

*State of Alaska  
Epidemiology*



# **Bulletin**

**Recommendations  
and  
Reports**

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# **HIV Infection in Alaska**

**Interim Report  
(through August 31, 1999)**

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## HIV INFECTION IN ALASKA – 1999

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### Introduction

HIV infection became reportable in Alaska in February 1999. This interim report provides data on the reported prevalence of HIV infection in Alaska through August 31, 1999. Because Alaska case numbers are relatively small, these data should be interpreted in the context of cumulative scientific knowledge about HIV/AIDS. As reporting of HIV infection continues, the data will become increasingly valuable in identifying incidence of HIV infection, enabling earlier identification of changing trends in risk factors and more effective targeting of intervention activities.

### Methods and Limitations in Interpreting Current Data

Reporting of HIV infection has been successfully implemented in Alaska with the support and cooperation of physicians, other health care providers, and laboratories. Because HIV infection is life-long at this time, cases reported include persons who were infected many years ago as well as persons recently infected or recently diagnosed for the first time. At this time, reporting is necessarily incomplete.

HIV infection data collected through the 1999 disease reporting requirements are not directly comparable to past data on HIV tests conducted by the State Lab. Careful analyses of multiple types of surveillance activities are necessary to provide an accurate picture of HIV infection in Alaska.

