

*State of Alaska
Epidemiology*



Bulletin

**Recommendations
and
Reports**

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HIV Infection in Alaska Through 2005

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SUMMARY

Under Alaska Administrative Codes 7 AAC 27.005 and 7 AAC 27.007, medical providers are required to report *suspected and diagnosed* cases of HIV infection and AIDS, and laboratories are required to report evidence of infection with HIV to the Division of Public Health. Through December 31, 2005, 1,048 cumulative cases of HIV (with and without AIDS) were reported to the Alaska Division of Public Health, Section of Epidemiology.

Of the 1,048 cumulative reported HIV/AIDS cases:

- 846 (81%) were in males and 202 (19%) were in females. The number and proportion of HIV cases in males has always exceeded those in females. In recent years, the proportion of cases in males declined and the proportion of cases in females increased, due primarily to decreasing HIV incidence in males.
- 730 (70%) had AIDS and 318 (30%) had HIV without AIDS; 344 (33%) were known to have died of any cause. Beginning in 1996, the number of HIV-related deaths declined significantly in Alaska (from an average of 15 deaths per year from 1986-1995 to an average of 10 per year from 1996-2005) and the United States, due primarily to advances in medical care and treatment. The decline in HIV-related deaths, coupled with ongoing incidence of new infections, has resulted in a steady increase in the number of individuals living with HIV.
- 741 (71%) were first diagnosed in individuals aged 25-44 years at time of diagnosis. The five-year age group with the largest proportion of cases at time of diagnosis was 30-34 years (214 cases; 20% of total cases). Of cases first diagnosed from 2001-2005, 23 (12%) were aged 13-24 years at time of diagnosis.
- 501 (48%) reported male-to-male sexual contact as a single transmission category; 145 (14%) reported injection drug use (IDU) as a single transmission category; 70 (7%) reported both MSM and IDU as transmission categories; 155 (15%) reported heterosexual contact with a person at increased risk for HIV (e.g., a known HIV-positive, an IDU, or, for females, a bisexual male) as a single transmission category; and 1% each of cumulative cases had documented perinatal transmission (7 cases), transfusion or transplantation (13 cases), or receipt of blood products for hemophilia (10 cases) as a transmission category.
- 606 (58%) were White, 238 (23%) were Alaska Native/American Indian, 98 (9%) were Black, 73 (7%) were Hispanic, 20 (2%) were Asian/Pacific Islander, and 13 (1%) were of unknown race/ethnicity. Compared with their proportions in the state's population, Alaska Natives/American Indians, Blacks, and Hispanics were over-represented among HIV cases.
- 747 (71%) resided in urban areas—Municipality of Anchorage, Fairbanks/North Star Borough or City and Borough of Juneau (areas with 60% of the state's population in 2005) at the time of their first HIV diagnosis in Alaska.

From 2003-2005, partner services identified 37% of all cases of HIV newly diagnosed in Alaska. In partner services, public health personnel work with individuals diagnosed with HIV to identify their sexual and needle-sharing partners, and follow up to offer these partners HIV prevention counseling, HIV testing and, if HIV positive, assistance in accessing care.

From 2001-2005, 36% of individuals with Alaska residence at first HIV diagnosis developed AIDS within 12 months of their initial HIV diagnosis, likely indicating diagnosis late in the course of HIV disease. Late diagnosis limits an individual's potential benefit from medical care and additionally indicates a lengthy period during which an infected person may have unknowingly transmitted HIV to others.

In 2005, 47% of Alaskans reported ever having had an HIV test, aside from testing as part of donating blood.

More than 76% of women who delivered live infants in Alaska each year from 1999-2003 recalled their health care provider discussing HIV testing with them during prenatal care. Recollection of discussing HIV with a

health care provider has been highly correlated with receiving an HIV test during pregnancy. Antiretroviral therapy for HIV positive mothers has helped to greatly reduce perinatal infection rates nationwide. Certain other infectious conditions have been associated with increased risk of exposure to, transmission of, or acquisition of HIV infection.

- From 1996-2005, 8.3% of individuals reported with early syphilis in Alaska were ever reported with HIV infection.
- Fewer than 1% of individuals reported with either chlamydia or gonorrhea from 1996-2005 were ever reported with HIV infection.
- Of individuals reported with hepatitis C infection from 1996-2005, 1.6% were ever reported with HIV infection.

CONSIDERATIONS REGARDING DATA AND METHODS

The first case of AIDS was reported in Alaska in 1982, before HIV, the causative agent, was identified. A laboratory test for HIV antibody became commercially available in the United States in 1985 and AIDS became a condition specifically reportable to the Alaska Division of Public Health, Section of Epidemiology that year. In February 1999, HIV infection without AIDS was made a reportable condition in Alaska. Under Alaska Administrative Codes 7 AAC 27.005 and 7 AAC 27.007, medical providers are required to report suspected and diagnosed cases of HIV infection and AIDS, and laboratories are required to report evidence of infection with HIV to the Division of Public Health.

For surveillance purposes, each HIV or AIDS case is counted only once, rather than once when reported with HIV and again when reported with AIDS. Most of the data presented in this document represent all cases of HIV or AIDS ever reported in Alaska, regardless of the state of residence at first diagnosis. This approach has been selected because these data are more likely to represent individuals with HIV who potentially need prevention and care services than data on only those cases first diagnosed in individuals who were Alaska residents at that time. Only when a table or figure specifies that the data presented are specifically for “Alaska cases” do the cases represent individuals first diagnosed with HIV infection (with or without AIDS) while they were Alaska residents, regardless of where that diagnosis occurred.

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 time of infection. Similarly, clinical detection of AIDS-defining conditions (the AIDS diagnosis) occurs at different points in the disease continuum for different individuals. Date of first known AIDS diagnosis is used as a surrogate measure for AIDS onset. Unless otherwise noted, data are presented by year of first known HIV diagnosis (to provide a closer estimate of the time of HIV acquisition) rather than by the year they were first reported to the Alaska Division of Public Health.

After HIV reporting was introduced in February 1999, cases were reported in individuals who had been diagnosed with HIV many years earlier as well as in individuals who were more recently infected or recently diagnosed for the first time. Reports on HIV and AIDS cases diagnosed prior to 1999 were more likely than reports on more recently diagnosed cases to have some data elements incomplete. Since 1999, it has been possible to gather more complete data on some, but not all, of these earlier cases (some may have died, moved out of state, or have been otherwise lost to follow-up).

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 unrelated causes in Alaska or elsewhere. Multiple types of surveillance activities are necessary to provide a complete picture of HIV infection in Alaska. Reported disease data are considered to provide an indicator of the situation at any point in time, rather than a complete measure of disease incidence and

prevalence. These data are interpreted in the context of cumulative scientific knowledge about HIV/AIDS and, in conjunction with information about local conditions, guide public health interventions.

The following sections present available data in different ways to depict cumulative and current aspects of HIV infection in Alaska. Unless otherwise specified, “HIV” case data include cases with and without AIDS. 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%, although rounding of individual proportions to the nearest whole number may result in their totaling slightly more or less than 100%). When one proportion decreases, one or more of the other proportions 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 fluctuations over time may make proportions and rates relatively unstable. Case numbers presented in this document may differ from data presented in other Section of Epidemiology reports because HIV case data are updated on an ongoing basis as new case-related information becomes available.

AIDS AND HIV INCIDENCE RATES IN ALASKA AND THE UNITED STATES

Alaska AIDS and HIV case rates for the most recent five years, as well as the data used to calculate them, are presented below in Table 1. In Table 1 and Figure 1, Alaska HIV and AIDS cases are defined as those cases that were in Alaska residents at their first known date of HIV diagnosis, regardless of where the diagnosis was made. Case rates are expressed per 100,000 population. Because Alaska case numbers are small and may fluctuate from year to year, a five-year (2001-2005) mean annual rate is also presented to offer a more stable estimate of the incidence rate in Alaska.

The mean annual incidence rate for Alaska AIDS cases (those first diagnosed with AIDS while Alaska residents) from 2001-2005 was 1.9 cases per 100,000 population. In comparison, the estimated 2004 AIDS incidence rate in the 50 U.S. states and the District of Columbia was 14.1 AIDS cases per 100,000 population (most recent published CDC data in *HIV/AIDS Surveillance Report, 2004*, Vol. 16, Table 5a).

The mean annual Alaska HIV incidence rate (cases of HIV with and without AIDS that were Alaska residents at first HIV diagnosis) for the period from 2001-2005 was 5.1 cases per 100,000 population (Table 1). In comparison, the 2004 HIV/AIDS incidence rate for the 33 states, plus Guam and the Virgin Islands, with confidential HIV reporting since 2000 was 20.7 cases per 100,000 population (Figure 1; United States rates were calculated from CDC data published in the *HIV/AIDS Surveillance Report, 2004*, Vol. 16, Table 5b).

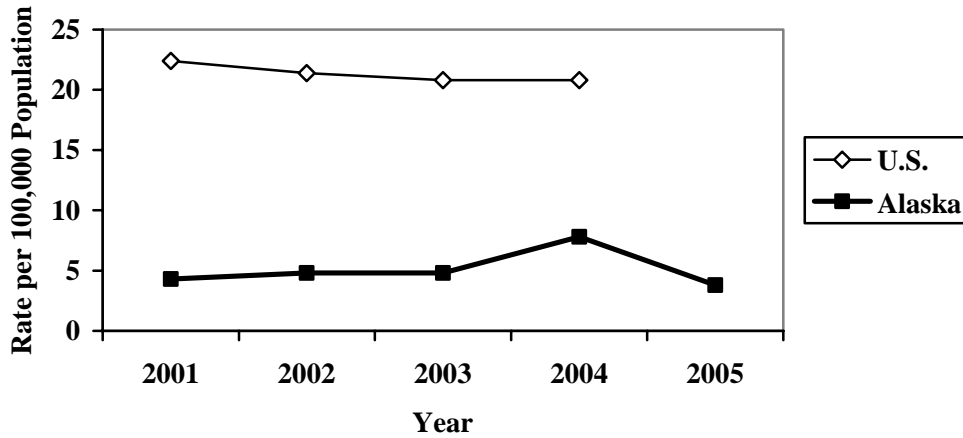
Table 1. AIDS and HIV Incidence—Alaska, 2001-2005

Year	Alaska* AIDS Cases (Number)	Alaska* AIDS Incidence Rate per 100,000 Population	Alaska* HIV Cases with & without AIDS (Number)	Alaska* HIV Cases with & without AIDS (Incidence Rate per 100,000 Population)	Alaska Population**
2001	12	1.9	27	4.3	632,249
2002	12	1.9	31	4.8	640,699
2003	14	2.2	31	4.8	648,510
2004	18	2.7	51	7.8	657,755
2005	4	0.6	25	3.8	663,661
Total	60	1.9	165	5.1	

*Alaska cases in Table 1 include only those with first HIV diagnosis occurring while an Alaska resident

**Population data are from the Alaska Department of Labor and Workforce Development, Alaska State Estimates

Figure 1. HIV Incidence (with and without AIDS)—Alaska* and U.S, 2001-2005



*Alaska cases in Figure 1 include only those with first HIV diagnosis occurring while an Alaska resident

CHARACTERISTICS OF HIV CASES REPORTED IN ALASKA

The following section presents data on all confirmed cases of HIV, with and without AIDS, ever reported in Alaska. These data reflect the most current information available at the time of publication and, as a result, may differ from data in prior Section of Epidemiology publications.

Through December 31, 2005, a cumulative total of 1,048 cases of HIV infection, with and without AIDS, were reported to the Alaska Division of Public Health (Table 2).

Table 2. HIV Cases Reported to the Division of Public Health—Alaska, 1982-2005 (N=1,048)

	Total HIV & AIDS Cases Reported In Alaska	HIV & AIDS Cases Not Known to Have Died	HIV & AIDS Cases Known to Have Died
HIV Cases with AIDS	730	411	319
HIV Cases without AIDS	318	293	25
Total HIV and AIDS Cases	1,048	704	344

Cumulative HIV cases and known deaths due to any cause are shown in Figure 2 and Table 3. In these two graphs/tables, a death is reflected in the year the case was first diagnosed (rather than the year in which the death occurred) to better reflect case mortality. These data illustrate the reduction in HIV mortality in recent years due primarily due to improved medical treatment, and also reflect earlier detection of HIV infection in some individuals.

Figure 2. HIV Cases and Known Deaths, by Year of First Known HIV Diagnosis—Alaska, 1982-2005 (N=1,048) (1 case with unknown date of diagnosis is not included below)

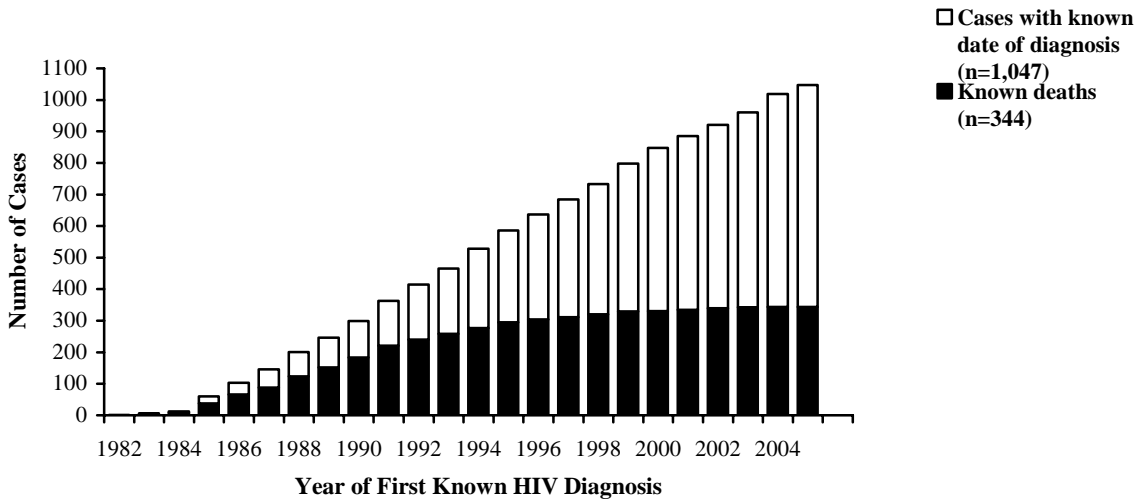


Table 3. HIV Cases and Known Deaths, by Year of First Known HIV Diagnosis—Alaska, 1982-2005 (N=1,048)

Year	Cases by Year of First Known HIV Diagnosis	Known Deaths Among Individuals Diagnosed with HIV in that Year
1982	1	1
1983	5	3
1984	6	4
1985	48	30
1986	43	28
1987	43	22
1988	55	36
1989	45	28
1990	53	31
1991	64	38
1992	52	19
1993	50	19
1994	63	18
1995	58	18
1996	51	9
1997	47	7
1998	49	9
1999	65	9
2000	50	2
2001	37	4
2002	36	5
2003	39	3
2004	59	1
2005	28	0
Unknown	1	0
Total	1,048	344

The number of individuals who are living with HIV in Alaska continues to grow, as new individuals become infected and previously infected individuals live longer. Along with this increase, needs for medical care, treatment, and supportive services will also grow. Additional data characterizing individuals living with HIV are presented later in this document.

