

California HIV/AIDS Update

Editor's Note: We are publishing a single issue for Calendar Year 2000 with two articles and two sets of surveillance data. Starting with 2000 data, maps (e.g., on page 20) will display only the most recent 12 months' data, not cumulative data.



Characteristics of African American Women Accessing California State-Funded HIV Testing Sites

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Introduction

Early in the HIV/AIDS epidemic, California African-American women were identified as being associated with a higher risk of contracting HIV, with a 2.5% infection rate of those testing at publicly funded sites in 1990 compared to a rate of 0.6% among White women.¹ Nationally, 53% of women diagnosed with AIDS in 1995 were African American, with an incidence rate for AIDS 16 times higher than for White women.² By 1999, African-American women represented almost two-thirds (62%) of new AIDS cases among women,³ but only about 12% of the female population in the United States.⁴

While it is evident that African-American women are at high risk for contracting HIV, it is also clear that these women are not at risk because of their race or ethnicity in and of itself. Rather, a person must perform a risky behavior with an HIV infected person to become infected. Behaviorally, the former is referred to as a transmission risk and the latter as an exposure risk. Transmission

risk refers to the likelihood that specific behaviors will result in transmission of HIV. Risk of exposure, on the other hand, refers to the likelihood of encountering an infected partner, based on partner characteristics such as injection drug use (IDU). The acquisition of HIV in African-American women among reported AIDS cases is most associated with heterosexual intercourse with an HIV-infected partner, unprotected heterosexual sex with injection drug users (IDUs), and their own IDU.⁵

The previous data on HIV/AIDS in African-American women have various limitations. AIDS surveillance data do not provide details on behavioral risks. For example, these data cannot characterize the specific types of drugs that are used. Crack, a smokable form of cocaine, reduces sexual inhibition and judgement, placing users at greater risk for unprotected sex and other high risk sexual behaviors.⁵ Furthermore, AIDS data represent HIV infections that occurred perhaps 10 years previous.

To produce theoretically sound, culturally and gender appropriate interventions to help African-American women in California reduce their HIV risks, more detailed behavioral data is necessary.

Methods

Sites and Data Collection Procedures

The California Department of Health Services provides free HIV counseling and testing at nearly 600 sites throughout the state. These sites include Alternative Test Sites (which provide anonymous testing exclusively), family planning clinics, rural and community health clinics, sexually transmitted disease clinics, primary care facilities, detention facilities, mobile testing units, tuberculosis testing sites, and other local health department programs.

In June 1994, these sites implemented a new HIV counseling strategy and data collection system. State-trained counselors use a semi-structured "client-centered" approach. Each client received an individual assessment of the risk for HIV infection based on a candid discussion of her risk-related behaviors. Using this assessment, counselors helped clients develop strategies to reduce their risk of HIV infection and provided relevant health education information and referrals. In addition, counselors completed an encounter form that included 118 demographic and behavioral variables for each client. It is important to note that data are provided voluntarily by clients and for each client visit. Thus, these data should not be interpreted as representing all California African-American women. Some women may have obtained more than one HIV test in this two-year period. Each site recorded the clients' information in a computerized database and submitted the data to the Office of AIDS for compilation and analysis.

Statistical Analysis

We used data from African-American female clients who had received HIV tests between July 1997 and June 1999. We excluded clients who had inconclusive test results.

We analyzed our sample using SAS[®] statistical software.⁶ Descriptive analyses were carried out, and the relation of selected variables to HIV status was examined. A multiple logistic regression model, with maximum-likelihood estimation of parameter values,

was used to determine the independent contribution of demographic characteristics, drug-use practices and high-risk sexual behavior in predicting HIV status. We defined and assessed drug-using and sexual risk history as occurring within the last two years. Adjusted odds ratios and 95% confidence intervals were derived from logistic-regression coefficients to provide an estimate of the statistical association between a given variable and the presence of a positive HIV antibody test result, with the other variables held constant.

Data were analyzed both separately and in combination for self-reported first-time and repeat testing clients to evaluate the impact that the aggregation of the two subgroups had on validity and generalizability. Because the results for the two groups were not statistically different, only the combined analyses are presented. Selected descriptive statistics will be presented. Independent variables found to be statistically significant in the resulting multivariate model will be discussed. No identifying information is collected in the data system, and a single person may be represented by multiple tests in the database.

Results

In total, 24,871 HIV antibody tests with positive or negative results were obtained from African-American female clients. Of these, 379 were HIV positive (1.5%) and 24,492 were HIV negative (98.5%). Table 1 illustrates the number and percent of HIV tests by demographic and descriptive characteristics of the sample.

Tests for clients aged 30-39 years constituted almost 32% of the sample, followed by 20-29 year-olds (27%), 40-49 year-olds (21.5%) and 12-19 year-olds (14%).

The largest proportion of tests were performed for clients who lived in metropolitan areas (74.5%): 29.3% of the sample in the Bay Area, 24.3% in the city of Los Angeles, 15.5% in the Southern Metropolitan Area (Riverside, Santa Barbara, and San Diego), and 5.9% in San Francisco.

More than twenty-eight percent of tests were performed at Alternative Test Sites (28.7%), mobile vans (24.4%), HIV test sites (11.8%), STD clinics (10.6%), and other health department clinics (5.9%). For 36% of tests, clients failed to return for their test result disclosure sessions.

Only one sexual partner in the last two years was reported by clients for 41% of the tests. The

remainder of the sample reported as follows: 24% two partners, 11% three partners, 5% four partners, 3% five partners, 11% six or more partners, and 5% no sexual partners in the last two years. In 21% of counseling sessions, clients reported a history of a sexually transmitted disease (STD). Depending on partner type, 6% to 48% of women who reported penile-vaginal intercourse used barrier protection.

Table 1. Demographic and Descriptive Characteristics of African American Female Clients at State-Funded HIV Test Sites in California, July 1997 - June 1999

	All Tests		HIV Positive Tests	
	N	% (of total)	N	% (of row)
Age (Years)				
11 and under	104	0.4%	0	0.0%
12-19	3500	14.0%	8	0.2%
20-29	6689	27.0%	74	1.1%
30-39	7925	32.0%	143	1.8%
40-49	5351	21.5%	130	2.4%
50-59	1015	4.0%	22	2.2%
60 and over	204	0.8%	1	0.5%
Not Specified	83	0.3%	1	1.2%
Region of Residence				
Bay Area ^a	7297	29.3%	138	1.9%
San Francisco	1464	5.9%	24	1.6%
Los Angeles	6043	24.3%	79	1.3%
Southern Metropolitan Area ^b	3859	15.5%	28	0.7%
All Other Counties	6208	25.0%	110	1.8%
Site Types				
Other Health Clinics	1473	5.9%	51	3.5%
Mobile Vans	6069	24.4%	113	1.9%
HIV Test Sites	2924	11.8%	43	1.5%
Alternative Test Sites	7140	28.7%	93	1.3%
STD Clinics	2628	10.6%	10	0.4%
All Other Sites/Clinics	4637	18.6%	69	1.5%
TOTAL	24,871	100%	379	1.5%

a:Includes Alameda, Contra Costa, Marin, Napa, San Mateo, Santa Clara, Solano, and Sonoma Counties

b:Includes Orange, Riverside, San Bernardino, and San Diego Counties

Source: California Dept. of Health Services, Office of AIDS, Prevention Research and Evaluation Section

Note: Each client may have received more than one test.

Table 2 (next page) summarizes the distribution of selected drugs used by women in the last two years. Clients who tested consumed alcohol (53%) and practiced marijuana use (34%). Crack and cocaine were adopted by almost 27% and 19%, respectively, and more than 8% of the sample used heroin.

Nearly 13% of women in the sample reported using needles and of these, 37% reported sharing needles in the last two years. Although only 1.6% of the women used barbiturates and tranquilizers, almost 4% of these women were HIV infected. Overall, 76% of African American women reported using drugs or alcohol with sex in the last two years.

Table 2. Distribution of Selected Drugs Used During Sex in Last Two Years by African American Female Clients at State-Funded HIV Test Sites in California, July 1997 - June 1999

	All Tests		HIV Positive Tests	
	N	% (of total)	N	% (of row)
Heroin	2004	8.1%	93	4.6%
Crack	6655	26.7%	161	2.4%
Cocaine	4681	18.8%	113	2.4%
Marijuana	8423	33.9%	108	1.3%
Alcohol	13158	52.9%	176	1.3%

Source: California Department of Health Services, Office of AIDS, Prevention Research and Evaluation Section

Notes: Totals are not reported because some clients reported multiple drug use.

Each client may have received more than one test.

Table 3 presents behavioral risk factors for the women in our sample. Twenty-five percent of the sample reported having multiple sexual partners and 7.8% reported having a partner who has multiple sexual partners. Nearly 13% reported their primary risk as being an IDU, and 6.8% reported having an IDU partner. Roughly 8% of the sample described their risk of exchanging sex for money and/or drugs and/or goods. Another 25% of clients failed to disclose HIV-risk information.

Table 3. Selected Risk Factors of African American Female Clients at State-Funded HIV Test Sites in California, July 1997 - June 1999

	Tests		HIV Positive Tests	
	N	% (of total)	N	% (of row)
Partner of HIV+	802	3.2%	46	5.7%
Injection Drug Use (IDU)	3183	12.8%	112	3.5%
Partner of Bisexual	758	3.0%	13	1.7%
No Reported Risk	6257	25.2%	95	1.5%
Partner of IDU	1700	6.8%	22	1.3%
Exchanging Sex for Drugs/Money	1892	7.6%	17	0.9%
Multiple Partners	6210	25.0%	38	0.6%
Partner of Multiple Partners	1930	7.8%	10	0.5%
All Other Risks	2139	8.6%	26	6.9%
Total	24,871	100%	379	1.5%

Source: California Department of Health Services, Office of AIDS, Prevention Research and Evaluation Section

Note. Risk categories were derived from behaviors reported by the client to the HIV counselor and noted on the HIV Counseling Information Form. These behaviors are ranked by decreasing risk of exposure and the client is assigned the category producing the greatest probable risk for contracting HIV.

