

*State of Alaska
Epidemiology*



Bulletin

*Recommendations
and
Reports*

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HIV Infection in Alaska through 2002

Table of Contents

OVERVIEW	1
CONSIDERATIONS REGARDING DATA AND METHODS	3
CUMULATIVE DATA ON HIV AND AIDS IN ALASKA.....	4
Gender.....	6
Age	6
Exposure Category	7
Race/Ethnicity	9
Geographic Region of Residence at First Known HIV Diagnosis	12
Deaths Among Person with HIV/AIDS	14
HIV/AIDS in Adolescents and Young Adults	15
Persons Diagnosed Late in the Course of their HIV Disease	16
HIV Cases Newly Reported in Alaska in 2002.....	17
Persons Presumed Living with HIV	18
PERSONS INFECTED MORE RECENTLY	19
PARTNER NOTIFICATION ACTIVITIES	28
VOLUNTARY HIV TESTING IN HIV COUNSELING AND TESTING SITES	29
HIV TESTING DURING PRENATAL CARE.....	30
HIV CARE SERVICE UTILIZATION.....	31
PREVALENCE OF HIV IN SPECIFIC POPULATIONS.....	32
INDICATORS OF RISK.....	33

OVERVIEW

Through December 31, 2002, 892 cases of HIV/AIDS were reported in Alaska. On average, 40 HIV/AIDS cases were newly diagnosed per year from 1998-2002, a decline from the average of 51 cases newly diagnosed per year in the previous decade (1988-1997).

Beginning in 1996, HIV-related deaths declined significantly in Alaska and in the U.S., primarily due to advances in medical care and treatment. The decline in deaths and a relatively constant rate of new infections resulted in a steady increase in the number of persons in the population living with HIV. Needs for medical care, supportive services, and ongoing prevention services will continue to grow as persons with HIV live longer, healthier lives.

A large proportion of persons with HIV infection was first diagnosed late in the course of their HIV disease. Of persons newly reported in Alaska with HIV infection from 1999-2002, 64% were first diagnosed with HIV within 12 months of their AIDS diagnosis. Late diagnosis limits an individual's potential benefit from medical care. Of public health importance, late diagnosis means there has been a lengthy period during which the infected person may have unknowingly transmitted HIV to others.

Although a number of individuals with HIV are unaware of their infection, HIV screening of the general population has not been effective in helping many of those infected learn of their infection. From 1998-2002, only 1-2 per 1,000 persons tested each year (0.1-0.2%) at voluntary HIV counseling and testing sites were found to have HIV infection. Partner notification activities work with persons diagnosed with HIV to alert their sexual and needle-sharing partners of their exposure. These activities offer one of the only effective ways to reach those individuals most likely to be infected at a point prior to symptomatic disease. Partner notification can interrupt HIV transmission by targeting intensive public health activities to those at greatest potential risk: offering individualized HIV counseling and testing, assuring those infected access to medical interventions and care, and identifying through disease intervention efforts others who may have been exposed.

Since the beginning of the epidemic, as occurred nationally, the number and proportion of HIV/AIDS cases in males exceeded those in females in Alaska through December 31, 2002. Over time, the proportion of cases in males declined. As the proportion in males declined, the proportion of cases in females increased. In the most recent five-year period (1998-2002), an average of 28 HIV/AIDS cases (70% of total cases) per year in Alaska were in males compared to an average of 12 HIV/AIDS cases (30% of total cases) per year in females.

We compared cases infected more recently to those infected earlier in the epidemic; the proportion of female cases increased from 16% to 38%. Although the proportion of cases in females increased, the number of cases per year in females was stable, averaging 11-12 cases per year for the past decade.

A greater proportion of female cases than male cases occurred in persons in a younger age group at the time of first HIV diagnosis, and the difference was greater for cases infected more recently than for those infected earlier in the epidemic. In females, 10 of 41 (24%) cases infected more recently were aged 15-24 years at the time of first HIV diagnosis compared to 19 of 127 (15%) cases infected earlier. In males, 10 of 67 (15%) cases infected more recently were aged 15-24 years at first HIV diagnosis compared to 68 of 657 (10%) cases infected earlier.

HIV infection affected individuals in all racial and ethnic groups. In Alaska, as in the U.S., the proportion of HIV/AIDS cases in Whites decreased. As a result, the proportion of HIV/AIDS cases in racial/ethnic minority persons increased. Compared to their proportions of the state's population, Alaska Native/American Indian, Black, and Hispanic persons were over-represented among HIV/AIDS cases. Of cases infected more recently (HIV non-AIDS with diagnosis from 1998-2002), disparities were greatest for Alaska Native/American Indian females (16 [39%] of 41 recent female cases) and for Alaska Native/American Indian males (19 [28%] of 67 recent male cases) and Black males (9 [13%] of 67 recent male cases).

Persons reported with HIV were from all regions of Alaska. Of persons infected more recently, 68 of 108 cases (64%) resided in the urban areas of Anchorage, Fairbanks, or Juneau at the time of first HIV diagnosis compared to 77% of earlier cases. Of the 108 recent cases, 55% resided in Anchorage/Mat-Su at time of first HIV diagnosis. Females, especially among more recent cases, were less likely than males to live in one of the three urban areas at the time of first diagnosis. In females, 20 of 41 (49%) recent cases lived in an urban area at the time of first HIV diagnosis, whereas in males, 49 of 67(73%) recent cases lived in an urban area at first diagnosis. Among earlier cases, 89 of 127 (70%) of females and 514 of 563 (78%) of males lived in an urban area at diagnosis.

The greatest proportion of HIV/AIDS cases was associated with exposure through male-male sex (MSM). Singly, and in combination with injection drug use, male-male sex was a risk factor in 477 HIV/AIDS cases (53% of cumulative cases and 66% of cumulative cases in males) reported in Alaska through December 31, 2002. The proportion of MSM-related cases among racial minority males was greater, and the proportion in White males less, in cases infected more recently in the epidemic.

Injection drug use was a risk factor in 168 HIV/AIDS cases (19% of cumulative cases) through December 31, 2002 (132 cases in males and 36 cases in females). IDU was a risk factor in 21% of cases in females, and IDU (singly and combined with MSM) was a risk factor in 18% of cases in males. In female cases infected more recently, IDU was associated with 24% of cases, compared to 20% of female cases infected earlier in the epidemic.

Of cumulative HIV/AIDS cases diagnosed through December 31, 2002, 105 cases (12%) were related to heterosexual contact with a person with or at increased risk of HIV infection (5% of male and 43% of female cases). The proportion of cases with this exposure category increased over time. Among cases infected more recently, 13% of male and 49% of female cases were related to heterosexual contact with a person with or at increased risk of HIV infection.

Exposure categories of transfusion/transplantation and hemophilia were associated with 2% (22 cases) of cumulative HIV/AIDS cases in Alaska through December 31, 2002. No HIV cases associated with transfusion/transplantation and with diagnosis after 1990 were reported in Alaska through December 31, 2002. Risk from contaminated blood products for hemophilia was essentially eliminated nationwide. No case associated with hemophilia was diagnosed with HIV in Alaska after 1996.

The greatest HIV risk for children in Alaska and the U.S. was perinatal transmission from a mother with HIV infection. Only 6 cases (1%) of HIV/AIDS cases in Alaska were related to perinatal transmission through December 31, 2002. Antiretroviral therapy is effective in reducing HIV transmission during pregnancy and delivery and has helped reduce perinatal infection rates nationwide. The majority of pregnant women in Alaska received HIV screening as part of their prenatal care.

An exposure category was not identified for 19% (172) of cumulative HIV/AIDS cases (16% of cases in males and 32% in females). This is consistent with trends in the U.S. The number of cases classified as having Other/Unknown/Unspecified exposure and the proportion of total cases in this category decreased steadily since 1999, when HIV first became a reportable condition in Alaska. Cases currently classified as Other/Unknown/Unspecified may be reclassified into other exposure categories as more information becomes available.

Fortunately and unlike some other areas of the U.S., HIV infection was uncommon in adolescents in Alaska, although behaviors placing individuals at increased risk of HIV exposure were relatively common in this population. Through December 31, 2002, there were 108 cumulative HIV/AIDS cases in persons aged 13-24 years at first HIV diagnosis (12% of the 892 cumulative HIV/AIDS cases reported in Alaska). Of these 108 cases, 79 cases (73%) were in males and 29 cases (27%) were in females. The average number of cases (5-6)

newly diagnosed per year in this age group varied little over the last 15 years. For males aged 13-24 years, risk behaviors of male-male sex (66%), injection drug use (9%), or male-male sex with injection drug use (15%) were associated with 90% of HIV/AIDS cases. For females in this age group, heterosexual contact to a person with or at increased risk for HIV was associated with 62% of HIV/AIDS cases and injection drug use 7%. All races/ethnicities were represented among cases in this age group, and cases were predominantly urban.

STD are indicators of risk behavior and persons with STD may be at increased risk of acquiring or transmitting HIV through sexual contact. Chlamydia and gonorrhea infections were relatively common in sexually active young adults in Alaska. Based on an analysis of co-infection data, persons reported with HIV did not overlap to a great extent with the population reported with gonorrhea from 1988-2001, and overlapped to an even smaller extent with the population reported with chlamydia from 1996-1999.

CONSIDERATIONS REGARDING DATA AND METHODS

AIDS became a condition reportable to the Alaska Division of Public Health in 1985. HIV became reportable in February 1999. Under Alaska Administrative Code (7 AAC 27.005 and 7 AAC 27.007), medical providers and laboratories are required to report suspected and diagnosed cases of HIV infection and AIDS to the Division of Public Health.

For surveillance purposes, each HIV or AIDS case is counted only once (rather than once as an HIV case and a second time when the individual develops AIDS). Reported date of first HIV diagnosis is used as a substitute for HIV infection incidence, realizing that individual cases are diagnosed at different times, ranging from months to years after infection. Similarly, clinical detection of AIDS-defining conditions occurs at different points in time for different individuals.

After HIV reporting was introduced in February 1999, cases were reported in persons who had been diagnosed with HIV many years earlier as well as persons who were more recently infected or recently diagnosed for the first time. Reports on “older” HIV cases were more likely to have incomplete data than reports on more recently diagnosed cases. Since 1999, it has been possible to gather more complete data on some, but not all, of these “older” cases. Unless otherwise specified, the data that follow are for all HIV and AIDS cases reported in Alaska, whether they were first diagnosed in Alaska or elsewhere. Unless otherwise noted, data are presented by year of diagnosis (to estimate onset of HIV infection) rather than by year of report.

People with HIV and AIDS undergo the same kinds of life events as people without HIV infection -- they move into or out of Alaska, they may or may not interact with medical providers while they live here, and they may die of HIV or other causes in Alaska or elsewhere. Multiple types of surveillance activities are necessary to provide an accurate picture of HIV infection in Alaska. The following sections present available data in different ways to depict cumulative and current aspects of the HIV epidemic in Alaska. Case numbers presented in this document may differ from data presented in other Section of Epidemiology reports since HIV/AIDS case data are updated as new information is available.

In many sections of this report, data are presented as proportions. It is important to recognize that proportions represented by each of the constituent elements must add up to the whole (100%). Therefore, when one proportion decreases, one or more of the others must increase. A proportionate increase does not necessarily mean that rates have changed. It is important to consider the actual number of cases or events involved and rates, along with any changes in proportions, before drawing conclusions. Alaska case numbers are relatively small and these data must be interpreted in the context of cumulative scientific knowledge about HIV/AIDS.

CUMULATIVE DATA ON HIV AND AIDS IN ALASKA

As of December 31, 2002, a total of 892 cases of HIV infection, with and without AIDS, were reported to the Alaska Division of Public Health (Table 1).

Table 1. Cumulative HIV and AIDS cases reported to the Alaska Division of Public Health through December 31, 2002

	Total HIV & AIDS Cases Reported	HIV & AIDS Cases Not Known to Have Died	HIV & AIDS Cases Known to Have Died
HIV Cases with AIDS	616	318	298
Alaska Residents at First AIDS Diagnosis (Onset)	524	239	285
Not Alaska Residents at First AIDS Diagnosis (Onset)	92	79	13
HIV Cases without AIDS	276	252	24
Total	892	570	322

The mean annual rate of AIDS cases reported as first diagnosed in Alaska residents from 1998-2002 (mean annual AIDS incidence rate) was 3.1 cases per 100,000 population. A mean annual rate over a five-year period is presented here to offer a more stable estimate of the actual AIDS incidence rate in Alaska, because the numbers of diagnosed cases are small and fluctuate from year to year (Table 2). This Alaska mean annual rate compares to an annual 2001 AIDS incidence rate in the U.S. of 14.9 AIDS cases per 100,000 population (source: CDC, *HIV/AIDS Surveillance Report, 2001 Year-end Edition*. 13:2).

The mean annual HIV incidence rate (cases with and without AIDS) among cases reported in Alaska and diagnosed in the period from 1998-2002 was 6.4 cases per 100,000 population (Table 2). Using CDC's national estimate of 40,000 new HIV cases occurring per year, the comparable annual rate for new HIV cases for the United States as a whole in 2002 was 13.9 cases per 100,000 population.

The figures used in calculations and the annual rates are presented in Table 2, below. In Table 2, column headings are abbreviated as follows: (1) AIDS cases first diagnosed in persons who were Alaska residents at the time of their AIDS diagnosis are labeled "Alaska AIDS Cases" and (2) HIV cases (with and without AIDS) are labeled "HIV/AIDS Cases." (Note that the number of cases is shown by date of first known AIDS diagnosis in the column labeled "Alaska AIDS cases" and by date of first known HIV diagnosis in the column labeled "HIV/AIDS cases.") Case rates are expressed per 100,000 population.

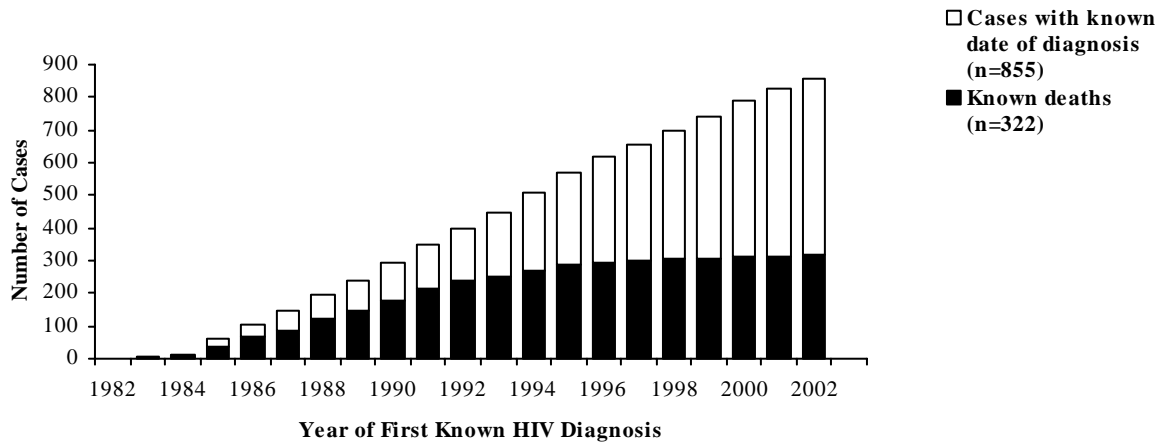
Table 2. HIV Cases Diagnosed by Year and Population, 1998-2002, Alaska

Year	Alaska AIDS Cases	Alaska AIDS Case Rate	HIV/AIDS Cases Reported in Alaska	HIV/AIDS Case Rate	Alaska Population*
1998	28	4.5	45	7.3	617,082
1999	7	1.1	42	6.6	622,000
2000	28	4.5	47	7.5	626,932
2001	18	2.8	35	5.5	634,892
2002	16	2.5	31	4.8	643,786
Total	97		200		
Mean		3.1		6.4	

*Population figures are estimates from the Alaska Department of Labor and Workforce Development for 1997-1999 and 2001-2002, and from the 2000 Census for 2000

Cumulative HIV cases and deaths due to any cause by year are shown in Figure 1. The number of individuals in the population who are living with HIV is growing, as new individuals become infected and previously infected individuals live longer.