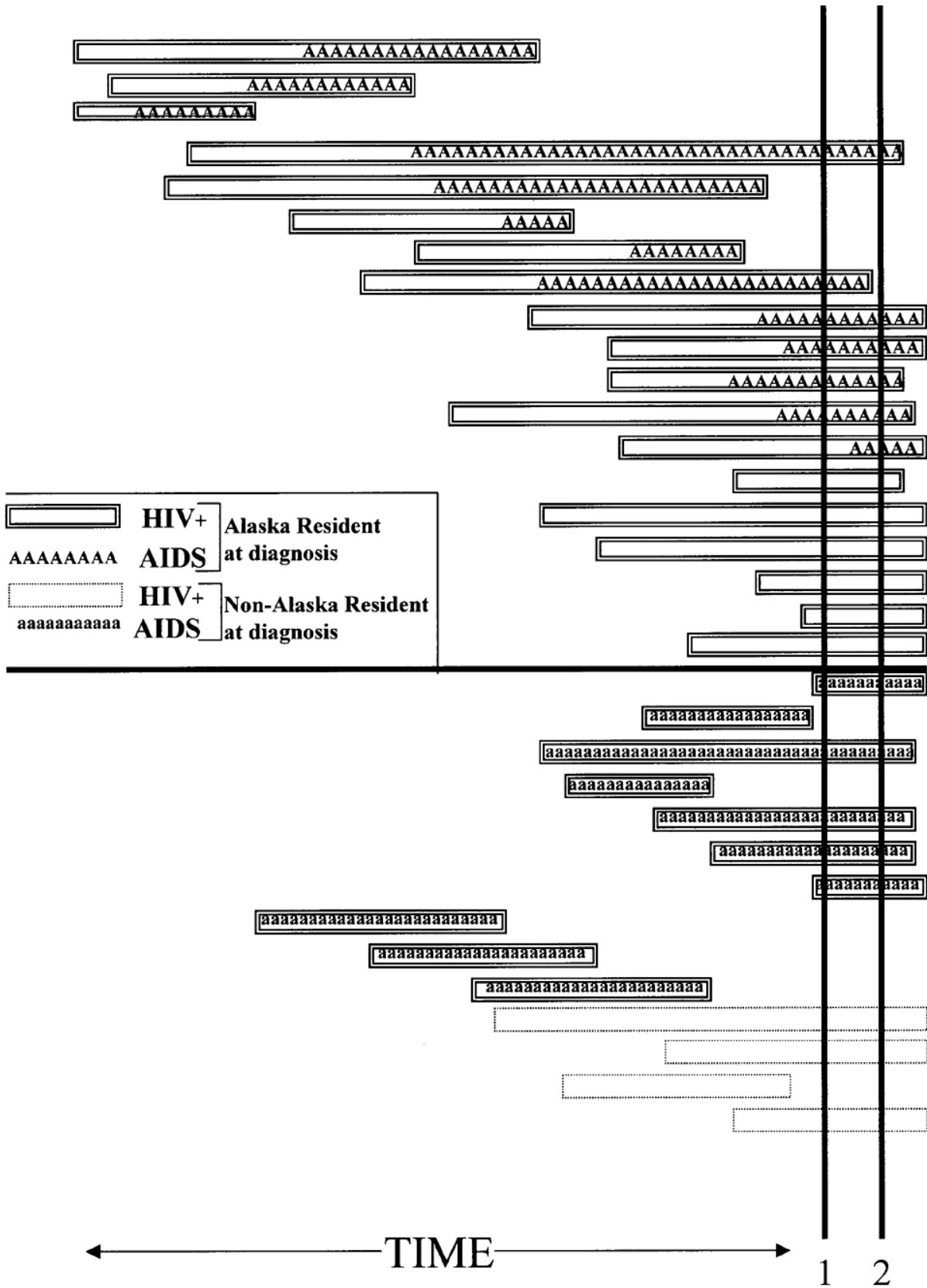
### HIV and AIDS Surveillance

AIDS became a reportable condition in Alaska in 1985. Data on AIDS in Alaska reflect the number of individuals first diagnosed with AIDS while Alaska residents. Because of the long incubation period between the time of first infection with HIV and the onset of conditions that meet the AIDS case definition, AIDS case data do not necessarily reflect HIV infection data.

Figure 1 is an example to illustrate how the data under the new system of HIV reporting differ from AIDS case data formerly reported by the Section of Epidemiology. [This example is for illustrative purposes only. Figure 1 does not reflect actual data or relative numbers of cases.] Only persons who gave Alaska as their state of residence at the time of their AIDS diagnosis are included as an Alaska AIDS case. Not included are Alaska residents with HIV infection who have not developed AIDS, and persons who were diagnosed with AIDS while a legal resident of another state who subsequently resided in Alaska. Alaska AIDS cases are the seven cases shown during the time period defined by the two vertical lines.

Now that HIV infection is reportable, HIV data will reflect all of the reported cases of persons who have been diagnosed with or received health care for HIV infection in Alaska, including persons with and without an AIDS diagnosis and regardless of state of residence at the time of diagnosis with HIV infection. Under this system, 21 HIV cases would be reported during the same time period indicated by the two vertical lines. (Figure 1)

Figure 1.



## Reported HIV Infection

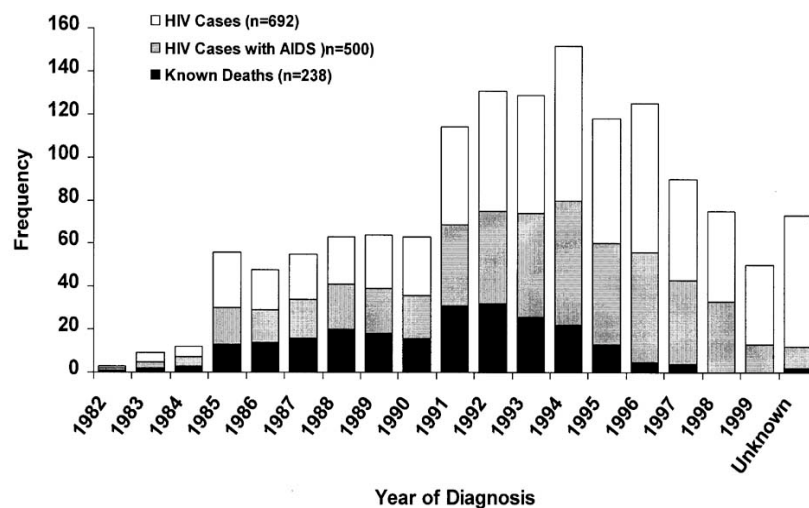
(through August 31, 1999)