Note: Each client may have received more than one test.

Multivariate logistic regression revealed several demographic and behavioral variables to be significantly associated with HIV infection ($p < .0001$). Table 4 illustrates these variables with odds ratios and 95% confidence intervals.

The demographic variable related to HIV seropositivity was age. African-American women in the 30-39 year old and 40-49 year old age group were at equally elevated risk for infection. African-American women who were in these age groups were 1.4 times more likely to be infected with HIV than African-American women who were not in this age group.

Table 4. Demographic and Behavioral Risk Variables Significantly Associated with HIV Infection in Multivariate Regression for African American Female Clients at State-Funded Test Sites in California, July 1997-June 1999

	Odds Ratio	95% Confidence Interval
Demographic Variables		
Aged 30 to 39	1.39	1.02 – 1.92
Aged 40 to 49	1.44	1.03 – 2.02
Behavioral Risk Variables		
Partner is HIV Positive	5.09	3.58 – 7.27
Heroin Use	2.43	1.56 – 3.80
Crack Use	1.54	1.14 – 2.10

Source: California Department of Health Services, Office of AIDS, Prevention Research and Evaluation Section

Note: Each client may have received more than one test. Regression was performed on tests, not on individual clients.

With respect to high-risk sexual behavior, having unprotected sex with a known HIV-positive partner was the most predictive behavioral variable for HIV in our sample. African-American women who engaged in unprotected sex with a known HIV-positive partner were 5 times more likely to be infected with HIV than African-American women who did not engage in this behavior. Finally, African-American women who used heroin and crack were over 2.4 times and 1.5 times more likely to be HIV infected than African-American women who did not engage in these behaviors.

Discussion

The data on which these conclusions are based have significant strengths and limitations. Strengths include the large cohort of African-American female client tests (almost 25,000), the geographic heterogeneity of the sample, the scope of demographic and risk behavior data collected, and the standardization of counseling and data collection methods across sites. All of these factors increase the generalizability of the findings across broad segments of the population.

However, certain limitations in this analysis should be considered. First, our data are predominately self-reported. Although the validity of such data is often contested, we have observed the similarities between demographic and risk behavior data from California HIV counseling and testing sites and AIDS cases reported in California. This correspondence suggests that most testing clients are candid about their risks in counseling sessions. Second, regression findings were based on a relatively small number of HIV positive cases. Therefore, the precision of the resulting model

could be questioned. Third, in the sample some women may have obtained more than one HIV test in this two-year period. Finally, results drawn from a sample accessing free HIV testing sites, where clients are at relatively high risk for HIV, may not characterize the risk behavior or HIV prevalence of all African-American women in California.

Despite these limitations, our study provided important insights concerning HIV risk factors among African-American women. Notably, African-American women's HIV infection rate was 1.5% in this sample. This finding is roughly 3 times higher than the positivity rate of California women of childbearing age.^{7, a} This, coupled with the high prevalence of not returning for test result disclosure sessions and low use of barrier protection among this sample is extremely problematic. Clearly, our findings suggest that California African-American women who access state-funded HIV testing sites are over-represented with respect to HIV infection, and 36% of infected women who tested are unaware of their status.

African-American women 30-49 had higher risk of HIV infection than other age groups. This most likely reflects the cumulative impact of risky behavior with risky partners. Age specific cultural influences may also be important but cannot be identified with this data.

As expected, having unprotected sex with an HIV-positive partner resulted in the highest relative risk of HIV infection. While some women are unaware of their partners' HIV status until after they engaged in unprotected sex, other women reported having

^aAfrican American women of childbearing age are included in the denominator of this equation. Therefore, we underestimated the risk ratio of this sample.

unprotected sex with a known HIV-positive partner. These behaviors embody both ingredients necessary for infection, an exposure risk and a transmission risk behavior. Currently, a study is being conducted by the Office of AIDS to learn if women who were aware of their partner's HIV positive status practiced safer sex than those who did not know prior to having sex.

Not surprisingly, our findings revealed additional exposure risks. We found heroin, an injected drug, to be significantly associated with HIV seropositivity. Nationally, it has been shown that IDU is the second most frequently reported risk behavior associated with HIV infection.⁸ Two HIV transmission routes are generally associated with heroin use: (1) the sharing of needles, and (2) sex work to support the drug habit. Another important finding from our study shows that crack use adds significantly to the risk of HIV infection among African-American women. It has been purported that crack use may result in oral sores that might promote the transmission of HIV orally.⁵ While crack use does not involve a needle, it has been associated with sex while high and sex for drugs to get high.⁵

As our data suggest, California African-American women engage in a constellation of high-risk sexual and drug-using behaviors. These data demonstrate higher risks of transmission through unprotected sex, needle use and heroin and crack use.

In a prior study, we demonstrated that African-American women were involved in more of these risky behaviors than women of other races/ethnicities. However, these behaviors did not fully account for the higher level of infection among African-American women, suggesting the likelihood that higher levels of HIV infection among sex and needle sharing partners contributes a significant level of transmission risk.⁹

Finally, the findings from this analysis may be used to direct culturally and gender appropriate HIV prevention interventions among California African American women. Based on these data, HIV-infected African-American women in this sample demonstrated clearly definable transmission and exposure risks. Prevention counselors should consider incorporating more comprehensive sexual risk reduction strategies, and drug treatment counseling. The transmission and exposure risks of having unprotected sex with a known HIV-positive partner resulted in the highest relative risk of HIV infection. African-American female clients would benefit from emotional and instrumental counseling strategies focused on safer sexual negotiation with high-risk partners. Exposure risks including heroin and crack use was also predictive of

HIV infection. Clients must be made aware of the benefits of needle exchange programs, and cleaning works for themselves and to their high-risk sexual partners. Counselors can maximize the prevention value of client-centered counseling by explicitly engaging the client in a dialogue concerning the likelihood of contracting HIV through crack use, the specific behaviors she engages in while high, and by giving detailed, personalized appropriately focused referral services.

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An Evaluation of the Relationship Between Ancillary HIV Services and Primary Medical Care

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Introduction

While the HIV/AIDS epidemic has remained a constant battle for nearly two decades, there have been major advances in the treatment of HIV disease. Clinical trials show that protease inhibitors (PIs) delay disease progression and prolong survival. Persons living with HIV disease (PLWH) who take PIs must, however, endure the side effects of the medications and adhere to a very strict regimen. Demanding dosing schedules of some anti-HIV drugs could cause people to skip doses or take less than the prescribed amount. HIV specialists have demonstrated that drug-resistant strains could develop if patients fail to follow their drug regimens.^{1,2} Maintaining the PI therapy, then, must involve routine visits to a physician.

Many PLWH, however, do not have the ancillary services available to them to maintain this strict PI regimen, and certain subsets of HIV-infected populations may have special ancillary service needs.³ For example, some HIV-infected individuals do not have affordable means of transportation to get to their medical appointments.⁴ HIV-positive women with children may need childcare to keep medical appointments. Many PLWH, then, must have assistance in accessing primary medical care. As funding for HIV disease becomes limited, it is important to determine the association between ancillary services and both entry into and retention in primary health care for PLWH disease.

Research Design

This study had two hypotheses. The first pertains to clients' access to medical care while the second was designed to measure clients' retention in medical care. 1) Ryan White Care Act (RWCA) clients who both needed and received a high number of ancillary services were seen in primary care more often than those clients

who needed the services but received few or no ancillary services; and 2) RWCA clients who both needed and received ancillary services were more likely to be seen in primary medical care at least once in three consecutive six-month periods than those clients who needed the ancillary services but received few or none. To test the above hypotheses, two types of clients who received primary medical care were measured: 1) clients who needed ancillary services and received a high number of these services; and 2) clients who needed ancillary services but received few or none.

Medical Care and Ancillary Service Data Collection

As the grantee for California RWCA Title II, the Office of AIDS (OA) distributes funds to entities known as HIV Care consortia (generally organized by county). Each consortium is responsible for conducting a needs assessment and setting priorities to determine local HIV services. We gathered client-level data for calendar years 1997 and 1998 from seven RWCA consortia medical care providers. This provided medical care visits for 63 unduplicated RWCA consortia clients.

The OA Case Management Program (CMP) provides comprehensive home and community-based services to persons with AIDS or symptomatic HIV. The CMP client's HIV disease is in the advanced stages, and the purpose of the program is to maintain these clients safely in their homes in lieu of placement in a nursing facility or hospital. The program uses an interdisciplinary core case management team consisting, at a minimum, of a nurse case manager, social worker, and the attending physician in concert with the client to determine needed services. The CMP providers send client-level service utilization data on ancillary services to OA on a monthly basis. Units of ancillary services are measured consistently in CMP while the method for reporting units of service differ

among consortia. For example, one consortia provider may report a case management visit that lasted 15 minutes as one visit while another may report a two-hour encounter as one visit. Because there is not a clear-cut standard for reporting ancillary services amongst consortia, only the CMP data were used for ancillary service information. These ancillary services include, but are not limited to, case management, translation services, childcare, transportation, and substance use counseling.

The RWCA consortia client-level data containing the number and dates of medical care services were merged with the OA's 1997 and 1998 CMP data files. This process identified 42 of the 63 RWCA consortia clients who received both RWCA consortia medical care services and CMP ancillary services.

Next, the OA's AIDS Drug Assistance Program (ADAP) client-level data were accessed and a file was created for each client receiving ADAP services in the two-year study period. Each ADAP client must see a medical care provider on a regular basis to acquire the necessary prescription refill. Thus, it is assumed that those clients who have access to prescriptions through ADAP have access to a primary care physician and are receiving primary medical care. For this study, each month of ADAP service was considered to be equivalent to a medical care visit. The ADAP file was merged with the CMP data file, and each ADAP client who matched with the CMP file was identified and included in the initial study database (n=959).

