemiology Program (HEP) staff to routinely contact and visit sites to facilitate the completion of HIV/AIDS case reports. Mandated reporters participating in passive surveillance submit case reports to HEP without any contact from surveillance staff. In LAC, about 80% of persons with HIV/AIDS are reported through active surveillance activities. As of December 31, 2009, a cumulative total of 76,383 persons with HIV/AIDS have been reported in LAC. Of these, a cumulative total of 56,091 persons have been diagnosed with AIDS, of which 31,448 have died, for a cumulative case-fatality of 56% (for more information about AIDS related deaths, see Appendix C). LAC accounts for 5.3% of cumulative reported AIDS cases in the United States, 5.4% of U.S. AIDS deaths, and 5.3% of persons living with HIV/AIDS. There are now over 44,450 reports of persons living with HIV in LAC. Of these, approximately 24,600 are living with AIDS.*

*Includes all cases reported to the HIV Epidemiology Program as of Dec. 31, 2009 and U.S. cases as reported in the CDC HIV/AIDS Surveillance Report, 2007. Vol. 19.

A. Update on HIV and AIDS Case Surveillance

AIDS case surveillance is a core public health activity that began in LAC in 1982. Non-AIDS HIV case surveillance, which mandates laboratory reporting of confirmatory HIV tests, began in California in July 2002. Between July 2002 and April 16, 2006, 15,275 cases of HIV were reported in LAC using a non-named, coded case reporting system. In April 2006, California law was revised to require the reporting of HIV cases by name rather than by non-named code. By June 30, 2009, 68% of the LAC cases initially reported by code, have been converted to named HIV/AIDS cases. Since 2006, case reports have been submitted using the name-based reporting system, for a total of approximately 20,300 named and coded non-AIDS HIV cases reported in LAC. At the time of this writing, there is a backlog of over 7,300 laboratory notifications pending investigation to determine if they represent cases of HIV that have not yet been reported. Therefore, the HIV data presented in this report are still preliminary.

B. HIV Incidence Surveillance

A goal of HIV case surveillance is to monitor the number and characteristics of individuals newly diagnosed with HIV. This information helps to identify trends in populations most at risk so that limited HIV prevention and testing resources may be targeted most effectively. Developments in laboratory technology have enhanced our existing HIV case surveillance system so that we may now estimate the number and rate of newly acquired HIV infections in a given year (i.e., HIV incidence). The "Serologic Testing Algorithm for Recent HIV Seroconversion" (STARHS) was developed in the late 1990's to differentiate between long-standing and recent (diagnosis within 6 months of infection) HIV infection. STARHS testing is the foundation of HIV Incidence Surveillance , a national effort to better identify groups currently at risk of acquiring HIV infection by estimating the annual number of new HIV infections that occur within a population.

Using the STARHS methodology, CDC estimates 56,300 persons acquired HIV infection in the United States in 2006.[1] Preliminary calculations for 2007, the first year for which we have sufficient data to calculate an HIV incidence estimate for LAC, are 2,000- 2,500 new HIV infections. Updated HIV incidence estimates for 2007 will be available in 2010 on the HIV Epidemiology Program website.

Gender: Consistent with the 2006 national estimate, LAC's highest HIV incidence rate was among men who have sex with men (MSM). Accordingly, males across LAC have a higher incidence of HIV than do females. HIV incidence estimates for the County's transgender population could not be calculated because the number of newly diagnosed infections did not meet sample size requirements to calculate an incidence estimate.

Race/Ethnicity: Among ethnic groups, the HIV incidence rate for Black residents was approximately three times the rate of Whites and Latinos. Notably, the estimated incidence rate for Black MSM was nearly twice that of White MSM and over two times greater than Latino MSM.

Age: Young adults aged 20-29 years had the highest estimated HIV incidence rate followed by those aged 30-39 years and 40-49 years. Numbers of newly diagnosed HIV cases in 2007 were too small to estimate incidence for the youngest (<20 years) and oldest (> 50 years) residents.

C. HIV Resistance Surveillance

The prevalence of resistant HIV among persons diagnosed with HIV in LAC each year is currently unknown. HEP is conducting Variant, Atypical and Resistant HIV Surveillance (VARHS) in newly diagnosed HIV cases to estimate the prevalence of mutations associated with HIV drug resistance and to investigate trends in the transmission of drug resistant strains. Preliminary local data indicate that 23% of our sample has evidence of resistance to at least one class of antiretroviral drugs. According to CDC, there is no national average with which to compare our preliminary findings.

D. Persons Living with HIV/AIDS (PLWHA)

As of May 31, 2009, there were over 42,000 persons living with HIV/AIDS (PLWHA) in LAC.

Gender: The number of PLWHA in LAC has increased steadily since 2002, when mandatory reporting for non-AIDS/HIV began in LAC (see Figure 3.1). This increase can be seen for both males and females, resulting in approximately 35,000 male and 5,000 female PLWHA in LAC by December 31, 2008 (data as of May 31, 2009). Males currently represent about 7 out of 8 (88%) PLWHA in LAC.

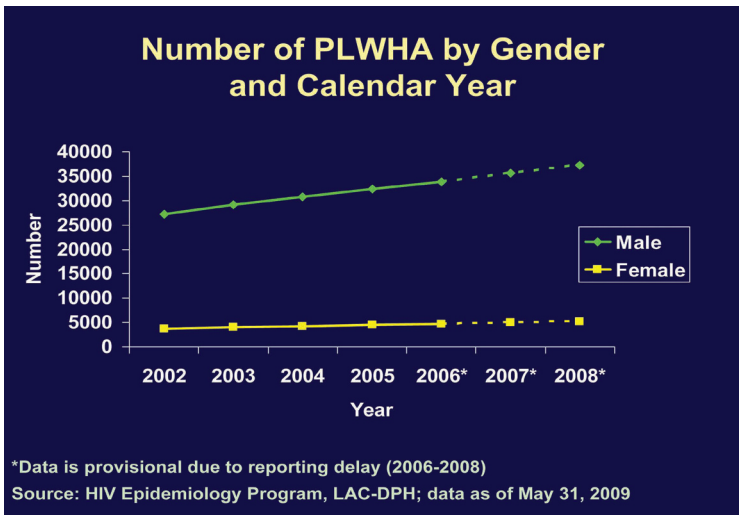


Figure 3.1

Age: Figure 3.2 shows the current age of PLWHA in LAC. Over two-thirds (70%) of PLWHA are 40 years or older, the majority of whom are age 40 – 49 years. The median age of PLWHA in LAC is 44 years. Less than 1% of PLWHA are under 20 years of age and 7% are 60 years or older.

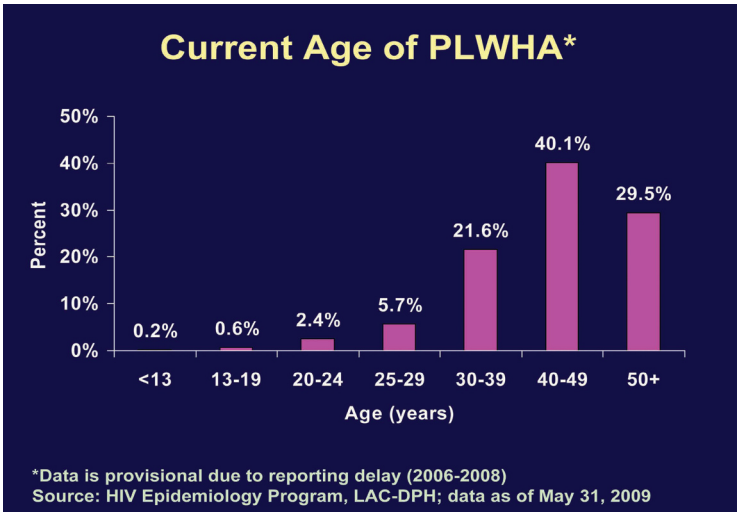


Figure 3.2

Race/Ethnicity: As seen in Figure 3.3, 39% of PLWHA in LAC are Latino, 36% White, 22% Black, and 3% Asian/Pacific Islander. Less than 1% of LAC cases are American Indian/Alaska Native. The racial/ethnic distribution of PLWHA differs by sex. Among female PLWHA, 37% are Black and 17% are White. Among male PLWHA, 20% are Black and 38% are White (see Figure 3.4).

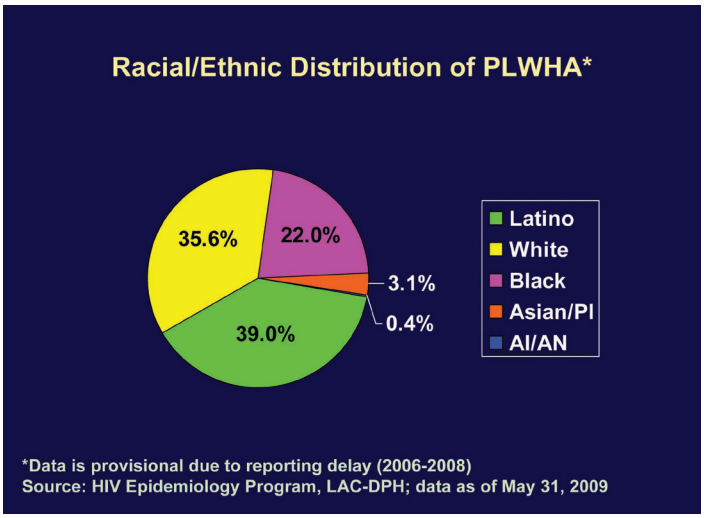


Figure 3.3

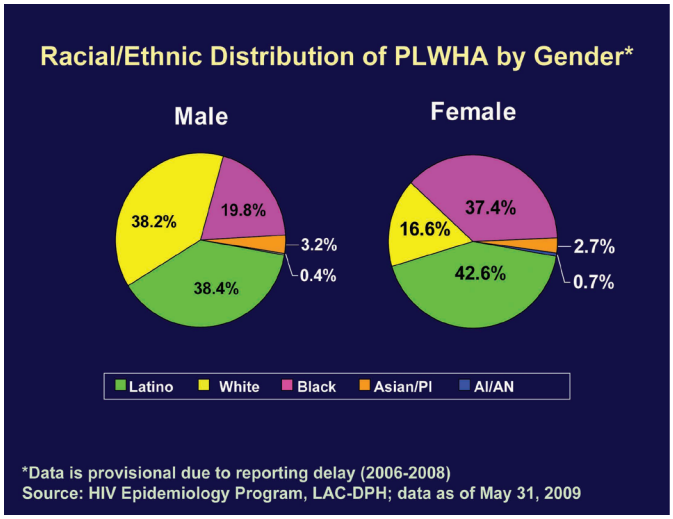


Figure 3.4

Mode of Exposure: The mode of exposure means how HIV is transmitted – that is, through sexual contact, injecting drugs using an HIV-contaminated needle or syringe (IDU), transmission from mother to child, or by receiving HIV-contaminated blood or blood products. AIDS surveillance includes reporting of demographics, mode of exposure, and other information.

Because recently reported HIV/AIDS cases are more likely to be reported without sufficient risk factor information, recent HIV/AIDS incidence in some transmission categories will be underestimated unless an adjustment is made. For figures that show the distribution by adjusted mode of exposure, persons who had no reported risk for HIV exposure were redistributed to other valid exposure categories based on the sex-, and race-specific distribution of the cases reported from 1996 to 2008 and reclassified to a valid exposure category. (See technical notes). With this adjustment, we estimate that 72% of PLWHA are MSM and 7% are MSM who also inject drugs (MSM/IDU). Other reported modes of exposure include injection drug use (7%), and heterosexual contact (12%) (see Figure 3.5).

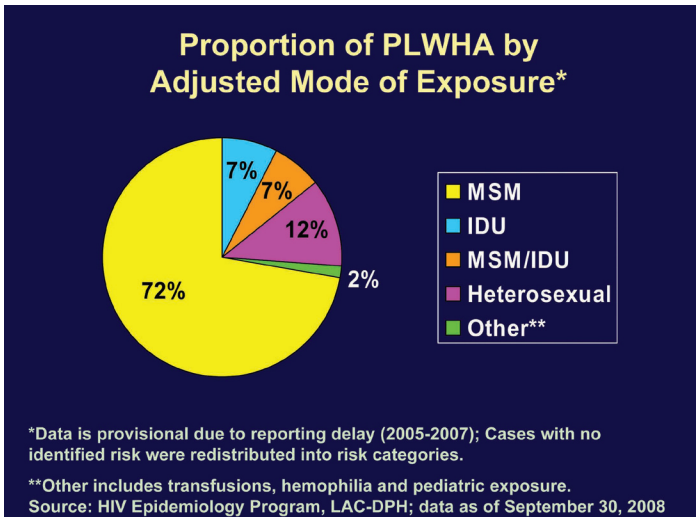


Figure 3.5

E. AIDS in Adults and Adolescents in Los Angeles County

Gender: The number of male adult and adolescent AIDS cases diagnosed annually in LAC has decreased substantially from a high of approximately 3,600 cases in 1993 to 1,186 cases in 2006 (see Figure 3.6). Female adult and adolescent AIDS diagnoses have also decreased from a high of 356 cases in 1995 to 173 cases in 2008. In 1993, males composed 92% and females 8% of all adult and adolescent AIDS cases in LAC. In 2000, the proportion of female cases rose to 13%. The proportion of female cases remains at 13% in 2006 (see Figure 3.7).

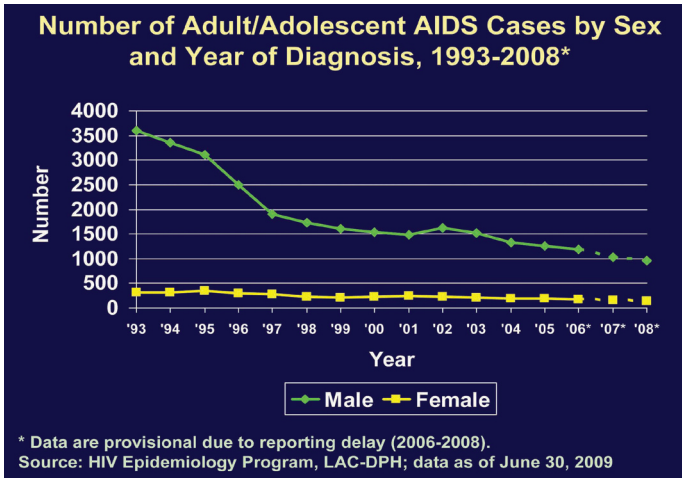


Figure 3.6

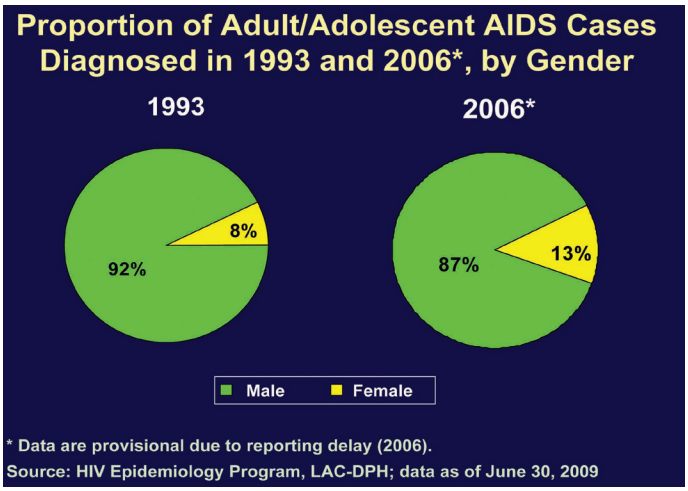


Figure 3.7

Race/ethnicity: The annual number of adult and adolescent AIDS cases decreased for all races/ethnicities in the last 10 years. The most dramatic decreases were among Blacks, whose annual total dropped 44%, from 538 cases in 1997 to 299 cases in 2006 (see Figure 3.8). White cases decreased 42%, from 710 in 1997 to 411 in 2006. The number of cases among Latinos decreased 32%, from 862 to 585 cases in 1997 and 2006, respectively. The number of cases among American Indian and Alaska Natives decreased 14% from 7 in 1997 to 6 in 2006 and the number of cases among Asian/Pacific Islanders decreased from 57 to 53 cases in 2006.

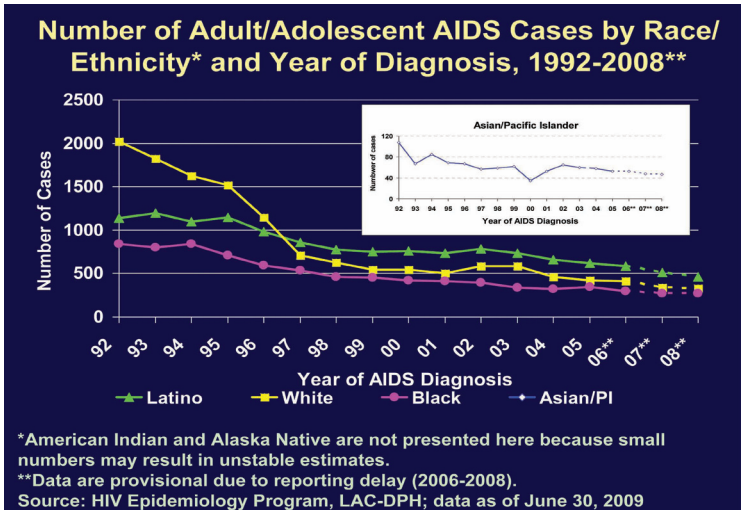


Figure 3.8

In 1993, Whites represented 47% of adults and adolescents living with AIDS in LAC while Latinos represented 31%, Blacks 20%, and Asian/Pacific Islanders only 2% (see Figure 3.9). By 2006, however, Latinos composed the largest proportion of living AIDS cases with 43%, followed by Whites, 30%, Blacks, 22%, and Asian/Pacific Islanders, 4%. Not shown in the figure due to small numbers are American Indians and Alaska Natives who represented 0.5% of all LAC adults and adolescents living with AIDS in 1993 and 0.4% in 2006.

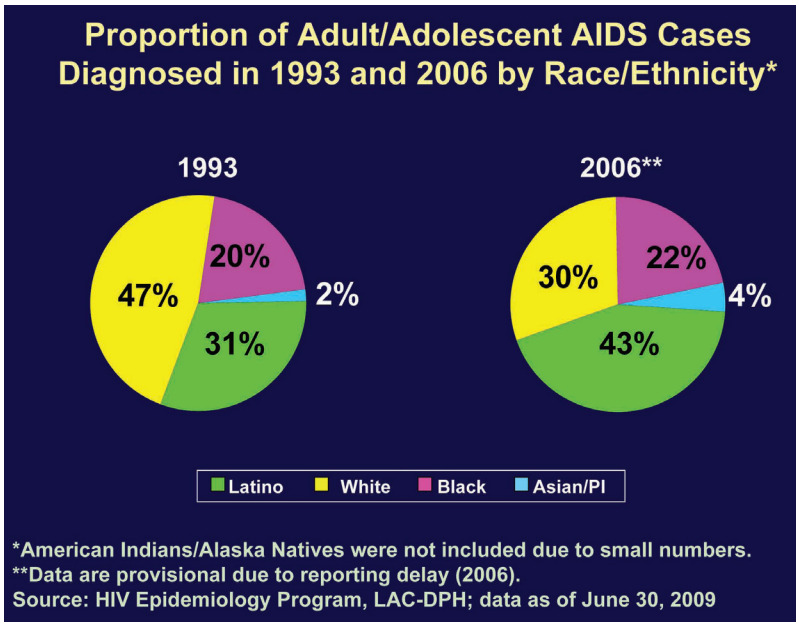


Figure 3.9

The proportion of females living with AIDS has increased between 1995 and 2006 across all racial/ethnic groups. This trend is most apparent among Asian/Pacific Islanders (40% increase) and American Indian/Alaska Natives (36% increase) (see Figure 3.10). Overall, males in all racial/ethnic groups composed a greater proportion of persons living with AIDS (PLWA) from 1995 through 2006 (see Figure 3.11). In 2006, this gender disparity is most pronounced among Whites, with males accounting for approximately 95% of White PLWA. The highest proportions of female PLWA are among Blacks (19%) and American Indian/Alaska Natives (21%). (See Figure 3.12).

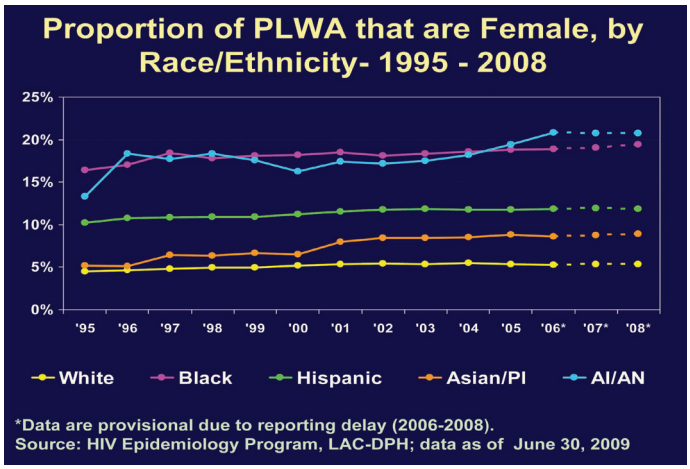


Figure 3.10

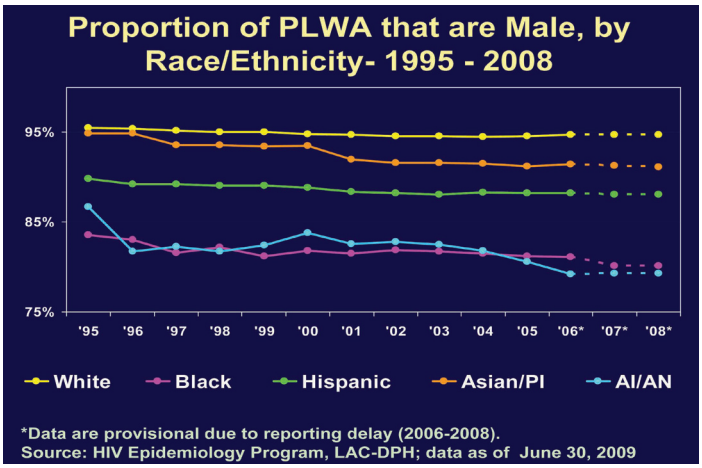


Figure 3.11

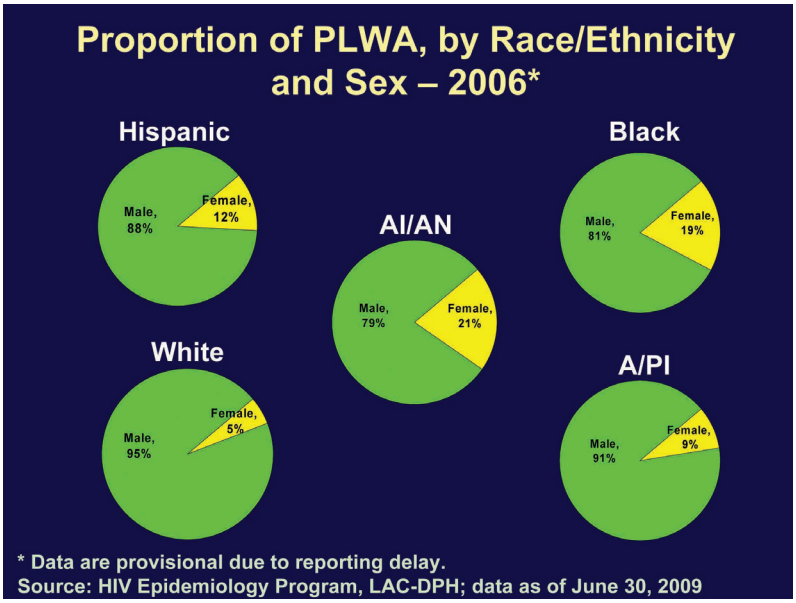


Figure 3.12

Although Whites once had, and Latinos now have, the highest number and proportion of AIDS cases, Blacks have been more heavily impacted by AIDS than any other racial/ethnic group in the County. The Black adult and adolescent annual AIDS rate for males, while steadily decreasing over the past decade, continues to be more than twice that for White and Latino males (see Figure 3.13). Similarly, among adult and adolescent females, Blacks have the highest annual AIDS rate of any racial/ethnic group—nearly 5 times higher than the rate for Latinas and 14 times the rate for Whites in 2006 (see Figure 3.14).

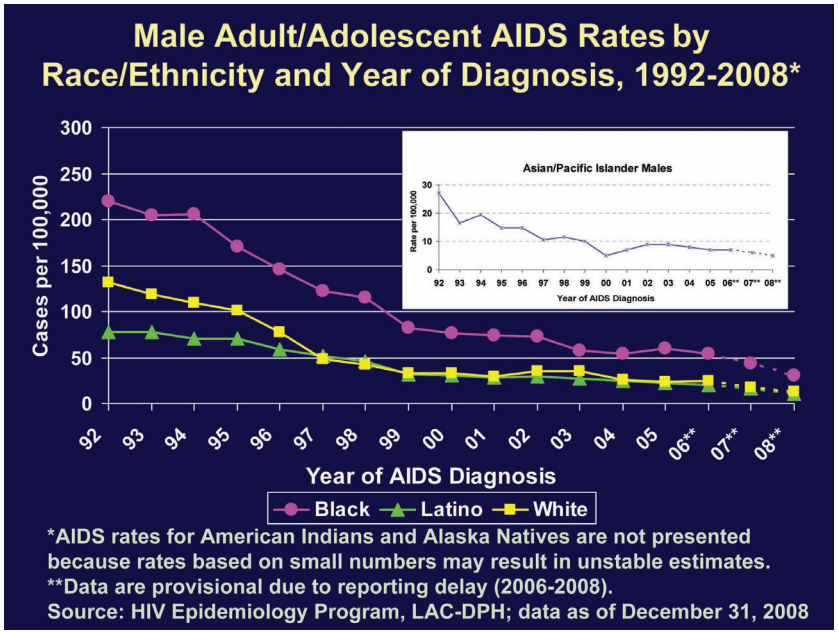


Figure 3.13

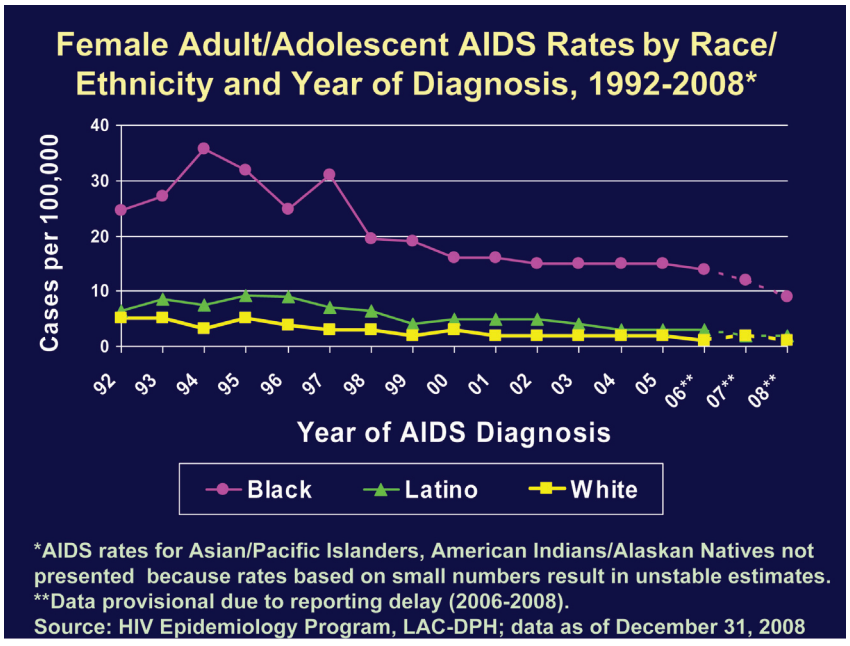


Figure 3.14

Age: The introduction of improved HIV treatments beginning in 1996 contributed to a significant delay in the progression of HIV to AIDS for many individuals. The median age at AIDS diagnosis has increased from 33.5 years in 1981 to 39 years in 2007 (see Figure 3.15).

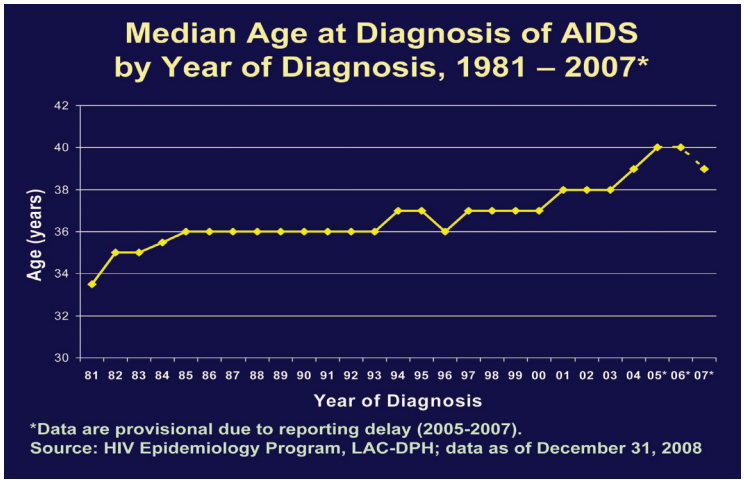


Figure 3.15

Between 1995 (prior to the introduction of more effective HIV treatments) and 2006, the proportion of AIDS cases diagnosed among persons over age 40 years increased 35% (see Figure 3.16). The most dramatic shift, however, occurred among those diagnosed at age 50 years or older (see Figure 3.17), increasing from 11% of newly diagnosed cases in 1995 to 17% in 2006.

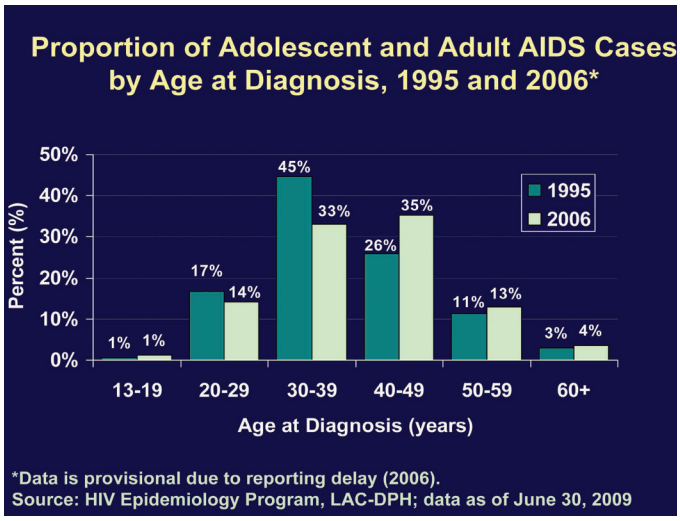


Figure 3.16

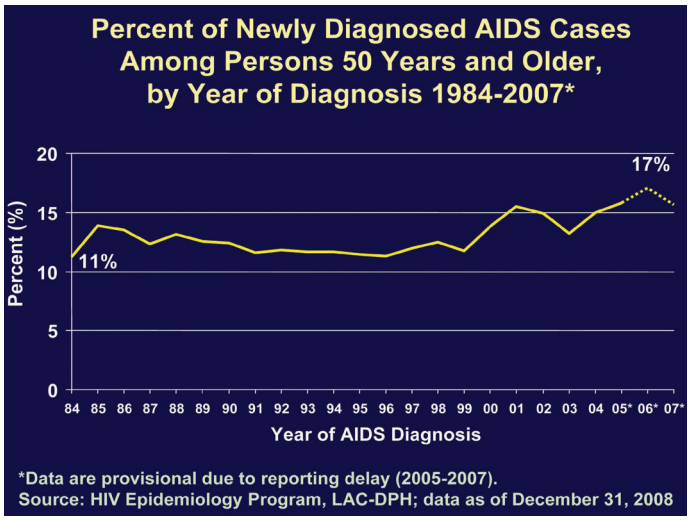


Figure 3.17

The proportion of new AIDS diagnoses among adolescents aged 13-24 years increased from 3.8% in 1995 to 6.5% 2007. The majority of AIDS diagnoses occurred among those aged 20-24 years with very few cases among those aged 13-19 years (Figure 3.18).

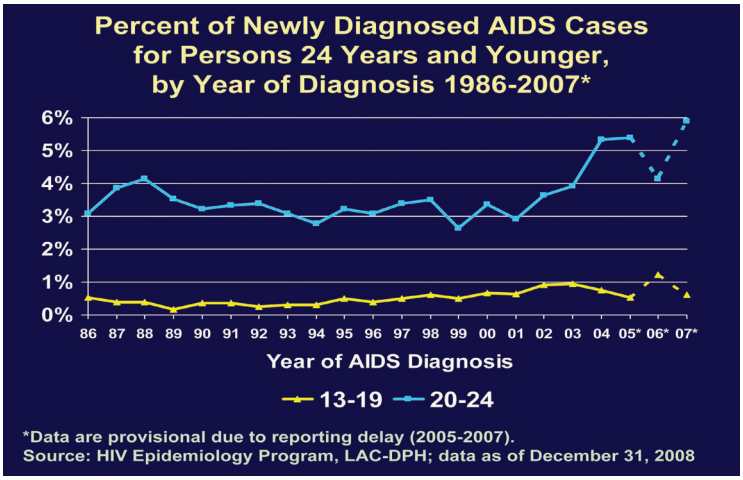


Figure 3.18

Mode of Exposure: Men who have sex with men (MSM) – including MSM who inject drugs (MSM/IDU) – continue to account for the majority of AIDS cases in LAC. Trends in the mode of exposure can only be estimated using adjusted mode of exposure. Adjusted mode of exposure estimates the proportion of cases in each exposure category based on information from routinely investigated and re-categorized AIDS cases in previous years (see technical notes). Before 1993, MSM represented 75% of AIDS cases. In 2006, MSM represented an estimated 70% of cases (see Figure 3.19). The proportion of AIDS cases attributed to injection drug use among heterosexuals peaked in 1997 at 11%; in 2006, 8% of cases were estimated to be among heterosexual injection drug users.

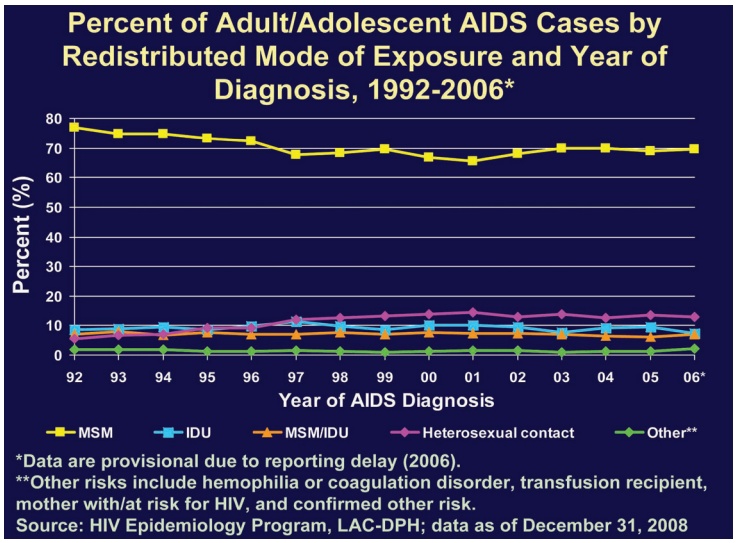


Figure 3.19

In comparing the proportions of AIDS diagnoses before and after the introduction of highly active antiretroviral therapy (HAART) in 1996, more females reported heterosexual contact as the mode of exposure (66%) in the post-HAART period compared with 53% before 1996 (see Figure 3.20). Among males, the proportion who reported exposure via MSM contact decreased (from 83% to 78%) after the introduction of HAART, while those who were exposed through heterosexual contact increased from 2% before HAART to 5% in the post HAART period (Figure 3.21).

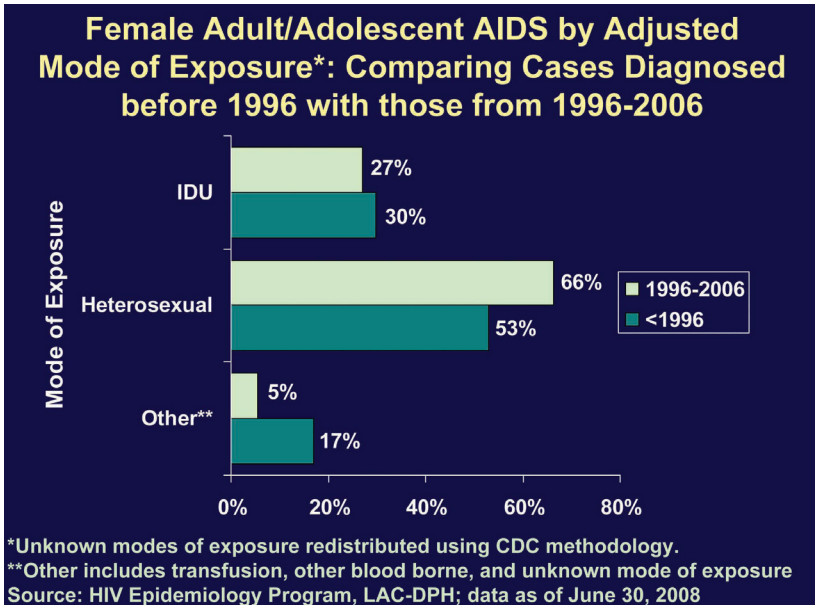


Figure 3.20

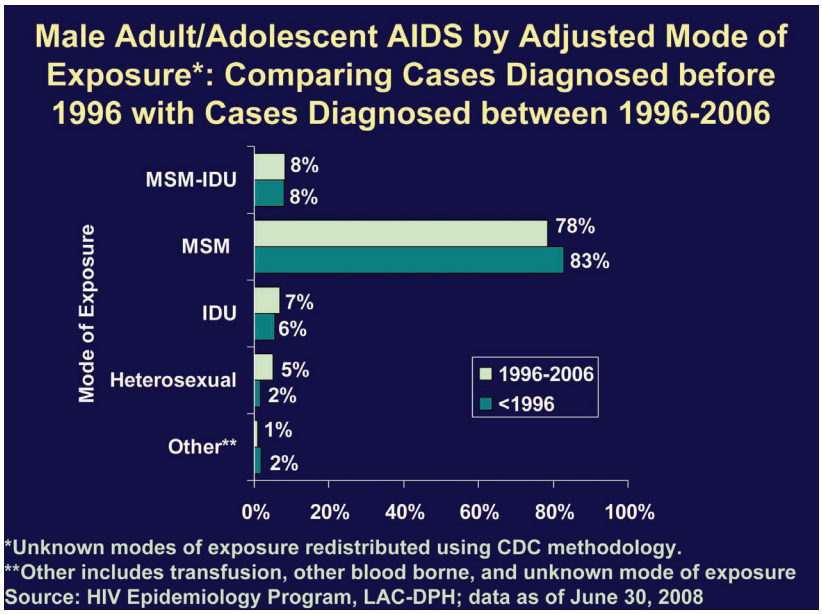


Figure 3.21

E. Comparison of AIDS Trends in Los Angeles County and the U.S.

There are similarities in broad AIDS trends between the U.S. and LAC, such as the dramatic decrease in both annual diagnosed AIDS cases and AIDS deaths from 1995 to 1998 followed by a steady decrease through 2006 (see Figures 3.22 and 3.23). There are, however, some important differences—especially in the distribution of cases by demographic and risk exposure characteristics. Therefore, it is important for planning groups and HIV researchers to examine local data and trends when trying to understand the impact of the epidemic in LAC.

In the mid 1980's, the number of AIDS diagnoses increased sharply in both the U.S. and LAC and peaked in 1992-1993. After a few years of steady decline, a steeper decline was seen between 1996 and 1998 before leveling off between 1999 and 2001. In July 2002, LAC expanded the AIDS reporting system to include laboratory reporting. While this change allowed for a more complete reporting system, it may have also contributed to a 7% spike in the number of AIDS diagnoses from 2001 to 2002. It remains unclear if the increase in cases is entirely due to laboratory reporting or reflects a true increase in diagnoses. From 2001-2002, CDC also reported a 2.2% increase in the annual AIDS diagnoses in the U.S., sparking national concerns about the increasing resistance of HIV to HAART and HAART contributing to the increased HIV diagnoses observed among MSM during that period. Between 2002 and 2006, however, the number of reported AIDS cases in the U.S. stabilized and in LAC (from 2002-2007), the number of reported AIDS cases continued to decline (see Figures 3.22 and 3.23).

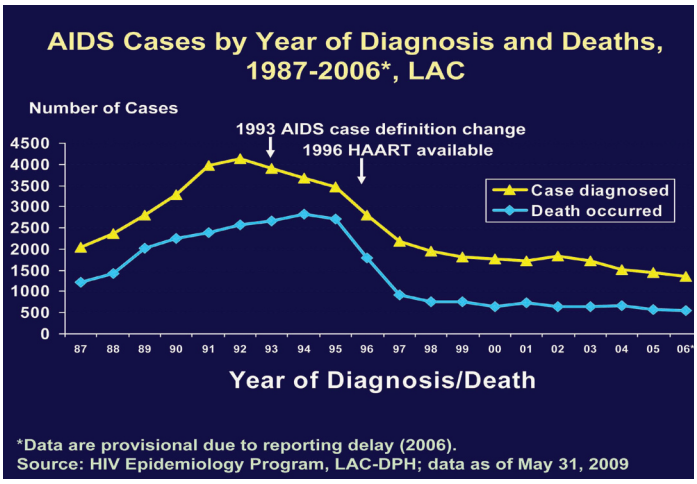


Figure 3.22

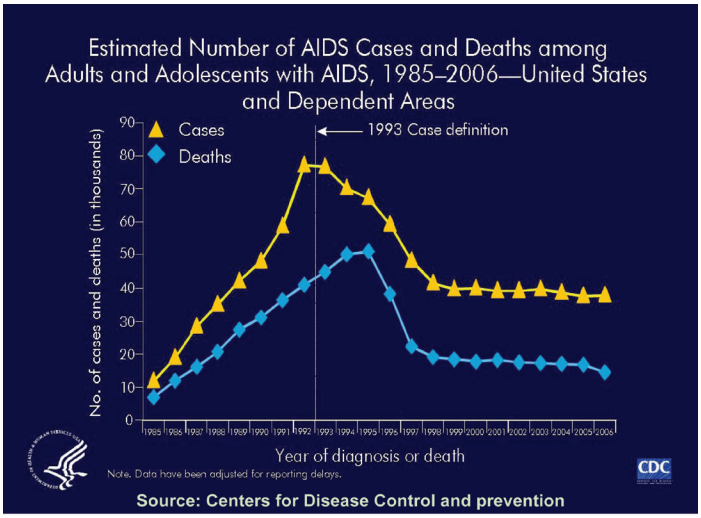


Figure 3.23

Annual AIDS deaths have shown nearly identical patterns in the U.S. and LAC, with steady increases seen until 1995, followed by steep declines between 1996 (when HAART was introduced) and 1998, followed again by moderate declines thereafter (see Figure 3.22 and 3.23). With the decline in deaths outpacing the decline in new cases, the number of persons living with AIDS has continued to increase in both the U.S. and LAC (see Figures 3.24 and 3.25).

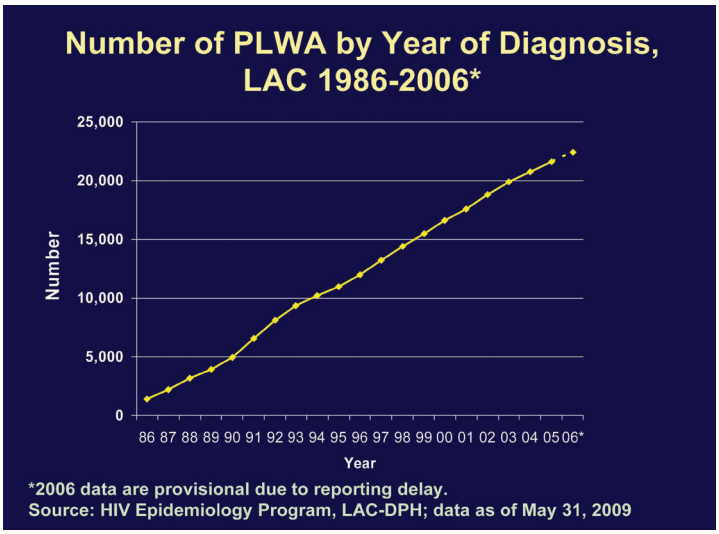


Figure 3.24

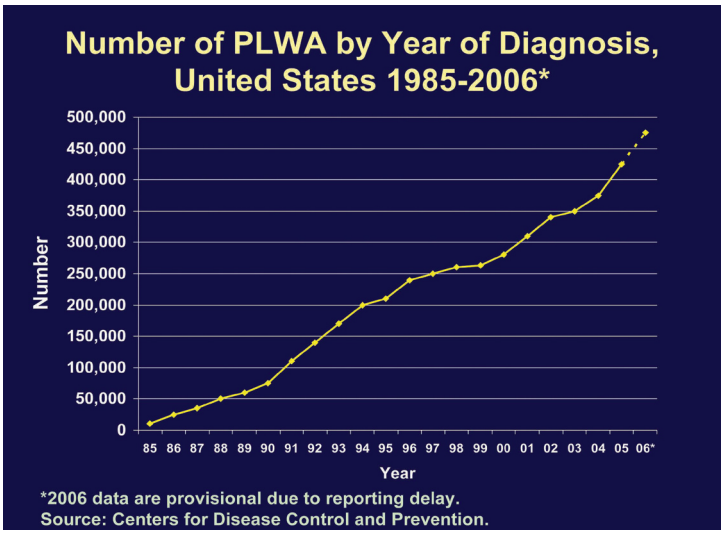


Figure 3.25

Gender: Among those living with AIDS, a much higher proportion are males compared with females in both LAC and the U.S. Largely due to LAC's substantial HIV epidemic among MSM, males living with AIDS account for a higher proportion of living AIDS cases in LAC (89%) than they do nationally (77%; see Figures 3.26 and 3.27).

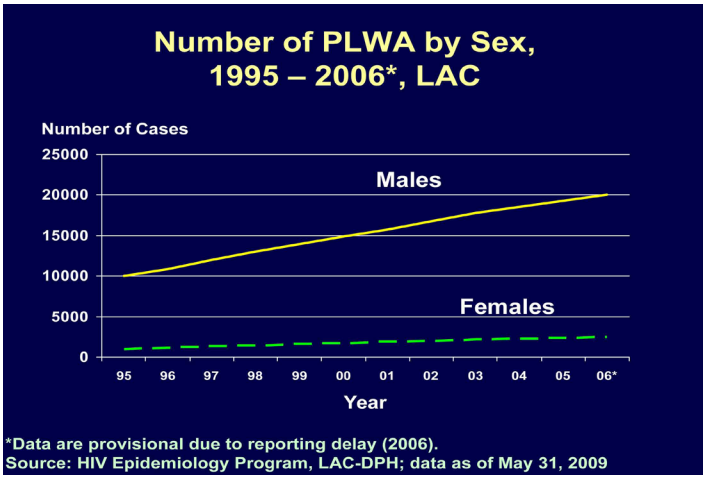


Figure 3.26

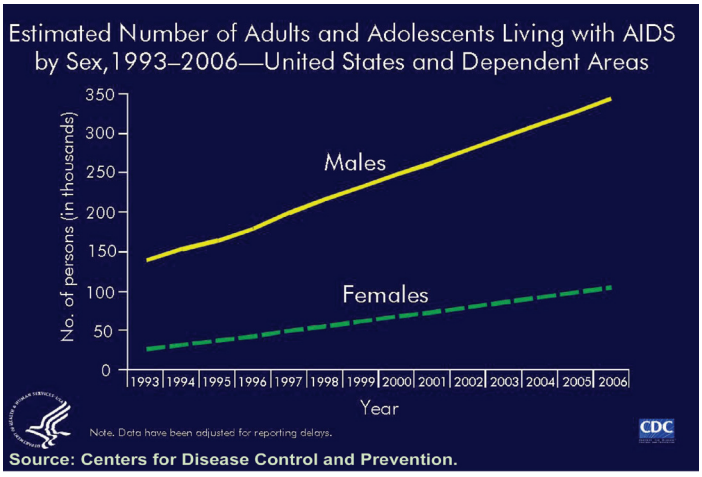


Figure 3.27

Race/Ethnicity: The racial/ethnic distribution of persons diagnosed with AIDS differs markedly between LAC and the U.S. Whites were predominantly affected by AIDS in both the U.S. and LAC in the 1980's and early 1990's. Since 1997, Latinos have become the predominant group affected in LAC, while Blacks have become the predominant group in the U.S. since 1996 (see Figures 3.28 and 3.29).

By 2006, Latinos accounted for 43% of AIDS cases in LAC compared with only 18% of U.S. cases. Blacks accounted for 22% of LAC cases, but accounted for half (49%) of all U.S. cases. Whites represented 30% of both LAC and U.S. cases, while other race/ethnicities—such as Asian/Pacific Islanders and American Indian/Alaska Natives—represented less than 5% of LAC cases and less than 2% of U.S. cases.