From January 1, 1982 through August 31, 1999, a cumulative total of 692 cases of HIV infection were reported among individuals in Alaska. Of the 692 cases of HIV infection, 500 individuals had AIDS and 238 are known to have died. (Figure 2, Table 1)

Table 1. Alaska HIV and AIDS Cases, and Known Deaths by Year of Diagnosis: 1982 – August 31, 1999

Cases and Known Deaths by Year of Diagnosis, N = 692			
Year	Total HIV Cases	HIV Cases with AIDS	Known Deaths
1982	1	1	1
1983	4	3	2
1984	5	4	3
1985	26	17	13
1986	19	15	14
1987	21	18	16
1988	22	21	20
1989	25	21	18
1990	27	20	16
1991	45	38	31
1992	56	43	32
1993	55	48	26
1994	72	58	22
1995	58	47	13
1996	69	51	5
1997	47	39	4
1998	42	33	0
1999	37	13	0
Unknown	61	10	2
<b>Total</b>	<b>692</b>	<b>500</b>	<b>238</b>

Figure 2. Alaska HIV and AIDS Cases and Known Deaths by Year of Diagnosis: 1982-August 31, 1999



### Mortality Due to HIV Infection

Until 1991, AIDS did not rank within the top 15 leading causes of death in Alaska. In the U.S., AIDS was first ranked (11th) among the leading causes of death in 1993, and it ranked as the 8th leading cause of death in the U.S. overall in 1996. AIDS ranked as the leading cause of death for persons aged 25-44 years nationwide from 1992-1995, and was the second leading cause of death in that age group in 1996.

Table 2 shows the number of deaths attributable to HIV infection among individuals whose residence was Alaska at the time of death, by the year in which the death occurred, from death certificates recorded in the Alaska Bureau of Vital Statistics.

Table 2. Alaska Resident Deaths Attributed to HIV Infection\* by Year of Death: 1982-1998, Section of Vital Statistics.

<u>Year</u>	<u>HIV/AIDS Deaths in that Year</u>
1982.....	0
1983.....	0
1984.....	0
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.....	4

\*ICD Codes 042-044

### Mode of Exposure to HIV (Table 3, Figure 3)

Of all Alaska reported HIV cases, 6 cases were reported in children less than 13 years old at the time of diagnosis. Of the 692 cases, 62 cases were of unknown age. Of the 624 adult/adolescent Alaska HIV cases, 410 (66%) were among individuals whose exposure was male-male sex (305), injection drug use (73), or both (32).

Figure 3. Alaska HIV cases by exposure category, through August 31, 1999. (N=692)

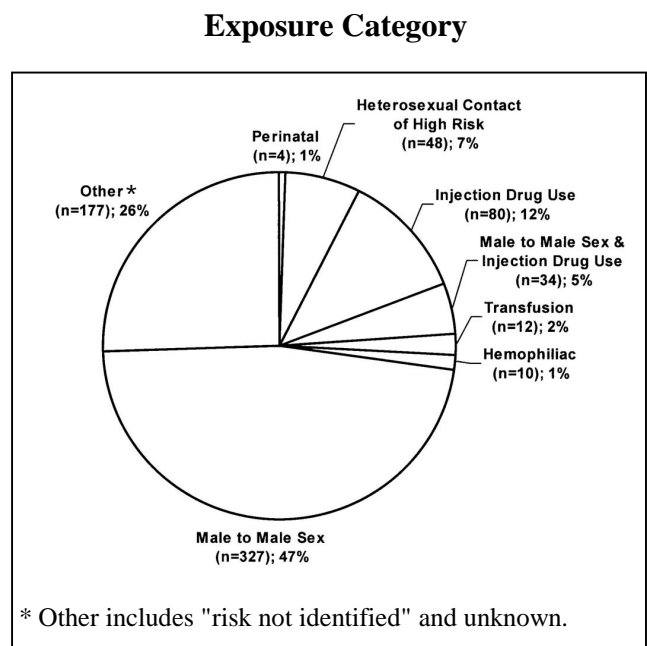


Table 3. HIV cases by exposure category, through August 31, 1999, Alaska.  
(N=692; Unknown age =62)

