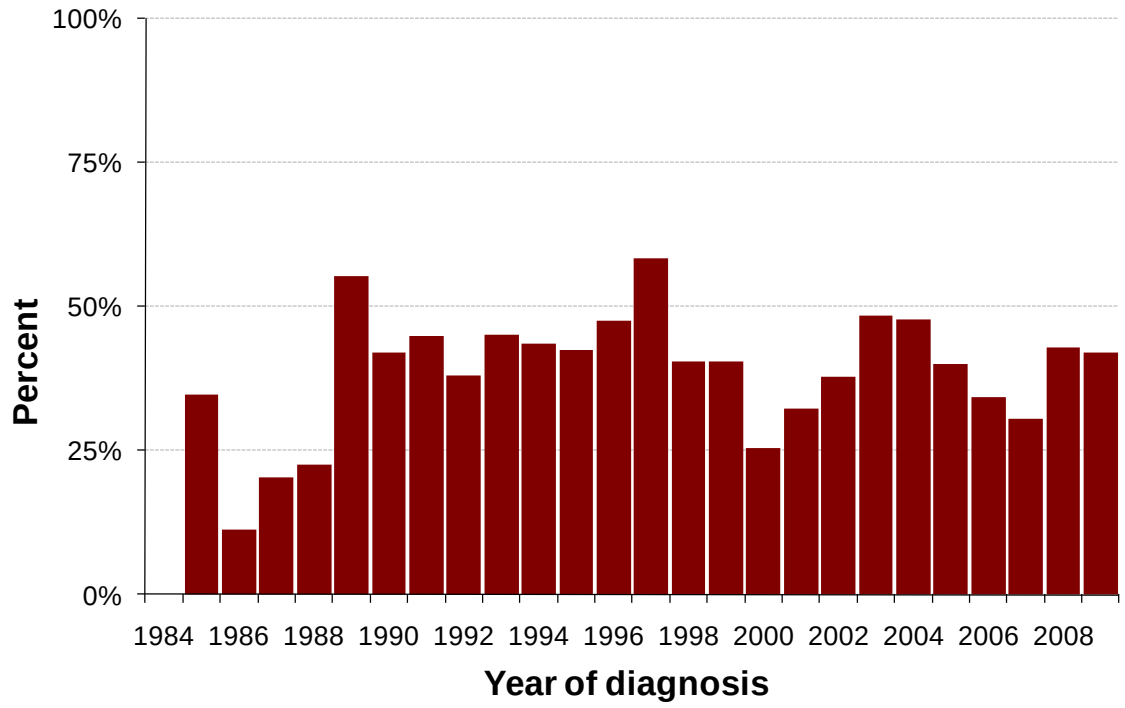
Idaho HIV/AIDS Epidemiologic Profile 2010

Proportion AIDS within 1 year of first HIV diagnosis by HIV diagnosis year—Idaho, 1984–2009



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List of Abbreviations:

AI/AN	American Indian/Alaska Native
A/PI	Asian/Pacific Islander
ADAP	AIDS Drug Assistance Program
AIDS	acquired immunodeficiency syndrome
BRFSS	Behavioral Risk Factor Surveillance System
CDC	Centers for Disease Control and Prevention
HARS	HIV/AIDS Reporting System
HIV	Human Immunodeficiency Virus
IDHW	State of Idaho Department of Health and Welfare
IDU	injection drug user
MSM	men who have sex with men
NCHSTP	National Center for HIV, STD, and TB Prevention (CDC)
NIR	no identified risk
OEFP	Office of Epidemiology and Food Protection
PLWA	people living with AIDS
PLWH	people living with HIV
STD	sexually transmitted disease
TB	tuberculosis
YRBSS	Youth Risk Behavioral Surveillance System

Introduction

Purpose

The Idaho Department of Health & Welfare's Family Planning, STD, and HIV Programs (FPSHP) and the Idaho Advisory Council on HIV and AIDS (IACHA) use HIV/AIDS epidemiologic and surveillance data to provide guidance and funding for programs for persons with, or at risk for, HIV/AIDS. The goals of these programs are to prevent HIV infections and, for those who are infected, to promote testing, care, and treatment.

Prevention and care planning groups use HIV/AIDS epidemiologic profiles for multiple purposes. This document describes the current impact of the HIV/AIDS epidemic in Idaho in terms of sociodemographic, geographic, behavioral, and clinical characteristics of persons infected with HIV. The profile is intended to be a valuable tool that is used at the state and local levels by those who make recommendations for allocating HIV prevention and care resources, planning programs, and evaluating programs and policies.

Audience

The epidemiologic profile is meant to be used by HIV/AIDS prevention and care planners as a tool to make decisions for prioritizing target populations for prevention and care, and for others in the general public to gain knowledge of the impact of HIV/AIDS on Idaho's population and care system for informed action.

Data Sources and Strengths and Weaknesses

A variety of data sources were used in this document. Each has strengths and limitations which affect interpretation. See Appendix A: Data Sources and Strengths and Weaknesses for details related to the data sources used in this document.

Methods

<u>Case Counting</u>
A case of HIV is counted as an Idaho case if the state of residence at first diagnosis is Idaho. Likewise, for AIDS, an Idaho case is one in which the state of residence at diagnosis of AIDS is Idaho.

DHW attempts to present HIV/AIDS data in a manner which meets the purpose of this document, which can more easily allow groups to plan for HIV prevention and HIV/AIDS care. In particular, where the purpose is to ascertain the populations being infected in Idaho, only HIV/AIDS cases where Idaho is the residence at first diagnosis are presented. This applies to the analysis of recent trends and to the tabulations of recent diagnoses in health districts and among special populations. For "Presumed Living With HIV/AIDS", where the purpose is to ascertain a potential burden for HIV/AIDS care or a population of potential secondary transmission in Idaho, all cases not reported as deceased, regardless of residence at first diagnosis, are included in analysis.

Trends

Reporting delays (time between diagnosis of HIV/AIDS and report) can vary. The CDC estimates that about 80% of all AIDS cases and about 92% of all HIV infections are reported within 1 year.

In graphs of trends over time, year of first HIV diagnosis is usually used rather than year of report, since year of diagnosis more closely reflects the actual trends in infection. In presenting AIDS incidence trends over time, year of AIDS diagnosis is used.

Presumed Living with HIV/AIDS

Presumed Living with HIV/AIDS, as used in this document, describes all cases of HIV/AIDS that have been reported in Idaho, regardless of residence at first diagnosis (i.e., have moved to Idaho after prior diagnosis in another state) and are not reported as deceased. This document cannot describe the attributes or number of Idahoans who are infected and not reported to public health.

Race/Ethnicity

HIV/AIDS surveillance data are categorized by race/ethnicity in combined race/ethnicity categories. The National Center for Health Statistics has provided the IDHW Bureau of Vital Statistics and Health Policy with population data sets based on U.S. Census estimates which allow population race/ethnicity breakdowns into these combined categories:

- Hispanic – any race
- American Indian/Alaska Native (AI/AN), not Hispanic
- Asian/Pacific Islander (A/PI), not Hispanic
- Black, not Hispanic
- White, not Hispanic

Unless otherwise noted, these categories are used.

Age Groups

Age groups used for HIV/AIDS surveillance are unique due to the definitions of pediatric and adult cases. When a person is diagnosed with HIV or AIDS, a determination of pediatric or adult HIV or AIDS case is made based on the age at diagnosis. Persons 12 or under at the time of diagnosis are considered pediatric cases and persons aged 13 or above are considered adult cases. In most presentations of these data, the age groups used are: 0-12, 13-19, 20-29, 30-39, 40-49, and 50+ years.

Sex

Sex is reported as male, female, or unknown. Transgender identification was not collected.

Modes of Exposure

All state and city HIV/AIDS surveillance systems funded by the Centers for Disease Control and Prevention use a standardized hierarchy of mode of exposure categories. HIV and AIDS cases with more than one reported mode of exposure to HIV are classified in the exposure category listed first in the hierarchy. In this way, each case is counted as having only one mode of exposure. The only exception to this rule is the dual risk of male-to-male sex (MSM) and intravenous drug use (IDU), which makes up a separate exposure category in the hierarchy.

The following is a list of the hierarchy for adolescent/adult HIV/AIDS cases:

(1) MSM

(2) IDU
(3) MSM/IDU
(4) Hemophilia patient
(5) Heterosexual contact
(6) Receipt of blood transfusion or tissue/organ transplant
(7) Other (e.g. needle stick in a health care setting)
(8) Risk not specified.

The following is the list of the hierarchy for pediatric HIV/AIDS cases:
(1) Hemophilia patient
(2) Mother with HIV or HIV risk
(3) Receipt of blood transfusion or tissue/organ transplant
(4) Other
(5) Risk not specified.

In 2007 at the annual meeting of the Council of State and Territorial Epidemiologists (CSTE) a modification to the mode of exposure category for the addition of a "Presumed Heterosexual" mode of exposure for women was sought and approved by the voting membership. It consisted of assigning a "Presumed Heterosexual" mode of exposure for women who answered "No" to injection drug use risk and for whom other likely alternative HIV infection sources are lacking (for example, occupational exposure) and the HIV risk of male partners was unknown. CSTE's statement indicates the category applies only to females and that more work must be done to discern presumed heterosexual mode of exposure for males. Although the modification is yet to be adopted at CDC, it has merit for describing probable heterosexual transmission in women which otherwise would be uncategorized. We have chosen to include this publication.

Heterosexual contact, different than "Presumed heterosexual contact" in this publication, is only designated if a male or female can report specific heterosexual contact with a partner who has or is at increased risk for HIV infection (e.g. an intravenous drug user). For females this also includes heterosexual contact with a bisexual male (mainly due to the elevated prevalence of HIV infection among men who have sex with men).

"Risk not specified" refers to cases with no reported history of exposure to HIV through any of the routes listed in the hierarchy of exposure categories. These cases include persons who cannot or who have not yet been interviewed by health department staff, persons whose exposure history is incomplete because they died, declined to be interviewed, or were lost to follow-up, and persons who were interviewed or for whom follow-up information was available but no exposure was identified or acknowledged.

The growing number of cases with unspecified risk in recent years is, in part, artificial and due to interviews that have not yet been completed. In time, a number of these will be assigned a mode of exposure category. However, the perception of social stigma presumably decreases the likelihood that a person will acknowledge certain risk behaviors, particularly male-to-male sex or injecting drug use. Thus, if the true numbers of cases due to MSM, and/or IDU increase, a larger number of cases without a specified risk would also be expected.

Late Testers

Because median time of progression between HIV infection and the development of AIDS is an average of 10 years, individuals who receive an AIDS diagnosis within 1 year of HIV infection

diagnosis are likely to have tested late after their actual infection. HIV/AIDS data were assessed for initial HIV diagnosis date and AIDS diagnosis date. Those with an AIDS diagnosis within 1 year of initial HIV diagnosis were classified as "Late Testers". Those whose diagnosis of AIDS was after 1 year of first HIV diagnosis or who do not have an AIDS diagnosis are classified as AIDS after 1 year. Limitations exist to classifying individuals as late testers by this method. First, it does not take into account prior HIV negative tests that may have been performed in close proximity to the HIV diagnosis. Second, it does not account for the inability to monitor disease progression accurately if individuals diagnosed with dropped away or infrequently visited specialty HIV medical providers.

Limitations of this document

When making planning decisions, it is important to consider the overall strengths and limitations of this document. Although the profile is comprehensive and draws from a number of data sources, there are many things that the profile cannot explain. The HIV/AIDS surveillance system in Idaho is based on data from people who have been tested for HIV. Consequently, HIV infections are under-detected and under-reported because only persons with HIV who were tested are counted. Also, persons are tested at differing times after they become infected, and many persons are not tested until HIV infection has progressed to AIDS. Thus, it is important to remember that the data in this report do not necessarily represent the characteristics of persons who have been recently infected with HIV, nor do they provide a true measure of HIV incidence.

Analyses of many different data sets are presented to provide robust representations of particular subpopulations. However, demographic and geographic subpopulations are disproportionately sensitive to differences and changes in access to health care, HIV testing patterns, and specific prevention programs and services. All of these issues must be carefully considered when interpreting HIV data. Therefore, it is important to make comparisons across data sources to get the most complete picture.

Executive Summary

Methods

- A "Presumed Heterosexual" mode of exposure has been added for women who answered "No" to injection drug use risk and for whom other likely alternative HIV infection sources are lacking (for example, occupational exposure) and the HIV risk of male partners was unknown. Although the modification is yet to be adopted at CDC, it has merit for describing probable heterosexual transmission in women which otherwise would be categorized as "Other/Unspecified".

Overall

- Idaho's 2009 population was estimated at 1,545,801. A large majority (86.5%) of residents are White; 9.8% are Hispanic. Idaho's population ranks 4th youngest in the U.S. with an average age of 34.0 years. 9.5% of families and 13.5% of individuals live below the poverty level.
- 1,125 HIV and AIDS cases have been diagnosed in Idaho residents and 1,254 individuals are presumed to be living with HIV or AIDS in Idaho, including individuals first diagnosed out-of-state.
- Males have been diagnosed with HIV/AIDS at a higher 2-year aggregate rate than females during 2004–2009. The 2-year aggregate rate trend among males increased sharply in 2008–2009, increasing 57% over the rate in 2004–2005. The rate among females stayed relatively level.
- Increases 2-year aggregate case counts occurred in 5 of 6 age groups. Age groups with at least 20 cases during 2004–2009 were 20–29 years, 30–39 years, 40–49 years, and 50+ years. In the 4 age groups with at least 20 cases over the most recent 6 year period, the increase was over 70% in 3, indicating increases were spread across age groups.
- Whites were 76% of diagnoses during 2004–2009, and a 76% increase in diagnoses was observed among Whites during 2004–2009. The number of diagnoses among other race/ethnic categories remained relatively level.
- MSM continues to be the most reported mode of exposure (49%) during 2004–2009, and the number of diagnoses among MSMs, MSM/IDUs, and Heterosexuals (including Presumed Heterosexuals) increased. Diagnoses among IDUs decreased by half, although the numbers are small.

Populations of interest

- 109 (49%) of the total 219 individuals diagnosed with HIV/AIDS during 2005–2009 were MSM. The highest proportion (32%) was aged 20-29 years. All but 1 were White (87%) or Hispanic (12%).
- 23 MSM/IDU were diagnosed during 2005–2009. Most (57%)% were 30-39 years at diagnosis. All but 2 were White.
- 17 non-MSM IDU were diagnosed during 2005–2009. 65% were male. Female IDUs were younger than male IDUs. In women, the highest proportions were aged 20-29 years at diagnosis, whereas for men, the highest proportion were aged 40-49 years.
- 27 heterosexual and presumed heterosexual mode of exposure diagnoses were reported during 2005–2009. 74% were female. Heterosexual females had twice the proportion of Hispanic race/ethnicity and were distributed toward younger age groups compared with males.

- 32 women were diagnosed during 2005–2009. Where mode of exposure was identified, 20 were heterosexual partners of high-risk males or had presumed heterosexual mode of exposure; 6 were IDU. A high proportion (25%) were Hispanic.
- 30 of the 36 HIV/AIDS cases in youth (aged 13-24 at diagnosis) were males; most (93%) males were MSM or MSM/IDU. The 6 female youth HIV/AIDS diagnoses were 50% non-White and half were heterosexual or presumed heterosexual mode of exposure.
- 36% (n=80) of the 219 individuals diagnosed during 2005–2009 progressed to AIDS within 1 year of their initial HIV diagnosis, suggesting these individuals received HIV testing late in the course of disease, long after initial infection. Proportion of late testers increased with successive age groups, suggesting individuals more people who were older at initial HIV diagnosis had older infections before being diagnosed. Heterosexual and Unspecified modes of exposure had higher proportions of late testers. Geographically, the proportion of late testers was highest in District 1 and lowest in District 6.

What are the sociodemographic characteristics of the population in Idaho?

Idaho has 44 counties and a land area of 83,557 square miles with agriculture, forestry, manufacturing, and tourism being the primary industries. Eighty percent of Idaho's land is either range or forest. Much of the state's central interior is mountain wilderness and national forest. Nineteen of Idaho's 44 counties are considered "frontier," with averages of less than six persons per square mile.

The US Census Bureau estimated Idaho's population in 2009 at 1,545,801. The physical barriers of terrain and distance have consolidated Idaho's population into seven natural regions. Idaho's public health delivery system is organized around the seven population centers, with counties grouped into seven districts (Figure 1). Estimated population proportions for the districts range from 6.8% in District 2 to 27.8% in District 4 (Table 1).