We identified a total of 1,001 RWCA clients who received primary medical care either through the RWCA consortia providers or through ADAP, and who were also enrolled in the CMP which provides a wide variety of ancillary services.

Measuring Need for Ancillary Services

Many of the populations served by the RWCA are confronted with economic and social issues that influence their access to medical care. To test the study hypotheses, the client's *need* for ancillary services had to be measured to identify the clients most impacted by these issues. Once identified, the clients with no hindrance in making medical appointments were deleted from the study cohort. Only then could we determine if the clients who both needed and received ancillary services more readily accessed medical care services than clients who needed but did not receive ancillary services. For this study, a client's need for

these ancillary services was determined through 11 variables routinely collected by CMP and through a one-page questionnaire. The 11 CMP variables included age, gender, race, AIDS status, poverty (income below 300% of Federal Poverty Income Guidelines), homelessness, mental competence, health insurance, men who have sex with men (MSM), injection drug user (IDU), and heterosexual contact with a high-risk individual.

A need questionnaire was designed to gather information about a CMP client's social, cultural, and environmental lifestyle. It contained questions relating to 12 factors that may impact adherence to antiretroviral regimen. These factors include education, language, family, substance abuse, etc.^{5,6,7}

We categorized the 1,001 potentially eligible clients by CMP site. Of the 41 CMP sites, 27 sites with 20 or fewer potentially eligible clients were asked to complete questionnaires on all clients. We randomly selected 20 clients for analysis from the 14 larger sites with more than 20 potentially eligible clients. A total of 554 questionnaires were sent to the 41 different CMP sites; 445 (80%) were completed and returned to OA. These data were entered into a database and merged with the client's CMP file, which included the 11 CMP variables referred to above. Table 1 provides the frequency of responses to the questions asked on the need questionnaire.

To determine which of the 12 need questionnaire variables and 11 CMP variables were generally correlated with a need for ancillary services, a factor analysis method was employed. This is a data reduction technique useful for reducing the number of variables being analyzed. It measures the relationships among several quantitative variables and generates 'scores' that help determine which variables correlate closely with each other. This method, and a reliability analysis, identified ten variables as reliable indicators of need for ancillary services ($\alpha=.5753$). Thus, any client having one or more of the following ten need indicators was defined as being in need of ancillary services:

1. Education Level (some high school or less)
2. Responsibility for Others
3. Language Barriers
4. Substance Abuse
5. Anonymity Concerns
6. History of Incarceration
7. Unreliable Transportation
8. IDU Risk Category

9. Poverty
10. Heterosexual Contact with High Risk Individual

Of the 445 clients we analyzed, 54 (12%) were determined to have no need of ancillary services and were deleted from the study cohort. The final study

TABLE 1 Questionnaire Results - Completed by CMP Case Managers on 391 Selected Clients

Question	Response	N	Percent
1. Client's Education Level?	< 9 th Grade or Some High School	118	30%
	12 th Grade or Higher	247	63%
	Unknown	26	7%
2. Is the client responsible for others?	Yes	72	18%
	No	304	78%
	Unknown	15	4%
3. Can the client read and/or speak english?	Yes	320	82%
	No	69	17%
	Unknown	2	1%
4. Has the client missed appointments in last 12 months?	Yes	177	45%
	No	121	31%
	Unknown	93	24%
5. Does the client have a substance abuse problem?	Yes	150	38%
	No	215	55%
	Unknown	26	7%
6. Does the client Have anonymity concerns?	Yes	73	19%
	No	296	76%
	Unknown	22	5%
7. Has the client ever been incarcerated?	Yes	96	25%
	No	227	58%
	Unknown	68	17%
8. Was the client on antiretroviral therapy in the last year?	Yes	293	75%
	No	29	7%
	Unknown	69	18%
9. How long has the client lived in the area?	< 6 mos.	16	4%
	6 – 12 mos.	28	7%
	> 12 mos.	336	86%
	Unknown	10	3%
10. Does the client have supportive family in the area?	Yes	213	55%
	No	152	39%
	Unknown	26	6%
11. Does the client have reliable transportation?	Yes	267	68%
	No	95	24%
	Unknown	29	8%
12. Does the community provide support services?	Yes	319	82%
	No	67	17%
	Unknown	5	1%

Source: California Department of Health Services, Office of AIDS, care Research and Evaluation Section.

cohort consisted of 391 individuals identified as needing ancillary services. Our merged client-level data files contained information relating to medical care¹ and ancillary service visits for these 391 individuals.

Results

Characteristics of Study Clients

A comparison of the demographic profile of the clients in the study cohort and California statewide AIDS cases

more often than those clients who needed the services but received few or no ancillary services, we began by defining clients receiving a low number of ancillary services and clients receiving a high number of ancillary services. Those clients who received fewer than six ancillary services in the two-year study period were included in the Low Ancillary Service Visit (LSV) category (n=132). Any client receiving over 11 ancillary services was included in the High Ancillary Service Visit (HSV) category (n=138). The 121 clients who fell in the mid-range were not included in the

TABLE 2
Study Cohort Compared to Statewide AIDS Cases* by Demographic Profile

	Study Cohort		Statewide AIDS Cases		p
	N	%	n	%	
Gender					>0.001
Male	323	82.6	38,405	90.3	
Female	68	17.4	4,107	9.7	
Race / Ethnicity					0.0119
White	192	49.1	23,102	54.3	
Latino	111	28.4	9,950	23.4	
Black	72	18.4	8,175	19.2	
Asian/Pacific Islander	9	2.3	997	2.4	
Native American	6	1.5	214	0.5	
Unknown	1	0.3	74	0.2	
Age					>0.001
<20	2	0.5	264	0.6	
20-29	34	8.7	2,539	6.0	
30-36	108	27.6	10,696	25.2	
37-44	123	31.5	15,440	36.3	
>44	124	31.7	13,573	31.9	
Exposure Category					0.021
MSM	244	62.4	28,085	66.1	
IDU	66	16.9	5,216	12.3	
Other	81	20.7	9,211	21.7	

*Persons living with AIDS diagnosed by 12/31/98 and reported as of 8/31/99

Source: California Department of Health Services, Office of AIDS, care Research and Evaluation Section

(Table 2) reveals that the study cohort consisted of larger proportions of women, Latino, Native American, and IDU clients.

Hypothesis Testing

To address our first study hypothesis, that RWCA clients who both needed and received a high number of ancillary services were seen in primary care

testing of the first hypothesis. The mean number of medical care visits (13.41) was higher for the HSV than the LSV group (8.26; $p < .001$).

The demographic characteristics of gender, race, age, insurance status, rural versus urban, and exposure category were used next as statistical controls. For purposes of analysis, race was collapsed into one variable and measured whether the respondent was white or non-white. The age variable measured whether

¹ Medical care is defined as office-based medical services, emergency department services, skilled nursing, intermediate care, long-term care, and specialized health services focusing on the prevention of illness and the ongoing management of chronic conditions and acute health problems. Medical care includes but is not limited to prescribing and managing medication therapy.

the client was either less than 35 or 35 and older. Insurance status was categorized as either “Yes” (the client did have some form of health insurance) or “No.” The county of the service provider was used to determine if the client received services in an urban or rural area. The two exposure categories were MSM and IDU.

As shown below in Table 3, when controlling for gender, race (white vs. non-white), age (under 35 vs. 35 and older), MSM, and insurance status, the positive relationship between ancillary services and primary medical care visits (PMCV) remained statistically significant: the mean number of medical care visits was higher for those in the HSV group than those in the LSV group. There was no statistical significance in the number of medical care visits,

however, when controlling for rural clients and those with IDU as their primary exposure.

Our second hypothesis concerned a client’s retention in primary medical care. The measure of program retention for this study is defined as one or more medical care visits in at least three consecutive six-month periods. From the original 391 clients who were determined to be in need of ancillary services, we identified 135 clients who did not meet our definition of retention.

We ran logistic regression on the 391 clients with receipt of at least one medical care visit in three consecutive six-month periods (Yes/No) as the dichotomous dependent variable. The independent variables in this analysis were age, race/ethnicity, sexual orientation/gender (combined to guard against multi-

TABLE 3
Significance of Selected Characteristics on Number of Primary Medical Care Visits (PMCV)
by Low (LSV) and High (HSV) Ancillary Service Visit Categories

	<u>LSV Group</u>		<u>HSV Group</u>		<u>t-test</u>	<u>P</u>
	<u>N</u>	<u>Mean PMCV</u>	<u>N</u>	<u>Mean PMCV</u>		
Primary Medical Care Visits	132	8.26	138	13.41	5.01	0.0001^a
Gender - Male	107	8.80	116	13.37	3.80	0.0002 ^a
Gender - Female	25	5.92	22	13.59	4.81	0.0001 ^a
Race - White	65	10.21	72	13.99	2.15	0.0340 ^c
Race - Non-White	67	6.36	66	12.77	6.14	0.0001 ^a
Age (< 35)	44	7.41	33	15.76	4.86	0.0001 ^a
Age (35 and older)	88	8.68	105	12.66	3.08	0.0024 ^b
MSM	83	9.64	95	13.94	3.03	0.0029 ^b
Non-MSM	49	5.92	43	12.23	4.97	0.0001 ^a
IDU	25	7.36	17	9.65	0.88	0.3821
Non-IDU	107	8.47	121	13.93	4.91	0.0001 ^a
Rural	22	13.23	15	13.93	0.18	0.8579
Urban	110	7.26	123	13.34	6.44	0.0001 ^a
Insurance Coverage	74	9.66	84	13.36	2.37	0.0192 ^c
No Insurance Coverage	58	6.47	54	13.48	2.37	0.0001 ^a

^ap<=.001 ^bp<=.01 ^cp<=.05

These findings support our first hypothesis: RWCA clients who both needed and received a high number of ancillary services were seen in primary care more often than those clients who needed the ancillary services but received few or no services.