Sex

Males. Of 1,048 cumulative HIV cases, 846 (81%) cases were in males. The average annual number of HIV cases newly diagnosed in males decreased in time periods after 1995 (Table 4).

Females. Of 1,048 cumulative HIV cases reported in Alaska through 2005, 202 (19%) cases were in females. The number and proportion of cases in females were lower than in males, consistent with national trends. The average annual number of HIV cases among females in Alaska increased from 1982 through 2000 (from an average of 1 case per year to an average of 14 cases per year), then decreased for the period from 2001-2005 (to an average of 11 cases per year). The proportion of total cases occurring in females increased steadily over time, from 8% to 27%. In recent periods, this proportionate increase was due primarily to a decline in the number and proportion of cases in males (Table 4).

Table 4. Average Number of HIV Cases Newly Diagnosed per Year, by Sex and Time Period—Alaska, 1982-2005 (N=1,048) (1 case with unknown year of diagnosis is not included in the table)

Time Period	Average Number of HIV Cases Newly Diagnosed Per Year				Average Total Number of HIV Cases per Year in Time Period, Males & Females**
	Males		Females		
	Average Number of Cases in Males per Year	Proportion of Cases in Males in Total HIV Cases During Time Period	Average Number of Cases in Females per Year	Proportion of Cases in Females in Total HIV Cases During Time Period	
1982-1985*	14	92%	1	8%	15
1986-1990	43	90%	5	10%	48
1991-1995	48	83%	10	17%	57
1996-2000	38	73%	14	27%	52
2001-2005	29	73%	11	27%	40

*First AIDS case diagnosed in Alaska in 1982

**Due to rounding, the sum of average numbers of cases for males and for females may not equal the average total number of cases in males and females (e.g., in 1991-1995, the average total number of cases per year is 57 rather than 48+10=58)

Although the average annual number of new cases from 2001-2005 was the lowest since 1982-1985, new infections continued to occur.

Age

Of the 1,048 cumulative reported HIV cases, 741 (71%) were first diagnosed in individuals 25 to 44 years of age. Unlike some other areas of the United States, relatively few HIV cases were reported among very young people in Alaska: 13 (1%) of 1,048 cases were aged 0-14, 23 (2%) were aged 15-19, and 111 (11%) were aged 20-24 years at time of first HIV diagnosis (Figure 3, Table 5). Characteristics of individuals diagnosed with HIV while adolescents/young adults 13-24 years of age are presented later in this document.

Figure 3. HIV Cases, by Age at First Known HIV Diagnosis—Alaska, 1982-2005 (N=1,048)
(1 case in a person whose age is unknown is not shown below)

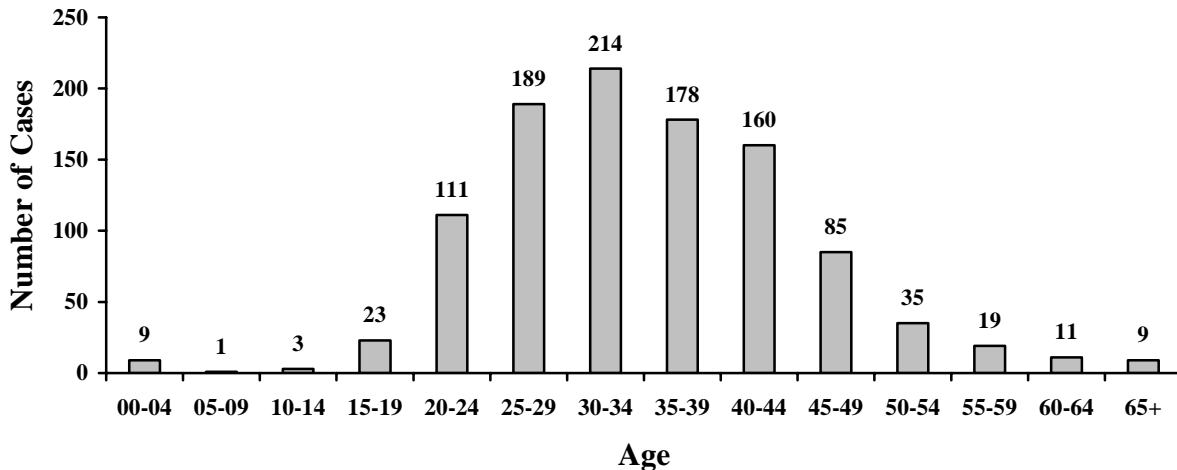


Table 5. HIV Cases, by Age and Sex at First Known HIV Diagnosis—Alaska, 1982-2005 (N=1,048)

Age Group	Males		Females		Total	
	Number	Column %	Number	Column %	Number	Column %
00-04	5	1%	4	2%	9	1%
05-09	1	<1%	0	0%	1	<1%
10-14	3	<1%	0	0%	3	<1%
15-19	12	1%	11	5%	23	2%
20-24	84	10%	27	13%	111	11%
25-29	150	18%	39	19%	189	18%
30-34	177	21%	37	18%	214	20%
35-39	151	18%	27	13%	178	17%
40-44	136	16%	24	12%	160	15%
45-49	67	8%	18	9%	85	8%
50-54	27	3%	8	4%	35	3%
55-59	16	2%	3	1%	19	2%
60-64	10	1%	1	<1%	11	1%
65+	6	1%	3	1%	9	1%
Unknown	1	<1%	0	0%	1	<1%
Total	846	100%	202	100%	1,048	100%

Of the 1,048 cumulative reported HIV cases, a higher proportion of cases in females (19%) than males (11%) occurred in individuals aged 15-24 years at the time of first HIV diagnosis. The proportion of cases aged 35-44 years at first HIV diagnosis was higher for cases in males (34%) than females (25%).

Transmission Category

In order to have consistent national data that are comparable across areas, HIV and AIDS cases are categorized according to specific national definitions in a hierarchy the CDC has established to identify the risk factor most likely to have been responsible for transmission. Individuals who have more than one reported risk factor are counted in only one exposure category (the category listed highest in the CDC hierarchy), except that men who report both sexual contact with other men and injection drug use make up a separate CDC transmission category. Several CDC transmission categories are defined in ways that may not be intuitively obvious from the titles:

Male-to-male sexual contact cases include men who report sexual contact with other men (i.e., homosexual contact) and men who report sexual contact with both men and women (i.e., bisexual contact).

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 *no risk reported or identified*.

No risk reported or identified cases are in individuals with no reported exposure to HIV through any of the routes listed in CDC's hierarchy of transmission categories. This case classification additionally includes:

- cases currently under investigation by the health department;
- cases with incomplete exposure history because the person died, declined to be interviewed, or was lost to follow up; and
- cases that were interviewed or for which other follow-up information was available and no mode of exposure was identified.

Newly reported cases of HIV infection are more likely to have incomplete information on transmission risk than cases reported earlier and for which risk information may have been obtained over time.

Figure 4. HIV Cases, by Transmission Category—Alaska, 1982-2005 (N=1,048)

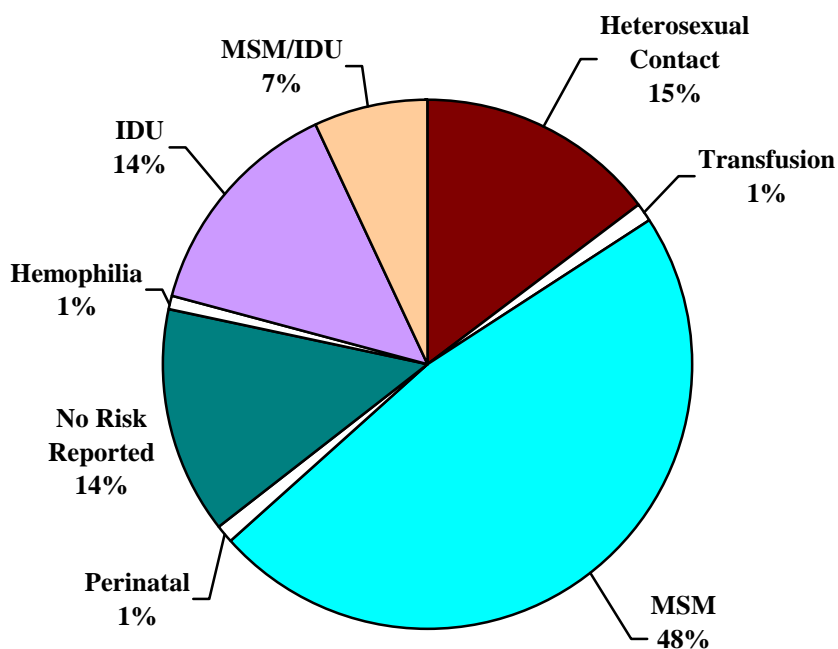


Table 6. HIV Cases, by Sex and Transmission Category—Alaska, 1982-2005 (N=1,048)

Transmission Category	Males		Females		Total	
	Number	Column %	Number	Column %	Number	Column %
Male-to-Male Sexual Contact (MSM)	501	59%	NA	NA	501	48%
Injection Drug Use (IDU)	100	12%	45	22%	145	14%
MSM and IDU	70	8%	NA	NA	70	7%
Heterosexual Contact to At-Risk Person	51	6%	104	51%	155	15%
Transfusion/Transplant	10	1%	3	1%	13	1%
Hemophilia	10	1%	0	0%	10	1%
Perinatal Transmission	3	<1%	4	2%	7	1%
No Risk Reported/Identified	101	12%	46	23%	147	14%
Total	846	100%	202	100%	1,048	100%

Male-to-male sexual contact (MSM) represented, by far, the largest single risk for infection both for the total population of individuals reported with HIV infection in Alaska (48% of all cumulative cases) and for the population of males only (in which MSM accounted for 59% of cases). Injection drug use (IDU) as a single transmission category accounted for 14% of cumulative cases (12% of cases in males and 22% of cases in females). Cases with both MSM and IDU risks accounted for an additional 7% of total cases and 8% of cases in males. 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 15% of total cumulative cases (6% of cases in males and 51% of cases in females). The proportions of total cumulative cases related to perinatal transmission, transfusion or transplantation, or receipt of blood products for hemophilia remained low at 1%, each (Figure 4 and Table 6).

Of the 1,048 cumulative HIV cases, 147 (14% of all cases; 12% of males and 23% of females) were classified as having no transmission risk reported or identified (this category is defined more fully at the beginning of this section). This proportion, while significant, is considerably lower than that for all of the 42 U.S. areas with confidential name-based HIV infection reporting (28% of all adult/adolescent cases; 24% of males and 36% of females) as cited in CDC's 2004 *HIV/AIDS Surveillance Report*. Some of the cases reported in Alaska with no risk identified, particularly those reported more recently, will be reclassified to other transmission categories over time as additional case-related information becomes available.

Race/Ethnicity

HIV affected people in all racial and ethnic groups in Alaska through 2005. Although individuals are not at risk of HIV infection due to their race/ethnicity, it can be an indicator of economic and 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, misidentification 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 at that time. 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 in the 2002 study. 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 in the Alaska data (and these changes are reflected throughout this report). 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 5, and by race/ethnicity and sex in Table 7, below. Please note that the HIV *case* data classify individuals of Hispanic ethnicity as a separate race/ethnicity category while the Alaska *population* data (Figure 6, Tables 8-10) include individuals of Hispanic ethnicity within the four race categories. Population data for individuals of Hispanic ethnicity are also shown separately [in brackets] in Tables 8-10.

Figure 5. HIV Cases, by Race/Ethnicity—Alaska, 1982-2005 (N=1,048)

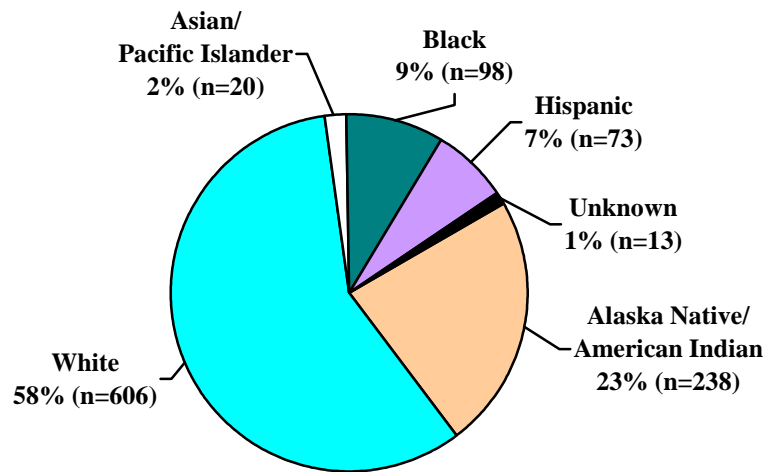


Figure 6. Alaska Population by Race, July 1, 2005

(Department of Labor and Workforce Development’s Alaska State Race Bridged Smooth Series; individuals of Hispanic ethnicity constitute 4% of population and are included within the four race categories)

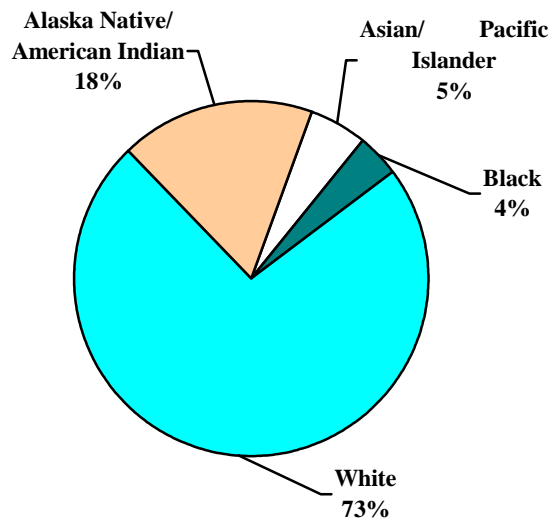


Table 7. HIV Cases, by Sex and Race/Ethnicity—Alaska, 1982-2005 (N=1,048)

Race/Ethnicity	Males		Females		Total	
	Number	Column %	Number	Column %	Number	Column %
White	518	61%	88	44%	606	58%
Alaska Native/ American Indian	170	20%	68	34%	238	23%
Black	71	8%	27	13%	98	9%
Asian/Pacific Islander	15	2%	5	2%	20	2%
Hispanic Ethnicity	62	7%	11	5%	73	7%
Unknown Race/Ethnicity	10	1%	3	1%	13	1%
Total	846	100%	202	100%	1,048	100%

For adult/adolescent males and females, HIV infection affected Whites and Asian/Pacific Islanders in proportions lower than their representation in the Alaska population, while HIV affected Alaska Native/American Indians, Blacks, and Hispanics in proportions higher than their representation in the overall Alaska population. A disproportionate representation of Blacks and Hispanics in individuals with HIV is also seen in the United States as a whole.

Tables 8-10 show estimates of the 2005 Alaska population reapportioned into single race categories as developed by the Alaska Department of Labor and Workforce Development. Individuals of Hispanic ethnicity are included within each of the four race categories in these population estimates. The 2005 Alaska Hispanic population is also estimated separately.