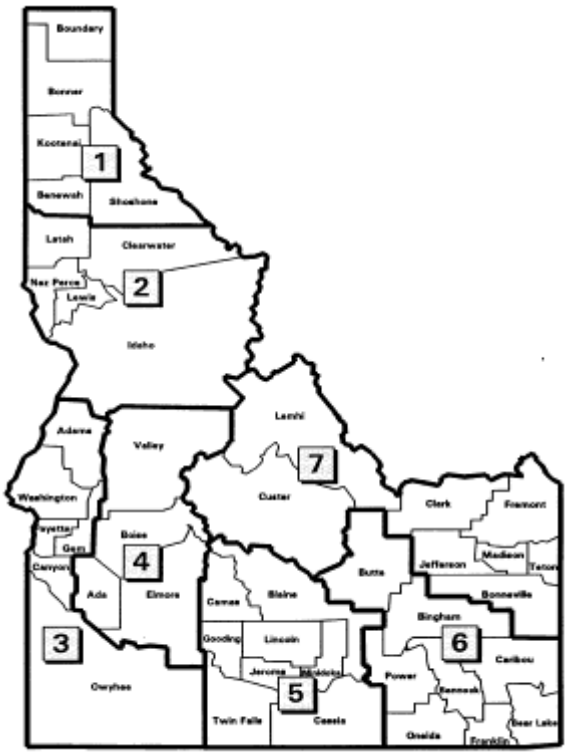

Figure 1. Idaho health district boundaries

Idaho's population ranks 4th youngest among states and the District of Columbia. The U.S. Census Bureau's 2005–2009 American Community Survey 5 year estimates, calculated the median age to be 34.0 years, compared to the U.S. median age of 36.5. According to U.S. Census Bureau estimates for 2009, almost 20% of the population are aged 12 and under (Table 2). Another quarter of the population is 13–29 years of age.

Table 1. Estimated population by health district—Idaho, 2009

Health district	N	%
District 1	213,662	13.8%
District 2	104,496	6.8%
District 3	251,013	16.2%
District 4	429,647	27.8%
District 5	179,994	11.6%
District 6	167,290	10.8%
District 7	199,699	12.9%
TOTAL	1,545,801	100.0%

Source: National Center for Health Statistics. Estimates of the July 1, 2009, United States resident population from the Vintage 2009 postcensal series by county, age, sex, race, and Hispanic origin, prepared under a collaborative arrangement with the U.S. Census Bureau, 7/23/2010.

The majority of Idaho's population are non-Hispanic Whites (85.5%). Hispanics (any race) are 10.7% of the population (Table 3). The country of origin for 87% of individuals of Hispanic ethnicity in Idaho is Mexico according to the American Community Survey 5-year estimates. All other race/ethnic categories make up the remaining 3.8% of Idaho's population. A smaller proportion of Idahoans are foreign born or speak a language other than English at home, compared to the U.S. population as a whole.

Educational achievement of high school or greater was higher in Idaho than the U.S. population as a whole, but proportionally fewer go on to receive a bachelor's degree (Table 4). 9.5% of families and 13.5% of individuals live below the poverty level, which is similar to the overall U.S. population.

Table 2. Estimated population by age group—Idaho, 2009

Age Group	N	%
0-12	307,722	19.9%
13-19	159,146	10.3%
20-29	225,053	14.6%
30-39	195,302	12.6%
40-49	197,073	12.7%
50 +	461,505	29.9%
TOTAL	1,545,801	100.0%

Source: National Center for Health Statistics. Estimates of the July 1, 2009, United States resident population from the Vintage 2009 postcensal series by county, age, sex, race, and Hispanic origin, prepared under a collaborative arrangement with the U.S. Census Bureau, 7/23/2010.

Table 3. Estimated population by race/ethnicity—Idaho, 2009

Race/Ethnicity	N	%
Hispanic	165,285	10.7%
American Indian/Alaska Native	21,801	1.4%
Asian/Pacific Islander	21,780	1.4%
Black	14,778	1.0%
White	1,322,157	85.5%
TOTAL	1,545,801	100.0%

Source: National Center for Health Statistics. Estimates of the July 1, 2009, United States resident population from the Vintage 2009 postcensal series by county, age, sex, race, and Hispanic origin, prepared under a collaborative arrangement with the U.S. Census Bureau, 7/23/2010.

Table 4. Selected population characteristics 5-year estimates—Idaho and the U.S., 2005–2009

Characteristic	Idaho	U.S.
Population 25 years and over:		
High school graduate or higher	87.7%	84.6%
Bachelor's degree or higher	23.7%	27.5%
Foreign born (all ages)	5.8%	12.4%
Married males (population 15 years and over)	58.2%	52.3%
Married females (population 15 years and over)	56.4%	48.4%
Speak a language other than English at home (5 years and over)	10.0	19.6%
Families below poverty level	9.5%	9.9%
Individuals below poverty level	13.5%	13.5%

Source: U.S. Census Bureau, 2005-2009 American Community Survey 5-Year Estimates

What is the scope of the HIV/AIDS epidemic in Idaho?

Cumulative HIV and AIDS

At 3.7 per 100,000, the Idaho rate is far below the estimated rate of 19.4 for the 37 states with mature HIV reporting systems in 2008. Rates of HIV infection (including concurrent AIDS diagnosis) have decreased in Idaho since the early 1990s (Figure 2) but appeared to increase substantially in the most recent 2 years for which data are available.

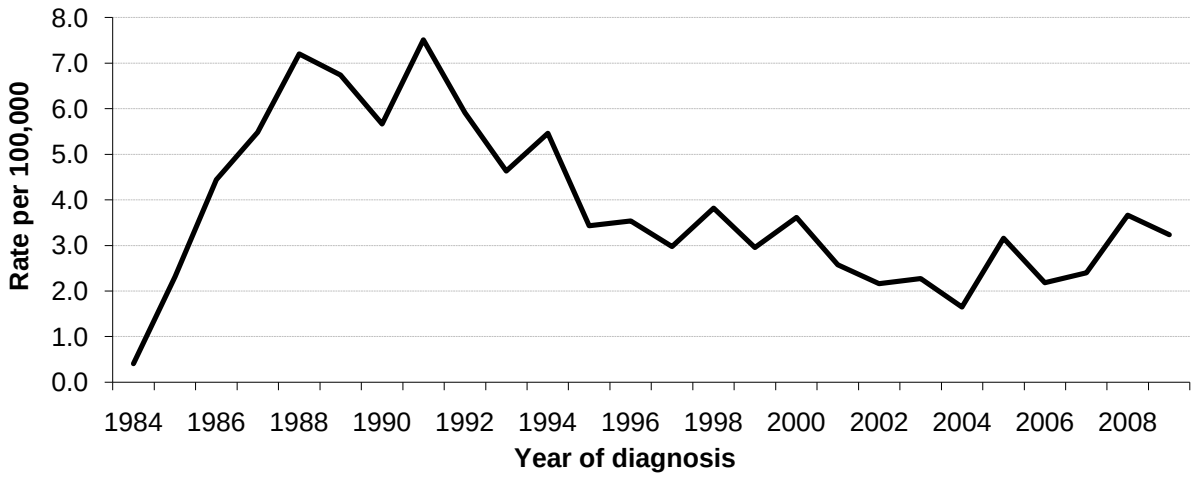

Figure 2.HIV/AIDS rate among Idaho residents by diagnosis year—Idaho, 1984–2009

HIV

A total of 459 residents were first diagnosed with HIV in Idaho from 1984–2009 and have not yet received an AIDS diagnosis. The great majority (81%) were male (Table 5); 80% were White. By age, the highest proportion of HIV cases were diagnosed in persons aged 20-29 years (42%), through persons aged 30-39 years accounted for almost one third of diagnoses. The most frequently reported exposure category was MSM, although the proportion was less than half of the total. Five were pediatric cases.

AIDS

A total of 666 residents were first diagnosed and reported with AIDS in Idaho from 1984–2009 (Table 5). An even greater majority (85%) were male compared to HIV cases, and 85% were White. Forty percent were aged 30–39 years at their AIDS diagnosis. Over half of diagnosed cases were among MSM. Three cases were pediatric.

Table 5. Characteristics of cumulative non-duplicated Idaho resident HIV & AIDS diagnosed through 12/31/2009

	Disease/Condition			
	HIV		AIDS	
	N	%	N	%
Sex				
Male	373	81%	569	85%
Female	86	19%	97	15%
Total	459	100%	666	100%
Race/ethnicity				
Hispanic	56	12%	69	10%
American Indian/Alaska Native	8	2%	10	2%
Asian/Pacific Islander	3	1%	3	0%
Black	20	4%	17	3%
White	366	80%	562	84%
Unknown	6	1%	5	1%
Total	459	100%	666	100%
Exposure categories - adults				
Men who have sex with men (MSM)	215	47%	345	52%
Injection drug use	55	12%	74	11%
MSM and inject drugs	46	10%	53	8%
Hemophilia/Coagulation disorder	1	0%	18	3%
Heterosexual Contact	59	13%	87	13%
Presumed Heterosexual Contact	9	2%	10	2%
Receipt of blood, components, or tissue	2	0%	11	2%
Other/risk not reported or identified	67	15%	65	10%
Total	454	100%	663	100%
Exposure categories - pediatric				
Mother with/at risk for HIV infection	3	60%	1	33%
Receipt of blood, components, or tissue	0	0%	2	67%
Other/Undetermined	2	40%	0	0%
Total	5	60%	3	100%
Age group at first diagnosis				
< 13	5	1%	3	0%
13-19	13	3%	5	1%
20-29	192	42%	159	24%
30-39	141	31%	269	40%
40-49	81	18%	155	23%
Over 49	27	6%	75	11%
Total	459	100%	666	100%

Presumed Living with HIV/AIDS

New HIV/AIDS cases outnumbered HIV/AIDS case deaths every year since Idaho's first case in 1984. Prior to the widespread use of protease inhibitors beginning in 1996, deaths averaged 26 per year. Afterward, Idaho averaged 15 deaths per year. With new cases outnumbering deaths, the number of reported persons living with HIV/AIDS in Idaho has increased (Figure 3). As of 12/31/2009, 1,254 persons ever reported in Idaho (regardless of whether they were diagnosed in Idaho or moved from another state) are presumed to be living with HIV/AIDS. While the possibility remains of over-counting of presumed living cases due to out-migration or deaths out of state, these figures represent only diagnosed and reported cases. Individuals infected but who are unaware of their HIV infection and have not been tested or reported are part of the true population of interest and mitigate potential over-counting.

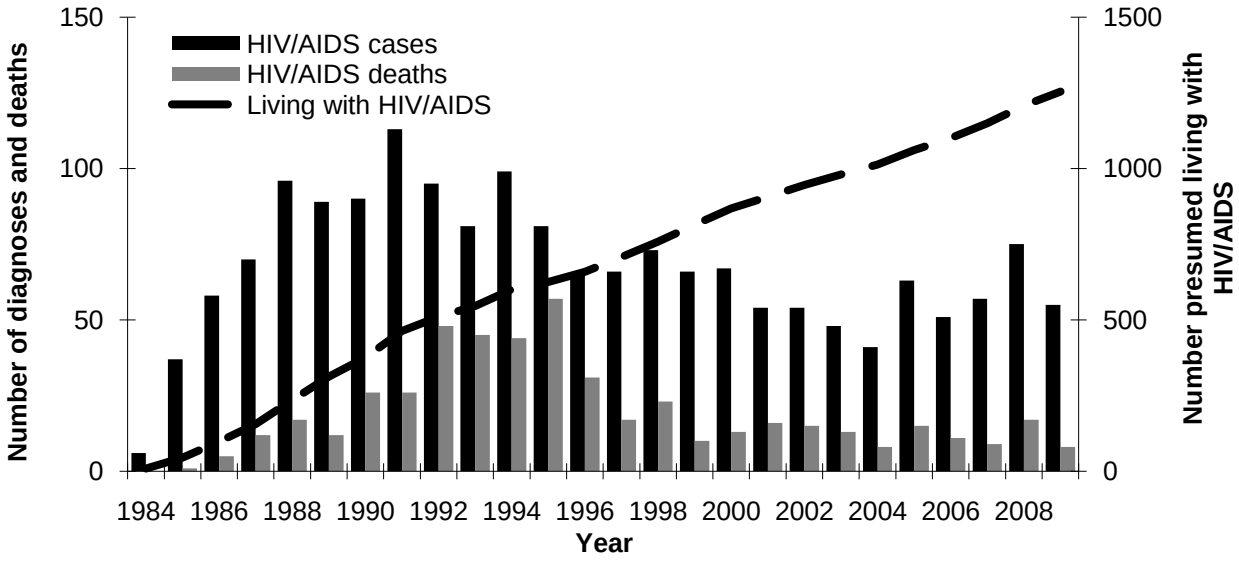

Figure 3. HIV/AIDS cases ever reported*, deaths, and presumed living by year—Idaho, 1984–2009
*Regardless of residence at first diagnosis.

More males than females were living with HIV/AIDS in Idaho at the end of 2007 (Table 6); males outnumbered females at a ratio of 5.5:1. At the national level including states with mature HIV reporting systems, this ratio is 2.7:1 (excluding pediatric cases which were presented without sex), according to the CDC 2008 HIV Surveillance Report. The proportion distribution by age for males was toward older age groups than for females. Overall, the presumed living rate was highest in the 40-49 year age group.

Table 6. Presumed living with an HIV/AIDS by sex and current age group—Idaho, 2009

Current age group	Males			Females			Total		
	N	%	Rate	N	%	Rate	N	%	Rate
<13	3	0%	1.8	6	3%	3.7	9	1%	2.7
13-19	3	0%	3.7	3	1%	3.8	6	0%	3.8
20-29	77	8%	65.9	31	13%	28.7	108	9%	48.0
30-39	181	18%	181.1	50	22%	52.4	231	18%	118.3
40-49	447	44%	450.9	82	36%	83.7	529	42%	268.4
50+	313	31%	141.1	58	25%	24.2	371	30%	80.4
TOTAL	1,024	82%	132.0	230	18%	29.9	1,254	100%	81.1

The majority of persons living with HIV/AIDS in Idaho were White (Table 7), but the rate (per 100,000) was lower than in most other race/ethnic categories. Blacks were observed to have the highest rate and Asian/Pacific Islanders had the lowest. This is also true at the national level for states with longstanding HIV reporting systems.

Table 7. Presumed living HIV and AIDS cases by sex and race/ethnicity—Idaho, 2009

Race/Ethnicity	Males			Females			Total		
	N	%	Rate	N	%	Rate	N	%	Rate
Hispanic	104	10%	118.9	35	15%	45.0	139	11%	84.1
AI/AN	17	2%	157.1	7	3%	63.8	24	2%	110.1
A/PI	8	1%	79.7	1	0%	8.5	9	1%	41.3
Black	49	5%	614.3	33	14%	485.2	82	7%	554.9
White	828	81%	125.5	152	66%	22.9	980	78%	74.1
Unknown	18	2%	-	2	1%	-	20	2%	-
TOTAL	1,024	82%	132.0	230	18%	29.9	1,254	98%	81.1

Over half of males living with HIV/AIDS in Idaho had MSM mode of exposure classification (Table 8). IDUs accounted for 10% and the dual-category MSM/IDUs were an additional 14%. Over half of females living with HIV/AIDS had heterosexual or presumed heterosexual mode of exposure. Both males and females had notable proportions of unidentified risk.

The highest rate of reported persons presumed living with HIV/AIDS was in health district 4 (Table 9), which also had the highest number of persons living with HIV/AIDS.

Table 8. Presumed living HIV/AIDS cases by sex and mode of exposure—Idaho, 2009

	Males		Females			Total	
Exposure category	N	%	N	%		N	%
Adult							
MSM	575	56%	NA	-		575	46%
IDU	103	10%	62	27%		165	13%
MSM/IDU	148	14%	NA	-		148	12%
Hemophiliac	4	0%	1	0%		5	0%
Heterosexual contact	56	5%	94	41%		150	12%
Presumed heterosexual contact	0	0%	30	13%		30	2%
Transfusion/transplant	4	0%	2	1%		6	0%
Risk not specified	129	13%	28	12%		157	13%
Pediatric							
Mother with/at risk HIV	3	0%	8	3%		11	1%
Transfusion/transplant	0	0%	0	0%	*	0	0%
Other/undetermined	2	0%	5	2%		7	1%
TOTAL	1,024	82%	230	18%		1,254	100%

Table 9. Presumed living HIV/AIDS cases by district—Idaho, 2009

District	N	%	Rate
1	147	12%	68.8
2	81	6%	77.5
3	156	12%	62.1
4	520	41%	121.0
5	117	9%	65.0
6	132	11%	78.9
7	101	8%	50.6
TOTAL	1,254	100%	81.1

Recent HIV/AIDS Trends

The majority of cases of HIV/AIDS in Idaho are male. The 2-year aggregate rates of HIV/AIDS diagnoses among females were relatively stable during the time period (Figure 4), but it appeared to increase sharply among males, rising 57% from 3.9 per 100,000 in 2004–2005 to 6.1 in 2008–2009.