Source: California Department of Health Services, Office of AIDS, care Research and Evaluation Section

collinearity), insurance status, and IDU. The number of ancillary services received by each client was also used as a continuous independent variable. Table 4 illustrates that of all the variables examined, ancillary services had the only statistical significance associated with a client's retention in primary medical care.

Conclusions

Our analysis of the data indicates that for those RWCA clients who were in need of ancillary services, a positive relationship existed between their receipt of ancillary services and their access to primary medical care. This observation remained statistically significant when we controlled for age, race, gender, and insurance status. We also found that these RWCA clients were more likely to be seen at least once in three consecutive six-month periods by a medical doctor when they received needed ancillary services. When controlling for other variables such as race, sexual orientation, age, insurance status, and injection drug use, we found that ancillary services had the only statistical significance associated with a client's retention in primary medical care.

Our study was limited in several ways. First, because of the comprehensive nature of the CMP and the CMP client's more advanced stage of disease, the clients studied may not be generalizable to the entire HIV-positive population. Second, as this was a convenience sampling technique, it is important to underscore that such vital needs as financial aid, transportation, or daycare may be over or underestimated in the CMP population. Third, this study assumes that an individual with HIV will actively seek primary medical care. A review of literature indicates that this may not be true. Cultural and societal influences play a significant role in the behavior patterns of people with HIV disease, shaping their response to illness and their health-seeking behavior.^{8,9,10,11} Accessing primary medical care for many is fraught with special issues, including poverty and a fear of disclosure that could lead to a loss of employment and/or rejection of family.¹² Finally, counselors reported the questionnaire data, not the clients themselves.

TABLE 4
Significance of Selected Characteristics on Retention in Primary Medical Care

	Clients Receiving Ancillary Services	% Retained	Odds Ratio	95% CI
Ancillary Service Visits	391	65.5	1.26	(1.19 – 1.34)^a
<u>Age Quartiles</u>				
<35	100	63.0	1.39	(0.70 – 2.77)
35-39	99	61.6	1.00	Reference
40-46	95	64.2	1.26	(0.63 – 2.53)
47+	93	74.2	1.97	(0.94 – 4.13)
<u>Race/Ethnicity</u>				
White	192	68.8	1.00	Reference
Black	72	56.9	0.68	(0.34 – 1.35)
Latino	111	64.9	1.07	(0.57 – 1.99)
<u>Sexual Orientation/Gender</u>				
MSM	244	70.1	1.00	Reference
Heterosexual Male	79	57.0	0.68	(0.27-1.07)
Female	68	58.8	1.07	(0.35-1.35)
<u>Insurance Coverage</u>				
Yes	238	68.9	1.00	Reference
No	153	60.1	0.68	(0.77-2.20)
<u>IDU Risk Category</u>				
Yes	66	60.6	1.00	Reference
No	325	66.5	1.09	(0.56-2.12)

^ap<=.01

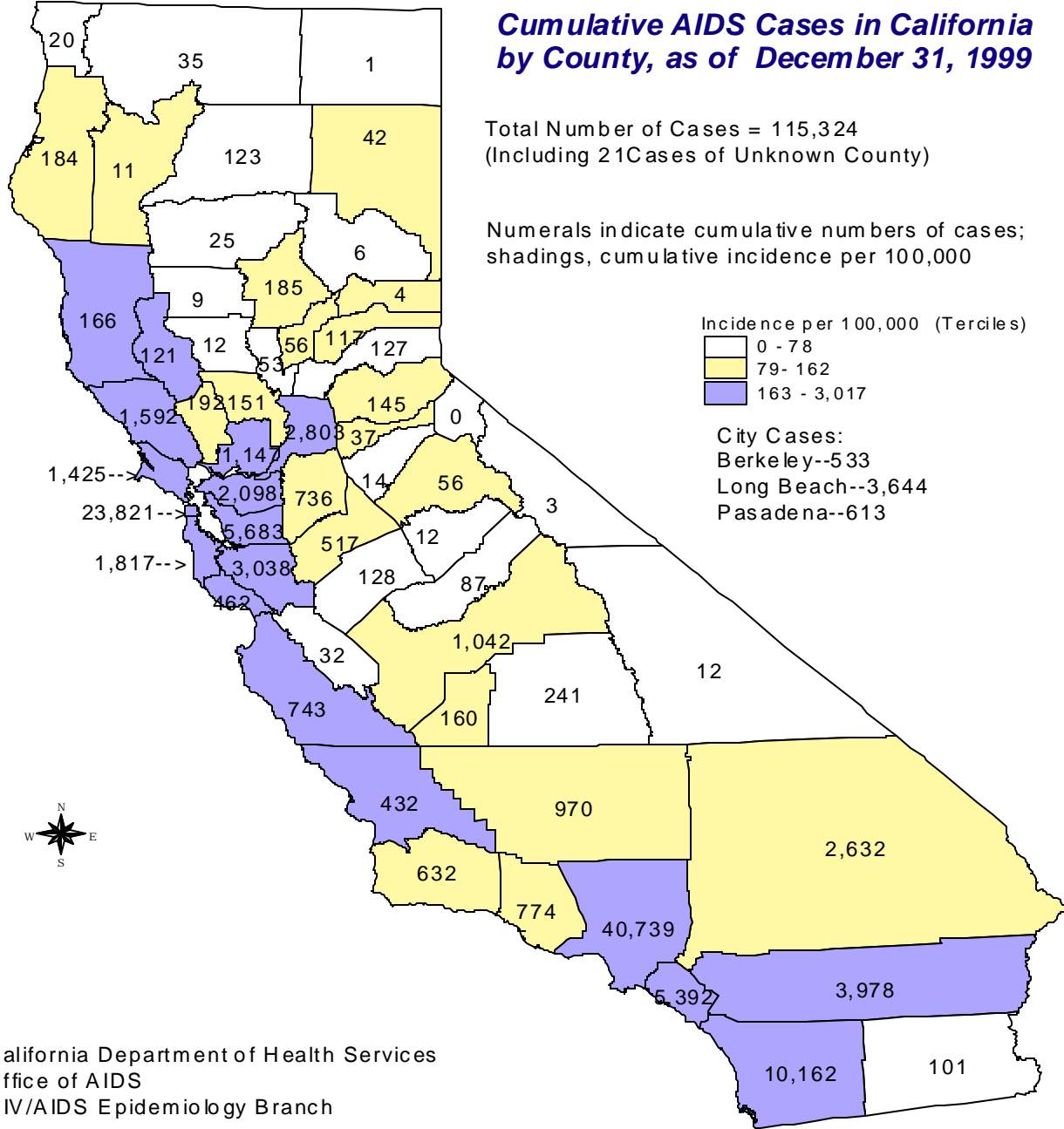
These findings support the second hypothesis: RWCA clients who both needed and received a high number of ancillary services were more likely to be seen in primary medical care at least once in three consecutive six-month periods compared to those clients who needed the ancillary services but did not receive them.

Source: California Department of Health Services, Office of AIDS, care Research and Evaluation Section.

This study took an important step in examining the impact of ancillary services on the receipt of primary medical care for PLWH disease. We supplied evidence that ancillary services provide a meaningful link between the HIV-infected person and medical care. Thus any RWCA program that funds ancillary services should be encouraged to continue this valuable aid to the HIV-infected community

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California Department of Health Services
Office of AIDS
HIV/AIDS Epidemiology Branch

Dec 1999.ap / January 31, 2 01 .AD

Table 1 AIDS cases by age group, exposure category, and gender in California, as of December 31, 1999

Adult/Adolescent Exposure Category	MALE				FEMALE				TOTALS				Cumulative Totals	
	Jan 1998- Dec 1998		Jan 1999- Dec 1999		Jan 1998- Dec 1998		Jan 1999- Dec 1999		Jan 1998- Dec 1998		Jan 1999- Dec 1999		Number	Percent
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent		
Homosexual/bisexual	3,403	67%	3,004	64%	0	0%	0	0%	3,403	59%	3,004	56%	81,094	71%
IDU (heterosexual)	598	12%	488	10%	195	30%	191	30%	793	14%	679	13%	11,487	10%
Homosexual/bisexual IDU	396	8%	361	8%	0	0%	0	0%	396	7%	361	7%	10,287	9%
Lesbian/bisexual IDU	0	0%	0	0%	7	1%	7	1%	7	0%	7	0%	137	0%
Coagulation Disorders	30	1%	17	0%	1	0%	1	0%	31	1%	18	0%	566	0%
Heterosexual	183	4%	148	3%	319	49%	284	45%	502	9%	432	8%	5,064	4%
Blood Transfusion	21	0%	18	0%	16	2%	10	2%	37	1%	28	1%	1,605	1%
Other/undetermined	475	9%	649	14%	114	17%	138	22%	589	10%	787	15%	4,488	4%
Perinatal Transmission	1	0%	1	0%	1	0%	1	0%	2	0%	2	0%	8	0%
Pediatric Unknown	0	0%	2	0%	0	0%	1	0%	0	0%	3	0%	4	0%
Subtotal	5,107		4,688		653		632		5,760		5,321		114,740	
Pediatric (<13 yrs) Exposure Category	Jan 1998- Dec 1998		Jan 1999- Dec 1999		Jan 1998- Dec 1998		Jan 1999- Dec 1999		Jan 1998- Dec 1998		Jan 1999- Dec 1999		Number	Percent
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent		
	Coagulation Disorders	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	30
Blood Transfusion	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	112	19%
Perinatal Transmission	10	100%	2	100%	8	100%	8	100%	18	100%	10	100%	438	75%
Other/undetermined	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	4	1%
Subtotal	10		2		8		8		18		10		584	
TOTAL	5,117		4,690		661		640		5,778		5,331		115,324	

Note: Totals may not add to 100% due to rounding.