<b>Adult/adolescent exposure category</b>	<b>Alaska</b>	
	<b>Number</b>	<b>Percent</b>
Men who have sex with men	305	(49%)
Injection drug use	73	(12%)
Heterosexual contact to individuals at high risk	44	(7%)
Men who have sex with men and inject drugs	32	(5%)
Blood transfusion/blood products	12	(2%)
Hemophilia	9	(1%)
Other/risk not reported	149	(24%)
<b>Adult/adolescent sub-total</b>	<b>624</b>	
<b>Pediatric (&lt;13 years old)</b>		
<b>exposure category</b>	<b>Number</b>	<b>Percent</b>
Mother with/at risk for HIV infection	4	(67%)
Hemophilia	1	(17%)
Blood transfusion/blood products	0	(0%)
Other/risk not reported	1	(17%)
<b>Pediatric sub-total</b>	<b>6</b>	
<b>Unknown Age</b>	<b>62</b>	
<b>Total (all HIV cases)</b>	<b>692</b>	

**Gender** (Table 4)

Female Of 692 Alaska HIV cases, 103 cases (15%) were females. The number of cases of HIV among women in Alaska and in the U.S. has increased in recent years, although it remains considerably smaller than the number of cases among men.

Male Of 692 Alaska HIV cases, 589 cases (85%) were males.

Table 4. HIV cases by sex, August 31, 1999, Alaska.

	<b>Males</b>		<b>Females</b>		<b>Total number</b>
	<b>number</b>	<b>%</b>	<b>number</b>	<b>%</b>	
Pediatric	4	67	2	33	6
Adult/adolescent	538	86	86	14	624
Unknown Age	47	76	15	24	62
<b>Totals</b>	<b>589</b>	<b>85</b>	<b>103</b>	<b>15</b>	<b>692</b>

**Race/Ethnicity** (Table 5 and Figure 4)

HIV affects individuals in all racial and ethnic groups in Alaska. Validation studies in Alaska show that racial misclassification has not been a factor in classifying Alaska HIV cases, although it has been a problem in some other areas of the U.S.

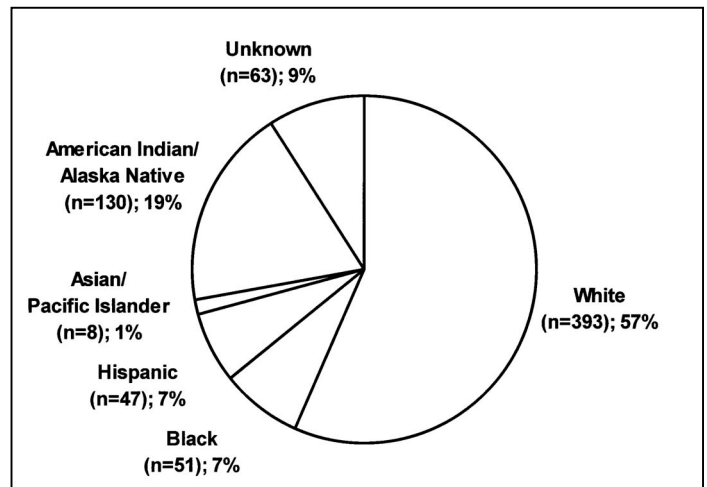
Table 5. HIV case distribution compared to estimated 1998 Alaska Population Overview

	HIV Cases	% Cases	Est. 1998 Population	% Population
Amer. Indian/AK Native	130	(19%)	104,085	17
Asian/Pacific Islander	8	(1%)	30,200	5
Black	51	(7%)	27,652	4
Hispanic	47	(7%)	28,889	5
White	393	(57%)	459,463	74
Unknown	63	(9%)	--	--
<b>Total</b>	<b>692</b>	<b>100</b>	<b>650,289</b>	<b>100</b>