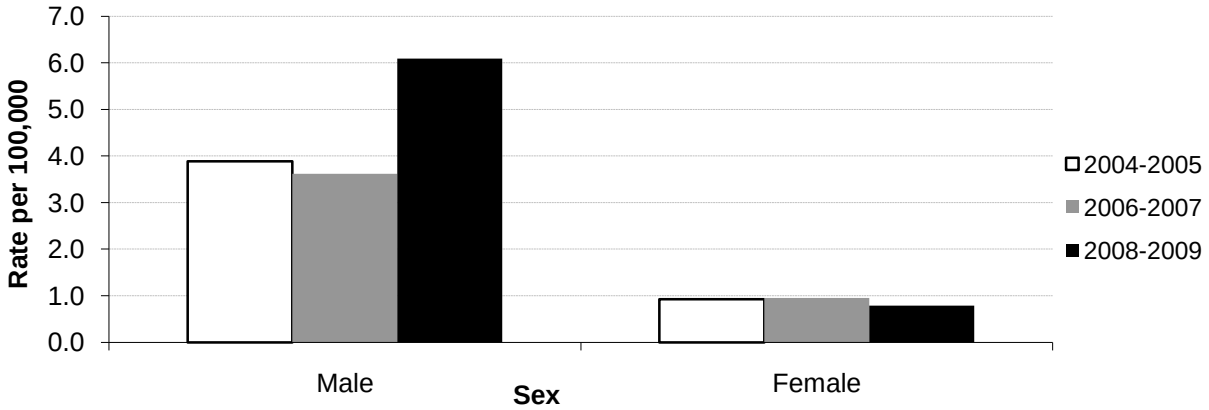

Figure 4. 2-year aggregate rate of HIV/AIDS diagnoses by sex—Idaho, 2004–2009

HIV diagnoses increased in 3 different age groups. Cases increased by 80% among 20-29 year olds, 72% among 40-49 year olds, and 100% among persons aged 50 and over during 2002–2007, although the number in this last age group were few compared to 20-29 and 30-39 year olds (Figure 5).

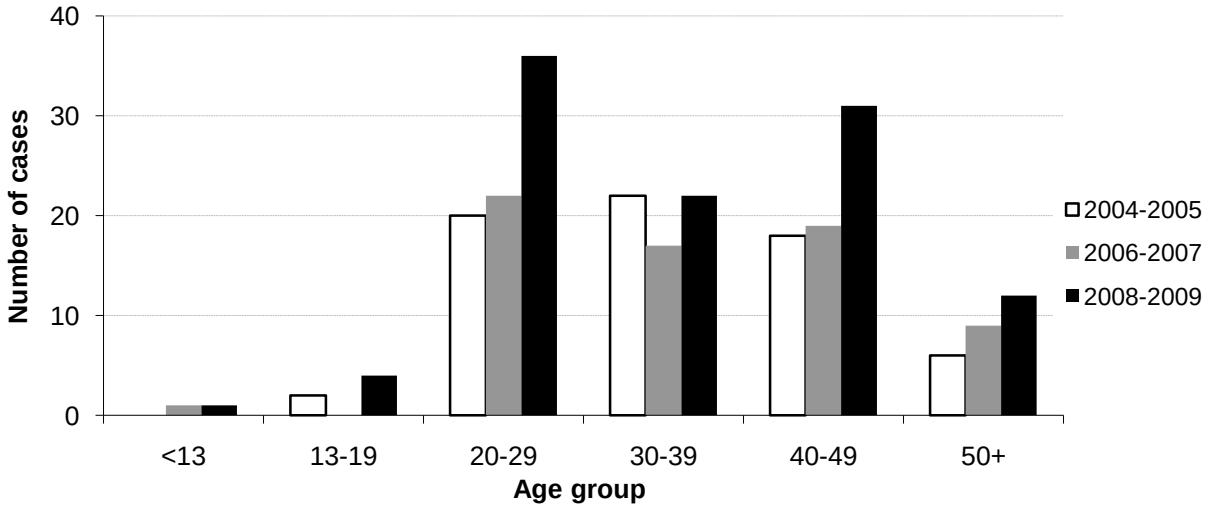

Figure 5. 2-year aggregate HIV/AIDS diagnoses by selected age group—Idaho, 2004–2009

A very large majority of diagnoses during the time frame were White (Figure 6), which increased by 76% from 49 in 2004–2005 to 86 in 2008–2009. Trends in diagnoses among other race/ethnic categories were minimal.

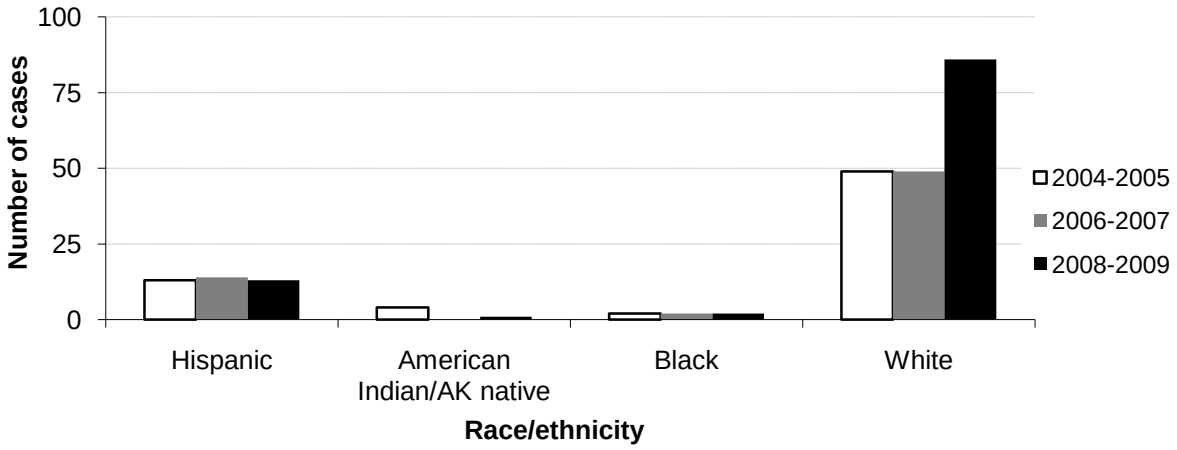

Figure 6. 2-year aggregate HIV/AIDS diagnoses by selected race/ethnicity—Idaho, 2004–2009

MSM was the most frequently reported mode of exposure during each 2-year period from 2004–2009 (Figure 7). The trend among MSM and MSM/IDU appeared to increase. Heterosexual mode of exposure increased, but when combined with the presumed heterosexual category, the trend was somewhat flat, with 10 cases in 2004–2005 and 11 cases in 2008–2009.

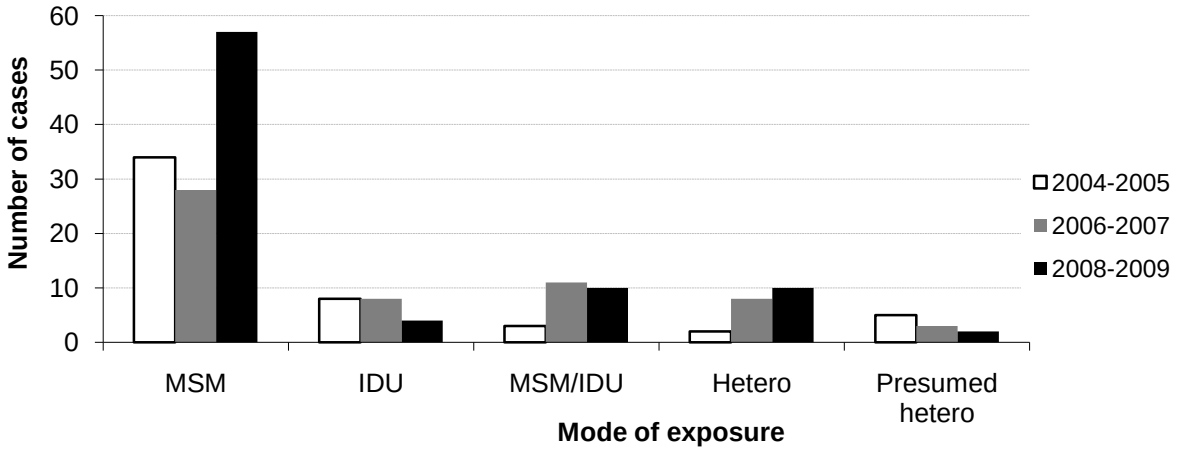

Figure 7. 2-year aggregate HIV/AIDS diagnoses by selected mode of exposure—Idaho, 2004–2009

Populations of Interest

Reported cases of HIV/AIDS diagnosed in Idaho residents during the past 5 years (2005–2009) were chosen for this section to highlight the characteristics of the most recent cases in these special populations. During this time period, 219 individuals were newly diagnosed and reported infected with HIV, including those with concurrent AIDS diagnosis.

Special populations examined in this document are: Men who have sex with men and do not inject drugs (MSM), MSM who inject drugs (MSM/IDU), non-MSM injection drug users (IDU), Heterosexuals (including both Heterosexual and Presumed Heterosexual modes of exposure), and Youth.

Men Who Have Sex with Men (non-IDU)

Half of individuals diagnosed were MSM during the 5-year period 2005–2009 (n=109), the most frequently reported mode of exposure category during the time period. The great majority (87%) were White; 12% were Hispanic (Table 10). Age groups were widely distributed but MSM in their 20s accounted for almost 2 in every 5 cases.

Table 10. HIV/AIDS diagnoses among MSM (non-IDU) by race/ethnicity and age group—Idaho, 2005–2009

	Hispanic		White		Other/Unk		TOTAL	
Age Group	N	%	N	%	N	%	N	%
13-19	0	0%	3	3%	0	0%	3	3%
20-29	4	31%	38	40%	1	100%	43	39%
30-39	5	38%	20	21%	0	0%	25	23%
40-49	4	31%	25	26%	0	0%	29	27%
50+	0	0%	9	9%	0	0%	9	8%
TOTAL	13	12%	95	87%	1	1%	109	100%

Men Who Have Sex with Men and Inject Drugs

During 2005–2009, 23 persons diagnosed with HIV/AIDS were reported to be MSM and also IDU. Although this combined mode of exposure category may potentially be combined with MSMs or IDUs for analysis, this may represent a unique population, and at the request of readers has been presented separately here. In this time period, diagnosed MSM/IDUs differed from MSMs (non-IDU) and IDUs (non-MSM) with respect to Hispanic ethnicity – none were diagnosed among MSM/IDUs whereas it accounted for 12% in both of the other groups (Table 11). Additionally, the distribution by age group was greatest in 30-39 year olds which older than MSM (non-IDU) and younger than IDU (non-MSM).

Table 11. HIV/AIDS diagnoses among MSM/IDU by age group and race/ethnicity—Idaho, 2005–2009

	AI/AN		Black		White		TOTAL	
Age Group	N	%	N	%	N	%	N	%
13-19	0	0%	0	0%	1	5%	1	4%
20-29	0	0%	0	0%	5	24%	5	22%
30-39	1	100%	1	100%	11	52%	13	57%
40-49	0	0%	0	0%	4	19%	4	17%
50+	0	0%	0	0%	0	0%	0	0%
TOTAL	1	4%	1	4%	21	91%	23	100%

Injection Drug Users (Non-MSM)

Most of the 17 non-MSM IDUs diagnosed during 2005–2009 were males (Table 12). Age group distributions were different in women compared with men. In women, the highest proportion were aged 20-29 years at diagnosis whereas, for men, the highest proportion were aged 40-49 years. 76% of cases were White. Two were AI/AN, half of the 4 total diagnoses among AI/AN during 2005–2009.

Table 12. HIV/AIDS diagnoses among IDU (non-MSM) by sex, age group and race/ethnicity—Idaho, 2005–2009

		Race/ethnicity							
		Hispanic		AI/AN		White		TOTAL	
	Age Group	N	%	N	%	N	%		
Males	13-19	0	0%	0	0%	0	0%	0	0%
	20-29	0	0%	0	0%	1	13%	1	9%
	30-39	0	0%	0	0%	3	38%	3	27%
	40-49	1	100%	2	100%	2	25%	5	45%
	50+	0	0%	0	0%	2	25%	2	18%
	TOTAL	1	9%	2	18%	8	73%	11	100%
Females	13-19	0	0%	0	-	0	0%	0	0%
	20-29	0	0%	0	-	3	60%	3	50%
	30-39	1	100%	0	-	1	20%	2	33%
	40-49	0	0%	0	-	1	20%	1	17%
	50+	0	0%	0	-	0	0%	0	0%
	TOTAL	1	17%	0	-	5	83%	6	100%
Total	13-19	0	0%	0	0%	0	0%	0	0%
	20-29	0	0%	0	0%	4	31%	4	24%
	30-39	1	50%	0	0%	4	31%	5	29%
	40-49	1	50%	2	100%	3	23%	6	35%
	50+	0	0%	0	0%	2	15%	2	12%
	TOTAL	2	12%	2	12%	13	76%	17	100%

Note: percentages may not equal 100 due to rounding

Heterosexuals (includes both Heterosexual and Presumed Heterosexual modes of exposure)

For this analysis, both Heterosexual and Presumed Heterosexual modes of exposure were used (see Methods for an explanation of these modes of exposure and the difference between them). More women than men were reported with heterosexual mode of exposure during 2005–2009 (Table 13); Hispanic women were 22% of the diagnoses. Sex with IDU and sex with someone with HIV/AIDS were the reported partner risks for individuals with heterosexual mode of exposure (Table 14); by definition, presumed heterosexual mode of exposure partners were of unknown HIV risk. Heterosexual females were distributed toward younger age groups compared to males. All but one male was aged 40 years or older.

Table 13. HIV/AIDS diagnoses among persons with heterosexual or presumed heterosexual mode of exposure by race/ethnicity and sex—Idaho, 2005–2009

	Males		Females		Total	
Race/Ethnicity	N	%	N	%	N	%
Hispanic - any race	1	14%	6	30%	7	26%
American Indian/AK native	0	0%	0	0%	0	0%
Asian/Pacific Islander	0	0%	0	0%	0	0%
Black	1	14%	0	0%	1	4%
White	5	71%	14	70%	19	70%
Unknown	0	0%	0	0%	0	0%
TOTAL	7	26%	20	74%	27	100%

Table 14. HIV/AIDS diagnoses among persons with heterosexual or presumed heterosexual mode of exposure by reported partner risk, age group, expanded mode of exposure, and sex, 2005–209

		Reported partner risk							
Males		IDU		HIV/AIDS diagnosis		Unknown		TOTAL	
	Age Group	N	%	N	%	N	%	N	%
	13-19	0	0%	0	0%	N/A	-	0	0%
	20-29	0	0%	1	25%	N/A	-	1	14%
	30-39	0	0%	0	0%	N/A	-	0	0%
	40-49	2	67%	3	75%	N/A	-	5	71%
	50+	1	33%	0	0%	N/A	-	1	14%
	TOTAL	3	43%	4	57%	N/A	-	7	100%
Females	13-19	1	13%	0	0%	0	0%	1	5%
	20-29	3	38%	1	20%	3	43%	7	35%
	30-39	2	25%	1	20%	1	14%	4	20%
	40-49	2	25%	2	40%	1	14%	5	25%
	50+	0	0%	1	20%	2	29%	3	15%
	TOTAL	8	40%	5	25%	7	35%	20	100%
Total	13-19	1	9%	0	0%	0	0%	1	4%
	20-29	3	27%	2	22%	3	43%	8	30%
	30-39	2	18%	1	11%	1	14%	4	15%
	40-49	4	36%	5	56%	1	14%	10	37%
	50+	1	9%	1	11%	2	29%	4	15%
	TOTAL	11	41%	9	33%	7	26%	27	100%

Women

The 20–29 year age group was the most frequently diagnosed age group among women diagnosed during 2005–2009 (Table 15). About two thirds of women diagnosed during this time period had heterosexual or presumed heterosexual mode of exposure. Approximately one fifth were IDU. The proportion of women with unspecified mode of exposure was high, also about one fifth. Non-White women are overrepresented among women diagnosed during the time

frame compared with Idaho's population distribution (Table 16). Only 69% were White; almost one quarter were Hispanic. Comparatively, the U.S. Census Bureau estimated females were 87% White (non-Hispanic) and 9% Hispanic among Idaho's 2007 population, the middle year of the time period of interest,

Table 15. HIV/AIDS diagnoses among women (≥ 13 years) by age group and mode of exposure—Idaho, 2005–2009