Figure 1. Cumulative HIV Cases and Known Deaths by Year of First Known HIV Diagnosis through December 31, 2002, Alaska N=892 (the 37 cases and 4 deaths for which date of diagnosis is unknown are not shown in the graph below)



HIV cases and known deaths due to any cause among those cases by year of first known HIV diagnosis are presented in Table 3. These data illustrate the reduction in HIV mortality from improved treatment and also an effect of earlier detection of HIV infection in some individuals.

Table 3. HIV Cases and Known Deaths by Year of First Known HIV Diagnosis through December 31, 2002, Alaska N=892

Year	Cases by Year of First Known HIV Diagnosis	Known Deaths Among Persons Diagnosed with HIV in that Year
1982	1	1
1983	5	3
1984	6	4
1985	48	30
1986	42	27
1987	42	22
1988	52	36
1989	45	27
1990	51	30
1991	60	37
1992	48	19
1993	49	17
1994	62	19
1995	57	15
1996	49	8
1997	38	5
1998	45	5
1999	42	4
2000	47	1
2001	35	3
2002	31	3
Unknown	37	6
Total	892	322

As the number of persons living with HIV continues to grow, needs for medical care, treatment, and supportive services will also grow.

Gender

Female - Of 892 cumulative Alaska HIV cases, 168 cases (19%) were in females. The number and proportion of HIV cases among females in Alaska increased over time, although both remained smaller than in males. This is similar to the national trend.

Male - Of 892 cumulative Alaska HIV cases, 724 cases (81%) were in males. The number of HIV/AIDS cases newly diagnosed in males per year has decreased over time.

The average number of HIV/AIDS cases diagnosed per year in females has changed little in the last ten years (1993-2002). The proportion of cases in females has increased considerably due to the decline in the number and proportion of cases in males (Table 4).

Table 4. Average Number of HIV/AIDS Cases Newly Diagnosed per Year in Time Periods from 1982-2002 by Gender, Alaska N=892 (date of first diagnosis is unknown for 28 males and 9 females)

Time Period	Average Number of Cases Diagnosed per Year		
	Males	Females	Total, Males & Females
1982-1987	22	2	24
1988-1992	44	7	51
1993-1997	40	11	51
1998-2002	28	12	40

Age

Of HIV cases reported in Alaska, 618 (69%) were first diagnosed in individuals aged 25 to 44 years. Unlike some other areas of the U.S., relatively few HIV cases were reported among younger people in Alaska: 19 of 892 cases (2%) were aged 10-19 years at first HIV diagnosis. (Figure 2, Table 5) Characteristics of persons diagnosed with HIV while adolescents/young adult are discussed later in this document (page 15).

Figure 2. Cumulative HIV Cases through December 31, 2002 (with and without AIDS) by Age at First Known HIV Diagnosis, Alaska N=892 (the 36 cases for which age is unknown are not shown in the graph below)

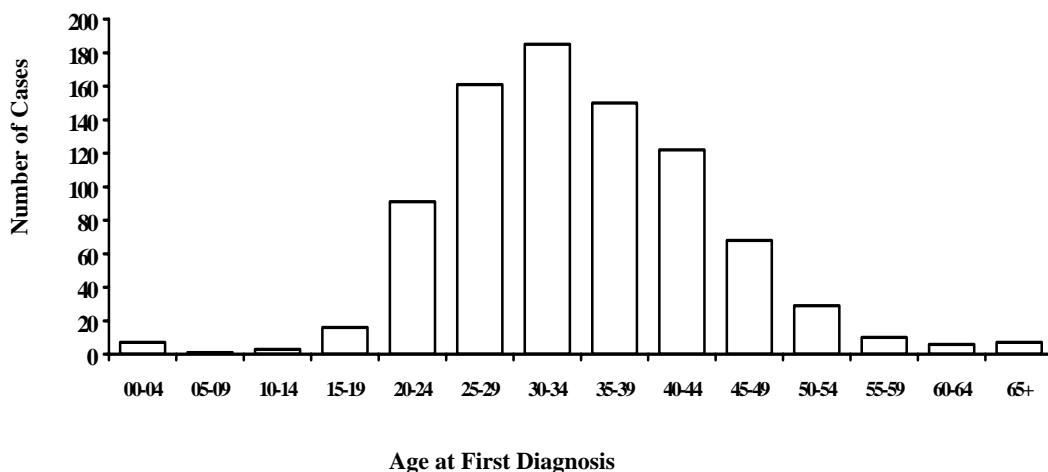


Table 5. Cumulative HIV Cases (with and without AIDS) by Gender and Age at First Known HIV Diagnosis through December 31, 2002, Alaska N=892

Age Group	Males		Females		Total	
	Number	Column %	Number	Column %	Number	Column %
00-04	4	1	3	2%	7	1%
05-09	1	<1%	0	0%	1	<1%
10-14	3	<1%	0	0%	3	<1%
15-19	10	1%	6	4%	16	2%
20-24	68	9%	23	14%	91	10%
25-29	130	18%	31	18%	161	18%
30-34	152	21%	33	20%	185	21%
35-39	128	18%	22	13%	150	17%
40-44	104	14%	18	11%	122	14%
45-49	54	7%	14	8%	68	8%
50-54	23	3%	6	4%	29	3%
55-59	9	1%	1	1%	10	1%
60-64	6	1%	0	0%	6	1%
65+	5	1%	2	1%	7	1%
Unknown	27	4%	9	5%	36	4%
Total	724	100%	168	100%	892	100%

Among total cumulative HIV cases, a greater proportion of adult female cases than adult male cases occurred in persons in a younger age group at the time of first HIV diagnosis (Table 6). Of cases with known dates of diagnosis, 18% of females, compared to 11% of males, were diagnosed between the ages of 15-24 years while, of those diagnosed between the ages of 35-44 years, males accounted for 33% and females 25%.

Table 6. Age at First Known HIV Diagnosis by Gender for Selected Age Groups, Cumulative HIV/AIDS Cases through December 31, 2002, Alaska (27 males and 9 females have unknown data of diagnosis and are not included in the table below)

Age Group	Males		Females	
	Number	Column %	Number	Column %
15-24 years	78	11%	29	18%
25-34 years	282	40%	64	40%
35-44 years	232	33%	40	25%
All Other Age Groups	105	15%	26	16%
Total Number of Cases with Known Date of Diagnosis	697	100%	159	100%

Exposure Category

In order to have consistent national data, the mode of HIV exposure is categorized according to specific national definitions in a hierarchy established by the CDC. Each HIV or AIDS case is counted only once. Individuals who have more than one mode of exposure are counted in only one exposure category determined by the CDC hierarchy, except that men who report both sexual contact with other men and injection drug use make up a separate CDC exposure category. CDC exposure category titles are straightforward, with two exceptions:

Heterosexual contact cases include only those cases reporting heterosexual contact with a person with, or at increased risk for, HIV infection (for example, an injection drug user). Cases where contact was not with an infected person or a person known to be at increased risk are classified as *Other (no risk reported or identified)*.

Other (no risk reported or identified) cases are in individuals with no reported history of exposure to HIV through any of the routes listed in the hierarchy of exposure categories. This case classification also includes:

- persons who are currently under investigation by the health department;
- persons whose exposure history is incomplete because they died, declined to be interviewed, or were lost to follow up; and
- persons who were interviewed or for whom other follow-up information was available and no (defined) exposure mode was identified.

Figure 3. Cumulative HIV Cases (with and without AIDS) by Exposure Category through December 31, 2002, Alaska (N=892)

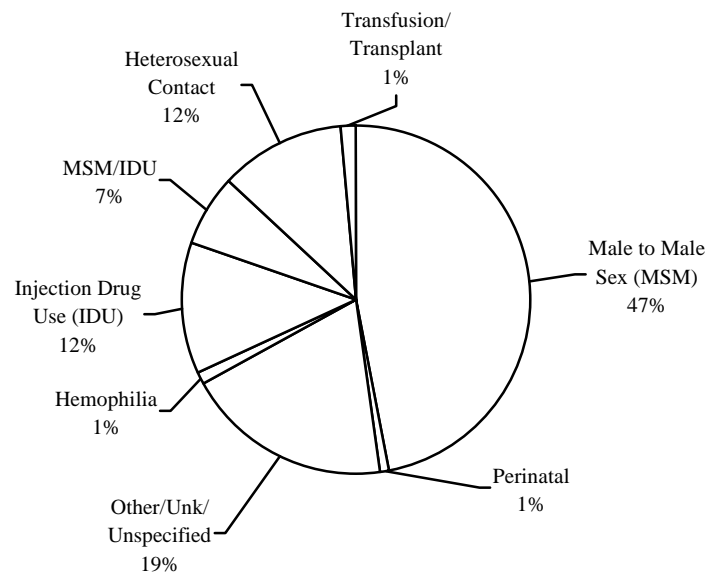


Table 7. Cumulative HIV Cases (with and without AIDS) by Exposure Category by Gender through December 31, 2002, Alaska (N=892)

Exposure Category	Males		Females		Total	
	Number	Column %	Number	Column %	Number	Column %
Male-Male Sex (MSM)	419	58%	NA	NA	419	47%
Injection Drug Use (IDU)	74	10%	36	21%	110	12%
MSM and IDU	58	8%	NA	NA	58	7%
Heterosexual Contact to at-risk Person	33	5%	72	43%	105	12%
Transfusion/Transplant	8	1%	4	2%	12	1%
Hemophilia	10	1%	0	0%	10	1%
Perinatal Transmission	3	<1%	3	2%	6	1%
Other/Unknown/Unspecified	119	16%	53	32%	172	19%
Total	724	100%	168	100%	892	100%

The exposure category of male-male sex was, by far, the largest single risk for infection. This was true both for the total population of persons with HIV infection in Alaska (47% of all cumulative cases plus an additional 7% of cumulative cases in combination with injection drug use) and for the population of males only, where male-male sex was associated with 66% of cases. Injection drug use as a single exposure category accounted for 12% of cumulative cases. When MSM-IDU cases were additionally considered, injection drug use was associated with 19% of cumulative cases (IDU was associated with 18% of cases in males and 21% of cases in females). Heterosexual contact to a person at increased risk for HIV (for example, a known HIV positive, an IDU, or, for females, a bisexual male) accounted for 12% of total cumulative cases (5% of cases in males and 43% of cases in females). The proportions of cumulative cases related to perinatal transmission, transfusion or transplantation, or receipt of blood products for hemophilia remained low at 1%, each.

A relatively large proportion of cumulative cases (172 cases or 19%) were classified in the Other/Unknown/Unspecified exposure category, consistent with national trends. Some of these cases (particularly more recent cases) will be reclassified to other exposure categories as more case information becomes available. The proportion of cumulative cases classified as Other/Unknown/Unspecified in Alaska decreased in 2002 compared to 2001 as a result of increased case investigation by HIV/STD Program staff.

Race/Ethnicity

HIV affects individuals in all racial and ethnic groups in Alaska. Although individuals are not at risk of HIV infection due to their race/ethnicity, it is an indicator of social factors that may influence risk of exposure to HIV.

Several studies in other areas of the country have documented misidentification of American Indians and Alaska Natives (AI/AN) in disease surveillance databases and on death certificates as evidence that HIV/AIDS cases among AI/AN were underreported nationally. In contrast, misclassification of Alaska Native/American Indian cases is not a significant problem in Alaska. A 1992 study by the Section of Epidemiology found no underreporting among AI/AN cases of AIDS in Alaska. In 2002, the Section of Epidemiology again undertook an assessment of the accuracy of the race/ethnicity data recorded for HIV/AIDS cases in collaboration with the Centers for Disease Control and Prevention and the Indian Health Service (IHS).

The IHS National Patient Information and Reporting System served as the best available source for AI/AN status. Of the 847 HIV/AIDS cases reported in Alaska through June 2002, 182 were AI/AN; six (3.3% of the total) were found to have been inappropriately coded as White or Hispanic. These cases included four American Indian and two Alaska Native cases. Coding was corrected on these cases (and these changes are reflected throughout this report) in the Alaska data. An additional 15 cases classified in the Alaska database as AI/AN were not found in the IHS database. These cases were retained as AI/AN cases in Alaska's database on the basis of other evidence.

Data on all cumulative HIV cases by race/ethnicity are presented in Figure 4, and by race/ethnicity and gender in Table 8, below. Please note that the HIV *case* data classify individuals of Hispanic ethnicity as a separate race/ethnicity category while the *population* data include individuals of Hispanic ethnicity within the other (race) categories.

Figure 4. Cumulative HIV Cases (with and without AIDS) by Race/Ethnicity through December 31, 2002, Alaska N=892 (22 cases have unknown race/ethnicity and are not shown in the graph below)

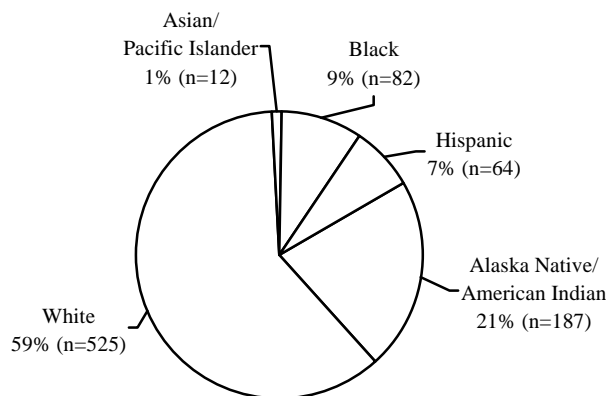


Figure 5. Alaska Population by Race, 2000 (National Center for Health Statistics Bridged Modified Race Series for April 1, 2000 based on Census 2000 Using Four Race Categories)

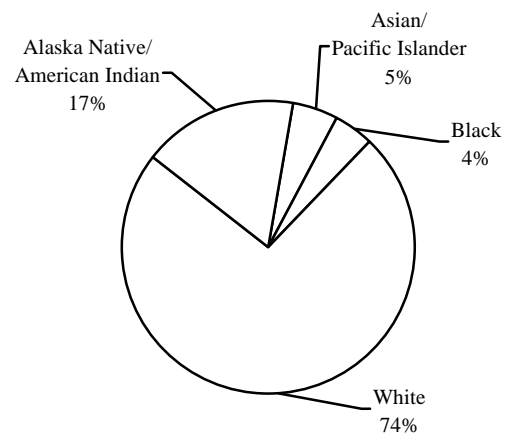


Table 8. Cumulative HIV Cases (with and without AIDS) Diagnosed through December 31, 2002 by Gender and Race/Ethnicity, Alaska (N=892)

Race/Ethnicity	Males		Females		Total	
	Number	Column %	Number	Column %	Number	Column %
White	451	62%	74	44%	525	59%
Alaska Native/American Indian	128	18%	59	35%	187	21%
Black	62	9%	20	12%	82	9%
Asian/Pacific Islander	9	1%	3	2%	12	1%
Hispanic Ethnicity	56	8%	8	5%	64	7%
Unknown	18	2%	4	2%	22	2%
Total	724	100%	168	100%	892	100%

For adult/adolescent males and females, HIV affected Whites and Asian/Pacific Islanders in proportions less than their representation in the state's population while HIV affected Alaska Native/American Indians, Blacks, and Hispanics in proportions greater than their representation in the population. These trends are similar to trends for the U.S. as a whole.