Table 6. Adult/adolescent HIV cases by race/ethnicity and gender, through August 31, 1999, Alaska

Race/ethnicity	Males		Females	
	Number	%	Number	%
Amer. Indian/AK Native	79	(15%)	28	(33%)
Asian/Pacific Islander	4	(<1%)	3	(3%)
Black	37	(7%)	10	(12%)
Hispanic	42	(8%)	4	(5%)
White	343	(64%)	35	(41%)
Unknown	33	(6%)	6	(7%)
<b>Total</b>	<b>538</b>	<b>100%</b>	<b>86</b>	<b>100%</b>

Figure 4. Alaska HIV cases by race/ethnicity, through August 31, 1999. (N=692)



The Alaska Department of Labor estimates Alaska’s 1998 population proportions by race. In these Department of Labor estimates, individuals of Hispanic ethnicity are included within estimates of those whose race is White or Black (rather than estimating White and Black persons of Hispanic ethnicity separately). The Department of Labor estimates the 1998 Hispanic population at 4.5% of the Alaskan total. (Table 5)

Based upon these Alaska population estimates, Blacks and persons of Hispanic ethnicity are over-represented among HIV cases. Alaska Natives are slightly over-represented in Alaska cases of HIV. (Table 5 and 6; Figure 4) Among Alaska HIV cases in females, American Indian/Alaska Native (33%) and Black (12%) are over represented relative to their percentage in the population. (Table 6).



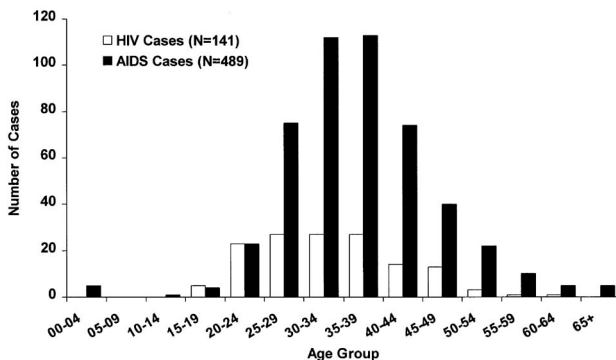
**Age (Table 8, Figure 5)**

The time from infection with HIV to development of AIDS may be quite prolonged. Current estimates place the time for progression from initial HIV infection to AIDS at 7-10 years. A person diagnosed with AIDS in his or her twenties or thirties was therefore likely to have been infected with HIV as a teen or young adult.

Table 8. HIV and AIDS cases by age at diagnosis, through August 31, 1999, Alaska.

Age Group	HIV without AIDS	HIV with AIDS
00-04	0	5
05-09	0	0
10-14	0	1
15-19	5	4
20-24	23	23
25-29	27	75
30-34	27	112
35-39	27	113
40-44	14	74
45-49	13	40
50-54	3	22
55-59	1	10
60-64	1	5
65+	0	5
Unknown	51	11
<b>Total</b>	<b>192</b>	<b>500</b>

Figure 5. HIV/AIDS cases by age at diagnosis, through August 31, 1999, Alaska (N=692, Age unknown = 62)