Source: California Department of Health Services, December 31, 1999

For questions, telephone the AIDS Case Registry at (916) 322-1065.

Table 2 AIDS cases by age group, exposure category, and race/ethnicity in California, as of December 31, 1999

Adult/Adolescent Exposure Category	White		Black		Hispanic		Asian/Pacific Is.		Native American		Not Specified		Cumulative Totals	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
	Homosexual/bisexual	54,797	78%	9,568	49%	14,601	65%	1,735	73%	271	55%	122	74%	81,094
IDU (heterosexual)	4,278	6%	4,672	24%	2,339	10%	109	5%	75	15%	14	9%	11,487	10%
Homosexual/bisexual IDU	6,602	9%	1,927	10%	1,562	7%	95	4%	96	20%	5	3%	10,287	9%
Lesbian/bisexual IDU	60	0%	49	0%	22	0%	2	0%	4	1%	0	0%	137	0%
Coagulation Disorders	387	1%	43	0%	107	0%	25	1%	1	0%	3	2%	566	0%
Heterosexual	1,787	3%	1,614	8%	1,465	7%	172	7%	22	4%	4	2%	5,064	4%
Blood Transfusion	921	1%	187	1%	374	2%	116	5%	3	1%	4	2%	1,605	1%
Other/undetermined	1,160	2%	1,280	7%	1,891	8%	127	5%	18	4%	12	7%	4,488	4%
Perinatal Transmission	2	0%	3	0%	2	0%	1	0%	0	0%	0	0%	8	0%
Pediatric Unknown	1	0%	0	0%	3	0%	0	0%	0	0%	0	0%	4	0%
Subtotal	69,995		19,343		22,366		2,382		490		164		114,740	
Pediatric (<13 yrs) Exposure Category	White		Black		Hispanic		Asian/Pacific Is.		Native American		Not Specified		Cumulative Totals	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
	Coagulation Disorders	16	10%	1	1%	11	5%	2	13%	0	0%	0	0%	30
Blood Transfusion	43	26%	23	13%	39	18%	7	47%	0	0%	0	0%	112	19%
Perinatal Transmission	104	64%	155	86%	167	76%	6	40%	5	100%	1	100%	438	75%
Other/undetermined	0	0%	2	1%	2	1%	0	0%	0	0%	0	0%	4	1%
Subtotal	163		181		219		15		5		1		584	
TOTAL	70,158		19,524		22,585		2,397		495		165		115,324	

Note: Totals may not add to 100% due to rounding.

Source: California Department of Health Services, December 31, 1999

For questions, telephone the AIDS Case Registry at (916) 322-1065

Table 3 Adult/adolescent AIDS cases by gender, exposure category, and race/ethnicity in California, as of December 31, 1999

Male Exposure Category	White		Black		Hispanic		Asian/Pacific Is.		Native American		Not Specified		Cumulative Totals	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Homosexual/bisexual	54,797	82%	9,568	58%	14,601	71%	1,735	81%	271	62%	122	79%	81,094	76%
IDU (heterosexual)	3,146	5%	3,334	20%	1,924	9%	71	3%	48	11%	9	6%	8,532	8%
Homosexual/bisexual IDU	6,602	10%	1,927	12%	1,562	8%	95	4%	96	22%	5	3%	10,287	10%
Coagulation Disorders	371	1%	41	0%	104	1%	25	1%	1	0%	3	2%	545	1%
Heterosexual	499	1%	512	3%	471	2%	41	2%	6	1%	3	2%	1,532	1%
Blood Transfusion	594	1%	88	1%	184	1%	65	3%	2	0%	3	2%	936	1%
Other/undetermined	979	1%	952	6%	1,658	8%	109	5%	12	3%	10	6%	3,720	3%
Perinatal Transmission	1	0%	2	0%	1	0%	0	0%	0	0%	0	0%	4	0%
Pediatric Unknown	1	0%	0	0%	1	0%	0	0%	0	0%	0	0%	2	0%
Subtotal	66,990		16,424		20,506		2,141		436		155		106,652	

Female Exposure Category	White		Black		Hispanic		Asian/Pacific Is.		Native American		Not Specified		Cumulative Totals	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
IDU (heterosexual)	1,132	38%	1,338	46%	415	22%	38	16%	27	50%	5	56%	2,955	37%
Lesbian/bisexual & IDU	60	2%	49	2%	22	1%	2	1%	4	7%	0	0%	137	2%
Heterosexual	1,288	43%	1,102	38%	994	53%	131	54%	16	30%	1	11%	3,532	44%
Coagulation Disorders	16	1%	2	0%	3	0%	0	0%	0	0%	0	0%	21	0%
Blood Transfusion	327	11%	99	3%	190	10%	51	21%	1	2%	1	11%	669	8%
Other/undetermined	181	6%	328	11%	233	13%	18	7%	6	11%	2	22%	768	9%
Perinatal Transmission	1	0%	1	0%	1	0%	1	0%	0	0%	0	0%	4	0%
Pediatric Unknown	0	0%	0	0%	2	0%	0	0%	0	0%	0	0%	2	0%
Subtotal	3,005		2,919		1,860		241		54		9		8,088	

TOTAL	69,995		19,343		22,366		2,382		490		164		114,740	
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Note: Totals may not add to 100% due to rounding.

Source: California Department of Health Services, December 31, 1999

For questions, telephone the AIDS Case Registry at (916) 322-1065

Table 4 AIDS cases in adolescents and adults under 25 years old, by exposure category in California, as of December 31, 1999

Exposure Category	13-19 Years old				20-24 Years old				TOTALS				Cumulative Totals	
	Jan 1998- Dec 1998		Jan 1999- Dec 1999		Jan 1998- Dec 1998		Jan 1999- Dec 1999		Jan 1998- Dec 1998		Jan 1999- Dec 1999		Number	Percent
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Homosexual/bisexual	8	33%	3	17%	79	47%	69	46%	87	46%	72	43%	81,094	71%
IDU (heterosexual)	4	17%	1	6%	16	10%	9	6%	20	10%	10	6%	11,487	10%
Homosexual/bisexual IDU	1	4%	1	6%	12	7%	12	8%	13	7%	13	8%	10,287	9%
Lesbian/bisexual IDU	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	137	0%
Coagulation Disorders	3	13%	1	6%	7	4%	3	2%	10	5%	4	2%	566	0%
Heterosexual	0	0%	1	6%	27	16%	30	20%	27	14%	31	18%	5,064	4%
Blood Transfusion	2	8%	1	6%	0	0%	0	0%	2	1%	1	1%	1,605	1%
Other/undetermined	4	17%	5	28%	26	16%	28	19%	30	16%	33	20%	4,488	4%
Perinatal Transmission	2	8%	2	11%	0	0%	0	0%	2	1%	2	1%	8	0%
Pediatric Unknown	0	0%	3	17%	0	0%	0	0%	0	0%	3	2%	4	0%
TOTAL	24		18		167		151		191		169		114,740	

Note: Totals may not add to 100% due to rounding.

Source: California Department of Health Services, December 31, 1999

For questions, telephone the AIDS Case Registry at (916) 322-1065.

Table 5 AIDS cases by gender, age at diagnosis, and race/ethnicity in California, as of December 31, 1999

Male Age at Diaanosis (In Years)	White		Black		Hispanic		Asian/ Pacific Is.		Native American		Not Specified		Cumulative Totals	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
0-4	47	0%	67	0%	73	0%	4	0%	2	0%	0	0%	193	0%
5-12	40	0%	28	0%	39	0%	4	0%	0	0%	0	0%	111	0%
13-19	82	0%	38	0%	116	1%	9	0%	3	1%	0	0%	248	0%
20-24	1,317	2%	468	3%	994	5%	73	3%	15	3%	5	3%	2,872	3%
25-29	7,263	11%	2,097	13%	3,723	18%	277	13%	78	18%	22	14%	13,460	13%
30-34	14,726	22%	3,707	22%	5,275	26%	454	21%	124	28%	30	19%	24,316	23%
35-39	15,497	23%	3,781	23%	4,328	21%	473	22%	104	24%	38	25%	24,221	23%
40-44	11,876	18%	2,852	17%	2,836	14%	391	18%	58	13%	24	15%	18,037	17%
45-49	7,552	11%	1,727	10%	1,476	7%	237	11%	27	6%	14	9%	11,033	10%
50-54	4,199	6%	896	5%	828	4%	98	5%	12	3%	8	5%	6,041	6%
55-59	2,299	3%	460	3%	475	2%	68	3%	7	2%	8	5%	3,317	3%
60-64	1,232	2%	234	1%	262	1%	31	1%	4	1%	2	1%	1,765	2%
65 or older	947	1%	164	1%	193	1%	30	1%	4	1%	4	3%	1,342	1%
Subtotal	67,077		16,519		20,618		2,149		438		155		106,956	
Female Age at Diaanosis (In Years)	White		Black		Hispanic		Asian/ Pacific Is.		Native American		Not Specified		Cumulative Totals	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
0-4	50	2%	67	2%	83	4%	4	2%	3	5%	1	10%	208	2%
5-12	26	1%	19	1%	24	1%	3	1%	0	0%	0	0%	72	1%
13-19	26	1%	22	1%	34	2%	4	2%	0	0%	0	0%	86	1%
20-24	155	5%	148	5%	163	8%	9	4%	4	7%	0	0%	479	6%
25-29	443	14%	389	13%	354	18%	34	14%	10	18%	0	0%	1,230	15%
30-34	637	21%	591	20%	377	19%	29	12%	13	23%	2	20%	1,649	20%
35-39	545	18%	667	22%	339	17%	57	23%	11	19%	4	40%	1,623	19%
40-44	443	14%	496	17%	241	12%	31	13%	7	12%	1	10%	1,219	15%
45-49	276	9%	307	10%	125	6%	32	13%	3	5%	1	10%	744	9%
50-54	155	5%	131	4%	90	5%	13	5%	4	7%	0	0%	393	5%
55-59	85	3%	81	3%	63	3%	14	6%	1	2%	0	0%	244	3%
60-64	72	2%	43	1%	41	2%	7	3%	0	0%	0	0%	163	2%
65 or older	168	5%	44	1%	33	2%	11	4%	1	2%	1	10%	258	3%
Subtotal	3,081		3,005		1,967		248		57		10		8,368	
TOTAL	70,158		19,524		22,585		2,397		495		165		115,324	

Note: Totals may not add to 100% due to rounding.