To allow comparison to HIV case data, Tables 9-11 and Figures 5-7 present Alaska population data for 2000, reapportioned into single race categories, according to the National Center for Health Statistics' Bridged Modified Race Series for April 1, 2000 based on Census 2000.

Table 9. Cumulative HIV Cases (with and without AIDS) Diagnosed through December 31, 2002 by Race/Ethnicity, Compared to Alaska Population

Race/Ethnicity	HIV Cases		Population Data from 2000 Census Reapportioned into Four Races*	
	Number	% Total	Number	% Total
White	525	59%	460,782	73%
Alaska Native/American Indian	187	21%	107,715	17%
Black	82	9%	26,649	4%
Asian/Pacific Islander	12	1%	31,786	5%
Hispanic Ethnicity	64	7%	[25,852]**	[4%]**
Other/Unknown/Unspecified	22	2%	---	---
Total	892	100%	626,932	100%

* Alaska population data by race are drawn from the National Center for Health Statistics' Bridged Modified Race Series for April 1, 2000 based on Census 2000, using four race categories

** Persons of Hispanic origin may be of any race and are included within the race categories in the population figures drawn from the 2000 Census

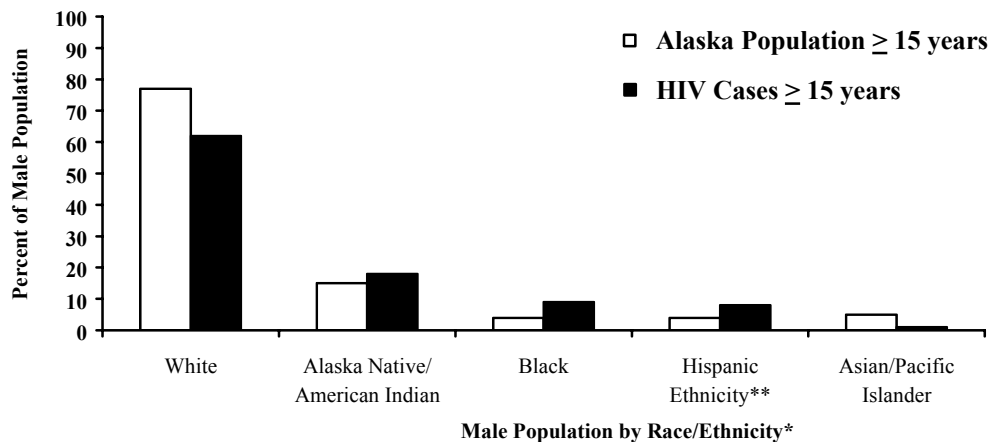
Table 10. Cumulative HIV Cases (with and without AIDS) in Males Aged 15 Years and Older, Diagnosis through December 31, 2002, Compared to Alaska Male Population by Race/Ethnicity

Race/Ethnicity	Males \geq 15 Years of Age, Alaska Population*		HIV Cases first Diagnosed in Males \geq 15 Years of Age	
	Number	% Total	Number	% Total
White	187,034	77%	445	62%
Alaska Native/American Indian	35,623	15%	127	18%
Black	9,425	4%	61	9%
Asian/ Pacific Islander	11,028	5%	9	1%
Hispanic Ethnicity	[8,835]**	[4%]**	56	8%
Other/Unknown/Unspecified	---	---	18	3%
Total	243,110	100%	716	100%

*Alaska population data by race are drawn from the National Center for Health Statistics' Bridged Modified Race Series for April 1, 2000 based on Census 2000, using four race categories. The Hispanic male population data are from the 2000 Census (total population Hispanic/Latino males = 13,268)

**Males \geq 15 years of Hispanic/Latino ethnicity are included within the racial categories in the population data

Figure 6. Distribution of Cumulative HIV/AIDS Cases First Diagnosed in Males \geq 15 Years through December 31, 2002 Compared to Males \geq 15 Years in the Alaska Population* by Race/Ethnicity N=716 (race/ethnicity is unknown for 18 HIV cases)



*Alaska population data by race are drawn from the National Center for Health Statistics' Bridged Modified Race Series for April 1, 2000 based on Census 2000, using four race categories. The Hispanic male population data are from the 2000 Census (total population Hispanic/Latino males = 13,268)

**Males \geq 15 years of Hispanic/Latino ethnicity are included within the racial categories in the population data

Compared to the population distribution, Alaska Native/American Indian, Black, and Hispanic males were disproportionately represented among adults/adolescent males with HIV infection.

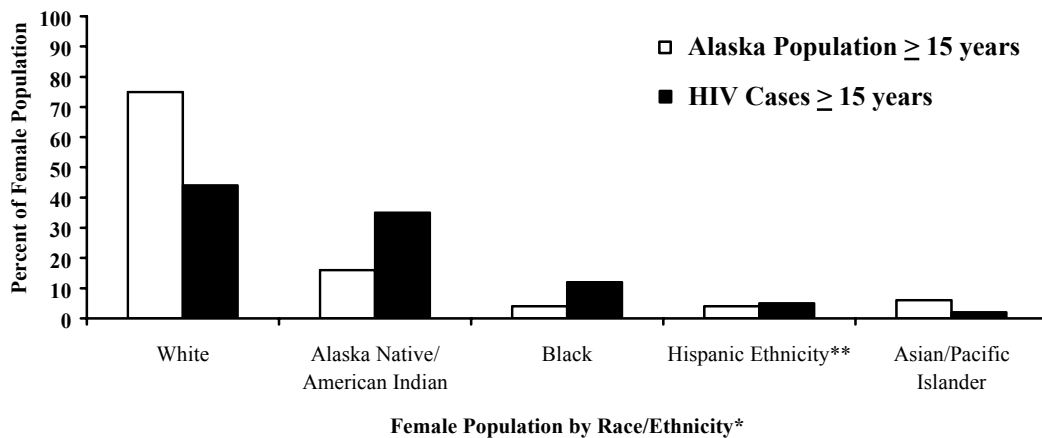
Table 11. Cumulative HIV Cases (with and without AIDS) in Females Aged 15 Years and Older, Diagnosis through December 31, 2002, Compared to Alaska Female Population by Race/Ethnicity

Race/Ethnicity	Females \geq 15 Years of Age, Alaska Population*		HIV Cases first Diagnosed in Females \geq 15 Years of Age	
	Number	% Total	Number	% Total
White	168,710	75%	73	44%
Alaska Native/American Indian	36,217	16%	58	35%
Black	8,157	4%	19	12%
Asian/Pacific Islander	12,715	6%	3	2%
Other/Unknown/Unspecified	---	---	4	2%
Hispanic Ethnicity	[8,187]**	[4%]**	8	5%
Total	225,779	100%	165	100%

*Alaska population data by race are drawn from the National Center for Health Statistics' Bridged Modified Race Series for April 1, 2000 based on Census 2000, using four race categories. The Hispanic female population data are from the 2000 Census (total population Hispanic/Latino females = 12,584)

**Females \geq 15 years of Hispanic/Latino ethnicity are included within the racial categories in the population data

Figure 7. Distribution of Cumulative HIV Cases First Diagnosed in Females \geq 15 Years through December 31, 2002 Compared to Females \geq 15 Years in the Alaska Population* by Race/Ethnicity N=165 (race/ethnicity is unknown for 4 cases)



*Alaska population data by race are drawn from the National Center for Health Statistics' Bridged Modified Race Series for April 1, 2000 based on Census 2000, using four race categories. The Hispanic female population data are from the 2000 Census (total population Hispanic/Latino females = 12,584)

**Females \geq 15 years of Hispanic/Latino ethnicity are included within the racial categories in the population data

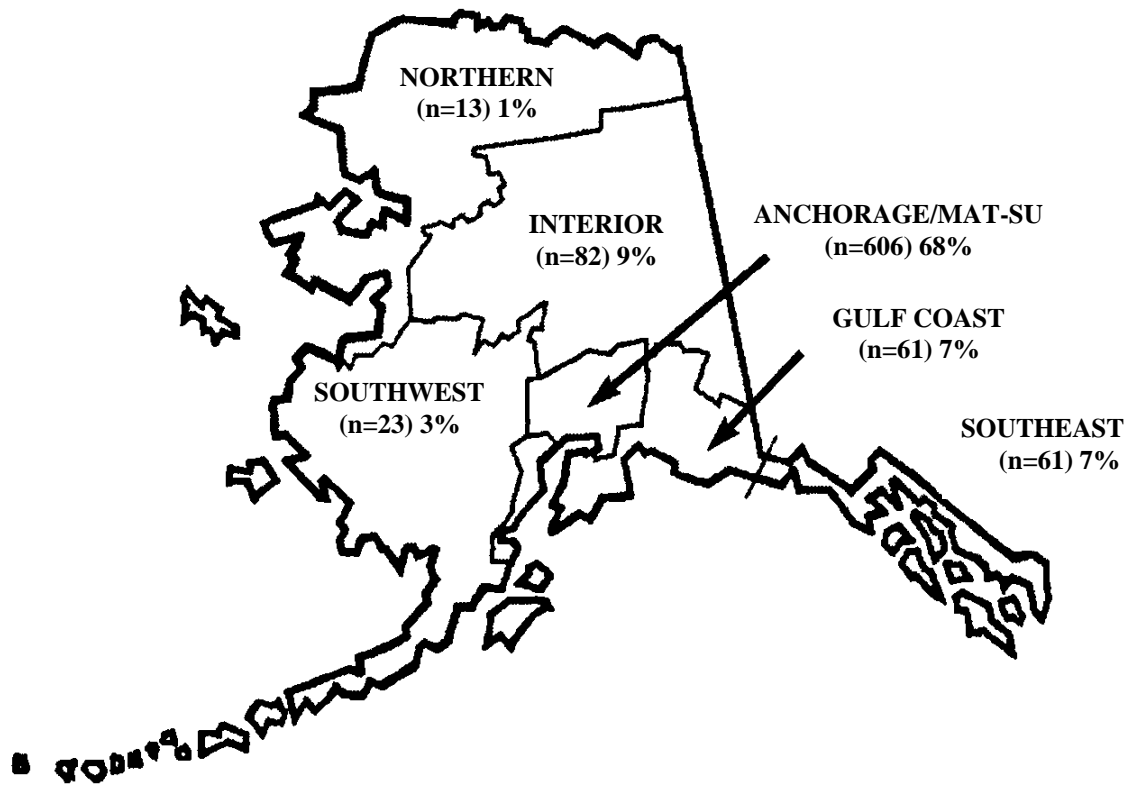
Compared to the population distribution, Alaska Native/American Indian and Black females were disproportionately represented among adults/adolescent females with HIV infection.

Geographic Region of Residence at First Known HIV Diagnosis

HIV cases were reported from all regions of the state. At the time of first known HIV diagnosis, the largest proportion of cases resided in the most populous area of the state, with 70% (574) reporting residence in Anchorage/Mat Su.

Geographic region of residence at the time of first known HIV diagnosis is shown in Figure 8 and Table 12 for cumulative cases of HIV infection reported in Alaska through December 31, 2002. The region of residence is the region where the case resided at the time of first known HIV diagnosis, when known. If this is not known, residence is defined as the region of residence at the time of first AIDS diagnosis. If neither of these is known, residence is defined as the region from which the earliest case report was received. The geographic areas identified represent the state's economic regions. Because HIV infection is generally asymptomatic for a long period after infection and the Alaska population is highly mobile, these data must be interpreted with caution. Residence at first known HIV diagnosis does not necessarily reflect the area where infection occurred, where the infected individual currently resides, or where the individual currently seeks care.

Figure 8. Region of Residence at Time of First Known HIV Diagnosis, Cumulative Cases Reported through December 31, 2002, Alaska* N=892 (35 with out-of-state residence and 11 with unknown residence)



*Note: Region of residence is defined as region of residence at first HIV diagnosis, when known, the region of residence at first AIDS diagnosis when the residence at HIV diagnosis is unknown, and the region of first case report when residence at HIV and AIDS diagnosis are unknown

Table 12. Estimated Population by Geographic Region* and Number of Cases by Region of Residence at First Known HIV Diagnosis, Cumulative Cases with Diagnosis through December 31, 2002, Alaska (N=892)

Region	Population		HIV Cases	
	Number	(% Total)	Number	(% Total)
Southwest	39,310	6%	23	3%
Northern	23,851	4%	13	1%
Interior	99,003	15%	82	9%
Anchorage/Mat-Su	334,311	52%	606	68%
Gulf Coast	75,339	12%	61	7%
Southeast	71,972	11%	61	7%
Out of State	---	---	35	4%
Unknown	---	---	11	1%
Total	643,786	100%	892	100%

*Population estimates by the Alaska Department of Labor and Workforce Development as of July 1, 2002

Deaths Among Persons with HIV/AIDS

Data on deaths in Alaska with an underlying cause of HIV infection are shown in Table 13. These data are drawn from death certificates recorded with the Alaska Section of Vital Statistics. All Alaska residents who die, regardless of where they die, should have an Alaska death certificate, as the Alaska Section of Vital Statistics has reciprocal reporting arrangements with other states.

Table 13. Alaska Resident Deaths with an Underlying Cause of HIV Infection by Year of Death, 1982-2002, Section of Vital Statistics (N=227)

Year	Deaths with Underlying Cause of HIV Infection in that Year (ICD codes 042-044)
1982 –1985	0
1986	7
1987	7
1988	7
1989	8
1990	11
1991	16
1992	20
1993	26
1994	21
1995	30
1996	16
1997	10
1998	6
1999	13
2000	11
2001	7
2002	11*
Total	227*

*preliminary data

Unlike the Vital Statistics data in Table 13 above, data on deaths among HIV/AIDS cases shown earlier in this document (Figure 1 and Table 3) include information on deaths due to any cause in persons with HIV/AIDS. This information is drawn from Alaska death certificates as well as information from newspaper obituaries and care providers, and from other states for individuals who were not Alaska residents at the time of death. (Information on deaths occurring in persons who were no longer Alaska residents is likely incomplete.) Figure 1 and Table 3 also differ from Table 13 in that for those cases known to have died, Figure 1 and Table 3 show deaths in the year the case was first diagnosed (rather than in the year the death occurred) in order to reflect case mortality.

Although ranked within the top 15 leading causes of death in Alaska from 1991 through 1995, HIV/AIDS has not ranked within the top 15 causes of death since 1995. HIV/AIDS ranked among the top 10 causes of death in 1996 for Alaskans aged 25-44 years but not since. HIV-related deaths have declined in Alaska and the U.S. as a whole since 1996, due primarily to advances in treatment, advances in medical care, and development of programs to improve access to treatment and care.

To help place deaths related to HIV in context, the top five causes of death for Alaskans in 1999 (and the number of deaths) included malignant neoplasms or cancer (621), heart disease (560), unintentional injuries (293), cerebrovascular disease (172), and chronic lower respiratory disease (145), compared to 13 HIV-related deaths.

HIV/AIDS in Adolescents and Young Adults

CDC selected the age group of 13-24 years to characterize HIV infection in adolescents and young adults in the U.S. epidemic. Through December 31, 2002, a cumulative total of 108 cases of HIV/AIDS were reported in Alaska in persons aged 13-24 years at first HIV diagnosis. The first case of AIDS in a person 15-24 years of age was diagnosed in 1983. An average of 5 cases per year in this age group was diagnosed in the period from 1998-2002, slightly less than the average of 6 cases diagnosed per year throughout the preceding decade (1988-1997). Cases aged 13-24 years comprised 11% of total cases diagnosed from 1988-1997 and 12% of total cases diagnosed from 1998-2002.

Of the 108 total cumulative cases in persons aged 13-24 years at first HIV diagnosis, 79 (73%) cases were in males and 29 (27%) cases in females (Table 14).