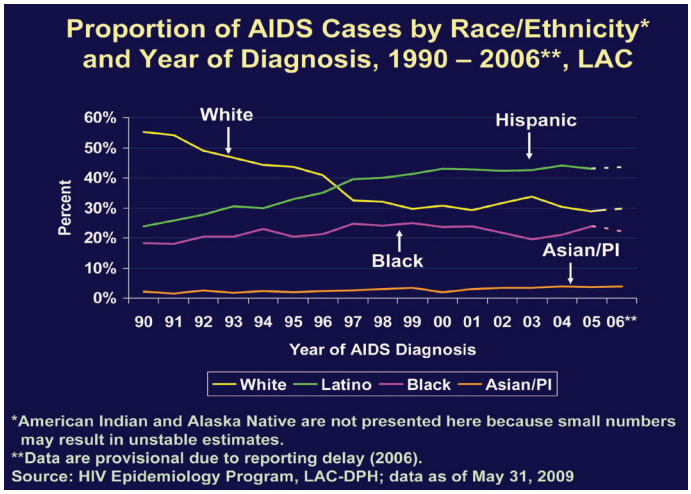


Figure 3.28

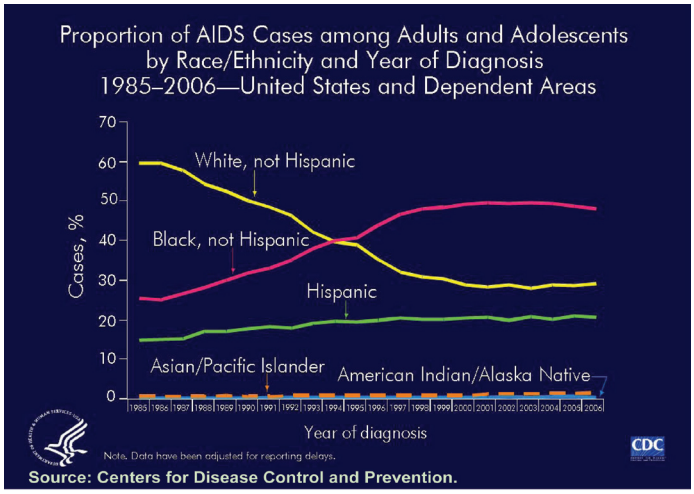


Figure 3.29

Differences in the proportions of AIDS cases by race and ethnicity are influenced by the underlying demographic characteristics of LAC compared with the U.S. As demonstrated in Section II, Latinos compose a larger proportion of the LAC population compared with the U.S. as a whole. For this reason, comparing AIDS rates by race/ethnicity is the most appropriate way to compare the relative impact of AIDS among groups of different population sizes. For both the U.S. and LAC, the highest annual AIDS rates for men and women were observed among Blacks. While U.S. AIDS rates were 65% higher than LAC rates for Black and Latino men, the rate of new cases for White males in LAC was over two times the rate for White males in the U.S. (see Figure 3.30).

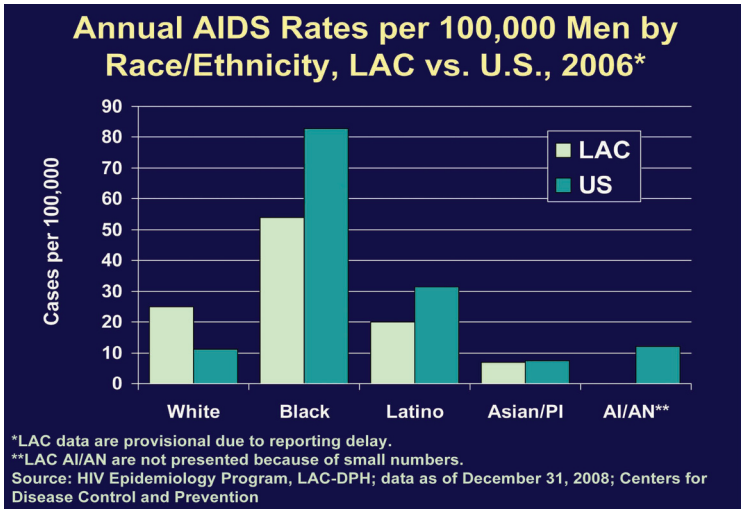


Figure 3.30

The U.S. AIDS incidence rate for females in 2006 was much higher than for females in LAC. These elevated rates were most pronounced among Latinas and Black females, where U.S. rates were three times higher than LAC rates (see Figure 3.31).

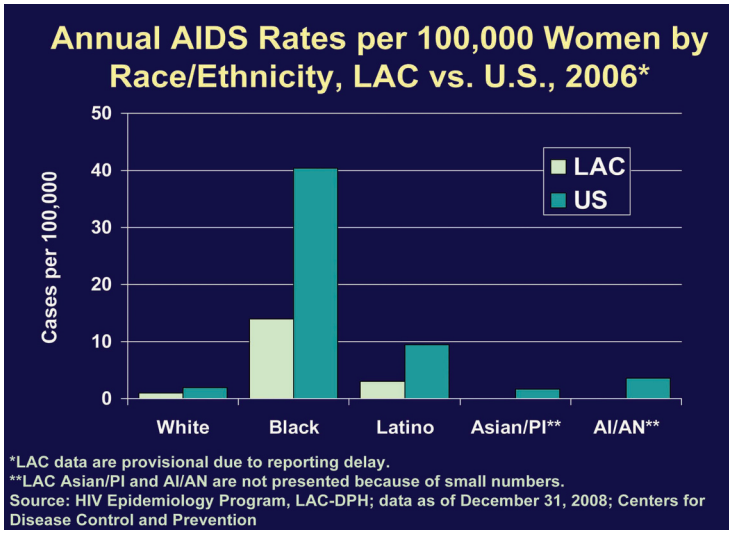


Figure 3.31

Mode of exposure: The distribution of AIDS cases by adjusted modes of exposure differs greatly between LAC and other regions of the country—such as the South and Northeast United States. LAC continues to have a higher proportion of AIDS cases among MSM and smaller proportions among heterosexuals and IDU than the nation overall. These differences can be seen in Figures 3.32 and 3.33.

From 1986 to 2006, the adjusted proportion of annual AIDS cases attributable to male-to-male transmission decreased from 65% to 46% nationally, and from 86% to 70% in LAC. Conversely, annual AIDS cases attributable to heterosexual contact increased nationally from 3% in 1985 to 30% in 2006. In LAC there was only a small increase from 2% in 1986 to 13% in 2006.

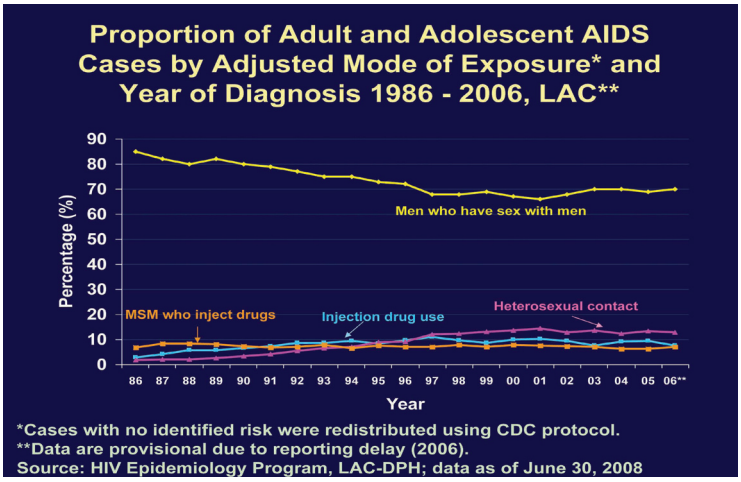


Figure 3.32

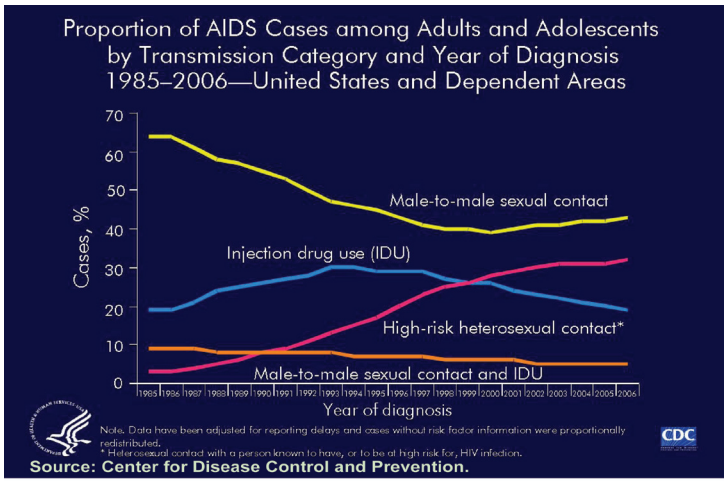


Figure 3.33

Figure 3.34 shows the adjusted mode of exposure for AIDS cases diagnosed in 2006 in LAC compared to the U.S. MSM and MSM/IDU (i.e., MSM who also inject drugs), together accounted for 77% of LAC's AIDS cases, but only 48% of national cases in that year. Conversely, compared with LAC cases, over twice as many U.S. cases report HIV exposure through (non-MSM) injection drug use (18% versus 8%) and heterosexual contact (32% versus 13%).

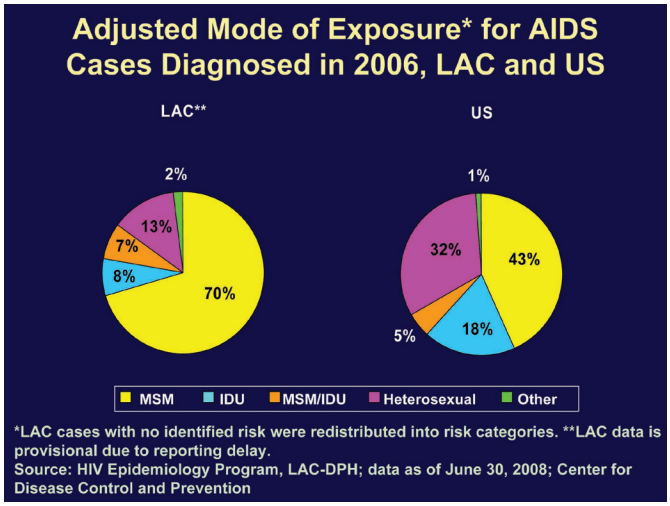


Figure 3.34

F. HIV/AIDS IN CHILDREN

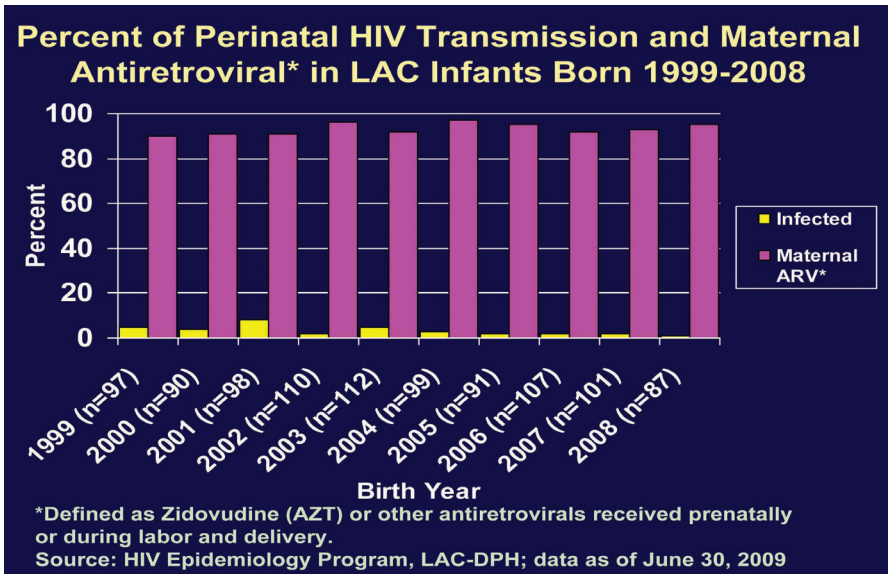
As of June 2009, a total of 543 children under 13 years of age have been diagnosed with HIV/AIDS since reporting began in LAC in 1982. This number includes 252 children diagnosed with AIDS and 291 children with HIV (non-AIDS) residing in LAC.

Overall, the racial/ethnic distribution for pediatric HIV and AIDS cases in LAC is 45% Latino, 34% Black, 17% White, 3% Asian/Pacific Islander and 1% Other/Unknown. This distribution is similar to racial/ethnic distribution of all adult female cases in LAC. Fifty-two percent (52%, n=284) of pediatric HIV/AIDS cases in LAC are males and forty-eight percent (48%, n=259) are females. There have been 169 deaths among the 252 pediatric AIDS cases for an AIDS case fatality rate of 69%. Case fatality among the total of 543 pediatric HIV/AIDS cases is 31% (169 of 543).

Since the implementation of universal blood donor screening in 1985 and the treatment of blood products received by those with hemophilia and other blood-clotting disorders, the majority of infected children have been exposed to HIV via perinatal (mother-to-child) transmission. Of the cumulative 543 children diagnosed with HIV or AIDS, 75% acquired HIV from their mothers; 19% were infected through a blood transfusion; and 5% had hemophilia or a coagulation disorder. In 1% of cases, no exposure category could be determined.

Despite major successes in reducing mother-to-child transmission of HIV at the local and national level, perinatal HIV prevention efforts fail to reach all HIV-infected pregnant women in LAC and, thus, transmission still occurs. Transmission among all births was 7% in 1999 and fell to 1% in 2008 (Figure 3.35). Nearly all of the HIV infections (60%) occurring for babies born between 1999 and 2008 resulted from missed opportunities for prevention primarily due to lack of prenatal care or failure to identify and treat mother for HIV during pregnancy or delivery.

Figure 3.35



Enhanced Perinatal Surveillance Project: With the emphasis on advancing HIV prevention and further reducing perinatal HIV transmission in high prevalence areas, the CDC launched the Enhanced Perinatal Surveillance project (EPS) in 1999 as an extension of routine HIV/AIDS surveillance activities. LAC is currently one of 15 sites nationwide funded through 2011 to conduct active surveillance for HIV-exposed infants and children less than 13 years of age and receiving care in LAC. Since perinatal HIV exposure is not reportable in California, EPS activities are conducted with local Institutional Review Board (IRB) approval at both the LAC Department of Public Health and at seven pediatric HIV-specialty hospitals/clinics countywide that report more than 90% of all perinatal HIV exposures in LAC.

EPS is a longitudinal study linking mother-infant pairs through retrospective medical records review and data abstraction of both the mother and child's medical records. Follow-up medical record reviews on the infant are completed every 6 months to document new symptoms, treatment regimens, birth defects, and immunologic status until the infant reaches 18 months of age or until his/her HIV-infection status is determined. EPS collects data on: the timing and receipt of prenatal care; maternal HIV testing history; antiretroviral therapy during pregnancy, labor, and delivery; substance use and STD history during pregnancy; maternal CD4 count, viral load and disease status; timing and characteristics of labor and delivery; neonatal antiretroviral therapy; pediatric PCP prophylaxis; infant's HIV antibody and DNA/RNA testing; pediatric HIV status; breast feeding; birth defects; sibling HIV status; and follow-up care of both mother and child.

As of June 2009, EPS reported a total of 2,257 HIV-exposed and infected children who were less than 13 years of age and receiving medical treatment for HIV in LAC (includes LAC and non-LAC residents). Of these, 1,450 (64%) were "seroreverters" – that is, not infected, 262 (12%) were pediatric AIDS cases, 348 (15%) were pediatric HIV (non-AIDS) cases, and 197 (9%) were cases with indeterminate HIV status.

HIV Testing in Pregnant Women: As of December 2008, there were 5,198 women living with HIV/AIDS in LAC. Fifty-six percent (56%, n=2,885) of these women were of childbearing age (15-44 years old). Between 2002 and 2008, there were 707 infants reported as born to HIV-positive mothers in LAC, representing an average of 101 perinatal HIV exposures per year in LAC. Since the mid-1990's, the number of incident pediatric HIV and AIDS cases in LAC has decreased from a peak of 32 cases in 1998 to only two in 2008. EPS data suggest that early identification and the widespread use of antiretroviral therapy in HIV-infected mothers during pregnancy and/or labor and delivery were major factors in the decline of perinatal HIV transmission (Figure 3.35). However, despite this declining trend, the persistence of mother-to-child transmission of HIV in LAC, albeit at a low level, demonstrates the continued need for the routine HIV testing of pregnant women followed by appropriate prophylaxis for those infected with HIV.

Regulations regarding prenatal HIV testing were established in California in 1996, but at least 20% of HIV-positive pregnant women still arrive in labor and delivery not knowing their HIV status. The recent passage of Assembly Bill 682 in early 2008 should help eliminate barriers to pregnant women receiving an HIV test during prenatal care. The Bill's "opt-out" testing provision provides rapid HIV testing in labor and delivery settings without written consent. As a result, HIV testing in prenatal care is expected to increase. Pediatric HIV/AIDS surveillance data show that only 54% of the infected mothers with no prenatal care and 26% with unknown prenatal care received antiretroviral therapy during labor and delivery, which indicates that rapid testing at labor and delivery is not uniformly practiced to prevent perinatal HIV transmission. Practitioners also need to be educated on the new testing law. EPS allows LAC to monitor and evaluate implementation of this new law by reviewing prenatal records and/or labor and delivery records for HIV counseling and testing documentation.

References

1. Hall HI, Song R, Rhodes P, et al. Estimation of HIV incidence in the United States. *JAMA*. Aug 6 2008;300(5): 520-529.

IV. GEOGRAPHIC DISTRIBUTION OF HIV AND AIDS IN LOS ANGELES COUNTY

As is seen with other diseases, HIV/AIDS has not affected all areas of the county equally. In 1998, 26 health districts in Los Angeles County (LAC) were aggregated into eight Service Planning Areas, or SPAs, in an effort to characterize local health needs regionally. (Selected sociodemographic characteristics of each SPA are given in Table 2.1 of this *Profile*.) In this section, we examine the distribution of newly diagnosed AIDS cases in 2006 and persons living with HIV/AIDS (PLWHA) by SPA and by select areas within each SPA. We have also included preliminary data on PLWHA and persons living with non-AIDS HIV (PLWH) from both the coded- and name-based reporting system. However, it is important to note that data associated with non-AIDS HIV is preliminary due to a backlog of cases that have yet to be investigated and reported. Thus, data presented for PLWH in this profile will not represent all HIV diagnoses in Los Angeles County until the HIV registry is complete.

Figure 4.1 is a map showing the number (in red), percent (in green), and rate per 100,000 population (in blue) of PLWHA reported in LAC by SPA. Persons living with HIV are based on preliminary data collected from July 2002 to December 2008. SPA 4 (Metro) has the highest number (16,405), proportion (39%), and rate (1,300 per 100,000) of PLWHA among SPAs in the county, followed by SPA 8 (South Bay) with over 7,000 PLWHA (17%), and a rate of 438 per 100,000. SPA 1 (Antelope Valley) has the lowest number (487), percent (1%), and rate (136 per 100,000) of PLWHA in LAC. Figure 4.2 shows the number of PLWA for areas of the City of Los Angeles and other cities in LAC.

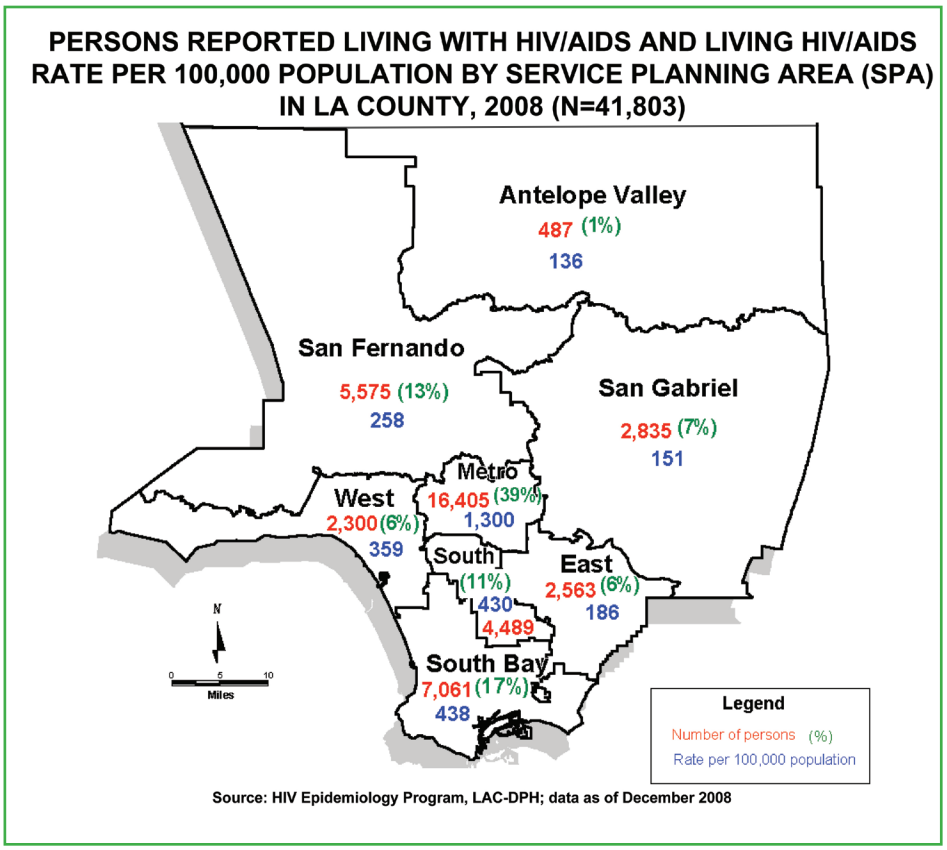


FIGURE 4.1

Cities and areas with the greatest number of persons living with AIDS (PLWA) are shaded in dark red—including Hollywood, West Hollywood, Downtown, and Long Beach. Other cities and areas that have fewer but still large numbers of PLWA (shaded in orange) can be found in all SPAs.

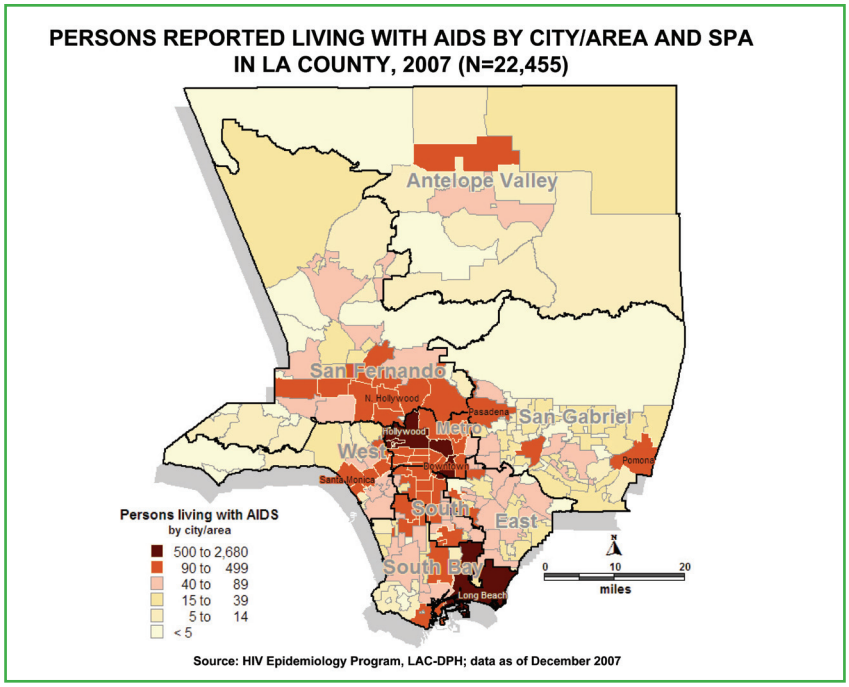


FIGURE 4.2

Figure 4.3 is a Kernel density map (see technical notes) showing the density of AIDS cases per square mile reported from 2000-2007 in LAC, which is calculated by averaging the number of AIDS cases within a 1.78 mile radius. The areas with the highest densities of persons reported with AIDS are shown in different shades of red – which cover the majority of the Metro (Hollywood and Downtown) and South SPAs and a portion of San Fernando, West, East, and South Bay (Long Beach) SPAs. The map also shows locations of jails or detention facilities and the geographical center of AIDS cases in Los Angeles County.

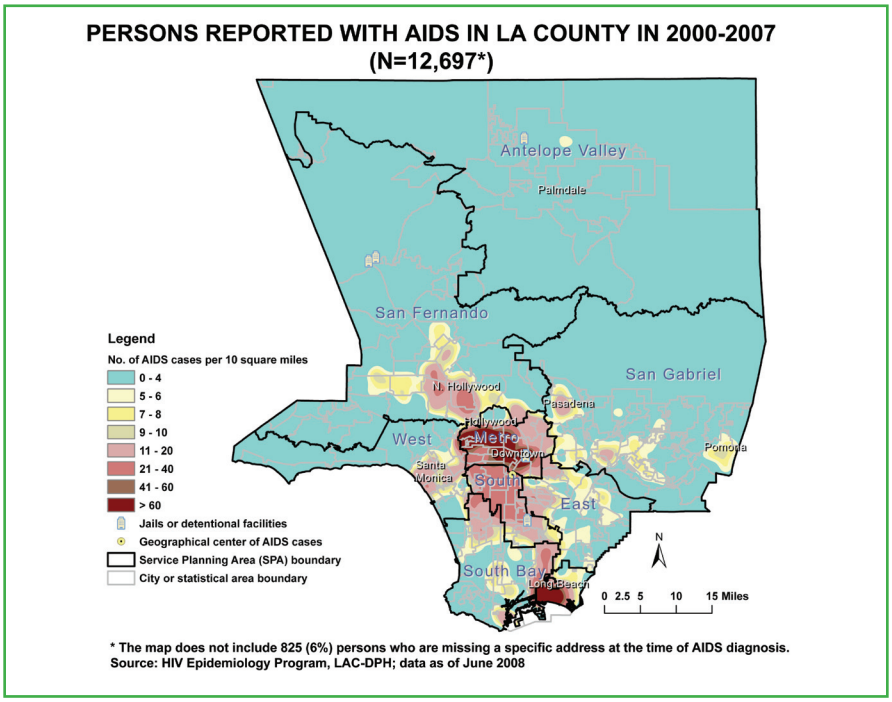


FIGURE 4.3

A. SPA 1: Antelope Valley

The number of cumulative AIDS cases, new AIDS cases in 2006, and persons living with AIDS as of 2007 for Palmdale and SPA 1 are described in Table 4.1. As of June 2008, there had been a cumulative total of 540 persons reported with AIDS in the Antelope Valley. Among the 540 cases, 49% were living. Most PLWA in SPA 1 were male (83%), 39% were White, 31% Black, and 28% Latino.[1] When combining both living HIV and AIDS cases, the percentage of female cases is much higher (23% vs. 17%) while the proportion of PLWHA by race/ethnicity is similar (Figure 4.4) to AIDS cases alone. After redistributing cases without confirmed risk information (see technical notes), the mode of HIV exposure for nearly two out of every three PLWHA was either MSM (52%) or MSM/IDU (9%) and, compared with other SPAs, SPA 1 had the highest proportion of cases with reported heterosexual exposure (21%; Figure 4.5). In Figure 4.6, the map of SPA 1 shows the distribution of PLWA by city/area. Lancaster had the highest number of PLWA (shaded in red) in SPA 1, followed by the city of Palmdale (shaded in pink).

Number and Cummulative AIDS Cases, Number and Rate of Both New AIDS Cases in 2006 and PLWA at the End of 2007 for Select Cities in LAC SPA 1

Table 4.1

City/Area	Cumulative[1]	New Cases in 2006[1,2]		PLWA in 2007[1,2]	
	Number of AIDS Cases	Number	Rate per 100,000	Number	Rate per 100,000
Palmdale	164	8	6	85	60
SPA 1 Total	540	16	5	262	73

1. Data are based on cases reported by June 2008.
2. Cities or areas with < 5 persons diagnosed with AIDS in 2006 not included in the table.

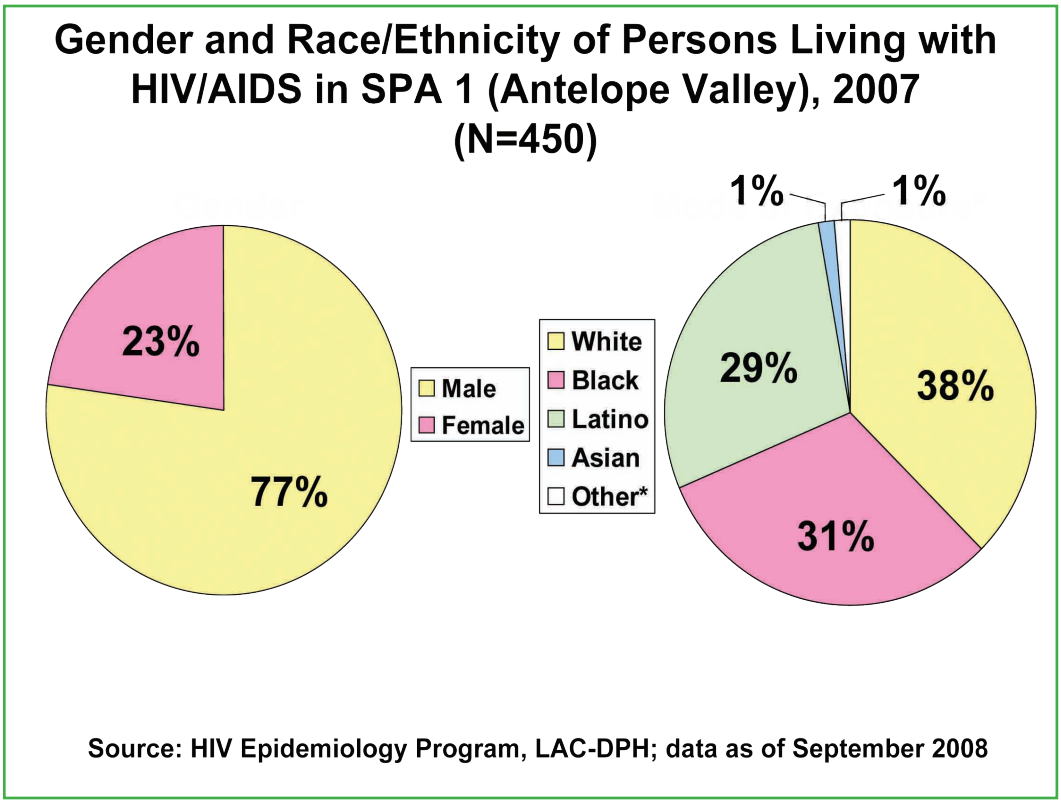
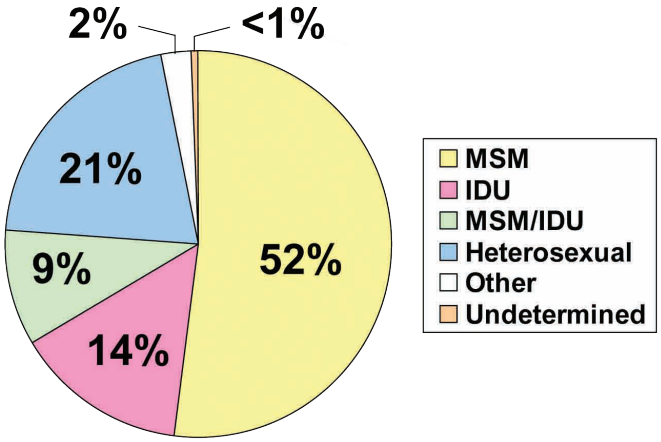


FIGURE 4.4

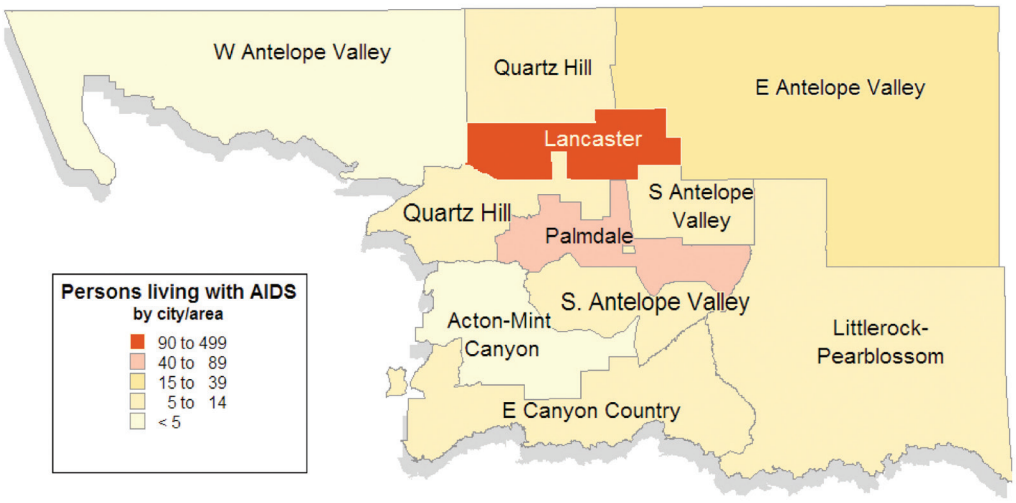
Adjusted Mode of HIV Exposure for Persons Living with HIV/AIDS in SPA1 (Antelope Valley), 2007 (N=450)



*Other includes those with hemophilia/coagulation disorder, transfusion recipients, and mothers with/or at risk for HIV
Source: HIV Epidemiology Program, LAC-DPH; data as of September 2008

FIGURE 4.5

Persons Living with AIDS by City/Area for SPA 1 in Los Angeles County, 2007



Source: HIV Epidemiology Program, LAC-DPH; data as of December 2007

FIGURE 4.6

B. SPA 2: San Fernando Valley

A cumulative total of 7,654 persons with AIDS had been reported in the San Fernando Valley as of June 2008. Among all cases reported, 39% were living, giving San Fernando Valley the third highest number of PLWA in LAC, after Metro and South Bay.[1] The highest number of cases and AIDS rates in SPA 2 were seen in North Hollywood, Studio City, and Van Nuys-Sherman Oaks (see Table 4.2). Most PLWA were male (90%) and the majority of cases were either White or Latino (46% and 38%, respectively).[1] When PLWH are included, the percentage of male cases drops to 88%. However, the distribution of cases by race and ethnicity remains the same, with Whites and Latinos still constituting the majority (46% and 38%) of HIV/AIDS cases (Figure 4.7). Figure 4.8 shows the adjusted mode of exposure for PLWHA. MSM represent 4 out of 5 PLWHA in SPA 2 (73% MSM and 6% MSM/IDU). This represents the third highest proportion of MSM among the SPAs, trailing only Metro and West. Cities or areas with the highest number of living AIDS cases are further illustrated in the geographic map of PLWA in SPA 2 (Figure 4.9). The majority of PLWA are clustered in North Hollywood, Van Nuys-Sherman Oaks, Glendale, Studio City, Sepulveda, and Burbank areas (shaded in red).

Number and Cumulative AIDS Cases, Number and Rate of Both New AIDS Cases in 2006 and PLWA at the End of 2007 for Select Cities in LAC SPA 2

Table 4.2

City/Area	Cumulative[1] Number of AIDS Cases	New Cases in 2006[1,2]		PLWA in 2007[1,2]	
		Number	Rate per 100,000	Number	Rate per 100,000
Studio City	773	6	12	241	457
North Hollywood	1,337	24	18	493	370
Van Nuys-Sherman Oaks	1,022	17	8	438	211
Sun Valley	273	11	13	120	145
Burbank	436	13	12	150	139
Glendale	670	16	8	248	120
SPA 2 Total	7,654	164	8	3,012	140

1. Data are based on cases reported by June 2008.
2. Cities or areas with < 5 persons diagnosed with AIDS in 2006 not included in the table.

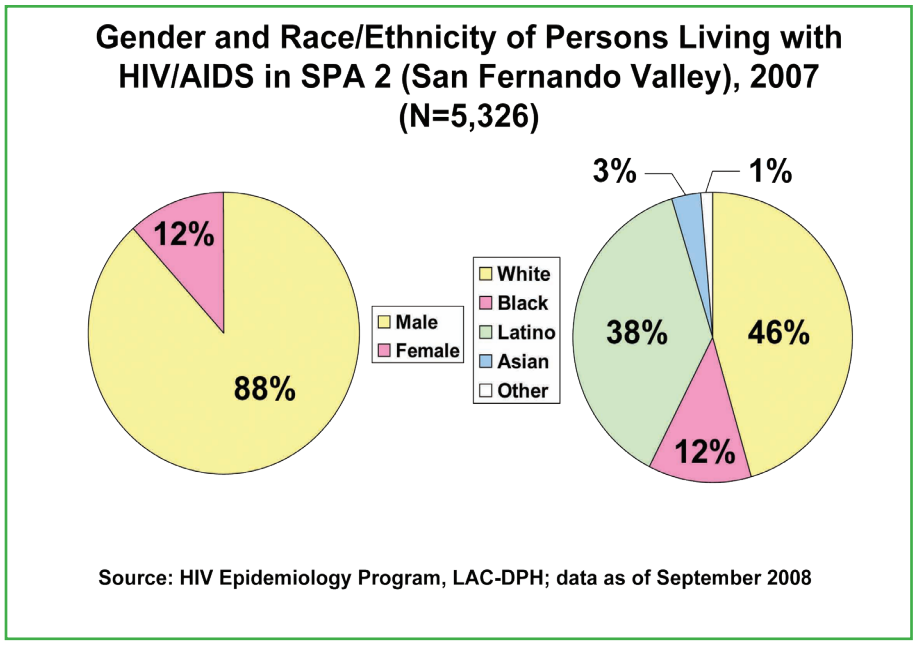
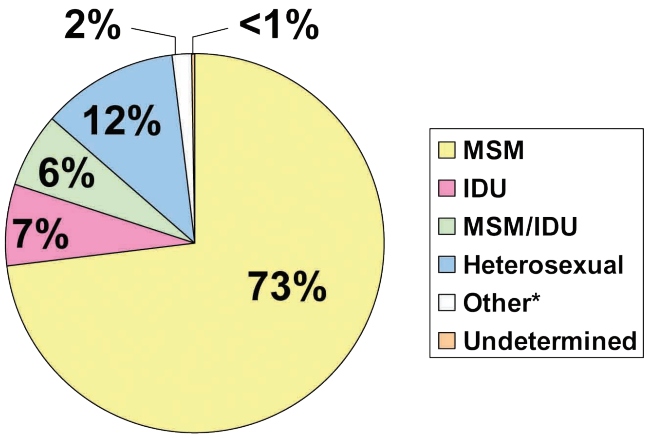


FIGURE 4.7

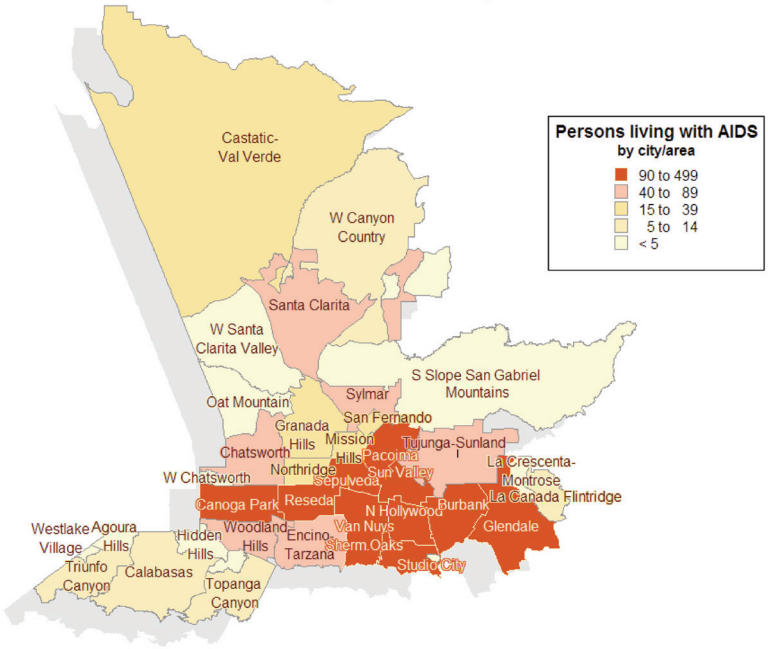
Adjusted Mode of HIV Exposure for Persons Living with HIV/AIDS in SPA 2 (San Fernando Valley), 2007 (N=5,326)



*Other includes those with hemophilia/coagulation disorder, transfusion recipients, and mothers with/or at risk for HIV
Source: HIV Epidemiology Program, LAC-DPH; data as of September 2008

FIGURE 4.8

Persons Living with AIDS by City/Area for SPA 2 in Los Angeles County, 2007



Source: HIV Epidemiology Program, LAC-DPH; data as of December 2007

FIGURE 4.9

C. SPA 3: San Gabriel Valley

Areas and cities within SPA 3 that have higher living AIDS rates at the end of 2007 are shown in Table 4.3 below. The total number of persons reported with AIDS in the San Gabriel Valley by June 30, 2008 was 3,979. Among all cases reported, 40% were living. In SPA 3, males accounted for 84% of PLWA, while Latinos accounted for just over half (53%), Whites nearly one-quarter (23%), and Blacks less than one-fifth (16%).[1] While Asian/Pacific Islanders accounted for only 7% of PLWA, they accounted for 18% of new AIDS diagnoses in 2006. Figure 4.10 below shows that combining living HIV and AIDS cases did not significantly change the proportion of male cases (83%), or the proportion of Latinos (52%), Whites (24%), or Blacks (15%). After redistributing cases without confirmed risk information, 66% of the SPA 3 residents living with HIV or AIDS at the end of 2007 were MSM, 6% MSM/IDU, 10% other IDU, and 16% heterosexual contact (Figure 4.11). Figure 4.12 is a geographic map of SPA 3 that shows the distribution of PLWAs by city/area. The map indicates that PLWA in San Gabriel Valley are clustered in three separate locations- Pasadena, Pomona, and El Monte. This is in contrast with most of the other SPAs, where neighboring cities or areas are clustered together and are heavily populated with PLWAs.

Number and Cummulative AIDS Cases, Number and Rate of Both New AIDS Cases in 2006 and PLWA at the End of 2007 for Select Cities in LAC SPA 3

Table 4.3

City/Area	Cumulative[1] Number of AIDS Cases	New Cases in 2006[1,2]		PLWA in 2007[1,2]	
		Number	Rate per 100,000	Number	Rate per 100,000
Pasadena	684	15	10	235	164
La Puente	101	8	19	51	123
Pomona	436	11	7	196	121
El Monte	250	5	4	120	96
SPA 3 Total	3,979	91	5	1,586	85

1. Data are based on cases reported by June 2008.
2. Cities or areas with < 5 persons diagnosed with AIDS in 2006 not included in the table.

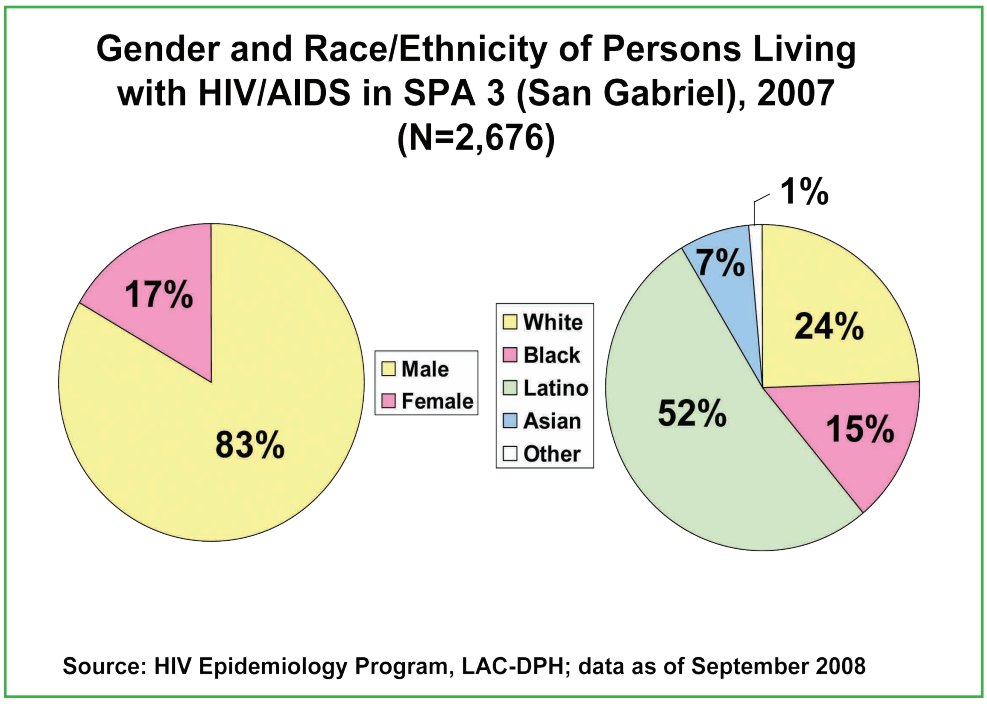
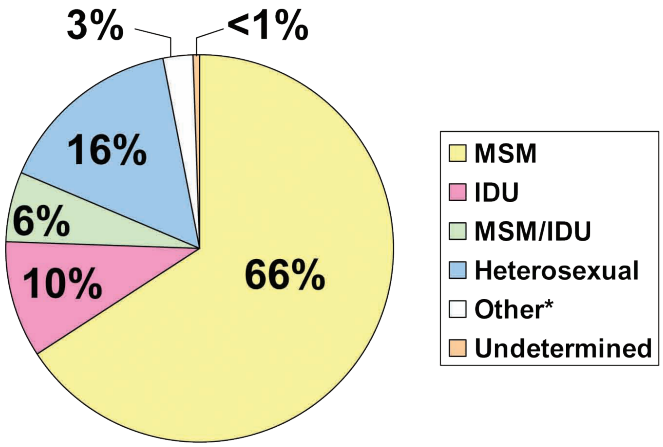


FIGURE 4.10

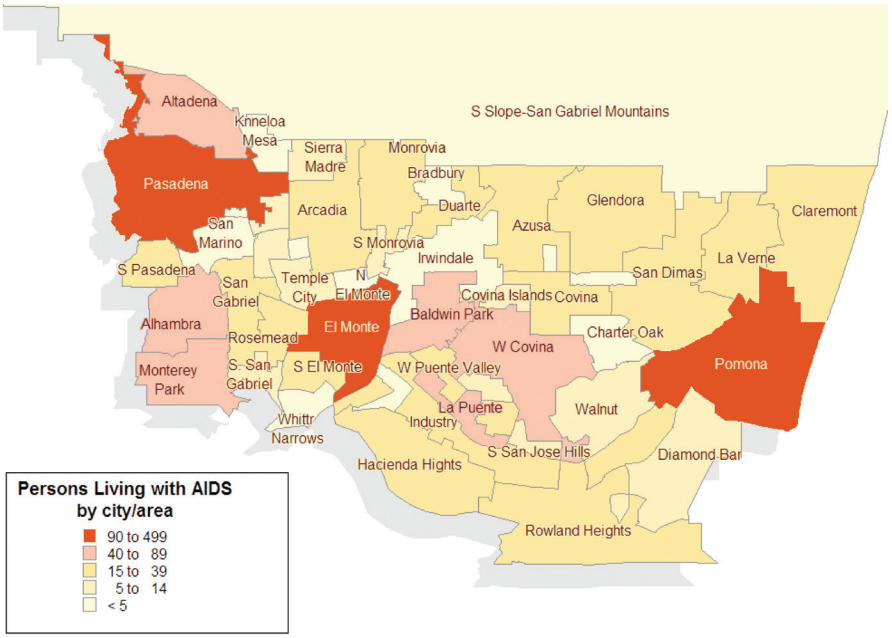
Adjusted Mode of HIV Exposure for Persons Living with HIV/AIDS in SPA 3 (San Gabriel), 2007 (N=2,676)



*Other includes those with hemophilia/coagulation disorder, transfusion recipients, and mothers with/or at risk for HIV
Source: HIV Epidemiology Program, LAC-DPH; data as of September 2008

FIGURE 4.11

Persons Living with AIDS by City/Area for SPA 3 in Los Angeles County, 2007



Source: HIV Epidemiology Program, LAC-DPH; data as of December 2007

FIGURE 4.12

D. SPA 4: Metropolitan Area

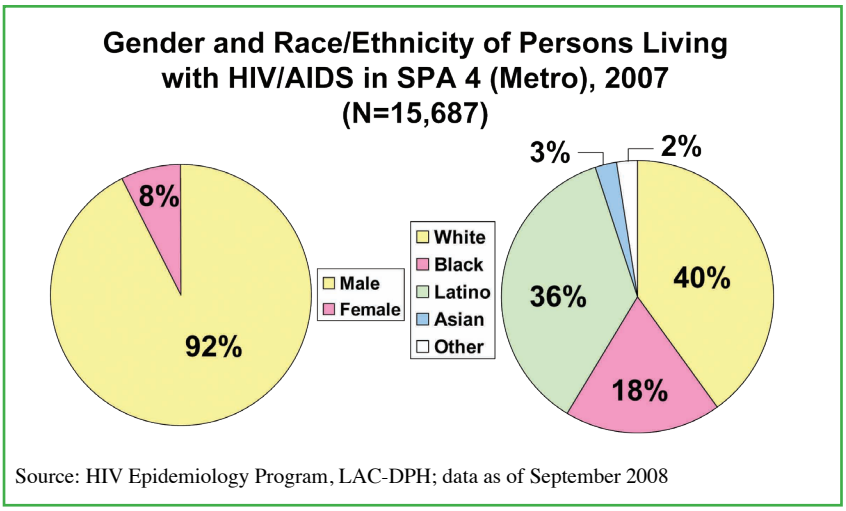
Since the beginning of the AIDS epidemic, Metro has been the SPA with the highest AIDS rate in the county. SPA 4 accounts for 39% of all cumulative AIDS cases in LAC.[1] Of Metro's 20,991 total cases, 41% were living with AIDS at the end of 2007. Areas within SPA 4 that had the highest AIDS cases and rates as of 2007 are shown in Table 4.4 below. More than half of the new (55%) and living (58%) AIDS cases are located in the West Hollywood, Wholesale, Hollywood, and Silver Lake-Chinatown areas. Of PLWA in SPA 4, 93% were male and 41% White, 39% Latino, and 17% Black. Although Blacks in Metro SPA only represented 17% of the PLWA in SPA 4, their AIDS incidence rate was 2.5 to 8 times that of Blacks in other SPAs.[1] Figure 4.13 shows that no drastic changes are seen in the proportion of male, White, Latino, or Black cases when all PLWHA are combined. MSM and MSM/IDU together represented 85% of PLWHA in SPA 4 (Figure 4.14) - the highest proportion of MSM living with HIV/AIDS among SPAs. The map of SPA 4 (Figure 4.15) further illustrates that the majority of PLWA in SPA 4 are living in the city/area of Hollywood, Silver Lake-Chinatown, West Hollywood, and Wholesale (shaded in dark red).