	IDU		Heterosexual		Presumed heterosexual		Risk not specified		TOTAL	
Age Group	N	%	N	%	N	%	N	%	N	%
13-19	0	0%	1	8%	0	0%	0	0%	1	3%
20-29	3	50%	4	31%	3	43%	2	33%	12	38%
30-39	2	33%	3	23%	1	14%	1	17%	7	22%
40-49	1	17%	4	31%	1	14%	3	50%	9	28%
50+	0	0%	1	8%	2	29%	0	0%	3	9%
TOTAL	6	19%	13	41%	7	22%	6	19%	32	100%

Table 16. HIV/AIDS diagnoses among women (≥ 13 years) by race/ethnicity and mode of exposure—Idaho, 2005–2009

	IDU		Heterosexual		Presumed heterosexual		Risk not specified		TOTAL	
Race/Ethnicty	N	%	N	%	N	%	N	%	N	%
Hispanic	1	17%	2	15%	4	57%	1	17%	8	25%
AI/AN	0	0%	0	0%	0	0%	1	17%	1	3%
Black	0	0%	0	0%	0	0%	1	17%	1	3%
White	5	83%	11	85%	3	43%	3	50%	22	69%
TOTAL	6	19%	13	41%	7	22%	6	19%	32	100%

Youth (aged 13-24)

Sixteen percent of diagnoses during 2005–2009 (n=36) were among youth. Eighty-three percent were males (Table 17); all but two males were White. Among females, only half were White. MSM was the most frequently reported mode of exposure for males; over two thirds of males were White and MSM. Among women, half were heterosexual or presumed heterosexual mode of exposure and one third were IDU

Table 17. HIV/AIDS diagnoses among youth (aged 13-24 yrs) by sex, race/ethnicity, and mode of exposure—Idaho, 2003–2007

		MSM		IDU		MSM/IDU		Hetero-sexual		Presumed hetero-sexual		Risk not specified		TOTAL	
Males	Race/Ethnicity	N	%	N	%	N	%	N	%	N	%	N	%	N	%
	Hispanic - any race	2	8%	0	-	0	0%	0	0%	NA	-	0	0%	2	7%
	AI/AN	0	0%	0	-	0	0%	0	0%	NA	-	0	0%	0	0%
	A/PI	0	0%	0	-	0	0%	0	0%	NA	-	0	0%	0	0%
	Black	0	0%	0	-	0	0%	0	0%	NA	-	0	0%	0	0%
	White	23	92%	0	-	3	100%	1	100%	NA	-	1	100%	28	93%
	TOTAL	25	83%	0	0%	3	10%	1	3%	NA	-	1	3%	30	100%
Fe-males	Hispanic - any race	N/A	-	0	0%	N/A	-	0	0%	1	100%	0	0%	1	17%
	AI/AN	N/A	-	0	0%	N/A	-	1	50%	0	0%	0	0%	1	17%
	A/PI	N/A	-	0	0%	N/A	-	0	0%	0	0%	0	0%	0	0%
	Black	N/A	-	0	0%	N/A	-	0	0%	0	0%	1	100%	1	17%
	White	N/A	-	2	100%	N/A	-	1	50%	0	0%	0	0%	3	50%
	TOTAL	N/A	-	2	33%	N/A	-	2	33%	1	17%	1	17%	6	100%
Total	Hispanic - any race	2	8%	0	0%	0	0%	0	0%	1	100%	0	0%	3	8%
	AI/AN	0	0%	0	0%	0	0%	1	33%	0	0%	0	0%	1	3%
	A/PI	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
	Black	0	0%	0	0%	0	0%	0	0%	0	0%	1	50%	1	3%
	White	23	92%	2	100%	3	100%	2	67%	0	0%	1	50%	31	86%
	TOTAL	25	69%	2	6%	3	8%	3	8%	1	3%	2	6%	36	100%

Late Testers

Because the time of progression between HIV infection and the development of AIDS is an average of 10 years, individuals who receive an AIDS diagnosis within 1 year of HIV infection diagnosis are likely to have tested long after their actual infection. This section seeks to describe this population in contrast to those who have not yet been diagnosed with AIDS.

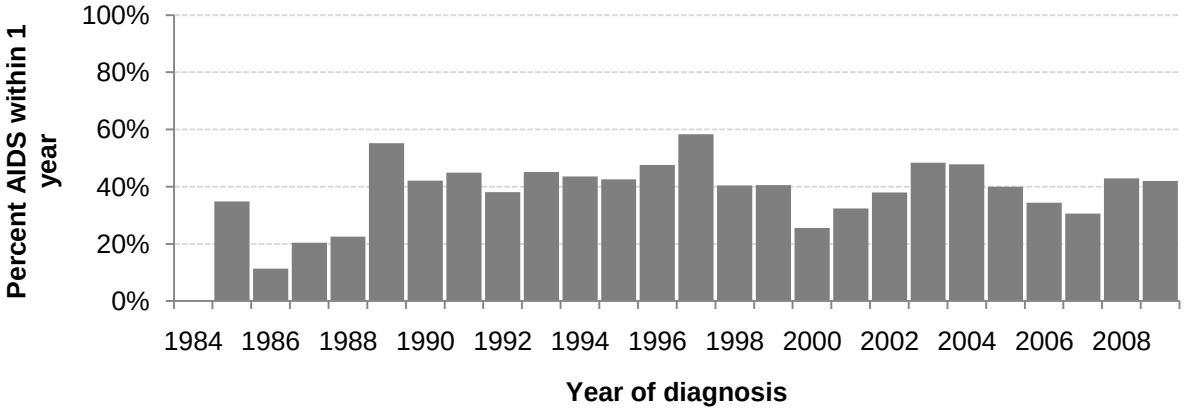

Figure 8. Proportion AIDS within 1 year of first HIV diagnosis by HIV diagnosis year—Idaho, 1984–2009

In Idaho, the trend of individuals diagnosed with AIDS within 1 year of HIV diagnosis has been variable since the late 1980s (Figure 8). AIDS was diagnosed within 1 year in 36% of individuals diagnosed with HIV during 2005–2009. This is similar to national proportion of 32% and 38% reported by CDC in the 2008 HIV Surveillance report and the June 2009 MMWR article "Late Testing—34 States, 1996–2005", respectively.

No appreciable difference was observed between males and females. The proportion with AIDS within 1 year of diagnosis increased in each successive age group after 0–12 years (Table 18). Whites and Hispanics had similar proportions consistent with the overall total. Of the 4 AI/ANs diagnosed in the time period, three quarters were diagnosed with AIDS within 1 year. Individuals with Heterosexual or Unspecified modes of exposure were a higher proportion late testers than other adult exposure categories. Districts 4, 6, and 7 had the lowest proportion of late testers by district.

Table 18. Time to AIDS diagnosis after diagnosis of HIV by selected characteristics—Idaho, 2005–2009

	Time period			
	<= 1 year		> 1 year	
Sex	N	Row %	N	Row %
Male	68	37%	118	63%
Female	12	36%	21	64%
Age group (yrs)				
0-12	1	50%	1	50%
13-19	0	0%	5	100%
20-29	13	18%	58	82%
30-39	18	34%	35	66%
40-49	29	48%	32	52%
50+	19	70%	8	30%
Race/ethnicity				
Hispanic	13	38%	21	62%
AI/AN	3	75%	1	25%
A/PI	0	0%	2	100%
Black	0	0%	4	100%
White	61	36%	109	64%
Other	3	60%	2	40%
TOTAL	80	37%	139	63%

	Time period			
	<= 1 year		> 1 year	
Exposure category	N	Row %	N	Row %
Adult				
MSM	32	29%	77	71%
IDU	6	35%	11	65%
MSM/IDU	5	22%	18	78%
Hemo	0	-	0	-
Hetero	9	45%	11	55%
Presumed hetero	2	29%	5	71%
Transf/transpl	0	-	0	-
Risk not spec	25	61%	16	39%
Pediatric				
Mom w/at risk HIV	1	100%	0	0%
Oth/undet	0	0%	1	100%
District				
1	13	57%	10	43%
2	8	50%	8	50%
3	11	50%	11	50%
4	28	30%	64	70%
5	7	54%	6	46%
6	7	20%	28	80%
7	6	33%	12	67%
TOTAL	80	37%	139	63%

Public Health Districts

Cases diagnosed in Idaho during 2005–2009 were chosen for this section to describe the characteristics of the most recent cases in these geographic areas. In addition, tabulations for each district's "Presumed Living with HIV/AIDS" cases are shown to describe the potential burden in each area for HIV/AIDS care and potential for secondary transmission.

District 1

Table 19. Newly diagnosed HIV infections (including AIDS)—health district 1, 2005–2009

		Males		Females		Total	
		N	%	N	%	N	%
Age group	<13	0	0%	0	0%	0	0%
	13-19	0	0%	0	0%	0	0%
	20-29	5	26%	0	0%	5	22%
	30-39	6	32%	2	50%	8	35%
	40-49	5	26%	2	50%	7	30%
	50+	3	16%	0	0%	3	13%
	TOTAL	19	100%	4	100%	23	100%
Race/ Ethnicity	Hispanic	2	11%	0	0%	2	9%
	AI/AN	0	0%	0	0%	0	0%
	A/PI	0	0%	0	0%	0	0%
	Black	0	0%	0	0%	0	0%
	White	17	89%	4	100%	21	91%
	Unknown	0	0%	0	0%	0	0%
	TOTAL	19	100%	4	100%	23	100%
Exposure category	Adult						
	MSM	14	74%	NA	-	14	61%
	IDU	0	0%	0	0%	0	0%
	MSM/IDU	3	16%	NA	-	3	13%
	Hemophiliac	0	0%	0	0%	0	0%
	Heterosexual contact	0	0%	4	100%	4	17%
	Presumed heterosexual contact	0	0%	0	0%	0	0%
	Transfusion/transplant	0	0%	0	0%	0	0%
	Risk not specified	2	11%	0	0%	2	9%
	Pediatric						
	Mother with/at risk HIV	0	0%	0	0%	0	0%
	Other/undetermined	0	0%	0	0%	0	0%
	TOTAL	19	83%	4	17%	23	100%

Table 20. Number of persons presumed living with HIV/AIDS—health district 1, 2009

		Males		Females		Total	
		N	%	N	%	N	%
Current age group	<13	0	0%	0	0%	0	0%
	13-19	0	0%	3	9%	3	2%
	20-29	7	6%	1	3%	8	5%
	30-39	22	19%	6	18%	28	19%
	40-49	37	32%	14	42%	51	35%
	50+	48	42%	9	27%	57	39%
	TOTAL	114	100%	33	100%	147	100%
Race/ Ethnicity	Hispanic	6	5%	2	6%	8	5%
	AI/AN	2	2%	0	0%	2	1%
	A/PI	0	0%	0	0%	0	0%
	Black	0	0%	3	9%	3	2%
	White	105	92%	27	82%	132	90%
	Unknown	1	1%	1	3%	2	1%
	TOTAL	114	100%	33	100%	147	100%
Exposure category	Adult						
	MSM	65	57%	0	-	65	44%
	IDU	15	13%	11	33%	26	18%
	MSM/IDU	18	16%	0	-	18	12%
	Hemophiliac	0	0%	0	0%	0	0%
	Heterosexual contact	6	5%	14	42%	20	14%
	Presumed heterosexual contact	0	0%	1	3%	1	1%
	Transfusion/transplant	0	0%	0	0%	0	0%
	Risk not specified	10	9%	3	9%	13	9%
	Pediatric						
	Mother with/at risk HIV	0	0%	4	12%	4	3%
	Other/undetermined	0	0%	0	0%	0	0%
	TOTAL	114	78%	33	22%	147	100%

District 2

Table 21. Newly diagnosed HIV infections (including AIDS)—health district 2, 2005–2009

		Males		Females		Total	
		N	%	N	%	N	%
Age group	<13	0	0%	0	0%	0	0%
	13-19	0	0%	0	0%	0	0%
	20-29	4	31%	0	0%	4	25%
	30-39	2	15%	1	33%	3	19%
	40-49	5	38%	1	33%	6	38%
	50+	2	15%	1	33%	3	19%
	TOTAL	13	100%	3	100%	16	100%
Race/ Ethnicity	Hispanic	3	23%	1	33%	4	25%
	AI/AN	1	8%	0	0%	1	6%
	A/PI	0	0%	0	0%	0	0%
	Black	0	0%	0	0%	0	0%
	White	9	69%	2	67%	11	69%
	Unknown	0	0%	0	0%	0	0%
	TOTAL	13	100%	3	100%	16	100%
Exposure category	Adult						
	MSM	4	31%	0	-	4	25%
	IDU	4	31%	1	33%	5	31%
	MSM/IDU	1	8%	0	-	1	6%
	Hemophiliac	0	0%	0	0%	0	0%
	Heterosexual contact	1	8%	0	0%	1	6%
	Presumed heterosexual contact	0	0%	2	67%	2	13%
	Transfusion/transplant	0	0%	0	0%	0	0%
	Risk not specified	3	23%	0	0%	3	19%
	Pediatric						
	Mother with/at risk HIV	0	0%	0	0%	0	0%
	Other/undetermined	0	0%	0	0%	0	0%
	TOTAL	13	81%	3	19%	16	100%

Table 22. Number of persons presumed living with HIV/AIDS—health district 2, 2009

		Males		Females		Total	
		N	%	N	%	N	%
Current age group	<13	1	2%	3	18%	4	5%
	13-19	0	0%	0	0%	0	0%
	20-29	5	8%	1	6%	6	7%
	30-39	12	19%	2	12%	14	17%
	40-49	29	45%	5	29%	34	42%
	50+	17	27%	6	35%	23	28%
	TOTAL	64	100%	17	100%	81	100%
Race/ Ethnicity	Hispanic	5	8%	2	12%	7	9%
	AI/AN	0	0%	1	6%	1	1%
	A/PI	0	0%	0	0%	0	0%
	Black	3	5%	4	24%	7	9%
	White	56	88%	10	59%	66	81%
	Unknown	0	0%	0	0%	0	0%
	TOTAL	64	100%	17	100%	81	100%
Exposure category	Adult						
	MSM	27	42%	0	-	27	33%
	IDU	9	14%	5	29%	14	17%
	MSM/IDU	12	19%	0	-	12	15%
	Hemophiliac	2	3%	0	0%	2	2%
	Heterosexual contact	3	5%	5	29%	8	10%
	Presumed heterosexual contact	0	0%	3	18%	3	4%
	Transfusion/transplant	0	0%	0	0%	0	0%
	Risk not specified	10	16%	1	6%	11	14%
	Pediatric						
	Mother with/at risk HIV	1	2%	0	0%	1	1%
	Other/undetermined	0	0%	3	18%	3	4%
	TOTAL	64	79%	17	21%	81	100%

District 3

Table 23. Newly diagnosed HIV infections (including AIDS)—health district 3, 2005–2009

		Males		Females		Total	
		N	%	N	%	N	%
Age group	<13	0	0%	0	0%	0	0%
	13-19	0	0%	0	0%	0	0%
	20-29	5	31%	3	50%	8	36%
	30-39	3	19%	2	33%	5	23%
	40-49	1	6%	1	17%	2	9%
	50+	7	44%	0	0%	7	32%
	TOTAL	16	100%	6	100%	22	100%
Race/ Ethnicity	Hispanic	8	50%	4	67%	12	55%
	AI/AN	0	0%	0	0%	0	0%
	A/PI	0	0%	0	0%	0	0%
	Black	0	0%	0	0%	0	0%
	White	7	44%	2	33%	9	41%
	Unknown	1	6%	0	0%	1	5%
	TOTAL	16	100%	6	100%	22	100%
Exposure category	Adult						
	MSM	6	38%	0	-	6	27%
	IDU	1	6%	0	0%	1	5%
	MSM/IDU	1	6%	0	-	1	5%
	Hemophiliac	0	0%	0	0%	0	0%
	Heterosexual contact	0	0%	2	33%	2	9%
	Presumed heterosexual contact	0	0%	3	50%	3	14%
	Transfusion/transplant	0	0%	0	0%	0	0%
	Risk not specified	8	50%	1	17%	9	41%
	Pediatric						
	Mother with/at risk HIV	0	0%	0	0%	0	0%
	Other/undetermined	0	0%	0	0%	0	0%
	TOTAL	16	73%	6	27%	22	100%

Table 24. Number of persons presumed living with HIV/AIDS—health district 3, 2009