For males aged 13-24 years, male-male-sex, injection drug use, and male-male sex combined with injection drug use accounted for 90% of cases through December 2002 (Table 14). For females aged 13-24 years, heterosexual contact to a person with or at increased risk of HIV infection was the most significant identified risk category (62% of cases), followed by injection drug use (7%). As with the total cumulative population of persons with HIV/AIDS, all races and ethnicities were represented in persons aged 13-24 years at first HIV diagnosis (Table 15). The largest proportion of cases resided in urban areas at time of first HIV diagnosis, with most in Anchorage/Mat-Su (Tables 16 and 17).

Table 14. Cumulative HIV Cases (with and without AIDS) in Persons Aged 13-24 Years at First HIV Diagnosis by Exposure Category by Gender through December 31, 2002, Alaska (N=108)

Exposure Category	Males		Females		Total	
	Number	Column %	Number	Column %	Number	Column %
Male-Male Sex (MSM)	52	66%	N/A	N/A	52	48%
Injection Drug Use (IDU)	7	9%	2	7%	9	8%
MSM and IDU	12	15%	N/A	N/A	12	11%
Heterosexual Contact to at-risk Person	1	1%	18	62%	19	18%
Transfusion/Transplant	0	0%	0	0%	0	0%
Hemophilia	0	0%	0	0%	0	0%
Perinatal Transmission	0	0%	0	0%	0	0%
Other/Unknown/Unspecified	7	9%	9	31%	16	15%
Total	79	100%	29	100%	108	100%

Table 15. Cumulative HIV Cases (with and without AIDS) in Persons Aged 13-24 Years at First HIV Diagnosis through December 31, 2002 by Gender and Race/Ethnicity, Alaska (N=108)

Race/Ethnicity	Males		Females		Total	
	Number	Column %	Number	Column %	Number	Column %
White	54	68%	12	41%	66	61%
Alaska Native/American Indian	14	18%	10	34%	24	22%
Black	4	5%	5	17%	9	8%
Hispanic Ethnicity	6	8%	1	3%	7	6%
Asian/Pacific Islander	0	0%	1	3%	1	1%
Unknown	1	1%	0	0%	1	1%
Total	79	100%	29	100%	108	100%

Table 16. Economic Region of Residence at First Known HIV Diagnosis, Cumulative HIV Cases (with and without AIDS) in Persons Aged 13-24 Years at First HIV Diagnosis through December 31, 2002, Alaska (N=108)

Economic Region	Total	
	Number	Column %
Anchorage/Mat-Su	72	67%
Gulf Coast	4	4%
Southeast	6	6%
Southwest	3	3%
Northern	1	1%
Interior	11	10%
Out of State	9	8%
Unknown	2	2%
Total	108	100%

Table 17. Urban/Rural Region of Residence at First Known HIV Diagnosis, Cumulative HIV Cases (with and without AIDS) in Persons Aged 13-24 Years at First HIV Diagnosis through December 31, 2002, Alaska (N=108)

Region*	Total	
	Number	Column %
Urban	80	74%
Sub-Urban	8	7%
Rural Hub	2	2%
Rural Community	7	6%
Out of State	9	8%
Unknown Residence	2	2%
Total	108	100%

*Urban areas include Anchorage, Fairbanks, and Juneau; urban satellites include the Matanuska-Susitna and Kenai Peninsula Boroughs; rural hubs include 13 communities with populations over 2,000; rural areas include 260 areas with fewer than 2,000 residents

Persons Diagnosed Late in the Course of their HIV Disease

Diagnosis of HIV late in the course of infection precludes the benefits of early treatment and is an indicator of a prolonged time during which an infected person may unknowingly expose others. One indicator of late HIV diagnosis is a diagnosis of AIDS soon after first HIV diagnosis. For purposes of comparison to national data, cases with a reported AIDS diagnosis within 12 months of first HIV diagnosis are defined as “late testers.”

HIV infection was made a condition reportable to the Division of Public Health in February 1999. In the period that followed, HIV cases diagnosed prior to this time were also reported, a number of which had been diagnosed many years earlier. Comprehensive record reviews with large providers identified additional AIDS cases that had not been reported, some of which were in persons who had moved to Alaska from other geographic areas.

From 1999 to 2002, 120 cases (97 males and 23 females) first reported with AIDS had their first known HIV diagnosis within 12 months of their AIDS diagnosis. These 120 cases included persons diagnosed with AIDS as long ago as 1983. Persons of all races/ethnicities were included. Most (69% of male and 83% of female cases) resided in Anchorage/Mat Su at the time of AIDS diagnosis. Male cases were reported from all economic regions of the state; 12% of male cases were first diagnosed with HIV out of state. Cases in females were concentrated in Anchorage/Mat-Su with a very small number of cases in two other regions.

Of the 120 cases reported to the Division of Public Health in this group, 61 cases received their first AIDS diagnosis in the period from 1999-2002. These 61 persons represented 64% of the 96 persons reported in Alaska as first diagnosed with AIDS from 1999-2002. Of cases reported through December 31, 2002, 18 were first diagnosed with AIDS in 2002. Of these 18 cases, 11 (61%) were diagnosed with AIDS within 12 months of their first HIV diagnosis. These 11 cases included 8 males and 3 females.

National data from 25 states showed that of 104,780 persons aged 13 years and older diagnosed with HIV from 1994-1999, 41% had an AIDS diagnosis within one year of a positive HIV test (*MMWR* 2003; 52(15):330). In a second CDC analysis of data from an ongoing, cross-sectional, multisite interview study in 16 higher prevalence health departments, 45% of 4,127 persons with AIDS aged 18 years or older were identified as having AIDS diagnosed within one year of HIV diagnosis (*MMWR* 2003; 52(25):582).

Further analysis of the characteristics of persons diagnosed late (and those diagnosed earlier) will be more feasible as additional Alaska HIV data become available over time.

HIV Cases Newly Reported in Alaska in 2002

Seventy-four (74) unduplicated cases of HIV were newly reported to the Alaska Division of Public Health in 2002 (Table 18). Of the 74 reported cases, 44 (59%) had a diagnosis of HIV without AIDS and 30 (41%) had an AIDS diagnosis. Of the 74 newly reported cases, 30 cases (41%) had their first known HIV diagnosis in 2002.

(Note: the data in Table 18 represent cases newly *reported* to the Division for the first time in 2002, and are not necessarily the same cases shown in Tables 2 and 3 as being first *diagnosed* in 2002. These two sets of case numbers are expected to differ. For example, a case first diagnosed with AIDS in 2001 and reported for the first time in 2002 would be considered newly reported in 2002. A new AIDS diagnosis in 2002 in a case reported in 2000 with HIV would not be considered a newly reported case in 2002.)

Of the 44 cases of HIV without AIDS, 21 were first diagnosed in 2002 and an additional 23 were first diagnosed prior to 2002. Of the 30 cases first reported in 2002 with AIDS, 13 had their first AIDS diagnosis in 2002, 16 were diagnosed with AIDS prior to 2002, and the date of AIDS diagnosis was unknown for one case. Of the 13 cases newly reported with an AIDS diagnosis in 2002, 9 (69%) had a first HIV diagnosis in 2002.

The number and proportion of cases reported for the first time in 2002 with an HIV diagnosis in an earlier year was much smaller than in 2001 or 2000 (4 or 5% of 74 cases reported in 2002 as compared to 16 or 31% of cases reported in 2001 and 37 or 48% of 77 cases reported in 2000). This decline indicates that “catch up” reporting on older, previously diagnosed Alaska cases has essentially been completed. Some previously diagnosed HIV cases will continue to be newly reported in Alaska since individuals will relocate to Alaska from other states (just as persons from Alaska relocate to other states).

Table 18. Cases First Reported with HIV and/or AIDS in 2002, Alaska (N=74)

Total reported with HIV and/or AIDS			74
Diagnosis of HIV only (without AIDS)			44
In 2002		21	
Before 2002		23	
Diagnosis date unknown		0	
Diagnosis of AIDS			30
AIDS diagnosis also in 2002		13	
HIV diagnosis also in 2002	9		
HIV & AIDS diagnosed at same time	7		
HIV diagnosed prior to AIDS onset but both in 2002	2		
HIV diagnosis date unknown	0		
HIV diagnosis before 2002	4		
AIDS diagnosis before 2002		16	
AIDS diagnosis date unknown		1	

Persons Presumed Living with HIV

Data on the number of persons living with HIV in a given area, or the *prevalence* of HIV infection in that area, provide one indicator of potential service needs. The true number and characteristics of persons living with HIV in Alaska can only be approximated, due to several factors. Some infected persons are unaware of their infection, not all diagnosed cases have yet been reported, some reported cases no longer live here, and some out-of-state deaths in prior residents are not reflected in case data. (Of the 570 persons reported with HIV/AIDS in Alaska since 1982 and who are not known to have died, 286 were diagnosed prior to 1990.) The most straightforward approximation of HIV prevalence is provided by the number of persons reported with HIV in Alaska who are not known to have died. For comparison purposes, data on persons not known to have died (referred to as “presumed living”) are contrasted with data on those known to have died in all tables in this section except Table 20.

Table 19. Cumulative HIV Cases by Gender, Cases Presumed Living and Cases Known to Have Died, through December 31, 2002, Alaska (N=892)

Gender	Cases Presumed Living		Cases Known to Have Died		Total	
	Number	Column %	Number	Column %	Number	Column %
Male	443	78%	281	87%	724	81%
Female	127	22%	41	13%	168	19%
Total	570	100%	322	100%	892	100%

The age data in Table 20, below differ from all other age data presented in this report in that each case’s age has been calculated as of July 2002 rather than using age at first HIV diagnosis, in order to better represent the (presumed living) population’s current characteristics.

Table 20. Cumulative HIV Cases by Gender and Age on July 2002, Cases Presumed Living, through December 31, 2002, Alaska (N=570)

Age as of July 2002	Male Cases Presumed Living		Female Cases Presumed Living		Total Cases Presumed Living	
	Number	Column %	Number	Column %	Number	Column %
0-4	0	0%	0	0%	0	0%
5-9	0	0%	0	0%	0	0%
10-14	1	<1%	1	1%	2	<1%
15-19	1	<1%	0	0%	1	<1%
20-24	7	2%	8	6%	15	3%
25-29	23	5%	12	9%	35	6%
30-34	45	10%	21	17%	66	12%
35-39	110	25%	23	18%	133	23%
40-44	103	23%	29	23%	132	23%
45-49	80	18%	17	13%	97	17%
50-54	41	9%	8	6%	49	9%
55-59	19	4%	5	4%	24	4%
60-64	8	2%	0	0%	8	1%
65+	5	1%	3	2%	8	1%
Unknown	0	0%	0	0%	0	0%
Total	443	100%	127	100%	570	100%

Table 21. Cumulative HIV Cases by Exposure Category, Cases Presumed Living and Cases Known to Have Died, through December 31, 2002, Alaska (N=892)

Exposure Category	Cases Presumed Living		Cases Known to have Died		Total	
	Number	Column %	Number	Column %	Number	Column %
Male-Male Sex (MSM)	236	41%	183	57%	419	47%
Injection Drug Use (IDU)	77	14%	33	10%	110	12%
MSM and IDU	37	6%	21	7%	58	7%
Heterosexual Contact to at-risk Person	83	15%	22	7%	105	12%
Transfusion/Transplant	1	<1%	11	3%	12	1%
Hemophilia	4	1%	6	2%	10	1%
Perinatal Transmission	1	<1%	5	2%	6	1%
Other/Unknown/Unspecified	131	23%	41	13%	172	19%
Total	570	100%	322	100%	892	100%

Table 22. Cumulative HIV Cases by Race/Ethnicity, Cases Presumed Living and Cases Known to Have Died, through December 31, 2002, Alaska (N=892)

Race/Ethnicity	Cases Presumed Living		Cases Known to have Died		Total Cases	
	Number	Column %	Number	Column %	Number	Column %
White	324	57%	201	62%	525	59%
Alaska Native/American Indian	114	20%	73	23%	187	21%
Black	57	10%	25	8%	82	9%
Hispanic Ethnicity	44	8%	20	6%	64	7%
Asian/Pacific Islander	10	2%	2	1%	12	1%
Unknown	21	4%	1	<1%	22	2%
Total	570	100%	322	100%	892	100%

PERSONS INFECTED MORE RECENTLY

Comparing information about persons with more recently acquired HIV infection to those infected earlier in the epidemic may provide important clues to help guide and focus HIV prevention and care activities to interrupt further transmission. This is difficult to do in Alaska because the small number of cases makes it hard to identify trends.

In order to include a reasonably large number of cases, cases within the most recent five-year period (1998-2002) were selected to represent “recent” cases. To approximate more recent infections, those cases with their first known HIV diagnosis within this five-year period and without progression to AIDS through December 31, 2002 were selected. This population is referred to below as “recent (HIV, non-AIDS).” We compared this population to all other persons reported in Alaska with HIV and AIDS, referred to as “earlier HIV/AIDS” cases.

Table 23. HIV Cases by Gender, Recent (HIV, Non-AIDS) Cases and Earlier HIV/AIDS Cases, Diagnosis through December 31, 2002, Alaska (N=892)

Gender	Recent HIV Cases		Earlier HIV/AIDS Cases		Total Cases	
	Number	Column %	Number	Column %	Number	Column %
Male	67	62%	657	84%	724	81%
Female	41	38%	127	16%	168	19%
Total	108	100%	784	100%	892	100%

In more recently infected cases, the proportion of females was considerably greater than in cases infected earlier.