Number and Cumulative AIDS Cases, Number and Rate of Both New AIDS Cases in 2006 and PLWA at the End of 2007 for Select Cities in LAC SPA 4

Table 4.4

City/Area	Cumulative[1] Number of AIDS Cases	New Cases in 2006[1]		PLWA in 2007[1]	
		Number	Rate per 100,000	Number	Rate per 100,000
West Hollywood	3,048	39	104	1,138	3,039
Wholesale	1,224	58	100	744	1,274
Hollywood	6,338	104	42	2,373	961
Los Feliz	1,233	14	32	403	912
Silver Lake-Chinatown	1,833	22	26	694	816
Downtown	371	11	51	166	769
Westlake	1,062	31	23	501	366
Boyle Heights	592	18	18	326	321
SPA 4 Total	20,991	409	32	8,591	681

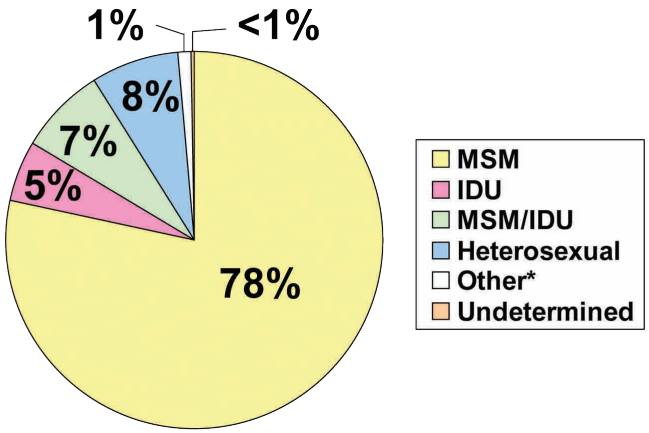
1. Data are based on cases reported by June 2008.
2. Cities or areas with < 5 persons diagnosed with AIDS in 2006 not included in the table.



Source: HIV Epidemiology Program, LAC-DPH; data as of September 2008

FIGURE 4.13

Adjusted Mode of HIV Exposure for Persons Living with HIV/AIDS in SPA 4 (Metro), 2007 (N=15,687)

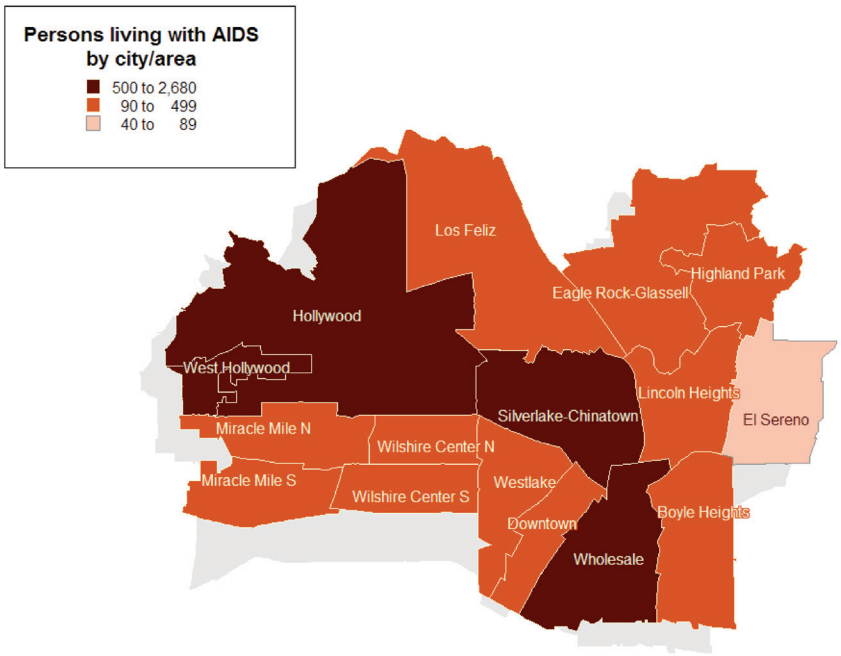


*Other includes those with hemophilia/coagulation disorder, transfusion recipients, and mothers with/or at risk for HIV

Source: HIV Epidemiology Program, LAC-DPH; data as of September 2008

FIGURE 4.14

Persons Living with AIDS by City/Area for SPA 4 in Los Angeles County, 2007



Source: HIV Epidemiology Program, LAC-DPH; data as of December 2007

FIGURE 4.15

E. SPA 5: West

The West SPA accounts for 3,161 persons reported with AIDS since 1981. Among the total reported cases, 40% were still living with AIDS at the end of 2007 (Table 4.5). Cities/areas with the highest living AIDS rates are Venice, Santa Monica and Mar Vista (394, 227, and 161 per 100,000 persons, respectively). PLWA in SPA 5 were predominantly male (92%) and White (59%). In fact, the West SPA had the highest proportion of White PLWA of all the SPAs, followed by San Fernando (SPA 2; 46%). MSM and MSM/IDU together accounted for 77% of the living AIDS cases, while 5% of PLWA were non-MSM IDU and 5% were infected through heterosexual contact.[1] After combining reported PLWHA the majority of cases still remained predominantly male and White (Figure 4.16). When taking living HIV cases into account and adjusting for cases with an unconfirmed risk, the proportion of MSM and MSM/IDU combined is 83% while the estimated proportion of cases infected through heterosexual contact is 8% (Figure 4.17). Figure 4.18 shows the geographic distribution of PLWA in SPA 5, with most of the PLWA concentrated in the Santa Monica, Venice, Palms, Mar Vista, and Beverly Hills city/areas (shaded in red).

Number and Cumulative AIDS Cases, Number and Rate of Both New AIDS Cases in 2006 and PLWA at the End of 2007 for Select Cities in LAC SPA 5

Table 4.5

City/Area	Cumulative[1] Number of AIDS Cases	New Cases in 2006[1,2]		PLWA in 2007[1,2]	
		Number	Rate per 100,000	Number	Rate per 100,000
Santa Monica	565	8	9	206	227
Mar Vista	242	8	12	110	161
Westchester	153	5	10	69	142
Barnes City	115	5	14	46	132
SPA 5 Total	3,161	60	9	1,263	197

1. Data are based on cases reported by June 2008.
2. Cities or areas with < 5 persons diagnosed with AIDS in 2006 not included in the table.

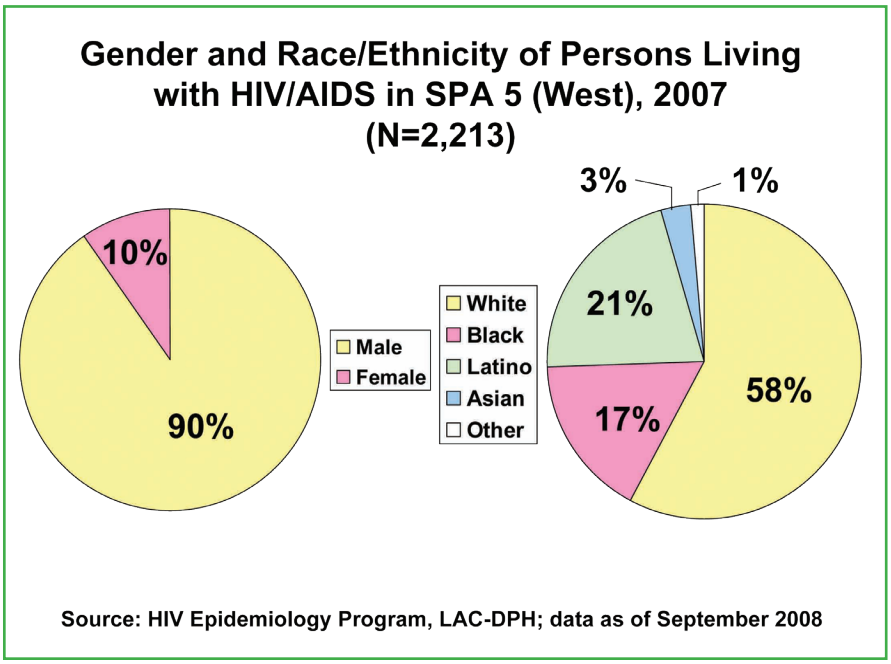
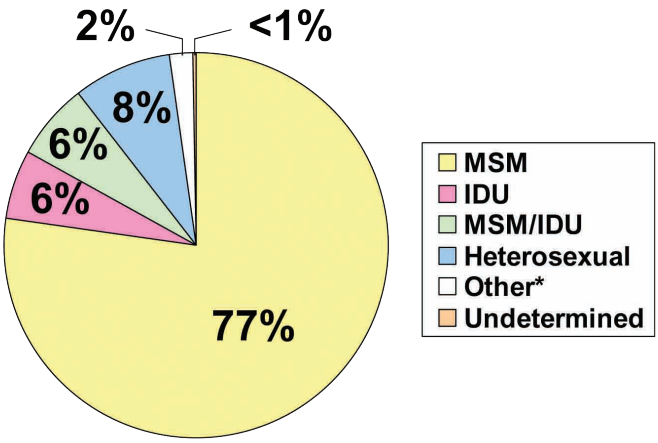


FIGURE 4.16

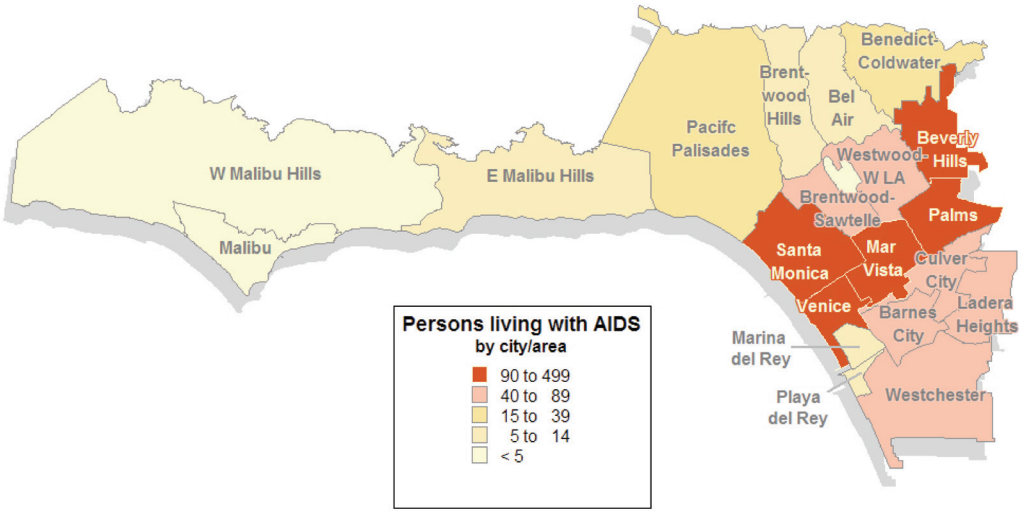
Adjusted Mode of HIV Exposure for Persons Living with HIV/AIDS in SPA 5 (West), 2007 (N=2,213)



*Other includes those with hemophilia/coagulation disorder, transfusion recipients, and mothers with/or at risk for HIV
Source: HIV Epidemiology Program, LAC-DPH; data as of September 2008

FIGURE 4.17

Persons Living with AIDS by City/Area for SPA 5 in Los Angeles County, 2007



Source: HIV Epidemiology Program, LAC-DPH; data as of December 2007

FIGURE 4.18

F. SPA 6: South

A total of 5,466 persons had been reported with AIDS in the South SPA by June 30, 2008. Areas with the highest AIDS rates in SPA 6 are shown in Table 4.6 below, with living AIDS rates ranging from 193 to 355 per 100,000 persons. Forty-three percent of AIDS cases were living at the end of 2007. This SPA has the highest proportion of female AIDS cases (21%), which is almost twice that for LAC overall (11%).[1] If PLWH are taken into account, the proportion of female cases increases to 25% which is more than twice the overall estimate (12%) for LAC (Figure 4.19). Of all SPAs South SPA had the highest proportion of Black PLWA. Among PLWA in the South SPA, 53% were Black and 42% Latino.[1] The proportions of Black and Latino cases did not change much when persons living with HIV are included. Male-to-male sexual contact, including MSM/IDU, accounted for 52% of AIDS cases in the South SPA, 14% were infected through heterosexual contact (with an HIV-positive or high-risk partner) and 8% through injection drug use (non-MSM).[1] Figure 4.20 shows the adjusted mode of HIV exposure for PLWHA to be 62% for MSM and MSM/IDU combined, while an estimated 22% and 11% are infected through heterosexual contact and other IDU, respectively. Figure 4.21 shows the city/area with the highest number of PLWA in SPA 6 (shaded in red).

Number and Cumulative AIDS Cases, Number and Rate of Both New AIDS Cases in 2006 and PLWA at the End of 2007 for Select Cities in LAC SPA 6

Table 4.6

City/Area	Cumulative[1] Number of AIDS Cases	New Cases in 2006[1]		PLWA in 2007[1]	
		Number	Rate per 100,000	Number	Rate per 100,000
Crenshaw	663	17	23	259	355
Adams-La Brea	442	10	17	163	278
South Vermont	602	21	19	276	256
Vermont Square	479	17	22	196	253
West Adams-Exposition Park	852	28	21	345	252
Watts	195	10	25	88	225
Green Meadows	317	9	15	127	209
Central Avenue-South Park	549	14	11	251	193
SPA 6 Total	5,466	169	16	2,357	226

1. Data are based on cases reported by June 2008.
2. Cities or areas with < 5 persons diagnosed with AIDS in 2006 not included in the table.

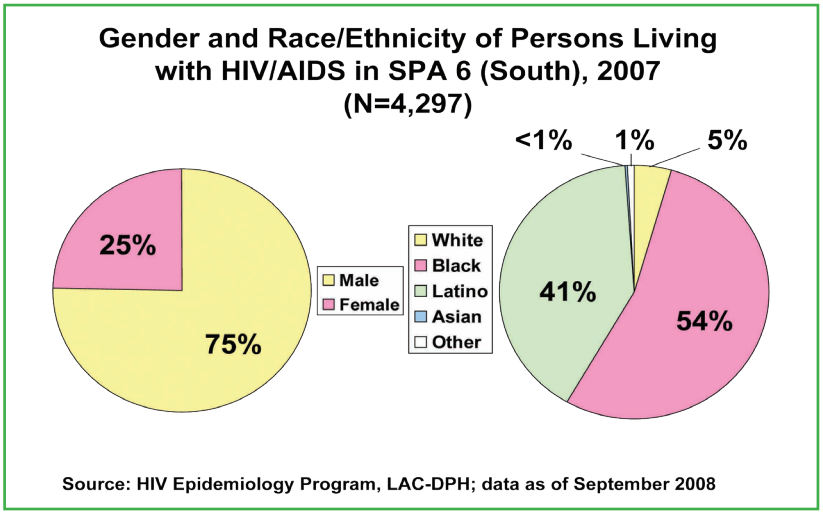
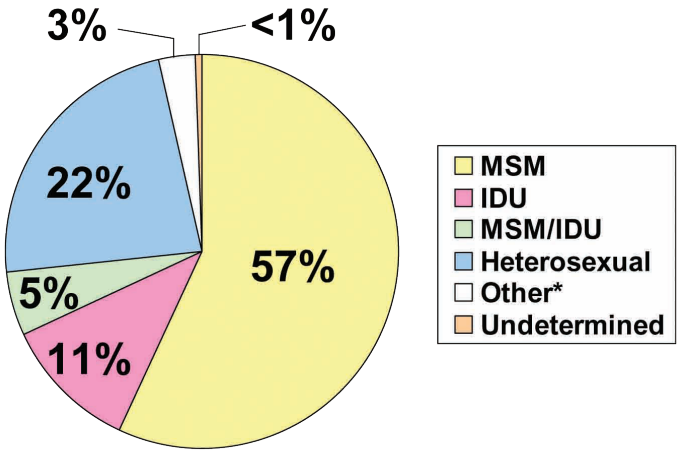


FIGURE 4.19

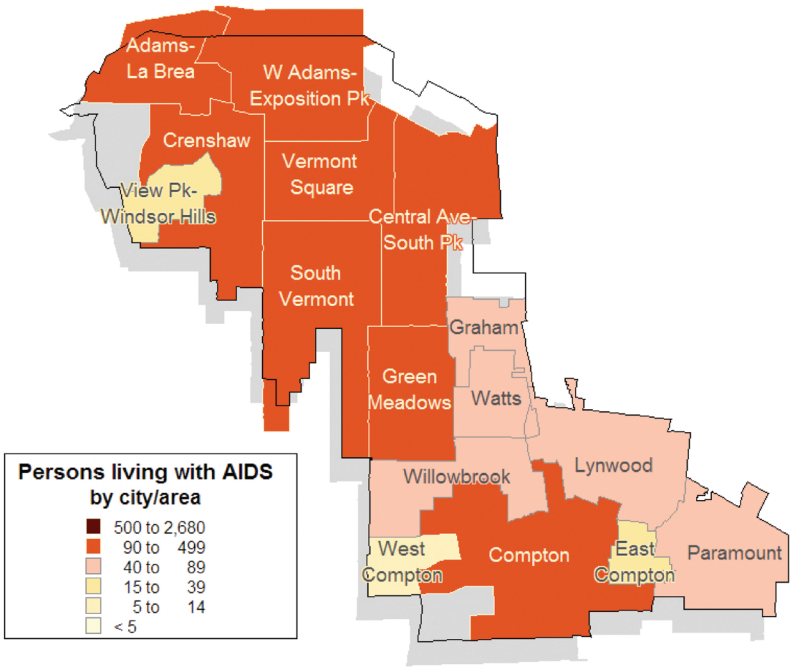
Adjusted Mode of HIV Exposure for Persons Living with HIV/AIDS in SPA 6 (South), 2007 (N=4,297)



*Other includes those with hemophilia/coagulation disorder, transfusion recipients, and mothers with/or at risk for HIV
Source: HIV Epidemiology Program, LAC-DPH; data as of September 2008

FIGURE 4.20

Persons Living with AIDS by City/Area for SPA 6 in Los Angeles County, 2007



Source: HIV Epidemiology Program, LAC-DPH; data as of December 2007

FIGURE 4.21

G. SPA 7: East

Of the 3,184 cumulative AIDS cases reported from the East SPA, 1,480 (46%) persons were still living at the end of 2007, 86% of whom were male.[1] Cities with the highest living AIDS rate in this SPA are shown in Table 4.7, with Belvedere Gardens and South Gate having the highest rates at 137 and 106 per 100,000 persons, respectively. PLWA in SPA 7 were predominately Latino (76%) giving East SPA the highest proportion of Latino PLWA, followed by San Gabriel SPA at 53%.[1] Figure 4.22 shows that the distribution of cases by gender and race/ethnicity was not significantly altered when including living HIV cases. By the end of 2007, 64% of PLWA reported MSM or MSM/IDU as their mode of exposure, 10% reported heterosexual exposure, and 6% IDU.[1] Figure 4.23 shows the adjusted mode of exposure for SPA 7 with 74% of PLWHA reporting MSM or MSM/IDU as their mode of transmission, and 15% reporting heterosexual contact. The map of the East SPA in Figure 4.24 shows how PLWA are widely dispersed with the exception of South Gate and Huntingon Park, two neighboring areas that have high numbers of PLWA (shaded in red).

Number and Cumulative AIDS Cases, Number and Rate of Both New AIDS Cases in 2006 and PLWA at the End of 2007 for Select Cities in LAC SPA 7

Table 4.7

City/Area	Cumulative[1] Number of AIDS Cases	New Cases in 2006[1,2]		PLWA in 2007[1,2]	
		Number	Rate per 100,000	Number	Rate per 100,000
Belvedere Gardens	212	8	11	99	137
South Gate	215	6	6	108	106
Whittier	198	9	10	90	101
Downey	203	5	4	91	81
SPA 7 Total	3,184	74	5	1,480	107

1. Data are based on cases reported by June 2008.
2. Cities or areas with < 5 persons diagnosed with AIDS in 2006 not included in the table.

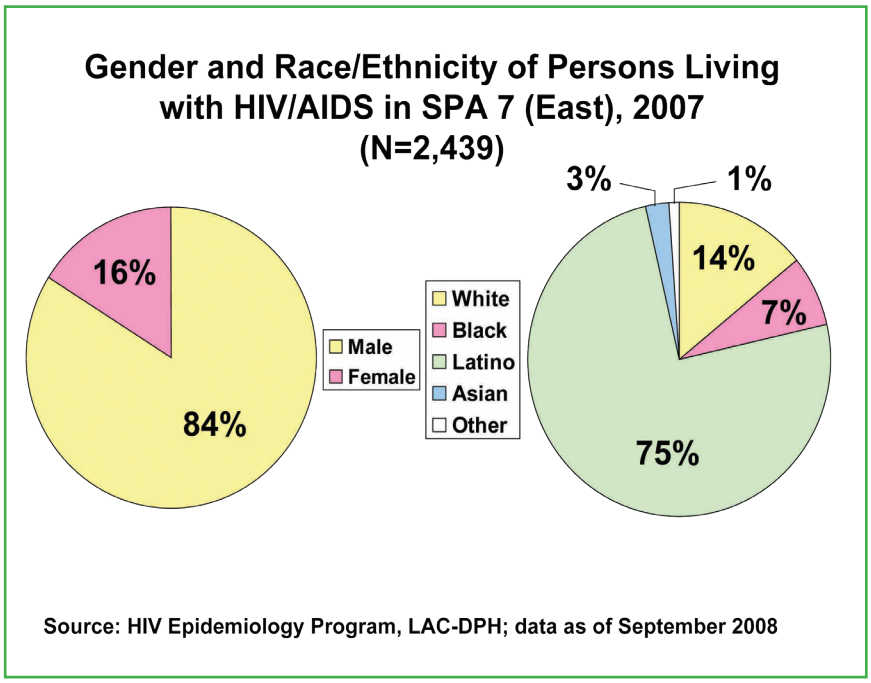
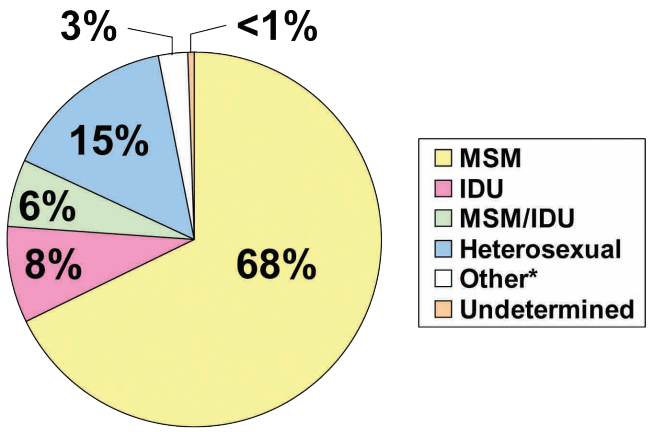


FIGURE 4.22

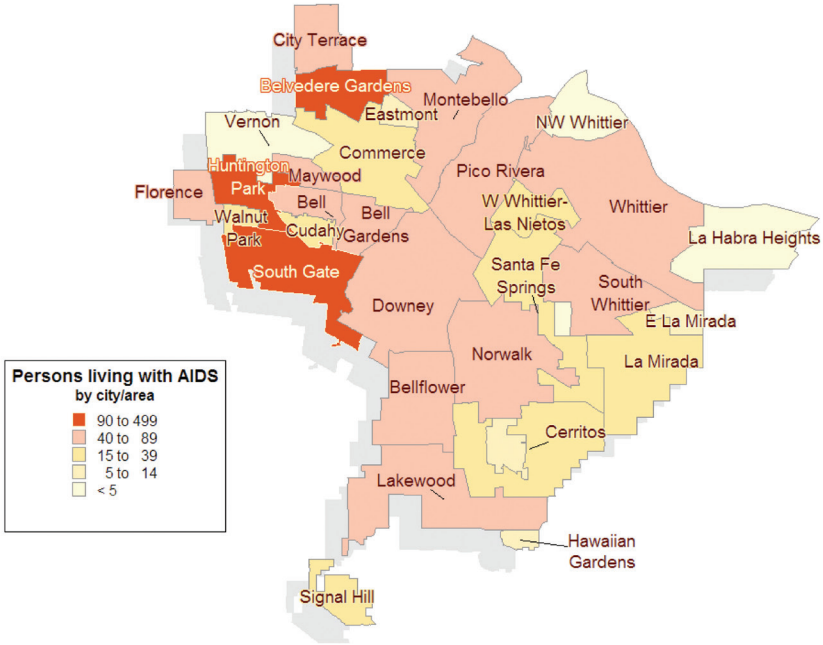
Adjusted Mode of HIV Exposure for Persons Living with HIV/AIDS in SPA 7 (East), 2007 (N=2,439)



*Other includes those with hemophilia/coagulation disorder, transfusion recipients, and mothers with/or at risk for HIV
Source: HIV Epidemiology Program, LAC-DPH; data as of September 2008

FIGURE 4.23

Persons Living with AIDS by City/Area for SPA 7 in Los Angeles County, 2007



Source: HIV Epidemiology Program, LAC-DPH; data as of December 2007

FIGURE 4.24

H. SPA 8: South Bay

South Bay SPA has the second highest AIDS rates in LAC.[1] As of June 2008, the cumulative number of persons reported with AIDS in the South Bay SPA was 8,866, of which 49% were living (Table 4.8). Long Beach and several other cities/areas with high AIDS prevalence in SPA 8 are shown below. In 2007, the City of Long Beach had the highest living AIDS rate (550 per 100,000 persons) in SPA 8. Among PLWA in SPA 8, 87% were male, 40% were White, 31% Latino, 25% Black, and 3% Asian/Pacific Islander.[1] The proportion of cases by race/ethnicity and gender is not noticeably different when PLWH are included in the analysis (Figure 4.25). Among PLWA in SPA 8, 74% were either MSM (66%) or MSM/IDU (8%), while 7% were other IDU and 10% were infected through high-risk heterosexual contact.[1] Figure 4.26 indicates that after adjusting for mode of exposure, 77% of PLWHA were MSM and MSM/IDU combined, while 13% acquired the virus through heterosexual contact. Figure 4.27 illustrates the geographic distribution of PLWA in South Bay, where almost two-thirds of PLWA are living in Long Beach (shaded in dark red).

Number and Cumulative AIDS Cases, Number and Rate of Both New AIDS Cases in 2006 and PLWA at the End of 2007 for Select Cities in LAC SPA 8

Table 4.8

City/Area	Cumulative[1] Number of AIDS Cases	New Cases in 2006[1]		PLWA in 2007[1]	
		Number	Rate per 100,000	Number	Rate per 100,000
Long Beach	5,466	184	37	2,718	550
Westmont-West Athens	230	5	11	101	231
Inglewood	587	16	14	259	218
San Pedro	272	14	18	142	182
Lawndale	119	6	18	60	180
Hawthorne	281	8	9	146	157
Gardena	174	7	11	79	127
SPA 8 Total	8,866	322	20	4,348	270

1. Data are based on cases reported by June 2008.
2. Cities or areas with < 5 persons diagnosed with AIDS in 2006 not included in the table.

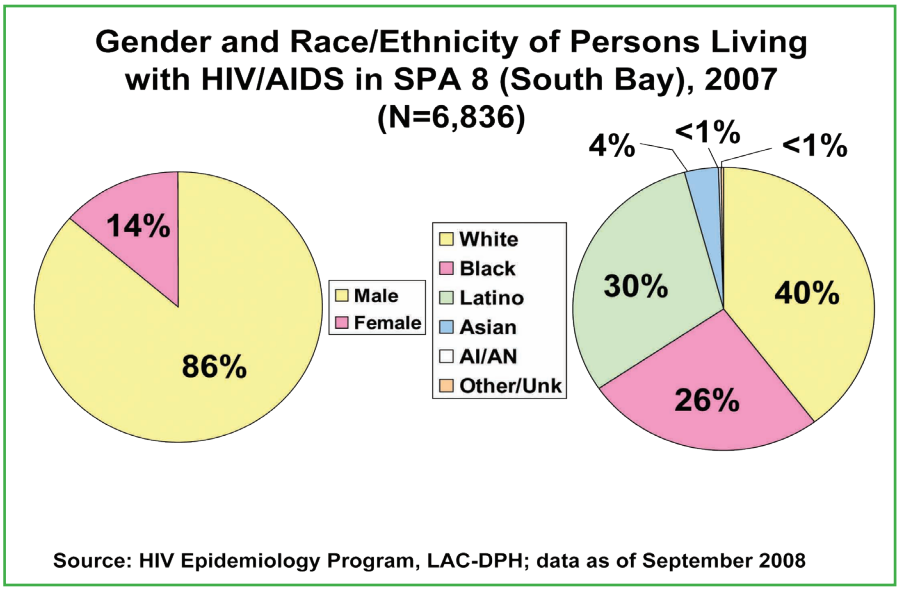


FIGURE 4.25

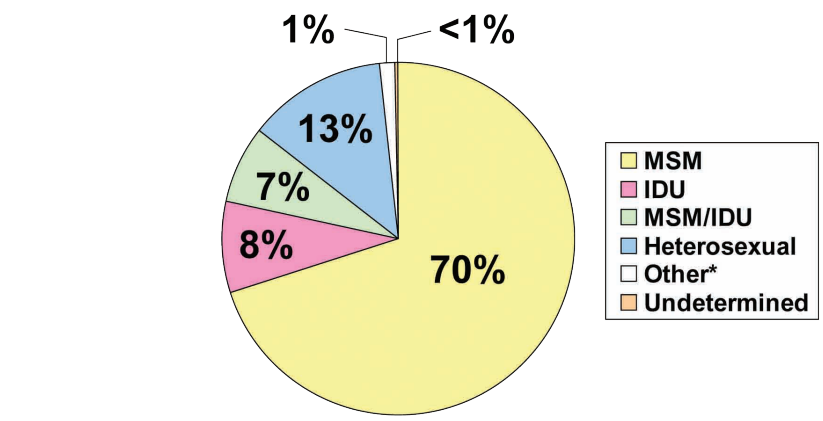


FIGURE 4.26

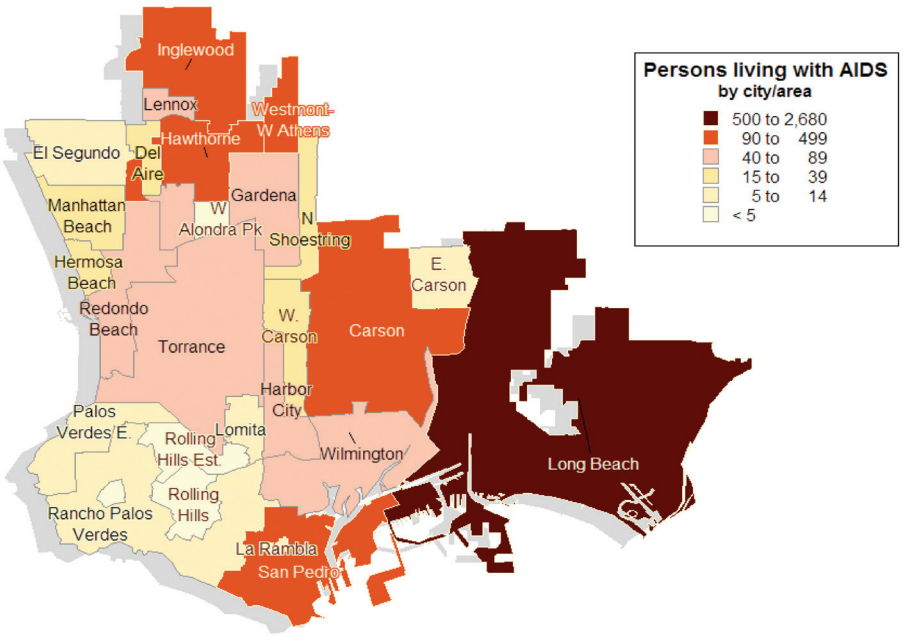


FIGURE 4.27

References

1. HIV Epidemiology Program. LAC-DPH HIV/AIDS Surveillance Summary; July 2008: 1-30.

V. PRIORITY AND CRITICAL POPULATIONS

Between 2000 and 2008, the HIV Prevention Planning Committee (PPC) utilized a behavioral risk group (BRG) model to guide HIV prevention planning. In order to address the limitations of the previous BRG planning model, the HIV PPC developed a new hybrid model that is inclusive of all individuals at risk for HIV in LAC. This model begins with six broad "priority" population categories: 1) HIV-positive individuals, 2) youth (13-24 years old), 3) men, 4) women, 5) transgender individuals, and 6) people who share needles and/or injection paraphernalia. The model then focuses on "critical" populations within each Priority Population. These are individuals who are most impacted by the epidemic and who may be at increased risk of acquiring or transmitting HIV within a Priority Population. Table 5.1 defines the Priority and Critical Populations highlighted in the new hybrid model. The racial and ethnic characteristics of these individuals are also taken into consideration, given that specific subpopulations are often disproportionately impacted by the epidemic.

While in theory this model is useful for identifying the range of persons at risk for HIV, in practice

Priority and Critical Populations of the LAC HIV Prevention Planning Committee **Table 5.1**

Priority population	Mode of Transmission	Critical Populations	Race/ Ethnicity
HIV-positive Individuals	Sexual	Gay men, Non-gay identified men who have sex with men/transgender/multiple genders, Transgender, Women at risk of transmitting HIV.	All races/ ethnicities
Youth	Sexual	Gay men, Non-gay identified men who have sex with men/transgender/multiple genders, Transgender, Sex workers, Young women who have sex with partners of unknown HIV status/risk and/or in highly impacted geographic areas/zip codes	
Men	Sexual	Gay men, Non-gay identified men who have sex with men/transgender/multiple genders	
Women	Sexual	Women who have sex with partners of unknown HIV status/risk and/or in highly impacted geographic areas/ zip codes	
Transgender Individuals	Sexual	All	
People who Share Needles/Works	Sharing injection paraphernalia	All	

Source: LAC DPH HIV Prevention Plan 2009-2013

there are limitations to the types of data currently available to describe Critical Populations through the HIV/AIDS Reporting System (HARS). HARS collects transmission information very well but detailed information needed to stratify the data by Critical-Population characteristics, such as non-gay identity or sex work, is not routinely collected. For this reason, HARS data can only be presented by Priority Populations, as seen in Section A. More detailed information on Critical Populations within each Priority Population is provided in Section B using epidemiological study data collected by the HIV Epidemiology Program (HEP) and other data sources.

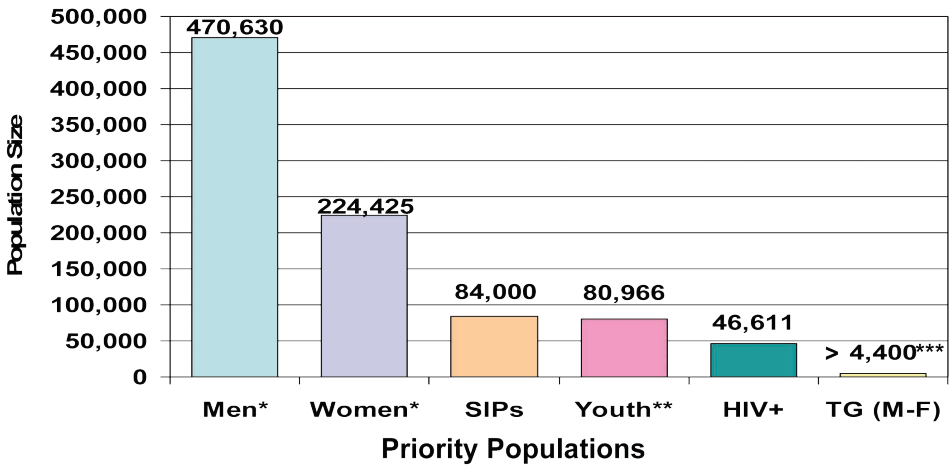
The number and racial/ethnic distribution of prevalent HIV and AIDS cases for the six Priority

A. Priority Populations: Estimates of Persons Living with HIV and AIDS

Populations were estimated by HEP in 2007. The methodologies employed by HEP to arrive at these estimates are briefly outlined in the Profile's Technical Notes (see Appendix B) – including data sources, assumptions and limitations.

In this section, the estimated and reported numbers of PLWHA in Los Angeles County (LAC) are presented by Priority Population. However, since HIV-positive individuals are a Priority Population, HARS data will be presented to illustrate the relative impact of HIV/AIDS across each of the remaining priority populations.

The estimated population size for each Priority Population is presented in Figure 5.1. Figure 5.2 shows the absolute number of PLWHA in 2007, as reported in HARS. While twice as many men as women are at risk of HIV (Figure 5.1), there are nearly ten times more men living with HIV/AIDS compared with women (32,531 vs. 3,391) (Figure 5.2). Likewise, while women represent more than two and half times the estimated population size of persons who share injection paraphernalia (SIPS), the number of PLWHA among SIPs is higher than among women (5,622 vs. 3,391).
The relative proportions of total PLWHA by Priority Population are shown in Figure 5.3. Note



*Age 15-64; **Age 15-24; ***Estimate of transgender at risk for HIV. True population size difficult to estimate but assumed to be larger.
Source: 2005 American Community Survey/HIV Epidemiology Program

Figure 5.1

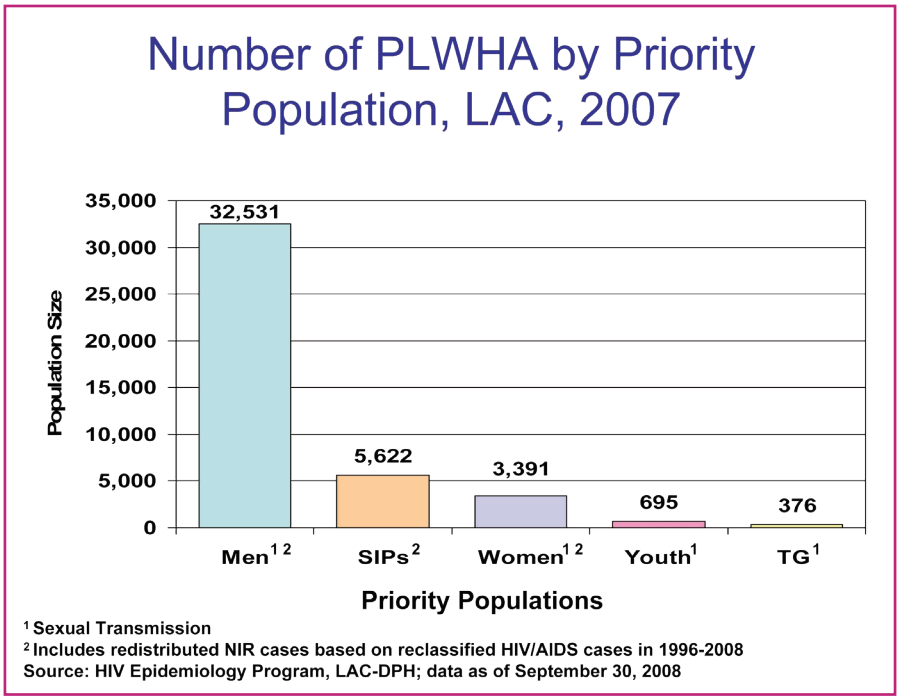


Figure 5.2

that groups are not mutually exclusive and persons may be included in more than one group (thus, total percentages do not equal 100%). Figure 5.4 displays the estimated HIV seroprevalence for each Priority Population – that is, the percentage of each Priority Population estimated to be living with HIV infection. While transgender individuals represent one percent of the living HIV/AIDS cases (see Figure 5.3), transgender individuals are estimated to have the highest HIV seroprevalence as shown in Figure 5.4 (21%). The estimated HIV seroprevalence among men, which includes men who have sex with men (MSM), men who have sex with multiple genders, and heterosexuals, is 7.6%. However, the HIV seroprevalence for the subpopulation of MSM is much higher at 14.2%.

Summary estimates of PLWHA, by Priority and selected Critical Populations, are stratified by race/

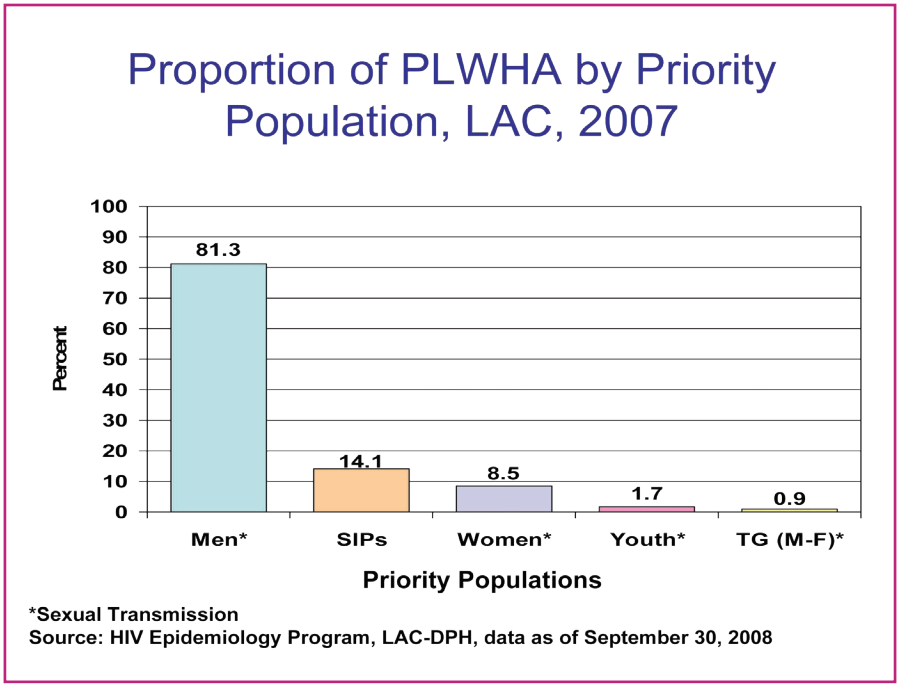


Figure 5.3

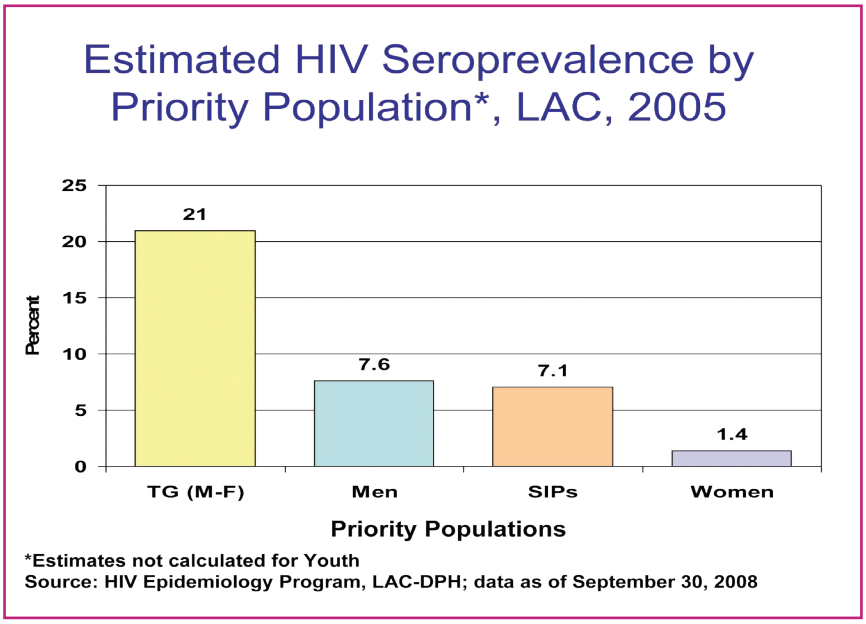


Figure 5.4

ethnicity in Table 5.2. Note that population estimates for women were based on a specifically defined sub-group of at-risk women and therefore may represent a higher HIV seroprevalence among women than would be expected (see Table 5.2 and Figure 5.4). For example, local HIV counseling and testing data for women during 2005 showed an HIV seroprevalence of 0.5%.[1] (See technical notes).

While Table 5.2 offers important insight into the epidemic in LAC, note that the table was created prior to the implementation of the Hybrid Model. Though it may provide information for Priority Populations, not all Critical Populations are included. Specifically, the table does not have an accurate population estimate for all men at sexual risk. The populations listed include MSM, men who have sex with multiple genders, MSM/IDU, and heterosexual men who inject drugs. Heterosexual men with no other risk factors are not included in this population estimate but have been included in Figure 5.1. Similarly, a population estimate was not calculated for youth but has been included in Figure 5.1. Among the Critical Populations, the following are not included in the table: young gay or non-gay identified MSM, transgenders or multiple genders; transgender youth; young sex workers; and young women who have sex with partners of unknown HIV status/risk and/or in highly impacted geographic areas/zip codes.

The data in Figure 5.5 are presented by mode of exposure for each Priority Population. While the majority of men living with HIV or AIDS fall under the exposure category of MSM, they were also exposed to HIV via heterosexual contact, IDU or "other" mode of exposure. "Other" includes exposure via adult hemophilia, transfusion, mother with HIV, or no identified risk (NIR). Figure 5.6 displays mode of exposure for youth and transgender persons. While the majority of HIV/AIDS cases among youth are either MSM or "other", most cases among transgender persons are among male-to-female transgenders who have sex with men.

Estimated PLWHA in LAC by Priority and Selected Critical Populations, Ages 15-64 Years

Table 5.2

	Population Race/Ethnicity	Estimated Size of Population	Estimated Number of PLWHA in Population	Proportion of PLWHA In LAC	Estimated HIV Seroprevalence in Group*
MEN	Gay/Non-Gay Identified MSM	180,385	26,788	57.50%	14.90%
	White	83,841	12,192	26.20%	14.50%
	African Amer./Black	10,185	3,755	8.10%	36.90%
	Latino/Hispanic	57,264	9,822	21.10%	17.20%
	Asian/PI	28,064	822	1.80%	2.90%
	Native American	383	100	0.20%	26.10%
	Other***	648	97	0.20%	15.00%
	Men who have sex with Multiple Genders	61,845	7,590	16.30%	12.30%
	White	16,200	1,670	3.60%	10.30%
	African Amer./Black	7,200	1,830	3.90%	25.40%
	Latino/Hispanic	31,200	3,815	8.20%	12.20%
	Asian/PI**	6,620	214	0.50%	3.20%
	Native American	275	38	0.10%	13.80%
	Other***	350	23	0.00%	6.60%
WOMEN	Women****	224,425	3,190	6.80%	1.40%
	White	84,600	459	1.00%	0.50%
	African Amer./Black	24,929	1,083	2.30%	4.30%
	Latina/Hispanic	85,309	1,531	3.30%	1.80%
	Asian/PI**	26,684	89	0.20%	0.30%
	Native American	903	22	0.00%	2.40%
	Other***	2,000	6	0.00%	0.30%
PEOPLE WHO SHARE INJECTION PARAPHERNALIA	Gay/Non-Gay Identified MSM	13,000	2,960	6.40%	22.80%
	White	4,550	1,362	2.90%	29.90%
	African Amer./Black	2,475	681	1.50%	27.50%
	Latino/Hispanic	5,000	829	1.80%	16.60%
	Asian/PI**	208	39	0.10%	18.80%
	Native American	150	33	0.10%	22.00%
	Other***	617	16	0.00%	2.60%
	Heterosexual Men	41,600	1,944	4.20%	4.70%
	White	17,098	600	1.30%	3.50%
	African Amer./Black	5,200	680	1.50%	13.10%
	Latino/Hispanic	15,558	620	1.30%	4.00%
	Asian/PI**	790	20	0.00%	2.50%
	Native American	541	16	0.00%	3.00%
	Other***	2,413	8	0.00%	0.30%
	Women	29,400	1,047	2.20%	3.60%
	White	12,083	325	0.70%	2.70%
	African Amer./Black	3,675	364	0.80%	9.90%
	Latina/Hispanic	10,996	335	0.70%	3.00%
	Asian/PI**	559	10	0.00%	1.80%
	Native American	382	8	0.00%	2.10%
	Other***	1,705	5	0.00%	0.30%
TRANSGENDERS	Transgenders	4,400	926	2.00%	21.00%
	White	559	58	0.10%	10.40%
	African Amer./Black	1,170	291	0.60%	24.90%
	Latino/Hispanic	2,086	515	1.10%	24.70%
	Asian/PI**	158	37	0.10%	23.40%
	Native American	57	11	0.00%	19.30%
	Other***	370	14	0.00%	3.80%

*Estimates do not include those who are HIV infected but unaware.
** PI represents persons of Pacific Islander ancestry.
*** Other race/ethnicity includes persons of mixed race or unknown ancestry.
**** see Technical Notes.