Source: California Department of Health Services, December 31, 1999

For questions, telephone the AIDS Case Registry at (916) 322-1065.

Table 6 Reported Cases of AIDS and Case-Fatality Rates by Half-Year of Diagnosis In California, as of December 31, 1999

Half-Year of Diagnosis	Number of Cases	Number of Deaths	Case-Fatality Rate
----- Before 1983	307	291	95%
1983 Jan -June	297	287	97%
July-Dec	414	400	97%
1984 Jan -June	601	580	97%
July-Dec	813	785	97%
1985 Jan -June	1177	1134	96%
July-Dec	1410	1364	97%
1986 Jan -June	1861	1792	96%
July-Dec	2226	2147	96%
1987 Jan -June	2812	2690	96%
July-Dec	2915	2753	94%
1988 Jan -June	3339	3133	94%
July-Dec	3460	3205	93%
1989 Jan -June	4213	3797	90%
July-Dec	4087	3654	89%
1990 Jan -June	4593	3943	86%
July-Dec	4489	3855	86%
1991 Jan -June	5336	4371	82%
July-Dec	5861	4673	80%
1992 Jan -June	6338	4612	73%
July-Dec	6168	4271	69%
1993 Jan -June	6380	3976	62%
July-Dec	5574	3029	54%
1994 Jan -June	5575	2614	47%
July-Dec	4782	1907	40%
1995 Jan -June	5114	1534	30%
July-Dec	4349	1082	25%
1996 Jan -June	4138	852	21%
July-Dec	3254	533	16%
1997 Jan -June	3078	428	14%
July-Dec	2602	340	13%
1998 Jan -June	2440	306	13%
July-Dec	2180	233	11%
1999 Jan -June	2078	197	9%
July-Dec	1063	45	4%
----- Totals	115324	70813	61%

Table 7 AIDS cases, cumulative incidence rates per 100,000, deaths, and case-fatality rates, by local health jurisdiction - California

AIDS Cases : 1981 through December 31, 1999

COUNTY (City)	Incidence		Deaths	Case-Fatality Rate	COUNTY (City)	Incidence		Deaths	Case-Fatality Rate
	AIDS Cases	Rate (per 100,000)				AIDS Cases	Rate (per 100,000)		
Alameda	5.683	403.59	3.499	61.6%	Orange	5.392	198.07	3.026	56.1%
Berkeley	533	494.43	341	64.0%	Placer	127	58.28	76	59.8%
Alpine	0	0.00	0	0.0%	Plumas	6	29.13	4	66.7%
Amador	37	109.79	19	51.4%	Riverside	3.978	276.02	2.020	50.8%
Butte	185	91.77	120	64.9%	Sacramento	2.803	241.68	1.743	62.2%
Calaveras	14	36.51	8	57.1%	San Benito	32	68.67	15	46.9%
Colusa	12	64.69	12	100.0%	San Bernardino	2.632	162.28	1.459	55.4%
Contra Costa	2.098	232.93	1.348	64.3%	San Diego	10.162	363.60	5.855	57.6%
Del Norte	20	69.20	11	55.0%	San Francisco	23.821	3,016.84	16.286	68.4%
El Dorado	145	98.24	92	63.4%	San Joaquin	736	135.00	437	59.4%
Fresno	1.042	132.44	662	63.5%	San Luis Obispo	432	180.75	207	47.9%
Glenn	9	33.40	6	66.7%	San Mateo	1.817	253.98	1.141	62.8%
Humboldt	184	144.09	107	58.2%	Santa Barbara	632	155.86	450	71.2%
Imperial	101	71.08	49	48.5%	Santa Clara	3.038	179.77	1.761	58.0%
Inyo	12	64.86	7	58.3%	Santa Cruz	462	184.65	279	60.4%
Kern	970	151.61	459	47.3%	Shasta	123	74.55	87	70.7%
Kings	160	130.29	58	36.3%	Sierra	4	119.05	4	100.0%
Lake	121	219.60	62	51.2%	Siskiyou	35	78.30	17	48.6%
Lassen	42	122.99	17	40.5%	Solano	1.147	299.01	606	52.8%
Los Angeles	40.739	424.22	25.007	61.4%	Sonoma	1.592	364.22	1.004	63.1%
Lona Beach	3.644	816.67	2.172	59.6%	Stanislaus	517	120.91	300	58.0%
Pasadena	613	436.61	389	63.5%	Sutter	53	69.01	35	66.0%
Madera	87	76.12	48	55.2%	Tehama	25	45.13	11	44.0%
Marin	1.425	579.50	781	54.8%	Trinity	11	83.02	9	81.8%
Mariposa	12	74.30	3	25.0%	Tulare	241	66.87	161	66.8%
Mendocino	166	191.02	111	66.9%	Tuolumne	56	106.06	33	58.9%
Merced	128	62.62	79	61.7%	Ventura	774	105.91	472	61.0%
Modoc	1	9.85	1	100.0%	Yolo	151	96.30	93	61.6%
Mono	3	28.30	2	66.7%	Yuba	56	91.21	35	62.5%
Monterey	743	192.39	425	57.2%	Unknown	21		8	38.1%
Napa	192	155.72	122	63.5%					
Nevada	117	131.76	64	54.7%					
					TOTAL	115.324	346.82	70.813	61.4%

Source: California Department of Health Services, Office of AIDS.

For questions, telephone the AIDS Case Registry at (916) 322-1065.

Note: City cases and deaths are included in the corresponding counties' cases and deaths

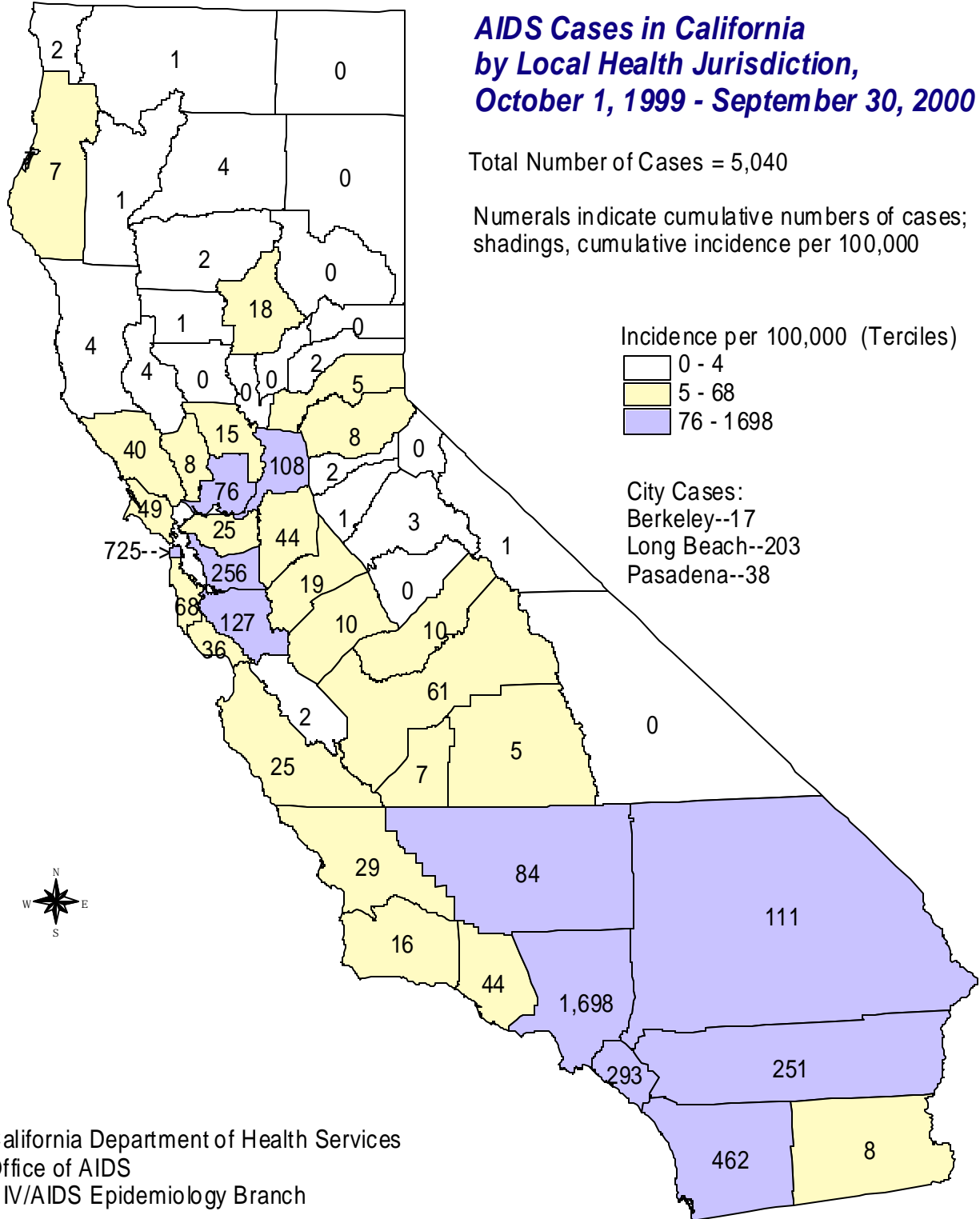


Table 1 AIDS cases by age group, exposure category, and gender in California as of September 30, 2000