Figure 9. HIV Cases by Gender, Recent (HIV, Non-AIDS) Cases and Earlier HIV/AIDS Cases, Diagnosis through December 31, 2002, Alaska (N=892; 108 Recent, 784 Earlier)

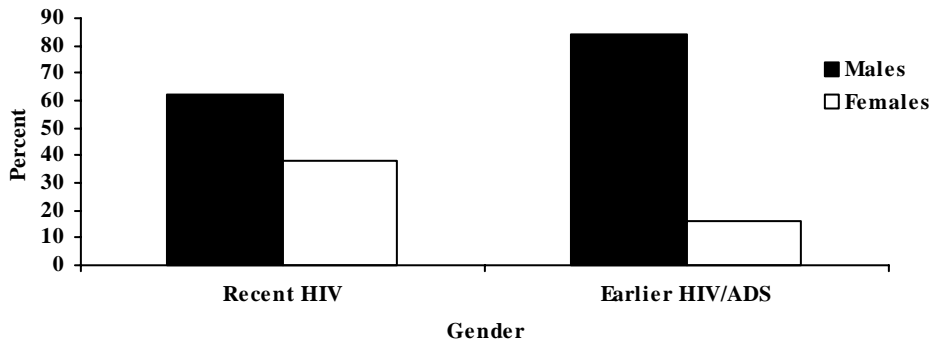
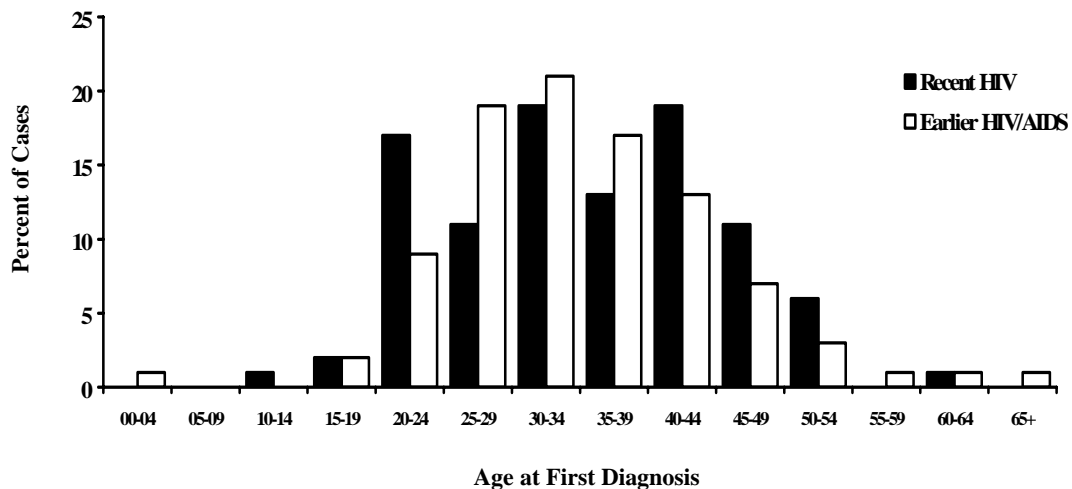


Table 24. HIV Cases by Age at First HIV Diagnosis, Recent (HIV, Non-AIDS) and Earlier HIV/AIDS Cases, Diagnosis through December 31, 2002, Alaska (N=892; 108 Recent, 784 Earlier)

Age at First HIV Diagnosis	Recent HIV Cases		Earlier HIV/AIDS Cases		Total	
	Number	column %	Number	column %	Number	column %
0-4	0	0%	7	1%	7	1%
5-9	0	0%	1	<1%	1	<1%
10-14	1	1%	2	<1%	3	<1%
15-19	2	2%	14	2%	16	2%
20-24	18	17%	73	9%	91	10%
25-29	12	11%	149	19%	161	18%
30-34	20	19%	165	21%	185	21%
35-39	14	13%	136	17%	150	17%
40-44	21	19%	101	13%	122	14%
45-49	12	11%	56	7%	68	8%
50-54	7	6%	22	3%	29	3%
55-59	0	0%	10	1%	10	1%
60-64	1	1%	5	1%	6	1%
65+	0	0%	7	1%	7	1%
Unknown	0	0%	36	5%	36	4%
Total	108	100%	784	100%	892	100%

Figure 10. HIV Cases by Age at First HIV Diagnosis, Recent (HIV, Non-AIDS) and Earlier HIV/AIDS Cases, Diagnosis through December 31, 2002, Alaska (N=892; 108 Recent and 784 Earlier) (the 36 cases for which age is unknown are not shown in the graph below)



Recent adult (ages 15 years and older) HIV, non-AIDS cases were younger at age of first HIV diagnosis than persons infected earlier. In cases with known dates of diagnosis, 19% of recent cases were aged 15-24 years at first HIV diagnosis compared to 12% of earlier cases.

Table 25. Male HIV Cases by Age at First HIV Diagnosis, Recent (HIV, Non-AIDS) and Earlier HIV/AIDS Cases, Diagnosis through December 31, 2002, Alaska (N=724; 67 Recent, 657 Earlier)

Age at First HIV Diagnosis	Recent Male HIV Cases		Earlier Male HIV/AIDS Cases		Total Male Cases	
	Number	Column %	Number	Column %	Number	Column %
0-4	0	0%	4	1%	4	1
5-9	0	0%	1	<1%	1	<1%
10-14	1	1%	2	<1%	3	<1%
15-19	1	1%	9	1%	10	1%
20-24	9	13%	59	9%	68	9%
25-29	5	7%	125	19%	130	18%
30-34	12	18%	140	21%	152	21%
35-39	11	16%	117	18%	128	18%
40-44	17	25%	87	13%	104	14%
45-49	4	6%	50	8%	54	7%
50-54	6	9%	17	3%	23	3%
55-59	0	0%	9	1%	9	1%
60-64	1	1%	5	1%	6	1%
65+	0	0%	5	1%	5	1%
Unknown	0	0%	27	4%	27	4%
Total	67	100%	657	100%	724	100%

Table 26. Female HIV Cases by Age at First HIV Diagnosis, Recent (HIV, Non-AIDS) and Earlier HIV/AIDS Cases, Diagnosis through December 31, 2002, Alaska (N=168; 41 Recent, 127 Earlier)

Age at First HIV Diagnosis	Recent Female HIV Cases		Earlier Female HIV/AIDS Cases		Total Female Cases	
	Number	Column %	Number	Column %	Number	Column %
0-4	0	0%	3	2%	3	2%
5-9	0	0%	0	0%	0	0%
10-14	0	0%	0	0%	0	0%
15-19	1	2%	5	4%	6	4%
20-24	9	22%	14	11%	23	14%
25-29	7	17%	24	19%	31	18%
30-34	8	20%	25	20%	33	20%
35-39	3	7%	19	15%	22	13%
40-44	4	10%	14	11%	18	11%
45-49	8	20%	6	5%	14	8%
50-54	1	2%	5	4%	6	4%
55-59	0	0%	1	1%	1	1%
60-64	0	0%	0	0%	0	0%
65+	0	0%	2	2%	2	1%
Unknown	0	0%	9	7%	9	5%
Total	41	100%	127	100%	168	100%

Recent cases showed age differences by gender. Of recent female cases, 24% were aged 15-24 years at first HIV diagnosis compared to 15% of recent cases in males.

Figure 11. Age at First Known HIV Diagnosis by Gender, Recent (HIV, Non-AIDS) Cases by Selected Age Group, Diagnosis 1998-2002, Alaska N=108, 67 Males and 41 Females (of these, 21 cases including 12 males and 9 females are in other age groups and are not shown below.)

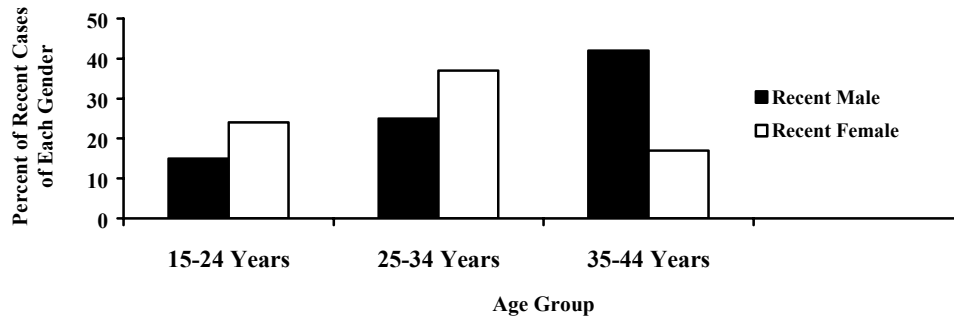


Table 27. Age at First Known HIV Diagnosis by Gender, Recent (HIV, non-AIDS) Cases by Selected Age Group, Diagnosis 1998-2002, Alaska N=108

Age Group	Males		Females		Total	
	Number	Column %	Number	Column %	Number	Column %
15-24 years	10	15%	10	24%	20	19%
25-34 years	17	25%	15	37%	32	30%
35-44 years	28	42%	7	17%	35	32%
All Other Ages	12	18%	9	22%	21	19%
Total	67	100%	41	100%	108	100%

Table 28. Male HIV Cases by Exposure Category, Recent (HIV, Non-AIDS) and Earlier Male HIV/AIDS Cases with Diagnosis through December 31, 2002, Alaska (N=724; 67 Recent and 657 Earlier)

Exposure Category	Recent HIV Cases		Earlier HIV/AIDS Cases		Total	
	Number	Column %	Number	Column %	Number	Column %
Male-Male Sex (MSM)	33	49%	386	59%	419	58%
Injection Drug Use (IDU)	6	9%	68	10%	74	10%
MSM and IDU	1	1%	57	9%	58	8%
Heterosexual Contact to at-risk Person	9	13%	24	4%	33	5%
Transfusion/Transplant	0	0%	8	1%	8	1%
Hemophilia	0	0%	10	2%	10	1%
Perinatal Transmission	0	0%	3	<1%	3	<1%
Other/Unknown/Unspecified	18	27%	101	15%	119	16%
Total	67	100%	657	100%	724	100%

Figure 12. Male HIV Cases by Exposure Category, Recent (HIV, Non-AIDS) and Earlier Male HIV/AIDS Cases with Diagnosis through December 31, 2002, Alaska (N=724; 67 Recent and 657 Earlier)

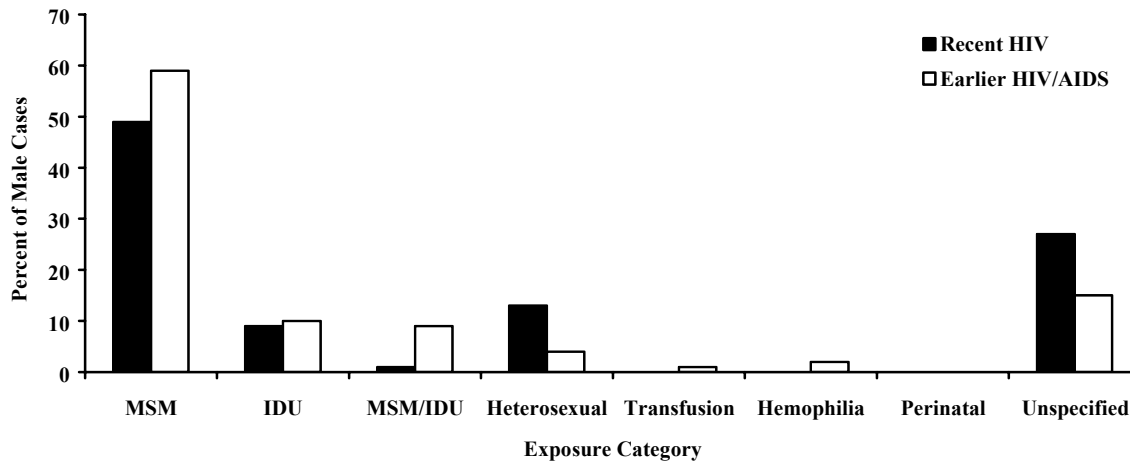
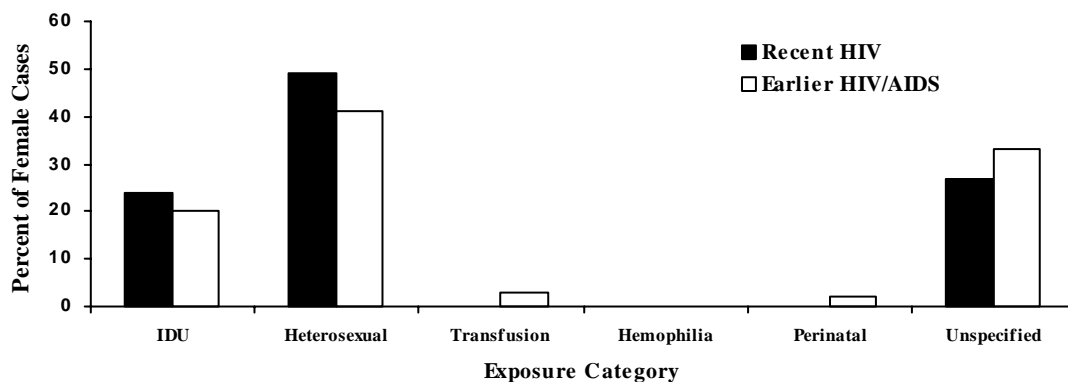


Table 29. Female HIV Cases by Exposure Category, Recent (HIV, Non-AIDS) and Earlier Female HIV/AIDS Cases with Diagnosis through December 31, 2002, Alaska (N=168; 41 Recent and 127 Earlier)

Exposure Category	Recent HIV Cases		Earlier HIV/AIDS Cases		Total	
	Number	Column %	Number	Column %	Number	Column %
Male-Male Sex (MSM)	N/A	N/A	N/A	N/A	N/A	N/A
Injection Drug Use (IDU)	10	24%	26	20%	36	21%
MSM and IDU	N/A	N/A	N/A	N/A	N/A	N/A
Heterosexual Contact to at-risk Person	20	49%	52	41%	72	43%
Transfusion/Transplant	0	0%	4	3%	4	2%
Hemophilia	0	0%	0	0%	0	0%
Perinatal Transmission	0	0%	3	2%	3	2%
Other/Unknown/Unspecified	11	27%	42	33%	53	32%
Total	41	100%	127	100%	168	100%

Figure 13. Female HIV Cases by Exposure Category, Recent (HIV, Non-AIDS) and Earlier Female HIV/AIDS Cases with Diagnosis through December 31, 2002, Alaska (N=168; 41 Recent and 127 Earlier)



The male-male sex exposure category remained the largest for male cases, although the proportion of cases was smaller in recent cases (49%) than in cases infected earlier (59%). The proportion of male cases with injection drug use exposure was similar in recent (9%) and earlier cases (10%). The proportion of cases with male-male sex and injection drug use was much smaller in recent (1%) than in earlier cases (9%). The proportion of male cases with the exposure category of heterosexual contact to a person with/at increased risk of HIV was higher in recent cases (13%) compared to earlier cases (4%). There were no recent male cases with exposure categories of transfusion/transplant, hemophilia, or perinatal transmission.

For females, the proportion of cases with heterosexual contact to a person with or at increased risk of HIV was higher in recent (49%) as compared to earlier cases (41%). The proportion of female cases with injection drug use exposure was also higher in recent (24%) than in earlier cases (20%). There were no recent female cases with exposure categories of transfusion/transplant, hemophilia, or perinatal transmission.

The proportion of cases with other/unknown/unspecified exposure category is large (27%) for recent cases in both males and females. If risk were determined and these cases were redistributed into other exposure categories, it might alter the respective proportions. The proportion of cases with unspecified risk in Alaska is similar to the proportion nationally, although CDC statistically redistributes national cases with undetermined risk into known exposure categories in most data presentations.

Individuals infected more recently differed in race/ethnicity from those infected earlier (Tables 30-31, Figures 14-15). The highest proportion of HIV cases was among White males, although this proportion (46%) was smaller in recent than in earlier (64%) cases. Proportions of Alaska Native/American Indian males and Black males were higher in recent cases (28% and 13%, respectively) than in cases infected earlier (17% and 8%, respectively). The proportion of White females increased to 49% in recent cases from 43% in earlier cases. The proportion of cases in Alaska Native/American Indian females increased to 39% in recent cases from 34% in earlier cases.