Table 8. HIV Cases 1982-2005 and 2005 Population, by Race/Ethnicity—Alaska

Race/Ethnicity	HIV/AIDS Cases		Alaska 2005 Population Data Reapportioned into Four Races*	
	Number	% Total	Number	% Total
White	606	58%	484,673	73%
Alaska Native/American Indian	238	23%	117,743	18%
Black	98	9%	25,970	4%
Asian/Pacific Islander	20	2%	35,275	5%
Hispanic Ethnicity	73	7%	[26,413]**	[4%]**
Unknown Race/Ethnicity	13	1%	---	---
Total	1,048	100%	663,661	100%

*Population data are from the Alaska Department of Labor and Workforce Development's Alaska State Race Bridged Smooth Series estimates for July 1, 2005 as revised 11/20/06

**Individuals of Hispanic/Latino ethnicity are included within the race categories in the population data (White, Alaska Native/American Indian, Black, Asian/Pacific Islander), as well as shown as a separate group

Data on HIV/AIDS by race and ethnicity, as well as Alaska population estimates by race and ethnicity, are also presented below for individuals aged 15 years or older to better characterize case distribution. Very few HIV cases occur in individuals younger than 15 years, and the population in the younger age groups is large and unevenly distributed across the different racial/ethnic populations. Additionally, the proportions of females and males differ across these populations.

Table 9. HIV Cases in Males Aged 15 Years and Older at First HIV Diagnosis 1982-2005 and 2005 Male Population Aged 15 Years and Older, by Race/Ethnicity—Alaska

Race/Ethnicity	HIV Cases First Diagnosed in Males \geq 15 Years of Age		Males \geq 15 Years of Age, Alaska Population*	
	Number	% Total	Number	% Total
White	511	61%	195,927	76%
Alaska Native/American Indian	168	20%	40,709	16%
Black	70	8%	9,772	4%
Asian/Pacific Islander	15	2%	11,890	5%
Hispanic Ethnicity	62	7%	[8,817]**	[3%]**
Unknown Race	10	1%	---	---
Total	836	100%	258,298	100%

*Population data are from the Alaska Department of Labor and Workforce Development's Alaska State Race Bridged Smooth Series estimates for July 1, 2005 as revised 11/20/06

**Males \geq 15 years of Hispanic/Latino ethnicity are included within the four race categories in the Alaska population data, as well as shown as a separate group

Compared with their distributions in the overall Alaska population, Alaska Native/American Indian, Black, and Hispanic males were over-represented, and White and Asian/Pacific Islander males were under-represented, among cumulative cases of HIV infection in adult/adolescent males through December 31, 2005.

Table 10. HIV Cases in Females Aged 15 Years and Older at First HIV Diagnosis 1982-2005 and 2005 Alaska Female Population Aged 15 Years and Older, by Race/Ethnicity—Alaska

Race/Ethnicity	HIV Cases first Diagnosed in Females \geq 15 Years of Age		Females \geq 15 Years of Age, Alaska Population*	
	Number	% Total	Number	% Total
White	87	44%	181,505	74%
Alaska Native/American Indian	67	34%	40,826	17%
Black	26	13%	8,728	4%
Asian/Pacific Islander	5	3%	14,056	6%
Hispanic Ethnicity	10	5%	[8,662]**	[4%]**
Unknown Race	3	2%	---	---
Total	198	100%	245,114	100%

*Population data are from the Alaska Department of Labor and Workforce Development's Alaska State Race Bridged Smooth Series estimates for July 1, 2005 as revised 11/20/06

**Females \geq 15 years of Hispanic/Latino ethnicity are included within the four race categories in the Alaska population data, as well as shown as a separate group

Compared with their distributions in the overall Alaska population, Alaska Native/American Indian, Black, Asian/Pacific Islander, and Hispanic females were over-represented, and White females were under-represented, among cumulative cases of HIV infection in adult/adolescent females through December 31, 2005.

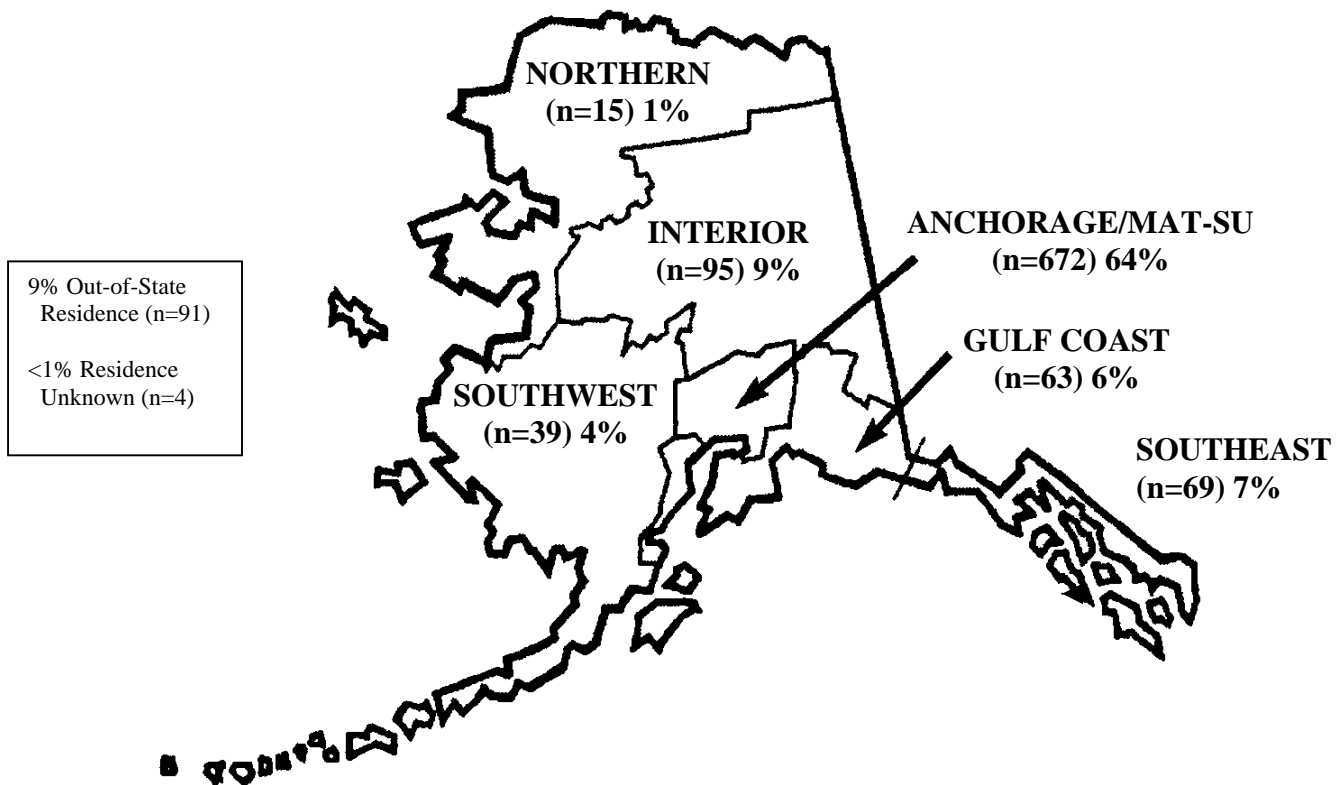
Geographic Region of Residence at First HIV Diagnosis in Alaska

HIV cases were reported in people from all regions of the state. At the time of their first HIV diagnosis in Alaska, 672 cases (64%) were in people with a reported residence of Anchorage/Mat Su, the most populous region of the state (53% of the state's population resided in the Anchorage/Mat Su region in 2005). A total of 747 cases (71%) were in people who resided in the urban areas of the Municipality of Anchorage, Fairbanks/North Star Borough or City and Borough of Juneau (where 60% of the state's 2005 population lived) at the time of their first HIV/AIDS diagnosis in Alaska.

Geographic region of residence at the time of first HIV/AIDS diagnosis in Alaska is shown in Figure 7 and Table 11 for cumulative cases of HIV/AIDS reported through December 31, 2005. The region of residence is defined as the region where the person 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.

HIV infection is generally asymptomatic for a long period after initial infection, and the population is highly mobile. These data must therefore be interpreted with caution. Residence at first known HIV diagnosis does not necessarily reflect the area where infection occurred or the area where the infected individual currently resides or seeks care, if still living.

Figure 7. Reported HIV Cases, by Region of Residence* at Time of First HIV Diagnosis in Alaska, 1982-2005 (N=1,048)



*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 11. Reported HIV Cases by Region of Residence at Time of First HIV Diagnosis in Alaska, 1982-2005 and Estimated 2005 Alaska Population by Geographic Region* (N=1,048)

Region	HIV Cases		Alaska Population	
	Number	(% Total)	Number	(% Total)
Southwest	39	4%	39,979	6%
Northern	15	1%	23,669	4%
Interior	95	9%	102,005	15%
Anchorage/Mat-Su	672	64%	352,282	53%
Gulf Coast	63	6%	74,904	11%
Southeast	69	7%	70,822	11%
Out of State	91	8%	---	---
Unknown	4	<1%	---	---
Total	1,048	100%	663,661	100%

*Population estimates by the Alaska Department of Labor and Workforce Development as of June 30, 2005

Deaths Among Individuals with HIV/AIDS

Data on deaths in Alaska with HIV infection as the underlying cause are shown below (Table 12). 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 12. Resident Deaths with HIV Infection as the Underlying Cause, by Year of Death—Alaska, 1982-2005, (N=254)

Year	Deaths in that Year with Underlying Cause* of HIV Infection
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	8
2002	16
2003	6
2004	8
2005**	7**
Total	254

*Since 1987, based on ICD-9 codes 042-044; data provided by the Alaska Section of Vital Statistics

**Preliminary Data

The vital statistics data in Table 12, above, differ from those on deaths among HIV/AIDS cases shown earlier in this document (Figure 2 and Table 3), as the data presented previously include information on deaths due to any cause (not just HIV-related deaths). This type of 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 individuals who were no longer Alaska residents is likely to be incomplete.) Figure 2 and Table 3 also differ from Table 13 in that deaths in Figure 2 and Table 3 are presented in the year the case was first diagnosed in order to reflect case mortality, while the data in Table 13 show each HIV-related death in the year it occurred.

HIV/AIDS has not ranked within the top 15 overall causes of death in Alaska since 1995, although it ranked among the top 10 causes of death in 1996 for Alaskans aged 25-44 years. The number of HIV-related deaths in Alaska (an average of 15 deaths per year from 1986-1995 and an average of 10 per year from 1996-2005) and in

the United States declined after 1995, due primarily to the availability new antiretroviral medications, advances in medical care, and development of programs to improve access to treatment and care.

To help place HIV-related deaths in context, the top five causes of death and number of deaths for Alaskans in 2003 included malignant neoplasm (cancer) (731 deaths), diseases of the heart (675), unintentional injuries (319), cerebrovascular diseases (183), and chronic lower respiratory diseases (148), compared with 6 HIV-related deaths.

RECENTLY INFECTED HIV CASES COMPARED WITH EARLIER CASES

Characteristics of cases infected with HIV more recently may differ from those infected in years past, potentially indicating changes in populations at risk. In order to allow for comparison, given the small case numbers in Alaska, data on HIV infections that were first diagnosed within the past 5 years (2001-2005) and that had not progressed to AIDS were selected as indicators of recent infections. In the following tables and graphs, data on “recent” cases of HIV infection are compared with data on all cases of HIV without AIDS diagnosed prior to 2001 and all cases with AIDS regardless of diagnosis date (“earlier” cases).

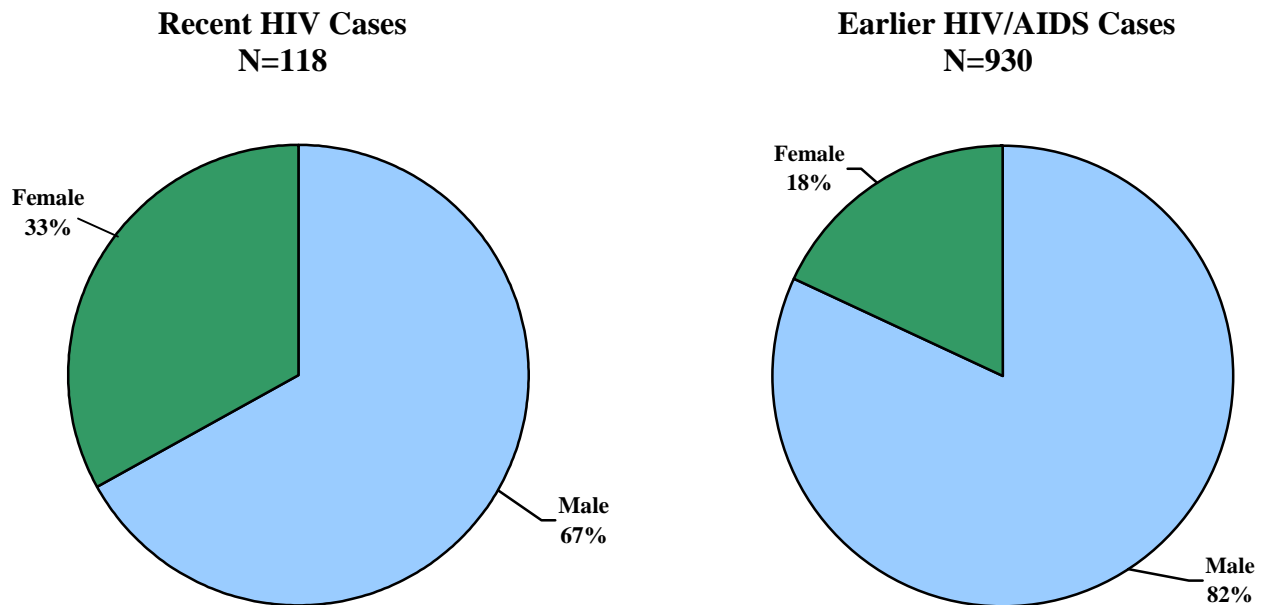
Sex

Male. Of the 118 recent cases, 79 (67%) were in males. Of 930 earlier cases, 767 (82%) were in males.

Female. Of the 118 recent cases, 39 (33%) were in females. Of 930 earlier cases, 163 (18%) were in females.

Females made up a larger proportion of recent (33%) than earlier cases (18%) in Alaska (Figure 8).

Figure 8. Recent HIV and Earlier HIV/AIDS Cases, by Sex—Alaska, 1982-2005 (N=1,048)



The proportion of recent HIV cases in males in Alaska (67%) was slightly lower than the proportion of cases of HIV without AIDS reported in 2004 in the 42 areas in the United States with confidential name-based HIV reporting (70%). The proportion of recent HIV cases in females in Alaska (33%) was slightly higher than the proportion of cases of HIV without AIDS reported in females in 2004 in the 42 areas in the United States with confidential name-based HIV reporting (30%). (CDC 2004 HIV/AIDS Surveillance Report, p.9)

Age

Males with recent cases were slightly older than males with earlier cases. In females, the age distribution of recent cases was similar to that of earlier cases (Tables 13 and 14, Figures 9 and 10).