		Males		Females		Total	
		N	%	N	%	N	%
Current age group	<13	0	0%	0	0%	0	0%
	13-19	0	0%	0	0%	0	0%
	20-29	8	6%	4	13%	12	8%
	30-39	20	16%	8	25%	28	18%
	40-49	58	47%	10	31%	68	44%
	50+	38	31%	10	31%	48	31%
	TOTAL	124	100%	32	100%	156	100%
Race/ Ethnicity	Hispanic	29	23%	14	44%	43	28%
	AI/AN	0	0%	2	6%	2	1%
	A/PI	0	0%	0	0%	0	0%
	Black	3	2%	1	3%	4	3%
	White	88	71%	15	47%	103	66%
	Unknown	4	3%	0	0%	4	3%
	TOTAL	124	100%	32	100%	156	100%
Exposure category	Adult						
	MSM	55	44%	0	-	55	35%
	IDU	18	15%	4	13%	22	14%
	MSM/IDU	19	15%	0	-	19	12%
	Hemophiliac	2	2%	0	0%	2	1%
	Heterosexual contact	2	2%	14	44%	16	10%
	Presumed heterosexual contact	0	0%	6	19%	6	4%
	Transfusion/transplant	0	0%	1	3%	1	1%
	Risk not specified	28	23%	5	16%	33	21%
	Pediatric						
	Mother with/at risk HIV	0	0%	1	3%	1	1%
	Pediatric transf/transpl	0	0%	1	3%	1	1%
	Other/undetermined	0	0%	0	0%	0	0%
	TOTAL	124	79%	32	21%	156	64%

District 4

Table 25. Newly diagnosed HIV infections (including AIDS)—health district 4, 2005–2009

		Males		Females		Total	
		N	%	N	%	N	%
Age group	<13	1	1%	0	0%	1	1%
	13-19	3	3%	0	0%	3	3%
	20-29	25	29%	2	40%	27	29%
	30-39	18	21%	0	0%	18	20%
	40-49	33	38%	2	40%	35	38%
	50+	7	8%	1	20%	8	9%
	TOTAL	87	100%	5	100%	92	100%
Race/ Ethnicity	Hispanic	6	7%	0	0%	6	7%
	AI/AN	0	0%	0	0%	0	0%
	A/PI	2	2%	0	0%	2	2%
	Black	3	3%	1	20%	4	4%
	White	72	83%	4	80%	76	83%
	Unknown	4	5%	0	0%	4	4%
	TOTAL	87	100%	5	100%	92	100%
Exposure category	Adult						
	MSM	52	60%	0	-	52	57%
	IDU	3	3%	2	40%	5	5%
	MSM/IDU	13	15%	0	-	13	14%
	Hemophiliac	0	0%	0	0%	0	0%
	Heterosexual contact	3	3%	1	20%	4	4%
	Presumed heterosexual contact	0	0%	1	20%	1	1%
	Transfusion/transplant	0	0%	0	0%	0	0%
	Risk not specified	15	17%	1	20%	16	17%
	Pediatric						
	Mother with/at risk HIV	0	0%	0	0%	0	0%
	Other/undetermined	1	1%	0	0%	1	1%
	TOTAL	87	95%	5	5%	92	100%

Table 26. Number of persons presumed living with HIV/AIDS—health district 4, 2009

		Males		Females		Total	
		N	%	N	%	N	%
Current age group	<13	2	0%	2	3%	4	1%
	13-19	2	0%	0	0%	2	0%
	20-29	30	7%	8	11%	38	7%
	30-39	67	15%	12	17%	79	15%
	40-49	204	46%	30	42%	234	45%
	50+	143	32%	20	28%	163	31%
	TOTAL	448	100%	72	100%	520	100%
Race/ Ethnicity	Hispanic	31	7%	4	6%	35	7%
	AI/AN	7	2%	0	0%	7	1%
	A/PI	8	2%	1	1%	9	2%
	Black	31	7%	20	28%	51	10%
	White	363	81%	46	64%	409	79%
	Unknown	8	2%	1	1%	9	2%
	TOTAL	448	100%	72	100%	520	100%
Exposure category	Adult						
	MSM	277	62%	0	-	277	53%
	IDU	38	8%	23	32%	61	12%
	MSM/IDU	59	13%	0	-	59	11%
	Hemophiliac	0	0%	0	0%	0	0%
	Heterosexual contact	23	5%	24	33%	47	9%
	Presumed heterosexual contact	0	0%	14	19%	14	3%
	Transfusion/transplant	2	0%	1	1%	3	1%
	Risk not specified	45	10%	8	11%	53	10%
	Pediatric						
	Mother with/at risk HIV	2	0%	1	1%	3	1%
	Other/undetermined	2	0%	1	1%	3	1%
	TOTAL	448	86%	72	14%	520	100%

District 5

Table 27. Newly diagnosed HIV infections (including AIDS)—health district 5, 2005–2009

		Males		Females		Total	
		N	%	N	%	N	%
Age group	<13	0	0%	0	0%	0	0%
	13-19	0	0%	0	0%	0	0%
	20-29	3	30%	2	67%	5	38%
	30-39	4	40%	0	0%	4	31%
	40-49	2	20%	0	0%	2	15%
	50+	1	10%	1	33%	2	15%
	TOTAL	10	100%	3	100%	13	100%
Race/ Ethnicity	Hispanic	3	30%	2	67%	5	38%
	AI/AN	1	10%	0	0%	1	8%
	A/PI	0	0%	0	0%	0	0%
	Black	0	0%	0	0%	0	0%
	White	6	60%	1	33%	7	54%
	Unknown	0	0%	0	0%	0	0%
	TOTAL	10	100%	3	100%	13	100%
Exposure category	Adult						
	MSM	7	70%	0	-	7	54%
	IDU	2	20%	0	0%	2	15%
	MSM/IDU	0	0%	0	-	0	0%
	Hemophiliac	0	0%	0	0%	0	0%
	Heterosexual contact	1	10%	2	67%	3	23%
	Presumed heterosexual contact	0	0%	0	0%	0	0%
	Transfusion/transplant	0	0%	0	0%	0	0%
	Risk not specified	0	0%	1	33%	1	8%
	Pediatric						
	Mother with/at risk HIV	0	0%	0	0%	0	0%
	Other/undetermined	0	0%	0	0%	0	0%
	TOTAL	10	77%	3	23%	13	100%

Table 28. Number of persons presumed living with HIV/AIDS—health district 5, 2009

		Males		Females		Total	
		N	%	N	%	N	%
Current age group	<13	0	0%	0	0%	0	0%
	13-19	0	0%	0	0%	0	0%
	20-29	9	10%	2	7%	11	9%
	30-39	19	21%	9	33%	28	24%
	40-49	38	42%	8	30%	46	39%
	50+	24	27%	8	30%	32	27%
	TOTAL	90	100%	27	100%	117	100%
Race/ Ethnicity	Hispanic	16	18%	6	22%	22	19%
	AI/AN	3	3%	0	0%	3	3%
	A/PI	0	0%	0	0%	0	0%
	Black	1	1%	1	4%	2	2%
	White	69	77%	20	74%	89	76%
	Unknown	1	1%	0	0%	1	1%
	TOTAL	90	100%	27	100%	117	100%
Exposure category	Adult						
	MSM	51	57%	0	-	51	44%
	IDU	11	12%	4	15%	15	13%
	MSM/IDU	12	13%	0	-	12	10%
	Hemophiliac	0	0%	0	0%	0	0%
	Heterosexual contact	9	10%	18	67%	27	23%
	Presumed heterosexual contact	0	0%	0	0%	0	0%
	Transfusion/transplant	0	0%	0	0%	0	0%
	Risk not specified	7	8%	5	19%	12	10%
	Pediatric						
	Mother with/at risk HIV	0	0%	0	0%	0	0%
	Other/undetermined	0	0%	0	0%	0	0%
	TOTAL	90	77%	27	23%	117	100%

District 6

Table 29. Newly diagnosed HIV infections (including AIDS)—health district 6, 2005–2009

		Males		Females		Total	
		N	%	N	%	N	%
Age group	<13	0	0%	0	0%	0	0%
	13-19	1	4%	1	11%	2	6%
	20-29	11	42%	3	33%	14	40%
	30-39	9	35%	2	22%	11	31%
	40-49	4	15%	3	33%	7	20%
	50+	1	4%	0	0%	1	3%
	TOTAL	26	100%	9	100%	35	100%
Race/ Ethnicity	Hispanic	1	4%	1	11%	2	6%
	AI/AN	1	4%	1	11%	2	6%
	A/PI	0	0%	0	0%	0	0%
	Black	0	0%	0	0%	0	0%
	White	24	92%	7	78%	31	89%
	Unknown	0	0%	0	0%	0	0%
	TOTAL	26	100%	9	100%	35	100%
Exposure category	Adult						
	MSM	18	69%	0	-	18	51%
	IDU	1	4%	1	11%	2	6%
	MSM/IDU	4	15%	0	-	4	11%
	Hemophiliac	0	0%	0	0%	0	0%
	Heterosexual contact	2	8%	4	44%	6	17%
	Presumed heterosexual contact	0	0%	1	11%	1	3%
	Transfusion/transplant	0	0%	0	0%	0	0%
	Risk not specified	1	4%	3	33%	4	11%
	Pediatric						
	Mother with/at risk HIV	0	0%	0	0%	0	0%
	Other/undetermined	0	0%	0	0%	0	0%
	TOTAL	26	74%	9	26%	35	100%

Table 30. Number of persons presumed living with HIV/AIDS—health district 6, 2009

		Males		Females		Total	
		N	%	N	%	N	%
Current age group	<13	0	0%	0	0%	0	0%
	13-19	1	1%	0	0%	1	1%
	20-29	11	11%	9	30%	20	15%
	30-39	28	27%	9	30%	37	28%
	40-49	41	40%	9	30%	50	38%
	50+	21	21%	3	10%	24	18%
	TOTAL	102	100%	30	100%	132	100%
Race/ Ethnicity	Hispanic	7	7%	3	10%	10	8%
	AI/AN	4	4%	3	10%	7	5%
	A/PI	0	0%	0	0%	0	0%
	Black	4	4%	4	13%	8	6%
	White	86	84%	20	67%	106	80%
	Unknown	1	1%	0	0%	1	1%
	TOTAL	102	100%	30	100%	132	100%
Exposure category	Adult						
	MSM	56	55%	0	-	56	42%
	IDU	8	8%	9	30%	17	13%
	MSM/IDU	16	16%	0	-	16	12%
	Hemophiliac	0	0%	0	0%	0	0%
	Heterosexual contact	8	8%	12	40%	20	15%
	Presumed heterosexual contact	0	0%	4	13%	4	3%
	Transfusion/transplant	1	1%	0	0%	1	1%
	Risk not specified	13	13%	4	13%	17	13%
	Pediatric						
	Mother with/at risk HIV	0	0%	1	3%	1	1%
	Other/undetermined	0	0%	0	0%	0	0%
	TOTAL	102	77%	30	23%	132	100%

District 7

Table 31. Newly diagnosed HIV infections (including AIDS)—health district 7, 2005–2009

		Males		Females		Total	
		N	%	N	%	N	%
Age group	<13	0	0%	1	33%	1	6%
	13-19	0	0%	0	0%	0	0%
	20-29	6	40%	2	67%	8	44%
	30-39	4	27%	0	0%	4	22%
	40-49	2	13%	0	0%	2	11%
	50+	3	20%	0	0%	3	17%
	TOTAL	15	100%	3	100%	18	100%
Race/ Ethnicity	Hispanic	2	13%	1	33%	3	17%
	AI/AN	0	0%	0	0%	0	0%
	A/PI	0	0%	0	0%	0	0%
	Black	0	0%	0	0%	0	0%
	White	13	87%	2	67%	15	83%
	Unknown	0	0%	0	0%	0	0%
	TOTAL	15	100%	3	100%	18	100%
Exposure category	Adult						
	MSM	8	53%	0	-	8	44%
	IDU	0	0%	2	67%	2	11%
	MSM/IDU	1	7%	0	-	1	6%
	Hemophiliac	0	0%	0	0%	0	0%
	Heterosexual contact	0	0%	0	0%	0	0%
	Presumed heterosexual contact	0	0%	0	0%	0	0%
	Transfusion/transplant	0	0%	0	0%	0	0%
	Risk not specified	6	40%	0	0%	6	33%
	Pediatric						
	Mother with/at risk HIV	0	0%	1	33%	1	6%
	Other/undetermined	0	0%	0	0%	0	0%
	TOTAL	15	83%	3	17%	18	100%

Table 32. Number of persons presumed living with HIV/AIDS—health district 7, 2009

		Males		Females		Total	
		N	%	N	%	N	%
Current age group	<13	0	0%	1	5%	1	1%
	13-19	0	0%	0	0%	0	0%
	20-29	7	9%	6	32%	13	13%
	30-39	13	16%	4	21%	17	17%
	40-49	40	49%	6	32%	46	46%
	50+	22	27%	2	11%	24	24%
	TOTAL	82	100%	19	100%	101	100%
Race/ Ethnicity	Hispanic	10	12%	4	21%	14	14%
	AI/AN	1	1%	1	5%	2	2%
	A/PI	0	0%	0	0%	0	0%
	Black	7	9%	0	0%	7	7%
	White	61	74%	14	74%	75	74%
	Unknown	3	4%	0	0%	3	3%
	TOTAL	82	100%	19	100%	101	100%
Exposure category	Adult						
	MSM	44	54%	0	-	44	44%
	IDU	4	5%	6	32%	10	10%
	MSM/IDU	12	15%	0	-	12	12%
	Hemophiliac	0	0%	1	5%	1	1%
	Heterosexual contact	5	6%	7	37%	12	12%
	Presumed heterosexual contact	0	0%	2	11%	2	2%
	Transfusion/transplant	1	1%	0	0%	1	1%
	Risk not specified	16	20%	2	11%	18	18%
	Pediatric						
	Mother with/at risk HIV	0	0%	1	5%	1	1%
	Other/undetermined	0	0%	0	0%	0	0%
	TOTAL	82	81%	19	19%	101	100%

What are the indicators of risk for HIV and AIDS in the population in Idaho?

The persons most likely to become infected with HIV are those who engage in high-risk behaviors and who live in communities where HIV prevalence is high. To help understand the differing risks for HIV infection in Idaho, this section examines the other available data which indicate high-risk behaviors in Idaho.

Sexually Transmitted Diseases

Sexually transmitted disease (STD) data can be used as indicators of high-risk unprotected sexual behavior which is associated with an increased risk of HIV infection. In addition, STDs facilitate the transmission of HIV.

Chlamydia

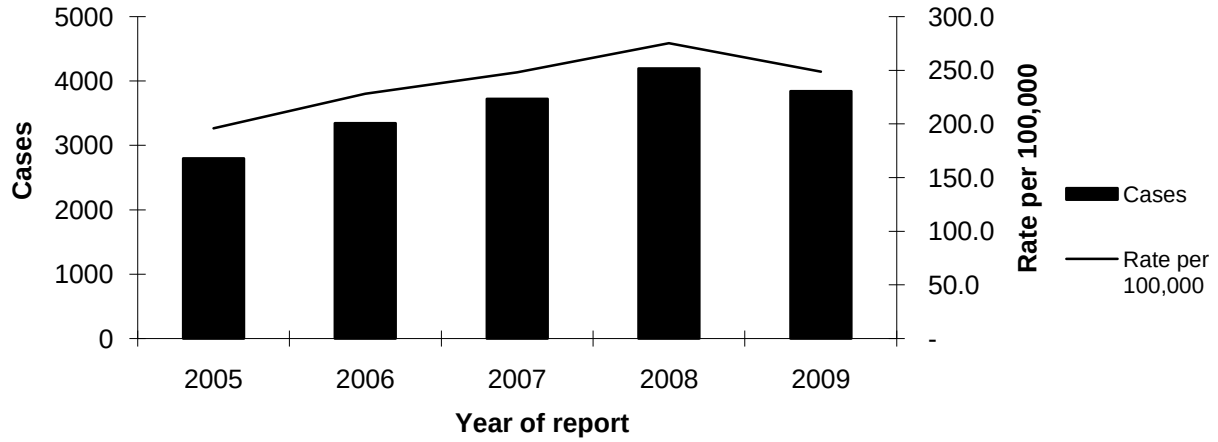

Figure 9. Reported chlamydia incidence and rate by year of report—Idaho, 2005–2009

Chlamydia is the most-reported among Idaho's reportable conditions, ranging from a low of 2,799 cases in 2003 to a high of 4,194 cases in 2006 during the last 5 years. Chlamydia incidence and rates had an overall increasing trend over the last five years but dipped slightly in 2009 (Figure 9). Rates have increased from 2005-2009 in both males and females, and females are reported with chlamydia at a higher rate than males in Idaho (Figure 10).

Much of the difference between reported cases in females and males may be explained by chlamydia screening practices. In order to prevent complications leading to infertility, the Public Health Service Task Force recommends universal screening for chlamydia in sexually active females aged 15-24 years of age. Older females are screened based upon self-reported sexual risk behavior, epidemiologic linkages to positive cases and/or symptomology. Men are usually tested only if symptomatic or if they are a sex partner to someone with diagnosed chlamydia.