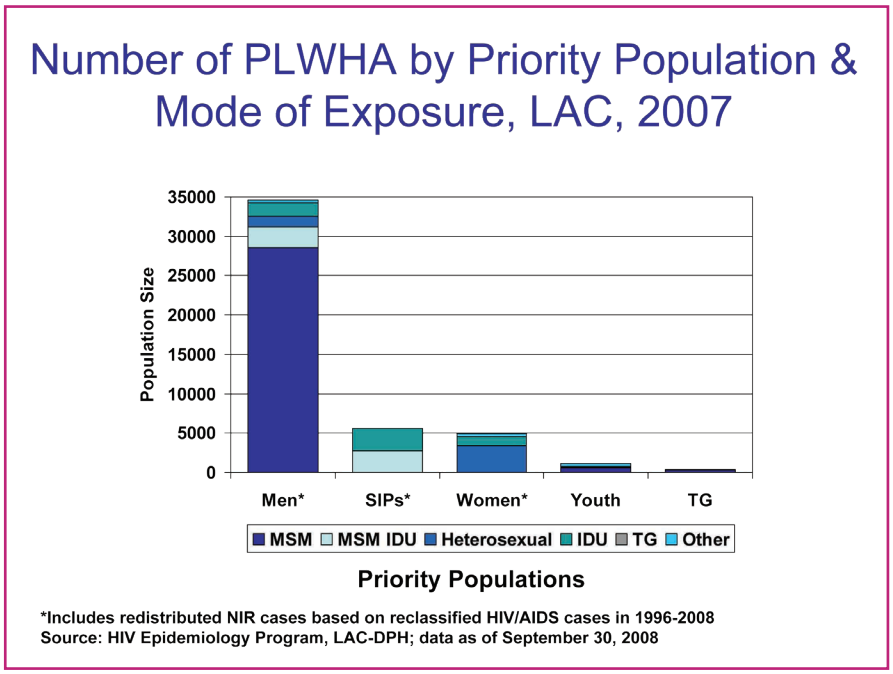


Figure 5.5

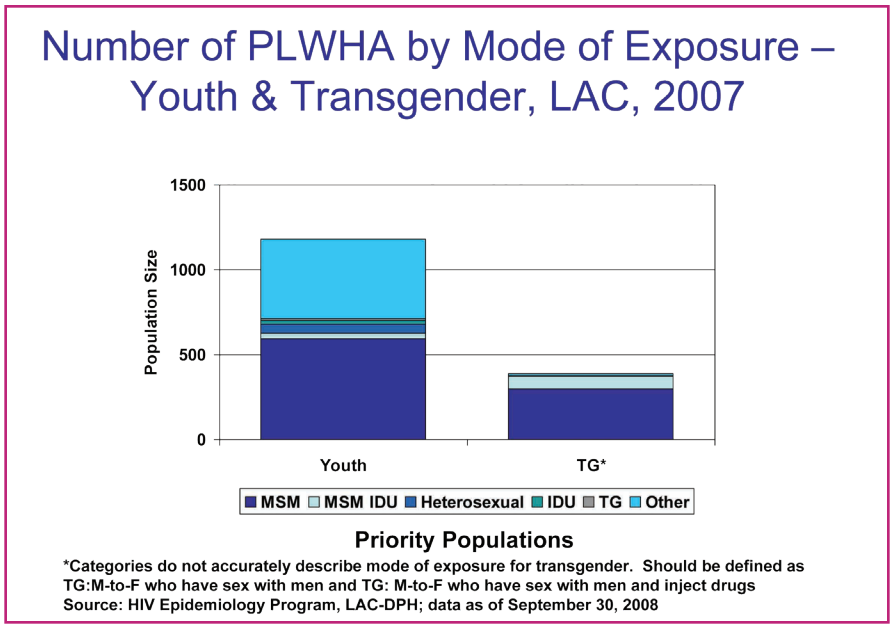


Figure 5.6

HARS data stratified by Priority Population and race/ethnicity is shown in Figure 5.7. Among the Priority Populations, with the exception of men and people who share injection paraphernalia (SIPs), the majority of living HIV/AIDS cases are among Latinos followed by Blacks. While Blacks represent only 9% of the overall population in LAC, they make up 22% of the total living HIV/AIDS cases. In contrast, Whites represent 29% of the overall population and 35% of the living HIV/AIDS cases, and Latinos make up 48% of the population and represent 38% of living HIV/AIDS cases. This underscores the disproportionate impact of HIV/AIDS on Blacks in LAC.[2]

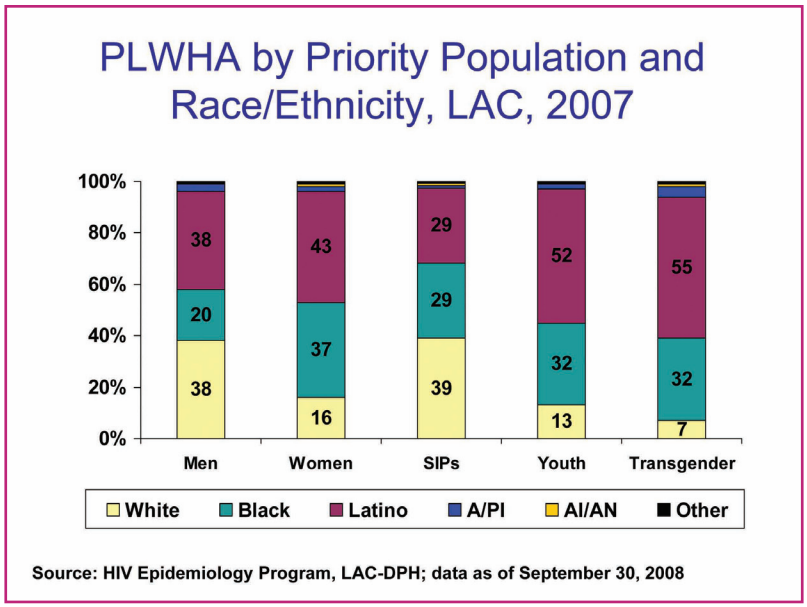


Figure 5.7

B. Priority Populations and Critical Populations: Co-factors

Within each Priority Population, Critical Populations were identified that represent individuals at most risk for acquiring or transmitting HIV. In addition to the Critical Populations, the Prevention Plan Work Group of the PPC also identified numerous co-factors that may contribute to a person's risk for acquiring/transmitting HIV or may prevent individuals from accessing services. Table 5.3 provides the list of co-factors for all Priority Populations and for specific Priority Populations as identified by the work group.

Co-factors that Contribute to a Person's Risk for Acquiring or Transmitting HIV

Table 5.3

Co-factors Impacting All Priority Populations		
• Poverty	• STDs	• Homelessness
• Stigma	• Mental Health Issues	• Immigration Status
• Discrimination	• Violence	• Language
• Racism	• Sexual Assault	• Sex Work
• Educational Level	• Incarceration	• Other Substance Use
Co-factors by Priority Population		
HIV-Positive Individuals	**Youth**	**Men**
• Methamphetamine	• Developmental Issues	• Individuals who Engage in Day Labor
• Undiagnosed HIV	• Legal	• Methamphetamine
• Homophobia	• Homelessness/Runaway	• Internet for Anonymous Sex
• Transphobia	• Methamphetamine	• Homophobia
• Age	• Transphobia	
	• Homophobia	
Women	**Transgender Individuals**	**People who Share Needles/Works**
• Sexism	• Methamphetamine/Other Substance Use	• Methamphetamine
• Crack	• Lack of Employment	• Transphobia
	• Transphobia	• Homophobia

Data from various HIV Epidemiology Program studies will be presented below by Priority and Critical Population and will focus on the above co-factors collected within each of the studies.

HIV-Positive Individuals

HIV-positive individuals are highlighted in the HIV surveillance data in Section A (Priority Populations: Estimates of Persons Living with HIV and AIDS); however, information on the Critical Populations among HIV-positive individuals and their co-factors are presented below.

Gay/Non-gay Identified MSM: In LAC, the majority of PLWHA are gay and non-gay identified MSM (69%). Table 5.4 provides detailed information collected on MSM in four epidemiological studies between 2001 and 2008. In the four studies we identified specific differences between HIV-positive and HIV-negative MSM. In the *LA Men's Survey*, more HIV-positive MSM reported they were below the 200% federal poverty level (FPL) compared to HIV-negative MSM (45.7% vs. 23.5%). In *Brothers y Hermanos*, more HIV-positive Latino MSM reported having less than a high school education (32.3% vs. 25.2%), being below the 200% FPL (85.5% vs. 73.3%), being depressed more than 7 days in the past 3 months (34.4% vs. 27.1%), and ever being forced to have sex (39.2% vs. 25.6%) compared with HIV-negative Latino MSM. Self-reported HIV-positive MSM enrolled in the *LA Web Survey* reported

Table 5.4 Co-Factor Data from Four HEP Studies on Gay and Non-Gay Identified MSM

Study: (Time period for recalled co-factor)	LA Men's Survey 2008 (Past 12 Months)		Brothers y Hermanos† 2005-2006 (Past 3 Months)		LA Web Survey 2007 (Past 12 Months)		Bathhouse Study 2001-2002 (Past 6 Months)	
	Positive†† n=94	Negative n=391	Positive†† n=318	Negative n=247	Positive**** n=118	Negative n=1116	New Positive n=73	Negative n=601
Co-factors	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Unprotected Anal Sex	54 (57.5)	221 (56.5)	159 (50.0)	125 (50.6)	99 (84.6)	651 (58.9)	37 (50.7)	208 (34.6)
Methamphetamine Use	16 (17.0)	51 (13.0)	54 (17.1)	46 (18.6)	-	-	11 (15.1)	58 (9.7)
Party Drugs*	26 (27.7)	118 (30.2)	72 (22.6)	69 (27.9)	-	-	17 (23.3)	80 (13.3)
Non-injection Drugs	55 (58.5)	205 (52.6)	125 (39.3)	113 (45.8)	68 (57.6)	408 (36.8)	32 (43.8)	198 (33.0)
Incarceration	11 (11.7)	20 (5.1)	132 (41.5)†††	97 (39.3)†††	-	-	-	-
Exchange Sex	3 (3.2)	16 (4.1)	32 (10.1)	36 (14.6)	-	-	-	-
Looked for Sex Partners on Internet	42 (44.7)	165 (42.2)	54 (17.2)	48 (19.5)	105 (89.0)	702 (64.5)	-	-
Less than High School Education	8 (8.5)	20 (5.1)	102 (32.3)	62 (25.2)	1 (0.9)	31 (2.8)	6 (8.2)	58 (9.7)
Below 200% Federal Poverty Guidelines	42 (45.7)	91 (23.5)	272 (85.5)	(181 (73.3)	-	-	-	-
Depressed >7 Days in Past 3 Mo.	-	-	109 (34.4)	67 (27.1)	-	-	-	-
Ever Forced to Have Sex	-	-	124 (39.2)	63 (25.6)	-	-	-	-
Experienced Homophobia	-	-	210 (66.0)**	176 (71.3)**	-	-	-	-
Experienced Racism	-	-	189 (59.6)**	161 (65.2)**	-	-	-	-
Seroprevalence	19.40%		56.3%***		9.6%****		10.80%	

† Sample of Latino men only.
†† Result of HIV test conducted in study.'
††† Ever incarcerated.
* Includes Amphetamine/Crystal Methamphetamine, cocaine, ecstasy, GHB, Special K.
** Time period of recall for these co-factors is in the past 12 months.
*** This study over-sampled HIV positive individuals through the use of respondent driven sampling (RDS) and therefore seroprevalence should not be cited as an accurate for Latino MSM in LAC.
**** HIV positive by self-report.

more unprotected anal sex (84.6% vs. 58.9%), non-injection drug use (57.6% vs. 36.8%), and use of the internet to find sex partners (89.0% vs. 64.5%) compared with self-reported HIV-negative MSM. The *Bathhouse Study* revealed more drug use among newly diagnosed HIV-positive MSM (non-injection drug use 43.8% vs. 33.0%, use of party drugs 23.3% vs. 13.3%, use of methamphetamine 15.1% vs. 9.7%) and more unprotected anal sex (50.7% vs. 34.6%) compared with HIV-negative MSM.

Medical Monitoring Project(MMP) 2007
MMP is a population-based supplemental surveillance system designed to assess clinical outcomes, behaviors, and the quality of HIV care among HIV/AIDS patients in the United States. Among 117 HIV-positive gay and non-gay identified MSM interviewed through MMP in LAC, 19% reported a history of IDU, 68% reported non-injection drug use, and 8% reported using crystal methamphetamine in the past 12 months. MSM respondents reported an average of 8 sexual partners in the past 12 months and 27% reported 5 or more partners in the past 12 months. Thirty-seven percent (37%) of MSM respondents reported engaging in any unprotected sex in past 12 months and 23% reported engaging in unprotected sex with more than one partner in the past 12 months.

Supplement to HIV/AIDS Surveillance (SHAS) 2000-2004
In a population-based, cross-sectional survey of persons diagnosed with AIDS in LAC, data from 455 MSM were analyzed to assess methamphetamine use. Lifetime methamphetamine use for MSM was 35% overall, 50% for White MSM, and 35% overall for Black MSM. Methamphetamine use among all MSM in the past 12 months was 11%. Overall findings showed that MSM methamphetamine users were more likely to be non-Latino (White or Black) (OR=2.7, 95% CI: 1.6, 4.3) and to report 10 or more sexual partners in the previous 12 months (OR=3.1, 95% CI: 1.7, 5.6) compared to MSM with no history of methamphetamine use.[3]

These studies are further detailed in Appendix C.

Transgender
HIV Testing Survey (HITS) 2003-2004
Of the 130 transgender women enrolled in a cross-sectional study to examine HIV-related risk behaviors and HIV testing patterns, 15 (12%) self-reported as HIV positive. Of those, 47% identified as Latina followed by Black (33%), White (13%), and multiracial (1%). Forty-seven (47%) percent of transgender participants reported a monthly income of less than $1,000, and reported being homeless at some point during the past 12 months. Sixty-seven percent (67%) reported having less than a high school education and 47% reported being born outside the U.S. Exchange sex in the past 12 months was reported by 67% of the participants, binge drinking by 13%, and some type of drug use by 57%. Thirty-six percent (36%) of participants reported having public health insurance, 36% reported private insurance, and 29% reported no health insurance. When asked about their source of healthcare, 50% reported going to a private provider followed by a public health clinic (36%), while 14% reported no source of healthcare. Among those who reported having at least one casual sexual partner, 40% reported more than 10 casual partners during the past year. Among those reporting at least one exchange sex partner, 47% reported more than 10 exchange sex partners in the past year. Forty percent (40%) of the HIV-positive participants also reported having an HIV-positive sex partner in the past year.

Women
According to 2007 HARS data, 3,396 (68%) HIV/AIDS cases among women were acquired through heterosexual sex, 1,197 (24%) were acquired via sharing injection paraphernalia, and 375 (8%) were acquired by other means, such as hemophilia/transfusion, mother with HIV, or no identified risk (NIR). No identified risk may include women who are unaware of their sex partner/spouse's HIV risk.

HEP has collected supplemental data on women at risk for HIV in three studies—as part of the heterosexual (*Straight 2 LA*) and injection drug use (*Sharps Study*) phases of the National HIV Behavioral Surveillance, and among female sex-worker participants in the 2003-2004 HIV Testing Survey (HITS). In *Straight 2 LA*, 2 of 578 women tested HIV positive for a seroprevalence of 0.3%. Three out of 150 women self-reported as HIV positive in the *Sharps Study* for a seroprevalence of 2%. In HITS, 5 of 101 female sex workers self-reported as HIV positive for a seroprevalence of 5%. Unfortunately, given the small samples of HIV-positive women, no other significant information could be garnered from these studies.

Supplement to HIV/AIDS Surveillance 2000-2004

In the population-based, cross-sectional SHAS study of persons diagnosed with AIDS in LAC, researchers found behaviors among Latina women to be low-risk in comparison with Black and White women (Table 5.5). Compared with non-Latinas, Latinas had fewer lifetime sexual partners (median=10, interquartile range (IQR)=15 vs. median=3, IQR=3; p=<0.0001), fewer sexually transmitted diseases, were less likely to trade sex, and were less likely to report exposure to HIV via injection drug use. Latina women were also less likely to receive public assistance and twice as likely to report never having had health insurance.[4]

Table 5.5 **Risk Behaviors and Co-factors of Latina Women Compared with non-Latina Women, LAC Supplement to HIV/AIDS Surveillance, 2000-2004**

Variable	*OR (95% Confidence Limits)*
Sexually transmitted diseases	0.24 (0.1, 0.5)
Trade sex for drugs/money	0.18 (0.07, 0.5)
Exposure to HIV via injection drug use	0.30 (0.09, 0.99)
Receive public assistance	0.33 (0.16, 0.70)
Completed high-school	0.11 (.04, 0.31)
Never have had health insurance	2.44 (1.15, 5.18)

A further discussion of PLWHA can be found in Section III. For more information on these studies, see Appendix C.

Men

Gay Men: In Table 5.6, data are presented from several studies conducted by HEP on gay-identified MSM, by race/ethnicity. Note that approximately 70-85% of the MSM in our studies, identify as gay or homosexual.

In the second cycle of National HIV Behavioral Surveillance among MSM (*2008 LA Men's Survey*), 441 gay-identified men were enrolled using venue-based sampling. Among the 441 gay-identified MSM, more Black MSM tested HIV positive (36.9%) than did Latino MSM (22.9%) and White MSM (14.7%). However, White MSM reported more unprotected anal sex in the past 12 months (60.9%) than did Black MSM (57.5%) or Latino MSM (53.9 %). Crystal use was highest among White MSM (17.2%) followed by Latino MSM (14.7%), Black MSM (6.9%) and Asian/Pacific Islander MSM (5.6%). Asian/Pacific Islander MSM reported looking for sex partners on the Internet (72.2%) more than any other race/ethnic group.

In the *LA Web Survey*, 1,006 gay-identifed MSM were recruited using a web-based direct-marketing approach between April and July 2007. Self-reported HIV seroprevalence was highest among Black MSM (23%). Black MSM also reported the highest percentage of unprotected anal sex in the past 12 months (70.9%) followed by Latinos (63.9%), Whites (61.4%), and Asian/Pacific Islander (51.1%). Both Black and White MSM reported higher percentages of looking for sex partners on the Internet, 72.7% and 71.6% respectively, than did Asian/Pacific Islander (65.2%) and Latino (58.8%) MSM.

Co-Factor Data from Four HEP Studies on Gay-Identified MSM in LAC by Race/Ethnicity

Table 5.6

LA Men's Survey 2008	A/PI n=36	Black n=73	Latino n=156	White n=151	Total N=441
Co-factor (12-month characteristics)	**n (%)**	**n (%)**	**n (%)**	**n (%)**	**n (%)**
HIV+ test	3 (9.1)	24 (36.9)	32 (22.9)	20 (14.7)	81 (20.4)
Any unprotected anal intercourse	14 (38.9)	42 (57.5)	84 (53.9)	92 (60.9)	247 (56.0)
Crystal use	2 (5.6)	5 (6.9)	23 (14.7)	26 (17.2)	58 (13.2)
Party drugs*	7 (19.4)	14 (19.2)	41 (26.3)	55 (36.4)	126 (28.6)
Any non-injection drug use	12 (33.3)	33 (45.2)	75 (48.4)	89 (58.9)	227 (51.2)
Incarcerated	1 (2.8)	8 (11.0)	7 (4.5)	2 (1.3)	18 (4.1)
Exchange sex	0	5 (6.9)	7 (4.5)	3 (2.0)	16 (3.6)
Looked for sex partners on Internet	26 (72.2)	30 (41.1)	67 (43.0)	72 (47.7)	201 (45.7)
Below 200% federal poverty guidelines	3 (8.3)	27 (37.0)	51 (33.3)	22 (14.8)	104 (23.9)
Less than high school grad / GED	0	3 (4.1)	14 (9.0)	2 (1.3)	19 (4.3)
LA Web Survey 2007	**A/PI n=46**	**Black n=56**	**Latino n=262**	**White n=601**	**Total N=1006**
Co-factor (12-month characteristics)	**n (%)**	**n (%)**	**n (%)**	**n (%)**	**n (%)**
HIV+ self report	1 (2.2)	13 (23)	23 (8.7)	71 (11.8)	111 (13.1)
Any unprotected anal intercourse	23 (51.1)	39 (70.9)	166 (63.9)	368 (61.4)	616 (62.4)
Any non-injection drug use	16 (34.8)	18 (32.1)	93 (35.5)	253 (42.2)	399 (39.9)
Looked for sex partners on Internet	30 (65.2)	40 (72.7)	151 (58.8)	424 (71.6)	669 (67.8)
Less than high school grad /GED	1 (2.2)	0	12 (4.6)	12 (2.0)	25 (2.5)
*Brothers y Hermanos 2005-2006***			**Latino n=397**		**Total N=397**
Co-factor (3-month characteristics)			**n (%)**		**n (%)**
HIV+ test	-	-	253 (63.7)	-	253 (63.7)
Any unprotected anal intercourse	-	-	207 (52.1)	-	207 (52.1)
Crystal use	-	-	65 (16.4)	-	65 (16.4)
Party drugs*	-	-	89 (22.4)	-	89 (22.4)
Any non-injection drug use	-	-	147 (37.0)	-	147 (37.0)
Incarcerated (ever)	-	-	143 (36.0)	-	143 (36.0)
Exchange sex	-	-	43 (10.8)	-	43 (10.8)
Looked for sex partners on Internet	-	-	82 (20.8)	-	82 (20.8)
Below 200% federal poverty guidelines	-	-	318 (80.1)	-	318 (80.1)
Less than high school grad /GED	-	-	104 (26.3)	-	104 (26.3)
Depressed 7+ days in past 3 mo.	-	-	123 (31.0)	-	123 (31.0)
Ever forced to have sex	-	-	253 (64.1)	-	253 (64.1)
Experienced any homophobia (12 mo.)	-	-	289 (72.8)	-	289 (72.8)
Experienced any racism (12 mo.)	-	-	243 (61.2)	-	243 (61.2)
Bathhouse Study 2001-2002	**A/PI n=37**	**Black n=68**	**Latino n=218**	**White n=140**	**Total N=471**
Co-factor (6-month characteristics)	**n (%)**	**n (%)**	**n (%)**	**n (%)**	**n (%)**
HIV+ test (unrecognized infection)	4 (11.1)	7 (10.3)	31 (14.4)	12 (8.7)	55 (11.8)
Any unprotected anal intercourse	14 (37.8)	29 (42.7)	77 (35.3)	57 (40.7)	183 (38.9)
Amphetamine/methamphetamine use	3 (8.1)	3 (4.4)	19 (8.7)	32 (22.9)	59 (12.5)
Less than full-time employment	9 (24.3)	25 (36.8)	57 (26.2)	34 (24.3)	129 (27.4)
Less than high school grad /GED	0	3 (4.4)	33 (15.1)	3 (2.1)	39 (8.3)

* Includes Amphetamine/Crystal Methamphetamine, cocaine, ecstasy, GHB, Special K

** This study over-sampled HIV positive individuals through the use of respondent driven sampling (RDS) and therefore cannot be cited as an accurate seroprevalence for Latino MSM in LAC.

In *Brothers y Hermanos*, 397 gay-identified Latino MSM were enrolled in LAC using respondent-driven sampling (RDS). The sample was largely made up of HIV-positive Latinos with 63.7% of gay-identified MSM testing HIV positive. It is important to note that this high HIV seroprevalence was an unexpected consequence of the selected sampling method and is likely not an accurate seroprevalence for gay-identified Latinos in LAC. In this sample, 36% reported ever being incarcerated and 80% reported being below the 200% federal poverty guidelines. Thirty-one percent (31%) reported being depressed for at least 7 days in the past 3 months and 64% reported ever being forced to have sex. Homophobia was experienced by 73% of gay-identified MSM in the past 12 months.

The Los Angeles *Bathhouse Study* was a cross-sectional study of men who attended bathhouses and accessed on-site HIV/STD testing between May 2001 and December 2002. Among the 471 gay-identified MSM who participated in the study, Latino MSM had the highest prevalence of new HIV diagnoses at 14.4% followed by Asians/Pacific Islanders at 11.1%, Blacks at 10.3%, and Whites at 8.7%. In contrast, unprotected anal intercourse in the past 6 months was highest among Blacks (42.7%) followed by Whites (40.7%), Asians/Pacific Islanders (37.8%), and Latinos (35.3%). Overall, White MSM reported using amphetamines/methamphetamines more than any other group at 22.9%. Finally, Black MSM reported having less than full-time employment more than any other group (36.8%).

Table 5.7a **Co-factor Data from Three HEP Studies on Non-Gay Identified MSM in LAC by Race/Ethnicity**

LA Men's Survey 2008	A/PI n=2	Black n=32	Latino n=33	White n=21	Total N=94
Co-factor (12-month characteristics)	**n (%)**	**n (%)**	**n (%)**	**n (%)**	**n (%)**
HIV+ test	-	6 (20.7)	1 (3.2)	3 (14.3)	12 (13.6)
Any UAI	-	11 (34.4)	16 (48.5)	11 (52.4)	40 (42.6)
Crystal use	-	2 (6.3)	6 (18.2)	4 (19.1)	12 (12.8)
Party drugs*	-	6 (18.8)	12 (36.4)	7 (33.3)	25 (26.6)
Any non-injection drug use	-	17 (53.1)	20 (60.6)	14 (66.7)	54 (57.5)
Incarcerated	-	8 (25.0)	3 (9.1)	2 (9.5)	14 (14.9)
Exchange sex	-	0	1 (3.0)	2 (9.5)	3 (3.2)
Looked for sex partners on Internet	-	8 (25.0)	7 (21.2)	6 (28.6)	24 (25.5)
Below 200% federal poverty guidelines	-	13 (40.6)	16 (48.5)	5 (25.0)	36 (38.7)
Less than high school grad / GED	-	2 (6.3)	4 (12.1)	2 (9.5)	9 (9.6)
LA Web Survey 2007	A/PI n=12	Black n=25	Latino n=86	White n=85	Total N=218
Co-factor (12-month characteristics)	**n (%)**	**n (%)**	**n (%)**	**n (%)**	**n (%)**
HIV+ self report	0	3 (12.0)	1 (1.1)	3 (3.5)	7 (4.7)
Any UAI	7 (58.3)	12 (48.0)	47 (54.0)	53 (62.4)	123 (57.5)
Any non-injection drug use	3 (25.0)	8 (32.0)	33 (37.9)	28 (33.7)	76 (35.4)
Looked for sex partners on Internet	8 (66.7)	18 (78.3)	42 (49.1)	63 (75.9)	135 (64.0)
Less than high school grad / GED	0	1 (4.0)	3 (3.5)	3 (3.5)	7 (3.2)
Straight 2 LA 2007	Multi-racial n=3	Black n=48	Latino n=4	White n=2	Total N=57
Co-factor (12-month characteristics)	**n (%)**	**n (%)**	**n (%)**	**n (%)**	**n (%)**
HIV+ test	-	4 (8.3)	-	-	4 (7.0)
Any UAI	-	3 (6.3)	-	-	4 (7.0)
Female sex partners (Mean; Median)	-	19; 10	-	-	17; 10
Male sex partners (Mean; Median)	-	7; 3	-	-	6; 3
Crystal use (Non-Injection)	-	11 (22.9)	-	-	17 (29.8)
Crystal use (Injection)	-	6 (12.5)	-	-	11 (19.3)
Looked for sex partners on Internet	-	11 (22.9)	-	-	15 (26.3)

* Includes Amphetamine/Crystal Methamphetamine, cocaine, ecstasy, GHB, Special K

** This study over-sampled HIV positive individuals through the use of respondent driven sampling (RDS) and therefore cannot be cited as an accurate seroprevalence for Latino MSM in LAC.

Co-factor Data from Two HEP Studies on Non-Gay Identified MSM in LAC by Race/Ethnicity

Table 5.7b

*Brothers y Hermanos 2005-2006***			Latino n=165		Total N=165
Co-factor (3-month characteristics)			**n (%)**		**n (%)**
HIV+ test	-	-	64 (38.8)	-	64 (38.8)
Any UAI	-	-	76 (46.1)	-	76 (46.1)
Crystal use	-	-	35 (21.2)	-	35 (21.2)
Party drugs*	-	-	52 (31.5)	-	52 (31.5)
Any non-injection drug use	-	-	91 (55.2)	-	91 (55.2)
Incarcerated	-	-	86 (52.1)	-	86 (52.1)
Exchange sex	-	-	25 (15.2)	-	25 (15.2)
Looked for sex partners on Internet	-	-	20 (12.1)	-	20 (12.1)
Below 200% federal poverty guidelines	-	-	134 (81.2)	-	134 (81.2)
Less than high school grad / GED	-	-	60 (36.6)	-	60 (36.6)
Depressed 7+ days in past 3 months	-	-	53 (32.1)	-	53 (32.1)
Ever forced to have sex	-	-	121 (73.3)	-	121 (73.3)
Experienced homophobia (12 mo.)	-	-	96 (58.2)	-	96 (58.2)
Experienced racism (12 mo.)	-	-	107 (64.9)	-	107 (64.9)
Bathhouse Study 2001-2002	API n=17	Black n=48	Latino n=93	White n=43	Total N=207
Co-factor (6-month characteristics)	**n (%)**	**n (%)**	**n (%)**	**n (%)**	**n (%)**
HIV+ test (unrecognized infection)	0	10 (20.8)	3 (3.3)	4 (9.3)	18 (8.7)
Any unprotected anal intercourse	4 (23.5)	20 (41.7)	22 (23.7)	16 (37.2)	63 (30.4)
Amphetamine/methamphetamine use	0	2 (4.2)	4 (4.3)	4 (9.3)	10 (4.8)
Less than full-time employment	2 (11.8)	17 (35.4)	24 (25.8)	25 (58.1)	71 (34.3)
Less than high school grad / GED	0	1 (2.1)	22 (23.7)	2 (4.7)	25 (12.1)

* Includes Amphetamine/Crystal Methamphetamine, cocaine, ecstasy, GHB, Special K
** This study over-sampled HIV positive individuals through the use of respondent driven sampling (RDS) and therefore cannot be cited as an accurate seroprevalence for Latino MSM in LAC.

Non-gay Identified MSM: Data are limited for non-gay identified MSM because the proportion of men in our studies who did not identify as gay was small. Tables 5.7a and b include non-gay identified MSM who identified as bisexual, heterosexual or other. Much of the data presented have relatively small sample sizes and therefore are considered unstable estimates.

Women

HEP enrolled high-risk and HIV-positive women in three national HIV surveys that were conducted in LAC. See Table 5.8 for some selected local findings from each of the studies.

The Critical Population for women is defined as women who have sex with partners of unknown HIV status/risk and/or in highly impacted geographic areas/zip codes. In *Straight 2 LA*, data were collected on heterosexual women who were residents of high poverty areas in LAC with high AIDS prevalence. Unprotected sex was high for both Black (93%) and Latina (96%) women; however, HIV seroprevalence was low at 0.3%. Black women reported more non-injection drug use (60%) than Latinas (45%) and also reported more non-injection crack use than Latinas (18% vs. 1%). The mean number of sex partners was higher for Black women (11) than for Latinas as well (4.7).

Among female IDU in the *Sharps Study,* 67% reported unprotected sex, 60% reported using crack, 47% had less than a high school education and 51% had been homeless in the past 12 months. HIV testing was not offered during this cycle of the *Sharps Study* but self-reported HIV seroprevalence was about 2% for females.

In a cross-sectional study of HIV-related risk behaviors and HIV testing patterns, 101 female sex workers (FSWs) were interviewed for the HITS Survey in 2003-2004. Of the 101 FSWs, 57% reported unprotected sex and 61% reported an STD in the past 12 months. Over three quarters of participants reported non-IDU and a third reported crack use. Self-reported HIV seroprevalence was 5%.

Table 5.8 Co-factor Data Collected from Three HEP Studies on Women at Risk for HIV in LAC

Co-factors	Straight 2 LA 2007 (Past 12-month behaviors)		Sharps Study 2005 (Past 12-month behaviors)	HIV Testing Survey 2003-2004 (Past 12-month behaviors)
	Black n=425	Latina n=83	All Race/Ethnicities n=150	All Race/Ethnicities n=101
	n (%)	n (%)	n (%)	n (%)
Any Unprotected Sex	395 (93)	80 (96)	99 (67)	58 (57)
History of STDs	62 (15)	11 (13)	14 (9)	62 (61)
Non-injection Drugs	253 (60)	37 (45)	120 (80)	77 (76)
Non-injection Meth Use	29 (7)	16 (19)	32 (22)	18 (18)
Non-injection Crack Use	100 (18)	7 (1)	90 (60)	33 (33)
Injection drug use	52 (12)	11 (13)	150 (100)	5 (5)
Incarceration	62 (11)	10 (2)	48 (33)	37(37)
# of Sex Partners (mean; median)	11; 3	4.7; 2	2.8; 1	172; 110
Exchange Sex	119 (21)	10 (2)	42 (28)	99 (98)
Less than High School Education	112 (20)	39 (7)	70 (47)	43 (43)
Income Less than $10,000	248 (58)	41(49)	99 (66)	28 (28)*
Current Homelessness	71 (13)	6 (1)	76 (51)	30 (30)
HIV Seroprevalence	0.30%		2.05%**	5.0%**

* < $1000 per month
** Self-reported seroprevalence

Transgender

Limited data are available on transgender individuals in LAC since the last *Profile* in 2004. The most recent data was collected by HEP as part of a pilot study of Black and Latina transgender women. Additional data were collected as part of a county-wide needs assessment by the Office of AIDS Programs and Policy (OAPP).

Transgender HIV Behavioral Surveillance 2009

Between February and April 2009, 103 transgender women were enrolled in a pilot project in LAC to evaluate a subject-sampling method and standardized questionnaire for a three-site CDC study. Forty-four percent (44%) of the enrolled sample identified as Black and 56% as Latina. A large percentage of the participants (63%) were between the ages of 30 and 49 years and 80% of the sample identified as transgender while 19% identified as female. Being homeless in the past 12 months was reported by 49%; under- and unemployment was common with 40% reporting being unemployed, 27% disabled, 13% reporting full-time work, and 10% working part-time. Overall, 3% of participants reported that their highest level of education was a bachelor's degree, 19% reported some college, 40% a high school degree or GED, 20% reported finishing some high school, and 17% less than high school. Incarceration was reported by 21% of participants in the past 12 months. Sixty-two percent (62%) reported ever injecting hormones and 22% reported ever injecting silicone. Injection drug use in the past 12 months was low at 4%, however, non-injection drug use in the past 12 months was reported by 29% of participants with 12% reporting methamphetamine use, 9% crack, and 6% cocaine. Unprotected sex in the past 12 months was reported by 56% of participants and self-reported HIV prevalence was 27%.

Los Angeles Coordinated HIV Needs Assessment (LACHNA) 2007 OAPP

In 2007, a needs assessment was conducted throughout LAC to provide a profile of HIV risk and to assess the service needs and utilization of individuals living with and at risk for HIV. Through this assessment, a total of 149 transgender individuals were interviewed. The racial/ethnic distribution of the participants was 55% Latino/a, 18% Black, 13% Asian/Pacific Islander, 7% multiracial/other, 5% White and 2% American Indian/Alaska Native. The majority of participants were male-to-female (85%) and 15% were female-to-male. Twenty-eight percent (28%) of participants reported that they had less than a high school education, 44% reported being unemployed, and 12% reported an unstable living condition or homelessness. Overall, 13% of participants reported methamphetamine use, 5% crack, 5% heroin, and 5% cocaine in the past 6 months. Injection of substances was reported by 37%, which included injecting hormones. For those who reported sexual activity in the past 6 months, 33% reported sex work and 28% reported looking for sex partners on the Internet. In the past 6 months, inconsistent condom use was reported by 53% of sexually active individuals and self-reported HIV seroprevalence was 33% (44/132).

Demographic and Behavioral Risk Characteristics of IDU in the 2005 NHBS *Sharps Study*

Table 5.9

Sharps Study 2005 (12-month characteristics)	N=544 %
Gender	
Male	72
Female	28
Race/Ethnicity	
Latino	44
Black	24
White	24
Native American	5
Multiracial	3
Asian/Pacific Islander	1
High School Degree or less	71
Household Income <$15,000	81
First Injection prior to Age 20 years	51
Drug Injected (in the past 12 months)	
Heroin	82
"black tar" heroin	66
Speedballs	51
Cocaine	35
Amphetamine/Methamphetamine	27
Crack	17
Oxycontin	7
Shared Needles	37
Shared Cookers, Cotton or Water	72
Divided Drug with Used Syringe	38
Obtained Needles From	
Friend, Relative or Sex Partner	73
Needle Exchange	69
Drug Dealer/Shooting Gallery	60
Pharmacy/Drug Store	14
Doctor's Office, Clinic or Hospital	6
HIV Test (in the past 12 months)	44
Unprotected anal or vaginal sex (in the past 12 months)	44
HIV infected (Self-reported)	1.7
Infected with Hepatitis C Virus	51

People who Share Needles/Works

While HEP collects information on injection drug use in most studies, there are frequently too few injectors to report reliable information on that population. However, one study, the *Sharps Study*, specifically focused on the characteristics and risk behaviors of IDU in LAC (see Table 5.9). In this study, it is important to note that the majority of participants reported injecting heroin (82%) in the past 6 months with 66% reporting, specifically, "black tar" heroin and 27% of participants reporting amphetamine/methamphetamine use. While in the past 6 months 37% of participants reported sharing needles, 72% reported sharing cookers, cotton or water, and 38% reported dividing drugs with a used syringe. Self-reported HIV seroprevalence was 1.7%, however, self-reported hepatitis C seroprevalence was 51%. The low HIV seroprevalence observed in this study is consistent with past studies in LAC and in Western cities in which IDU were found to have HIV seroprevalence of 3-5%.[5,6]

Youth (Age 13-24 years)

Youth are defined by the HIV PPC as persons between the ages of 13 and 24 years. According to 2007 HARS data, there were 1,180 youth living with HIV/AIDS in LAC with a large percentage (54%) the result of male-to-male transmission, 40% due to unidentified risk, 5% due to heterosexual transmission, and 2% due to sharing injection paraphernalia (Figure 5.6). While there is one study that collected data on youth under 18, all other studies conducted by HEP collected information on youth ages 18 to 24 years.

The Critical Populations specifically highlighted by the Prevention Plan Work Group for youth include: gay men, non-gay identified MSM/transgenders/multiple genders, transgender, sex workers, and young women who have sex with partners of unknown HIV status/risk and/or in highly impacted geographic areas/zip codes.

Young Gay/Non-Gay Identified Men: Data on young gay and non-gay identified men are limited and therefore have been combined in Table 5.10. Note that the data represent small sample sizes and therefore are considered unstable estimates. However, in the *LA Web Survey*, large samples of young Latino and White gay/non-gay identified men were obtained and therefore are considered to be the most useful for planning.

In the *LA Web Survey*, while self-reported HIV seroprevalence was 3.2% and 1.6% for Latino and White young men, respectively, unprotected anal sex in the past 12 months was relatively high at 59% and 63%, respectively. Non-injection drug use in the past 12 months was reported by 37% of young Latinos and 39% of young White men. Half (50%) of young Latino men and 59% of young White men reported looking for sex partners on the Internet in the past 12 months. Although we enrolled a smaller and less statistically stable sample of Black young men (n=44), their self-reported HIV prevalence was high at 11%. While HIV risk behaviors reported by Black young men were similar or less frequent compared with Latinos and Whites, it is clear that MSM of all races/ethnicities in this age range are important subjects for targeted HIV prevention efforts.

Transgender Youth:

Transgender Research Youth Project (TRYP) 2004-2005 Children's Hospital Los Angeles

In an exploratory study to examine the HIV risk behaviors of male-to-female (MTF) transgender youth (age 14-24 years) in Los Angeles, 76 MTF transgenders were enrolled through venue-based sampling. Of the 76 participants, 57% reported ever being homeless, 30% reported being employed, and 75% reported having other sources of income. When asked about substance use, 53% reported using alcohol in the past 30 days, 32% reported using marijuana, and 25% reported using speed or crystal methamphetamine. Incarceration (ever) was reported by 47% of participants and 28% ever being a ward of the state. Participants were asked about victimization due to being transgender: 87% reported being

Co-factor Data from Four HEP Studies that Included Young MSM by Race/Ethnicity

Table 5.10

LA Men's Survey 2008	A/PI n=4	Black n=19	Latino n=42	White n=27
Co-factor (12-month characteristics)	**n (%)**	**n (%)**	**n (%)**	**n (%)**
HIV+ test	-	3 (16.7)	6 (15.0)	1 (4.0)
Any unprotected anal intercourse	-	12 (63.2)	25 (59.5)	19 (70.4)
Crystal methamphetamine use	-	1 (5.3)	11 (26.2)	3 (11.1)
Party drugs*	-	6 (31.6)	14 (33.3)	9 (33.3)
Any non-injection drug use	-	12 (63.2)	23 (56.0)	19 (70.4)
Arrested	-	7 (36.8)	2 (4.8)	2 (7.4)
Exchange sex	-	1 (5.3)	3 (7.1)	0
Looked for sex partners on Internet	-	5 (26.3)	16 (38.1)	14 (51.9)
Below 200% federal poverty level	-	7 (36.8)	15 (36.6)	7 (28.0)
Less than high school grad /GED	-	2 (10.5)	6 (14.3)	2 (7.4)
LA Web Survey 2007	**A/PI n=35**	**Black n=44**	**Latino n=220**	**White n=248**
Co-factor (12-month characteristics)	**n (%)**	**n (%)**	**n (%)**	**n (%)**
HIV+ self report	1 (2.9)	5 (11.4)	7 (3.2)	4 (1.6)
Any unprotected anal intercourse	22 (64.7)	27 (62.8)	128 (59.0)	156 (63.2)
Any non-injection drug use	11 (31.4)	13 (29.6)	80 (36.9)	97 (39.4)
Looked for sex partners on Internet	21 (60.0)	26 (63.4)	106 (49.8)	141 (59.0)
Less than high school grad/GED	1 (2.9)	1 (2.3)	11 (5.1)	8 (3.2)
Brothers y Hermanos 2005-2006			**Latino n=61**	
Co-factor (12-month characteristics)			**n (%)**	
HIV+ test			11 (18.0)	
Any unprotected anal intercourse			34 (55.7)	
Crystal methamphetamine use			8 (13.1)	
Party drugs*			9 (14.8)	
Any non-injection drug use			26 (42.6)	
Arrested			17 (27.9)	
Exchange sex			11 (18.0)	
Looked for sex partners on Internet			22 (36.1)	
Below 200% federal poverty guidelines			43 (70.5)	
Less than high school grad /GED			18 (29.5)	
Depressed 7 or more days in past 3 mo.			21 (34.4)	
Ever forced to have sex			17 (27.9)	
Experienced any homophobia in the past 12 months			53 (86.9)	
Experienced any racism (12 mo.)			44 (72.1)	
Bathhouse Study 2001-2002	**A/PI n=3**	**Black n=14**	**Latino n=54**	**White n=11**
Co-factor (6-month characteristics)	**n (%)**	**n (%)**	**n (%)**	**n (%)**
HIV+ (unrecognized infection)	-	3 (21.4)	2 (3.8)	2 (20.0)
Unprotected anal intercourse in the past 6 months	-	8 (57.1)	20 (37.0)	6 (54.6)
Less than full-time employment	-	9 (64.3)	18 (33.3)	6 (54.6)
Less than high school grad /GED	-	2 (14.3)	11 (20.4)	1 (9.1)
Amphetamine/methamphetamine use in the past 6 months	-	0	4 (7.4)	4 (36.4)

* includes amphetamine/methamphetamine, cocaine, ecstasy, GHB, Special K.

verbally insulted; 71% reported being threatened with physical violence; and 25% reported being spat upon. Sex work was reported by 75% of the participants interviewed and among those, 68% reported sex work in the past 3 months. Seventy-eight percent (78%) reported having vaginal, oral, or anal sex in the past 3 months. For those reporting anal sex with a main partner (n=24), 83% reported receptive anal sex and 85% reported inconsistent condom use. HIV testing was reported by 84% of the participants. Self-reported HIV seroprevalence was 20%.[7]

HIV Testing Survey (HITS) 2003-2004
Twenty-eight percent (28%, n=36) of the 130 transgender women interviewed in a cross-sectional study to examine HIV-related risk behaviors and HIV testing patterns were youth between the ages of 18 and 24 years. Although the sample is small and findings are statistically unstable, descriptive data are provided. Of the 36 transgender youth participants, 39% were Latina, 33% Black, and 14% White or multiracial. Seventeen percent (17%) were non-U.S. born, 29% had an income of less than $1000/month, 34% reported being homeless at some point in the past 12 months, and 36% reported having less than a high school education. When asked about alcohol and drugs, 28% reported binge drinking, and 58% reported using some type of drug in the past 12 months. Sixty-eight percent (68%) of participants reported exchanging sex in the past 12 months and among these, nearly 20% reported having more than 45 exchange partners. Eighty-three percent (83%) reported having between 1 and 10 casual partners and 28% reported being incarcerated in the past 12 months. Self-reported HIV seroprevalence was 6%.

Young Sex Workers:
HIV Testing Survey (HITS) 2003-2004
In the *HITS Survey,* 101 female sex workers (FSW) were enrolled in a cross-sectional study using venue based sampling to examine HIV-related risk behaviors and HIV testing patterns. Of the 101 FSW surveyed, 21 (21%) were between the ages of 18 and 24 years. While the sample size is extremely small and findings are statistically unstable, some basic demographics and information are provided. Fifty-seven percent (57%) of young FSW identified as Latino, 38% as Black and 5% White. Forty-three percent (43%) of the young women reported having less than a high school education, 29% reported being homeless at some point in the past 12 months, and 24% reported making less than $1000/month. When asked about alcohol and drugs, 14% reported binge drinking and 86% reported taking some type of drug in the past 12 months. Incarceration in the past 12 months was reported by 38% of participants and 76% reported more than 45 sexual exchange partners in the past 12 months. None of these young FSW reported having HIV.

Young Women:
National HIV Behavioral Surveillance (NHBS) Straight 2 LA Study, 2007
In the first heterosexual cycle of NHBS *Straight 2 LA*, 578 women who lived in high-poverty/high AIDS-prevalence areas of LAC were interviewed using respondent-driven sampling. Of those 578 women, 191 (33%) were between the ages of 18 and 24 years. The racial/ethnic distribution of the young women was 65% Black, 25% Latina, 7% multiracial, 2% other, 1% White, and 4% unknown. Twenty-eight percent (28%) of young women reported having less than a high school education, 58% reported having an annual income of less than $10,000, and 25% reported ever being homeless. When asked about sexual orientation, 71% identified as heterosexual, 28% bisexual, and 1% homosexual. The median number of male sex partners was 3 and 90% of the participants reported unprotected sex with males in the past 12 months. In the past 12 months non-injection drug use was reported by 54% of participants, use of party drugs was reported by 29%, and crystal use was reported by 10%. Twelve percent (12%) of participants reported ever injecting drugs and 7% reported injection drug use in the past 12 months. Exchange sex was reported by 14% of participants and 17% reported having had an STD in the past 12 months. HIV testing of young female study participants found a seroprevalence of 1%.

C. American Indians/Alaska Natives

According to 2008 U.S. estimates, there are more than 134,000 American Indians/Alaska Natives living in LAC, which includes American Indians/Alaska Natives in combination with one or more races. Of the approximately 78,000 American Indians/Alaska Natives (full-blood) living in LAC in 2000, the largest concentration live in SPA 3 (19%), followed by SPA 7 (18%), SPA 2 (17%), SPA 4 (14%), and SPA 8 (13%; see Figure 5.8). In contrast, of the 171 American Indians/Alaska Natives living with HIV/AIDS in LAC, the largest percentage resides in SPA 4 (39%), SPA 2 (15%), and SPA 8 (15%; see Figure 5.9).