Table 13. Recent HIV and Earlier HIV/AIDS Cases in Males, by Age Group—Alaska, 1982-2005 (N=846)

Age Group	Recent HIV Cases in Males		Earlier HIV/AIDS Cases in Males		Total Cases in Males	
	Number	Column %	Number	Column %	Number	Column %
00-04	0	0%	5	1%	5	1%
05-09	0	0%	1	<1%	1	<1%
10-14	1	1%	2	<1%	3	<1%
15-19	1	1%	11	1%	12	1%
20-24	7	9%	77	10%	84	10%
25-29	8	10%	142	19%	150	18%
30-34	13	16%	164	21%	177	21%
35-39	10	13%	141	18%	151	18%
40-44	20	25%	116	15%	136	16%
45-49	11	14%	56	7%	67	8%
50-54	3	4%	24	3%	27	3%
55-59	4	5%	12	2%	16	2%
60-64	1	1%	9	1%	10	1%
65+	0	0%	6	1%	6	1%
Unknown	0	0%	2	<1%	1	<1%
Total	79	100%	767	100%	846	100%

Figure 9. Recent HIV and Earlier HIV/AIDS Cases in Males, by Age Group—Alaska, 1982-2005 (N=846) (1 case in a person whose age is unknown at diagnosis is not included in graph)

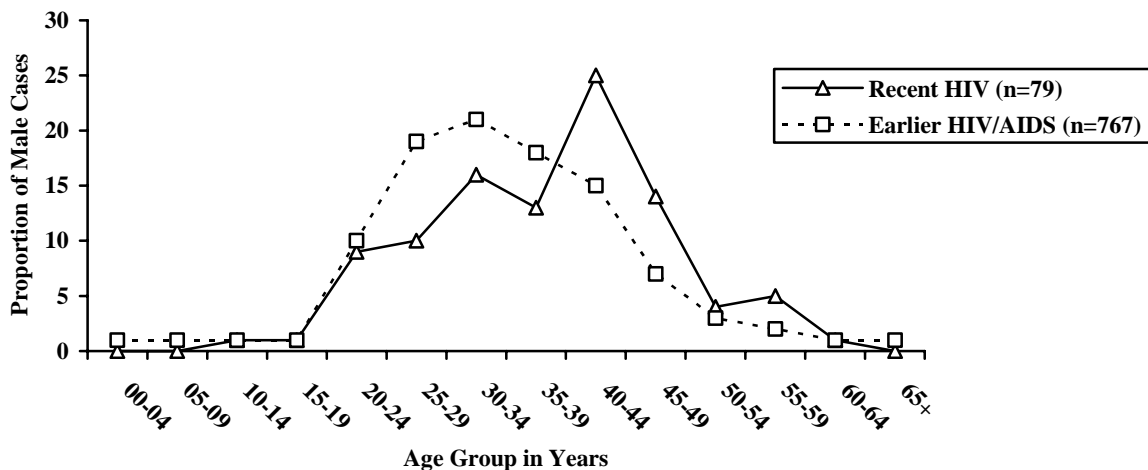
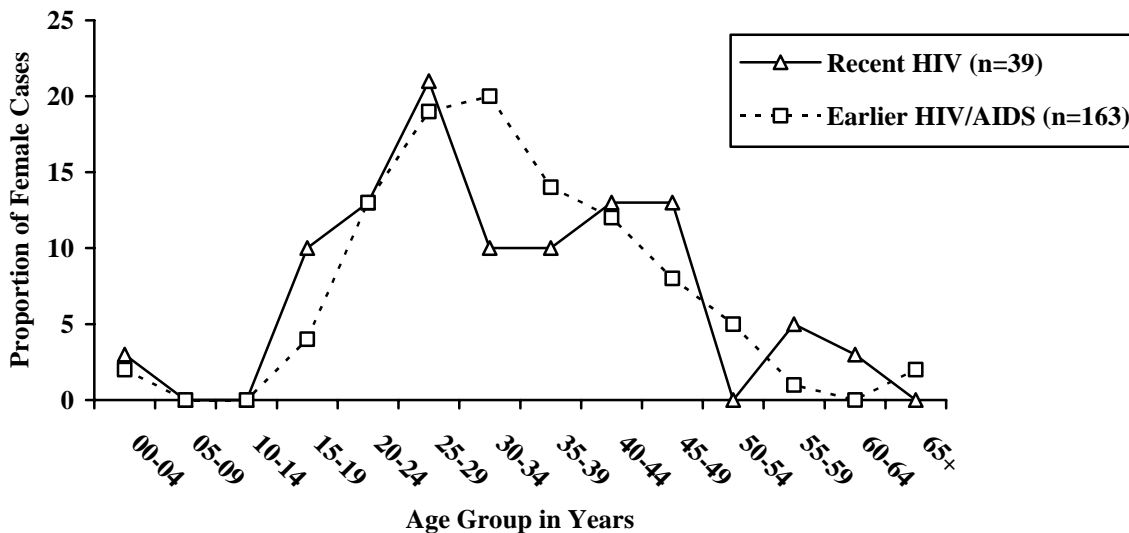


Table 14. Recent HIV and Earlier HIV/AIDS Cases in Females, by Age Group—Alaska, 1982-2005 (N=202)

Age Group	Recent HIV Cases in Females		Earlier HIV/AIDS Cases in Females		Total Cases in Females	
	Number	Column %	Number	Column %	Number	Column %
00-04	1	3%	3	2%	4	2%
05-09	0	0%	0	0%	0	0%
10-14	0	0%	0	0%	0	0%
15-19	4	10%	7	4%	11	5%
20-24	5	13%	22	13%	27	13%
25-29	8	21%	31	19%	39	19%
30-34	4	10%	33	20%	37	18%
35-39	4	10%	23	14%	27	13%
40-44	5	13%	19	12%	24	12%
45-49	5	13%	13	8%	18	9%
50-54	0	0%	8	5%	8	4%
55-59	2	5%	1	1%	3	1%
60-64	1	3%	0	0%	1	<1%
65+	0	0%	3	2%	3	1%
Unknown	0	0%	0	0%	0	0%
Total	39	100%	163	100%	202	100%

Figure 10. Recent HIV and Earlier HIV/AIDS Cases in Females, by Age Group—Alaska, 1982-2005 (N=202)



Transmission Category

Males. Transmission risk for the greatest proportions of recent and earlier cases in males was male-to-male sexual contact, but the proportion was less for recent (53%) than earlier (60%) cases. The proportion of cases with injection drug use as the transmission risk was greater for recent (16%) than for earlier (11%) male cases. The proportion of cases with combined MSM and IDU transmission risk was lower for recent (3%) than earlier (9%) male cases. The proportion of cases with heterosexual transmission risk was higher for recent (15%) than earlier (5%) male cases. No recent male cases were reported with risks related to transfusion/transplant, hemophilia, or perinatal transmission (Table 15).

Table 15. Recent HIV and Earlier HIV/AIDS Cases in Males, by Transmission Category—Alaska, 1982-2005 (N=846)

Transmission Category	Recent HIV Cases in Males		Earlier HIV/AIDS Cases in Males		Total Cases in Males	
	Number	Column %	Number	Column %	Number	Column %
Male-to-Male Sexual Contact (MSM)	42	53%	459	60%	501	59%
Injection Drug Use (IDU)	13	16%	87	11%	100	12%
MSM and IDU	2	3%	68	9%	70	8%
Heterosexual Contact to At-Risk Person	12	15%	39	5%	51	6%
Transfusion/Transplant	0	0%	10	1%	10	1%
Hemophilia	0	0%	10	1%	10	1%
Perinatal Transmission	0	0%	3	<1%	3	<1%
No Risk Reported/Identified	10	13%	91	12%	101	12%
Total	79	100%	767	100%	846	100%

Females. Transmission risk for the greatest proportions of recent and earlier cases in females was heterosexual contact to a person with or at increased risk for HIV, and the proportion was higher for recent (54%) than for earlier (51%) cases. The proportion of cases with injection drug use as the transmission risk was lower for recent (21%) than earlier (23%) female cases. One recent female case was reported with perinatal transmission and none with risks related to transfusion/transplant or hemophilia (Table 16).

Table 16. Recent HIV and Earlier HIV/AIDS Cases in Females, by Transmission Category—Alaska, 1982-2005 (N=202)

Transmission Category	Recent HIV Cases in Females		Earlier HIV/AIDS Cases in Females		Total Cases in Females	
	Number	Column %	Number	Column %	Number	Column %
Male-to-Male Sexual Contact (MSM)	N/A	N/A	N/A	N/A	NA	NA
Injection Drug Use (IDU)	8	21%	37	23%	45	22%
MSM and IDU	N/A	N/A	N/A	N/A	NA	NA
Heterosexual Contact to At-Risk Person	21	54%	83	51%	104	51%
Transfusion/Transplant	0	0%	3	2%	3	1%
Hemophilia	0	0%	0	0%	0	0%
Perinatal Transmission	1	3%	3	2%	4	2%
No Risk Reported/Identified	9	23%	37	23%	46	23%
Total	39	100%	163	100%	202	100%

Race/Ethnicity

Males. Whites constituted the greatest proportion of recent and earlier cases in males, but the proportion was lower for recent (51%) than earlier (62%) cases. For males of all other races and Hispanic ethnicity, the proportion of cases was higher for recent than earlier cases: Alaska Native/American Indian males constituted 25% of recent and 20% of earlier cases; Black males constituted 10% of recent and 8% of earlier cases; Asian/Pacific Islander males constituted 6% of recent and 1% of earlier cases; and Hispanic males constituted 8% of recent and 7% of earlier cases (Table 17).

Table 17. Recent HIV and Earlier HIV/AIDS Cases in Males, by Race/Ethnicity—Alaska, 1982-2005 (N=846)

Race/Ethnicity	Recent HIV Cases in Males		Earlier HIV/AIDS Cases in Males		Total Cases in Males	
	Number	Column %	Number	Column %	Number	Column %
White	40	51%	478	62%	518	61%
Alaska Native/ American Indian	20	25%	150	20%	170	20%
Black	8	10%	63	8%	71	8%
Asian/Pacific Islander	5	6%	10	1%	15	2%
Hispanic Ethnicity	6	8%	56	7%	62	7%
Unknown Race/Ethnicity	0	0%	10	1%	10	1%
Total	79	100%	767	100%	846	100%

Females. Whites constituted the greatest proportion of recent and earlier cases in females, and the proportion was higher in recent (56%) than earlier (40%) cases. The proportion of cases in Alaska Natives/American Indians was lower in recent (28%) than earlier (35%) female cases. The proportion of cases in Blacks was the same in recent (13%) and earlier female cases. The proportion of cases in Hispanics was lower in recent (3%) than earlier (6%) female cases. No recent cases were reported in Asian/Pacific Islander females (Table 18).

Table 18. Recent HIV and Earlier HIV/AIDS Cases in Females, by Race/Ethnicity—Alaska, 1982-2005 (N=202)

Race/Ethnicity	Recent HIV Cases in Females		Earlier HIV/AIDS Cases in Females		Total Cases in Females	
	Number	Column %	Number	Column %	Number	Column %
White	22	56%	66	40%	88	44%
Alaska Native/ American Indian	11	28%	57	35%	68	34%
Black	5	13%	22	13%	27	13%
Asian/Pacific Islander	0	0%	5	3%	5	2%
Hispanic Ethnicity	1	3%	10	6%	11	5%
Unknown Race/Ethnicity	0	0%	3	2%	3	1%
Total	39	100%	163	100%	202	100%

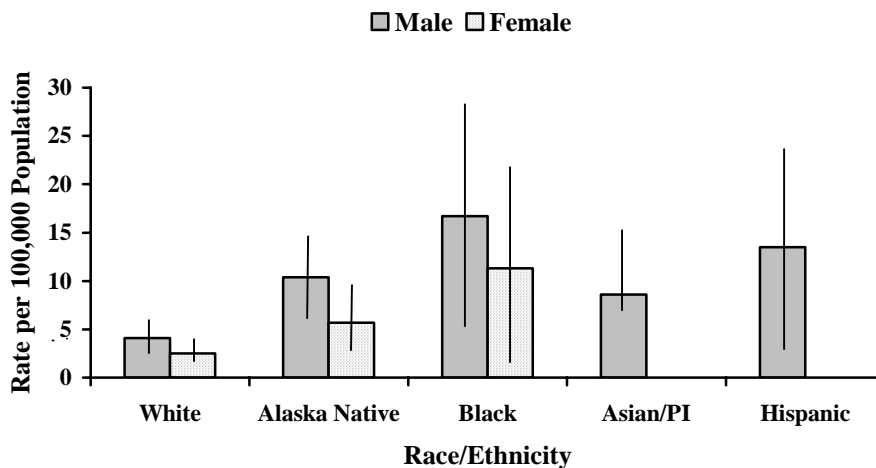
Race is one of the few characteristics where estimates of the various populations' sizes are available (in contrast to populations of MSM, injectors, etc.) and allow calculation of rates to help compare disease occurrence across populations of different sizes. In Table 19 and Figure 11, below, rates by sex for each race (including individuals of Hispanic ethnicity), and separately for individuals of Hispanic ethnicity, are provided for recent HIV cases aged 15 years and older. Since not every case of HIV infection is likely to have been diagnosed, the rates calculated can be considered estimates of the true rates. The probability that the true incidence rate falls within the confidence intervals shown is 95%.

Table 19. HIV Incidence Rates for Recent HIV Infections in Adolescents/Adults ≥ 15 Years of Age, by Sex and Race/Ethnicity*—Alaska, 2001-2005 (N=117)

Race/Ethnicity Category, Cases \geq with Age > 15 Years	Rate per 100,000 Population*	95% Confidence Limits for Rates
White Male	4.2	2.9-5.5
White Female	2.5	1.5-3.5
Alaska Native/ American Indian Male	10.4	5.8-14.9
Alaska Native/ American Indian Female	5.7	2.3-9.0
Black Male	16.7	5.1-28.3
Black Female	11.8	1.5-22.2
Asian/Pacific Islander Male	8.6	7.5-16.2
Asian/Pacific Islander Female	N/A	N/A
Hispanic Male	13.5	2.7-24.3
Hispanic Female	N/A	N/A

*Population data are from the Alaska Department of Labor and Workforce Development's Alaska State Race Bridged Smooth Series estimates for July 1, 2005 as revised 11/20/06. The figures for each race include individuals of Hispanic ethnicity within the population for each race; Hispanic population estimates are used separately in calculating rates for Hispanic males and females.

Figure 11. HIV Incidence Rates for Recent HIV Infections in Adolescents/Adults ≥ 15 Years of Age, by Sex and Race/Ethnicity*—Alaska, 2001-2005 (N=117)
(Vertical lines in bars show 95% confidence intervals for rates)



*Population data are from the Alaska Department of Labor and Workforce Development's Alaska State Race Bridged Smooth Series estimates for July 1, 2005 as revised 11/20/06. The figures for each race include individuals of Hispanic ethnicity within the population for each race; Hispanic population estimates are used separately in calculating rates for Hispanic males and females.