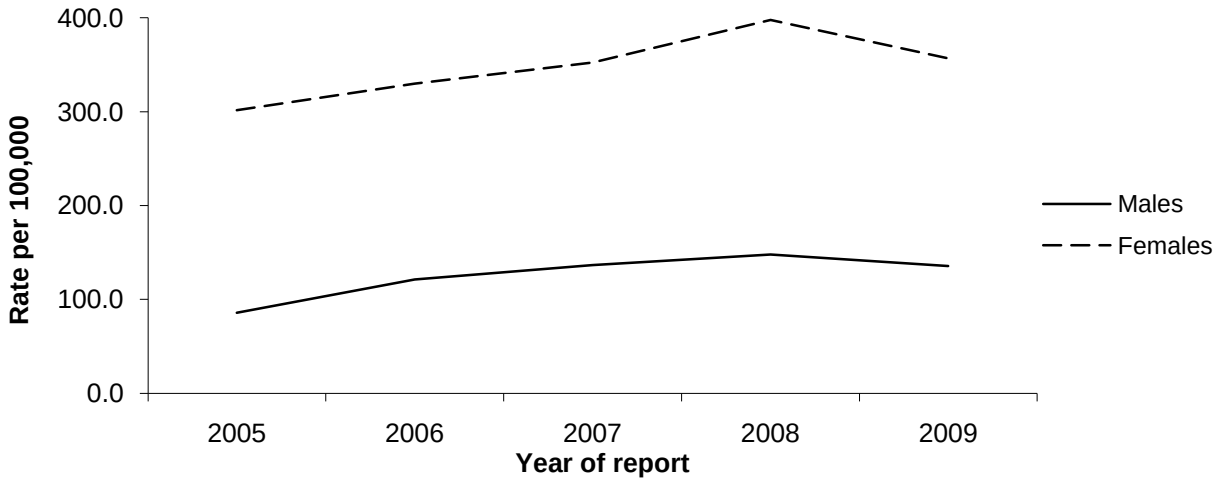

Figure 10. Reported chlamydia incidence rate by sex and year of report—Idaho, 2005–2009

Ninety-five percent of chlamydia cases reported during 2005–2009 were in persons 15-34 years old. Cases among persons aged 20-24 years were reported at a much higher rate than other age groups. Of these most-affected age groups, the highest increase (+47%) occurred among persons aged 15-19 years, from a rate of 806.5 in 2005 to 1,184.9 in 2009 (Figure 11).

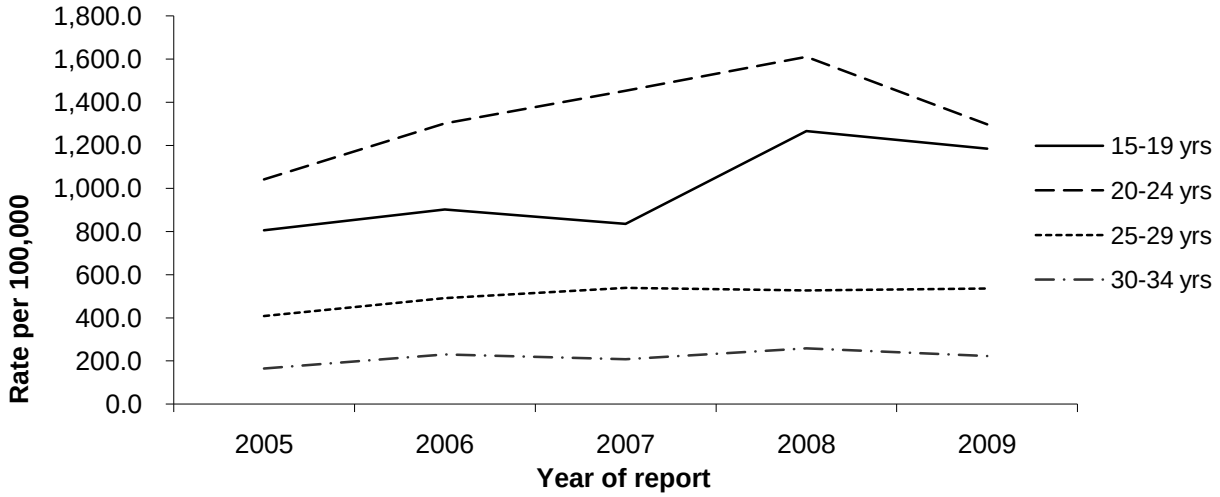

Figure 11. Reported chlamydia incidence rate by selected age group and year of report—Idaho, 2005–2009

The chlamydia rate decreased among Blacks during 2005–2009 (Figure 12). Whites were reported at the lowest rate during most years, but Whites make up 73% of cases with known race/ethnicity. Caution should be used when interpreting these rates because over one quarter (28%) of reported cases during the time period were of unknown race/ethnicity.

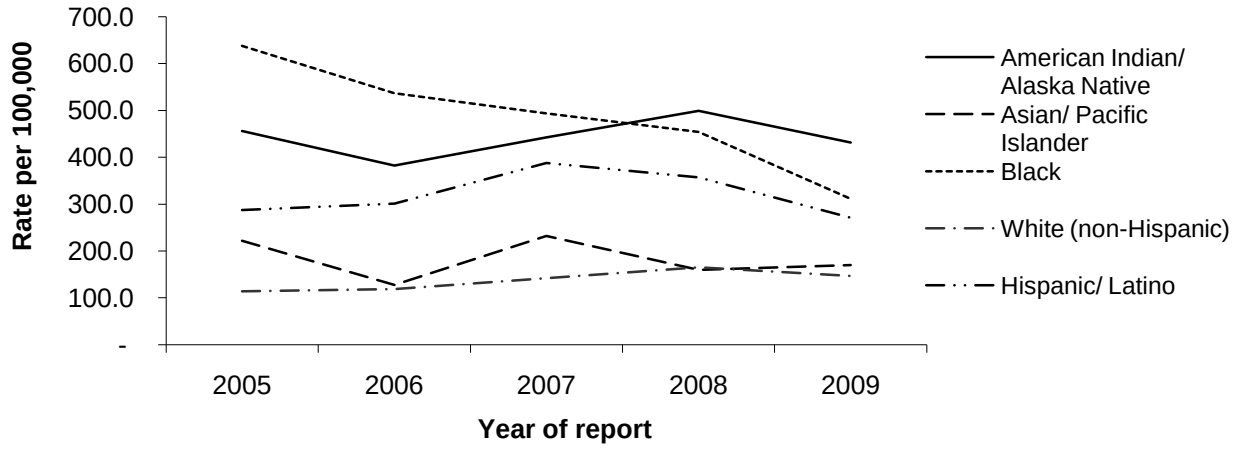

Figure 12. Reported chlamydia incidence rate by race/ethnicity and year of report—Idaho, 2005–2009

Gonorrhea

Gonorrhea incidence and rates showed an variable trend over the last 5 years (Figure 13). Case totals in 2007 were a 20-year high—the last time Idaho achieved a gonorrhea case count 200 was 1988. Case counts and rates returned to baseline levels in 2009.

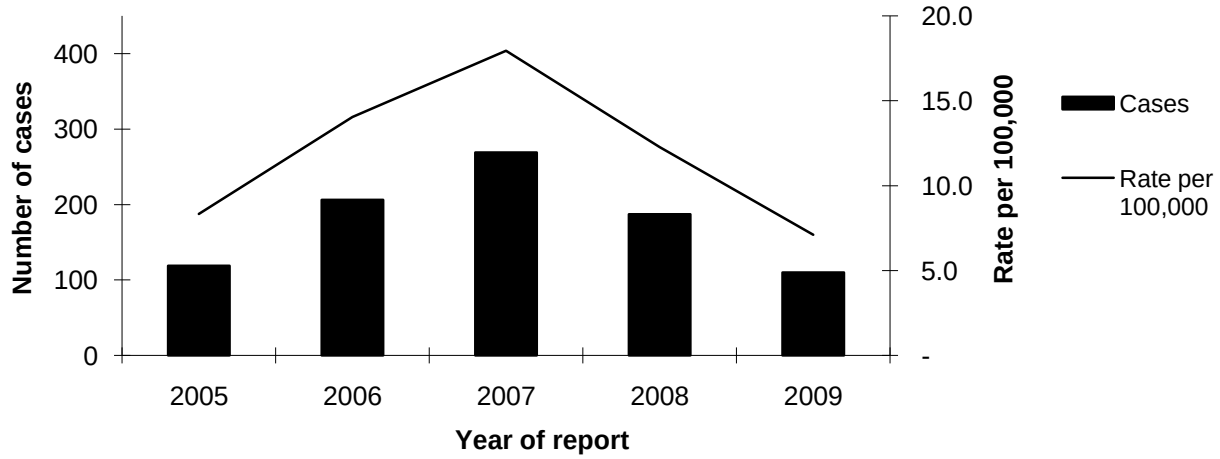

Figure 13. Reported gonorrhea incidence and rate by year of report—Idaho, 2005–2009

Historically in Idaho, females have reported with gonorrhea at rate relatively similar to males, but the rates diverged briefly from 2006–2007 (Figure 14). The rates were relatively equal again in 2009.

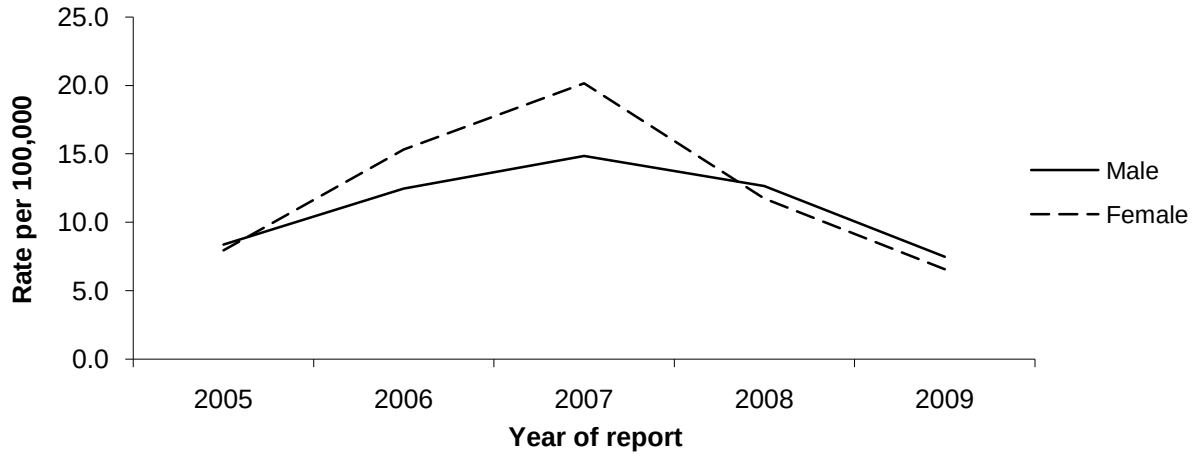

Figure 14. Reported gonorrhea incidence rate by sex and year of report—Idaho, 2005–2009

Age groups affected by gonorrhea were similar to those affected by chlamydia. Ninety-two percent of cases during 2005–2009 were among 15-39 year olds. The highest rates were in 20-24 year olds during each year (Figure 15).

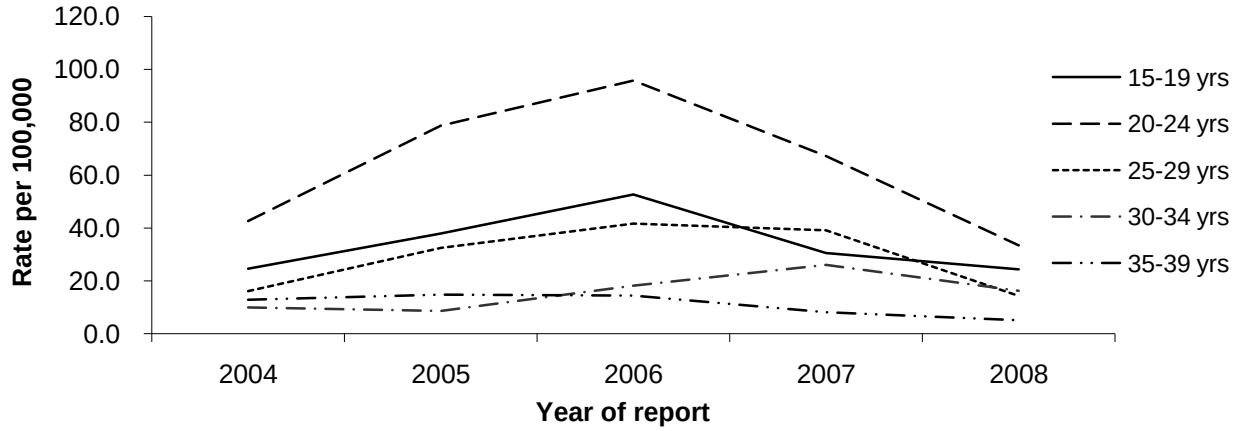

Figure 15. Reported gonorrhea incidence rate by selected age group and year of report—Idaho, 2005–2009

Among reported cases of known race/ethnicity during 2005–2009, most (69%) cases were White and just under a quarter (23%) were Hispanic. However, caution should be used when interpreting trends of gonorrhea based on race because 29% of reported cases during 2005–2009 were of unknown race. The trend by race/ethnicity can be seen in Figure 16.

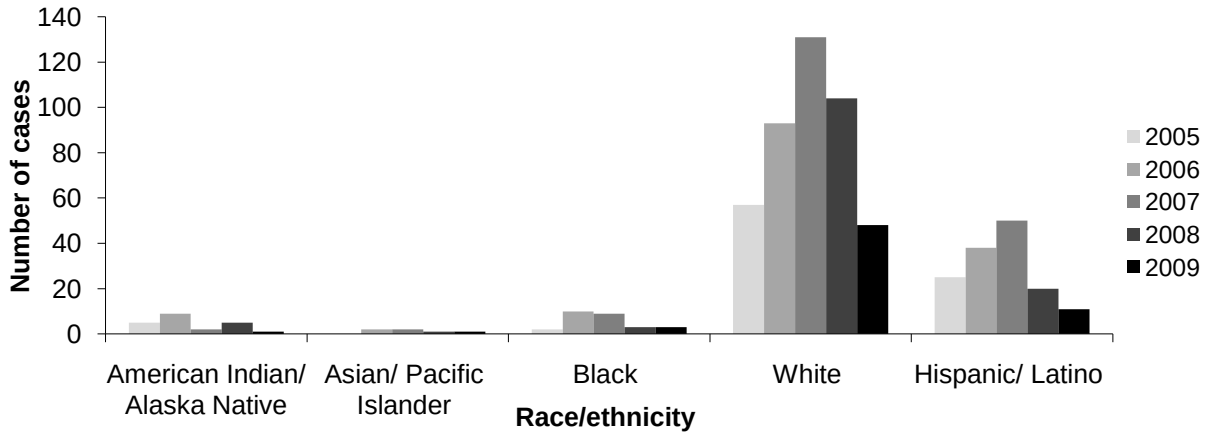

Figure 16. Reported gonorrhea incidence by race/ethnicity and year of report—Idaho, 2005–2009

Syphilis

In Idaho, early syphilis (<1 year duration) cases were reported in high numbers in 2005, a continuation from a statewide syphilis outbreak that began in 2003. Outbreak response measures enacted by OEFI and local health departments impacted the number of cases reported and by 2007, rates were back to pre-outbreak levels (Figure 17).

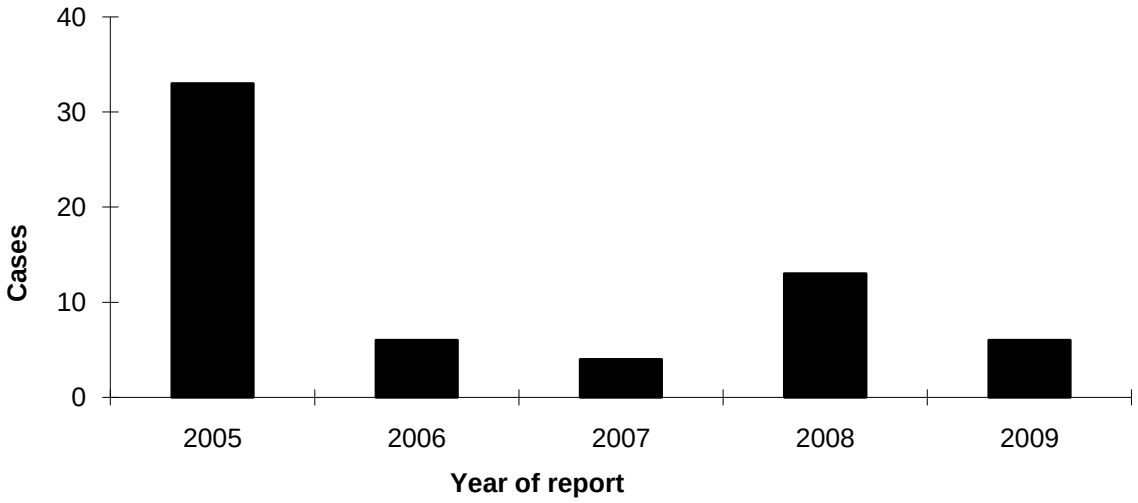

Figure 17. Reported early syphilis incidence and rate by year of report—Idaho, 2005–2009

Because early syphilis cases in Idaho are investigated and most individuals are interviewed, race/ethnicity is usually known. During 2005–2009, 89% of early syphilis cases had known race/ethnicity. The majority of early syphilis cases reported during 2005–2009 were among persons of Hispanic/Latino ethnicity (56%), due to the high number of Hispanics/Latinos involved in the outbreak that ended in 2005 (Figure 18).