**Partner Notification**

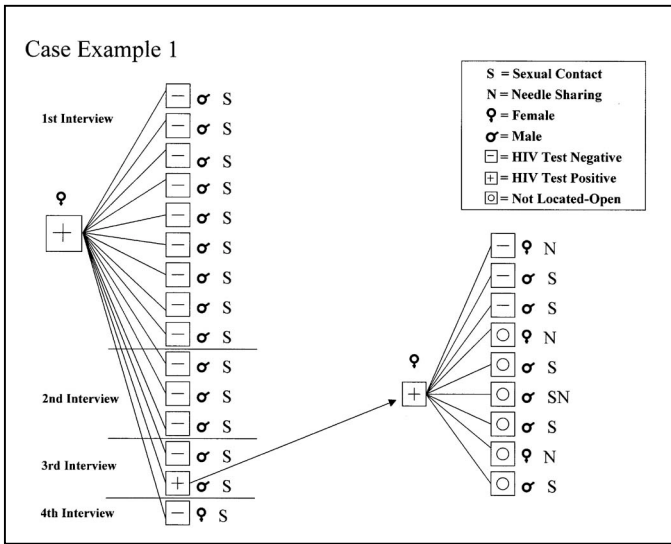
An important public health activity that has been facilitated through HIV reporting is working with infected individuals to advise sexual and needle-sharing partners of their possible exposure to HIV. These individuals are at high risk of infection. Working with these partners to help them learn their HIV status and, if infected, access care and notify their partners is critical in helping to interrupt disease transmission. Three “case studies” illustrate the importance and productivity of partner notification services in Alaska.

Case #1 – Original patient disclosed to the provider information on ten partners. The partner services provider obtained names of another three partners at the time of the first in-person interview. The original patient was re-interviewed and provided another two partners, for a total of 15 partners named by the original patient. During the notification process, one additional partner was named for a total of 16 partners. All 16 partners were located, notified, counseled and tested with one individual being newly identified as HIV positive (this person was one of the last two named partners).

The newly identified HIV positive person named only one partner. This partner was tested, notified and was found to be HIV positive. This second newly identified person has named 9 sex and/or needle-sharing partners thus far in an ongoing investigation.

This investigation includes a total of 25 partners, 19 male and six female. Nineteen have been notified, counseled and tested, with two partners testing positive. Attempts to locate the remaining six partners continue.

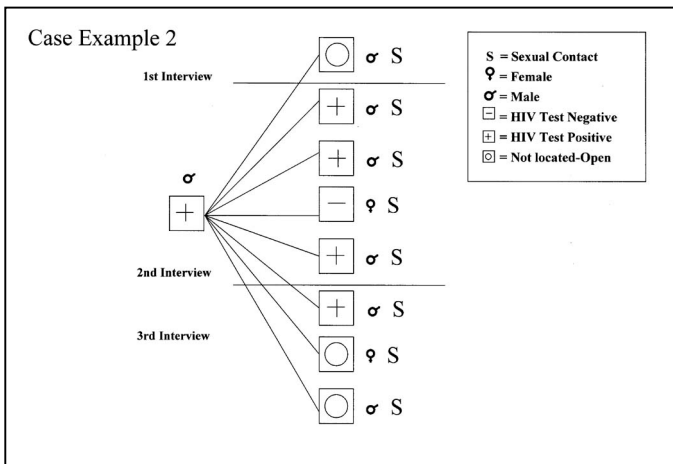
This case involved multiple geographic areas ranging from Anchorage to villages. Assistance was provided by Public Health Nursing, the Department of Corrections, the Municipality of Anchorage Health Department, and a Regional Health Corporation.



Case #2 – The original patient was interviewed and provided two contacts; however, there was only enough information to initiate activity on one contact. This contact was notified, counseled, tested and found to be HIV negative. The original patient was then re-interviewed, and seven additional partners were named. Record reviews indicated that two partners were known to be HIV infected. During the investigation, coincidentally, one of the partners was reported by a local hospital to have recently tested HIV positive.

In this investigation dispositions are known for five of the eight partners. Four of those five are HIV positive, with two newly identified. Three partners are still in process of being located, notified, counseled and tested. There are a total of seven male and one female partners. All partners are sexual contacts only; no needle use has been reported to date.