Residence at First HIV Diagnosis in Alaska

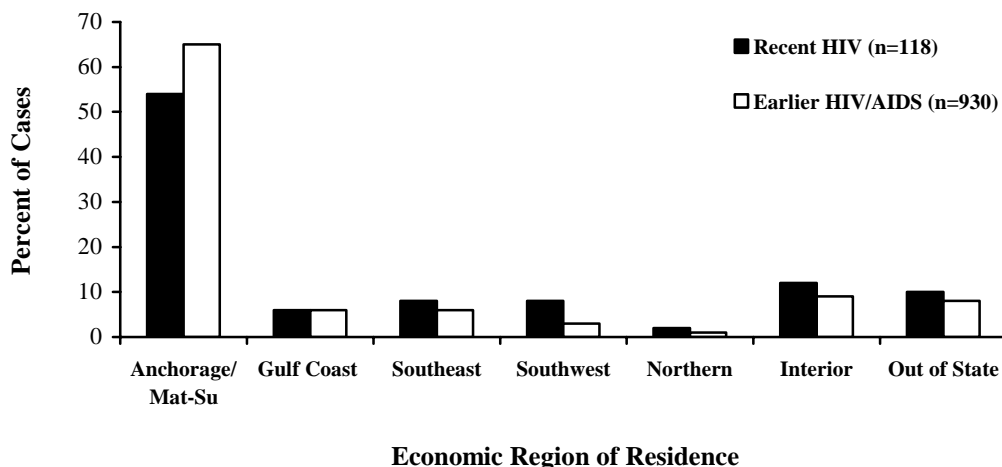
The data that follow characterize the distribution across economic regions and rural/urban areas at the time of first HIV diagnosis in Alaska of recent HIV and earlier HIV/AIDS cases.

Economic Regions. The largest proportion of all recent HIV (54%) and earlier HIV/AIDS (65%) cases were in individuals who resided in the Anchorage/Mat-Su region at the time of first HIV diagnosis in Alaska, although the proportion of recent cases with this residence was lower than that of earlier cases. The proportion of recent cases residing in all other regions at first Alaska diagnosis was higher than that of earlier cases, except for the Gulf Coast region, in which the proportions of recent and earlier cases were same. The proportion of recent cases with out-of-state residence was higher in recent than earlier cases (Table 20, Figure 12).

Table 20. Recent HIV and Earlier HIV/AIDS Cases, by Economic Region of Residence at First HIV Diagnosis in Alaska, 1982-2005 (N=1,048)

Economic Region	Recent HIV Cases		Earlier HIV/AIDS Cases		Total	
	Number	Column %	Number	Column %	Number	Column %
Anchorage/Mat-Su	64	54%	608	65%	672	64%
Gulf Coast	7	6%	56	6%	63	6%
Southeast	9	8%	60	6%	69	7%
Southwest	10	8%	29	3%	39	4%
Northern	2	2%	13	1%	15	1%
Interior	14	12%	81	9%	95	9%
Out of State	12	10%	79	8%	91	8%
Unknown	0	0%	4	<1%	4	<1%
Total	118	100%	930	100%	1,048	100%

Figure 12. Recent HIV and Earlier HIV/AIDS Cases, by Economic Region of Residence at First HIV Diagnosis in Alaska, 1982-2005 (N=1,048)
(4 [$<1\%$] earlier cases in a person whose age is unknown with unknown residence are not included)

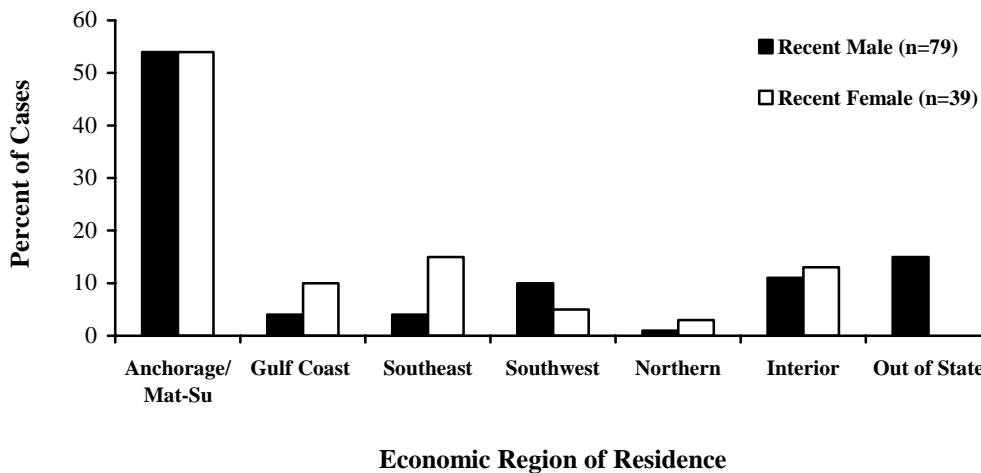


Economic Region by Sex. The largest proportion of all recent HIV cases in males and females (54%) resided in Anchorage/Mat-Su at the time of first HIV diagnosis in Alaska, and was the same for both sexes. A higher proportion of recent male cases than recent female cases resided in Southwest Alaska or Out of State at the time of first diagnosis in Alaska. In all other regions, the proportion of female cases that resided there at time of first diagnosis in Alaska was higher than the proportion of male cases (Table 21, Figure 13).

Table 21. Recent HIV Cases, by Sex and Economic Region of Residence at First HIV Diagnosis in Alaska, 2001-2005 (N=118)

Economic Region	Male		Female		Total	
	Number	Column %	Number	Column %	Number	Column %
Anchorage/Mat-Su	43	54%	21	54%	64	54%
Gulf Coast	3	4%	4	10%	7	6%
Southeast	3	4%	6	15%	9	8%
Southwest	8	10%	2	5%	10	8%
Northern	1	1%	1	3%	2	2%
Interior	9	11%	5	13%	14	12%
Out of State	12	15%	0	0%	12	10%
Unknown	0	0%	0	0%	0	0%
Total	79	100%	39	100%	118	100%

Figure 13. Recent HIV Cases, by Sex and Economic Region of Residence at First HIV Diagnosis in Alaska, 2001-2005 (N=118)



Males. The largest proportion of males with HIV resided in Anchorage/Mat-Su at the time of first HIV diagnosis in Alaska. The proportion of such cases was lower for recent (54%) than earlier (67%) cases, as was the proportion of males with first diagnosis in the Gulf Coast (4% of recent and 6% of earlier cases), and Southeast regions (4% of recent and 7% of earlier cases). The proportion of persons residing in the Northern region (3%) at time of first diagnosis in Alaska was the same in recent and earlier male cases. Higher proportions of recent than earlier male cases resided in Southwest (10% of recent and 3% of earlier cases) and Interior regions (11% of recent and 8% of earlier cases), and Out of State (15% of recent and 6% of earlier cases) at the time of first HIV diagnosis in Alaska (Table 22).

Table 22. Recent HIV and Earlier HIV/AIDS Cases in Males, by Economic Region of Residence at First HIV Diagnosis in Alaska, 1982-2005 (N=846)

Economic Region	Recent HIV Cases in Males		Earlier HIV/AIDS Cases in Males		Total Cases in Males	
	Number	Column %	Number	Column %	Number	Column %
Anchorage/Mat-Su	43	54%	512	67%	555	66%
Gulf Coast	3	4%	43	6%	46	5%
Southeast	3	4%	51	7%	54	6%
Southwest	8	10%	21	3%	29	3%
Northern	1	1%	8	1%	9	1%
Interior	9	11%	67	9%	71	8%
Out of State	12	15%	67	9%	79	9%
Unknown	0	0%	3	<1%	3	<1%
Total	79	100%	767	100%	846	100%

Females. The largest proportion of females with HIV resided in Anchorage/Mat-Su at the time of first HIV diagnosis in Alaska. The proportion of such cases was higher for earlier HIV/AIDS (59%) than recent HIV (54%) cases, as was the proportion of cases residing Out of State (7% of earlier female cases and 0% of recent cases). The proportions of persons residing in Southwest (5%) and Northern (3%) regions at time of first diagnosis in Alaska were the same in recent and earlier female cases. Higher proportions of recent than earlier female cases resided in the Gulf Coast (10% of recent and 8% of earlier cases), Southeast (15% of recent and 6% of earlier cases), and Interior regions (13% of recent and 12% of earlier cases) at time of first diagnosis in Alaska (Table 23).

Table 23. Recent HIV and Earlier HIV/AIDS Cases in Females, by Economic Region of Residence at First HIV Diagnosis in Alaska, 1982-2005 (N=202)

Economic Region	Recent HIV Cases in Females		Earlier HIV/AIDS Cases in Females		Total Cases in Females	
	Number	Column %	Number	Column %	Number	Column %
Anchorage/Mat-Su	21	54%	96	59%	117	58%
Gulf Coast	4	10%	13	8%	17	8%
Southeast	6	15%	9	6%	15	7%
Southwest	2	5%	8	5%	10	5%
Northern	1	3%	5	3%	6	3%
Interior	5	13%	19	12%	24	12%
Out of State	0	0%	12	7%	12	6%
Unknown	0	0%	1	1%	1	<1%
Total	39	100%	163	100%	202	100%

Urban/Rural Residence. To further geographically characterize HIV infection, the distribution of cases is also presented below across four geographic categories: (1) urban centers, combining the Municipality of Anchorage, Fairbanks/North Star Borough, and the City and Borough of Juneau; (2) sub-urban areas, combining the Matanuska-Susitna and Kenai Peninsula Boroughs and excluding villages not connected to Anchorage on the road system; (3) rural hubs, including the thirteen economic and transportation centers in the rural regions of Alaska and Southeast Alaska with populations over 2,000; and (4) rural communities, including the 260 incorporated and unincorporated cities, census designated places, and Alaska Native villages outside of the other categories as well as individuals living outside of any community.

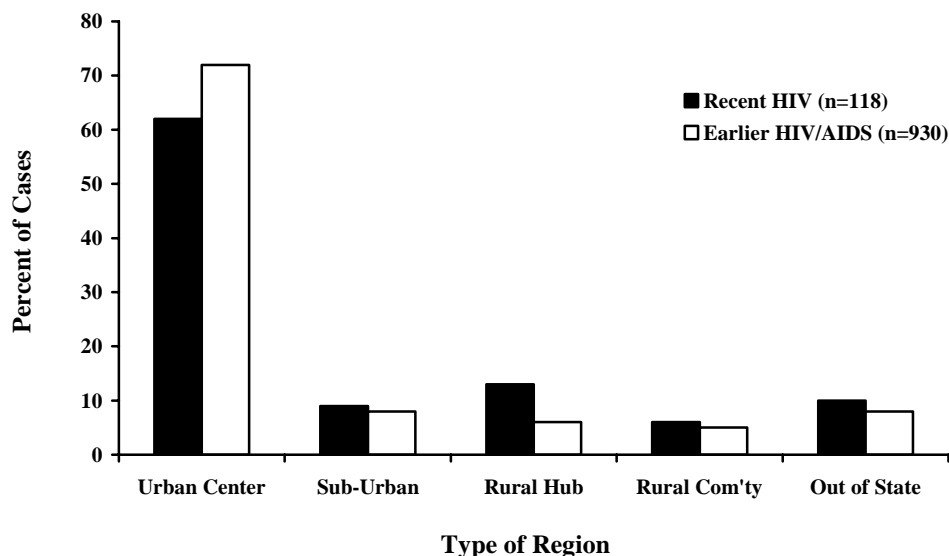
The largest proportion of HIV cases resided in urban areas at the time of first HIV diagnosis in Alaska, but the proportion was lower in recent HIV (62%) than earlier HIV/AIDS (72%) cases. The proportions of recent and earlier cases were similar in sub-urban areas and in rural communities. A greater proportion of recent cases occurred in rural hub communities compared with earlier cases (Table 24).

Table 24. Recent HIV and Earlier HIV/AIDS Cases, by Urban/Rural Area of Residence at First HIV Diagnosis in Alaska, 1982-2005 (N=1,048)

Urban/Rural Area	Recent		Earlier		Total	
	Number	Column %	Number	Column %	Number	Column %
Urban	73	62%	674	72%	747	71%
Sub-Urban	11	9%	70	8%	81	8%
Rural Hub	15	13%	52	6%	67	6%
Rural Community	7	6%	51	5%	58	6%
Out of State	12	10%	79	8%	91	9%
Unknown Residence	0	0%	4	<1%	4	<1%
Total	118	100%	930	100%	1,048	100%

Figure 14. Recent HIV and Earlier HIV/AIDS Cases, by Urban/Rural Area of Residence at First HIV Diagnosis in Alaska, 1982-2005 (N=1,048)

(4 [$<1\%$] earlier cases have unknown region of residence)

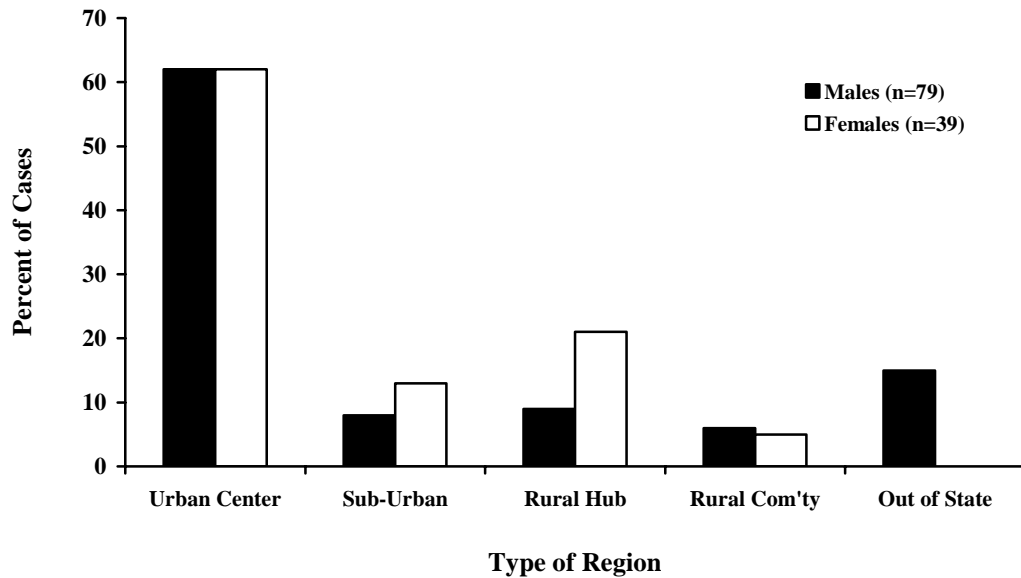


Urban/Rural Area by Sex. The largest proportions of recent cases in males and females were in residents of urban areas at the time of first Alaska HIV diagnosis (both 62%). The proportion of females (13%) with suburban residence at diagnosis was higher than that of males (8%), as was the proportion with residence in rural hubs (21% of female cases, 9% of male cases). A higher proportion of cases in males was in residents of rural communities or in persons living out of state at time of first diagnosis (6% and 15%, respectively) compared with cases in females (5% and 0%, respectively), (Table 25, Figure 15).