Table 30. Male HIV Cases by Race/Ethnicity, Recent (HIV, Non-AIDS) and Earlier Male HIV/AIDS Cases with Diagnosis through December 31, 2002, Alaska (N=724)

Race/Ethnicity	Recent HIV Cases		Earlier HIV/AIDS Cases		Total	
	Number	Column %	Number	Column %	Number	Column %
White	31	46%	420	64%	451	62%
Alaska Native/American Indian	19	28%	109	17%	128	18%
Black	9	13%	53	8%	62	9%
Hispanic Ethnicity	2	3%	54	8%	56	8%
Asian/Pacific Islander	3	4%	6	1%	9	1%
Unknown	3	4%	15	2%	18	(2%
Total	67	100%	657	100%	724	100%

Figure 14. Male HIV Cases by Race/Ethnicity, Recent (HIV, Non-AIDS) and All Other Male HIV/AIDS Cases with Diagnosis through December 31, 2002, Alaska (N=724; 67 Recent and 657 Earlier) (Race/ethnicity is unknown for 3 recent and 15 earlier cases)

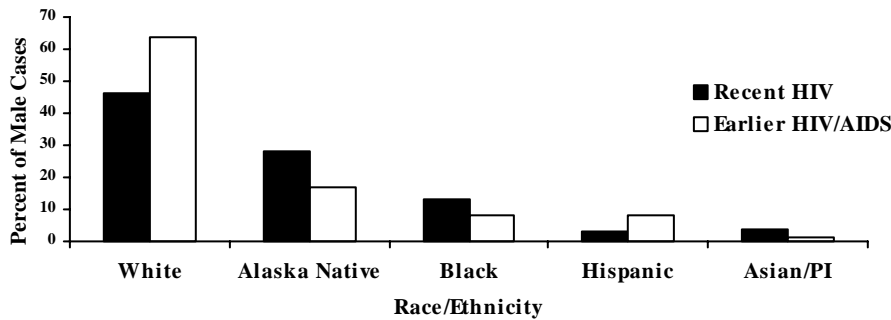
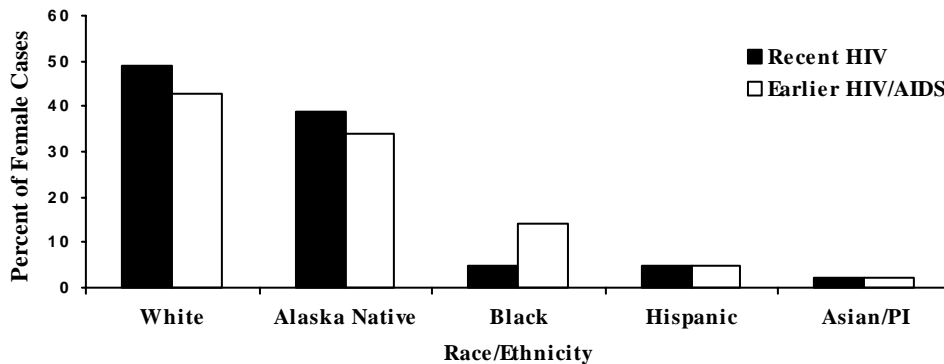


Table 31. Female HIV Cases by Race/Ethnicity, Recent (HIV, Non-AIDS) and Earlier Female HIV/AIDS Cases with Diagnosis through December 31, 2002, Alaska (N=168)

Race/Ethnicity	Recent HIV Cases		Earlier HIV/AIDS Cases		Total	
	Number	Column %	Number	Column %	Number	Column %
White	20	49%	54	43%	74	44%
Alaska Native/American Indian	16	39%	43	34%	59	35%
Black	2	5%	18	14%	20	12%
Hispanic Ethnicity	2	5%	6	5%	8	5%
Asian/Pacific Islander	1	2%	2	2%	3	2%
Unknown	0	0%	4	3%	4	2%
Total	41	100%	127	100%	168	100%

Figure 15. Female HIV Cases by Race/Ethnicity, Recent (HIV, Non-AIDS) and Earlier Female HIV/AIDS Cases with Diagnosis through December 31, 2002, Alaska (N=168; 41 Recent and 127 Earlier) (Race/ethnicity is unknown for 4 earlier cases)

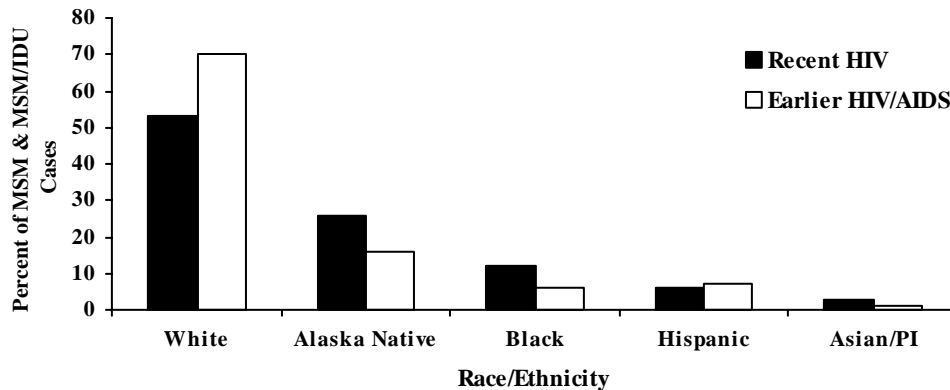


Although the small number of cases of HIV (non-AIDS) in MSM and MSM/IDU make the proportions unstable, data in Table 32, below indicate the burden of HIV disease among men of minority race/ethnicity has increased in recent (1998-2002) years compared to that in white MSM and MSM/IDU.

Table 32. Recent (HIV, Non-AIDS) and Earlier Male HIV/AIDS Cases with Exposure Categories of Male-Male Sex and Male-Male Sex/Injection Drug Use by Race Ethnicity, with Diagnosis through December 31, 2002, Alaska (N=477; 34 Recent and 443 Earlier)

Race/Ethnicity	Recent HIV Cases in MSM & MSM/IDU		Earlier HIV/AIDS Cases in MSM & MSM/IDU		Total HIV/AIDS Cases in MSM & MSM/IDU	
	Number	Column %	Number	Column %	Number	Column %
White	18	53%	310	70%	328	69%
Alaska Native/American Indian	9	26%	71	16%	80	17%
Black	4	12%	27	6%	31	6%
Hispanic Ethnicity	2	6%	29	7%	31	6%
Asian/Pacific Islander	1	3%	3	1%	4	1%
Unknown	0	0%	3	1%	3	1%
Total	34	100%	443	100%	477	100%

Figure 16. Recent (HIV, Non-AIDS) and Earlier Male HIV/AIDS Cases with Exposure Categories of Male-Male Sex and Male-Male Sex/Injection Drug Use by Race Ethnicity, with Diagnosis through December 31, 2002, Alaska (N=477; 34 Recent and 443 Earlier)

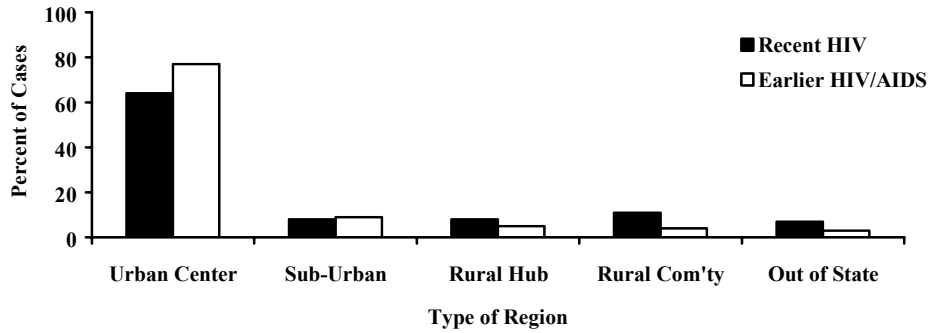


In Tables 33, 34, 35, and 36 and Figures 17 and 18, geographic areas are defined as follows: urban areas include Anchorage, Fairbanks, and Juneau; urban satellites include Matanuska-Susitna and Kenai Peninsula Boroughs; and rural hubs include 13 communities with populations over 2,000; and rural areas include 260 areas with fewer than 2,000 residents.

Table 33. Urban/Rural Region of Residence at First Known HIV Diagnosis, Recent (HIV, non-AIDS) Cases and Earlier HIV/AIDS Cases, Diagnosis through December 31, 2002, Alaska (N=892; 108 Recent and 784 Earlier)

Region	Recent		Earlier		Total	
	Number	Column %	Number	Column %	Number	Column %
Urban	69	64%	603	77%	672	75%
Sub-Urban	9	8%	71	9%	80	9%
Rural Hub	9	8%	40	5%	49	5%
Rural Community	12	11%	33	4%	45	5%
Out of State	8	7%	27	3%	35	4%
Unknown Residence	1	1%	10	1%	11	1%
Total	108	100%	784	100%	892	100%

Figure 17. Urban/Rural Region of Residence at First Known HIV Diagnosis, Recent (HIV, non-AIDS) Cases and Earlier HIV/AIDS Cases, Diagnosis through December 31, 2002, Alaska (N= 892; 108 Recent and 784 Earlier) (1 recent HIV and 10 earlier HIV/AIDS cases have unknown region of residence)

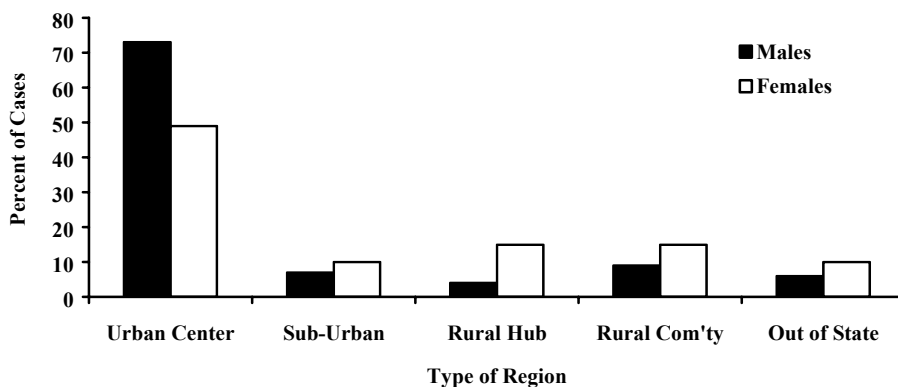


Persons reported with HIV were from all regions of Alaska. Of persons infected more recently, 69 of 108 cases (64%) resided in the urban areas of Anchorage, Fairbanks, or Juneau at the time of first HIV diagnosis compared to 603 of 784 (77%) cases infected earlier in the epidemic.

Table 34. Region of Residence at First HIV Diagnosis by Gender, Recent (HIV, non-AIDS) Cases with Diagnosis 1998-2002, Alaska (N=108; 67 Males and 41 Females)

Region	Male		Female		Total	
	Number	Column %	Number	Column %	Number	Column %
Urban	49	73%	20	49%	69	64%
Sub-Urban	5	7%	4	10%	9	8%
Rural Hub	3	4%	6	15%	9	8%
Rural Community	6	9%	6	15%	12	11%
Out of State	4	6%	4	10%	8	7%
Unknown Residence	0	0%	1	2%	1	1%
Total	67	100%	41	100%	108	100%

Figure 18. Urban/Rural Region of Residence at First Known HIV Diagnosis by Gender, Recent (HIV, Non-AIDS) Cases with Diagnosis 1998-2002, Alaska (N= 108; 67 Males and 41 Females) (1 recent female case with unknown region of residence)



Among recent cases with first HIV diagnosis in Alaska, a larger proportion of females lived in non-urban areas at the time of first diagnosis (16 of 36 female cases [44%]) than did males (14 of 63 male cases [22%]). Non-urban areas include all areas other than Anchorage, Fairbanks, or Juneau.

Table 35. Urban/Rural Region of Residence at First Known HIV Diagnosis, Recent Male (HIV, non-AIDS) Cases and Earlier Male HIV/AIDS Cases, Diagnosis through December 31, 2002, Alaska (N=724; 67 Recent and 657 Earlier)

Region	Recent Male		Earlier Male		Total Male	
	Number	Column %	Number	Column %	Number	Column %
Urban	49	73%	514	78%	563	78%
Sub-Urban	5	7%	56	9%	61	8%
Rural Hub	3	4%	31	5%	34	5%
Rural Community	6	9%	24	4%	30	4%
Out of State	4	6%	24	4%	28	4%
Unknown Residence	0	0%	8	1%	8	1%
Total	67	100%	657	100%	724	100%

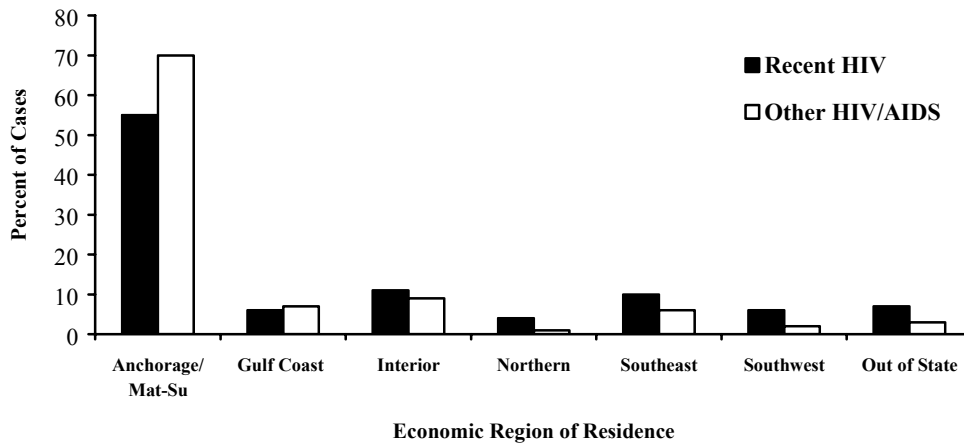
Table 36. Urban/Rural Region of Residence at First Known HIV Diagnosis, Recent Female (HIV, non-AIDS) Cases and Earlier Female HIV/AIDS Cases, Diagnosis through December 31, 2002, Alaska (N=168; 41 Recent and 127 Earlier)

Region	Recent Female		Earlier Female		Total Female	
	Number	Column %	Number	Column %	Number	Column %
Urban	20	49%	89	70%	109	65%
Sub-Urban	4	10%	15	12%	19	11%
Rural Hub	6	15%	9	7%	15	9%
Rural Community	6	15%	9	7%	15	9%
Out of State	4	10%	3	2%	7	4%
Unknown Residence	1	2%	2	2%	3	2%
Total	41	100%	127	100%	168	100%

Table 37. Economic Region of Residence at First Known HIV Diagnosis, Recent (HIV, non-AIDS) Cases and Earlier HIV/AIDS Cases, Diagnosis through December 31, 2002, Alaska (N=892; 108 Recent and 784 Earlier)

Economic Region	Recent		Earlier		Total	
	Number	Column %	Number	Column %	Number	Column %
Anchorage/Mat-Su	59	55%	547	70%	606	68%
Gulf Coast	6	6%	55	7%	61	7%
Southeast	12	11%	70	9%	82	9%
Southwest	4	4%	9	1%	13	1%
Northern	11	10%	50	6%	61	7%
Interior	7	6%	16	2%	23	3%
Out of State	8	7%	27	3%	35	4%
Unknown	1	1%	10	1%	11	1%
Total	108	100%	784	100%	892	100%

Figure 19. Economic Region of Residence at First Known HIV Diagnosis, Recent (HIV, non-AIDS) Cases and Earlier HIV/AIDS Cases, Diagnosis through December 31, 2002, Alaska (N= 892; 108 Recent and 784 Earlier) (residence unknown for 1 recent and 10 earlier cases)



The majority of all recent cases (59 of 108 cases [55%]) resided in Anchorage/Mat-Su at the time of first HIV diagnosis, although this proportion declined compared to the proportion of those infected earlier (547 of 784 cases [77%]).

PARTNER NOTIFICATION ACTIVITIES

Partner notification is a voluntary service conducted in cooperation with the HIV infected person to confidentially advise his/her sexual and injecting partners of their exposure to HIV and offer them testing, prevention counseling, and referrals for other services. Multiple interactions over a period of time are often involved, depending on the circumstances.

In Alaska, partner services are generally conducted by public health professionals with specialized training and skills. Persons with risk behavior and HIV exposure are at risk of infection. Partner notification activities reach these individuals more efficiently and effectively than any other approach, facilitating provision of focused, individualized prevention services and referrals for medical care.