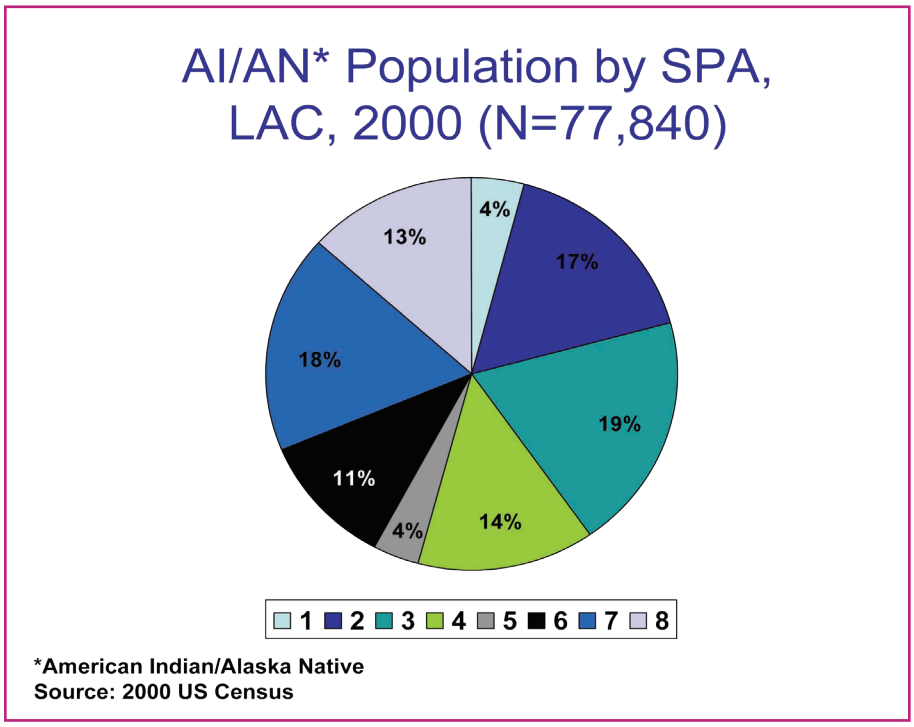


Figure 5.8

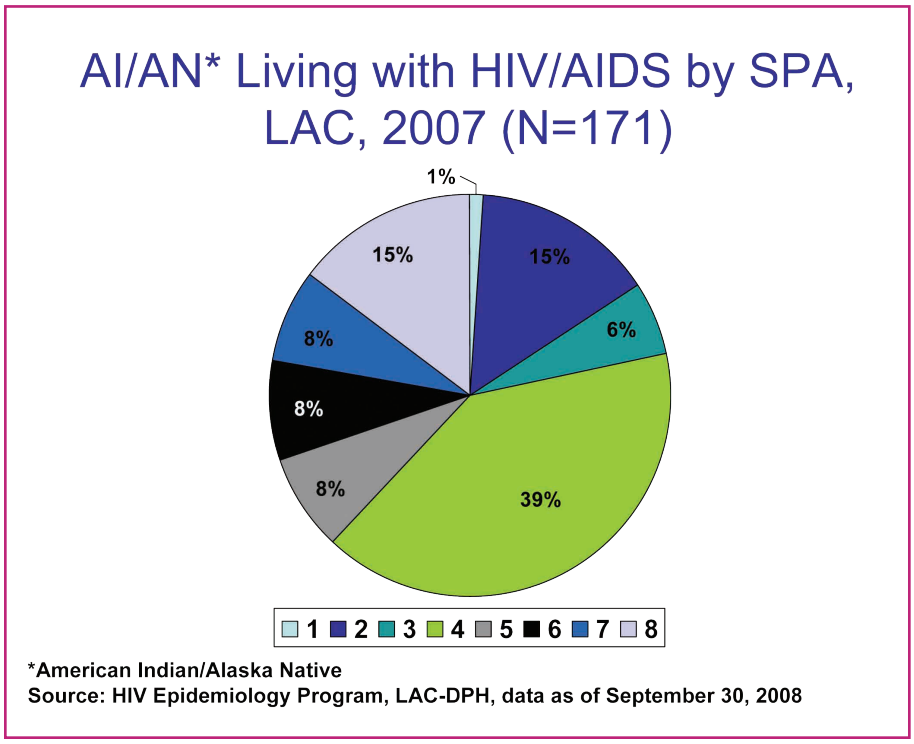


Figure 5.9

Nationally, American Indians/Alaska Natives have the third highest rate of HIV/AIDS diagnosis, after Blacks and Latinos (CDC HIV surveillance Report, 2006). In LAC, 5.6 out of every 1,000 American Indians/Alaska Natives are living with HIV/AIDS, second only to Black Angelenos (Figure 5.10). Figure 5.11 shows that 77% of American Indian/Alaska Native HIV/AIDS cases were among men, 23% among SIPs, and nearly 20% among women. Transgenders represent 2.9% of the cases which is higher in this population compared with data shown in Figure 5.3, where transgender represent 1% of all HIV/AIDS cases in LAC.

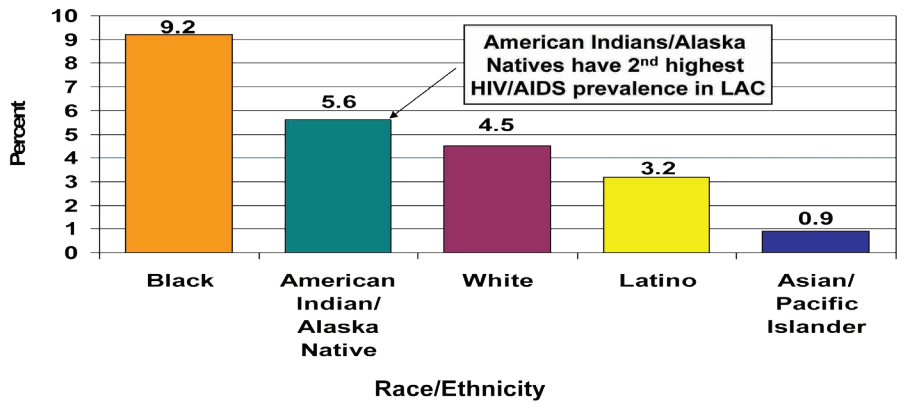


Figure 5.10

Source: HIV Epidemiology Program, LAC-DPH; data as of September 30, 2008

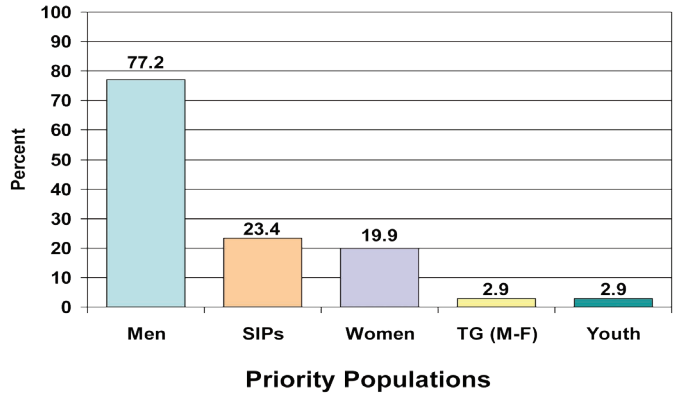


Figure 5.11

*American Indian/Alaska Native
Source: HIV Epidemiology Program, LAC-DPH; data as of September 30, 2008

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VI SPECIAL AND EMERGING POPULATIONS

A. Special Populations

The Los Angeles County Commission on HIV has identified 15 specific populations with special HIV care and service needs. These populations are not mutually exclusive; therefore some persons may fit into more than one special population category. The special population categories, as defined by the Commission on HIV, are as follows:

1. **Blacks:** individuals who identify as African American/Black.
2. **Currently/Chronically Homeless:** individuals who are homeless are those who either live or who have lived in one of the following places for at least one year (currently homeless) or for more than four times in the past three years (chronically homeless): a car or other vehicle; an abandoned or vacant building; outside (street, park, beach, or underpass); an emergency shelter or mission; transitional housing; and/or a hotel with voucher.
3. **Incarcerated/Formerly Incarcerated:** individuals who report that they have been incarcerated at least once in the past 12 months.
4. **Latinos:** individuals who identify as Latino(a)/Hispanic.
5. **Men of Color Who Have Sex With Men (MSM):** individuals who 1) identify as male; 2) identify as either African American/Black, Asian or Pacific Islander, Latino/Hispanic, or American Indian/Alaska Native; and 3) identify as gay/homosexual or indicate that they have sex with men.
6. **Mentally Ill (severe, persistent mental illness)**: persons who indicate that they have experienced any of the following in the past 12 months: feeling tired, sad, irritable, lazy, unmotivated, apathetic; sadness, melancholia or despair that has advanced to the point of being disruptive to social functioning and/or activities of daily living; a relatively recent decline in attention, focus, perception, and cognition; persistent or irrational fears; frequent headaches, heart palpitations, dizziness, and insomnia not related to taking medication; extreme mood changes; hyperactivity, forgetfulness, poor impulse control, and distractibility; hearing voices or noises that no one else hears; or seeing images, events, or people that no one else sees.
7. **Monolingual Latinos**: individuals report they primarily speak Spanish. In the future, this population will include only individuals who are unable to communicate in English.
8. **American Indian/Alaska Native**: persons who identify as American Indian/Alaska Native.
9. **People with sensory disabilities/impairments** (for example, deaf and blind): individuals who indicate that they have been told by a doctor or other healthcare provider that they have difficulty hearing or seeing.
10. **Sex Workers/People Engaged in Survival or Exchange Sex**: individuals who indicate that they exchanged sex for money or other things that they needed such as food, a place to stay, or drugs within the past 6 months.
11. **Substance Users** (Injection Drug Users [IDU] and needle-sharing)**:** individuals who indicate that they injected any of the following substances within the past 6 months: crystal methamphetamine; cocaine; heroin; any other drugs (including prescription drugs, not used according to prescription [abused] or not prescribed to them), or used a needle to inject steroid, hormones or other substances, or for home tattooing in the past 6 months.
12. **Transgender Women:** persons who identify as or who indicate they are transgender women.
13. **Undocumented Latinos**: persons who indicate residency status as undocumented.
14. **Women:** individuals who identify as female.
15. **Youth/Adolescents:** individuals who are between the ages of 13 and 25.

The estimated number of PLWHA (prevalence of HIV/AIDS) for the special populations of the Commission on HIV is presented in Table 6.1. The table also includes the estimated "HIV seroprevalence" – or percent of each group thought to be infected with HIV – for these groups and the proportion of county cases accounted for by each special population group. Note again, these special needs populations are not mutually exclusive. Therefore, some persons may fit into more than one category. Due to limitations in how the data is collected, some categories in the table only approximate those as defined by the Commission – for example, youth is defined as age 15 – 24 years in the table, but as age 13 – 24 years by the Commission.

Table 6.1 Estimated PLWHA for Special Populations of the LAC Commission on HIV[36]

Category	Estimated Size of Population	Estimated Prevalence of HIV/AIDS	Estimated HIV Seroprevalence	Estimated Percent of Adult/ Adolescent PLWH/A in LAC N=48,065
Women of Childbearing Age	3,465,579	5,845	0.20%	12.20%
Women at High Risk [2]	270,565	5,610	2.10%	11.70%
Homeless in Last Year	141,737	4,960	3.50%	10.10%
Transgender Women	4,690	985	21%	2.00%
Youth, Age 15 – 24	1,524,814	1,365	0.10%	2.80%
Recently Incarcerated	167,660	4,800	2.90%	10.00%
HIV+, but Unaware of Status	16,000	16,000	100%	Not Included
Severely Mentally Ill, Age 16-64 yrs	202,959	1,875	0.90%	3.90%
Exchange Sex Workers [3]	N/A	N/A	N/A	N/A
Injection Drug Users	89,540	6,345	7.10%	13.20%
Persons with Sensory Impairment	N/A	N/A	N/A	N/A
Deaf / Hearing Impaired [4]	24,835 / 294,453	N/A	N/A	N/A
Blind / Sight Impaired [5]	192,000	N/A	N/A	N/A
MSM of Color	167,660	23,520	14.00%	49%
Black MSM	21,170	6,680	32%	13.90%
Latino MSM	99,630	15,420	15.50%	32%
Asian MSM	37,195	1,150	3.10%	2.40%
American Indian MSM	860	180	21%	0.40%
Other/Mixed race MSM	1,720	140	8.10%	0.30%
Non Gay Identified MSM [3]	N/A	N/A	N/A	N/A
				Percent of All PLWH/A in LAC N=48,180
Latinos	4,875,289	18,300	0.40%	38%
Monolingual Latinos [3]	N/A	N/A	N/A	N/A
Undocumented Latinos [3]	N/A	N/A	N/A	N/A
Black	942,969	10,640	1.10%	22%
American Indian/Alaskan Native	30,719	207	0.70%	0.40%

[1] Estimates are calculated by HIV Epidemiology Program based on multiple assumptions and should be used with caution for HIV planning group purposes only. Note also: These categories are not mutually exclusive.
[2] Women at High Risk include women who have injected drugs or reported unprotected sex in the last year.
[3] Not enough information was available to calculate either population size or HIV seroprevalence estimates.
[4] Not enough information was available to calculate HIV seroprevalence estimates for this population. The estimated population size for both the deaf and hearing impaired in LAC was obtained from the Los Angeles Almanac (http://www.laalmanac.com/population/po50.htm), accessed on November 6, 2008.
[5] Not enough information was available to calculate HIV seroprevalence estimates for this population. The estimated population size of the Blind and Visually Impaired of Southern California was obtained from the Braille Institute as shown on the Los Angeles Almanac Web site (http://www.laalmanac.com/population/po51.htm), accessed on November 6, 2008.

From Table 6.1, we can see that women of childbearing age comprise 12% of LAC cases. Within this category are those identified at high risk – that is, those women who report either having had unprotected sex or having used injection drugs. These women have an HIV seroprevalence ten times that of other women (2.1% versus 0.2%, respectively). Another special population of note is MSM of Color who represent nearly half (49%) of all adult/adolescent PLWHA in LAC and have a combined seroprevalence of 14%, which is identical, as it turns out, to that of White MSM (data not shown). However, when further broken down into the individual race/ethnic groups, a much higher seroprevalence is seen among Black MSM (32%) and American Indian/Alaska Native MSM (21%), while Asian/Pacific Islander MSM have a comparatively very low seroprevalence (3.1%). Latino MSM account for nearly one-third of persons with HIV/AIDS in LAC (32%) and have a seroprevalence of 16%. Finally, while fewer in number, transgender women have the second highest seroprevalence of any overall special population (21%).

B. Emerging Populations With Special Needs

The LAC Office of AIDS Programs and Policy (OAPP) has also identified several emerging populations with special needs. These overlap to some extent with the HIV Commission Special Populations and include: MSM; women of color; multiply-diagnosed individuals (mental illness and substance abuse); Blacks; Latino/as; and transgender persons. Where possible, HIV Epidemiology Program (HEP) has provided estimates of population size and seroprevalence for these populations to OAPP for their Year 19 Ryan White Part A application. Selected excerpts from that application describing the unique service challenges for each emerging population were adapted for this *Profile* and are presented below.

Men who have Sex with Men: In LAC, male-to-male sexual contact remains the primary route of HIV transmission for all racial and ethnic groups. MSM make up 80% of all reported HIV and AIDS cases in LAC, and the absolute number of infected MSM continues to increase. The estimated HIV/AIDS prevalence among MSM is 14.9%. Among MSM, Black MSM have the highest prevalence rate at 32%, followed by American Indian/Alaska Native at 21.2%.

According to OAPP Ryan White client data from 2007, 56% of MSM with HIV had income below the federal poverty level, and 61% had no health insurance. Those who had insurance primarily had Medi-Cal and Medicare. Over half (54%) of MSM receiving Ryan White funded services had AIDS, nearly one third (31%) were in mental health treatment or counseling, and approximately 6% were homeless.

Women of Color: Though the absolute number of women living with HIV and AIDS in LAC is relatively small compared to the number of men infected with HIV, an increase in new infections in recent years among women, especially women of color, has been striking. Many of these women do not perceive themselves to be at risk for HIV infection.[1] However, there are an estimated 6,155 women living with HIV/AIDS in LAC, of whom most are women of color, (83%) while 17% are White. Women of color also make up 85% of new female AIDS cases.

When the estimate is limited to women ages 15 – 64 years at risk for HIV infection, HEP estimates the HIV seroprevalence of women of color at 2.7% in 2007, compared to 1.0% for Whites. Black women have the highest HIV seroprevalence, estimated at 6.3%, followed by American Indians/Alaska Natives (2.9%) and Latinas (2.4%).

Multiply-Diagnosed: A growing number of PLWHA in LAC are dealing with dual challenges of mental illness and substance abuse. Denial, stigma, and isolation create a vicious cycle of using drugs to escape the harsh reality of living with HIV and suffering from severe depression or other mental illness. In turn, the progression of drug use and dependency compromises health and the ability to

manage HIV disease. Frequently, PLWHA with multiple diagnoses of mental illness and substance abuse become homeless as they lose life-coping skills due to deteriorating health. In 2007, 72% of those diagnosed with mental illness and substance abuse who utilized Ryan White funded services in LAC lived in poverty. Almost half (48%) had no insurance, and 53% had been diagnosed with AIDS. The proportion of substance users who were homeless was twice as high as the overall client population.

Blacks: Blacks represent approximately 23% of the estimated total population of PLWHA but account for only 9% of the County's population, making them the most disproportionately affected racial/ethnic group. The impact on Black MSM is even more severe; at a 31.6% seroprevalence, approximately one out of every three Black MSM in LAC is estimated to be infected with HIV. The overall estimated HIV seroprevalence for Black in 2007 was 1.2%; however, it was much higher for adult/adolescent Black women (6.3%) and among Black living in SPA 4, the epicenter of the HIV epidemic in LAC, who had an estimated seroprevalence of 5.1%.

The local *Supplement to HIV and AIDS Surveillance (SHAS)* Study noted that from 2000 to 2004, 53% of Blacks respondents recently diagnosed with AIDS stated they had received their HIV diagnosis within one year of their AIDS diagnosis, compared to 35% of Whites, suggesting late detection of HIV infection and delayed entry into care among Blacks. This finding suggests a need for more efforts focused on bringing Blacks who have been diagnosed with HIV into care, in order to slow disease progression, improve health outcomes, reduce disparities, and prevent further transmissions.

Latinos: There are 15,207 Latino/as living with HIV/AIDS in LAC who are aware of their HIV infection, representing 38% of the overall known PLWHA. In 2006 and 2007 alone (provisional data), there were 970 newly diagnosed Latino/a AIDS cases. While the overall HIV seroprevalence is relatively low among Latino/as, it is high among Latino MSM (15.5%) and adult and adolescent women at risk (2.4%).

The local *Supplement to HIV and AIDS Surveillance* (SHAS) Project noted that from 2000 to 2004, 72% of Latino respondents recently diagnosed with AIDS stated they had their HIV diagnosis within one year of their AIDS diagnosis, as compared with 35% of Whites, suggesting late detection of HIV infection and delayed entry into care. In a recent SHAS analysis of factors associated with late testing among Latinos, the main factor identified was the completing of the interview in Spanish, suggesting a lack of English proficiency.[2] Culturally and linguistically competent services are critical to engage Latino/as in care.

Transgender Persons: Historically, transgender women (male-to-female) and transgender men (female-to-male) have been ignored in population enumerations such as the U.S. Census. Gender reporting options to include transgender persons in the HIV/AIDS Reporting System (HARS) have only been used in LAC since July 2002, and these data have yet to be evaluated for completeness and accuracy. For these reasons, the transgender population and the prevalence of HIV and AIDS in this population can only be estimated. As of 2008, HEP estimated the male-to-female transgender population in LAC to be about 4,690 and their estimated HIV seroprevalence to be 21%.

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VII. CO-MORBID COMMUNICABLE DISEASES

A. Tuberculosis

Tuberculosis (TB) infection is one of the conditions the Centers for Disease Control and Prevention (CDC) use to define an AIDS diagnosis in an HIV infected person. Not only does infection with HIV increase a person's susceptibility for becoming infected with Mycobacterium tuberculosis, TB also has detrimental effects on the course of HIV disease. The risk of death in an HIV-infected person with TB is twice that of an HIV-infected person without TB, even among those with similar CD4 cell counts.[1] While approximately 10% of persons infected with M. tuberculosis will develop active TB in their lifetime, about 50% of all persons immunocompromised by HIV infection will develop active TB.[2] According to CDC, TB is the leading killer of HIV-infected persons worldwide.[3]

Statistics from the LAC-DPH Tuberculosis Control Program show a decrease in the number of annual TB cases – from 949 in 2003 to 816 in 2007.[4] TB cases reported during 2007 were predominantly male (61%), Latino (44%) or Asian/Pacific Islander (40%), and primarily ages 15-34 (23%) or over 65 years of age (24%).[4] Asian/Pacific Islanders were the most impacted racial/ethnic group in 2007 with an active TB incidence rate of 26 new diagnoses per 100,000 population followed by Blacks (9/100,000) and Latinos (8/100,000); Whites were the least impacted with 2 new diagnoses per 100,000 population.[4]

HIV Co-Infection in the Tuberculosis Control Database: In LAC, the percent of active TB-infected individuals who tested positive for HIV, from 1999 (9%) to 2007 (8%), has remained relatively stable.[4] Table 7.1 shows the number and proportion of HIV/TB co-infection among persons with active TB in LAC. From 2003-2007, the highest percentages of all HIV/TB co-infections were found in the Latino (62%) and Black (21%) populations of LAC.[4] Males represented 89% of all HIV/TB cases in 2007.[4] Adults between 25-44 years old accounted for 59% of all HIV/TB co-infections reported between 2003 and 2007.[4]

Number and Percent of HIV-TB Co-Infection among Active TB Cases by Demographic Variables, LAC, 2003-2007

Table 7.1

Demographic	Active TB Cases		TB-HIV Co-infection	
	Number	Percent	Number	Percent
Gender				
Male	1,763	39.3	51	15.4
Female	2,723	60.7	281	84.6
Race/Ethnicity*				
Asian/PI	1,664	37.1	25	7.5
Black	447	10	70	21.1
Hispanic	2,038	45.5	207	62.3
White	332	7.4	30	9
Other	3	0.1	0	0
Age Group				
00-04	122	2.7	0	0
05-24	488	10.9	14	4.2
25-44	1,406	31.3	196	59
45-64	1,411	31.5	114	34.3
65+	1,059	23.6	8	2.4
Total	**4,486**	**100**	**332**	**100**

*'Black' refers to Black, non-Hispanic;'Hispanic' refers to persons of Hispanic origin of any race; 'White' refers to White, non-Hispanic.
Note: Statistics may differ slightly from previously published due to periodic updates.

TB Co-Infection in the HIV/AIDS Reporting System (HARS): Table 7.2 shows the number and percent of TB co-infection among HIV/AIDS cases in LAC as of 2009. Unadjusted odds ratios are also presented for purposes of comparisons across subgroups. Approximately 4% of all reported AIDS cases in LAC were also infected with TB.[5] White AIDS cases had the lowest prevalence of TB (2%) of all racial/ethnic groups. Asian/Pacific Islander, American Indian/Alaska Native, Latino, and Black AIDS cases had 3.2 to 3.6 higher odds of active TB infection compared with Whites.[5] Injection drug users

Table 7.2

Number, Percent, and Unadjusted Odds Ratios of HIV-TB Co-infection among HIV[1] Cases, by Demographic Characteristics, LAC, 2009[2]

Demographic	Cumulative No. of HIV/ AIDS Cases	No. of HIV cases with TB	Percent HIV Cases with TB	Odds Ratio [3]
Gender				
Male	67416	2838	4.20%	Referent
Female	7469	327	4.40%	1.0 (0.9, 1.2)
Race/Ethnicity				
White	31698	581	1.80%	Referent
Latino	24628	1542	6.30%	**3.6 (3.3, 3.9)**
Asian/PI	1929	114	5.90%	**3.4 (2.7, 4.1)**
Black	15885	903	5.70%	**3.2 (2.9, 3.6)**
AI/AN	301	18	6.00%	**3.4 (2.1, 5.5)**
Other/Unknown	444	7	1.60%	0.9 (0.4, 1.8)
Age Group (years)				
<13	546	8	1.50%	**0.3 (0.2, 0.7)**
13-19	1,345	60	4.50%	1.1 (0.8, 1.4)
20-29	18,354	728	4.00%	0.9 (0.8, 1.0)
30-39	30,288	1,290	4.30%	Referent
40-49	16,786	730	4.30%	1.0 (0.9, 1.1)
50-59	5,727	258	4.50%	1.1 (0.9, 1.2)
60+	1,839	91	4.90%	1.2 (0.9, 1.5)
Exposure Mode				
MSM	50,129	1,559	3.10%	Referent
IDU	4,343	452	10.40%	**3.6 (3.2, 4.0)**
MSM-IDU	4,671	354	7.60%	**2.6 (2.3, 2.9)**
Heterosexual	4,084	186	4.60%	**1.5 (1.3, 1.7)**
Hemophilia	223	8	3.60%	1.2 (0.6, 2.4)
Transfusion	693	35	5.10%	**1.7 (1.2, 2.3)**
Other/NRR	10,742	571	5.30%	1.7 (1.6, 1.9)
Place of Birth				
U.S.-born	46,005	1,594	3.50%	Referent
U.S. territories	415	28	6.70%	**2.0 (1.4, 3.0)**
Foreign-born	18,378	1,400	7.60%	**2.3 (2.1, 2.5)**
Unknown	10,087	143	1.40%	0.4 (0.3, 0.5)
Total	**74,885**	**3,165**	**4.20%**	-

1. The number of persons with HIV are based on preliminary data collected from July 2002 to June 2009 (includes code-based and named HIV cases).
2. Data source: HIV Epidemiology Program HIV/AIDS surveillance database as of June 30, 2009.
3. Odds ratio followed by 95% confidence limits in parentheses; statistically significant differences given in bold.

(IDU) had 3.6 higher odds of HIV-TB co-infection compared with MSM; MSM-IDU had 2.6 higher odds of co-infection compared with MSM.[5] The highest proportions of co-infected individuals were among persons 60 years and older, closely followed by those aged 13-19 and 50-59 years. Foreign-born county residents infected with HIV/AIDS had 2.3 times the odds of being co-infected compared with U.S.-born residents.

B. Sexually Transmitted Diseases

Sexually transmitted diseases (STDs) reportable to the LAC-DPH STD Program include syphilis, gonorrhea, and Chlamydia. Many STDs – syphilis, herpes, gonorrhea, Chlamydia, and trichomoniasis, in particular – can facilitate the transmission of HIV. These STDs can impair the body's first defenses against infection either by causing ulcers on the skin or decreasing the protective integrity of mucosal barrier secretions.[6] STDs can also increase HIV viral shedding, leading to increased amounts of virus present in the secretions of an HIV-infected sexual partner. The presence of an STD is thought to increase the odds of HIV transmission 3 to 5 fold.[7]

Chlamydia: In LAC, the rate of Chlamydia infection increased 7.5%, from 392.2 cases per 100,000 persons in 2003 to 421.6 per 100,000 in 2007.[8] LAC's Chlamydia incidence rate for 2007 was 8.4% higher than the rate in California (389 per 100,000) and 14% higher than the U.S. rate (370.2 per 100,000) for the same year.[9] As shown in Table 7.3, the groups most heavily impacted by Chlamydia in LAC are women (576 per 100,000), residents aged 20-24 years (1,980 per 100,000), Blacks (1,169 per 100,000) and residents of SPA 6 (922 per 100,000).[8] The Nation's Healthy People 2010 goal is to reduce the prevalence of Chlamydia infection to 3% of young adults who attend a family planning or STD clinic.[10]

Gonorrhea: Between 2003 and 2007, gonorrhea incidence rates in LAC have increased from 86 cases per 100,000 to 96 per 100,000.[8] In 2007, the LAC gonorrhea rate was 11.7%, higher than that for California (86 per 100,000), but 24% lower than the U.S. rate (119 per 100,000).[9] In this same year, the highest rates of gonorrhea infection were among males (105 per 100,000), adults 20-24 years of age (378 per 100,000), Black men and women (581 per 100,000 and 529 per 100,000, respectively), and residents of SPA 6 (270 per 100,000)[8] (see Table 7.3).The Healthy People 2010 goal is to reduce the rate of new gonorrhea infections to 19 cases per 100,000.[9]

Syphilis: Reported syphilis incidence rates in LAC have significantly increased, from 1.0 per 100,000 in 1999 to 8.7 per 100,000 in 2007.[8] Once lower than the U.S. rates, the LAC syphilis rate in 2007 was more than twice the U.S. rate (3.8 per 100,000), and 55% higher than the rate in California (5.6 per 100,000).[9] The highest rates of syphilis are observed among Black men (36 per 100,000), adults aged 25-29 years (21 per 100,000), and residents of SPA 4 (29 per 100,000)[8] (see Table 7.3). Black women had the highest rates of all women in LAC (5.0 per 100,000) compared with 1.0 per 100,000 in Hispanic and 0.5 per 100,000 for White women.[8] In 2007, LAC men had 15 times the rate of primary and secondary syphilis among women (16.5 vs. 1.1 per 100,000).[8] Between 2003 and 2007, the syphilis rate for White men increased 1.2 fold, Black men 2.5 fold, and Latino men 2.3 fold.[8] The Healthy People 2010 objective is to reduce the rate of syphilis infection to 0.2 cases per 100,000.[9]

The recent increases in early syphilis have been most pronounced among MSM. In 2000, MSM accounted for about half (51%) of all syphilis cases in LAC; by 2007, MSM accounted for over two-thirds (72.3%) of all syphilis cases.[11] Two-thirds of MSM syphilis cases in 2007 (65%) reported having anonymous sex in the past year and 59% self-reported co-infection with HIV.[11] Figure 7.1 shows the distribution of HIV/syphilis co-morbidity from 2004 to 2007. This recent increase of early syphilis seen in LAC was first recognized in 2000 as an outbreak among MSM throughout California.[12] The syphilis outbreak prompted a multifaceted response led by the LAC-DPH's STD Program that included studies targeting transmission among incarcerated persons, internet partner notification, increased provider awareness, community outreach, and a media campaign ("Stop the Sores").[13]

Comparison of Selected Sexually Transmitted Diseases by Demographic Subgroup and Service Planning Area, LAC, 2007

Table 7.3

	Chlamydia			Gonorrhea			Syphilis		
Demographic	**No.**	**%**	**Rate**	**No.**	**%**	**Rate**	**No.**	**%**	**Rate**
Gender									
Male	12,529	31	261	5,033	54	105	790	94	17
Female	28,164	69	576	4,255	46	87	53	6	1
Unknown	158	<1	.	20	<1	.	1	<1	.
Race/Ethnicity									
White	3,683	9	127	1,289	14	45	281	33	10
Black	9,956	24	1,169	4,035	43	474	159	19	19
Latino	16,909	41	365	2,153	23	47	344	41	7
A/PI	1,412	3	110	183	2	14	24	3	2
Other	206	1	728	56	1	198	5	1	18
Unknown	8,685	21	.	1,592	17	.	31	4	.
Age Group									
<15 years	348	1	16	89	1	4	0	0	0
15-19 years	11,458	28	1,564	2,258	24	308	21	2	3
20-24 years	13,902	34	1,980	2,656	29	378	113	13	16
25-29 years	7,439	18	1,110	1,669	18	249	138	16	21
30-34 years	3,430	8	483	942	10	133	121	14	17
35-44 years	3,029	7	202	1,134	12	76	273	32	18
45-54 years	843	2	64	426	5	32	138	16	11
55-64 years	196	<1	22	89	1	10	32	4	4
65+	38	<1	4	18	<1	2	6	1	<1
Unknown	168	<1	.	27	<1	.	2	0	.
SPA									
Antelope Valley, 1	1,720	4	480	375	4	105	8	1	2
San Fernando, 2	5,797	14	269	986	11	46	133	16	6
San Gabriel, 3	4,732	12	274	679	7	39	45	5	3
Metro, 4	5,036	12	399	1,633	18	129	368	44	29
West, 5	1,337	3	209	406	4	63	42	5	7
South, 6	9,636	24	922	2,823	30	270	90	11	9
East, 7	5,155	13	374	714	8	52	85	10	6
South Bay, 8	4,610	11	412	1,163	12	104	46	5	4
Unknown	2,828	7	.	529	6	.	27	3	.
LAC Total	40,851	100	422	9,308	100	96	844	100	9

Data from LAC STD Program's *Sexually Transmitted Disease Morbidity Report* 2007. Data as of July 2008.

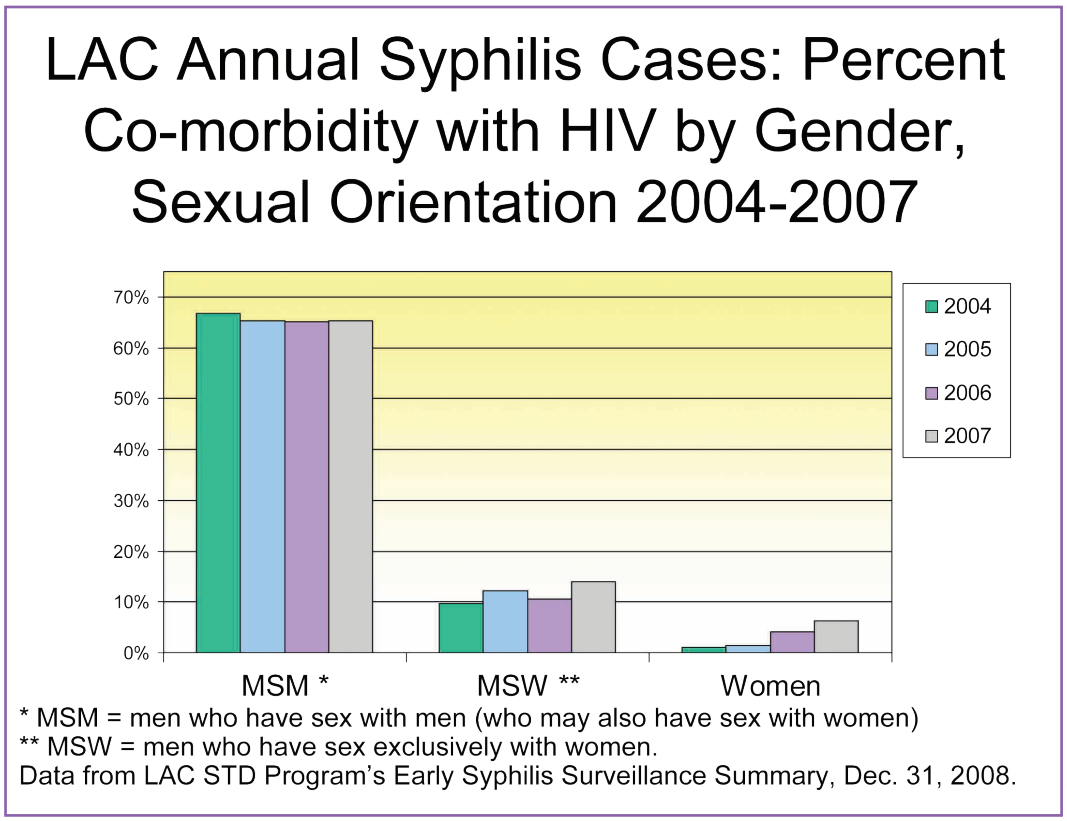

Figure 7.1

Despite these efforts, a decline in new syphilis cases has yet to be realized. STD Program's STD Morbidity Report 2007 reported that the number of early syphilis cases rose from 475 cases in 2006 to 844 cases in 2007. A similar trend was seen in California, with 2,050 early syphilis cases reported in 2007, an increase of 10.6% from 2006. [11] Of the cases reported in LAC in 2007, 94% were male, 41% were Latinos, one-third of the cases were White (33%), and 32% were residents aged 35-44 years (see Table 7.3).[8] Additionally, STD Program revealed increased rates of syphilis infection in women, from 0.5 per 100,000 in 2003 to 1.1 per 100,000 in 2007.[8]

Public health implications of the continued early syphilis outbreak in LAC among MSM are unclear. The rise in syphilis in 1998-2002 was not accompanied by a concomitant increase in new HIV cases at STD clinics.[14] MSM may be altering sex practices based on a partner's HIV status, referred to as "serosorting," which includes practicing unprotected sex with same-status partners. This practice may be contributing to the continued high rate of syphilis infection among MSM.[15, 16]

C. Hepatitis C Virus

Infection with hepatitis C virus (HCV) is one of the most common blood-borne infections in the United States. There were an estimated 17,000 new acute cases in 2007, and an estimated 3.2 million Americans are chronically infected.[17] In LAC, an estimated 134,000 persons are chronically infected with HCV, with an overall estimated prevalence of 1.3%.[18] Surveillance for HCV has been mandated only for acute disease, which is greatly underreported. Acute Communicable Disease Control maintains an HCV registry of all cases, but participation is voluntary and not all positive screening tests have been confirmed as cases, thus we are not able to present statistics for LAC at this time.

HCV is predominantly transmitted through contact with contaminated blood and blood products. Persons at increased risk for contracting HCV include ID, healthcare workers via needlestick injury, recipients of clotting factors before 1989, recipients of a blood transfusion or solid organ prior to 1992, hemodialysis patients, HIV-infected persons, and infants born to HCV-positive mothers.[17] CDC estimates one-quarter of all people with HIV in the U.S. are also infected with HCV.[19] Over half (50-90%) of HIV-positive IDU are co-infected with HCV.[19] Co-infection with HIV and HCV is associated with higher HCV viral loads compared with HCV infection alone and amplifies the deleterious effects of HCV.[19]

D. HIV/HCV Co-infection

HIV/AIDS Reporting System (HARS): In 2004, the LAC-DPH HIV Epidemiology Program compared data from the HIV/AIDS Reporting System (HARS) and the LAC-DPH Acute Communicable Disease Control Program's HCV database.[20] Living HIV/AIDS cases in HARS were matched with HCV cases in the ACDC Program's database in order to get a crude estimate of HIV/HCV and AIDS/HCV co-morbidity. There were 10,634 non-AIDS HIV cases reported to LAC's HARS by July 2004, 360 of which were identified in the HCV registry, providing an estimated co-morbidity of 3.4%. Of the approximately 19,794 persons living with AIDS at the end of July 2004, 901 also had evidence of HCV infection (4.6%). This data indicates that the prevalence of HCV infection among those living with HIV/AIDS in LAC is lower than the estimate for the U.S. as a whole.

Data on HIV/HCV co-infection was collected from January to December 2008 from HIV counseling and testing (HCT) sites funded by the LAC-DPH Office of AIDS Programs and Policy (OAPP). HCT sites in LAC performed 35,484 HIV tests in 2008; of these, 1,014 self-reported as HCV positive.[21] Of the tests which were positive for HIV, 2.0% self-reported co-infection with HCV.[21]

Cumulative AIDS cases in HARS as of June 2009 show much lower proportions of IDU as the mode of exposure to HIV (19%) compared with New York City (44%) or the U.S. (31%).[22, 23] Thus, it is not surprising to observe lower HCV co-morbidity among living HIV/AIDS cases in LAC (4.1% as of 2004) compared with other areas of the country with a greater proportion of IDU transmission among HIV/AIDS cases.

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VIII. CARE SERVICES UTILIZATION

To help characterize: 1) service utilization, 2) access to and retention in HIV care, and 3) unmet need among persons living with HIV and AIDS (PLWHA) in Los Angeles County (LAC), data are presented from a variety of sources. This includes programmatic data for Ryan White Care Act clients collected by the Office of AIDS Programs and Policy (OAPP), survey data from the *Los Angeles Coordinated HIV Needs Assessment (LACHNA)*, surveillance data from the HIV/AIDS reporting system (HARS), and epidemiologic data from specialized studies conducted by HIV Epidemiology Program (HEP).

A. Ryan White Care Act Client Data

Information about the utilization of medical, nutritional, mental health, housing and substance use services by Ryan White Care Act clients is collected through OAPP's "CaseWatch" system. CaseWatch is a client-level data collection system used by OAPP and Ryan White-funded agencies in LAC to manage eligibility, demographic and service utilization data, medical and support service outcomes, and to track linkages and referrals to other service providers or systems of care for persons with HIV. CaseWatch data from March 2007-February 2008 is presented to characterize client characteristics and service utilization.

Of the 17,913 clients in CaseWatch, the majority were male (83%), followed by females (15%) and transgender (2%). The clients were Latino (45%), White (27%), Black (24%), Asian/Pacific Islander (3%), American Indian/Alaska Native (<1%) and Mixed/Other or unknown (<1%). The median age was 43 years. Most clients reported having no insurance (57%) or public insurance (35%). Over half of clients had been diagnosed with AIDS (56%), followed by HIV non-AIDS (30%) and HIV with unknown AIDS status (13%). Only 7% of clients were reported to have been homeless. The majority of clients had no history of incarceration (81%), however, 10% reported incarceration in the past 2 years and 9% were incarcerated over 2 years ago.

Table 8.1 shows the utilization of care and social services among Ryan White clients. These data are useful to identify the characteristics of those clients receiving services funded through Ryan White and the service utilization patterns.

From the table, we can see that the service most utilized by Ryan White Care Act clients was medical outpatient (77%), followed by psychosocial case management (28%), mental health psychotherapy (17%), nutrition support services (15%), mental health psychiatric (14%) and treatment adherence services (11%).

Table 8.1

Service Utilization by Ryan White Care Act Clients, LAC, 2007-2008

Service Type	Clients N=17,913	
	N	%
Medical Outpatient	13,849	77%
Psychosocial Case Management	5,060	28%
Mental Health Psychotherapy	3,032	17%
Nutrition Support Services	2,680	15%
Mental Health Psychiatric	2,512	14%
Treatment Adherence Services	1,942	11%
Peer Support Services	651	4%
Home and Community-Based Health Services	629	4%
Transitional Case Management	380	2%
Residential Emergency Housing	270	2%
Residential Care Facility for the Chronically Ill	173	1%
Substance Abuse-Residential Detox	170	1%
Residential Transitional Housing	144	1%
Substance Abuse-Transitional Housing	107	1%
Adult Residential Facilities Services	49	<1%
Substance Abuse-Day Treatment	48	<1%
Hospice Services & Skilled Nursing Services	10	<1%

Source: Office of AIDS Programs and Policy, LAC-DPH, *CaseWatch* Year 17, March 2007-February 2008

B. Los Angeles Coordinated HIV Needs Assessment (LACHNA)

From 2007-2008, the LAC HIV Prevention Planning Committee (PPC) and the LAC Commission on HIV (COH) together with OAPP collaborated to conduct *LACHNA*, a cross-sectional survey to assess gaps in HIV prevention and care services in LAC, including unmet need, for HIV-negative and HIV-positive residents. Participants were recruited using a geographic venue-based sampling strategy that included identifying nearly 150 venues where high risk behaviors for HIV transmission were deemed likely to occur or where persons with HIV and AIDS were likely to congregate. Venues included bars, clubs, parks, beaches, street corners, day labor sites, and service provider sites in areas of LAC where the highest number of HIV and AIDS cases were reported. Eligible participants were LAC residents, were at least 13 years of age, had the capacity to provide verbal consent, and spoke either English or Spanish. Interested participants were screened by interviewers prior to administering the survey. Approximately 80% of persons approached agreed to participate in the survey. *LACHNA* data are presented to characterize engagement in HIV medical care and unmet need for PLWHA in LAC.

Engagement in Medical Care: *LACHNA* data were assessed to identify characteristics of persons with HIV by their level of engagement in HIV medical care. Respondents who reported they had never received any HIV-related medical care were defined as "never in care". Those respondents who reported they had returned to care in the past 6 months after having been out of care for a year or more were defined as "return to care". If respondents reported they had been in care previously but were not currently accessing HIV medical care, they were defined as "lost to care". No specific length of time out of care was reported for those lost to care. Respondents who reported they were currently in care and had consistently accessed HIV medical care for the past year were defined as "in care".

From 2007-2008, a total of 896 persons with HIV were interviewed. Table 8.2 below shows the proportion of respondents by level of engagement in HIV medical care by demographics and Service Planning Area (SPA). Of the 896 respondents, 48 (5%) had never been in HIV care, 274 (31%) had returned to care in the past 6 months after being out of care for over a year, 14 (2%) were lost to care and 560 (63%) had been in care consistently for the past year. To better highlight the association between respondent characteristics and engagement in HIV care, selected odds ratios and confidence intervals are reported. Transgender respondents were significantly less likely than male and female respondents to report being in care consistently for the past year (OR=0.4; 95% CI=0.2-0.7). Latino respondents were significantly less likely to be in care consistently for the past year compared to other race/ethnicities (OR=0.74; 95% CI=0.56-0.98). Respondents who identified their primary language as Spanish were three times more likely to report never being in care compared with English-speaking respondents (8% versus 4%, respectively; OR=3.1; 95% CI=1.5-6.2), while respondents not born in the U.S. were twice as likely as those born in the US to report never being in care (7% versus 4%, respectively; OR=1.8; 95% CI=1.0-3.4). Finally, although undocumented respondents were least likely to report being in care, they were also more than twice as likely than U.S. citizens and legal residents to report having returned to care in the past 6 months after being out of care for over a year (OR=2.4; 95% CI=1.5-4.0).

Unmet Need: The Health Resources and Services Administration (HRSA), the granting agency for Ryan White Program funds, defines unmet need for primary HIV care as absence of viral load testing, CD4 count, or provision of antiretroviral therapy in the past 12 months. Consistent with HRSA's definition of unmet need, an analysis of *LACHNA* data considered HIV-positive participants who reported never being in HIV care and who reported not having a CD4 or T-cell test in the last 12 months as having unmet need for primary HIV care. Of the 865 participants, 64 (7%) of participants had unmet need for HIV care services. Participants aged 13 – 24 years were nearly three times as likely to have unmet need as those age 25 and older (OR=2.8; Fisher Exact p=0.2). Lower education was associated with unmet need (χ^2 for trend=9.1; p=0.0025), with those completing only 9th grade reporting having higher unmet need (11%) than those who completed four years of college (2%). Participants whose primary language was Spanish were twice as likely to have unmet need as those who primarily spoke English (OR=1.9; 95% CI=1.1-3.3). Participants born outside the U.S. were twice as likely to have unmet need compared with those born in the US (OR=1.8; 95% CI=1.1-3.1). Finally, although nearly twice as many undocumented respondents had unmet need compared with U.S. citizen respondents (12% versus 7%, respectively), this difference was not statistically significant (p=0.1). There were no statistically significant differences in unmet need by gender, sexual identity, race/ethnicity, current work status, living situation, or time since immigration to the US.

While these data are useful to get a better understanding of unmet need for primary HIV care in LAC, their reliability is limited as they are based on very small numbers. The estimated unmet need in this study may not be generalizable to the unmet need in LAC as many HIV-positive persons were recruited from clinical care sites. Despite this limitation, these data suggest that being younger (between ages 13-24), speaking primarily Spanish, and being born outside of the U.S. are associated with more unmet need for primary HIV care. These data are helpful for developing and guiding interventions to improve engagement in HIV care for these groups to help reduce their need for primary HIV care.

Table 8.2 Engagement in HIV Medical Care of Persons with HIV/AIDS in LAC, LACHNA, 2007-2008

Characteristic	Never in Care N = 48		Return to Care N = 274		Lost to Care N = 14		In Care N = 560		Total[1] N = 896	
	n	%	n	%	n	%	n	%	n	%
Gender										
Male	35	5%	200	29%	11	2%	432	64%	678	76%
Female	6	4%	43	29%	2	1%	95	65%	146	16%
Transgender	7	11%	30	45%	1	2%	28	42%	66	7%
Other	0	0%	1	17%	0	0%	5	83%	6	<1%
Sexual Identity										
Straight/Heterosexual	16	5%	104	31%	5	1%	215	63%	340	38%
Gay/Homosexual	27	6%	146	32%	7	2%	274	60%	454	51%
Lesbian	0	0%	0	0%	0	0%	1	100%	1	<1%
Bisexual	4	4%	23	25%	2	2%	62	68%	91	10%
Other	0	0%	1	13%	0	0%	7	88%	8	<1%
Race/Ethnicity										
Black	8	3%	83	32%	2	1%	170	65%	263	29%
Asian/Pacific Islander	0	0%	4	22%	1	6%	13	72%	18	2%
Latino/Hispanic	30	7%	145	33%	6	1%	259	59%	440	49%
American Indian/Alaska Native	1	7%	2	14%	0	0%	11	79%	14	2%
White/Caucasian	7	6%	27	23%	3	3%	82	69%	119	13%
Mixed Race/Other	2	5%	13	31%	2	5%	25	60%	42	5%
Age										
13-24	5	10%	15	31%	1	2%	27	56%	48	5%
25-49	33	5%	191	31%	11	2%	372	61%	607	68%
50+	10	4%	68	28%	2	1%	161	67%	241	27%
Primary Language										
English	27	4%	205	32%	11	2%	400	62%	643	72%
Spanish	21	9%	66	27%	2	1%	152	63%	241	27%
Other	0	0%	3	25%	1	8%	8	67%	12	1%
Education										
Completed 9th grade	21	9%	86	39%	3	1%	112	50%	222	25%
Completed high school/GED	14	5%	103	35%	7	2%	174	58%	298	33%
Completed 1-2 yrs. college/trade school	11	5%	54	24%	2	1%	162	71%	229	26%
Completed 4-yr. college degree	1	2%	15	23%	2	3%	48	73%	66	7%
Completed grad/ professional degree	0	< 1%	4	29%	0	< 1%	10	71%	14	2%
Other	1	1%	12	18%	0	< 1%	54	81%	67	7%
Current Work Status										
Full Time (≥ 35 hrs.)	12	11%	27	25%	2	2%	68	62%	109	12%
Part Time (< 35 hrs.)	10	10%	27	26%	2	2%	66	63%	105	12%
Unemployed (look for work)	5	4%	23	18%	1	1%	98	77%	127	14%
Unemployed (not look for work)	18	4%	187	37%	8	2%	290	58%	503	56%
Retired	2	4%	9	18%	1	2%	37	76%	49	6%

Source: LACHNA, 2007-2008, the Los Angeles County Commission on HIV/AIDS.
Note: Column percentages may not add up to 100% due to rounding, missing, refused, or skipped values.
[1]Totals in some categories may be less due to missing data. The subcategory country of birth was limited to the 340 respondents who reported having been born outside of the U.S.
[2]Defined as: living in a house, condominium, or apartment that is owned or rented, or living with a family member or friend (whether or not you pay rent).
[3]Includes transitional housing, assisted living, hotel without a lease, in a hospital or institution, or in a residential hospice or nursing facility.
[4]Defined as living in a car/other vehicle, in an abandoned/vacant building, on a street, park, beach or underpass, or in an emergency shelter.
[5]Categories not mutually exclusive.