Adult/Adolescent Exposure Category	MALE				FEMALE				TOTALS				Cumulative Totals	
	Oct 1998- Sep 1999		Oct 1999- Sep 2000		Oct 1998- Sep 1999		Oct 1999- Sep 2000		Oct 1998- Sep 1999		Oct 1999- Sep 2000		Number	Percent
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Homosexual/bisexual IDU (heterosexual)	3,066	64%	2,679	65%	0	0%	0	0%	3,066	56%	2,679	56%	82,964	70%
Homosexual/bisexual IDU	523	11%	469	11%	202	30%	174	28%	725	13%	643	13%	11,992	10%
Lesbian/bisexual IDU	386	8%	301	7%	0	0%	0	0%	386	7%	301	6%	10,656	9%
Coagulation Disorders	0	0%	0	0%	9	1%	10	2%	9	0%	10	0%	145	0%
Heterosexual	16	0%	13	0%	1	0%	0	0%	17	0%	13	0%	572	0%
Blood Transfusion	191	4%	151	4%	313	47%	273	44%	504	9%	424	9%	5,415	5%
Other/undetermined	20	0%	13	0%	13	2%	14	2%	33	1%	27	1%	1,625	1%
Perinatal Transmission	592	12%	521	13%	127	19%	141	23%	719	13%	662	14%	4,831	4%
Pediatric Unknown	0	0%	0	0%	1	0%	0	0%	1	0%	0	0%	7	0%
Pediatric Unknown	2	0%	4	0%	1	0%	2	0%	3	0%	6	0%	10	0%
Subtotal	4,796		4,151		667		614		5,463		4,765		118,217	
Pediatric (<13 yrs) Exposure Category	Oct 1998- Sep 1999		Oct 1999- Sep 2000		Oct 1998- Sep 1999		Oct 1999- Sep 2000		Oct 1998- Sep 1999		Oct 1999- Sep 2000		Number	Percent
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Coagulation Disorders	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	30	5%
Blood Transfusion	0	0%	0	0%	0	0%	1	11%	0	0%	1	6%	113	19%
Perinatal Transmission	4	100%	8	100%	8	100%	7	78%	12	100%	15	88%	451	75%
Other/undetermined	0	0%	0	0%	0	0%	1	11%	0	0%	1	6%	4	1%
Subtotal	4		8		8		9		12		17		598	
TOTAL	4,800		4,159		675		623		5,475		4,782		118,815	

Note: Totals may not add to 100% due to rounding.
 Source: California Department of Health Services, September 30, 2000
 For questions, telephone the AIDS Case Registry at (916) 322-1065.

Table 2 AIDS cases by age group, exposure category, and race/ethnicity in California as of September 30, 2000

Adult/Adolescent Exposure Category	White		Black		Hispanic		Asian/Pacific Is.		Native American		Not Specified		Cumulative Totals	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Homosexual/bisexual IDU (heterosexual)	55,720	78%	9,850	49%	15,195	65%	1,790	72%	285	56%	124	73%	82,964	70%
Homosexual/bisexual IDU	4,442	6%	4,878	24%	2,466	11%	113	5%	79	15%	14	8%	11,992	10%
Lesbian/bisexual IDU	6,814	10%	2,003	10%	1,636	7%	101	4%	97	19%	5	3%	10,656	9%
Coagulation Disorders	61	0%	52	0%	26	0%	2	0%	4	1%	0	0%	145	0%
Heterosexual	389	1%	43	0%	111	0%	25	1%	1	0%	3	2%	572	0%
Blood Transfusion	1,843	3%	1,763	9%	1,589	7%	191	8%	25	5%	4	2%	5,415	5%
Other/undetermined	929	1%	194	376%	379	117%	116	3%	3	4%	4	2%	1,625	1%
Perinatal Transmission	1,217	2%	1,380	7%	2,064	3%	136	1%	18	0%	16	0%	4,831	4%
Pediatric Unknown	2	0%	2	0%	2	0%	1	0%	0	0%	0	0%	7	0%
Pediatric Unknown	3	0%	3	0%	4	0%	0	0%	0	0%	0	0%	10	0%
Subtotal	71,420		20,168		23,472		2,475		512		170		118,217	
Pediatric (<13 yrs) Exposure Category	White		Black		Hispanic		Asian/Pacific Is.		Native American		Not Specified		Cumulative Totals	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Coagulation Disorders	17	10%	1	1%	10	5%	2	12%	0	0%	0	0%	30	5%
Blood Transfusion	43	26%	23	12%	39	18%	8	47%	0	0%	0	0%	113	19%
Perinatal Transmission	107	64%	159	86%	171	77%	7	41%	6	100%	1	100%	451	75%
Other/undetermined	1	1%	2	1%	1	0%	0	0%	0	0%	0	0%	4	1%
Subtotal	168		185		221		17		6		1		598	
TOTAL	71,588		20,353		23,693		2,492		518		171		118,815	

Note: Totals may not add to 100% due to rounding.
 Source: California Department of Health Services, September 30, 2000
 For questions, telephone the AIDS Case Registry at (916) 322-1065.

Table 3 Adult/adolescent AIDS cases by gender, exposure category, and race/ethnicity in California as of September 30, 2000

Male Exposure Category	White		Black		Hispanic		Asian/ Pacific Is.		Native American		Not Specified		Cumulative Totals	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Homosexual/bisexual	55,720	82%	9,850	58%	15,195	71%	1,790	81%	285	63%	124	78%	82,964	76%
IDU (heterosexual)	3,260	5%	3,475	5%	2,023	3%	73	0%	49	0%	9	0%	8,889	8%
Homosexual/bisexual IDU	6,814	10%	2,003	3%	1,636	2%	101	0%	97	0%	5	0%	10,656	10%
Coagulation Disorders	373	1%	41	0%	108	0%	25	0%	1	0%	3	0%	551	1%
Heterosexual	521	1%	562	1%	522	1%	47	0%	6	0%	3	0%	1,661	2%
Blood Transfusion	598	1%	87	0%	187	0%	64	0%	2	0%	3	0%	941	1%
Other/undetermined	1,022	1%	1,029	2%	1,797	3%	116	0%	12	0%	13	0%	3,989	4%
Perinatal Transmission	1	0%	1	0%	1	0%	0	0%	0	0%	0	0%	3	0%
Pediatric Unknown	2	0%	2	0%	2	0%	0	0%	0	0%	0	0%	6	0%
Subtotal	68,311		17,050		21,471		2,216		452		160		109,660	
Female Exposure Category	White		Black		Hispanic		Asian/ Pacific Is.		Native American		Not Specified		Cumulative Totals	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
IDU (heterosexual)	1,182	38%	1,403	45%	443	22%	40	15%	30	50%	5	50%	3,103	36%
Lesbian/bisexual & IDU	61	2%	52	2%	26	1%	2	1%	4	7%	0	0%	145	2%
Heterosexual	1,322	43%	1,201	39%	1,067	53%	144	56%	19	32%	1	10%	3,754	44%
Coagulation Disorders	16	1%	2	0%	3	0%	0	0%	0	0%	0	0%	21	0%
Blood Transfusion	331	11%	107	3%	192	10%	52	20%	1	2%	1	10%	684	8%
Other/undetermined	195	6%	351	11%	267	13%	20	8%	6	10%	3	30%	842	10%
Perinatal Transmission	1	0%	1	0%	1	0%	1	0%	0	0%	0	0%	4	0%
Pediatric Unknown	1	0%	1	0%	2	0%	0	0%	0	0%	0	0%	4	0%
Subtotal	3,109		3,118		2,001		259		60		10		8,557	
TOTAL	71,420		20,168		23,472		2,475		512		170		118,217	

Note: Totals may not add to 100% due to rounding.

Source: California Department of Health Services, September 30, 2000

For questions, telephone the AIDS Case Registry at (916) 322-1065.

Table 4 AIDS cases of adolescents and adults under 25 years old, by exposure category in California as of September 30, 2000

Exposure Category	13-19 Years old				20-24 Years old				TOTALS				Cumulative	
	Oct 1998- Sep 1999-		Oct 1999- Sep 2000-		Oct 1998- Sep 1999-		Oct 1999- Sep 2000-		Oct 1998- Sep 1999-		Oct 1999- Sep 2000-		Totals	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Homosexual/bisexual	6	32%	3	14%	69	42%	70	53%	75	41%	73	48%	82,964	70%
IDU (heterosexual)	1	5%	1	5%	10	6%	12	9%	11	6%	13	8%	11,992	10%
Homosexual/bisexual IDU	1	5%	0	0%	15	9%	10	8%	16	9%	10	7%	10,656	9%
Lesbian/bisexual IDU	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	145	0%
Coagulation Disorders	2	11%	1	5%	4	2%	0	0%	6	3%	1	1%	572	0%
Heterosexual	1	5%	5	23%	38	23%	14	11%	39	21%	19	12%	5,415	5%
Blood Transfusion	2	11%	1	5%	0	0%	0	0%	2	1%	1	1%	1,625	1%
Other/undetermined	2	11%	6	27%	29	18%	24	18%	31	17%	30	20%	4,831	4%
Perinatal Transmission	1	5%	0	0%	0	0%	0	0%	1	1%	0	0%	7	0%
Pediatric Unknown	3	16%	5	23%	0	0%	1	1%	3	2%	6	4%	10	0%
TOTAL	19		22		165		131		184		153		118,217	

Note: Totals may not add to 100% due to rounding.

Source: California Department of Health Services, September 30, 2000

For questions, telephone the AIDS Case Registry at (916) 322-1065.