Table 25. Recent HIV Cases, by Sex and Urban/Rural Area of Residence at First HIV Diagnosis in Alaska, 2001-2005 (N=118)

Urban/Rural Area	Male		Female		Total	
	Number	Column %	Number	Column %	Number	Column %
Urban	49	62%	24	62%	73	62%
Sub-Urban	6	8%	5	13%	11	9%
Rural Hub	7	9%	8	21%	15	13%
Rural Community	5	6%	2	5%	7	6%
Out of State	12	15%	0	0%	12	10%
Unknown Residence	0	0%	0	0%	0	0%
Total	79	100%	39	100%	118	100%

Figure 15. Recent HIV Cases, by Sex and Urban/Rural Area of Residence at First HIV Diagnosis in Alaska, 2001-2005 (N=118)



Males. The largest proportion of cases in males was among residents of urban areas, and this proportion was lower for recent (62%) than for earlier (74%) cases. Proportions of recent HIV cases in males with first diagnosis in all other areas of residence were higher than were proportions of earlier cases in males (Table 26).

Table 26. Recent HIV and Earlier HIV/AIDS Cases in Males, by Region of Residence at First HIV Diagnosis in Alaska, 1982-2005 (N=846)

Region	Recent HIV Cases in Males		Earlier HIV/AIDS Cases in Males		Total Cases in Males	
	Number	Column %	Number	Column %	Number	Column %
Urban	49	62%	569	74%	618	73%
Sub-Urban	6	8%	54	7%	60	7%
Rural Hub	7	9%	39	5%	46	5%
Rural Community	5	6%	35	5%	40	5%
Out of State	12	15%	67	9%	79	9%
Unknown Residence	0	0%	3	<1%	3	<1%
Total	79	100%	767	100%	846	100%

Females. The largest proportion of HIV cases in females was among residents of urban areas, and this proportion was slightly lower for recent (62%) as compared with earlier (64%) cases. Proportions of recent HIV cases in females with residence in sub-urban (13%) and rural hub (21%) areas at first HIV diagnosis were higher than earlier cases (10% and 8%, respectively). HIV cases in females with residence at diagnosis in rural communities and out of state were lower for recent (5% and 0%, respectively) than earlier cases (10% and 7%, respectively) (Table 27).

Table 27. Recent HIV and Earlier HIV/AIDS Cases in Females, by Urban/Rural Area of Residence at First HIV Diagnosis in Alaska, 1982-2005 (N=202)

Urban/Rural Area	Recent HIV Cases in Females		Earlier HIV/AIDS Cases in Females		Total Cases in Females	
	Number	Column %	Number	Column %	Number	Column %
Urban	24	62%	105	64%	129	64%
Sub-Urban	5	13%	16	10%	21	10%
Rural Hub	8	21%	13	8%	21	10%
Rural Community	2	5%	16	10%	18	9%
Out of State	0	0%	12	7%	12	6%
Unknown Residence	0	0%	1	1%	1	<1%
Total	39	100%	163	100%	202	100%

HIV CASES IN INDIVIDUALS PRESUMED TO BE LIVING

Data on the number of persons living with HIV (PLWHIV) 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 PLWHIV in Alaska can only be approximated for a number of reasons: some infected individuals are unaware of their infection (they have not been diagnosed), not all diagnosed cases have yet been reported, some individuals reported with HIV no longer live here, and some out-of-state deaths in individuals with prior Alaska residence are not reflected in case data. (For example, of the 704 individuals reported with HIV/AIDS in Alaska since 1982 and who are not known to have died, 94 were diagnosed prior to 1990.) The most straightforward approximation of HIV prevalence is provided by the number of PLWHIV reported in Alaska who are not known to have died.

Many characteristics of PLWHIV in Alaska are similar to characteristics of people living with HIV in other areas of the United States, except for race/ethnicity. Data on transmission categories are difficult to compare because the CDC estimates for the United States redistribute cases with no risk identified into the other transmission categories according to statistical models. In the Alaska data, cases with no risk identified are shown as a separate transmission category. Characteristics presented below for the United States (referenced as “national”) are based on data from the 35 areas with confidential name-based HIV infection reporting since 2000, as presented in CDC’s *2004 HIV/AIDS Surveillance Report* (p.7), (Tables 28-32).

- Of all PLWHIV in Alaska, 78% were male. By comparison, 73% of adult and adolescent PLWHIV nationally were male.
- The largest single proportion of PLWHIV in Alaska and nationally were those aged 40-44 years (22% for both).
- Among male PLWHIV, 56% in Alaska and 60% nationally were MSM; 14% of PLWHIV in Alaska and 19% nationally were IDU; 7% of PLWHIV in Alaska and 13% nationally were exposed through heterosexual contact; and 8% of PLWHIV in Alaska and 7% nationally were MSM who also were IDU.
- Of female PLWHIV, 55% in Alaska and 71% nationally were exposed through heterosexual contact; and 18% in Alaska and 27% of nationally were IDU.
- The proportions of the Alaska population by race differed from those of the United States, and proportions of PLWHIV likewise differed: 58% of PLWHIV in Alaska and 34% nationally were White; 23% of PLWHIV in Alaska and less than 1% nationally were Alaska Native/American Indian; 9% of PLWHIV in Alaska and 48% nationally were Black; 7% of PLWHIV in Alaska and 17% nationally were Hispanic; and 2% of PLWHIV in Alaska and less than 1% nationally were Asian/Pacific Islander.

Sex

Of the 704 PLWHIV in Alaska, as of December 31, 2005, 547 (78%) were male and 157 (22%) were female (Table 28).

Table 28. HIV Cases Presumed Living and Known Dead as of December 31, 2005, by Sex—Alaska (N=1,048)

Sex	Cases Presumed Living		Cases Known to Have Died		Total HIV/AIDS Cases	
	Number	Column %	Number	Column %	Number	Column %
Male	547	78%	299	87%	846	81%
Female	157	22%	45	13%	202	19%
Total	704	100%	344	100%	1,048	100%

Age

In Table 29, below, age is calculated as of December 31, 2005. (Note that this differs from other age tables in this document that present age at time of first HIV diagnosis.)

Table 29. Age of PLWHIV in Alaska as of December 31, 2005 (N=704)

Age Group	Cases Presumed Living	
	Number	Column %
00-04	2	<1%
05-09	0	0%
10-14	1	<1%
15-19	3	<1%
20-24	10	1%
25-29	37	5%
30-34	65	9%
35-39	120	17%
40-44	157	22%
45-49	143	20%
50-54	86	12%
55-59	49	7%
60-64	17	2%
65+	14	2%
Unknown	0	0%
Total	704	100%

Transmission Category

Table 30. HIV Cases Presumed Living and Those Known to Have Died as of December 31, 2005, by Transmission Category—Alaska (N=1,048)

Transmission Category	Cases Presumed Living		Cases Known to Have Died		Total HIV/AIDS Cases	
	Number	Column %	Number	Column %	Number	Column %
Male-to-Male Sexual Contact (MSM)	307	44%	194	56%	501	48%
Injection Drug Use (IDU)	105	15%	40	12%	145	14%
MSM and IDU	46	7%	24	7%	70	7%
Heterosexual Contact to At-Risk Person	128	18%	27	8%	155	15%
Transfusion/Transplant	1	<1%	12	3%	13	1%
Hemophilia	4	1%	6	2%	10	1%
Perinatal Transmission	2	<1%	5	1%	7	1%
No Risk Reported/Identified	111	16%	36	10%	147	14%
Total	704	100%	344	100%	1,048	100%

Table 31. HIV Cases Presumed Living as of December 31, 2005, by Sex and Transmission Risk—Alaska (N=704)

Transmission Category	Cases in Males Presumed Living		Cases in Females Presumed Living		Total Cases Presumed Living	
	Number	Column %	Number	Column %	Number	Column %
Male-to-Male Sexual Contact (MSM)	307	56%	N/A	N/A	307	44%
Injection Drug Use (IDU)	76	14%	29	18%	105	15%
MSM and IDU	46	8%	N/A	N/A	46	7%
Heterosexual Contact to At-Risk Person	41	7%	87	55%	128	18%
Transfusion/Transplant	1	<1%	0	0%	1	<1%
Hemophilia	4	<1%	0	0%	4	1%
Perinatal Transmission	0	0%	2	1%	2	<1%
No Risk Reported/Identified	72	13%	39	25%	111	16%
Total	547	100%	157	100%	704	100%

Race/Ethnicity

Table 32. HIV Cases Presumed Living and Those Known to Have Died as of December 31, 2005, by Race/Ethnicity—Alaska (N=1,048)

Race/Ethnicity	Cases Presumed Living		Cases Known to Have Died		Total HIV/AIDS Cases	
	Number	Column %	Number	Column %	Number	Column %
White	397	56%	209	61%	606	58%
Alaska Native/ American Indian	153	22%	85	25%	238	23%
Black	72	10%	26	8%	98	9%
Asian/Pacific Islander	16	2%	4	1%	20	2%
Hispanic Ethnicity	54	8%	19	6%	73	7%
Unknown Race/Ethnicity	12	2%	1	<1%	13	1%
Total	704	100%	344	100%	1,048	100%

INDIVIDUALS AGED 13-24 YEARS AT TIME OF HIV DIAGNOSIS

Nationally, CDC has selected the age group of 13-24 years to characterize HIV infection in adolescents and young adults in the United States. Of the 1,048 cumulative HIV cases reported in Alaska through December 31, 2005, 135 (13%) were reported in individuals aged 13-24 years at first HIV diagnosis. Of these 135 cases, 28 are known to have died. The year of first HIV diagnosis ranged from 1983-2005 for these 135 cases (Tables 33-37).

Sex

Of the 135 total cumulative cases in individuals aged 13-24 years at first HIV diagnosis, 97 (72%) cases were in males and 38 (28%) cases in females.

Age

The proportion of HIV/AIDS cases first diagnosed from 2001-2005 in individuals 13-24 years of age (23 of 199 or 12%) was slightly higher than the proportion first diagnosed in individuals in this age group from 1982-2000 (13%), (Table 33).

Table 33. Individuals 13-24 Years of Age at First HIV Diagnosis and Individuals of All Other Ages, by Time Period of Diagnosis—Alaska, 1982-2005 (N=1,048)

Time Period	Individuals Aged 13-24 Years at First HIV Diagnosis		Individuals of All Other Ages at First HIV Diagnosis		Total	
	Number	Row %	Number	Row %	Number	Row %
1982-1985	10	17%	50	83%	60	100%
1986-1990	45	19%	194	81%	239	100%
1991-1995	33	11%	254	89%	287	100%
1996-2000	24	9%	238	91%	262	100%
2001-2005	23	12%	176	88%	199	100%
Unknown	0	0%	1	100%	1	100%
Total	135	13%	912	87%	1,048	100%

Transmission Category

For males aged 13-24 years at first HIV diagnosis, male-to-male-sex, injection drug use, and male-male sex combined with injection drug use accounted for 90% of cases through December 2005. For females aged 13-24 years at first diagnosis, heterosexual contact to a person with or at increased risk of HIV infection was the most significant identified exposure risk (63% of cases), followed by injection drug use (11%), (Table 34).

Table 34. Individuals 13-24 Years of Age at First HIV Diagnosis, by Transmission Category—Alaska, 1982-2005 (N=135)

Transmission Category	Males		Females		Total	
	Number	Column %	Number	Column %	Number	Column %
Male-to-Male Sexual Contact (MSM)	64	66%	N/A	N/A	64	47%
Injection Drug Use (IDU)	8	8%	4	11%	12	9%
MSM and IDU	16	16%	N/A	N/A	16	12%
Heterosexual Contact to At-Risk Person	3	3%	24	63%	27	20%
Transfusion/Transplant	0	0%	0	0%	0	0%
Hemophilia	0	0%	0	0%	0	0%
Perinatal Transmission	0	0%	0	0%	0	0%
No Risk Reported/Identified	6	6%	10	26%	16	12%
Total	97	100%	38	100%	135	100%

Race/Ethnicity

All races and ethnicities were represented in individuals aged 13-24 years at first HIV diagnosis, with the largest proportions of cases in White and Alaska Native males, and in White, Alaska Native, and Black females (Table 35).

Table 35. Individuals 13-24 Years of Age at First HIV Diagnosis, by Race/Ethnicity—Alaska, 1982-2005 (N=135)

Race/Ethnicity	Males		Females		Total	
	Number	Column %	Number	Column %	Number	Column %
White	64	66%	16	42%	80	59%
Alaska Native/ American Indian	20	21%	12	32%	32	24%
Black	5	5%	7	18%	12	9%
Asian/Pacific Islander	0	0%	1	3%	1	1%
Hispanic Ethnicity	7	7%	2	5%	9	7%
Unknown Race/Ethnicity	1	1%	0	0%	1	1%
Total	97	100%	38	100%	135	100%

Region of Residence

The largest proportions of males and females aged 13-24 years at first HIV diagnosis resided in Anchorage/Mat-Su or Out of State at that time (Tables 36). When comparing urban, sub-urban, and rural areas, the largest proportions of males and females aged 13-24 years at first HIV diagnosis lived in urban areas (Table 37).

Table 36. Individuals 13-24 Years of Age at First HIV Diagnosis, by Economic Region of Residence at First HIV Diagnosis in Alaska, 1982-2005 (N=135)

Economic Region	Males		Females		Total	
	Number	Column %	Number	Column %	Number	Column %
Anchorage/Mat-Su	64	66%	19	50%	83	61%
Gulf Coast	3	3%	3	8%	6	4%
Southeast	4	4%	2	5%	6	4%
Southwest	3	3%	3	8%	6	4%
Northern	0	0%	1	3%	1	1%
Interior	6	6%	3	8%	9	7%
Out of State	17	18%	6	16%	23	17%
Unknown	0	0%	1	3%	1	1%
Total	97	100%	38	100%	135	100%

Table 37. Individuals 13-24 Years of Age at First HIV Diagnosis, by Urban/Rural Area of Residence at First HIV Diagnosis in Alaska, 1982-2005 (N=135)

Urban/Rural Area	Males		Females		Total	
	Number	Column %	Number	Column %	Number	Column %
Urban	70	72%	20	53%	90	67%
Sub-Urban	5	5%	3	8%	8	6%
Rural Hub	1	1%	4	11%	5	4%
Rural Community	4	4%	4	11%	8	6%
Out of State	17	18%	6	16%	23	17%
Unknown Residence	0	0%	1	3%	1	1%
Total	97	100%	38	100%	135	100%

HIV CASES FIRST REPORTED IN 2005

Forty-four unduplicated cases of HIV were newly reported to the Alaska Division of Public Health in 2005, 30 (68%) diagnosed with HIV without AIDS and 14 (32%) with an AIDS diagnosis. Of the 44 newly reported cases, 28 (64%) had their first known HIV diagnosis in 2005, 15 (34%) had an earlier HIV diagnosis date, and one case had an unknown date of diagnosis (Table 38).