Table 8.2 cont'd.

Living Situation										
Stable[2]	37	5%	217	30%	10	1%	462	64%	726	82%
Transitional[3]	7	5%	46	34%	2	1%	80	59%	135	15%
Homeless[4]	3	11%	9	32%	2	7%	14	50%	28	3%
Insurance Status[5]										
Private	8	6%	36	27%	5	4%	85	63%	134	15%
Public	17	4%	150	31%	8	2%	305	64%	480	52%
Neither Private nor Public	24	8%	91	30%	3	1%	189	62%	307	33%
Country of Birth										
US	23	4%	164	29%	12	2%	357	64%	556	62%
Other	25	7%	110	32%	2	1%	203	60%	340	38%
Recent Immigrant										
Yes	24	7%	103	32%	2	1%	195	60%	324	95%
No	1	6%	7	44%	0	< 1%	8	50%	16	5%
Residency/Citizenship										
Undocumented	13	9%	65	43%	2	1%	72	47%	152	45%
Legal Resident (not US citizen)	7	8%	28	30%	0	< 1%	58	62%	93	27%
US Citizen	4	5%	14	18%	0	< 1%	59	77%	77	23%
Other	1	6%	3	17%	0	< 1%	14	78%	18	4%
Resident Service Planning Area										
SPA 1 - Antelope Valley	0	< 1%	4	17%	0	< 1%	19	83%	23	3%
SPA 2 - San Fernando Valley	3	2%	54	32%	1	1%	112	66%	170	20%
SPA 3 - San Gabriel Valley	3	5%	14	25%	2	4%	36	65%	55	6%
SPA 4 - Metro	28	10%	94	34%	6	2%	145	53%	273	32%
SPA 5 - West	3	10%	13	43%	1	3%	13	43%	30	3%
SPA 6 - South	3	2%	44	31%	2	1%	93	65%	142	17%
SPA 7 - East	3	4%	13	17%	0	< 1%	61	79%	77	9%
SPA 8 - South Bay	2	2%	21	23%	2	2%	65	72%	90	10%

C. HIV/AIDS Reporting System (HARS)

Special studies have used HARS data to evaluate both differences in distance to care for PLWHA and to obtain an estimate of those persons with HIV and AIDS who are not in HIV care.

Access to Care: For many PLWHA, distance between home and the doctor's office or clinic may be a barrier to consistent health care access. Using the HARS data, the average distance from a place of residence to a healthcare facility was estimated among a sample of persons reported with AIDS in LAC from January 2001 to June 2004.[1] Of the sample (n=6,142), 87% were men, 44% were Latino, 33% were White and 23% were Black.

Public care facilities were more likely to be utilized by Latino (43%) and Black men (43%) compared with White men (15%, $p<0.0001$). Similarly, Latina (51%) and Black women (51%) were more likely to utilize public care facilities than White women (26%, $p<0.001$). Latino and Black men travelled longer distances to care facilities compared with White men ($p=0.03$). While Latina and Black women also had longer distances to travel to care facilities compared with White women, these differences were not statistically significant. These results are provocative in that they may reflect either disparities in access to health care among Latinos and Blacks compared with Whites, or Latinos and Blacks with AIDS are seeking care outside of their local communities – perhaps as a result of stigma or shame associated with an HIV diagnosis. More research is needed in this area to determine which interpretation is more accurate.

Estimates of Persons with HIV Who Are Not in Care: Starting July 2002, all laboratories were required to report all test results indicative of an HIV infection to local health departments in California. Viral load testing has been used as a surrogate indicator for persons receiving HIV care. Using reported HIV/AIDS cases from HARS and laboratory data in LAC, the number of HIV-positive persons not in HIV care and factors associated with lack of HIV care were estimated.[2]

HIV positive persons "not in care" were defined as those who had a confirmed HIV-positive test by either Western Blot (WB) or Immunofluorescent assay (IFA), but had no viral load test based on surveillance data. For persons "in care," the average time to HIV care was calculated as the time between first positive WB or IFA test and first viral load test. The number of new HIV infections was estimated as the number of unduplicated and confirmed WB/IFA tests that either did not have an earlier record of a detectable viral load test result or did not match a HARS record with an earlier HIV diagnosis date. Additional information on demographics and risk behaviors was obtained from HARS. Multivariate logistic regression methods were used to determine the factors associated with lack of HIV care.

Adjusted Odds Ratios[1] for *Not in Care* among Persons with HIV in Los Angeles County.

Characteristics	Adj. OR	95% C.I.
Female	1.3	1.1-1.5
Age 40+ yrs (vs. 30-39 yrs)	1.4	1.3-1.7
Race/Ethnicity (vs. White)		
Black	2.8	2.3-3.3
Latino	3.2	2.7-3.7
Asian	2.6	1.8-3.6
Heterosexual IDU[2]	1.2	0.9-1.5
Public Health Facility	1.0	0.9-1.1
HIV non-AIDS Diagnosis	4.3	3.8-4.9

1. Results from multivariate logistic regression modeling, including age, gender, race/ethnicity, type of health facility, HIV or AIDS diagnosis, and HIV risk.
2. Compared with MSM or MSM/IDU.

Figure 8.1

A total of 384,063 antibody and viral load tests reported to HEP from July 2002 to March 2007 were matched with the 55,384 persons reported in HARS since 1982. Of these, approximately 5,900 persons had a confirmed HIV antibody test, but no viral load. Using viral load testing as an indicator of receiving HIV care, we estimated that 11% of PLWHA and 42% of persons with a new HIV diagnosis in 2002-2007 were not in care during the study period. The average time to care for the newly-diagnosed persons who were in care was 2.7 months. For the 34,136 persons with multiple viral load tests, the average time between a first and second viral load tests was 6 months.

Multivariate logistic regression analyses, adjusted for age, gender, race/ethnicity, type of health facility, and HIV/AIDS diagnosis, are presented in Figure 8.1. Factors associated with not being in care included the absence of an AIDS diagnosis (AOR=4.3, 95% CI=3.8-4.9) and female gender (AOR=1.3, 95% CI=1.1-1.5). Compared with Whites, Latinos (AOR=3.2, 95% CI=2.7-3.7), Blacks (AOR=2.8, 95% CI=2.3-3.3), and Asian/Pacific Islanders (AOR=2.6, 95% CI=1.8-3.6) were less likely to be in care.

These data are useful to help identify those persons with recent HIV diagnoses who were most likely to be out of care so that, in conjunction with the results of other studies, interventions might be developed to help improve the linkage from HIV testing to HIV primary care.

D. Supplement to HIV/AIDS Surveillance Project (SHAS)

The SHAS Project was a cross-sectional interview study that ran from 1990 through June 2004 to supplement information routinely collected through HARS. The objective of SHAS was to improve our understanding of sexual and drug-using behaviors; health care access; minority issues; utilization and adherence to therapies; geographic differences; and disability related to HIV infection among newly reported AIDS cases. Of the 4,117 SHAS enrollees, 81% were male, 65% were between the age of 30 and 49 years, and 50% were Latino. Additional information about SHAS is available in Appendix C. The results from three recent analyses of the SHAS data are presented below.

Methamphetamine Use among Men Newly Diagnosed with AIDS: Increased numbers of sexual partners and unprotected anal intercourse (UAI) among men who have sex with men (MSM) diagnosed with AIDS from 1993 to 2003 in LAC have been reported,[3] however the role of methamphetamine use in this increase of high-risk sexual behaviors has not been fully examined. SHAS data were used to examine patterns of methamphetamine use and the association between methamphetamine use, demographics and sexual behaviors among MSM and non-MSM diagnosed with AIDS.[4] Analyses of recent sexual behaviors were limited to only those men who reported having had sex in the last 12 months. Men were defined "MSM" if they identified as "homosexual/gay" or "bisexual" and/or reported having had sex with a man in the last 12 months. "Non-MSM" were defined as those men who identified as "heterosexual/straight" and did not report sex with men in the last 12 months.

Of the 683 men recently diagnosed with AIDS who were interviewed in SHAS from September 2000-June 2004, 455 (67%) were MSM and 228 (33%) were non-MSM. The mean age was 39 years, with the majority of participants (74%) between 30 and 49 years of age. Nearly half (48%) of all participants were Latino, two-thirds of participants graduated from high school (67%), but only one third were currently employed (36%) and two-thirds (67%) reported yearly income of less than $10,000. Compared with MSM, non-MSM tended to be older, Latino, have fewer years of schooling, and a lower annual income. Lifetime methamphetamine use was 35% for MSM, 14% for non-MSM, 50% for White MSM, and 35% for Black MSM. Methamphetamine use in the previous 12 months among MSM (11%) and non-MSM (0.4%) was less than lifetime use. Compared to MSM with no history of methamphetamine use in a multivariate analysis, MSM methamphetamine users were more likely to be non-Latino (White or Black) (OR=2.7, 95% CI: 1.6-4.3) and to have reported 10 or more sexual partners in the previous 12 months (OR=3.1, 95% CI: 1.7-5.6). These data indicate both MSM and non-MSM with AIDS in LAC use methamphetamine and that lifetime use is associated with sexual risk behaviors among MSM.

Risk Behaviors among Latina Women with AIDS in Los Angeles County: Latina women represent nearly half of all females diagnosed with AIDS in LAC, yet little is known about their risk behaviors compared with women of other races/ethnicities. The sexual and drug-using behaviors, socio-demographic factors and healthcare use among Latinas with AIDS were characterized and compared with the characteristics of women of other races/ethnicities with AIDS in LAC.[5]

Of the 842 persons who completed a SHAS interview from 2000-2004, 131 (16%) were women. Among the 131 interviews, 71 (54%) were Latinas of which 54 (76%) interviews were conducted in Spanish. Among the 71 Latinas with AIDS who were interviewed for SHAS, 80% were born outside of the US: 43% from Mexico; 29% El Salvador; 14% Guatemala; and 11% in Honduras. Among foreign-born Latinas, the median number of years living in the US was 12 years (IQR=9). The majority of the Latinas were unaware of how they became infected with HIV (58%), reported exposure to HIV through heterosexual contact with an HIV-infected person (23%) or through heterosexual contact with a person whose HIV status was unknown (13%). Among the non-Latinas, 25% were White, 70% were Black and 5% were other races/ethnicities.

Compared with White and Black women with AIDS, Latinas with AIDS had fewer lifetime male sexual partners (p<.0001); reported fewer sexually transmitted diseases (OR=0.24; 95% CI: 0.1-0.5); were less likely to trade sex for drugs/money (OR=0.18; 95% CI: 0.07-0.5); and were less likely to report exposure to HIV via injection drug use (OR=0.3; 95% CI: 0.09-0.99). Latinas were also more likely to be single mothers (OR=3.02; 95% CI: 1.4-6.4); were less likely to receive public assistance (OR=0.33; 95% CI: 0.16-0.70); were less likely to have completed high school (OR=0.11; 95% CI: 0.04-0.31) and were more likely to never have had health insurance (OR=2.44; 95% CI: 1.15-5.18). The low-risk behaviors demonstrated for Latinas in this study underscore the challenge of delivering effective HIV prevention to women without traditional risk profiles.

Factors Associated with Late HIV Testing for Latinos: Latinos are less likely to test for HIV generally and are more likely to test late for HIV infection compared with other racial/ethnic groups in the United States and LAC. The time between when persons first learn that they are HIV infected and when they are diagnosed with AIDS is one measure of how early the disease has been detected or, seen another way, of how late one gets tested for HIV. SHAS data were used to examine factors associated with late HIV testing for Latinos diagnosed with AIDS in LAC.[6] For this analysis, persons who received their first HIV diagnosis within one year of their AIDS diagnosis were defined as "late testers" and persons who received an AIDS diagnosis more than one year following an HIV diagnosis were defined as "non-late testers".

Among the 414 eligible Latino participants diagnosed with AIDS and interviewed in SHAS from 2000-2004, 31 individuals were excluded from this analysis due to invalid HIV or AIDS diagnosis dates, yielding a total sample size of 383 Latinos. The sample was largely male (83%), predominately born outside of the U.S. (80%), and between the ages of 30-49 years (67%). Less than half of Latino participants had a high school education or higher (43%), and two-thirds completed the interview survey in Spanish (69%). A small proportion (9%) reported a history of injection drug use. After adjusting for age, education, country of birth and injection drug use in a multivariate logistic regression analysis, completion of the interview in Spanish was the main factor associated with late testing (Adjusted OR=2.9, 95% CI: 1.4-6.0). Latinos testing late for HIV were also more likely than participants of other races/ethnicities to test due to illness (p<.0001) and less likely to test as part of a clinical screening (p<.0001). Late testers were more likely to receive their first positive HIV test as a hospital inpatient (p<.0001) and less likely to test positive at a community health center or public clinic (p=.05). To accomplish widespread and timely HIV testing for Latinos in LAC, Spanish-language social marketing campaigns are needed and Spanish-speaking patients should be offered HIV testing in all clinical settings.

E. Medical Monitoring Project (MMP)

The *Medical Monitoring Project* (MMP) is a Centers for Disease Control and Prevention (CDC)-funded study that is the first research study since the HIV Cost and Services Utilization Study (HCSUS), conducted in the mid-1990's, to collect information from a nationwide representative sample of people receiving HIV care. MMP was designed to assess clinical outcomes, behaviors and the quality of HIV care among HIV/AIDS patients receiving care in the U.S. by using a 3-stage sampling design (see Appendix C for more detail about MMP). The primary goal of Los Angeles' MMP is to identify a representative sample of HIV-positive persons in care in LAC in order to provide representative data for HIV services planning in the County. The objectives of MMP are to collect information from HIV-infected persons in care on healthcare utilization, disease outcomes, and risk behaviors; monitor and calculate rates of opportunistic infections among HIV-infected persons; determine the prevalence of adverse events to medical therapy; determine the prevalence of resistant strains of HIV; assess the impact of behavioral determinants in access to care and in adherence to medical regimens for HIV-positive persons; improve prevention programs to prevent further HIV transmission; and improve services for those already infected.

The data from MMP presented here assess factors associated with intermittent versus regular HIV care among patients in LAC.[7] A representative sample of 379 HIV-infected adults receiving HIV care in LAC was interviewed from January to April 2007. Patients who had fewer than 2 primary care visits in 9 months were considered in "intermittent care" (n=127), while patients with 2 or more visits were considered in "regular care" (n=202). OR and t-tests were calculated to examine socio-demographic and clinical characteristics associated with intermittent care.

Patients sampled were predominately Latino (41%) and White (39.7%) and the majority were male (92%). Over half of the patients (56.8%) were born in the U.S. Nearly equal numbers of persons with AIDS (53%) and non-AIDS HIV (46.7%) were sampled and most were diagnosed with HIV/AIDS fewer than 3 years before the interview (70%). Most patients received antiretroviral therapy (81.7%).

We compared the demographic characteristics of the patients sampled and the factors associated with being in intermittent versus regular HIV care. Younger age at HIV diagnosis (p=.003), younger age at time of interview (p=.001), and non-AIDS HIV status (OR=1.7, 95% CI=1.1-2.8) were associated with being in intermittent care. Among patients with AIDS, the mean years between an HIV and AIDS diagnosis was greater for those in intermittent care (p=.006). No differences in intermittent versus regular care were observed with regard to health insurance status or type, race/ethnicity, substance use or sexual behaviors.

These results indicate that HIV-positive patients in care in LAC who are younger, do not have AIDS, and among those with AIDS who had more years between an HIV and AIDS diagnosis, were more likely to have "intermittent HIV care". Data such as these may be useful for identifying HIV-positive persons who are most likely to fall out of regular care, and may require additional interventions to help them maintain consistent care.

F. Directly-Administered Antiretroviral Treatment Project (DAART)

The CDC-funded *Directly-Administered Antiretroviral Treatment Project* (DAART) evaluated interventions for improving adherence to Highly Active Antiretroviral Therapy (HAART) from 2000-2004 at three public HIV clinics. The necessarily complex HAART drug regimens provide challenges for optimal adherence for many individuals. Participants were randomized to one of three adherence models: 1) the DAART model in which participants receive daily delivery and observation of the ingestion of one HAART drug once-daily, five days per week by a community worker; 2) a clinic-based

DAART Study: Clinical Results

Variables	DAART	IAP	SOC	p-value
Enrolled (n)	82	84	84	-
Completed 6 months (n)	65	67	62	0.59
VL < 400 copies/ml (%) at 6 months				
ITT analysis	54%	60%	54%	0.68
As treated analysis	71%	80%	74%	0.58
CD4 increase(cells/mm^3)	63	78	69	0.90
100% adherence (24-hr)	97%	93%	94%	0.69
Any OIs	18%	10%	13%	0.40

Figure 8.2

intensive adherence case management intervention (IACM) to overcome barriers to adhering to the patient's HAART regimen; or, 3) standard of care (SOC) provided at the clinics, in which no special case management or administered drugs were given. The major objective of this study was to determine if the three models of adherence support affected the virologic, immunologic and clinical outcomes of HIV disease. A secondary objective was to see if the three models of support impacted utilization of health care services, including hospital stays, emergency room use and outpatient HIV visits. More detail about the DAART study is available in Appendix C.

Between November 2001 and October 2004, 250 participants were enrolled into the DAART study. Of these, 82 were randomized to the DAART arm, 84 to the IACM arm and 84 to the SOC arm. The majority of participants were Latino (64%), male (75%), and 30-49 years (70%). Chi-square analyses and Kruskal-Wallis tests were used to compare differences among the three intervention arms.

Figure 8.2 shows study enrollment, retention and primary outcomes across the three study arms at six months. Of the 250 participants enrolled, 194 (78%) completed 6 months in the study, with equal retention rates across the three arms. No statistical differences were observed at 6 months in the percentage of participants with undetectable viral load in an "intent-to-treat" or in an "as treated analysis".[8] In addition, there were no differences in CD4 cell count increase from enrollment, the proportion of participants with perfect (100%) self-reported adherence in the past 24 hours, or in the incidence of opportunistic infection at 6 months.

Health care utilization was estimated across the three study arms using billing records from the three clinic sites. Differences between DAART, IACM and SOC in the rate of hospitalizations, hospital days, and outpatient and emergency department visits were assessed over an average period of 1.7 years from enrollment. The costs of hospital days and of outpatient and emergency room visits were assigned using data from the HCSUS.[9] Program and participant costs were assessed using surveys administered to participants, reports submitted by study staff, and data reported by program administrators. The incremental costs of DAART or IACM versus SOC were calculated, and those costs were compared with savings in health care utilization among participants in the adherence programs. Health care utilization outcomes were expressed as a rate per 1,000 patient-days, and calculated an incidence rate ratio to compare the adherence program arms with SOC. Poisson regression models were used to test for differences between the DAART and IACM arms and SOC.

Notable results include the following: participants receiving intensive case management experienced fewer hospital days compared with those receiving SOC (2.3 versus 6.7 days/1,000 person-days, incidence rate ratio: 0.34, 97.5% CI: 0.13-0.87). Those participants receiving directly administered antiretroviral treatment had more outpatient visits than those receiving SOC (44.2/1,000 versus 31.5/1,000 person-days, incidence rate ratio: 1.40; 97.5% CI: 1.01-1.97).

Average per-participant health care utilization costs were $13,127 for participants receiving DAART, $8,988 for those receiving intensive case management, and $14,416 for SOC. Incremental six-month program costs were $2,120 for participants receiving DAART and $1,653 for those receiving intensive case management. Subtracting savings in health care utilization from program costs resulted in an average net program cost of $831 per DAART participant and savings of $3,775 per IACM participant.

While no statistical differences in virologic, immunologic, clinical or self-reported adherence outcomes were found between DAART or IACM to SOC, differences were observed in healthcare utilization between the intervention arms.[8, 10] DAART was associated with a significant increase in the number of outpatient visits compared with SOC. IACM was associated with a significant decrease in hospital days compared with SOC. In addition, IACM was cost saving when program costs were compared with savings in health care utilization.

G. Young Men Taking Charge

HIV-positive Latino and Black young men who have sex with men (YMSM) in the U.S. have been historically difficult to identify, engage and retain in HIV care. Enhanced programs are needed to support timely and consistent HIV care. In 2004, HRSA funded demonstration sites through their Special Projects of National Significance (SPNS) program that identify, implement and evaluate new models to provide outreach and interventions for HIV-positive Latino and Black YMSM. As one of eight demonstration sites across the country, the LAC Department of Public Health developed a clinic-based, youth-focused case management (YCM) intervention to engage and retain these young men in HIV primary care services. Data on retention in care at six months are presented.[11]

The two-year YCM intervention consisted of weekly meetings for two months followed by monthly meetings for 22 months with a case manager (CM). Participants were administered a comprehensive psychosocial assessment by the CM to guide treatment plan development and identify needed referrals. For this analysis, retention in HIV care was defined as having 2 or more clinical care visits in the past 6 months as per the USPHS Treatment Guidelines.

From April 2005 to April 2009, 69 participants were enrolled in YCM. Of the 69 participants, 51% were Black, 49% were Latino and the median age at enrollment was 21 years. Participants identified themselves as male (91%), transgender (3%), female (3%), or other/refused to identify (2%). Sexual orientation was reported as homosexual by 64% of the participants, 20% identified as bisexual and 10% identified as heterosexual. Over one-third (39%) of the participants reported that they were still in school and three-quarters (74%) reported that they had completed at least high school. Compared with Latinos, Blacks were significantly more likely to have completed at least high school (OR=3.6, 95% CI=1.1-11.6). Overall, 42% were currently employed, with no statistical differences between Blacks and Latinos. Most participants reported living with their family (60%) or friends (27%) and Blacks were significantly more likely to report living with friends compared with Latinos (OR=6.4, 95% CI=1.6-25.4). At enrollment, 78% of participants had critical need for housing, nutrition, substance abuse or mental health services.

Of the 69 enrolled, 61 were in YCM for at least 6 months. Total hours of YCM received was significantly higher for Latinos compared with Blacks (9.7 hours versus 5.1 hours, p=0.01). Referrals were primarily for housing (29%), risk reduction counseling (11%) and mental health treatment (13%). At 6 months, 68% of referrals had been completed with no differences by race/ethnicity. From enrollment to 3 months, participants attended an average of 2.2 HIV care appointments and from 4 to 6 months they attended an average of 1.7 HIV care appointments (p=0.04). In addition, 67% of participants were retained in HIV primary care from enrollment to 3 months and 70% were retained in HIV primary care from 4 to 6 months (p=0.0005). Better retention in HIV care at 6 months was positively associated with the hours of YCM received OR=3.3 CI=1.3-8.8) and with the number of hours of YCM appointments attended OR=3.7 CI=1.5-9.4) . Race/ethnicity, HIV care history, CD4 count, housing status, employment, education, critical need, history of drug use, depression, and age were not associated with retention in HIV care at 6 months.

These findings demonstrate that a clinic-based YCM intervention has the capacity to improve engagement and retention in HIV care among YMSM. More total hours of YCM received and more YCM appointments attended increased the likelihood that YMSM were successfully retained in HIV care at six months, underscoring the need for intensive case management for this high-risk population. These data are useful for informing the development of future programs to improve engagement and retention in HIV care for HIV-positive Latino and Black YMSM. Additional information about the SPNS study is available in Appendix C.

H. Social Support Study

The *Social Support Study* is a five-year project funded in 2004 by the California HIV/AIDS Research Program (CHRP) to evaluate how social support, stress and social network characteristics influence engagement in HIV care for Blacks and Latinos. A growing body of literature highlights the potential links between social support and the health status of people with chronic illnesses; however, few studies have quantitatively examined the impact of social networks on engagement in HIV treatment among low-income Latinos and Blacks. Both qualitative and quantitative research methods were used. The qualitative component consisted of in-depth interviews with 24 HIV-positive patients and the quantitative component consisted of a cross-sectional survey and medical record abstraction of 400 HIV-positive patients at five public HIV clinics in LAC. Data from both components are presented below.[12, 13] Additional information about the *Social Support Study* is in Appendix C.

Qualitative Analysis: Chronically ill, disadvantaged minority populations tend to receive most of their social support from informal support systems. However, because of HIV-related stigma and non-disclosure in these ethnic communities, it is not clear to what extent ethnic minority HIV-positive people may rely on informal support systems (family and friends) for their primary support. In 24 semi-structured, in-depth interviews conducted with HIV-infected persons – Latina and Black women, Latino and Black MSM – participants were asked about their daily experiences with engaging in HIV health care (e.g.,who helped them and under what circumstances).

Two main themes emerged from interview data on the role of social support in engagement in HIV care. Participants identified the sources and types of social support necessary to engage in HIV health care as different from those necessary for their general care needed for living with HIV. Table 8.3 displays the core categories and subcategories. Sources of support included individuals with both formal and informal roles, such as medical and other care providers, family and friends. Three types of social support categories (emotional, instrumental and informational) emerged from the analysis of these data. Emotional support referred to non-tangible help from others that led to a person feeling loved and cared for, with a bolstered sense of self-worth (e.g. talking over a problem, providing encouragement/ positive feedback). By contrast, instrumental support referred to various types of tangible help (e.g. help with childcare/housekeeping, provision of transportation or money). Informational support represented a third type of social support and referred to the help that others offered through the provision of information. Finally, the participants clearly delineated between the areas of HIV-specific care, and general care needs.

In these interviews, participants reported having received social support for both HIV health care as well as general care from a range of formal and informal sources of support. However, there were distinct patterns identified by participants in terms of the sources of social support for different types of care. When needing support for continued engagement and maintenance in HIV health care, they were more likely to report receiving support from health care providers and HIV support organizations than from their informal networks of family and friends. For more general global support for daily living, they were more likely to turn to family and friends and then to a lesser extent from HIV support organizations and churches. This information can be useful to HIV service providers and organizations working to increase social support and to develop interventions to facilitate care retention among HIV-positive Latino and Black minority women and MSM.

Quantitative Analysis: Social support and stress have been associated with disease outcomes that include diabetes, heart disease and asthma; however, these factors have been poorly characterized for persons with HIV, particularly for Blacks and Latinos. Eligibility criteria included confirmed HIV-positive status, self-identification as Black or Latino, language proficiency in English or Spanish and age 18 years of age or older. Latino and Black men had to also report a history of sex with men. Interview data on general and HIV-specific support, stress and social network characteristics were collected for

Examples of Types of Social Support Received and Sources of Support for Different Areas of Care

Table 8.3

Dimensions of Social Support		**Areas of Care**	
Types of Support	Sources of Support	HIV Health Care	General Subsistence Care
Emotional	Health care providers	Encouragement about health, reminders about appointments & medication adherence, support to try new therapies & "tough love"	----------
	HIV-related organizations	Support groups for talking/venting about HIV, encouragement for medication adherence & keeping appointments.	Talking, going out & having fun with support group members
	Family and friends	Encouragement with medication adherence, keeping appointments and follow up care	Provision of outlet to talk, distractions from HIV, asking about patient's well-being
Instrumental	Health care providers	Provision of medications, advocacy, individualized care, transportation, being available/contactable, help with paperwork for health benefits.	--------
	HIV-related organizations	Transportation vouchers, translation & mental health services, primary care and referral to specialists	Case management, housing & legal aid, food bank
	Family and friends	Transportation support (rides, loan of car); family members attending appointments	Food, shelter, housework & errands, loans & gifts of money
Informational	Health care providers	Information about medication & other resources	---------
	HIV-related organizations	Education about HIV nutrition, medications, treatment options through conferences, workshops and word of mouth.	Information about resources (housing,
			Legal aid & food bank
	Family and friends	Looking for information on the Internet	-------

Table courtesy of George, S et al., Journal of Health Care for the Poor and Underserved, 2009

Black and Latino women and MSM in LAC using a modification of the Social Resources and Social Supports Questionnaire (SRSQ). The SRSQ asks participants to nominate 10 people in their social network who were most important to them, characterize their relationship to each of these individuals, answer whether they had disclosed their HIV status to each person and whether or not each provided general or HIV-related support or stress. The questions on HIV-specific support and stress were only asked of people to whom the participant had disclosed their HIV status. For each type of support or stress, participants were asked to characterize the frequency of the support or stress and the degree of satisfaction with the support they receive. Frequency of support and stress was based on a 5-point Likert scale ranging from 1 to 5 with 1=never, 2=rarely, 3=sometimes, 4=usually and 5=always. Satisfaction with the quality of support received was also rated based on a 5-point Likert scale with the following response categories: 1=not at all, 2=a little, 3=somewhat, 4=very, 5=always.

From November 2007 to May 2008, a total of 400 participants were enrolled (100 Latina women, 100 Black women, 100 Latino MSM and 100 Black MSM). Black (mean=41, SD 17) and Latina (mean=40, SD=19) women reported the highest overall mean general support. Overall stress was highest for Latina women (mean=18, SD=11) and statistically higher compared with Latino and Black MSM ($p < 0.05$). Black and Latina women reported receiving most of their social support and most of their stress

from family members, while Black and Latino MSM received their support and stress from friends and providers. Latina (mean=15, SD=8) and Black (mean=15, SD=8) women reported the greatest satisfaction with the support received from network members and Latina women reported higher satisfaction with the support received than did Latino MSM ($p < 0.05$). Finally, both Latina (mean=2.6, SD=1.7) and Black (mean=2.4, SD=1.6) women disclosed their HIV status to more network members and received more HIV-specific support than did MSM ($p < 0.05$).

Overall, these data demonstrate some clear differences in the support, stress and structure of familial, friend and provider networks by race/ethnicity and gender/sexual orientation among the four subgroups of HIV-positive Latino and Black women and MSM. The data suggest that Latino MSM in particular may be the most in need of interventions to help develop emotional, instrumental and informational support from family, friends and providers to improve their quality of life as they manage their HIV infection.

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APPENDIX A
Glossary of Terms

Active surveillance — Health department staff regularly contact reporting facilities (hospitals, clinics, physician offices, laboratories) to identify potential/suspected HIV/AIDS cases (or confirm no cases). Health department staff review medical records at provider sites or receive information over the telephone or, US mail to establish an HIV/AIDS case and to elicit information for HIV/AIDS case report forms.

AIDS — Acquired Immunodeficiency Syndrome. Most often caused by chronic infection with the human immunodeficiency virus, or HIV, a syndrome diagnosed when the host immune system is depressed or damaged to such an extent that the CD4+ lymphocyte cell count is below 200 cells per microliter, or when an opportunistic infection is present.

Anonymous HIV testing — Testing a person for HIV without the person having to give personal identifying information; all specimens are marked with a code number and cannot be linked to the person. Positive anonymous HIV tests are not reportable. (Compare with Confidential HIV testing)

Antibody — Protein molecule produced by white blood cells to bind up and disable infectious agents, such as viruses and bacteria.

Antigen — Substance such as a virus or bacterium—that provokes an immune (antibody) response when introduced into the body. (See Antibody)

Antiretroviral therapy — Drugs used specifically for the treatment of HIV disease. (See HAART)

As-treated analysis — An analytic approach used in randomized trials where the study outcomes are analyzed based on whether treatment was actually received or completed rather than by the original treatment assignment. Also known as "treatment received".

Asymptomatic — Showing or having no symptoms. (See Incubation period)

Bias — Error not caused by chance in a study that leads to a distorted result.

Blinded study — Study in which subjects are assigned one of the multiple treatments being compared against each other, in such a way that the subjects (single-blind) or both subjects and treating physicians (double-blind) are kept unaware of the actual treatment assigned to them.

CD4 ("helper T") cell Type of white blood cell that oversees the action of the human immune system and is a main target of HIV infection.

Candidiasis Fungus that usually infects the mucous membranes, commonly occurring in the mouth (thrush) or in the vagina (yeast infection). These infections usually result in painful or burning red lesions with or without white spots.

Case Occurrence of the disease or event of interest in a person.

Case-control study Observational study in which subjects are recruited based on the presence (cases) or absence (controls) of the disease of interest. Information is collected about prior exposure to potential risk factors for the disease of interest.

Case fatality rate The proportion of persons with a particular disease who die from that disease, compared with the number of new cases of the disease reported in the same year.

CDC The National Centers for Disease Control and Prevention in Atlanta, GA.

City/area Geographical units that are aggregated from associated census tracts. When a census tract is divided by two or more cities or the U.S. census-defined statistical areas, the whole census tract is arbitrarily assigned to a single city or area that has the highest number of population within this census tract. Therefore, the city/area boundaries on the maps do not reflect the legal boundaries of the city/area.

Chlamydia Sexually transmitted disease (STD) caused by the bacteria *Chlamydia trachomatis*. In men, Chlamydia is characterized by a discharge from the urethra (penis). In women, most will have no symptoms; if left untreated, however, pelvic inflammatory disease (PID) can develop, which can lead to chronic pain or infertility. Chlamydia is curable when treated with appropriate antibiotics.

Cohort Group of persons who share a common attribute such as birth in a particular year – who are followed over time.

Cohort study Epidemiologic study in which a specified population (the cohort) is observed for long enough to calculate reliable disease incidence or mortality rates. Also known as a longitudinal study

Combination therapy Use of two or more drugs to fight infections. Combinations may be more effective in some ways than single-drug treatment.(See HAART)

Commission on HIV — The Los Angeles County Commission on HIV serves as the planning body for Part A of the Ryan White HIV/AIDS Treatment Modernization Act of 2006 in the context of other publicly funded HIV services and programs administered by the Office of AIDS Programs and Policy (OAPP).

Confidence interval (CI) — Range of values for an estimate, such as a proportion or rate, that is believed to contain the true value within a specified level of certainty. For example, "95%CI=2-5" suggests that we have 95% confidence that the true rate lies between 2 and 5. Similar to Confidence Limit.

Confidence limit (CL) — Similar to confidence interval. The values for an estimate, such as a proportion or rate, between which the true value can be found within a specified level of certainty. For example, "95% C.L.=2, 5" suggests that we have 95% confidence that the true rate lies between 2 and 5.

Confidential HIV testing — A person who test for HIV where his or her name is known or given; specimens are marked with a code number, but can be linked to a name. Positive confidential HIV tests are reportable. (Compare with Anonymous HIV testing)

Confounding — Systematic error in a study in which the effect of an exposure on the study outcome is distorted due to the exposure of other factor(s) that also have an influence on the outcome.

Control — Study subject without the disease of interest in a case-control study.

Convenience sample — Sample of study subjects selected without using probabilistic methods needed to obtain a "random sample." Generalizing from the results of a survey based upon a convenience sample is problematic, as there is no way of knowing what sorts of biases may have been operating.

Correctional institution — Prison or jail.

Critical populations — For prevention planning purposes, these are subpopulations within each Priority Population; individuals who are most impacted by the epidemic and who may be at increased risk of acquiring or transmitting HIV.

Cross-sectional study — Study that examines the relationship between diseases and other variables of interest as they exist in a defined population at one particular time—such as a one-time survey.

Crude Mortality Rate	An estimate of the proportion of a population that dies within a given time period. It is calculated by dividing the number of persons dying during the time period by the number of persons living in the time period. (Also called the "Crude Death Rate")
Cumulative	Pertaining to the total number; made up of accumulated parts.
Cumulative incidence	Risk of developing a particular disease within a specified period of time.
Cumulative AIDS	The cumulative number of persons reported with AIDS during a specified period divided by the total population at risk for AIDS at the midpoint of that period.
Death rate	See Crude Mortality Rate.
Demographic	Pertaining to characteristics of a population—such as age, race/ethnicity and gender.
Density map	A map that shows where the highest concentration of features or points, are located.
ELISA test	Blood or oral fluid test which indicates the presence of antibodies to HIV. (See also Western Blot test)
Epidemic	Dramatic increase above the usual or expected rate of occurrence of a particular disease in a population.
Epidemiology	Study of the distribution and determinants of disease in a specified population in order to promote, protect, and restore health in that population.
Exposure	Contact with a factor or behavior that is suspected to influence the risk for a person developing a particular disease.
GED	"General Educational Development" or "General Equivalency Diploma". Test which certifies high school-level academic skills.
Gender	Term or variable to classify persons as male or female. Recent gender categories may now include both male-to-female and female-to-male transgender persons.

Geographical Center The mean center is the average x and y coordinate of all the features in the study area. It's useful for tracking changes in the distribution or for comparing the distributions of different types of features. The geographic mean center for AIDS is a spatial point constructed from the average values of the geographic coordinates (latitude and longitude) for all AIDS cases within a defined area.

Gonorrhea Common sexually transmitted disease caused by the organism *Neisseria gonorrheae*; it is often abbreviated "GC". GC is often used as a surrogate to identify persons at sexual risk for HIV transmission. GC is curable when treated with appropriate antibiotics.

HAART Highly Active Antiretroviral Therapy; Combination of three or more anti-HIV drugs, of which at least one is usually a protease inhibitor.

HARS HIV/AIDS Reporting System; surveillance database containing HIV and AIDS reports.

Hemophiliac A person who has hemophilia, a genetic disorder in which excessive bleeding occurs due to the absence or abnormality of a clotting factor in the blood.

HEP The "HIV Epidemiology Program" of the Los Angeles County Department of Public Health; often called "HIV Epi" for short.

Hepatitis Inflammation of the liver; often caused by viruses, drugs, or other chemicals.

Hepatitis A Called "infectious hepatitis." Form of viral hepatitis caused by the hepatitis A virus (HAV). HAV may be transmitted through oral contact with infected feces (stool) or surfaces and objects recently contaminated with infected feces. Usually causes acute mild illness that resolves within weeks.

Hepatitis B Called "serum hepatitis." More severe form of viral hepatitis caused by the hepatitis B virus (HBV). HBV may be transmitted through contact with infected blood, saliva, seminal fluid, vaginal secretions, and breast milk. Persistent disease, may lead to cirrhosis, liver failure, and/or death.

Hepatitis C Once called "Non-A/non-B hepatitis." Severe form of viral hepatitis caused by the hepatitis C virus (HCV). HCV is most often transmitted through contact with infected blood, but may also be transmitted through contact with other body fluids. HCV may persist for decades, often leading to cirrhosis, liver failure, and/or death.

Hepatocellular carcinoma	Liver cancer. Often associated with chronic hepatitis B or C disease.
HIV	Human Immunodeficiency Virus. Infection with HIV is the cause of or AIDS. (See AIDS)
HIV Epidemiology Program	Los Angeles County program that collects, analyzes, and disseminates HIV/AIDS surveillance and epidemiologic study data essential for the planning, implementation, and evaluation of programs and policies involving HIV and AIDS care, prevention, education, and research in Los Angeles County.
Homophobia	Fear of or discrimination against homosexuals.
IDU	Injection drug user. Person who injects illicit drugs into their body, usually to get high performance enhancement, or for cosmetics purpose.
Immunology	Study of the body's response to foreign organisms and how humans and other animals fight off disease-causing microorganisms, such as viruses and bacteria.
Immunosuppressed	State of the body where immune system defenses do not work normally. This can be the result of an immune deficiency from birth, an illness such as cancer or AIDS, or from the administration of certain drugs.
Incarcerated person	Person who is in prison or jail.
Incidence	Number or proportion of persons in a given population who have developed or acquired a particular disease or condition within a specific period of time.
Incidence rate	Rate at which new events, such as cases of a particular disease, arise in a given population—for instance, the number of new cases diagnosed in one year divided by the population at risk in that same year.
Incidence rate ratio	The ratio of two incidence rates. The incidence rate among the exposed proportion of the population, divided by the incidence rate in the unexposed portion of the population, gives a relative measure of the effect of a given exposure.
Incubation period	Period of time between contact with an infectious agent and the first clinical evidence of illness resulting from that infection. Also latent period.

Independent variables	Variables that are thought to explain or predict an outcome or event.
Infant mortality rate	The rate of the number of deaths in a year among children less than one year old for every 1,000 live births in that year.
Intent-to-treat analysis	An analytic approach used in randomized trials where study outcomes are analyzed based on the treatment assignment rather than whether treatment was actually received or completed.
LAC	Los Angeles County.
Latent period	See Incubation period.
Longitudinal study	See Cohort study.
Marker	Substitute measure, or proxy, for an event or disease that cannot readily be measured by any other method.
Mean	An average of all values.
Median	That value which divides a set of measurable values into 2 equal halves, such that half of all values are above the median, and half are below. For example, the median age of study participants was 35 years.
Methamphetamine	"Meth"; central nervous system stimulant derived from amphetamine that has been shown in studies to be associated with HIV risk behaviors.
Migration	Movement from one area or jurisdiction to another.
MSM	Men who have sex with men, no matter how they identify themselves; By definition, includes MSM/W (see next listing), unless MSM/W are counted separately.
MSM/IDU	Men who have sex with men and who also use injection drugs.
MSM/W	Men who have sex with men and women, no matter how they self-identify.
NIR	No identified risk; cases of HIV or AIDS in which no risk behavior for infection was identified.
Non-named code	Code required by regulation for use when reporting new cases of (before April 2006) HIV infection in California; includes alphanumeric code (based on last name), date of birth, gender, and last four digits of social security number.

Non-gonococcal urethritis (NGU)	Sexually transmitted disease that causes inflammation of the urethra, but is not caused by gonorrhea—most commonly, it is caused by Chlamydia trachomatis. (See Chlamydia)
OAPP	The Los Angeles County Department of Public Health Office of AIDS Programs and Policy (OAPP) was established in 1985 in the Department of Health Services, Public Health. The office directs the overall response to the HIV/AIDS epidemic in Los Angeles County.
Odds ratio	Odds of a person with a disease of interest having a particular exposure divided by the corresponding odds of a person without the disease of interest having the same particular exposure.
Opportunistic Infection (OI)	OIs are diseases caused by agents commonly present in our bodies or environment but only cause illness when the host immune system becomes damaged or depressed—as in AIDS.
Pandemic	Epidemic occurring over a very wide area, crossing international boundaries and usually affecting a large number of people.
Party drugs	Included amphetamine/methamphetamine, cocaine, ecstasy, GHB, or Special K.
Passive surveillance	The health department receives HIV/AIDS case reports from physicians, laboratories, or other individuals or institutions without regularly contacting the reporting sources.
PPC	The Los Angeles County HIV Prevention Planning Committee makes ongoing evidence-based recommendations concerning populations targeted for HIV prevention services, types of prevention services provided, and the equitable distribution of funds to support publicly-funded prevention services in LAC.
Protease inhibitor (PI)	Antiretroviral drug that works by binding to and blocking HIV protease, thus preventing the assembly and release of new infectious viral particles from an infected white blood cell; includes amprenavir, tipranavir, indinavir, saquinavir, lopinavir, ritonavir, fosamprenavir, darunavir, atazanavir, and nelfinavir.
Prevalence	Proportion of persons in a given population who have a particular disease at a specified point or interval of time.

Priority populations	For prevention planning purposes, non-mutually exclusive populations identified to be at risk for HIV infection or transmission; they include: HIV-positive individuals, youth (13-24 years), men, women, transgender individuals, and people who share needles and/or works.
Probability sample	See Random sample.
Proportion	Percentage of a part of the whole to the whole – e.g. 45% of Angelenos are Latino.
Prospective study	See Cohort study.
Random sample	Sample in which all individuals have a precisely defined and equal chance of being selected used ti reduce effects of a bias in selecting a study population.
Rate	Measure of the frequency of a disease in a specified population during a specified period of time; used to compare the impact of a disease on one subpopulation compared with others; also to monitor the impact on groups across time. (Example Incidence rate)
Report delay	Period between the date a reportable disease is diagnosed by a physician and the date that the diagnosis is reported to public health officials; reason why reliable and accurate data sometimes only available after a period of months to years after diagnosis.
Respondent-driven sampling (RDS)	A technique for developing a research sample where exiting study subjects recruit future subjects from among their acquaintances. A mathematical model is used to weight the sample to compensate for the fact that the sample was collected in a non-random way. (See Snowball sampling) For more information, see www.respondentdrivensampling.org.
Risk ratio	Likelihood of a particular disease occurrence among persons exposed to a given risk factor divided by the corresponding likelihood among persons not exposed.
Sample	Subset of a population that is chosen for investigation. (See Convenience sample and Random sample)
Serology	Study of the components and properties of a patient's blood serum—for example, serum antibodies to HIV. (See Seroprevalence)
Seroprevalence	Proportion of a specified population who have antibodies to a particular organism in their blood serum—for instance, HIV.

Seroconvert	Positive blood serum test indicative of HIV infection in a person with a history of having been negative .
Seroreverters	Uninfected infants born to HIV-infected mothers, in which maternal HIV antibodies that were measurable in infant blood at birth disappear over time, thereby reverting to HIV negative.
Serostatus	Status with respect to being seropositive or seronegative for a particular antibody—for example, for HIV.
Service Planning Area	One of eight geographic subdivisions of Los Angeles County established to decentralize public health service administration into regional areas more responsive to local needs.
Sexual risk	Person is said to be at sexual risk for HIV when engaging in sexual intercourse—penile-vaginal, penile-anal, or penile-oral—with a partner who is either HIV-infected or at high risk for being HIV-infected, and without the use of a protective barrier, such as a condom.
Sexually exposed	Exposure to an infectious agent as a result of sexual intercourse with an infected partner.
SIPs	Persons who share injection paraphernalia.
Snowball sampling	A technique for developing a research sample where existing study subjects recruit future subjects from among their acquaintances. Thus the sample group appears to grow like a rolling snowball. As the sample builds up, enough data is gathered to be useful for research. This sampling technique is often used in hidden populations which are difficult for researchers to access.
Social desirability bias	Bias that can arise when individuals answer in a socially acceptable way – the way that "most people" are perceived to respond, or the way that would reflect most favorably on the person.
STD	Sexually transmitted disease; disease spread from one sexual partner to another as a result of sexual activity—usually through sexual intercourse.
Statistical power	Relative frequency with which a true difference of specified size between populations would be detected by the proposed experiment or test.

Statistically significant The finding of an observed difference between two or more samples is described as statistically significant when it can be demonstrated that the probability of obtaining such a difference by chance alone, is low. It is customary to describe one's finding as statistically significant, when the observed result would occur by chance no more than 5 times out of 100.

Superinfection The recent transmission of a new and different strain of HIV to an already HIV-infected person. The risk for the superinfected person is that this new strain of HIV may have a different drug-resistance pattern than their original infection and that this may result in their HIV disease progressing more rapidly.

Surveillance Systematic and ongoing collection and analysis of information about a disease within a population, followed by the timely distribution of that information to those who need to know so that action can be taken.

Synergistic effect Interaction of discrete agents—before for example, antiretroviral drugs, or different viruses) such that the combined effect is greater than the sum of the individual effects.

Syphilis Infectious disease—spread either sexually or from an infected mother to her newborn—caused by the bacterial organism *Treponema pallidum*. Syphilis is curable when treated with appropriate antibiotics.

Transphobia Fear of or discrimination against transgender individuals.

Treatment received See As-treated analysis.

Trichomonas vaginitis STD caused by the one-celled protozoan, *Trichomonas vaginalis*. In women, disease may produce no symptoms or cause a vaginal discharge. In men, infection is usually asymptomatic, but can survive and hide in the male urethra or prostate, allowing for further sexual transmission of the organism. Trichomonas vaginitis often coexists with other STDs, and is curable when treated with the appropriate antibiotic.

Tuberculosis (TB) Disease caused by the highly infectious microorganism, *Mycobacterium tuberculosis*; is spread through the air after spitting and coughing of infected mucus or from ingestion of unpasteurized infected cow's milk. TB is an AIDS-defining opportunistic infection.