In 2002, 39 cases were assigned to State public health professionals for partner notification activities. At the time of this summary, 37 cases were contacted, with the following results:

- 24 cases named 57 partners
- 7 cases named no partners
- 5 cases refused to participate
- 1 case is pending

Of the 57 partners named:

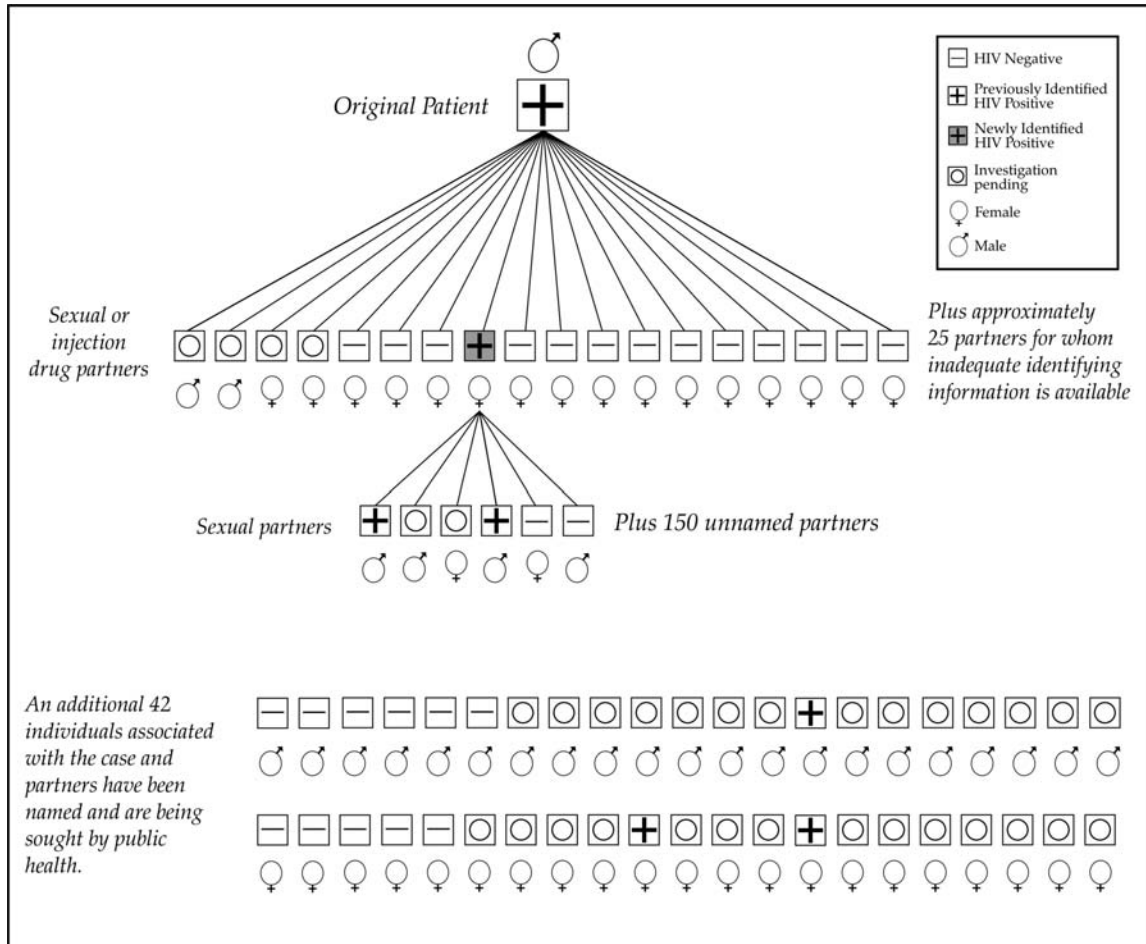
- 11 were HIV positive and were aware of their HIV status
- 38 were notified of their exposure; 35 were tested
- 2 partners were newly found to be HIV positive

Although some partner notification and disease intervention activities are relatively uncomplicated, most are not. For example, an extensive public health investigation of an HIV case with many sexual and injection drug partners (Figure 20) was underway at the time this document was published. Risk factors in this investigation include crack cocaine and injection drug use, unprotected sex, pregnancy, multiple partners, group sexual activity, anal sex, and individuals with a history of incarceration. Specialized public health activities have included more than 60 case and partner interviews; many hours of partner evaluation, education, risk reduction counseling, and referral for medical care; identification of prior and new HIV infection in partners; ensuring evaluation for HIV infection of six female partners who were pregnant, and ensuring evaluation/follow-up for their infants after birth.

This investigation demonstrates the critical, essential, and core functions of public health. Public health staff access confidential locating and medical records, contact medical providers, ensure appropriate medical referrals, network with other State agencies, and interview individuals confidentially under statutory authority. Public health staff are able to conduct essential activities to determine who may have been exposed and to interrupt further disease transmission. Other health care providers or outside agencies would not be able to do all of these things.

The success of these activities depends on the voluntary cooperation of those who are infected and exposed. Protection of confidentiality is essential to successful cooperation.

Figure 20. A Case Investigation and Associated Partner Notification Activities, in Progress, Alaska, 2003



VOLUNTARY HIV TESTING IN HIV COUNSELING AND TESTING SITES

Twenty-one sites in urban and hub cities around the state were HIV Counseling and Testing Sites (CTS). These sites were State-funded or funded with federal HIV prevention funds through the HIV/STD Program, and used the State Virology Laboratory to process their HIV tests. Data were gathered from these sites on characteristics of persons tested as well as on pre- and post-test counseling activities. (HIV testing was also available at a number of other sites around the state, including in all correctional institutions.)

From 1998-2002, the number of individuals tested per year at CTS increased nearly 9% (from 5,467 in 1998 to 5,935 in 2002), while the number of individuals tested in all other sites using the State Virology Lab decreased by 21% (from 7,077 to 5,558 individuals in 2002). CTS also accounted for an increasing proportion of the number of persons testing HIV positive at the end as compared to the beginning of this five-year period

(from 13 positive individuals in 1998 or 59% of all individuals testing positive through the State Lab, to 10 positive individuals in 2002 or 83% of all individuals testing positive through the State Lab). Individuals of all races/ethnicities were represented among the individuals using the CTS (and those testing HIV positive).

Table 38. Individuals Receiving HIV Testing through the State Virology Laboratory, HIV Counseling and Testing (CTS) and Other Sites by Year, 1998-2002, Alaska (N=60,481)

Year	Individuals Tested at Counseling & Testing Sites (CTS)		Individuals Tested at Other Sites Using State Lab		Total Individuals Tested through State Lab	
	Number Tested	No. (%) HIV+	Number Tested	No. (%) HIV+	Number Tested	No. (%) HIV+
1998	5,467	13+ (0.2%)	7,077	9+ (0.1%)	12,544	22+ (0.2%)
1999	5,445	14+ (0.3%)	6,918	10+ (0.1%)	12,363	24+ (0.2%)
2000	5,385	10+ (0.2%)	6,811	14+ (0.2%)	12,196	24+ (0.2%)
2001	5,758	13+ (0.2%)	6,127	3+ (<0.1%)	11,885	16+ (0.1%)
2002	5,935	10+ (0.2%)	5,558	2+ (<0.1%)	11,493	12+ (0.1%)
Total	27,990	60+ (0.2%)	32,491	38+ (0.1%)	60,481	98+ (0.2%)

Individuals testing at CTS were interviewed for their HIV-related risks in order to guide HIV prevention counseling. Individuals' willingness to voluntarily disclose risks, as well as interviewer skills, affected data validity, and the resulting data are best considered indicators and interpreted with caution. The four most significant HIV risk categories identified through these interactions were male-male sex (MSM), injection drug use (IDU), and heterosexual contact with a partner either (1) at increased risk or (2) with no known risk. Over the five-year period from 1998 to 2002, those stating their risk as MSM consistently had the greatest proportion testing HIV positive, and this risk category was the only one to show a trend, declining from 3% positive in 1998 to 1% positive in 2002.

Table 39. Cumulative Proportion of Individuals Testing HIV Positive in CTS by Selected Risk Category, 1998-2002

Risk Category	Number of Individuals Tested	Individuals with This Risk Testing HIV Positive	
		Number HIV+	Percent HIV+
Male-Male Sex	1,424	28	2.0%
Heterosexual Partner, Increased Risk	681	5	0.7%
Injection Drug Use	869	2	0.2%
Heterosexual Partner, No Known Risk	18,866	17	0.1%

CTS staff documented post-test counseling for 60.5% of persons tested at their sites in 2002 as compared to 55.4% in 2001. All (100%) persons with HIV positive test results in CTS received their test results and post-test counseling.

HIV TESTING DURING PRENATAL CARE

Pregnancy Risk Assessment Monitoring Survey (PRAMS). PRAMS is an ongoing national surveillance study conducted by states to collect information on maternal behaviors, attitudes, and experiences. The PRAMS includes a systematic, stratified random sample of mothers who have given birth to live infants. Response data are statistically weighted to represent the state's population of women with live births.

Beginning in 1996, surveyed mothers were asked if their prenatal health care providers had (1) counseled them about HIV prevention and (2) discussed HIV testing with them. National PRAMS data indicate that discussion of HIV testing is highly correlated with the occurrence of testing. The question on counseling was dropped from the survey after 1999.

PRAMS survey results through 2000 (the most recent available PRAMS data) for the HIV-related questions follow in Tables 40 and 41.

Table 40. Percent of Women Giving Birth to Live Infants Whose Prenatal Health Care Providers Counseled Them About HIV Prevention, Alaska

	2000	1999	1998	1997	1996
Number of Live Births in Alaska	9,766	9,819	9,793	9,820	8,198
Response					
Yes	(question not asked)	46.8%	46.7%	42.9%	43.9%
No		49.7%	50.3%	54.0%	52.4%
Skipped (no prenatal care)		0.9%	0.8%	1.7%	1.4%
No response		2.6%	2.2%	1.3%	2.3%

Table 41. Percent of Women Giving Birth to Live Infants Whose Prenatal Health Care Providers Discussed HIV Testing With Them, Alaska

	2000	1999	1998	1997	1996
Number of Live Births in Alaska	9,766	9,819	9,793	9,820	8,198
Response					
Yes	80.9%	76.1%	73.7%	74.5%	76.6%
No	16.8%	19.9%	23.6%	22.3%	20.0%
Skipped (no prenatal care)	0.6%	0.9%	0.8%	1.7%	1.4%
No response	1.8%	3.1%	1.9%	1.5%	2.0%

Alaska currently has a low incidence of perinatal HIV transmission. PRAMS data show a relatively large and growing proportion of those women with live births reported discussion of (and likely testing for) HIV during pregnancy. The number of HIV-infected women of childbearing age is relatively small but will continue to grow as additional women become infected with HIV and infected persons live longer, healthier lives. Of the 168 cases of HIV/AIDS reported in females in Alaska, 127 were not known to have died as of December 31, 2002. Of these, 93 women were between the ages of 15-44 years as of July, 2002 and theoretically of childbearing age. It will be increasingly important to provide individualized services to HIV positive women, including services related to their reproductive health and the health of their children, to increase the number of pregnant women receiving prenatal care, and to progress toward universal, voluntary HIV testing as a routine part of prenatal care.

HIV CARE SERVICE UTILIZATION

The State of Alaska receives federal funding under Title II of the Ryan White CARE Act to purchase HIV care services for low income persons with HIV and their families as well as HIV medications. (Other in-state organizations including the Alaska Native Tribal Health Consortium, Anchorage Neighborhood Health Center, and the Yukon-Kuskokwim Health Corporation also receive federal funding under different titles of the CARE Act.)

In 2002, a total of 362 HIV positive individuals received one or more services provided or purchased with CARE Act funds by one of the two State grantee organizations. These organizations have offices in Anchorage, Fairbanks, and Juneau and also serve individuals in other areas of the state. Of these 362 individuals, 43 (12%) were new clients to the service organizations during 2002. Males constituted 76% (274 individuals), females 24% (87 individuals), and transgender persons 1% (1 individual) of the client population. Sixty-one individuals participated in the AIDS Drug Assistance Program.

Characteristics of individuals served with Title II CARE Act services funded through the State HIV/STD Program are contrasted with characteristics of cases with HIV/AIDS reported in Alaska and not known to have died through 12/31/02. Table 42 indicates the characteristics of both populations are very similar. The two

sets of race/ethnicity data are not fully comparable because Hispanic ethnicity is treated as an exclusive race category for presumed living cases while for CARE Act clients, persons are classified in one of the four race categories and also as to whether or not they are of Hispanic ethnicity.

Table 42. Demographic Characteristics of HIV/AIDS Cases Presumed Living through December 31, 2002 and Title II CARE Act Clients in 2002, Alaska

Characteristic	HIV/AIDS Cases Presumed Living through 12/31/02 (N=570)	Clients of Title II CARE Act Services in 2002 (N=362)
Gender		
Male	78%	76%
Female	22%	24%
Transgender	--	<1%
Race/Ethnicity		
White	57%	70%
Alaska Native/Am. Indian	20%	22%
Black	10%	7%
Asian/Pacific Islander	2%	1%
Hispanic Ethnicity*	8%*	[10%]*
Age Range (age in 2002)		
0-12 years	<1%	0%
13-24 years	3%	2%
25-44 years	64%	68%
45+ years	33%	31%

*CARE Act clients of Hispanic ethnicity are included in the four race categories listed, unlike HIV/AIDS cases presumed living where Hispanic ethnicity is treated as if it were a (fifth) race category

PREVALENCE OF HIV INFECTION IN SPECIFIC POPULATIONS

Civilian Applicants for Military Service. All civilian applicants for military service are screened for HIV infection. This includes individuals applying for active duty or reserve military service (including the National Guard), the service academies, and the Reserve Officers Training Corps (ROTC). From October 1985 through December 2001, 21,974 (17,985 male and 3,989 female) individual applicants for military service in Alaska were tested. Of these, 3 (0.01%) had test results showing HIV infection. All three were males, including one aged 20-24 years and two 30 years or older, with one White, one Black, and one of unspecified race.

Job Corps. The Job Corps is a U.S. Department of Labor occupational training program for socially and economically disadvantaged youth aged 16-25 years. The Job Corps recruits high school drop outs or high school graduates from rural and urban areas of all 50 states and U.S. territories to provide them with additional training to assist them to obtain and hold meaningful jobs. The 2,118 Alaska residents entering the Job Corps from 1990 through 1997 included 1,304 males and 814 females; 904 Whites, 141 Blacks, 972 Alaska Natives/American Indians, and 101 individuals of other races/ethnicity; and 701 individuals from Anchorage and 1,417 individuals from other areas of the state. Of the 2,118 Alaska Job Corps participants, none tested HIV positive. More recent data are not available from CDC.

HIV seroprevalence in childbearing women. From 1990 through 1996, Alaska participated in the national Survey of Childbearing Women. Blood samples drawn from all Alaska newborns for metabolic screening were, after the required tests had been completed, stripped of identifiers and anonymously tested for HIV. The resulting data provided population based information about the prevalence of HIV infection among childbearing women in Alaska. From 1990 to 1996, the number of HIV positive women delivering live infants in Alaska ranged from 0 to 4 women per year (positivity range of 0.0% to 0.3% per year). This survey was discontinued in 1997.

INDICATORS OF RISK

Sexually Transmitted Diseases (STD). Infection with a sexually transmitted disease indicates sexual risk behavior. Three STD with potentially serious health effects and effective treatments are reportable in Alaska: syphilis, gonorrhea and chlamydia. Alaska data do not show a high degree of overlap at this time between populations reported with gonorrhea, chlamydia, or syphilis infections and populations with HIV infection.

Syphilis. Syphilis, especially in its infectious stages, is relatively rare in Alaska. In 2001, 10 syphilis cases were reported in Alaska and 9 cases were reported in 2002. None of these cases was primary or secondary (infectious) syphilis.

Gonorrhea. Although gonorrhea rates in Alaska have declined dramatically since the late 1970s, the 642 cases reported in 2002 constituted a 41% increase over the 455 cases reported in 2001 and marked the third year of an upward trend. Reported cases in males increased 36% (from 213 in 2001 to 289 in 2002) and cases in females increased 46% (from 242 in 2001 to 353 in 2002). There were 14 cases of gonorrhea pelvic inflammatory disease (PID). Gonorrhea was reported among persons of every race. Case rates were highest in Black males (634/100,000) and Alaska Native females (465/100,000). Approximately 36% of gonorrhea cases reported in 2002 also were infected with chlamydia. The increase in gonorrhea cases from 2000 to 2002 is likely attributable to rising disease incidence, primarily in Anchorage; providers' increased and targeted STD screening in adolescents and young adults; and expanded partner notification activities throughout the state.