Table 5 AIDS cases by gender, age at diagnosis, and race/ethnicity in California as of September 30, 2000

Male		White		Black		Hispanic		Asian/ Pacific Is.		Native American		Not Specified		Cumulative Totals		
Age at Diagnosis (In Years)	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
0-4	49	0%	69	0%	74	0%	5	0%	2	0%	0	0%	199	0%		
5-12	41	0%	28	0%	40	0%	4	0%	1	0%	0	0%	114	0%		
13-19	85	0%	40	0%	121	1%	9	0%	3	1%	0	0%	258	0%		
20-24	1,339	2%	482	3%	1,044	5%	73	3%	14	3%	5	3%	2,957	3%		
25-29	7,346	11%	2,154	13%	3,838	18%	292	13%	82	18%	21	13%	13,733	12%		
30-34	14,944	22%	3,825	22%	5,530	26%	467	21%	128	28%	31	19%	24,925	23%		
35-39	15,846	23%	3,917	23%	4,557	21%	496	22%	110	24%	40	25%	24,966	23%		
40-44	12,150	18%	2,975	17%	2,964	14%	400	18%	58	13%	26	16%	18,573	17%		
45-49	7,714	11%	1,798	10%	1,571	7%	248	11%	27	6%	14	9%	11,372	10%		
50-54	4,298	6%	951	6%	869	4%	102	5%	13	3%	8	5%	6,241	6%		
55-59	2,349	3%	490	3%	495	2%	67	3%	9	2%	8	5%	3,418	3%		
60-64	1,265	2%	246	1%	274	1%	31	1%	4	1%	2	1%	1,822	2%		
65 or older	975	1%	172	1%	208	1%	31	1%	4	1%	5	3%	1,395	1%		
Subtotal	68,401		17,147		21,585		2,225		455		160		109,973			
Female		White		Black		Hispanic		Asian/ Pacific Is.		Native American		Not Specified		Cumulative Totals		
Age at Diagnosis (In Years)	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
0-4	50	2%	67	2%	83	4%	4	1%	3	5%	1	9%	208	2%		
5-12	28	1%	21	1%	24	1%	4	1%	0	0%	0	0%	77	1%		
13-19	27	1%	26	1%	35	2%	4	1%	0	0%	0	0%	92	1%		
20-24	155	5%	153	5%	170	8%	9	3%	4	6%	0	0%	491	6%		
25-29	451	14%	411	13%	379	18%	35	13%	10	16%	1	9%	1,287	15%		
30-34	658	21%	628	20%	400	19%	34	13%	14	22%	2	18%	1,736	20%		
35-39	575	18%	708	22%	364	17%	59	22%	12	19%	4	36%	1,722	19%		
40-44	458	14%	532	17%	262	12%	35	13%	9	14%	1	9%	1,297	15%		
45-49	287	9%	335	10%	140	7%	34	13%	5	8%	1	9%	802	9%		
50-54	161	5%	143	4%	102	5%	15	6%	4	6%	0	0%	425	5%		
55-59	90	3%	89	3%	70	3%	15	6%	1	2%	0	0%	265	3%		
60-64	74	2%	46	1%	44	2%	8	3%	0	0%	0	0%	172	2%		
65 or older	173	5%	47	1%	35	2%	11	4%	1	2%	1	9%	268	3%		
Subtotal	3,187		3,206		2,108		267		63		11		8,842			
TOTAL	71,588		20,353		23,693		2,492		518		171		118,815			

Note: Totals may not add to 100% due to rounding.

Source: California Department of Health Services, September 30, 2000

For questions, telephone the AIDS Case Registry at (916) 322-1065.

Table 6 Reported Cases of AIDS and Case-Fatality Rates by Half-Year of Diagnosis in California as of September 30, 2000

Half-Year of Diagnosis	Number of Cases	Number of Deaths	Case-Fatality Rate
-----	-----	-----	-----
Before 1983	305	293	96%
1983 Jan -June	298	289	97%
July-Dec	411	398	97%
1984 Jan -June	598	576	96%
July-Dec	818	791	97%
1985 Jan -June	1178	1135	96%
July-Dec	1412	1364	97%
1986 Jan -June	1861	1794	96%
July-Dec	2226	2151	97%
1987 Jan -June	2817	2697	96%
July-Dec	2925	2763	94%
1988 Jan -June	3354	3153	94%
July-Dec	3468	3217	93%
1989 Jan -June	4223	3819	90%
July-Dec	4112	3687	90%
1990 Jan -June	4596	3979	87%
July-Dec	4483	3884	87%
1991 Jan -June	5304	4399	83%
July-Dec	5854	4756	81%
1992 Jan -June	6320	4733	75%
July-Dec	6149	4408	72%
1993 Jan -June	6390	4117	64%
July-Dec	5591	3186	57%
1994 Jan -June	5613	2788	50%
July-Dec	4815	2050	43%
1995 Jan -June	5159	1681	33%
July-Dec	4373	1189	27%
1996 Jan -June	4173	942	23%
July-Dec	3286	619	19%
1997 Jan -June	3140	500	16%
July-Dec	2663	397	15%
1998 Jan -June	2523	364	14%
July-Dec	2283	278	12%
1999 Jan -June	2306	268	12%
July-Dec	1883	169	9%
2000 Jan -June	1609	102	6%
July-Sept 30	296	11	4%
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Totals	118815	72947	61%

Table 7 AIDS cases, cumulative incidence rates per 100,000, deaths, and case-fatality rates, by local health jurisdiction - California

AIDS Cases : 1981 through September 30, 2000

COUNTY (City)	Incidence			Case- Fatality Rate	COUNTY (City)	Incidence			Case- Fatality Rate
	AIDS Cases	Rate (per 100,000)	Deaths			AIDS Cases	Rate (per 100,000)	Deaths	
Alameda	5,881	410.31	3,572	60.7%	Orange	5,620	202.48	3,103	55.2%
Berkeley	554	508.72	350	63.2%	Placer	129	57.10	76	58.9%
Alpine	0	0.00	0	0.0%	Plumas	6	29.34	4	66.7%
Amador	38	111.60	20	52.6%	Riverside	4,178	283.58	2,100	50.3%
Butte	202	100.05	122	60.4%	Sacramento	2,899	246.14	1,764	60.8%
Calaveras	14	36.70	8	57.1%	San Benito	33	68.97	15	45.5%
Colusa	12	64.69	12	100.0%	San Bernardino	2,732	165.18	1,502	55.0%
Contra Costa	2,101	229.27	1,348	64.2%	San Diego	10,521	368.73	5,968	56.7%
Del Norte	22	78.29	11	50.0%	San Francisco	24,293	3,073.12	16,456	67.7%
El Dorado	150	99.47	95	63.3%	San Joaquin	768	138.53	447	58.2%
Fresno	1,096	138.07	683	62.3%	San Luis Obispo	455	188.33	206	45.3%
Glenn	10	37.11	6	60.0%	San Mateo	1,859	257.19	1,156	62.2%
Humboldt	187	145.98	111	59.4%	Santa Barbara	646	157.95	453	70.1%
Imperial	109	76.38	56	51.4%	Santa Clara	3,126	182.23	1,836	58.7%
Inyo	12	65.75	7	58.3%	Santa Cruz	501	198.18	291	58.1%
Kern	1,029	158.70	477	46.4%	Shasta	124	74.97	88	71.0%
Kings	165	128.60	62	37.6%	Sierra	4	124.22	4	100.0%
Lake	124	224.23	68	54.8%	Siskiyou	35	78.92	18	51.4%
Lassen	43	126.28	18	41.9%	Solano	1,190	305.05	616	51.8%
Los Angeles	41,957	430.00	26,289	62.7%	Sonoma	1,621	365.34	1,014	62.6%
Long Beach	3,807	840.58	2,312	60.7%	Stanislaus	535	123.56	303	56.6%
Pasadena	648	454.74	415	64.0%	Sutter	53	69.10	37	69.8%
Madera	97	83.77	51	52.6%	Tehama	26	46.68	11	42.3%
Marin	1,463	590.16	798	54.5%	Trinity	12	90.91	9	75.0%
Mariposa	12	74.53	4	33.3%	Tulare	246	67.71	165	67.1%
Mendocino	169	194.03	112	66.3%	Tuolumne	59	111.11	34	57.6%
Merced	135	65.25	87	64.4%	Ventura	808	108.89	489	60.5%
Modoc	1	10.08	1	100.0%	Yolo	166	104.53	98	59.0%
Mono	3	27.78	2	66.7%	Yuba	55	91.06	35	63.6%
Monterey	761	194.48	433	56.9%	Unknown	11		7	63.6%
Napa	194	155.70	125	64.4%					
Nevada	117	130.58	64	54.7%					
					TOTAL	118,815	351.80	72,947	61.4%

Source: California Department of Health Services, Office of AIDS,

For questions, telephone the AIDS Case Registry at (916) 322-1065.

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MEETINGS/ANNOUNCEMENTS

April 18, 2001 14th Annual HIV/AIDS on the Front Line Conference. Hilton Hotel, Costa Mesa, CA. The conference is designed to meet the educational needs of physicians, nurses and pharmacists. Topics include pathogenesis of HIV, addressing resistance, pharmacokinetics, and drug monitoring. Conference is sponsored by the Pacific AIDS Education and Training Center at UC Irvine Medical Center and Orange County Health Care Agency. For information: call (714) 456-2249 or visit www.HIVconference.org.

August 12-15, 2001 National HIV Prevention Conference, Hyatt Regency, Atlanta, GA. Goals of this conference are to share effective prevention approaches and research findings among governmental, community, and academic partners in HIV prevention, and to strengthen collaborations between program practitioners and researchers in areas including behavioral interventions, vaccine development, and monitoring the epidemic. Deadline for submission of abstracts is March 2, 2001. For information: call (404) 233-6446 or visit www.2001hivprevconf.org.

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