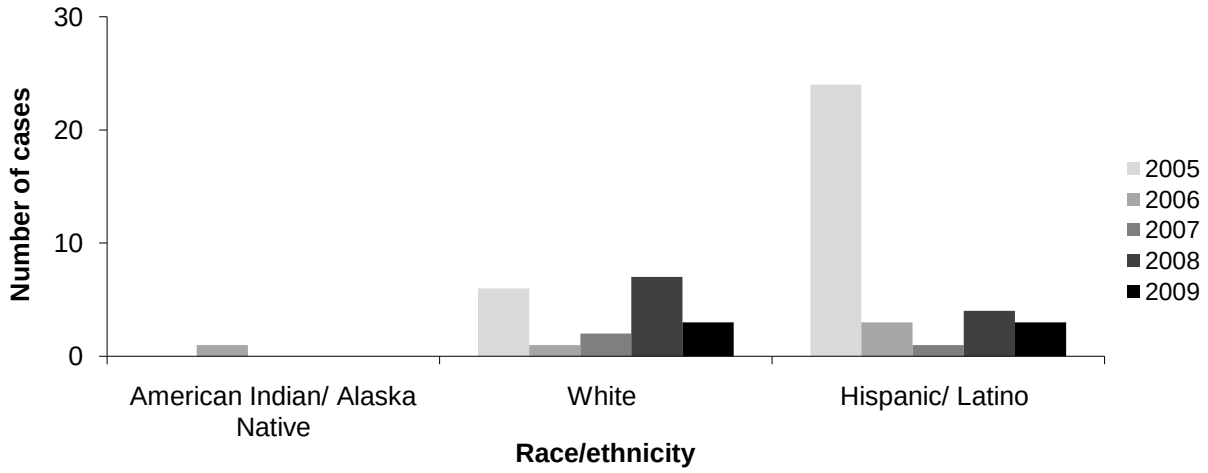

Figure 18. Reported early syphilis incidence by race/ethnicity and year of report—Idaho, 2005–2009

National surveillance data indicated that, where sex of sex partners was known, 62 percent of primary and secondary (P&S) syphilis cases in the U.S. in 2009 occurred among MSM. In Idaho, this pattern has also been observed. Among all syphilis cases interviewed in 2005–2009, heterosexual sex was the most reported risk among females (Table 32). However, among males in 2008 and 2009, sex with other males became a proportionally more prominent reported risk.

Table 33. Frequency of reported risks among interviewed syphilis cases (all stages) by report year, 2005–2009

		Report Year				
Patient Sex	Risk	2005	2006	2007	2008	2009
Male	Heterosexual sex with IDU	1	0	2	0	0
	Heterosexual sex with HIV-infected partner	0	0	2	0	0
	Sex for drugs/money	2	0	0	0	0
	Sex with female	18	3	3	8	10
	Sex with male	8	3	5	10	6
	Used IV drugs	2	1	4	0	1
Female	Heterosexual sex with bisexual male	1	0	0	0	0
	Heterosexual sex with IDU	4	0	1	0	1
	Sex for drugs/money	1	0	0	0	1
	Sex with female	1	0	0	0	0
	Sex with male	31	6	5	3	4
	Used IV drugs	6	0	0	0	0

HIV Testing

HIV testing data summarized in this document are collected from publicly-funded HIV testing sites in Idaho from the most recent 5 years. Counseling and testing sites are located within each district health department location and selected alternative test site locations outside the health departments within all public health districts. Testing increased at IDHW-funded testing sites from 3,160 in 2005 to 4,499 in 2009 (Figure 19). The largest change (+27%) was from 2007 to 2008.

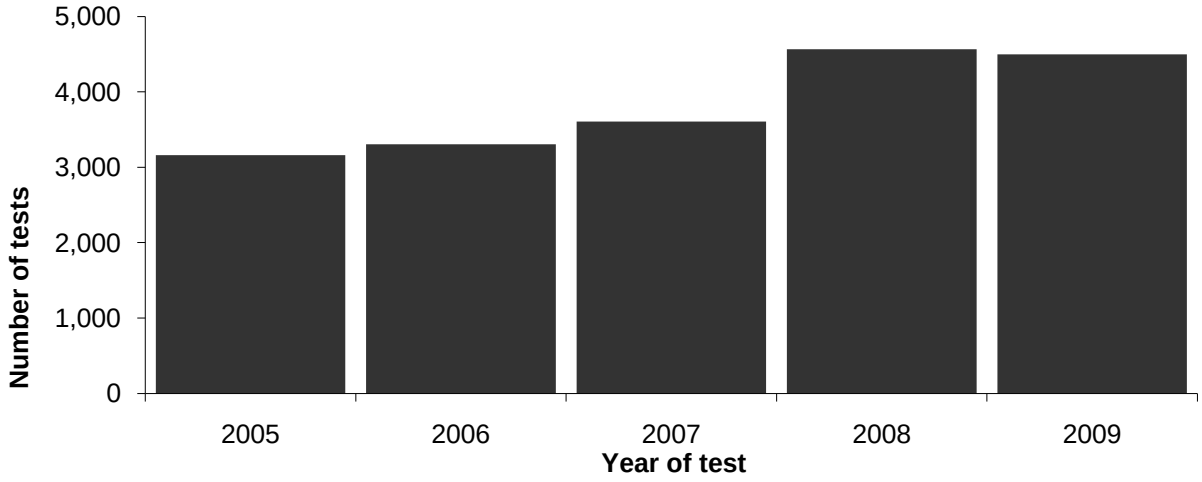

Figure 19. HIV tests through IDHW-funded HIV counseling and testing sites—Idaho, 2005–2009

10% more males than females were tested during 2005–2009 and tests among males were positive at over three times the rate of females (Table 34). The highest proportion of tests (82%) and number of positive results were reported among Whites. The percentage of positive tests was highest among samples from individuals of multiple, other, undetermined, and unspecified race/ethnicity (Table 35), but the number of positive tests was low.

Due to forms scanning problems involving birthdates, age data in 2007 were compromised. Therefore, age group data include only the years 2005, 2006, 2008, and 2009. The highest number of tests was submitted for persons aged 20–29 years, but the highest rate of positive tests was among tests performed on persons aged 40–49 years (Table 36). The highest number of positive tests were among persons aged 20–29 years.

Of all tests, a full 25% were from persons reporting a only heterosexual partners. Tests for persons reporting both MSM and IDU risks were just 1% of the total, but had the highest percentage of positive results (Table 37). MSM (non-IDU) had the next highest percentage of positives and had the most positive results.

Table 34. HIV testing and percent positive tests at counseling and testing sites by sex—Idaho, 2005–2009

Sex	Tests	Positive Tests	Tests
Male	10,578	72	0.7%
Female	8,533	15	0.2%
Unspecified	22	1	1.1%
TOTAL	19,133	88	0.5%

Table 35. HIV testing and positivity of tests at counseling and testing sites by race/ethnicity—Idaho, 2005–2009

Race/ ethnicity	Tests	Positive Tests	Tests
White	15,677	74	0.5%
Black	285	1	0.4%
AI/AN	261	0	0.0%
Hispanic	2,278	8	0.4%
All others	632	5	0.8%
TOTAL	19,133	88	0.5%

Table 36. HIV testing and positivity of tests at counseling and testing sites by age group—Idaho, 2005–2009*

Age group	Tests	Positive Tests	Tests
< 13	28	0	0.0%
13-19	2,636	3	0.1%
20-29	6,876	33	0.5%
30-39	3,003	21	0.7%
40-49	1,840	14	0.8%
>= 50	1,083	4	0.4%
Not Spec.	63	0	0.0%
TOTAL	15,529	75	0.5%

*Forms scanning irregularities with written birth dates caused unreliability in 2007 age data. Therefore, 2007 age data were not included in this table

Table 37. HIV testing and positivity of tests at counseling and testing sites by risk category—Idaho, 2005–2009

Risk category	Tests	Positive Tests	% positive
MSM/IDU	226	11	4.9%
MSM	2,219	45	2.0%
IDU (Hetsx)	2,667	7	0.3%
Sex partner at risk	4,216	13	0.3%
STD diagnosis	749	1	0.1%
Sex while using non-injection drugs	1,500	2	0.1%
No acknowledged risk	2,404	3	0.1%
Heterosexual, no other risk	4,704	5	0.1%
All others	448	1	0.2%
TOTAL	19,133	88	0.5%

Behavioral Risk Factor Surveillance Survey (BRFSS)

The latest BRFSS survey was conducted in 2009 by random telephone survey. Respondents totaled 5,390. Idahoans 18-65 years of age were interviewed in each health district. The mean age of respondents was 45.9 years. Not all participants answered each question.

With regard to HIV and HIV risk, almost (32.6%) of 3,406 respondents had been tested for HIV in the past. Of 1,026 who responded to a question about where they received their test, 36.7% of were tested at their private doctor or HMO, 24.2% at a clinic, and 21.1% at a hospital. About one quarter (24.8%) of 147 respondents to a question about rapid testing indicated having one. 2.9% of 3,469 respondents indicated HIV or STD risk behavior. HIV and STD risk behaviors were defined as IDU, treatment for STD, given or received money or drugs in return for sex, or anal sex without a condom, any within the past 12 months.

Youth Risk Behavior Survey (YRBS)

The YRBS is a self-administered questionnaire that is given to a representative sample of students in grades 9 through 12 at the national, state, and local levels. The objective is to monitor behaviors that contribute to the leading causes of mortality, morbidity, and social problems among youth and young adults. The Idaho Department of Education conducted the YRBS survey in Idaho during the spring 2007 school semester. Surveys were completed by 2,164 students in 53 public high schools. Results are weighted. National 2007 YRBS survey results were used for comparison because 2009 results were not available.

YRBS results indicate that 2.7% of Idaho high school students have used a needle to inject an illegal drug into their body at least once in their lives (Table 38). This is slightly higher than the national level was in 2007. Overall, 12th grade students reported the highest proportion of ever injecting drugs, and males reported a much higher proportion of past injection drug use in grades 9–11. In 12th grade, females reported a higher proportion than males.

Table 38. Percentage of students who reported using a needle to inject any illegal drug into their body one or more times during their life—Idaho, 2009

Grade	Total	Female	Male
9th	1.9	1.6	2.2
10th	2.0	1.2	2.8
11th	2.3	1.4	2.8
12th	2.4	2.6	2.2
Idaho Overall	2.3	1.8	2.7
2007 U.S. Overall	2.0	1.3	2.6

Source: Results of the 2009 Idaho Youth Risk Behavior Survey

39.0% of Idaho high school students have had sexual intercourse (Table 39), compared to 47.8% nationwide in 2007. The proportion increased with each grade level. The Idaho YRBS reports Hispanic students were significantly more likely than White students to report ever having had sexual intercourse.

Table 39. Percentage of students who reported ever having sexual intercourse— Idaho, 2009

Grade	Total	Female	Male
9th	25.2	22.2	28.1
10th	38.2	38.8	37.5
11th	45.3	47.8	42.8
12th	48.2	49.0	47.3
Idaho Overall	39.0	39.2	38.8
2007 U.S. Overall	47.8	45.9	49.8

Source: Results of the 2009 Idaho Youth Risk Behavior Survey

The proportion of Idaho students who reported having had sexual intercourse before age 13 is below the national proportion. However, a higher proportion of 9th grade students than 12th grade students in Idaho reported sexual intercourse for the first time before the age of 13 (Table 40). This may suggest the initiation of sexual intercourse is beginning to occur at a younger age (<13 years) more frequently in Idaho.

Table 40. Percentage of students who reported sexual intercourse for the first time before age 13—Idaho, 2009

Grade	Total	Female	Male
9th	5.7	5.5	6.3
10th	4.1	2.7	5.5
11th	2.9	2.8	3.0
12th	3.3	3.2	3.3
Idaho Overall	4.2	3.4	4.9
2007 U.S. Overall	7.1	4.0	10.1

Source: Results of the 2009 Idaho Youth Risk Behavior Survey

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Appendixes

Appendix A. Data Sources - Strengths and Weaknesses
Appendix B. Trend Tables
Appendix C. Planning Group Epidemiologic Profile Feedback Form
Appendix D. Glossary

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Appendix A: Data Sources - Strengths and Weaknesses

AIDS Surveillance

Overview: AIDS is a reportable condition in all states and territories. AIDS cases, reportable since the early 1980s, have been defined according to the prevailing CDC surveillance case definition (last revised in 1993). The AIDS surveillance system was established to monitor incidence and the demographic profile of AIDS, describe the modes of HIV transmission among persons with a diagnosis of AIDS, guide the development and implementation of public health intervention and prevention programs, and assist in the assessment of the efficacy of public health interventions. AIDS surveillance data are also used to allocate federal resources for HIV/AIDS care programs. AIDS case reporting is mandated in Idaho by state law.

State and local health departments actively solicit disease reports from health care providers and laboratories. Standardized case report forms are used to collect sociodemographic information, mode of exposure, laboratory and clinical information, vital status, and referrals for treatment or services.

Population: All persons whose conditions meet the 1993 CDC AIDS surveillance case definition

Strengths: The only source of AIDS information that is available in all areas (states), these data reflect the effect of AIDS in Idaho and each health district and the trends of the epidemic in these areas. AIDS surveillance has been determined to be >85% complete, meaning that although most AIDS cases have been reported, a small proportion are not. The data include all demographic groups (age, race/ethnicity, gender).

Limitations: Because of the prolonged and variable period from infection to the development of AIDS, trends in AIDS surveillance do not represent recent HIV infections. Asymptomatic HIV-infected persons are also not represented by AIDS case data. In addition, physician willingness to test and lack of awareness or fear in persons may limit their interest or willingness to get tested and may reduce number of cases diagnosed and reported. Further, the widespread use of highly active antiretroviral therapy complicates the interpretation of AIDS case surveillance data and estimation of the HIV/AIDS epidemic in an area. Newly reported AIDS cases may reflect treatment failures or the failure of the health care system to halt the progression of HIV infection to AIDS. AIDS cases represent late-stage HIV infections.

HIV Surveillance

Overview: Reporting of HIV infections to local health authorities as an integral part of AIDS surveillance activities has been recommended by CDC and other professional organizations since HIV was identified and a test for HIV was licensed. As part of ongoing active HIV surveillance, state and local health departments educate providers on their reporting responsibilities, establish active surveillance sites, establish liaisons with laboratories conducting CD4+ T-lymphocyte cell analysis and enzyme immunoassay and Western blot testing and follow-up of HIV cases of epidemiologic importance. HIV case reporting is mandated in Idaho by state law.

Population: All persons who test positive for HIV

Strengths: HIV surveillance data, compared with AIDS surveillance data, represent more recent infection. According to state evaluations, HIV infection reporting is estimated to be >85% complete for persons who have tested positive for HIV. HIV surveillance provides a minimum estimate of the number of persons known to be HIV infected and reported to the health department, may identify emerging patterns of transmission, and can be used to detect trends in HIV infections among populations of particular interest (e.g., children, adolescents, women). These trends may not be evident from AIDS surveillance. HIV surveillance provides a basis for establishing and evaluating linkages to the provision of prevention and early intervention services and can be used to anticipate unmet needs for HIV care.

Limitations: HIV surveillance data may underestimate the number of recently infected persons because some infected persons either do not know they are infected or have not sought testing. National HIV surveillance data represent infections in jurisdictions that have reporting laws for HIV. Reporting of behavioral risk information may not be complete.

Behavioral Risk Factor Surveillance System (BRFSS)

Overview: A state-based random-digit-dialed telephone survey that monitors state-level prevalence of the major behavioral risks associated with premature morbidity and mortality among adults. Each month, a sample of households is contacted and 1 person in the household who is 18 years or older is randomly selected for an interview. Multiple attempts are made to contact the sampled household. A Spanish translation of the interview is available. Respondents are asked a variety of questions about their personal health behaviors and health experiences. Since 1994, the BRFSS questionnaire has included questions related to HIV/AIDS for respondents aged 18 to 65 years. These questions include perceived risk of getting an HIV infection; use of HIV testing; reasons for testing; if tested, and the type of place where tested. As of 2001, respondents have been asked about their perception of the importance of HIV testing.