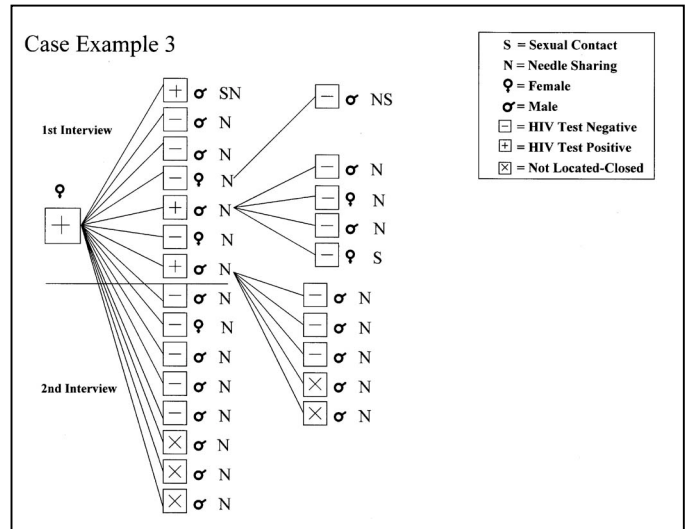
This case involved multiple jurisdictions ranging from Anchorage to villages. Assistance was received from a Regional Health Corporation and Public Health Nursing.



Case #3 – The original patient was interviewed and named seven partners, all of whom were notified, counseled and offered testing. Three of these partners were positive, with two newly testing HIV positive. The two newly identified HIV positive individuals were interviewed, and the original patient was re-interviewed. An additional 18 sex and needle sharing contacts were elicited, all of whom were negative.

In this investigation 25 partners were named with 20 partners notified, counseled and offered testing. Five partners could not be located. Of the 20 partners located and tested, three were HIV positive (two previously unknown). Ten partners had been under custody of the Department of Corrections (current or recent past), two partners were TB reactors, and 1 partner was pregnant.

The majority of partners named were injection drug users. Partners were located in four different cities across Alaska. This investigation included assistance from Public Health Nursing, Department of Corrections, and a Regional Health Corporation.



Partner elicitation and contact notification is an intensive use of public health resources. However, as the three partner notification cases reported here illustrate, it is effort well-spent and is relatively efficient in identifying previously undiagnosed cases of HIV infection. Public health follow-up of these three described cases led to testing and personalized HIV risk reduction counseling of 44 persons who had been exposed to HIV. Of the 44, 9 (20%) tested HIV positive; 6 were not aware that they were infected with HIV. This compares to a percent positivity of (0.2%) from HIV testing through facilities using the State Lab in 1998 (12,555 tests; 22 HIV positive.)

## Discussion

HIV infection became reportable in Alaska in February 1999. Implementation of HIV reporting has received strong support and cooperation from health care providers and laboratories. Public health professionals in the State HIV/AIDS Program have worked closely with providers to obtain HIV/AIDS case information. Although reporting is still incomplete, data support Alaska as being one of the geographic areas with low incidence of HIV infection.

Most important to understanding disease transmission and to targeting activities to prevent disease transmission is identification of incident cases: newly infected persons. By working with newly infected individuals and their health care providers, public health professionals can identify other persons exposed to HIV and learn about characteristics and risk factors that were associated with HIV transmission. Exposed persons can be tested for HIV infection, and counseled about risks of disease transmission and behaviors that will reduce these risks. Persons who are infected can be provided with assistance to insure access to medical evaluation and treatment.

The AIDS/STD Program's experience with partner notification and outreach has been successful. We have received a very high level of cooperation from patients, exposed persons, and providers. We have had a high degree of success in locating, testing, and counseling exposed persons. Through this intensive work, we have identified individuals who were unaware that they were infected with HIV.

## Conclusion

The reporting of HIV infection which went into effect in February 1999 has provided the following benefits:

- 1) more accurate data on the incidence and prevalence of HIV infection in Alaska. Subsequent years of data should provide better information on trends in risk behaviors and demographics of persons newly diagnosed with HIV infection. These data will help inform program funding needs, prevention activities, and planning for care and support services; and
- 2) more timely reporting of individual cases to facilitate case follow-up and partner notification activities. Case follow-up by public health personnel provides assistance to access medical evaluation, diagnosis and treatment, counseling to prevent further transmission, and support services. Partner notification efforts facilitate HIV prevention counseling, testing, and referral for persons exposed to HIV infection.