Unique identifier	A code used as a substitute for a person's identifying information—such as name, birthdate, and address—and that can be retraced to a unique person. (Compare Anonymous HIV testing and Non-name code)
Unlinked HIV test	Test in which all blood specimens tested for HIV are marked with a code number that cannot be linked to the patient's name. (See also Anonymous HIV testing)
Unrecognized infection	Individuals who are infected with HIV but are unaware that they are HIV-infected.
Urethra	The canal in humans and other mammals that carries off urine from the bladder; in the mammalian male, the urethra also functions as a duct for semen transit during ejaculation.
Venue	In epidemiological research, a place or location for the observation or interviewing of subjects in a study.
Western Blot test	Blood or oral fluid test used to detect HIV antibody; most often used to confirm the results of a positive ELISA test. (See also ELISA test)
Window period	Time period between initial infection with a disease and the time when the antibodies can be measured. In HIV infection, the window period is usually between 2 - 12 weeks after infection.

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APPENDIX B
Technical Notes

1. Population Pyramids (Section II)

The age-sex distribution of a population is an important analysis feature to understand a country's demographic distribution. A good way to illustrate the structure of a population is to graph the number of males and females for various ages. A horizontal bar graph with data for males on the left and females on the right is called a "population pyramid". Vivian Z. Klaff describes age structure models (in Dem-Lab: Teaching Demography Through Computers, 1992 Prentice Hall) that range from an "expansive" population—with a high proportion of children, a rapid rate of population growth, and a low proportion of older people—to "stable" growth (e.g. Latinos in LAC), to "declining" population—with a high proportion of older persons and declining numbers (e.g. Whites). Modified from the Canadian Statistical Reference Centre Web site at: http://www.statcan.ca/english/kits/animat/pyone.htm.

2. Poverty Level (Section II)

Federal Poverty Level is a term referring to a national guideline issued by the Department of Health and Human Services. These guidelines are used for administrative purposes, for example, determining eligibility for federal services. Los Angeles County, as discussed in section II, poses a greater cost of living to residents, and as such, the FPL does not adequately represent the burden of poverty in LAC as compared to regions across the Nation. Thus, a slightly higher rate (125% FPL) is used here to reflect this difference.

3. Mode of Exposure and the redistribution of HIV and AIDS cases with "no identified risk" (Section III/ IV)

Exposure categories are assigned in a hierarchical fashion, so that cases for which more than one exposure category have been identified are assigned to the category listed highest in the hierarchy. For example, a man who reports having sexual contact with another man and also reports having "heterosexual" contact with an HIV-positive woman would be classified as "male-male sexual contact", because that is the highest risk exposure category. The only exposure category that includes two risk exposures is the MSM-IDU category—that is, men who report both sexual contact with another man (MSM) as well as engaging in injection-drug use (IDU). The "Undetermined" exposure category includes persons with no history of exposure to HIV through one of the defined exposure categories. If subsequent case investigation identifies a mode of exposure, the case is reclassified into the corresponding exposure category. For analysis purposes, the number of cases with no identified risk (NIR) is re-distributed into one of the defined exposure categories proportionately, based upon the past pattern of reclassification of undetermined exposure cases.

4. Density Map (Section IV)

Density analysis measures the number of points or features on the map to obtain a clearer distribution of the population throughout the landscape. The basis of the analysis is on measuring the number of features at each location and the spatial relationship of the locations. In order to spread the point values over a surface, a cell size is specified to create a raster output or a matrix of cells. A circular search area is then applied to determine the density value of each cell in the output raster. Although the concentration of features can be seen on any map, density mapping allows one to determine which areas have a higher concentration, and is especially useful when comparing areas that vary in size. There are two methods to calculate density, simple or kernel density. For Figure 4.3, we used kernel density calculation to create a map that has a smoother distribution of persons reported with AIDS. Kernel density calculation allows for a smoother distribution because the magnitude of the points is taken into consideration. In other words, points that are closer to the point location or the center of the search area have a greater magnitude than points at the specified radius. In Figure 4.3, the number of AIDS cases

was smoothed on the density map by averaging this number within a 1.78 mile radius, which is based on a circular search area of 10 square miles. Modified from the ArcGIS Desktop Help 9.2 Web site at: http://webhelp.esri.com/arcgisdesktop/9.2/index.cfm?TopicName=An_overview_of_Spatial_Analyst

5. SPA Maps (Section IV)

The City of Los Angeles is divided into "areas" or geographical units. For Service Planning Area (SPA) maps, each SPA was divided by city/area boundaries. However, the boundaries illustrated on the SPA maps do not reflect the actual boundaries of the cities/areas. Instead, the cities/areas are aggregated from the associated census tracts based on "centroids". A centroid is the geographical center of a census tract. Within each city/area of the SPA, the number of PLWA at the end of 2007 was calculated. Each city/area within the SPA was color shaded according to the number of PLWA. Cities/areas with the darkest shade of color corresponded with the highest number of PLWA.

6. Estimation of population size and HIV prevalence in Priority and Critical Populations (Section V)

To assess the magnitude of HIV and AIDS within each Priority Population, the population size of each Priority Population and their racial/ethnic breakdown were estimated using a variety of sources – including the 2005 American Community Survey, the Los Angeles Health Survey, the 2001 California Consensus Meeting, Office of AIDS Programs and Policy's HIV Counseling and Testing data, Alcohol and Drug Program Administration data, and information from various epidemiological studies. Given the immature status of our HIV reporting system, HIV prevalence was estimated as well. Estimates were based on a CDC-recommended formula to estimate living HIV cases based on the number of persons living with AIDS (1:1 to 1.2:1 ratio of HIV to AIDS cases). Using this formula, we estimated that there were between 56,500 and 62,200 persons living with HIV or AIDS in Los Angeles County in 2007. We also estimated that there were 14,100 to 15,500 persons living in Los Angeles County who were unaware of their HIV infection in 2007.

There are some limitations to the estimates provided in the table, mainly that 1) estimates were calculated prior to the implementation of the Priority/Critical Populations and therefore estimates are not available for all populations; 2) estimates are limited by the data available; 3) some estimates are based on published methodologies while for others published methodologies were unavailable; and 4) these estimates were calculated in 2007 and based on 2005 data, therefore while these estimates may be outdated, they are not thought to change greatly from year to year.

For further information on the methodology used for these populations, contact Trista Bingham at 213-351-8175.

7. Estimation of population size and HIV prevalence in women (Section V)

Based on our algorithm for estimating the number of women at sexual risk among all African American and Latina women, the calculated HIV prevalence estimates for these two groups appear higher than expected. Our methodology for calculating the proportion of women who are at sexual risk across all racial and ethnic groups was determined by women's reported individual behaviors. More realistic population size estimates of women at sexual risk in Los Angeles County should probably take into account the differences in observed HIV/AIDS prevalence of women's heterosexual and bisexual male partners. Assuming that women's sexual exposure is primarily from men of the same racial/ethnic background, future estimates may incorporate this type of information (i.e., the background HIV prevalence of male partners) to produce more realistic HIV prevalence estimates for women.

8. Comparing the odds of infection with TB and HIV for demographic groups (Section VII)
The odds ratio describes the odds a person in one demographic group has of being co-infected with HIV and TB compared with a person in the referent (or comparison) group. Since the odds ratio is a statistical estimate, it is not exact. To account for this inherent error, a "95% confidence interval" is used to give a range of odds within which the "true" odds ratio will be 95% of the time. If the confidence interval does not include 1.0 (or "even odds"), then a person in one demographic group has a "statistically significant" higher or lower odds of being co-infected than a person in the referent group. For example, in Table 7.2, among persons reported with HIV/AIDS, injection drug users have statistically significantly higher odds of being co-infected with TB than do the referent group, MSM, because 1.0 does not fall with the 95% confidence interval of their odds ratio (3.2-4.0).

APPENDIX C
Project Summaries

1. Brothers y Hermanos

2. Causes of Death Unrelated to HIV/AIDS among Persons with AIDS

3. The DAART Study

4. The Medical Monitoring Project

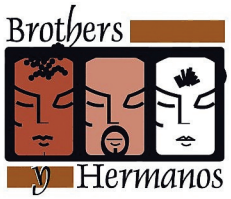
5. National HIV Behavioral Surveillance
   a. LA Men's Survey
   b. Sharps Study
   c. Straight 2 LA Study

6. Social Support Study

7. Supplement to HIV/AIDS Surveillance Project

8. Web-based HIV Behavioral Surveillance

9. Young Men Taking Charge



Brothers y Hermanos: An epidemiologic study of Latino men who have sex with men

Latinos represented an estimated 18% of all new HIV infections in the United States in 2006.[1] In Los Angeles County (LAC), Latinos represent an even higher percentage of those affected by HIV/AIDS—44% of all new AIDS diagnoses and 37% of all living non-AIDS HIV cases in 2007.[2] Male-to-male sex (62%) represents the primary mode of exposure among Latinos diagnosed with AIDS in 2007, followed by heterosexual contact (8%).[2] Given that the LAC population is primarily Latino (47%)[3] and considering that our HIV/AIDS epidemic largely affects men who have sex with men (MSM), it is important to understand HIV risk factors as well as health-seeking behaviors among Latino MSM.

In this brief report, we present findings from a sample of 565 Latino MSM, ages 18 years and older, who were residents of Los Angeles County and were recruited with respondent-driven sampling into the Brothers y Hermanos Study (ByH) in 2005-06. For comparison, we also present socio-demographic data collected from 201 Latino MSM enrolled in the 2004 LA Men's Survey (LMS).

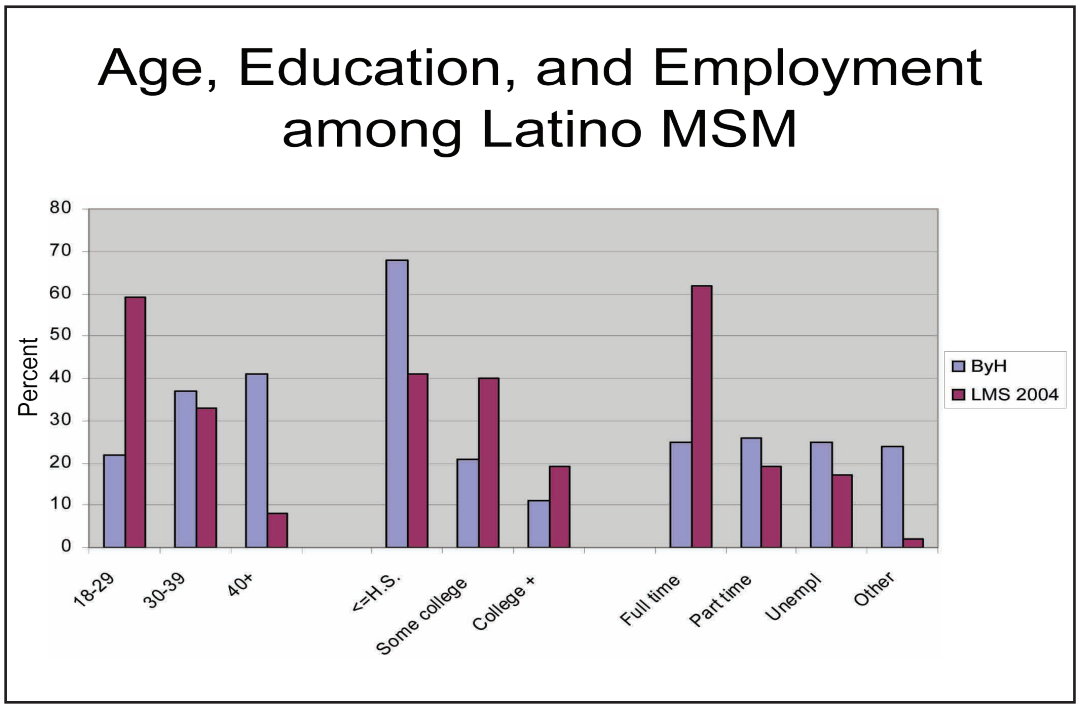


Chart 1

Socio-demographic characteristics and HIV prevalence

Latino MSM enrolled in ByH ranged in age from 18 to 70 years (median: 38 years). Compared with the sample of Latino MSM in the 2004 LA Men's Survey, ByH participants were older, reported lower levels of education and reported lower levels of full-time employment (Chart 1). A large proportion (73%) of ByH participants were born outside the U.S.

ByH participants were less likely to self-identify as gay/homosexual compared with Latino MSM from LMS. Half of all MSM enrolled in ByH disclosed that they were already HIV positive and an additional 5% received an HIV-positive diagnosis at the time of the study interview. This contrasts with only 7% known HIV positives and 8% new HIV-positive diagnoses among Latino MSM in LMS (Chart 2).

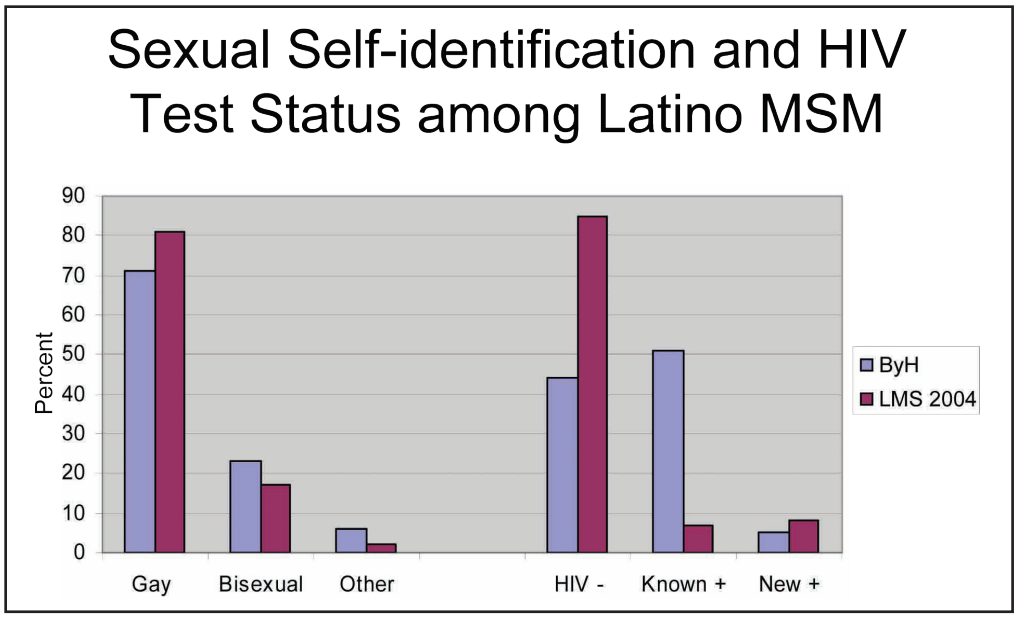


Chart 2

HIV risk characteristics by HIV status

Table 1 shows the prevalence of selected HIV risk behaviors by HIV status for ByH participants. Newly diagnosed HIV-positive men (n=29) reported higher frequencies of unprotected anal sex (UAS) compared with both HIV negative and known positive men. HIV-negative men reported higher prevalence of sex with a female in the past 3 months, lower levels of depression, a higher prevalence of excellent/good perceived health, and a higher frequency of binge drinking compared with known and newly diagnosed HIV-positive men. Nearly 2 out of 5 ByH participants had ever been arrested and nearly 1 out of 2 reported ever receiving an STD diagnosis from a health care provider.

Prevalence of Selected Risk Behaviors by HIV Status

Table 1

Characteristics (3-month behaviors)	HIV negative n=247 %	Known positive n=289 %	New positive n=29 %
Any unprotected anal sex (UAS) with males	51	48	69
Had a main male partner	58	63	72
UAS with main male partner	29	19	45
UAS with casual male partner	37	40	59
Exchange sex	11	9	7
Sex with a female	18	3	3
STD diagnosed by health care provider (ever)	30	67	34
7 or more days of depression in past 3 months	27	34	36
Arrested (ever)	39	42	38
Perceived health status (excellent/good vs. other)	81	67	61
Any non-injection drug use*	46	40	31
Binge drinking (5+ drinks in one sitting)	60	35	38
Crystal use	19	18	11

* Includes use of crystal, cocaine, crack, heroin, marijuana, poppers, ecstasy

Use of alcohol and drugs

Chart 3 shows the prevalence of binge drinking (5 or more drinks in one sitting) and use of selected substances in the past 3 months. Marijuana (24%) was the most commonly reported substance followed by crystal methamphetamine (18%) and cocaine (14%). Binge drinking was reported by over half of the sample of Latino MSM. About a third of ByH participants reported binge drinking at least 2-3 times per month.

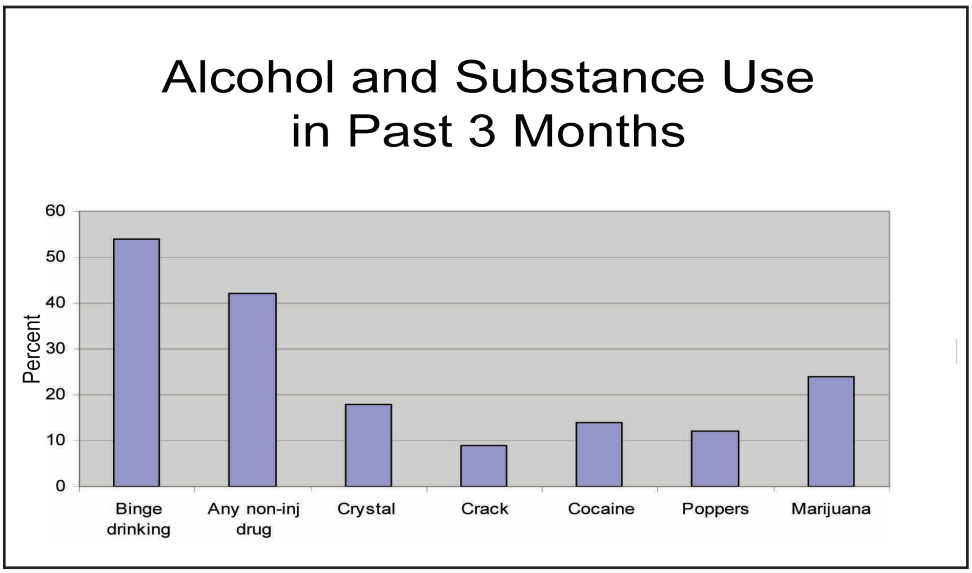


Chart 3

Connection to community and beliefs about homosexual relationships

Most (83%) ByH participants reported feeling connected to the overall Latino community in Los Angeles. About three-quarters felt connected to the gay Latino community and 42% felt connected to the mainstream (White) gay community in Los Angeles. Connection to each of these communities varied slightly by whether participants were U.S. or foreign-born. Compared with foreign-born men, U.S. born participants reported lower levels of connection to the overall Latino and gay Latino communities and a higher connection to the White gay community.

Eighty-four percent (84%) of ByH participants thought that gay marriage should be legal in the U.S. and 79% thought homosexual relationships can be stable and lasting. These beliefs did not vary by U.S. or foreign-born status.

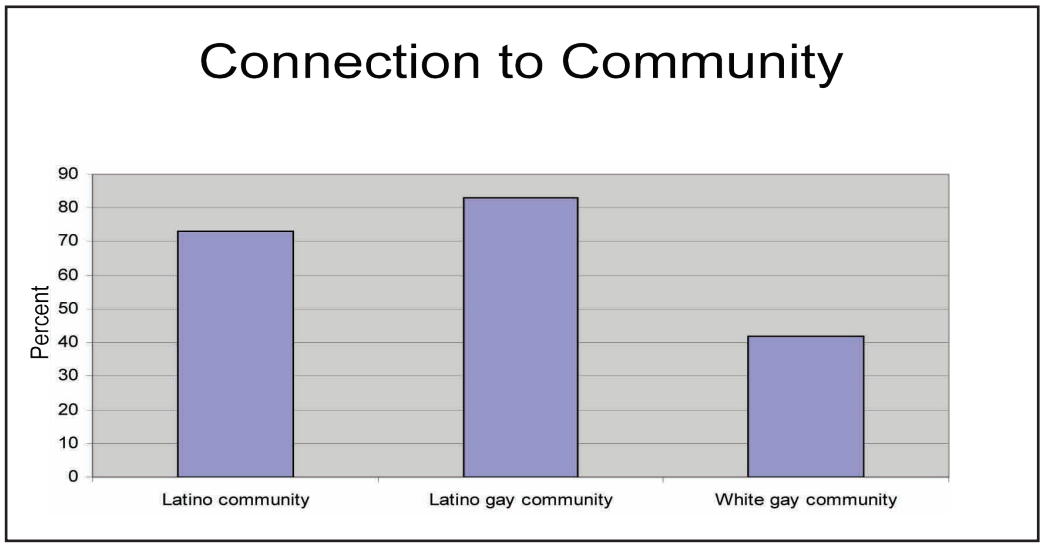


Chart 4

Limitations

Respondent-driven sampling was used in Brothers y Hermanos to produce a population-based sample of Latino MSM. Unfortunately, the sampling method did not work as intended and the study population is more accurately described as a convenience sample of Latino MSM ages 18 years and older in LAC. Estimates of HIV prevalence, for example, were much higher than expected and were likely the result of the community's perception that the study was for HIV-positive men. Men who consented to take an optional HIV test received higher compensation for participation. Because of HIV stigma in the community, men who already knew their HIV-positive status were probably more likely to participate and to refer their social network members.

Conclusions

Data collected for the *Brothers y Hermanos* Study indicate that a high proportion of Latino MSM continue to practice unprotected anal sex practices that put themselves and others at risk for HIV infection. Results also indicate a high prevalence of binge drinking, use of crystal methamphetamine and cocaine. While the sampling method did not allow for a population-based estimate of HIV infection, it showed the feasibility of enrolling large numbers of known HIV-positive Latino MSM for future community-based research investigations.

References

1. Subpopulation estimates from the HIV incidence surveillance system--United States, 2006. *MMWR Morb Mortal Wkly* Rep, 2008. 57(36): p. 985-9.
2. HIV Epidemiology Program, Los Angeles County Department of Public Health. HIV/AIDS Surveillance Summary, January 2009: 1-33.
3. U.S. Census Bureau website: http://quickfacts.census.gov/qfd/states/06/06037.html
4. Respondent Driven Sampling website: http://www.respondentdrivensampling.org/

Causes of Death Unrelated to HIV/AIDS among Persons with AIDS

The number of deaths among persons with HIV/AIDS has been decreasing in the post-highly active antiretroviral therapy (HAART) era. While the lives of persons with HIV/AIDS have been prolonged with HAART, there are also increased concerns of HAART's long term adverse side effects. It is unclear how non-HIV/AIDS-related illnesses have impacted persons with HIV/AIDS in recent years. With an increasing number of persons living with HIV/AIDS, more data on causes of death unrelated to HIV/AIDS are needed to prioritize treatment options and prevention efforts.

We identified a total of 18,149 deaths from 1990 to 2002 among persons reported with AIDS through a record linkage between the HIV/AIDS Surveillance System (HARS) and the death certificate data from Vital Records in Los Angeles County. Among these deaths, 87% (15,706) were related to HIV/AIDS, while 13% (2,443) were not. This proportion of non-HIV/AIDS related deaths had increased significantly, from 10% in pre-HAART era (≤ 1995) to 21% in the post-HAART era ($p<0.007$). Other than HIV/AIDS, the five most common causes of death were malignant neoplasm (22%), major cardiovascular diseases (MCVD; 15%), other infectious or parasitic diseases (14%), unintentional injuries (6%), and suicide (5%). Though proportion of deaths due to other infectious/parasitic diseases and suicide declined significantly from 1990 to 2002 – from 17% to 4% ($p < 0.0001$) and from 8% to 4% ($p = 0.08$), respectively – increasing trends were seen in causes of death due to unintentional injuries and major cardiovascular diseases (CVD) – from 3% to 8% ($p < 0.0001$) and from 8% to 25% ($p < 0.0001$), respectively.

Table 1

Predictors for Major Cardiovascular Diseases in Non-HIV/AIDS Related Deaths - Los Angeles County, 1990 -2002

	Unadjusted OR (95% C.I.)	Adjusted OR* (95% C.I.)
Female	1.0 (0.7-1.5)	0.8 (0.6-1.3)
Race/Ethnicity		
White	1.0	1.0
Black	1.8 (1.4-2.3)	1.9 (1.5-2.5)
Hispanic	1.1 (0.8-1.4)	1.2 (0.9-1.6)
Others	1.1 (0.5-2.2)	1.2 (0.6-2.6)
CD4<200 µl or <14%	1.5 (1.2-1.8)	1.2 (0.9-1.5)
Post HAART (>=1996)	1.9 (1.5-2.4)	1.6 (1.3-2.1)

*Adjusted by gender, age at time of diagnosis, race/ethnicity, age at time of death, category of AIDS diagnosis and pre and post HAART.

Since the introduction of HAART, death due to CVD have played an increasingly significant role as a cause of death among persons with HIV/AIDS, who died of non-HIV/AIDS causes. Non-HIV/AIDS related deaths in post-HAART era were more likely to be from CVD compared to the deaths that occurred in the pre-HAART era (OR=1.6, 95%; CI=1.3-2.1). Blacks were also more likely to die from CVD when compared to Whites (OR=1.9, 95% CI: 1.45-2.51) and Latinos (OR=1.6, 95% CI: 1.2-2.2; Table 1), even when adjusted for age, risk and other factors.

Future studies are needed to assess the potential effect of long term HAART treatment on the cardiovascular wellness among person living with HIV/AIDS. Treatments and prevention programs focusing on chronic illness – such as CVD – will become increasingly important to improve and prolong the lives of persons with HIV/AIDS.

THE DAART STUDY

The DAART study, also known as "A Clinic-Based Evaluation of Three Adherence Models for HAART – Directly Administered Antiretroviral Therapy (DAART), Intensive Adherence Support, and Standard Care," was funded in Los Angeles County (LAC) by the Centers for Disease Control and Prevention from 2000-2005. The DAART project was a randomized intervention trial designed to evaluate three models of adherence support for HIV-infected persons receiving highly active antiretroviral therapy (HAART). The three adherence models included: 1) the standard of care (SOC) model, which is the current practice that included individual adherence-support counseling by the primary provider and pharmacist; 2) an intensive adherence case management program (IACM) in which an HIV-infected patient had at least weekly contact with a trained adherence Case Manager; and 3) the directly administered antiretroviral therapy (DAART) model in which HAART was dispensed in-person by dose with maintenance of a per-dose medication record. The major objective of the DAART project was to determine if the three models of adherence support affect the virologic, immunologic and clinical outcomes of HIV disease. Secondary analyses were also conducted to evaluate the DAART and IACM interventions, healthcare utilization, and the costs associated with healthcare utilization and program delivery.

Methods

Recruitment was conducted at three LAC HIV clinics from 2001-2004. Eligible participants were at least 18 years old, were either treatment-naive or treatment-experienced persons who had failed no more than one prior regimen, and who had initiated a once- or twice-daily HAART regimen within the past six months. In addition, eligible participants were required to either live or work in the study catchment areas and had to agree to have their HAART prescriptions filled by the local study pharmacy if randomized to the DAART arm. DAART and IACM interventions are described in detail elsewhere.[1-4]

All participants completed a baseline survey at enrollment and follow-up surveys at 1, 3, 6, 9 and 12 months. Survey data included information on demographics, psychosocial characteristics, substance use, risk behaviors, HIV testing and care history, and access to care. Program and participant costs were collected from baseline and follow-up surveys, from reports submitted by DAART community workers and IACM case managers and from data reported by program administrators. Clinical data, including HIV-1 RNA levels, CD4 cell count, antiretroviral use, and opportunistic infections, were abstracted from medical records. To assess satisfaction with the interventions, a short survey was administered to participants at the end of the study that used a 5-point Likert scale to measure how strongly participants agreed with nine statements about the specific intervention they received. Two open-ended questions were added to the satisfaction survey to elicit additional feedback from participants on intervention components that they liked the most and liked the least. Participants received quarterly incentives of $25 and weekly incentives valued at $5 for a maximum of $205 over six months.

Results

A total of 250 patients were enrolled in the study from 2001-2004. Of the 250 patients enrolled, 67% were Latino and 21% were Black. Most of the patients were male (74%). The annual income for most patients was less than $10,000 per year (64%). Of the 250 patients, 57% self-reported as heterosexual and 37% self reported as gay/bisexual. The majority of patients were Spanish-speaking (57%). Nearly half of the patients were HAART naïve (46%) at baseline. Most intervention participants were prescribed a twice-daily HAART regimen (90%) with only 10% on a once-daily HAART regimen.

Among patients with limited prior HAART experience, no statistically significant differences were found in viral load, CD4 counts, self-reported adherence or incidence of opportunistic infection in the intervention groups compared with standard of care at 6 months (Table 1).[2]

Study Outcome by Intervention Group

Table 1

Variables	DAART	IAP	SOC	DAART vs. SOC	IAP vs. SOC
Number Enrolled	82	84	84	-	-
No. (%) Completing 6 mths.	65 (79%)	67 (80%)	62 (74%)	p= 0.25	p= 0.15
VL < 400 copies/ml at 6 mths.					
Intent to treat[1]	54%	60%	54%	p= 0.99	p= 0.44
As treated[2]	71%	80%	74%	p= 0.73	p= 0.49
CD4 increase (cells/mm3)	63	78	69	p= 0.91	p= 0.65
100% adherence (last 24 hrs)	97%	93%	94%	p= 1.0	p= 1.0

[1]Intent-to-treat: study outcome is analyzed based on original treatment assignment rather than if treatment was actually completed (see glossary).
[2]As treated: study outcome is analyzed based on whether treatment was actually received rather than original treatment assignment (see glossary).

Primary Outcomes

Participants in IACM experienced significantly fewer hospital days compared with those in SOC (2.3 vs. 6.7 days/1,000 person-days, respectively; Incidence Rate Ratio: 0.34, 97.5% CI: 0.13-0.87). Participants in DAART had significantly more outpatient visits than those receiving SOC (44.2 vs. 31.5/1,000 person-days; Incidence Rate Ratio: 1.40; 97.5% CI: 1.01-1.97).

Average per-participant health care utilization costs were $13,127, $8,988 and $14,416 for DAART, IACM and SOC, respectively. Incremental six-month program costs were $2,120 for DAART and $1,653 for IACM participants. The average net program cost (subtracting savings in health care utilization from program costs) was $831 per participant to provide DAART, while providing IACM resulted in an average savings of $3,775 per participant.[5]

Both the DAART and the IACM interventions were feasible to implement in clinical settings and acceptable to patients.[1,3,4] Latinos were more likely to complete the DAART intervention compared to patients of other race/ethnicities (OR=4.76, 95% CI=1.38, 16.44, p=0.01), while no difference was seen in completion rates by race/ethnicity for IACM. In addition, foreign-born participants were more likely to complete DAART than U.S.-born participants (OR=3.38, 95% CI= 1.11-10.22, p=0.03), however these differences were not seen in IACM. Satisfaction with the intervention was high among patients in both DAART and IACM arms of the intervention. Among participants in IACM, a large proportion of case management goals and referrals were completed; however, there was no improvement in self-reported adherence to HAART compared to SOC.

Conclusions

These data represent the results from the first randomized control study of a directly administered antiretroviral therapy and an intensive adherence support program in a community-based clinic population to examine virologic and immunologic outcomes. No differences were observed in virologic or immunologic outcomes for patients participating in a DAART or an IACM intervention at six months compared to SOC at three public HIV specialty clinics in LAC. The likely explanation for the absence of a virologic or immunologic effect of the interventions is that the adherence support provided by the study clinics and other sources adequately addresses the adherence needs of patients.

While no differences were seen in virologic, immunologic outcomes or self-reported adherence for patients participating in the three intervention arms, participants in DAART attended more outpatient visits and IACM participants had shorter hospital stays compared to SOC, suggesting that these interventions may impact health care utilization in ways other than medicine adherence. In addition, compared to SOC, IAP was cost-saving, demonstrating the utility of this type of intervention without a decrease in clinical outcomes, at least at 6 months.

The utility of IACM was also demonstrated here with completion of a large proportion of case management goals and referrals, as well as high participant satisfaction among those completing the intervention.

Although DAART was associated with higher attendance to outpatient visits, it was not associated with improved adherence or better clinical outcomes. A DAART intervention is likely to be most effective among persons with known adherence problems but is probably not necessary for a general clinic population with adequate adherence to HAART.

These data can be used to inform the further development of interventions to support adherence to HAART and to HIV care among public HIV clinic populations.

Publications from DAART

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2. Wohl AR, Garland WH, Valencia R, et al. A randomized trial of directly administered antiretroviral therapy and adherence case management intervention. *Clin Infect Dis*. Jun 1 2006;42(11):1619-1627.
3. Garland WH, Wohl AR, Valencia R, et al. The acceptability of a directly-administered antiretroviral therapy (DAART) intervention among patients in public HIV clinics in Los Angeles, California. *AIDS Care*. Feb 2007;19(2):159-167.
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5. Sansom SL, Anthony MN, Garland WH, et al. The costs of HIV antiretroviral therapy adherence programs and impact on health care utilization. *AIDS Patient Care STDs*. Feb 2008;22(2):131-138.

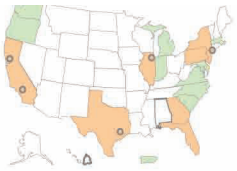
The Medical Monitoring Project

The Medical Monitoring Project (MMP) is an expanded surveillance project sponsored by the Centers for Disease Control and Prevention (CDC) in collaboration with 26 state and local health departments (including Los Angeles County). MMP was designed in 2005 to address the need for a nationally representative, population-based supplemental surveillance system to assess clinical outcomes, behaviors and the quality of HIV care among HIV/AIDS patients receiving care in the United States. MMP's objectives are to:

- Provide local and national estimates of risk behaviors and clinical outcomes for persons in HIV care
- Describe health-related behaviors
- Increase knowledge of care and treatment provided
- Determine accessibility and use of prevention and support services
- Identify met and unmet needs for HIV care and prevention services to inform prevention and care planning groups, health care providers, and other stakeholders

Sampling

MMP uses a 3-stage sampling design. In the first stage, CDC selected 20 state and 6 local health departments to participate. In the second stage, 25-30 outpatient HIV care providers in each project area are sampled using probability proportional-to-size sampling. AIDS prevalence data is used to ensure that states and providers with the largest number of patients in care for HIV/AIDS have a higher likelihood of being included in the study. In the third stage, 400 patients age 18 years and older are sampled from the selected provider sites. An interview and medical record review are then completed on these selected patients. Facility and provider information are also collected to supplement the patient-level data. A new sample of providers and patients are selected each year.



1st stage – State Level:
26 Project Areas

2nd Stage – Facility Level:
>1,000 Facilities
(25-30 per project area)

3rd Stage – Patient Lev
>10,000 Patients
(~400 per project area

Data Collection

Informed consent is obtained from all patients and they are reimbursed for their participation. The questionnaire collects data on patient demographics, access to health care, treatment and adherence, sexual behavior, drug and alcohol use, access to prevention services, unmet needs, health and well-being, and social support. Data abstracted from the patients' medical record includes insurance status, opportunistic illnesses, health conditions, screening and immunizations, antiretroviral therapy and other medications, laboratory data (such as CD4 count and viral load), substance abuse, mental health and social service referrals.

Preliminary Findings

MMP data were collected in 2007 and 2008. A total of 471 patients have participated as of April 2009. Although the participation rate (40%) is low due to challenges in locating patients, most demographic and clinic characteristics do not differ significantly between participants and non-participants. Participants were more likely to: have an AIDS diagnosis (OR=1.70, 95% CI=1.13-2.61), be older at HIV diagnosis (mean=35 yrs vs. 33 yrs, p=0.04), and have fewer years between HIV infection and AIDS diagnosis (mean=2.8 yrs vs. 4.4 yrs, p=0.04).

Demographic Characteristics

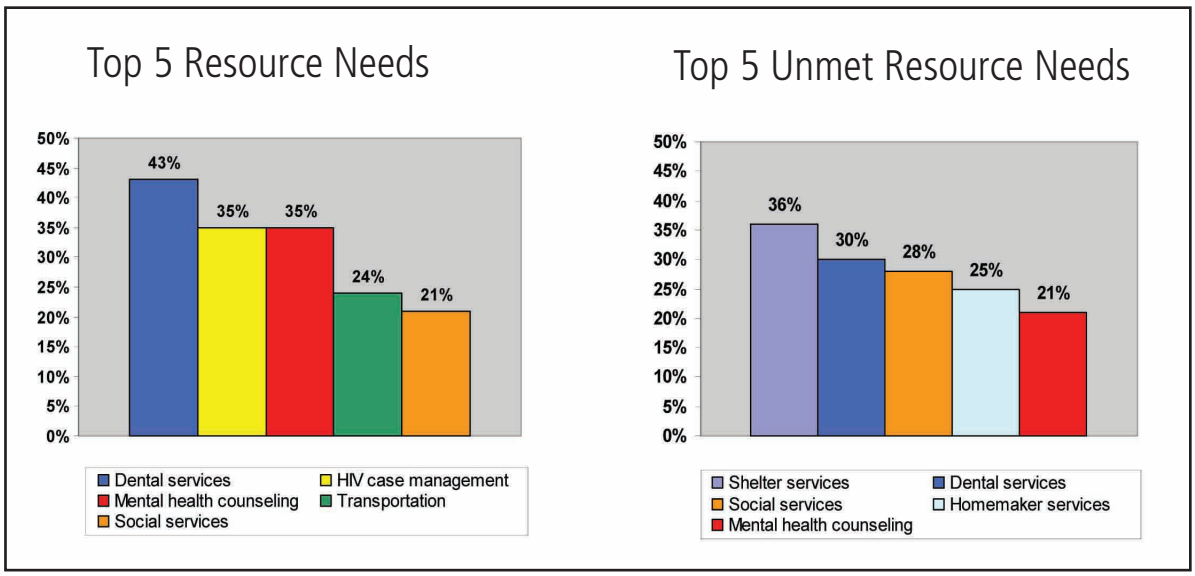
Participants were predominantly male (86%), 12% female and 2% transgender. Patients were White (40%), Hispanic (37%), Black (12%), Asian/Pacific Islander/American Indian/Alaska Native (2%) and other (15%). Twenty-nine percent of the interviews were completed in Spanish. The majority of patients identified as gay (64%), followed by heterosexual (26%), bisexual (9%), and other (1%). The average age was 43 years. One-third (29%) had a household income of less than $10,000 per year, 51% were unemployed, and 20% had less than a high school education. Approximately 7% were homeless or in transitional or temporary housing, but 83% had access to basic necessities (e.g. refrigerator, stove, heating, bathroom) at their place of residence. Approximately 15% of patients reported a history of injection drug use and 59% reported non-injection drug use (NIDU), including alcohol, in the past 12 months. MSM had 2.4 times the odds (CI=1.02-5.75) of NIDU compared with non-MSM respondents.

Medical Care and Treatment Characteristics

While nearly all patients reported having one usual place to go for medical care (99%), 40% reported having no health insurance in the past 12 months. Preliminary analyses indicate that patients who are not in regular care for HIV (defined as fewer than 2 primary care visits in 9 months) were more likely to be younger (p<0.01) and without an AIDS diagnosis (OR=0.58, 95% CI=0.36-0.92). Among those with AIDS, patients who are not in regular care for HIV have a higher mean number of years (>3 years vs. 0-3 years) between an HIV and AIDS diagnosis (OR=0.37, 95% CI=0.17-0.80).

Resource Needs

Patients reported dental services, HIV case management, mental health counseling, transportation and social services as the top resource needs. Patients were also asked about services needed that they were not able to obtain. The top 5 unmet resource needs were shelter services, dental services, social services, homemaker services, and mental health counseling.



Further data analyses are being conducted and results will be disseminated in future presentations and publications.

Presentations

Rhodri Dierst-Davies R, Tejero J, Acholonu U, Wohl A. Characteristics of HIV Patients in Intermittent vs. Regular Care among a Representative Sample in Los Angeles County Poster presentation at the American Conference for the Treatment of HIV (ACTHIV), Denver, Colorado, 2009.

Tejero J, Dierst-Davies R, Acholonu A, Wohl A. Factors Associated with Intermittent HIV Care among a Representative Sample in Los Angeles County, California. American Public Health Association (APHA) 137th Annual Meeting and Exposition, Philadelphia, PA, 2009.

National HIV Behavioral Surveillance: LA Men's Survey

LA Men's Survey

Among all behavioral risk groups, men who have sex with men (MSM) continue to bear the greatest burden of the HIV epidemic in the United States.[1] In 2006, 53% of all new estimated HIV cases in the U.S. were attributed to male-to-male sexual transmission.[2] In Los Angeles County (LAC), 67% of persons living with non-AIDS HIV by 2008 were among MSM.[3] Furthermore, recent national surveillance data indicate that MSM are the only risk group with increasing HIV incidence since 2000.[2] In 2003, LAC HIV Epidemiology Program HEP was funded by the Centers for Disease Control and Prevention (CDC) to monitor the prevalence and trends in HIV risk and prevention behaviors among important risk populations as part of National HIV Behavioral Surveillance (NHBS). NHBS began in LAC with the recruitment and enrollment of MSM and was known locally as the LA Men's Survey (LMS).

LA Men's Survey 2004

Beginning in December 2003, the first cycle of LMS enrolled MSM into an anonymous, cross-sectional survey using venue-based or time-space sampling. By December 2004, a total of 1,423 MSM were recruited during 197 "sampling" events throughout LAC. During the last four months of the survey period, 507 (77%) of enrolled MSM consented to anonymous rapid or standard HIV testing and counseling at the time of their interview.

LA Men's Survey 2008

Between August and November 2008, the LMS team enrolled 537 MSM at 55 sampling events conducted at public venues and social settings throughout the County. Ninety-one percent (91%, n=486) of 2008 LMS participants who were offered rapid HIV testing and counseling consented to an anonymous test.

This brief report will describe and compare the socio-demographic, behavioral, and prevention characteristics of participants of the first two cycles of the LA Men's Survey. HIV testing characteristics are presented for the 507 and 486 MSM who accepted HIV testing in 2004 and 2008, respectively.

Socio-demographic characteristics

Study populations recruited in the first two cycles (2004 and 2008) of LMS were similar in terms of age, race/ethnicity, education, and sexual orientation. Chart 1 displays their age and racial/ethnic distributions. Chart 2 compares educational attainment and self-reported sexual orientation of each LMS cycle.

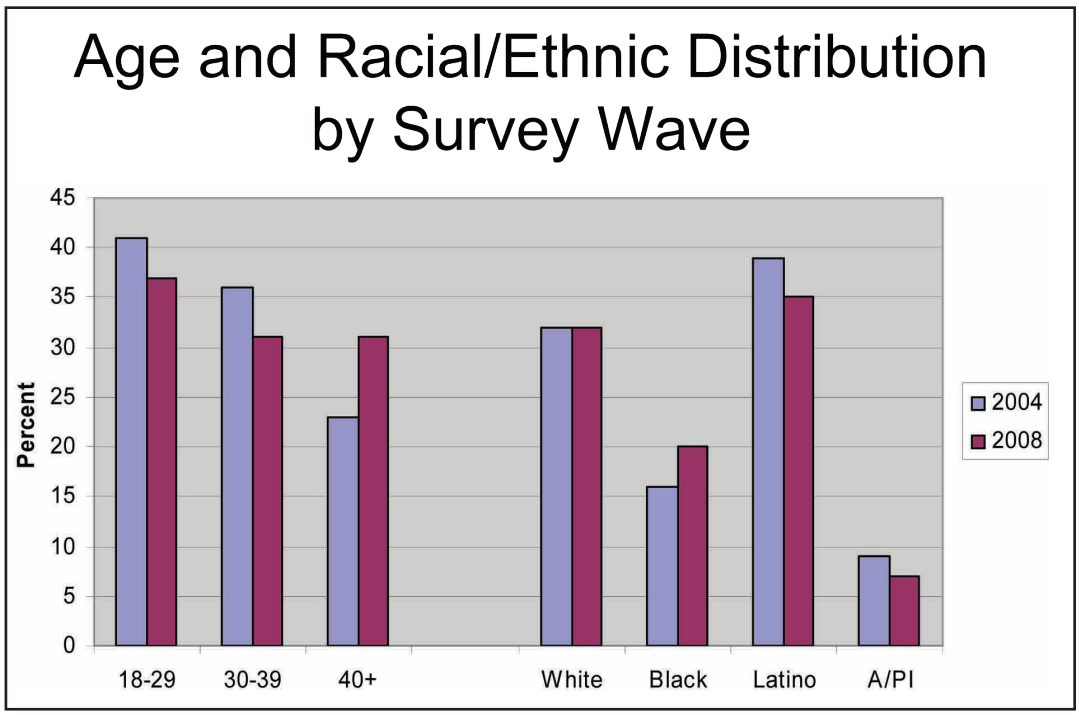


Chart 1

Employment characteristics for LMS 2004 and 2008 were similar. LMS 2008 data indicated that 63% of the sample was employed full time, 13% part-time, 11% unemployed, and 13% other. While a question on income was not included in the LMS 2004 survey, 27% of MSM enrolled in the 2008 sample earned less than $20,000 per year.

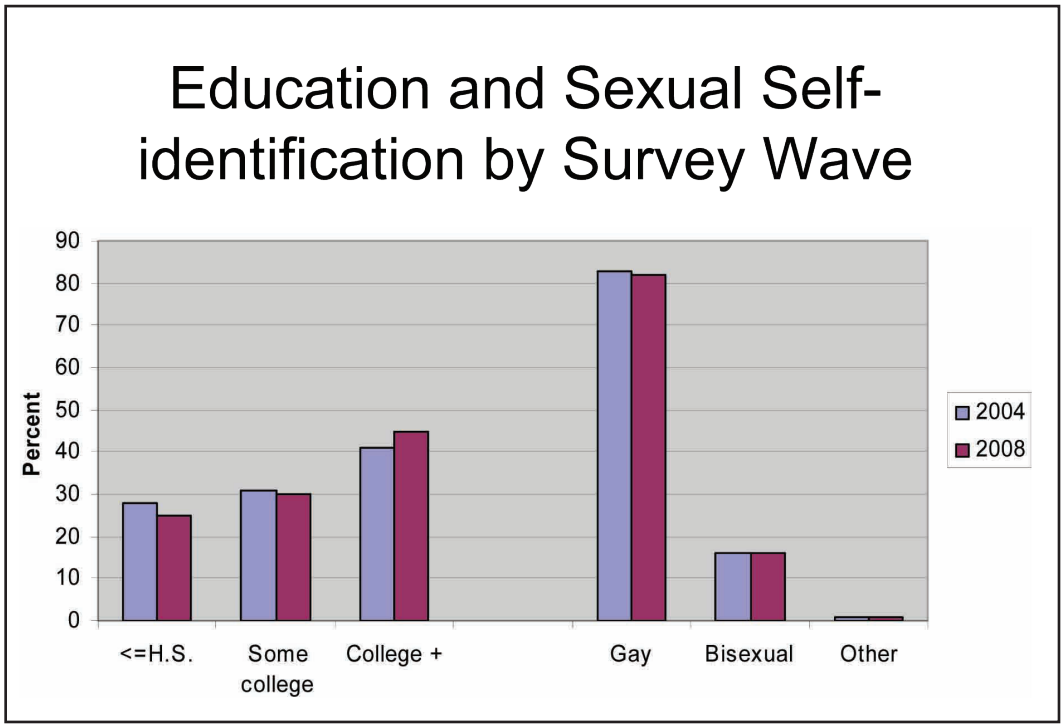


Chart 2

Behavioral characteristics

Recent national HIV surveillance reports indicate that MSM between 13 and 29 years of age account for 38% of new infections among MSM.[4] Table 1 presents recent sexual HIV-risk behaviors reported by LMS participants stratified by age group (18-29 years versus 30+ years) and survey cycle (2004 and 2008).

Table 1

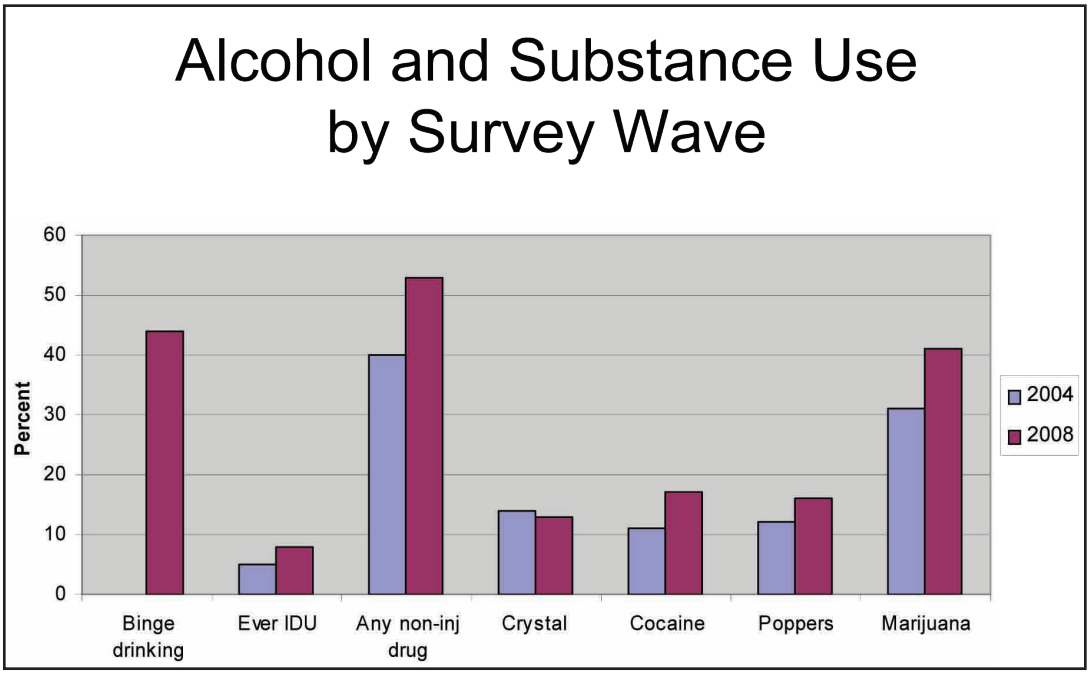
Recent Sexual HIV Risk Behaviors by Age Group and Survey Cycle

Sexual Behaviors	LMS 2004		LMS 2008	
	18-29 yrs	30+ yrs	18-29 yrs	30+ yrs
Any UAS* with males in past 12 months	52%	45%	62%	49%
>5 male partners in past 12 months	32%	38%	28%	35%
UAS at last sex (main partner)	32%	21%	22%	12%
UAS at last sex (casual partner)	11%	14%	8%	11%
Substance use at last sex (main partner)	14%	13%	13%	12%
Substance use at last sex (casual partner)	26%	23%	23%	29%
Sex with females in past 12 months	16%	11%	12%	10%
STD diagnosis in past 12 months	7%	5%	14%	9%

* Unprotected insertive or receptive anal sex.