The data, in Table 38, below represent cases newly *reported* to the Division for the *first* time in 2005, and are not necessarily the same cases shown in Figure 2 and Table 3 as having been first *diagnosed* in 2005. (These two sets of case numbers are expected to differ.) For example, a case first diagnosed with AIDS in 2004 and reported for the first time in 2005 would be considered newly reported in 2005. A new AIDS diagnosis in 2005 in a case previously reported with HIV in 2000 would not be considered a newly reported case in 2005. Additionally, some individuals with an earlier HIV diagnosis move to Alaska from other areas and are subsequently reported in Alaska for the first time.

Of the 30 cases of HIV without AIDS, 22 (73%) were first diagnosed in 2005, 7 (23%) were first diagnosed prior to 2005, and 1 (3%) case had an unknown date of diagnosis. Of the 14 cases first reported in 2005 with AIDS, 7 (50%) had their first AIDS diagnosis in 2005 and 7 (50%) were diagnosed with AIDS prior to 2005. Of the 14 cases newly reported with AIDS in 2005, 6 (43%) also had a first HIV diagnosis in 2005.

Table 38. Cases First Reported with HIV and/or AIDS in 2005—Alaska (N=44)

Cases of HIV (without AIDS)	No.
HIV diagnosis in 2005	22
HIV diagnosis before 2005	7
HIV diagnosis, date unknown	1
<i>Total</i>	<i>30</i>
Cases of AIDS	
AIDS diagnosis in 2005	7*
AIDS diagnosis before 2005	7
<i>Total</i>	<i>14</i>

* Includes 3 cases where HIV and AIDS were diagnosed simultaneously in 2005, 3 cases where HIV was diagnosed in 2005 prior to the diagnosis of AIDS, and 1 case where HIV had been diagnosed prior to 2005

INDIVIDUALS DIAGNOSED LATE IN THE COURSE OF HIV INFECTION

From 2001-2005, 60 of 165 (36%) individuals with Alaska residence at first diagnosis developed AIDS within 12 months of their initial HIV diagnosis. This likely indicates diagnosis late in the course of their HIV disease, and late diagnosis limits an individual's potential benefit from medical care. Late diagnosis additionally indicates a lengthy period during which the infected person may have unknowingly transmitted HIV to others.

Of the 60 cases, 46% were in males and 14% in females. The largest proportion (45%) was in the age category 40-49 years at first HIV diagnosis; another 29% were between the ages of 25-34 years at first HIV diagnosis. Of the 60 cases, 45% were in Whites, 28% in Alaska Natives/American Indians, 10% in Blacks, 8% in Hispanics, and 8% in Asians/Pacific Islanders. Transmission risk for 38% of cases was MSM, for 28% heterosexual contact to a person at increased risk of HIV infection, for 12% injection drug use, for 8% MSM/IDU, and for 12% not specified.

Comparable data for the United States show that of all HIV infections diagnosed in 2003, 39% progressed to AIDS within 12 months after HIV infection was diagnosed. This occurred for a larger proportion of individuals aged 35 years and older, IDUs, and individuals exposed through heterosexual contact (CDC's *2004 HIV/AIDS Surveillance Report*, p.6).

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 individuals with HIV and their families as well as HIV medications. (Other organizations receiving federal funding under the various titles of the CARE Act in 2005 included the Alaska Native Tribal Health Consortium, Anchorage Neighborhood Health Center, and Yukon-Kuskokwim Health Corporation.)

In 2005, a total of 325 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 325 individuals, 37 (11%) were clients new to the service organizations during 2005. Males constituted 71% (230 individuals), females 29% (93 individuals), and transgender individuals 1% (2 individuals) of the client population. Fifty individuals participated in the AIDS Drug Assistance Program.

Characteristics of individuals receiving services funded with Title II CARE Act funds are presented in Table 39, below.

Table 39. Title II CARE Act Clients, by Demographic Characteristics—Alaska, 2005

Characteristic	Title II CARE Act Service Clients, 2005 (N=325)
Sex	
Male	71%
Female	29%
Transgender	1%
Race	
White	52%
Alaska Native/ American Indian	26%
Black	11%
Asian	2%
Native Hawaiian/Pacific Islander	<1%
More than one Race	1%
Hispanic Ethnicity	9%
Age Range	
0-12 years	<1%
13-24 years	3%
25-44 years	54%
45+ years	41%
65+ years	2%
Unknown	<1%

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 2003, 24,628 (20,067 male and 4,561 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.

HIV SCREENING AND HIV PARTNER SERVICES

In 2005, data on HIV tests submitted to the State Virology Laboratory from four public health clinics that offered testing in the context of reproductive health services showed that of 3,269 individuals tested, four (0.12%) were HIV-positive. Different models of HIV testing through targeted outreach in community settings frequented by individuals at high risk, some using rapid HIV tests, are being explored to identify ways to best reach individuals with undiagnosed HIV infection.

Partner notification activities involve working with individuals diagnosed with HIV to confidentially notify their sexual and needle-sharing partners of their exposure and offer them testing as a means of reaching individuals at highest risk, as well as identifying previously unrecognized HIV infection prior to symptomatic disease. In 2005, 46 HIV-positive individuals were interviewed for partners; 82 partners were notified by public health personnel; 67 of these partners accepted HIV counseling and testing, and 8 (12%) were newly diagnosed with HIV. The 8 cases identified through partner services constituted 29% of the 28 cases of HIV newly diagnosed in Alaska in 2005. From 2003-2005, partner services identified 37% of all HIV cases newly identified in Alaska.

Providers and HIV positive patients may request assistance from State HIV/STD Program staff in notifying potentially exposed partners and offering HIV testing, as needed (not solely at time of first HIV diagnosis).

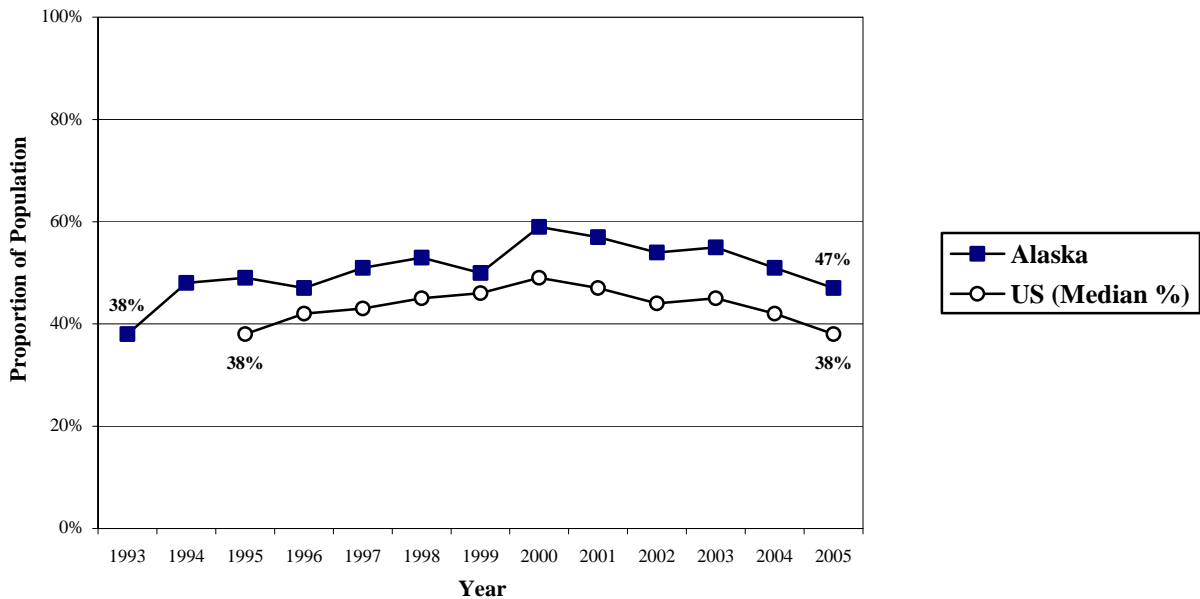
SELF-REPORTED HIV TESTING

The Behavioral Risk Factor Surveillance System (BRFSS) is a national survey developed by CDC to monitor state-level prevalence of the major behavioral risks among adults. The BRFSS has been conducted yearly in Alaska since 1990 by the Alaska Division of Public Health. Health interviews are conducted by phone with adults 18 years and older. Data are statistically weighted to be representative of the state’s population.

The BRFSS interview includes several questions about HIV testing experience. Respondents are asked: “Have you ever been tested for HIV? Do not count tests you may have had as part of a blood donation.” In 2004, 51% of respondents in Alaska had ever had an HIV test aside from testing as part of donating blood. In 2005, 47% of Alaskans and 38% of U.S. respondents reported ever having had an HIV test. As shown in Figure 16, Alaska has consistently been slightly higher than the nation in the percentage of individuals who report being tested (State of Alaska 2006).

Respondents are read a list of four HIV transmission risk factors and, without specifying a risk, asked if any applied to them in the past 12 months. Risk factors include: use of intravenous drugs; treatment for STD; exchange of sex for money or drugs; and anal sex without a condom. In 2004 and 2005, 4% of Alaskan respondents reported having participated in some high-risk activity in the previous 12 months.

Figure 16. Self-reported HIV Testing, Age 18-64 Years—Alaska and Nationwide, 1993-2005



HIV TESTING DURING PRENATAL CARE

Antiretroviral therapy is effective in reducing HIV transmission during pregnancy and delivery, and has helped reduce perinatal infection rates in Alaska and nationwide. The majority of pregnant women in Alaska received HIV screening as part of their prenatal care.

Pregnancy Risk Assessment Monitoring Survey (PRAMS) is an ongoing national surveillance study conducted by states to collect information on maternal behaviors, attitudes, and experiences. It 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 counseled them about HIV prevention and 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 2003 (the most recent available PRAMS data) for the HIV-related questions follow (Tables 40-41).

Table 40. Percent of Women Giving Birth to Live Infants Whose Prenatal Health Care Providers Counseled Them About HIV Prevention, Alaska, 1996-1999

	1996	1997	1998	1999
Number of Live Births in Alaska	8,198	9,820	9,793	9,819
Response				
Yes	43.9%	42.9%	46.7%	46.8%
No	52.4%	54.0%	50.3%	49.7%
Skipped (no prenatal care)	1.4%	1.7%	0.8%	0.9%
No response	2.3%	1.3%	2.2%	2.6%

Table 41. Percent of Women Giving Birth to Live Infants Whose Prenatal Health Care Providers Discussed HIV Testing With Them, Alaska, 1999-2003

	1999	2000	2001	2002	2003
Number of Live Births In Alaska	9,819	9,766	9,627	9,612	9,718
Response					
Yes	76.1%	80.9%	78.8%	82.3%	79.9%
No	19.9%	16.8%	18.4%	15.4%	17.3%
Skipped (no prenatal care)	0.9%	0.6%	1.0%	0.6%	1.5%
No response	3.1%	1.8%	1.8%	1.8%	1.3%

There was a low incidence of perinatal HIV transmission in Alaska through 2005. PRAMS data show a relatively large and consistent 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 individuals live longer, healthier lives. Of the 202 cases of HIV/AIDS reported in females in Alaska, 157 were not known to have died as of December 31, 2005. Of these, 129 women were between the ages of 15-44 years as of December 31, 2005 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.

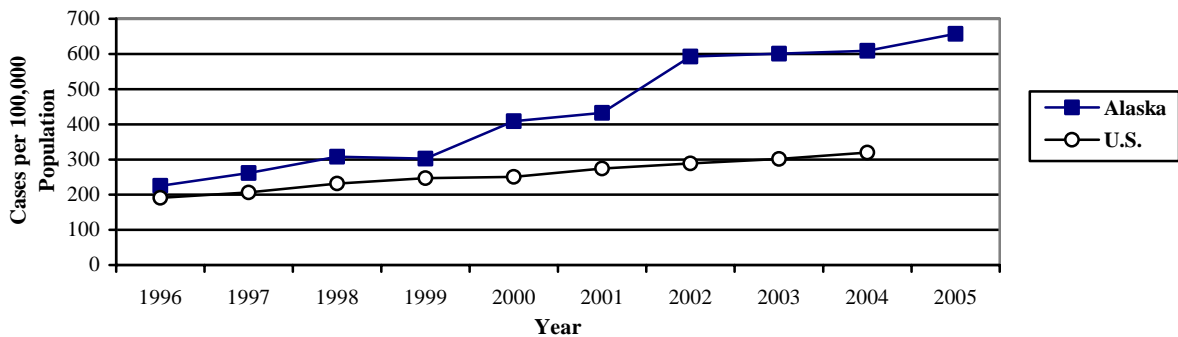
INDICATORS OF POTENTIAL RISK FOR HIV

Reportable Sexually Transmitted Diseases (STD). The most common reportable sexually transmitted infections in Alaska and the rest of the U.S. are chlamydia, gonorrhea, and syphilis, in decreasing order of prevalence. Chlamydia infection in Alaska is most common in adolescents and younger adults, especially females. Gonorrhea infection is less common than chlamydia, and most cases occur in young adults. Syphilis is relatively uncommon and most recent cases occurred in males. Indicators of unprotected sex, STD may also indicate increased risk of exposure to, transmission of, or acquisition of HIV infection.

A relatively small number of individuals with chlamydia were ever reported with gonorrhea, indicating that these infections are associated not only with unprotected sex but also with participation in fairly distinct sexual networks. It was uncommon for individuals with chlamydia and/or gonorrhea to have been reported with HIV infection, but a relatively high proportion of recent cases of infectious syphilis in Alaska were in individuals who had or had been recently exposed to HIV infection.

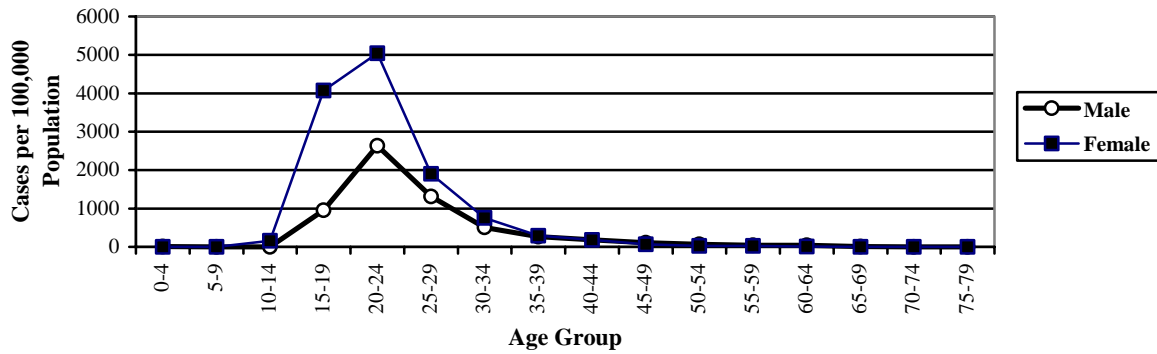
Chlamydia in Alaska. Chlamydia rates have been high in Alaska since the infection was first made reportable in 1996. Rates of chlamydia infection have continued to increase in Alaska and the United States, and Alaska rates have ranked among the highest in the United States in recent years (Figure 17). While the increase in cases reported in Alaska may, in part, represent a true increase in disease incidence, other likely contributors include recent improvements in disease detection due to the use of more sensitive laboratory technology and non-invasive (urine) specimen collection methods, as well as increased testing of exposed partners and more screening of populations at risk of infection.