Co-infection with HIV and Gonorrhea. All cases of gonorrhea (9,626) reported in Alaska from January 1, 1988 through December 31, 2001 were matched against all cases of HIV infection ever reported in Alaska through June 2002 (840 cases). Forty-two (42) individuals reported with gonorrhea were ever reported with HIV. Of these 42 persons:

- 23 had gonorrhea only prior to HIV diagnosis;
- 15 had gonorrhea only after HIV diagnosis;
- 3 had gonorrhea before and after HIV diagnosis; and
- 1 had an unknown HIV diagnosis date.

Fewer than 1% of persons ever reported with gonorrhea during this period were reported with HIV, indicating that gonorrhea was not necessarily a good predictor of HIV in Alaska. Five percent of persons reported with HIV had ever been reported with gonorrhea.

Chlamydia. In 2001 and 2002, Alaska reported the highest case rates of urogenital *Chlamydia trachomatis* infection in the United States. A total of 3,805 cases of chlamydia infection were reported in Alaska in 2002, a 40% increase from cases in 2001. The annual number of reported cases in females increased 31% (from 1,968 in 2001 to 2,576 in 2002) and cases in males increased 63% (from 753 in 2001 to 1,229 in 2002). Chlamydia rates were higher for females than males, reflecting a much higher incidence of screening and testing in females than males. There were 48 reported cases of chlamydia pelvic inflammatory disease (PID). Peak infection rates occurred at ages 15 to 24 years for both genders. Case rates were highest among Alaska Native females (2,527/100,000) and Black males (1,961/100,000). Approximately 5% of chlamydia cases reported in 2002 were simultaneously reported with gonorrhea. The increase in chlamydia case reports reflects broader use of noninvasive screening technology and adherence to national screening recommendations; intensified case finding through partner notification activities statewide; and a high rate of disease incidence.

Co-infection with HIV and Chlamydia. Cases of HIV and chlamydia were cross-matched in 2000, and results are presented below. Because the number of chlamydia cases is large (nearly 4,000 cases in 2002) and the overlap between the HIV and chlamydia was found to be quite small in the 2000 cross-match, a similar match has not subsequently been conducted.

All cases of chlamydia (6,726) reported in Alaska from January 1, 1996 (when chlamydia infection first became a reportable condition) through December 31, 1999 were matched against all cases of HIV infection ever reported in Alaska through December 31, 1999 (717). Four individuals ever reported with HIV were reported with five cases of chlamydia. None of these individuals was reported with chlamydia after the reported date of HIV onset.

Tuberculosis. In Alaska, tuberculosis (TB) occurs predominantly among Alaska Native and Asian/Pacific Islander populations and is equally distributed between males and females. State TB Control Program staff determine whether HIV testing has been offered and document HIV test results for confirmed TB cases aged 25-44 years. The TB Control Program documented that HIV testing was offered to 7 of 9 (80%) active TB cases aged 25-44 years in 2002.

Co-infection with HIV and TB. HIV/AIDS and TB case records are matched periodically to identify shared cases. HIV infection in persons with tuberculosis continues to be uncommon in Alaska. Of the 734 cases of TB reported from 1993 through 2002, 10 (1.4%) were also infected with HIV.

Hepatitis C Virus Infection. Hepatitis C infection, particularly in recent years, is often related to sharing equipment and/or drugs for injection, which is also a risk behavior for HIV infection. From 1996, when hepatitis C virus (HCV) infection first became a condition reportable to the Section of Epidemiology, through December 2002, a cumulative total of approximately 5,500 HCV cases were reported. The majority of reported cases were between the ages of 40-49 years of age at the time of first report. Slightly more than 50% of females were less than 40 years old at time of report, as compared to 30% of males. Males comprised the majority of cases. Although race was not specified for over 60% of cases, Alaska Natives comprised the largest identified race group with 23% of cases. Of cases for which residence was known, most resided in Anchorage or the Matanuska-Susitna Borough.

Co-infection with HIV and hepatitis C. A cross match conducted early in 2001 found that, through December 31, 2000, 74 individuals were reported with both HIV and hepatitis C: 74 (9%) of 781 HIV cases were also reported with HCV; and 74 (2%) of 3,889 HCV cases were reported with HIV.

Substance Use and Abuse.

The National Household Survey on Drug Abuse (NHSDA). The National Household Survey on Drug Abuse (NHSDA) is conducted annually by the federal Substance Abuse and Mental Health Services Administration (SAMHSA). The survey is administered to a probability sample of the U.S. civilian population and a computer-assisted interview asks persons aged 12 years and older about their use of illicit drugs, alcohol, and other substances. From these data, SAMHSA develops statistical estimates of national and state substance abuse levels. The survey population is limited to persons living in households, noninstitutional group quarters (such as shelters, rooming houses, and dormitories), and civilians living on military bases, and excludes homeless persons not living in shelters, active duty military, and residents of institutional group quarters such as jails and hospitals.

Survey data indicate that a large proportion of Alaskans uses alcohol, a smaller proportion uses marijuana, and a much smaller proportion uses other illicit substances. The proportion of the population reporting substance use constituting dependence or abuse is even smaller, although higher than in the U.S. as a whole. Substance use data reported below are annual averages based on the 1999 and 2000 surveys. The data reported below on dependence and abuse are from the 2000 NHSDA survey.

An estimated 8.8% of the Alaska population over 12 years of age used any illicit drug during the past month (as compared to 6.3% of the U.S. population), ranking Alaska in the group of states with highest estimated usage. This group also included California, Colorado, Delaware, Hawaii, Massachusetts, Oregon, Rhode Island, Vermont, and Washington. The estimated proportion of Alaskans using any illicit drug other than marijuana in the past month was 3.2% (as compared to 2.7% in the U.S.), with the highest proportion of

Alaska users aged 18-25 years. The proportion of Alaskans estimated to have used cocaine in the past year was 2.2% (compared to 1.6% for the U.S.)

The proportion of Alaskans reporting alcohol use in the past month was 52.9% (compared to 46.3% in the U.S.), with 21.5% reporting binge alcohol use in the past month (compared to 20.4% for the U.S.). Seven percent of Alaskans reported alcohol dependence or abuse in the past year (compared to 5.5% of the U.S. population). Compared to the U.S. at 2.0%, 2.6% of Alaskans reported any illicit drug dependence or abuse in the past year (highest in those aged 18-25 years at 7.2%).

Arrestee Drug Abuse Monitoring Program (ADAM). The Arrestee Drug Abuse Monitoring Program (ADAM) study, funded by the National Institute of Justice, conducts voluntary, anonymous drug testing and interviews with arrestees. Data reported on study participants from Department of Corrections facilities in Anchorage in 2000 indicated that 52% of male and 56% of female arrestees tested positive for drugs. Injection drug use was self-reported by 5.7% of males surveyed.

Substance Abuse Treatment. From 7/1/01 – 6/30/02, 4,537 individuals were substance abuse treatment clients of the Alaska Division of Alcoholism and Drug Abuse or ADA. Approximately 16% of these individuals were ADA clients more than once during this period. The 2001-2002 figure represents a 17% decrease from the 5,460 unduplicated ADA clients treated during the period from 7/1/00 – 6/30/01. Of the 2001-2002 clients, 26% were in detox, 3% in inpatient settings, 20% in residential settings, and 44% in outpatient treatment settings. Eight percent of clients were in correctional settings.

Sixty-one percent of ADA treatment clients were aged 21-44 years, with most (53%) aged 25-44 years. Eighteen percent were younger than 18 years. Males made up 62% of unduplicated clients. Four percent of females whose status was known were pregnant. Client racial/ethnic distribution was 46% White, 46% Alaska Native, 3% Black, 3% Hispanic, 1% Asian/Pacific Islander, and 1% Other/Unknown.

Fewer than 10% of clients (359) in ADA treatment in 2001-2002 identified heroin or other opiates, cocaine/crack, or methamphetamines as their primary substance problem. Of clients identifying a problem on admission (4,303), primary problems were:

Alcohol	74%	Other opiates	2%
Marijuana/hashish	44%	Methamphetamines	1%
Cocaine/crack	5%	Polydrugs	1%
Heroin	<1%		

Those identifying secondary substance problems (2,059 clients) identified the following substances:

Alcohol	22%	Other opiates	3%
Marijuana/hashish	47%	Methamphetamines	1%
Cocaine/crack	17%	Polydrugs	1%
Heroin	1%		

Unique clients in treatment were geographically distributed as follows:

Southeast	22%	Yukon Delta	4%
Southcentral	36%	Central	14%
Kenai Peninsula	16%	North Central	1%
Northwest	5%	North Slope	<1%
Bristol Bay/Aleutians	2%		

Behavioral Risk Factor Surveillance System (BRFSS). The BRFSS is a nationally designed survey regularly conducted by the Alaska Department of Health & Social Services to gather information about the health related lifestyle choices of Alaskan adults. Over 100 health interviews are conducted each month using a standardized BRFSS questionnaire. Interviews are conducted over the telephone using randomly selected telephone numbers. Respondents are selected from among the adult members of the household (18 years of age and older). Data are statistically weighted to represent the state’s population. In 1997, with additional funding from the HIV/STD Program, the statewide BRFSS included a Sexual Behavior Module to gain additional information about sexual activity and perception of risk for HIV.

Over time, the questions included on the BRFSS have changed. Some questions have been deleted from the survey and new questions have been added. The following sections summarize results of selected questions related to HIV/AIDS from the 1994 to 2002 Alaska BRFSS. Data provided cover different periods of time for different questions, and the applicable periods are noted in each case.

Support for AIDS education in the schools. From 1995 to 1998, the majority of Alaskans (72%) consistently supported beginning AIDS education in elementary school. Less than 4% opposed AIDS education in the schools. Data from the 1999 and 2000 BRFSS are shown in Table 43.

Table 43. Support for AIDS Education in the Schools, 1999 and 2000, Alaska

	1999	2000
Begin in Elementary School	69%	73%
Begin in Kindergarten	8%	6%
Opposed	3%	2%

Condom Effectiveness. The number of Alaskans who thought that a properly used condom is “very effective” for preventing HIV infection increased annually: 29% in 1994, 36% in 1995, and 47% in 1997 (not asked on the BRFSS in 1998 and after). In 1996, a higher percent of Alaskans thought condoms are “very effective” for preventing HIV compared to the nation (Alaska 39%, nationwide 38%). The number of Alaskans who thought that a properly used condom was “not at all effective” decreased each year.

Consistent with national opinion, the majority of Alaskans would encourage a sexually active teenager to use condoms. In 2000 (as in 1998 and 1999), 90% of Alaskans said they would encourage condom use; nationwide in 2000, 89% would endorse condom use for sexually active teenagers. Endorsement for condom use for sexually active teenagers was slightly higher in Alaska in 1995 (91%).

HIV Testing Experience. The percentage of Alaskans who reported that they had ever had an HIV test (excluding for blood donation):

- increased from 40% in 1993 to 53% in 2002;
- was consistently higher than the national median (33% in 2001 nationally, the most recent available year);
- was higher in 2002 for females (58%) than males (50%) in Alaska; and
- was higher in females aged 18-44 years than females of other ages, and higher in males aged 25-44 years than in males of other ages.

In 2002, a higher percentage of Alaskans who self-identified as Black or Hispanic reported having ever been tested for HIV than did Whites or persons of other races/ethnicities. Those reporting ever having been tested for HIV were:

- 78% of Blacks;
- 53% of Whites;
- 53% of Alaska Natives/American Indians;
- 24% of Asians;
- 52% of Native Hawaiians or Other Pacific Islanders; and
- 69% Other races.

Of those included in the races above, 69% of persons of Hispanic ethnicity reported having ever been tested for HIV.

Nationally, also (based on 2001 data), a higher percentage of Blacks (56%) and Hispanics (46%) reported ever having been tested than Whites (38%). (Alaska HIV testing data confirm that higher percentages of the state's population of Alaska Natives and African-Americans have been tested for HIV as compared to Whites.)

In 2002, individuals most often reported their reasons for testing as:

- it was required (18%);
- they wanted to find out (24%); or
- it was part of a routine exam (26%).

For females only, pregnancy was a commonly cited reason for testing, as well (28%).

Most frequently cited sites for testing were:

- private doctor or HMO (33%);
- hospital (27%); or
- clinic (28%).

Importance of knowing HIV status. In 2002, the BRFSS asked how important it was for people to know their HIV status by getting tested. Eighty-eight percent (88%) of Alaskans thought it was "very important." Females (91%), especially those aged 18-44, were more likely than males (85%) to think this. A higher proportion of Alaska Natives/American Indians (92%), Asians (96%), and Native Hawaiians/Pacific Islanders (98%) and those of Hispanic ethnicity (91%) believed it was "very important" than did Whites (87%) or Blacks (79%).

Knowledge about treatment for HIV. In 2002, 71% of Alaskans (83% of females and 77% of males) believed that a pregnant woman with HIV could get treatment to help reduce the chances that she would pass the virus on to her baby.

Also in 2002, 96% of Alaskans (96% of males and 97% of females) believed there were medical treatments available that were intended to help a person who was infected with HIV to live longer.

Talked with a professional about STDs and condom use. In 2002, 52% of Alaskans reported having talked with a health professional within the past 12 months about preventing sexually transmitted diseases through condom use (39% of males and 61% of females).

Risk Perception. The majority of Alaskans did not consider themselves at risk for HIV infection. Between 1995 and 2000, the percentage of Alaskans reporting no chance of getting infected with HIV was between 60% and 67%. In 2000, the percentage of Alaskans with a perception of no risk was 64% compared to the nationwide median of 68%.

In Alaska in 2000, a higher percentage of Blacks (74%) and Alaska Natives (66%) rated their risk of HIV as "none" compared to Whites (64%), and Hispanics (52%).

Comparing responses from Alaskan men to those from women shows that a higher percentage of women (68%) perceived themselves at no risk for HIV infection than did men (61%). Two percent (2%) of women assessed their risk as high, compared to 1% of men who perceived themselves to be at high risk.

Risk Behavior. The 2002 BRFSS included the following question about risk behaviors. "I'm going to read you a list. When I'm done, please tell me if any of the situations apply to you. You don't need to tell me which one.

- You have used intravenous drugs in the past year
- You have been treated for a sexually transmitted or venereal disease in the past year
- You have been given or received money or drugs in exchange for sex in the past year
- You had anal sex without a condom in the past year."

Consistent with low perception of risk (see above), 96% of Alaskans reported in 2002 that none of the list of the HIV-related risk behaviors applied to them. Only 5% said that any of the stated risk situations applied. A risk situation applied to slightly more males (5%) than females (4%). A higher percentage of 18 to 24 year olds (12%) and 25 to 34 year olds (6%) than older respondents (range 1% to 3%) reported that a risk situation applied to themselves. Report of risk behavior declined with education from 13% among persons with 8th grade education or less to 3% among college graduates, and was higher among never married persons (10%) and members of an unmarried couple (9%) than among married persons (3%).

Youth Risk Behavior Survey. The Youth Risk Behavior Survey (YRBS) is part of a national surveillance system implemented in 1988 by the Centers for Disease Control and Prevention (CDC) and is an important contribution to efforts to prevent infectious and chronic health conditions and injury. The YRBS is intended to monitor the prevalence of behaviors that influence adolescent health and also put youth at risk for the most significant health and social problems that can occur in adolescence and adulthood. Several categories included in the YRBS address sexual behaviors that can result in HIV infection as well as other STD. Data from the 2003 YRBS are being published as a separate document.

State of Alaska
Epidemiology



Bulletin

Recommendations
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