Chart 3 displays alcohol and drug use reported in the past 12 months by survey cycle. Data on binge drinking (i.e. 5 or more alcoholic drinks per sitting in the past 30 days) was not included in LMS 2004.

Chart 3



HIV testing characteristics

HIV prevalence among those who accepted HIV testing was similar across survey cycles and HIV prevalence by age group (Chart 4) and race/ethnicity (Chart 5) across both survey cycles show little change. The prevalence of previously undiagnosed HIV infection, however, was different between waves: 45% in LMS 2004 compared to 36% in LMS 2008.

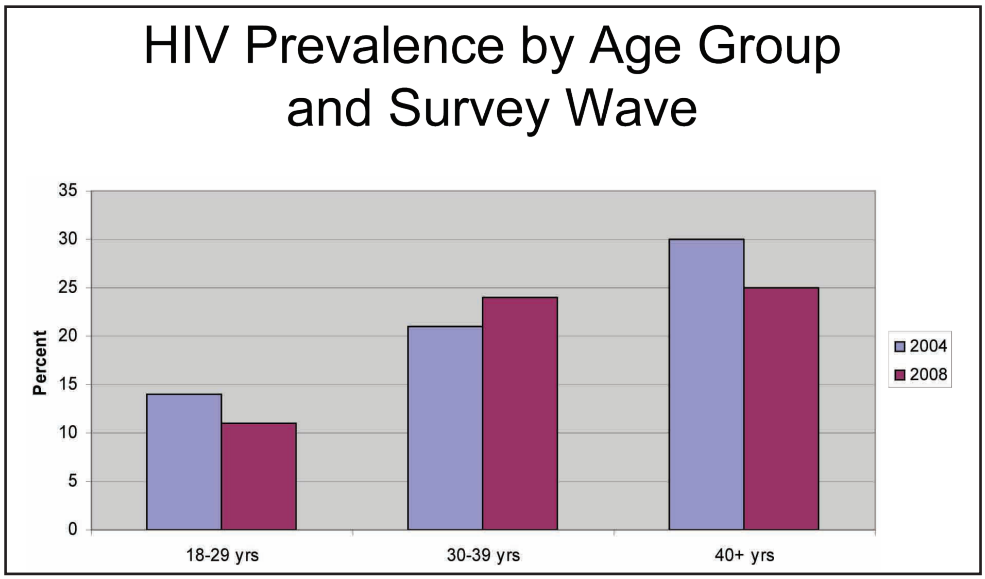


Chart 4

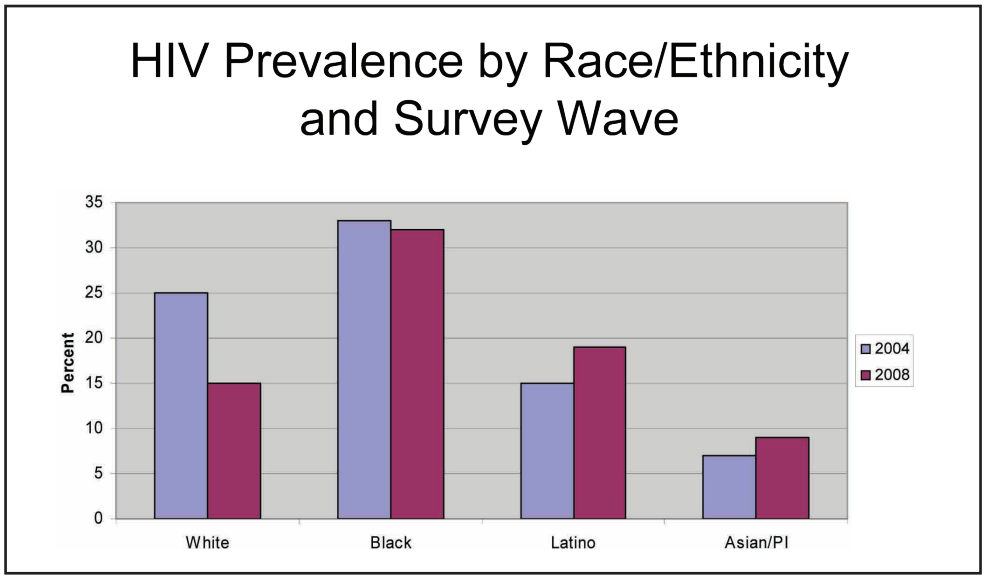


Chart 5

Exposure to HIV prevention resources

Small proportions of LMS participants report involvement in either individual or group level HIV outreach or interventions in the past 12 months. Ten percent of LMS 2004 participants reported some type of one-on-one discussion with an outreach or prevention worker in the past 12 months compared to 13% of LMS 2008 participants. Exposure to group-level interventions showed an increase across survey cycle—5% of LMS 2004 participants attended a group session to discuss HIV prevention compared with 12% of LMS 2008 participants.

Conclusions

The prevalence of important HIV-related risk behaviors reported by LMS participants were similar in 2004 and 2008. Tested HIV prevalence varied by survey cycle, with minor fluctuations by age group and among White MSM. These fluctuations may be due to sampling biases and do not necessarily indicate changes in HIV incidence or prevalence over time. We observed a lower prevalence of unrecognized HIV infection, especially among Black participants in 2008 compared with 2004. Finally, we observed some evidence of stable crystal methamphetamine use and an increase in powder cocaine in 2008 compared with 2004.

References

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2. Hall, H.I., et al., Estimation of HIV incidence in the United States. *JAMA*, 2008. 300(5): p. 520-9.
3. HIV Epidemiology Program, Los Angeles County Department of Public Health. HIV/AIDS Surveillance Summary, January 2009:1-33.
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National HIV Behavioral Surveillance: Sharps Study

HIV prevalence among injection drug users (IDU) has dropped in the Los Angeles area from 5.6% in 1992 to 3.8% in 2002.[1] However, IDU persist as a high-risk population for HIV infection with 12% of new HIV infections in the United States in 2006 attributed to injection drug use as the mode of transmission.[2] In this summary, data from the *National HIV Behavioral Surveillance* (NHBS-IDU) study, known locally as the *Sharps Study*, are presented. The purpose of the *Sharps Study* is to collect cross-sectional survey data on HIV risk behaviors, once every three years, from adults residing in Los Angeles County LAC who have injected illicit substances in the previous 12 months. In this first cycle, we used respondent-driven sampling (RDS) to enroll 544 study participants between June and December 2005.

Socio-demographic characteristics

The median age of *Sharps Study* participants was 49 years (female median=45; male median=50). The majority of the study participants were male (72%). The study sample was composed of 44% Latinos, 24% Blacks, 24% Whites, 5% American Indians/Alaska Natives, 3% Multi-racial/Other, and 1% Asian/Pacific Islander participants (Chart 1).

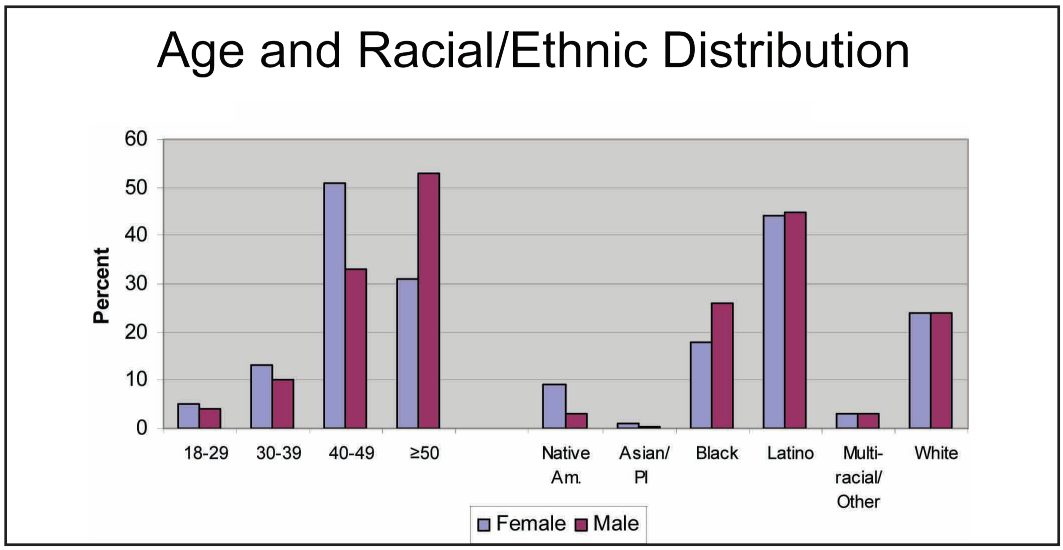

Chart 1

Eighty-seven percent (87%) of participants identified as heterosexual, 10% as bisexual, and 3% as homosexual. Eighty-eight percent (88%) of the participants earned less than $20,000 annually. Thirty-eight percent (38%) reported less than a high school education, 33% reported a high school diploma or GED, and 29% had some college or a technical degree, bachelors or graduate degree. Chart 2 displays differences between male and female participants. Females reported lower levels of education compared with males.

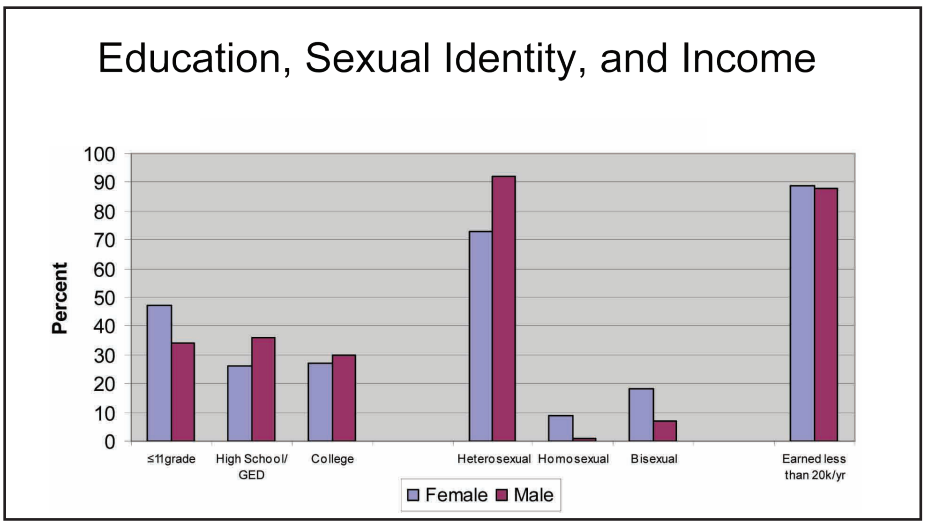

Chart 2

Injecting Risk Behaviors

Sharing needles in the past 12 months was reported by 75% of Sharps Study participants. Furthermore, 75% reported sharing cookers, cotton or water and 42% had used a syringe to divide drugs in the past 12 months. Chart 3 displays where participants obtained syringes in the past 12 months. Though not shown here, prevalence of needle sharing and other injecting behaviors was similar for male and female participants.

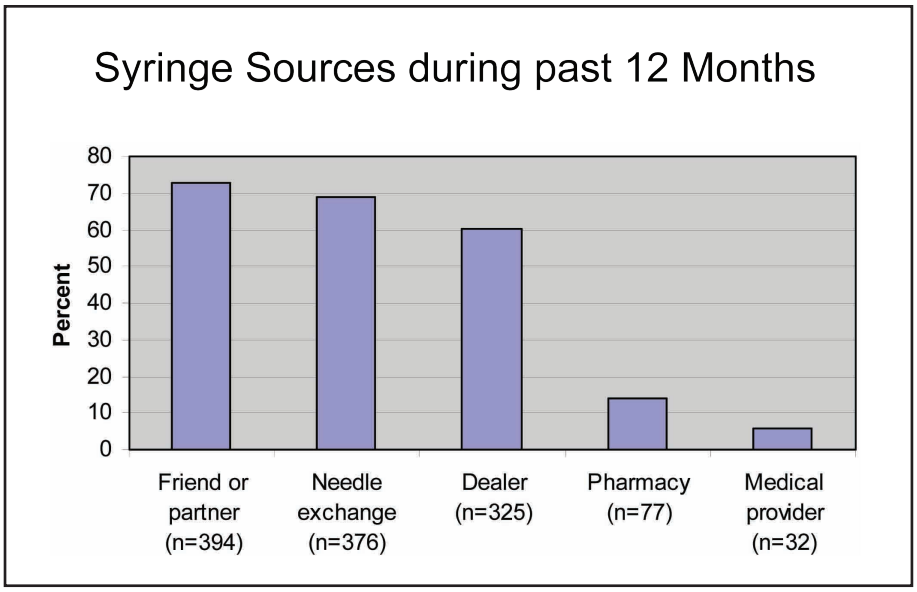

Chart 3

Sexual Risk Behaviors

Male and female IDU reported similar levels of sexual risk behaviors. Sixty-seven percent (67%) of the total sample reported any unprotected vaginal or anal sex in the past 12 months (Table 1). Females reported similar levels of exchange sex as males (29% versus 24%, respectively). Eighty-one percent (81%) of the IDU reported using alcohol or any type of drugs before or during sex. More females reported having an STD in the past 12 months compared with males (9% versus 3%).

Sexual Risk Behavior by Gender

Table 1

Characteristics (12-month behaviors)	Male (n=394)		Female (n=150)	
	Number	Percent	Number	Percent
Unprotected Vaginal Sex	261	66%	102	68%
Unprotected Anal Sex				
with female partner	61	16%	—	—
with male partner	10	3%	24	16%
Any Unprotected Sex	264	67%	102	68%
Exchange Sex	95	24%	44	29%
Alcohol or drug use during or after sex	320	81%	122	81%
STD	13	3%	14	9%

HIV testing and prevention services among IDU

Few IDU (5%) had never been tested for HIV. We did not conduct HIV testing during this cycle of the *Sharps Study*. Self-reported HIV prevalence was 1.8%. Study participants reported where they had received their most recent HIV test: 24% in a drug treatment program; 23% at a public clinic; 18% in a correctional facility; 14% at a mobile unit or HIV testing site; 6% in a hospital or emergency room and 16% at another site. The majority of participants had received free condoms (60%) and free sterile needles (68%) in the past 12 months. Twenty percent (20%) reported that they had received one-on-one HIV prevention counseling and 9% had participated in a group HIV prevention session in the past 12 months.

Conclusions

Drug-use and sexual risk behaviors were similar among male and female IDU. Despite a high number of IDU who received free condoms and sterile needles in the past year, IDU in Los Angeles remain at risk for HIV infection based on their high reported prevalence of unprotected sexual and needle-sharing behaviors.

References

1. Tempalski, B., et al., HIV prevalence rates among injection drug users in 96 large US metropolitan areas. *J Urban Health*, 2009. 86(1): p. 132-154.
2. Hall, H.I., et al., Estimation of HIV incidence in the United States. *JAMA*, 2008. 300(5): p. 520-9.

National HIV Behavioral Surveillance: Straight 2 LA Study

Heterosexual contact accounts for 31% of new HIV infections in the United States.[1] High-risk heterosexual contact is the most common mode of transmission for women and accounted for 80% of new HIV infections in women in 2006.[2] Los Angeles County (LAC) participates in the National HIV Behavioral Surveillance (NHBS) effort to monitor the prevalence of and trends in HIV risk behaviors and exposure to HIV prevention services among heterosexuals living in high-risk areas (NHBS-HET). Known locally as the "Straight 2 LA Study", we collected data for this summary between November 2006 and October 2007 using respondent-driven sampling. We recruited a total of 930 heterosexual males and females residing in LAC neighborhoods with disproportionately high rates of poverty and AIDS morbidity and mortality. This summary excludes participants who reported injection drug use within the past 12 months (n=137) for a final study population of 793 heterosexuals.

Socio-demographic Characteristics

The median age of NHBS-HET participants was 29 years. The racial/ethnic distribution was similar for males and females with the majority of the sample being African American or Black (75%), followed by Latinos (16%) and Multi-racial/Other (9%), with White, Native American and Asian/Pacific Islander all less than 1% (Chart 1).

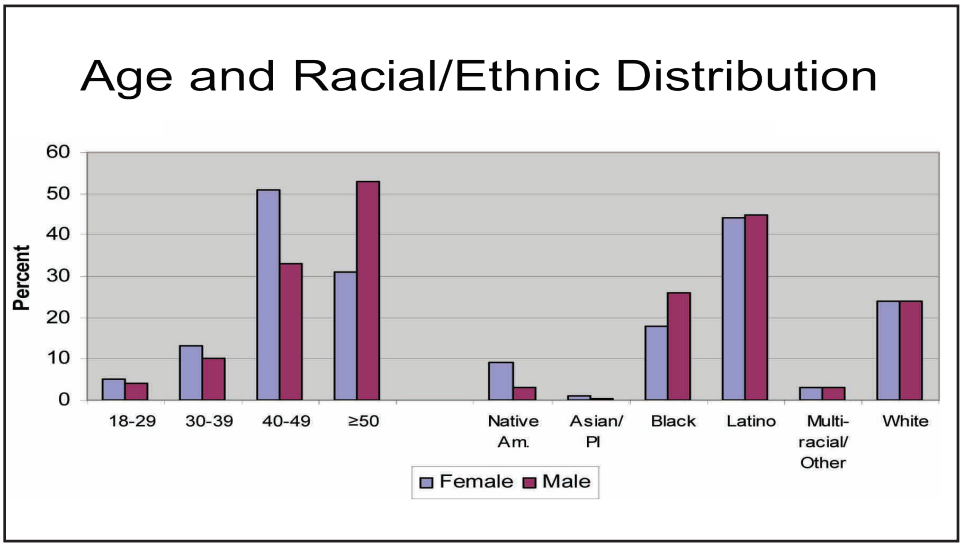

Chart 1

Educational attainment was similar for males and females – 29% had attended 11th grade or lower, 45% had earned a high school diploma or GED, and 27% had at least some college. Twenty-six percent of participants had ever been homeless. More women than men earned less than $20,000 a year (84% versus 75%). Sexual identity varied by gender – 91% of males and 75% of females identified as heterosexual, <1% of both males and females identified as homosexual, and 8% of males and 25% of females identified as bisexual (Chart 2).

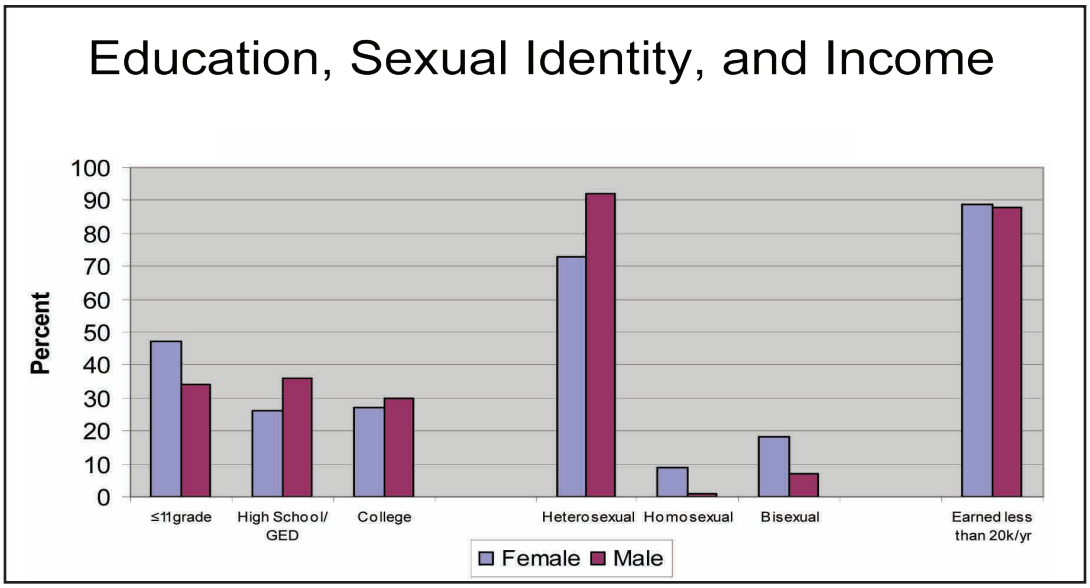

Chart 2

HIV Testing and Prevention

We offered HIV counseling and testing during the data collection session. Almost all (99.5%) of our participants consented to an OraSure HIV test. HIV prevalence was 1.4% for males (4 HIV+) and 0.4% for females (2 HIV+) in the study. All males who were HIV+ identified as bisexual. One HIV+ female identified as heterosexual, while the other HIV+ female identified as bisexual. More females reported ever having been tested for HIV compared with males (78% versus 55%). Forty-five percent (45%) of the 793 study participants with a previous HIV test received their last test at a public clinic, 25% at a private doctor, 10% at a mobile unit or HIV testing center, 9% at a correctional facility, 8% at another location and 4% at a hospital or emergency room. Twenty-four percent (24%) received free condoms in the past 12 months. Six percent (6%) of participants reported attending one-on-one HIV prevention counseling in the past 12 months and 4% had attended a group HIV prevention session in the past 12 months.

Sexual Risk Behaviors

Most study participants reported unprotected vaginal sex within the past 12 months (92%), while 75% of participants reported unprotected vaginal sex with their most recent sexual partner. Thirty-four percent (34%) of study participants reported unprotected heterosexual anal sex in the past 12 months and 11% reported unprotected heterosexual anal sex with their most recent sexual partner. Fourteen percent (14%) of men reported ever having oral or anal sex with another male; 10% reported having oral or anal sex with another male in the past 12 months. A higher proportion of women reported an STD in the past 12 months compared with males (14% versus 8%). Forty-six percent (46%) of males and 59% of females reported no substance use (drugs or alcohol) before or during last sex. Table 1 displays the sexual risk behaviors for NHBS-HET participants by gender.

Table 1

Sexual Risk Behavior by Gender

HIV Risk Behaviors	Male n (%)	Female n (%)
Total	290 (100)	503 (100)
In Past 12 months		
Unprotected Vaginal Sex		
with a main partner	182 (63)	356 (71)
with a casual partner	137 (47)	223 (44)
with an exchange partner	28 (10)	76 (15)
Unprotected Anal Sex		
with male partner	17 (6)	177 (35)
with female partner	91 (31)	---
Any Unprotected Sex	263 (91)	468 (93)
Exchange Sex	46 (16)	101 (20)
STD	22 (8)	69 (14)
Mean (median) number of partners		
male partners	2.7 (1.5)	8.1 (3)
female partners	8.7 (4)	1.3 (0)
At Last Sex		
Unprotected Vaginal Sex	194 (67)	397 (79)
Unprotected Anal Sex		
with male partner	14 (5)	60 (12)
with female partner	27 (9)	---
Any Unprotected Sex	198 (68)	400 (80)
Exchange Sex	19 (7)	44 (9)
Alcohol before or during sex	63 (22)	104 (21)
Drugs before or during sex	26 (9)	19 (4)
Drugs or alcohol before or during sex	69 (24)	83 (17)

Conclusions

Low levels of vaginal sex with consistent condom use and evidence of males' sexual bridging between male and female partners indicates that high risk for HIV infection exists in this population. Additionally, there was low exposure to HIV prevention in this population including one-on-one counseling, group sessions and free condoms.

References

1. Hall, H.I., et al. Estimation of HIV incidence in the United States. *JAMA*, 2008. 300(5): p. 520-9.

2. Centers for Disease Control and Prevention. HIV/AIDS Surveillance Report. Department of Health and Human Services, Centers for Disease Control and Prevention, 2007. 19: p. 1-63.

Social Support Study

The Social Support Study was funded in 2005 by the California HIV/AIDS Research Program (CHRP) to evaluate how social support, stress, and social networks influence individuals' retention in HIV care. A growing body of literature highlights the potential links between social support and the health status of people with chronic illnesses; however, few studies have quantitatively examined the impact of social support, stress and social network characteristics on retention in HIV treatment among low-income Latinos and Blacks. The objectives of the Social Support study were:

1. To describe the retention patterns in HIV treatment among publicly insured Latinos and Blacks with HIV infection in Los Angeles County (LAC);
2. To describe and evaluate the potential roles of formal and informal social networks in promoting retention in HIV treatment; and
3. To test for differences between Latinos and Blacks in objectives 1 and 2.

This four-year study used both qualitative and quantitative methods to address the study objectives. Eligible participants were: HIV-positive; Black or Latino; able to complete an interview in English or Spanish; and age 18 years of age or older. Latino and Black men had to also report a history of having had sex with men ("MSM"). The qualitative component consisted of the collection and analysis of in-depth qualitative interviews with 24 HIV-positive patients. The quantitative component consisted of a cross-sectional survey and medical record abstraction with 400 HIV-positive patients at five public HIV clinics in LAC. Data from the qualitative component were used to guide questionnaire development for the quantitative component.

Qualitative Component

Twenty-four participants were recruited from two public HIV clinics between April 2006 and October 2006, six each of Latina women, Black women, Latino MSM, and Black MSM. Participants were interviewed about their daily experiences with engaging in HIV health care (for example, who helped them and in what circumstances). The content of the interviews were analyzed using a grounded theory approach, a qualitative analysis method.[1, 2] For this group of HIV-positive patients, formal social support networks (such as health care providers and HIV organizations) appear to be more critical to facilitating retention in medical and mental health care for HIV treatment, and that informal networks (such as family, friends, and churches) appear to be more critical for other general subsistence care needs.[3] These findings also suggested that when health care providers showed genuine interest and concern, patients were more likely to engage in HIV health care. Conversely, a lack of sensitivity or compassion from health care providers was more likely to encourage disengagement from care.

Quantitative Component

For the quantitative phase, a total of 400 participants were recruited from five public HIV clinics between November 2007 and May 2008, each of Latina women, Black women, Latino MSM and Black MSM. One Black MSM was discovered to be ineligible for participation after study enrollment was completed and was excluded from analysis, leaving a final total sample of 399. Eligible participants completed an interviewer-administered questionnaire in English or Spanish that collected data on socio-demographic characteristics, social support and social networks, religious support and stress, mental health, health care utilization, HIV history and symptoms, stigma, stress and coping, and religiosity and spirituality. Medical records and billing records were abstracted at study enrollment to obtain clinical and health care utilization data in the previous 6 months. Characteristics of the participants enrolled into the quantitative phase are shown below in Table 1.

The first analysis from the quantitative phase focused on describing social support, stress, and social network characteristics of the study population. Interview data on general and HIV-specific support and stress, and social network characteristics were collected using a modification of the Social Resources

Socio-demographic Characteristics for 399 HIV Positive Latino and Black Women and MSM at Five Publicly Funded Los Angeles HIV Clinics, 2007-2008.

Table 1

Characteristic	Black MSM N=99	Black Women N=100	Latino MSM N=100	Latina Women N=100	Total N=399
Age (years)					
18-29	14%	12%	12%	19%	14%
30-39	21%	34%	34%	32%	30%
40-49	43%	21%	36%	27%	32%
50 +	22%	33%	18%	22%	24%
Country of Birth					
United States	95%	86%	27%	24%	58%
Mexico	0%	0%	56%	53%	27%
Central America	2%	1%	12%	21%	9%
Other	3%	13%	5%	2%	6%
Education[a]					
Less than high school	20%	25%	26%	68%	35%
High school or more	80%	75%	74%	32%	65%
Marital Status					
Married	27%	29%	28%	52%	34%
Not married	73%	71%	72%	48%	66%
Self-Identified Sexual Orientation[b]					
Heterosexual	9%	96%	8%	95%	52%
Homosexual	59%	1%	69%	1%	32%
Bisexual	24%	3%	19%	4%	13%
Other/Declined	8%	0%	4%	0%	3%
Health Insurance?[a]					
No	28%	25%	53%	48%	38%
Yes	72%	75%	47%	52%	62%

[a] Missing data on 2 participants
[b] Missing data on 1 participant

and Social Supports Questionnaire (SRSQ). The SRSQ asks people to nominate 10 people in their social network who were most important to them, characterize their relationship to each of these individuals, answer whether they had disclosed their HIV status to each person and whether or not each provided general or HIV-related support or stress. The questions on HIV-specific support were only asked of people to whom the participant had disclosed their HIV status. For each type of support, participants were asked to characterize the frequency of the support or stress as "never, rarely, sometimes, usually or always" and the degree of satisfaction with the support as "not at all, a little, somewhat, very and always" using a Likert scale ranging from 1 to 5 with 1=never/not at all to 5=always. A mean score was calculated for each item for all network members to measure the degree of support or stress. Mean scores were compared using an ANOVA test with a Tukey adjustment for multiple pair wise comparisons.

Black women (mean=41; SD=17) and Latinas (mean=40; SD=19) reported higher general support than did MSM participants. Stress was also highest for Latina women (mean=18; SD=11) and higher compared with Latino and Black MSM ($p<.05$). Black and Latina women reported receiving most of their social support and stress from family members, while Black and Latino MSM received their support and stress from friends and providers. Finally, Latina and Black women disclosed their HIV status to more network members and received more HIV-specific support compared to MSM.

Overall, these data provide an important description of the fuller social context of the lives of HIV-positive Latino and Black women and MSM and demonstrate some very clear differences between the social support, stress and social network characteristics of the four study groups. These data suggest that additional support and interventions are needed to help Latino and Black MSM enhance their support networks to manage a stigmatized illness.

Further analyses on the impact of social support and stress and social network characteristics on retention in HIV care are forthcoming.

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Publications from the Social Support Study

1. George S, Garth B, Wohl AR, Galvan F, Garland WH, Myers H. Sources and Types of Social Support that Influence Engagement in HIV Care among Latinos and African Americans. Journal of Health Care for the Poor and Underserved, in press.
2. Wohl AR, Galvan FH, Myers HF, Garland W, George S, Witt M, Cadden J, Operskalski E, Jordan W, Carpio F. Social Support, Stress and Social Network Characteristics among HIV-Positive Latino and African American Women and Men who have Sex with Men. In submission.

Supplement to HIV/AIDS Surveillance Project

The Supplement to HIV/AIDS Surveillance (SHAS) Project was a cross-sectional interview study designed by the Centers for Disease Control and Prevention (CDC) to obtain additional descriptive information on persons diagnosed with AIDS. Los Angeles County Department of Public Health and 18 other U.S. sites conducted SHAS from 1990 through June 30, 2004. Persons diagnosed with AIDS who were at least 18 years of age and reported to the Los Angeles County HIV/AIDS Reporting System were eligible to participate in SHAS.

SHAS was the only population-based study of risk behaviors among persons diagnosed with AIDS in Los Angeles County. Patients were contacted through their health care providers at all sites that diagnose and report persons with AIDS. Trained interviewers administered a standardized questionnaire to participants within two years of their AIDS diagnosis. The SHAS questionnaire collected information on demographics; sexual behaviors and STD history; drug and alcohol use; reproductive/gynecological history; HIV testing and medical therapy; and access to health and social services.

From 1990-2004 a total of 4,117 individuals were interviewed. Of these, 3,139 (76%) were male and 978 (24%) were female. The majority (64%) were between the ages of 30-49 years. The majority of persons were Latino (49%) followed by Whites (27%), African Americans (20%), Asian/Pacific Islanders (2%), and Other (2%). Among males, 59% were exposed to HIV through sex with men. Among females, 70% were exposed to HIV through heterosexual contact. Most participants had completed at least high school (64%) and most were unemployed at the time of the interview (71%). Most interviewees received their care at public health care sites (81%) and 74% of them had some form of health insurance.

SHAS data are used at the state and local levels to inform policy makers and others involved in HIV prevention and care. Numerous papers using local data from LAC have been published on socio-demographic differences in antiretroviral therapy, drug use, HIV testing, and risk behaviors. A list of local publications on SHAS data follows. Additional information on the demographic characteristics, sexual and drug-using behaviors, HIV testing history, and health care utilization of Los Angeles County SHAS participants is available in the SHAS Final Report available at: http://publichealth.lacounty.gov/hiv/projects/hivproj03.htm.

Publications from SHAS in LAC

1. Wohl AR, Tejero J, Frye D. Factors associated with late HIV testing for Latinos diagnosed with AIDS in Los Angeles County. *AIDS Care*, 2009:21:1203-1210.
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Web-based HIV Behavioral Surveillance

An increasing proportion of MSM are relying on the Internet to identify male sex partners.[1-2] To the extent that these Internet-using MSM are absent from traditional gay venues (physical locations such as dance clubs and bars), there is concern that existing venue-based behavioral surveillance efforts may be excluding this important sub-population of MSM. The objectives of the Web-based HIV Behavioral Surveillance (WHBS) project were to 1) develop methods to recruit MSM for behavioral surveys using an Internet-sampling approach and 2) compare their socio-demographic and behavioral characteristics to MSM recruited with traditional, venue-based sampling methods, as used in the MSM cycle of our local National Health Behavioral Surveillance (NHBS).

In this brief report, we present data on MSM, ages 18 years and older, recruited during 2007 using an Internet-based direct marketing approach with banner-ad recruitment from seven popular web sites catering to MSM. To examine differences between MSM recruited with internet based-versus venue-based sampling methods, we compare 1,234 WHBS participants to 537 MSM enrolled in the 2008 MSM cycle of NHBS.

Socio-demographic characteristics

We observed some differences in socio-demographic characteristics when comparing the MSM from WHBS to those from NHBS. Chart 1 displays the distributions by age group and by race/ethnicity. Our WHBS study enrolled a larger proportion of young (18-29 year olds) and White participants compared with the NHBS sample.

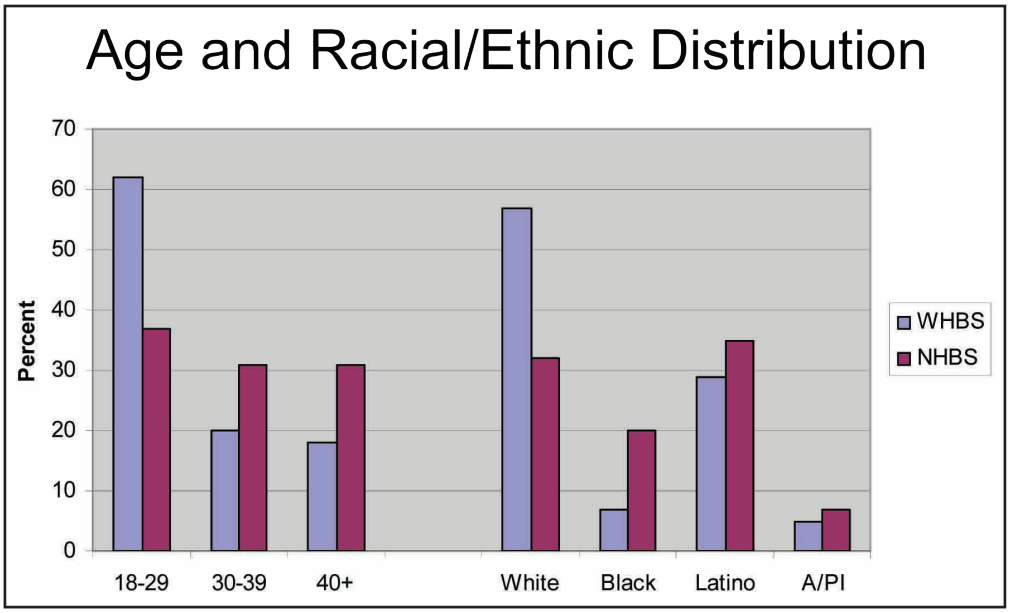

Chart 1

The distributions of some socio-demographic characteristics, however, were similar between the studies, including level of educational attainment, self-reported sexual identity, and sex with female partners in the past 12 months (Chart 2).

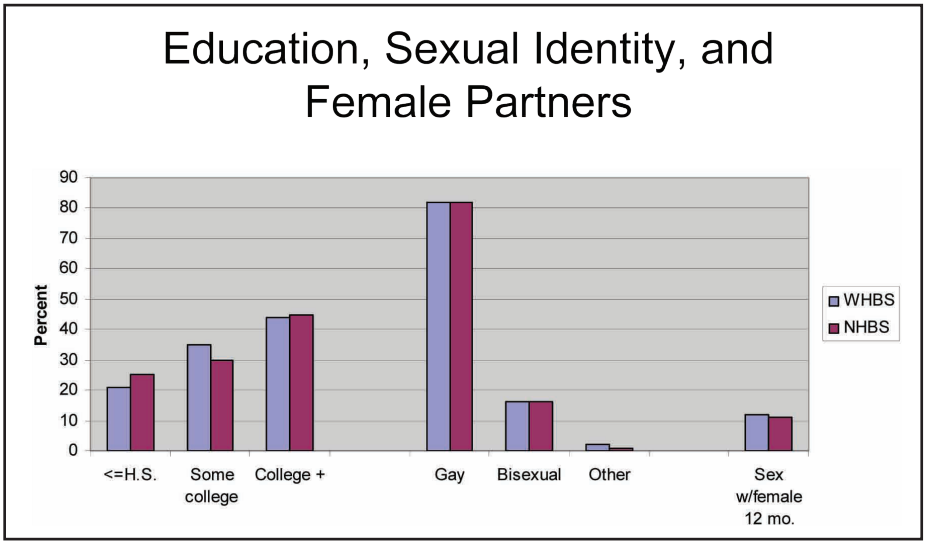

Chart 2

Behavioral characteristics

Table 1 displays sexual and drug-use behaviors reported by MSM in the past 12 months. Results of the WHBS survey indicate higher frequencies of sexual risk compared with NHBS participants. For example, WHBS participants reported higher levels of unprotected anal sex with male partners (total partners as well as recent main and recent non-main partners) in the past 12 months. WHBS participants also reported a higher average number of male partners in the past 12 months than did NHBS participants (20 versus 9, respectively). More MSM in WHBS reported meeting their most recent non-main sex partner on-line (63%) than did MSM interviewed in NHBS (22%). Prevalence of alcohol/drug use during sex with recent partners, however, was reported more frequently by MSM enrolled in NHBS than in WHBS.

HIV testing

Data on self-reported HIV status indicate similar proportions of each sample with known HIV infection (10% for WHBS and 12% for NHBS). However, 18% of the WHBS sample had never tested for HIV compared with only 5% of the NHBS sample. In WHBS, a higher prevalence of younger participants age 18-29 years had never been tested (26%) compared with those 30 years and older (4%). Meanwhile in NHBS, 93% of participants age 18-29 years reported having received a previous HIV test.

Discussion and Limitations

Given the difference in data collection methods – self-administered surveys in WHBS versus face-to-face interviewer-administered surveys in NHBS – it is difficult to rule out whether social desirability bias was associated with lower sexual risks reported by NHBS participants. One characteristic – whether MSM met their most recent non-main partner on-line – suggests a difference across samples that is probably not attributable to under-reporting by NHBS participants. Whether this difference in prevalence of on-line sex partners corresponds with greater HIV risk, however, remains unknown. Differences between the studies in younger men reporting never having been tested suggest some underlying HIV-testing differences among younger men who are sampled on-line versus those sampled in physical venues.

Sexual and Drug-Use Behaviors Reported by MSM

Table 1

Behavioral Characteristics in Past 12-months	WHBS 2007	NHBS 2008
Unprotected anal sex with any male partner	61%	53%
Type of sex with most recent main partner		
Oral only	15%	23%
Protected anal	30%	40%
Unprotected anal	55%	37%
Knew partner's HIV status	89%	83%
Type of sex with most recent non-main partner		
Oral only	25%	43%
Protected anal	38%	39%
Unprotected anal	37%	18%
Knew partner's HIV status	64%	49%
Met recent non-main partner via Internet	63%	22%
Mean (median) number of male partners	20 (5)	9 (3.5)
Number of male partners		
1	18%	23%
2-5	36%	44%
6 or more	46%	33%
Drug and/or alcohol use with recent main partner	16%	29%
Drug and/or alcohol use w/recent non-main partner	30%	48%
Injecting drug use	2%	2%
Unprotected sex with females	6%	3%

Conclusions

We observed both differences and similarities in socio-demographics and risk behavior data across study samples. It is difficult, however, to draw conclusions about risk profiles across studies due to the two modes of survey administration. While 96% of WHBS participants attended at least one NHBS physical venue in the past 12 months – and thus could potentially have been included in NHBS – we found that WHBS supplied a subpopulation of MSM that was distinct from the NHBS sample. One goal of WHBS was to sample higher proportions of non-gay-identified and racial/ethnic minority MSM who may not frequent gay-identified physical venues. Because we enrolled a less ethnically diverse sample and a similar sample in terms of sexual orientation, we concluded that an Internet-based survey did not effectively complement the existing NHBS effort. Additional benefits of NHBS, such as the opportunity to collect biological specimens and to provide risk-reduction counseling, argued in favor of venue-based methods compared to Internet sampling for a widespread behavioral surveillance system.

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Projects of National Significance: *Young Men Taking Charge*

Innovative, culturally appropriate models of care are necessary to engage special populations in HIV testing, care, outreach and prevention services. In 2004, the Health Resource and Services Administration (HRSA) HIV/AIDS Bureau, Program of Special Projects of National Significance (SPNS) funded eight demonstration sites to identify, implement and evaluate new models to provide outreach and interventions for HIV-positive Latino and African American young men who have sex with men (YMSM). As one of eight demonstration sites, the Los Angeles County Department of Public Health's Office of AIDS Programs and Policy and HIV Epidemiology Program developed a clinic-based, youth-focused case management intervention that combined prevention, treatment adherence, and psychosocial case management to engage and retain HIV-positive Latino and African American YMSM in HIV primary care services. An additional goal of the Los Angeles County's Young Men Taking Charge project was to help develop the capacity of the two study clinics to provide HIV services to youth.

Methods

Study participants were recruited between April 2006 and August 2009 from HIV testing sites, sexually transmitted disease clinics and two public HIV clinics in Los Angeles County (LAC) that provide HIV care to predominantly Latino and African-American patients. Neither of the two study clinics offered youth-focused HIV care programs prior to the initiation of this intervention. Eligibility criteria included ages 13 to 23 years, confirmed HIV-positive status, Latino or African American race/ethnicity, and having been biologically male at birth. In addition, eligible participants had to be either: 1) new to HIV care or 2) receiving intermittent care (fewer than two HIV primary care visits in the previous six months).

The youth-focused case management intervention (YCM) was a two-year, clinic-based, intervention delivered by two case managers with experience working with HIV-positive Latino and African American YMSM. One full-time case manager was stationed at each clinic for the duration of the project. The intervention combined psychosocial case management, treatment education/adherence and HIV prevention. The intervention was designed so that participants met weekly with a case manager for the first two months and monthly for the next 22 months.

Participants were administered a baseline survey at enrollment to assess demographic and psychosocial characteristics, sexual risk behaviors, substance use, depression, and HIV testing and care history. Data on antiretroviral therapy regimens, HIV-1 RNA levels, CD4+ cell counts, opportunistic infections and attendance to HIV care appointments were abstracted from patient medical records. Follow-up surveys were conducted quarterly to evaluate completed referrals, HIV care visits and intervention visits. Data on attendance to YCM appointments, duration of YCM appointments and types of referrals provided and completed were also collected.

Results

Between April 2006 and April 2009, 69 HIV-positive YMSM were enrolled into Young Men Taking Charge. Of the 69 participants, 51% were African-American, 49% were Latino and the mean age at enrollment was 21 years. The average time between HIV diagnosis and enrollment in the intervention was 14.4 months. Approximately half of participants were previously in care and half were new to care. At enrollment into the intervention, 78% of the YMSM had a critical need for housing, nutrition, substance abuse or mental health treatment services. Of the 69 participants, 61 (88%) were enrolled for at least 6 months.

The 61 participants enrolled at least 6 months attended an average of 5.1 scheduled YCM appointments, had an average of 1.1 drop-in visits, 0.9 telephone contacts and 2.3 missed YCM appointments. Overall, participants attended 61% of scheduled YCM appointments. On average, participants received 7.3 hours of the intervention with Latino YMSM receiving statistically more hours of the intervention compared with African Americans (p=.001). The average YCM appointment was 67 minutes. YCM appointment times for Latinos were longer than for African Americans (84 minutes versus 52 minutes).

There were a total of 238 referrals provided in the first six months of the intervention and 163 (68%) of the referrals were completed by six months. The most commonly provided referrals were for housing (29%), mental health services (13%), risk reduction education (11%), and transportation assistance (8%). African American YMSM were more likely to receive referrals for housing (p<.0001) and transportation (p<.0001) compared with Latino YMSM. Latino YMSM were more likely than African American YMSM to receive referrals for risk reduction services (p=.007), support groups (p=.03), and substance abuse services (p=.03).

As shown below in Figure 1, among those participants enrolled for at least 6 months (n=61), 90% were retained in HIV primary care at 3 months and 70% at 6 months. Among enrollees who had been in intermittent care at baseline (n=33), the proportion attending all HIV primary care visits in the previous 6 months increased from 7% to 73% following participation in the intervention (p<.0001) (see Figure 2.)

Retention in HIV Care at 3 and 6 Months among HIV-Positive YMSM[1] in YCM (n=61)

	3 Months	6 Months	p-value[2]
Mean number of HIV care visits in the past 3 months	2.2	1.7	0.04[2]
Mean missed HIV care visits in past 3 months	0.6	1.0	0.06[2]
Percent of scheduled HIV care visits attended in the past 3 months	76%	51%	<0.0001[2]
Percent retained in HIV care in past 3 months	90%	70%	0.0005[2]

[1] Includes clients who had completed 6 months of the intervention
[2] p-value for paired t-test
[3] p-value for McNemar's test for paired data

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Figure 1

Retention in HIV Care at 6 Months among HIV-Positive YMSM in a YCM Intervention who had been in Intermittent Care [1] (n=33)

	Baseline (n=33)	6 Months (n=33)	p-value [2]
Mean attended HIV care visits in past 6 months	0.2	5.5	<0.0001 [2]
Mean missed HIV care visits in past 6 months	0.4	2.0	0.0001 [2]
Percent of scheduled HIV care visits attended in past 6 months	7%	73%	<0.0001 [2]
Percent retained in HIV care at 6 months	0%	82%	--

[1] Includes clients who had previously been in HIV care and who had completed 6 months of the intervention
[2] p-value from results of paired t-test

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Figure 2

Retention in HIV care at six months was associated with more intervention visits, more hours in the intervention and HAART use as shown below in Figure 3.

Factors Associated with Retention in HIV Care at 6 Months among YMSM in an YCM Intervention (n=61)

Characteristic	Unadjusted OR (95% CI)
On HAART	
Yes	**11.7 (2.7-51.4)**
No	Referent
Number of YCM appointments[2]	
9 or more appointments	**10.5 (1.1-96.6)**
5-8 appointments	2.8 (0.7-11.5)
0-4 appointments	Referent
Number of YCM hours[3]	
10 or more hours	**6.6 (1.1-38.7)**
5-9 hours	6.0 (1.3-28.3)
1-4 hours	Referent

[1]Retention in care was defined as 2 or more HIV primary care visits in the previous 6 months
[2]The chi-square test for trend =6.01, p-value =.05
[3] The chi-square test for trend =7.83, p-value =.02

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Figure 3

Discussion

Our results suggest that a time-intensive intervention delivered by a non-judgmental, culturally competent peer case manager is effective at engaging Latino and African American YMSM in HIV care, particularly early in care. Given the high proportion of clients with critical need for housing, nutrition, substance abuse and/or mental health treatment services at enrollment, youth-focused interventions are needed to address the special needs of younger clients who encounter barriers to HIV care. While attendance to clinical care appointments is not perfect, most clients met the guideline standard of at least one clinical care visit every 3-4 months. These data underscore the unique needs of HIV-positive youth, which highlight the importance of targeted support to improve retention in HIV care that is critical to maintaining their health.

Additional analyses from the SPNS data are ongoing and will be presented in future reports. For more information about the other demonstration sites and this SPNS initiative, including results from all 8 sites, please go to http://www.yescenter.org.

Local presentations from SPNS

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