Figure 17. Chlamydia Rates—Alaska and the United States, 1996-2005



A total of 4,357 cases of chlamydia were reported in Alaska in 2005 (rate: 657 cases per 100,000 population). Case numbers in 2005 increased 9% over 2004 and represented the largest annual increase since 2002. There were 2,911 (67%) cases reported in females and 1,447 (33%) in males. Of the 2,911 cases in females, 51 (2%) were associated with pelvic inflammatory disease.

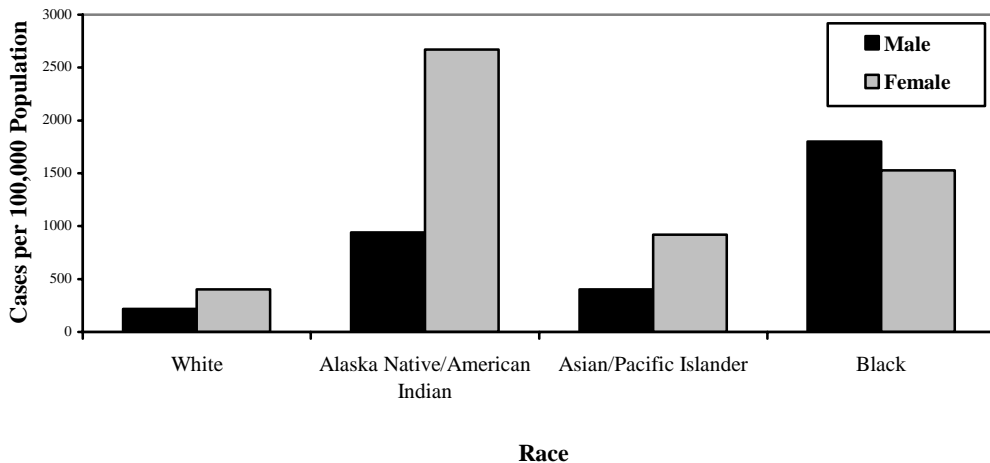
Figure 18. Chlamydia Rates, by Age and Sex Group—Alaska, 2005 (N=4,357)



Highest 2005 chlamydia case rates in females were among those aged 20-24 years (5,046 per 100,000 females) and 15-19 years (4,075 per 100,000 females). Highest 2005 chlamydia case rates in males were among those aged 20-24 years (2,633 cases per 100,000 males), (Figure 18).

Chlamydia case rates among males were highest in Blacks (1,800 per 100,000 males) and Alaska Natives/American Indians (940 per 100,000 males). Case rates among females were highest in Alaska Natives/American Indians (2,669 per 100,000 females) and Blacks (1,526 per 100,000 females), (Figure 19).

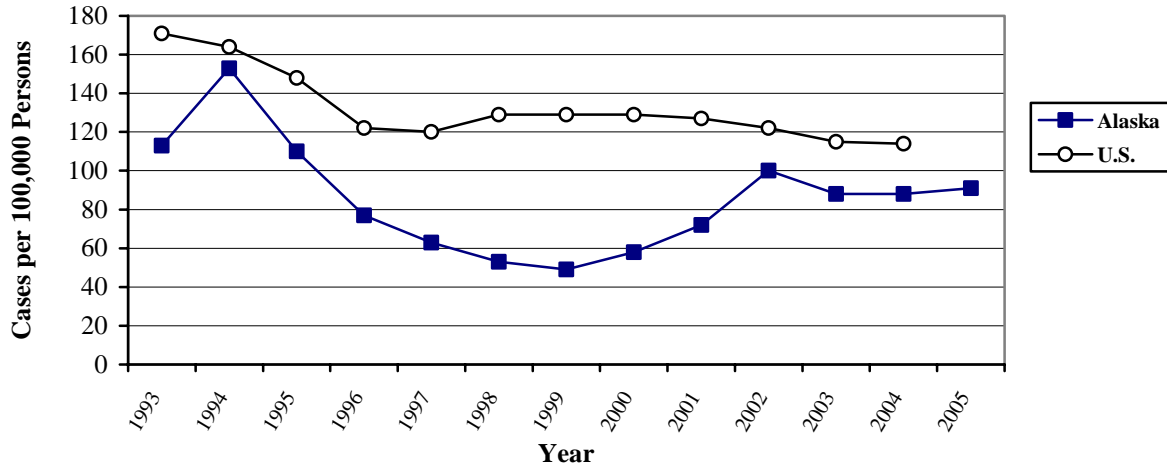
Figure 19. Chlamydia Rates, by Race and Sex—Alaska, 2005 (N=4,357)
(34 males and 46 females of unknown race are not included in the graph)



Chlamydia and HIV. Cases of chlamydia reported in Alaska from January 4, 1996 through December 31, 2005 (27,711 cases) were matched against all cases of HIV infection reported in Alaska through December 31, 2005 (1,048 cases). Of those individuals with a case of chlamydia reported during the time period indicated, 35 (<1%) were ever reported with HIV infection. Of the 35 persons with HIV, 18 (51%; 10 females, 8 males) were diagnosed with a chlamydia infection before or at the time of HIV diagnosis, and 18 (51%; 10 females, 8 males) were diagnosed with a chlamydia infection after HIV was diagnosed.

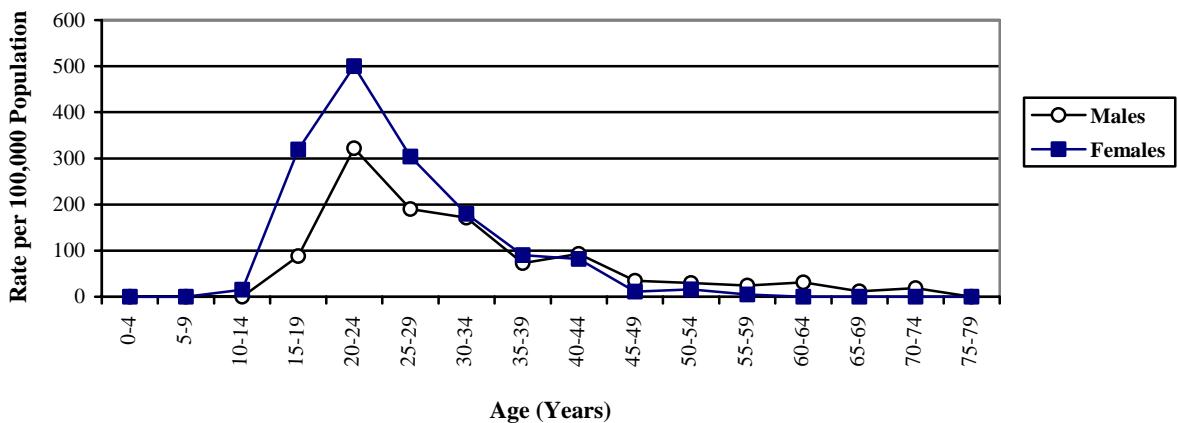
Gonorrhea in Alaska. Gonorrhea rates have declined considerably in Alaska since the historic highs recorded in the 1970’s during construction of the TransAlaska oil pipeline. Although they remain below national rates, Alaska gonorrhea rates have increased in recent years (Figure 20). While this likely represents a true increase in disease incidence, other likely contributors include recent improvements in disease detection due to the use of more sensitive laboratory technology and non-invasive (urine) specimen collection methods, as well as increased testing of exposed partners and increased screening of populations at greater risk of infection.

Figure 20. Gonorrhea Rates—Alaska and the United States, 1993-2005



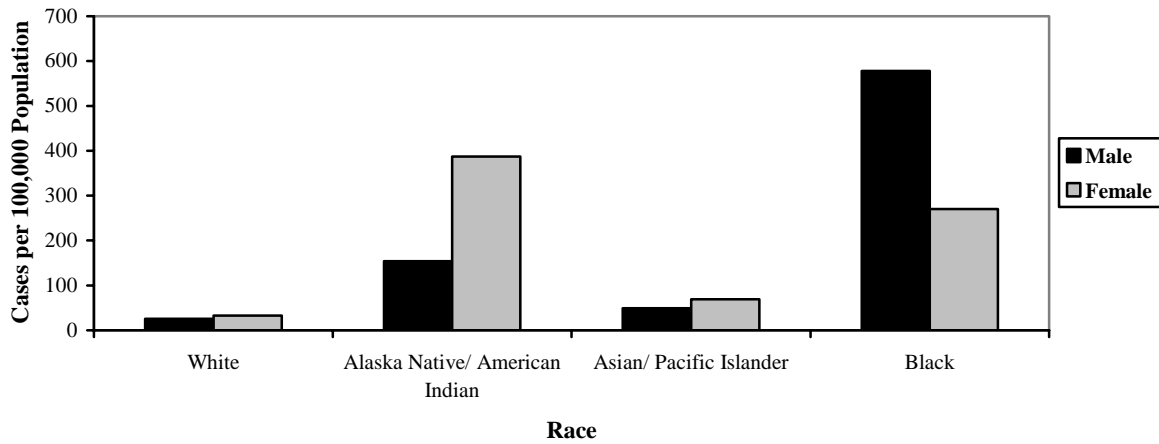
A total of 601 cases of gonorrhea were reported in Alaska in 2005 (rate: 91 cases per 100,000 individuals). This represents a 4% increase over the number of gonorrhea cases in 2004. Of the 601 cases, 349 (58%) cases were in females and 252 (42%) cases in males. Of the 349 cases in females, 17 (5%) were associated with pelvic inflammatory disease. Highest 2005 gonorrhea case rates in females were among those aged 20-24 years (500 per 100,000 females), 15-19 years (319 per 100,000 females), and 25-29 years (304 per 100,000 females). The highest 2005 gonorrhea rate in males was among those aged 20-24 years (322 per 100,000 males), (Figure 21).

Figure 21. Gonorrhea Rates, by Sex and Age—Alaska, 2005 (N=601)



Gonorrhea case rates among males were highest in Blacks (rate: 578 cases per 100,000 males) and Alaska Natives/American Indians (rate: 154 cases per 100,000 males). Case rates among females were highest in Alaska Natives/American Indians (rate: 387 cases per 100,000 females) and Blacks (rate: 269 cases per 100,000 females), (Figure 22).

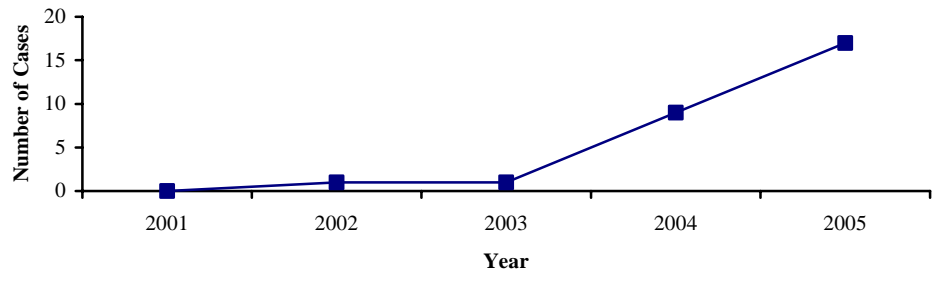
Figure 22. Gonorrhea Rates, by Race and Sex—Alaska, 2005 (N=601)
(9 male cases of unknown race are not included in the graph)



Gonorrhea and HIV. Cases of gonorrhea reported in Alaska from January 1, 1996 through December 31, 2005, (4,578 cases) were matched against all cases of HIV infection reported in Alaska through December 31, 2005 (1,048 cases). Of those individuals with a case of gonorrhea reported during the time period indicated, 17 (0.4%) were ever reported with HIV infection. Of the 17 individuals, 11 (65%; 5 females, 6 males) were diagnosed with a gonorrhea infection before or at the time of HIV diagnosis, and 10 (59%; 2 females, 8 males) were diagnosed with a gonorrhea infection after HIV was diagnosed (some individuals had gonorrhea and in both time periods and/or more than once in each time period).

Syphilis in Alaska. Infectious syphilis was not a significant problem in Alaska for many years. An outbreak, largely confined to areas on the road system from Anchorage to Fairbanks, began in late 2004 and was still ongoing at the end of 2005 (Figure 23). A total of 26 cases of early syphilis (primary, secondary, and early latent stages) were reported between September 1, 2004 and December 31, 2005. Of the 26 cases, 22 (85%) were in males and 4 (15%) in females; 13 (50%) were in men who acknowledged same sex partners, 12 (46%) individuals had risks associated with methamphetamine use, and a number of cases involved anonymous sex associated with use of the Internet. Of the 26 cases, 19 (73%) were in Whites, 4 (15%) in Alaska Natives/American Indians, and 3 (12%) in Blacks. Additionally, 7 (30%) of the 26 cases were in individuals who either had HIV or had recently been named as a sex or needle sharing partner of a person with HIV infection.

Figure 23. Cases of Primary, Secondary, & Early Latent Syphilis—Alaska, 2001-2005



Syphilis and HIV. All cases of early syphilis (primary, secondary, or early latent) reported in Alaska from January 1, 1996 through December 31, 2005 (36 cases) were matched against all cases of HIV infection reported in Alaska through 12/31/05 (1,048 cases). Of those individuals reported with a case of early syphilis, 3 (8.3%) individuals were ever reported with HIV infection. Of the 3 individuals, 1 (33%; male) was diagnosed with early syphilis before or at the time of HIV diagnosis, and 2 (67%; males) were diagnosed with early syphilis after HIV was diagnosed.

SELECTED OTHER CONDITIONS AND HIV IN ALASKA

Hepatitis A. Cases of hepatitis A reported in Alaska from January 1, 1972 through May 17, 2006 (6,749 cases) were matched against all cases of HIV infection reported in Alaska through May 15, 2006 (1,084 cases). Of all individuals reported with hepatitis A during the time period indicated, a total of 7 (0.1%; 3 females, 4 males) were ever reported with HIV.

Hepatitis B. Cases of hepatitis B reported in Alaska from February 1, 1973 through May 17, 2006 (1,152 cases) were matched against all cases of HIV infection ever reported in Alaska through May 15, 2006 (1,084 cases). Of all individuals reported with hepatitis B during the time period indicated, a total of 8 (0.7%; 2 females, 6 males, none reported after 1992) were ever reported with HIV.

Hepatitis C. Cases of hepatitis C reported in Alaska from December 18, 1989 through May 17, 2006 (8,946 cases) were matched against all cases of HIV infection reported in Alaska through May 15, 2006 (1,084 cases). Of the 8,946 individuals reported with hepatitis C, 117 (1.3%; 34 females, 83 males) were ever reported with HIV infection.

Tuberculosis. Cases of tuberculosis (TB) reported in Alaska from January 1, 1972 through May 17, 2006 (2,660 cases) were matched against all cases of HIV infection reported in Alaska through May 15, 2006 (1,084 cases). Of all individuals reported with TB during the time period indicated, a total of 20 (0.8%; 3 females, 17 males) were ever reported with HIV. Of these 20 cases, 5 (25%) cases had TB diagnosed before, 2 (10%) at the time of, and 13 (65%) after diagnosis with HIV.