Population: All non-institutionalized adults, 18 years and older, who reside in a household with a telephone

Strengths: Data are population based; thus, estimates about testing attitudes and practices can be generalized to the adult population of a state. The sample is large (4,824 total respondents in Idaho in 2003). Information collected from the BRFSS survey may be useful for planning community-wide education programs.

Limitations: BRFSS data are self-reported; thus, the information may be subject to recall bias. No attempt is made to corroborate information given in this survey. Respondents are contacted by telephone survey; thus, the data are not representative of households without a telephone. In addition, BRFSS data are representative of the general non-institutionalized adult population in an area, not just persons at highest risk for HIV/AIDS. The extent of HIV behavioral risk information collected by the BRFSS questionnaire is limited and inferences can be made only at the state level.

Youth Risk Behavior Surveillance System (YRBSS)

Overview: The YRBSS was established to monitor behaviors that contribute to the leading causes of mortality, morbidity, and social problems among youth and young adults in the United States. YRBSS was developed to collect data that are comparable nationally, statewide, and locally. It is a self-administered questionnaire that is given to a representative sample of students in grades 9 through 12 at the state and local levels.

Population: A representative sample of students in grades 9 through 12 at the state and local level

Strengths: YRBSS samples adolescents in public schools and is population-based. The YRBS questionnaire is administered to students anonymously during school. Inferences from YRBSS estimates can be drawn about behaviors and attitudes of adolescents in school, which makes the information useful for developing communitywide prevention programs aimed at younger persons.

Limitations: The YRBSS project relies upon self-reported information; therefore, reporting of sensitive behavioral information may not be accurate (may be underreported or overreported). Also, because the YRBSS questionnaire is administered in school, the data are representative only of students and cannot be generalized to all youth. For example, students at highest risk, who may be more likely to be absent from school or to drop out of school, may be underrepresented in this survey, especially among upper grades.

HIV Counseling and Testing System (CTS)

Overview: All states, territories, and selected cities receive funding to support HIV counseling, testing, and referral programs as part of HIV prevention cooperative agreements with CDC. To monitor these programs, the CTS collects information to quantify and characterize services delivered at CDC-funded sites. Data include information on demographics and on counseling and testing (testing history, test result).

Population: All clients who receive confidential or anonymous HIV counseling and testing services at a site funded through a CDC cooperative agreement

Strengths: Standardized data on clients who are tested for HIV are available at the local level. Data may offer insights into HIV infection rates for a high-risk population in that area. CTS testing data may highlight the effect of a prevention program upon the populations being targeted and the effect of prevention programs upon routine HIV/AIDS surveillance.

Limitations: In most areas, the CTS collects test-based, rather than person-based, data and collects information only from persons who seek counseling and testing services at a CDC-funded site. Population estimation of HIV seroprevalence is not possible at sites where CTS data are test based, like Idaho. In test based systems, because a person can repeatedly seek testing, it is not possible to distinguish persons who have been tested multiple times; however, an estimate of the number of persons may be made by using the self-report of a previous HIV-positive test result on the client abstract form. Because the CTS gathers data on prevention activities, changes may reflect changes in program priorities rather than testing patterns of individuals.

Sexually Transmitted Disease Surveillance

Overview: CDC conducts surveillance to monitor the levels of syphilis, gonorrhea, chancroid, and, more recently, chlamydia, in the United States in order to establish prevention programs, develop and revise treatment guidelines, and identify populations at risk for sexually transmitted diseases (STDs). States, local areas, and US territories submit to CDC (weekly, monthly, or annually) case reports of STDs that have met the respective case definition for the infection. Case report forms include information on patient demographics, type of infection, and source of report (private or public sector). Service areas conduct both passive and active surveillance of STDs to monitor the STD epidemic in their area.

Population: All persons with a diagnosis of an infection that meets the CDC surveillance case definition for the infection and who are reported to local health department

Strengths: STD surveillance data can serve as a surrogate marker for unsafe sexual practices. STD data are widely available at the state and local level and because of shorter incubation periods between exposure and infection, STDs can serve as a marker of recent unsafe sexual behavior. In addition, certain STDs (e.g., ulcerative STDs) can facilitate transmission or acquisition of HIV infection. Finally, changes in trends of STDs may indicate changes in community sexual norms (e.g., unprotected sex).

Limitations: STDs are reportable, but requirements for reporting differ by state. Reporting of STDs from private-sector providers may be less complete. Although STD risk behaviors result from unsafe sexual behavior, they do not necessarily correlate with HIV risk. Trends in chlamydia infections may reflect changes in reporting and screening practices rather than actual trends in disease.

US Bureau of the Census (Census Bureau)

Overview: The Census Bureau collects and provides timely information about the people and the economy of the United States. The Web site for the Census Bureau includes data on demographic characteristics (e.g., age, race, Hispanic ethnicity, sex) of the population, family structure, educational attainment, income level, housing status, and the percentage of persons living at or below the poverty level. Tables and maps of census data are available for all geographic areas to the block level. Summaries of the most requested data for states and counties are provided, as well as analytical reports on population change, race, age, family structure, and apportionment.

Population: US population.

Strengths: Provides an estimate of the population of interest in absence of an actual census; census provides actual counts.

Limitations: Estimates are not an actual count of a population, but are arrived at through statistical means. Census may miss migrating or homeless populations.

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Appendix B: Trend Tables

Table 41. HIV/AIDS diagnoses by sex and year of first diagnosis—Idaho, 2004–2009

	Year of Diagnosis					
Sex	2004	2005	2006	2007	2008	2009
Male	17	38	25	29	49	45
Female	6	7	7	7	7	5
TOTAL	23	45	32	36	56	50

Table 42. HIV/AIDS diagnoses by age group and year of first diagnosis—Idaho, 2004–2009

	Year of Diagnosis					
Age group	2004	2005	2006	2007	2008	2009
<13	0	0	0	1	0	1
13-19	1	1	0	0	3	1
20-29	7	13	9	13	21	15
30-39	8	14	6	11	11	11
40-49	7	11	12	7	14	17
50+	0	6	5	4	7	5
TOTAL	23	45	32	36	56	50

Table 43. HIV/AIDS diagnoses by race/ethnicity and year of diagnosis—Idaho, 2004–2009

	Year of Diagnosis					
Race/ethnicity	2004	2005	2006	2007	2008	2009
Hispanic - any race	6	7	6	8	7	6
American Indian/AK native	1	3	0	0	1	0
Asian/Pacific Islander	0	0	0	2	0	0
Black	2	0	1	1	2	0
White	14	35	24	25	45	41
Other/Unknown	0	0	1	0	1	3
TOTAL	23	45	32	36	56	50

Table 44. HIV/AIDS diagnoses by exposure category and year of report—Idaho, 2004–2009

	Year of Diagnosis					
Exposure category	2004	2005	2006	2007	2008	2009
Adult						
MSM	10	24	12	16	29	28
IDU	3	5	4	4	1	3
MSM/IDU	1	2	5	6	5	5
Hemophiliac	0	0	0	0	0	0
Heterosexual contact	0	2	4	4	10	0
Presumed heterosexual contact	3	2	3	0	1	1
Transfusion/transplant	0	0	0	0	0	0
Risk not specified	6	10	4	5	10	12
Pediatric						
Mother with/at risk HIV	0	0	0	0	0	1
Other/undetermined	0	0	0	1	0	0

TOTAL	23	45	32	36	56	50

Table 45. HIV/AIDS diagnoses by district of residence and year of diagnosis—Idaho, 2004–2009

	Year of Diagnosis					
District	2004	2005	2006	2007	2008	2009
1	0	3	5	5	3	7
2	3	5	3	2	2	4
3	6	6	4	4	5	3
4	10	25	15	17	16	19
5	3	2	1	1	4	5
6	1	2	4	4	18	7
7	0	2	0	3	8	5
TOTAL	23	45	32	36	56	50

Appendix C. Planning Group Epidemiologic Profile Feedback Form

The purpose of this form is to provide the writers of HIV/AIDS epidemiologic profiles feedback from their end users regarding the ease of use and applicability of the profile to prevention and care planning activities.

Please complete this feedback form and send it to:

Jared Bartschi
Office of Epidemiology and Food Protection
Idaho Department of Health and Welfare
450 West State Street, 4th Floor
Boise, ID 83720

1. Was the epidemiologic profile easy to read?
   _____Yes
   _____ No
   _____Somewhat

2. How were the findings of the epidemiologic profile communicated to you?
   _____Print copy only
   _____Profile writers presented epidemiologic profile to planning group
   _____Other type of presentation:
   _____

3. Were the findings of the epidemiologic profile clear to you?
   _____Yes
   _____No
   _____Somewhat

If not, please explain why.

_____
_____
_____

4. How can the next epidemiologic profile be improved?

_____
_____
_____
_____
_____

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Appendix D. Glossary

AIDS (acquired immunodeficiency syndrome). The condition that results from HIV infection and is marked by the presence of opportunistic infections that do not affect persons with healthy immune systems.

case. A condition, such as HIV infection (e.g., an HIV case) or AIDS (e.g., an AIDS case) diagnosed according to a standard case definition.

CDC. The Centers for Disease Control and Prevention, in the U.S. Department of Health and Human Services, is the lead federal agency for protecting the health and safety of the people of the United States. The CDC provides most of the funding for HIV prevention and HIV surveillance activities in Idaho.

community planning group. A group of persons who represent, or have interests in, a given community and who work in partnership with health departments to design local prevention plans to meet the needs of persons at risk for, or infected with, HIV.

comprehensive planning. The process used to determine how HIV services will be organized and delivered. Comprehensive HIV services planning requires planning councils and consortia to answer 4 questions: (1) Where are we now? (2) Where should we be going? (3) How will we get there? (4) How will we monitor our progress?

confidentiality. The treatment of information that an individual or institution has disclosed in a relationship of trust, with the expectation that the information will not be divulged to others in ways that are inconsistent with the individual's or institution's understanding when the individual or institution provided the information. It encompasses access to, and disclosure of, information in accordance with requirements of state law or official policy. For HIV/AIDS surveillance data, confidentiality refers to the protection of private information collected by the HIV/AIDS surveillance system.

continuum of care. A coordinated delivery system, encompassing a comprehensive range of health and social services that meet the needs of people living with HIV at all stages of illness.

cumulative cases. The total number of cases of a disease reported or diagnosed during a specified time. Cumulative cases can include cases in people who have died.

denominator. Divisor; the term of a fraction, usually written under or after the line that indicates the number of equal parts into which the unit is divided; used to calculate a rate or ratio. For example, in the fraction ¾, four is the denominator.

epidemiologic profile. A document that describes the HIV/AIDS epidemic in various populations and identifies characteristics both of HIV-infected and HIV-negative persons in defined geographic areas. It is composed of information gathered to describe the effect of HIV/AIDS on an area in terms of sociodemographic, geographic, behavioral, and clinical characteristics. The epidemiologic profile serves as the scientific basis from which HIV prevention and care needs are identified and prioritized for a jurisdiction.

epidemiology. The study of the distribution and determinants of health-related states or events in specified populations and the application of this study to the control of health problems.

estimate. In situations in which precise data are not available, an estimate may be made on the basis of available data and an understanding of how the data can be generalized to larger populations.

exposure categories. To monitor how HIV is being transmitted, HIV/AIDS cases are classified as one of several exposure (risk) categories developed by the CDC. This classification is calculated based on the reported risk factors for the case. Although not a CDC classification, in this publication, the "presumed heterosexual" mode of exposure was added. Although the modification is yet to be adopted at CDC, it has merit for describing probable heterosexual transmission which otherwise would be uncategorized. See the Methods section for more information.

- Male-male sexual contact refers to men who have sex with men (MSM).
- MSM/IDU refers to cases which are reported with dual risk factors of injection drug use AND male-male sexual contact.
- Injection drug use refers to the use of forms of drugs that require injection. Although it may be valuable to know that a person has used illicit drugs through other routes, this information would not be enough to classify a case as an exposure through injection drug use.
- High-risk heterosexual contact refers to heterosexual contact with a partner who is at increased risk for HIV infection, i.e., an MSM, an injection drug user, or a person with documented HIV infection.
- Presumed heterosexual contact refers to women who answered "No" to injection drug use risk and for whom other likely alternative HIV infection sources are lacking (for example, occupational exposure) and the HIV risk of male partners was unknown.
- Hemophilia/transfusion/transplant cases are those resulting from a transfusion of blood or blood products.
- Perinatal HIV cases are cases of HIV infection in children resulting from transmission from an HIV-positive mother.
- Unspecified, or no identified risk (NIR), cases are those in persons who have no reported history of exposure at the time of the report date. This category includes persons for whom the surveillance protocols to document risk behavior information have not yet been completed, persons whose exposure history is incomplete because they have died, persons who have declined to disclose their risk behavior or who deny any risk behavior, and persons who do not know the HIV status or risk behaviors of their sex partners.

health district. One of the seven geographic areas in Idaho in which public health surveillance or public health services are provided. Districts consist of groups counties. See map, page 1.

HIV (human immunodeficiency virus). The virus that causes AIDS. Persons with HIV in their system are referred to as HIV infected.

HIV Care Consortium. An association of public and private nonprofit providers of health support services and community-based organizations that plans, develops, and delivers services for people living with HIV. The CARE Act authorizes states to use Title II funds to establish consortia in "areas most affected by HIV disease."

HIV/AIDS surveillance. The systematic collection, analysis, interpretation, dissemination, and evaluation of population-based information about persons with a diagnosis of HIV infection and persons with a diagnosis of AIDS.

incidence. The number of new cases in a defined population during a specific period, often a year, which can be used to measure disease frequency.

incidence rate. The number of new cases in a specific area during a specific period among persons at risk in the same area and during the same period. Incidence rate provides a measure of the effect of illness relative to the size of the population. Incidence rate is calculated by dividing incidence in the specified period by the population in which cases occurred. A multiplier is used to convert the resulting fraction to a number over a common denominator (often 100,000).

mean. The sum of individual values in a data set divided by the total number of values. The mean is what many people refer to as an average.

median. The middle value in a data set. Typically, approximately half the values will be higher, and half will be lower. The median is useful when a data set has unusually high or unusually low values, which can affect the mean. It is also useful when data are skewed, meaning that most of the values are at one extreme or the other.

mode of exposure. See "exposure categories".

morbidity. The presence of illness in the population.

mortality. The total number of persons who have died of the disease of interest. Usually expressed as a rate, mortality (total number of deaths over the total population) measures the effect of the disease on the population as a whole.

no identified risk (NIR). Unspecified, or no identified risk (NIR), cases are those in persons who have no reported history of exposure at the time of the report date. This category includes persons for whom the surveillance protocols to document risk behavior information have not yet been completed, persons whose exposure history is incomplete because they have died, persons who have declined to disclose their risk behavior or who deny any risk behavior, and certain individuals reporting only heterosexual sex who do not know the HIV status or risk behaviors of their sex partners. See "exposure categories" for a description of exceptions which are included in the Presumptive Heterosexual category.

numerator. Dividend, the term of a fraction, usually written above or before the line that indicates the number of parts that are to be divided; used to calculate a rate or ratio. For example, in the fraction ¾, three is the numerator.

percentage (proportion). A proportion of the whole, in which the whole is 100.

Presumed living with HIV/AIDS. The total number of reported cases of a HIV or AIDS in persons not known to have died in a given population at a specific time.

proportion (percentage). A portion of a complete population or data set, usually expressed as a fraction or percentage of the population or data set.

range. The largest and smallest values in a data set.

rate. A measure of the frequency of an event or a disease compared with the number or persons at risk for the event or disease.

reporting delay. The time between a diagnosis of HIV infection or AIDS and the receipt of the report by the health department.

representative. A sample that is similar to the population from which it is drawn and thus can be used to draw conclusions about the population.

sample. A group of people selected from a total population with the expectation that studying this group will provide important information about the total population. In HIV laboratory testing terms, a sample is a small quantity or a single item from a larger whole presented for evaluation of HIV infection. For example, a blood sample.

service area. CDC jurisdictions and HRSA service areas or planning regions.

sociodemographic factors. Background information about the population of interest (e.g., age, sex, race, educational status, income, geographic location). These factors are often thought of as explanatory because they help us to make sense of the results of our analyses.

surveillance. In a public health context, refers to the intentional collection of data on diseases or other important health conditions in order to monitor where the condition occurs and to determine the risk factors associated with the condition.

trend. A long-term movement or change in frequency, usually upward or downward; may be presented as a line graph.

year of diagnosis. The year in which a diagnosis of HIV infection or AIDS was made.

year of report. The year in which a person with a diagnosis of HIV infection or AIDS was reported to the health department.

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