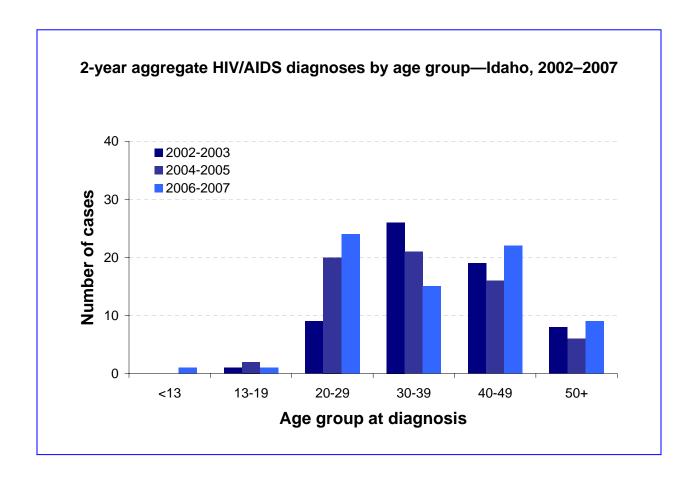
# Idaho HIV/AIDS Epidemiologic Profile 2008



Office of Epidemiology and Food Protection



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# Contents

Contributors	i
List of Tables and Figures	iv
List of Abbreviations	vi
Introduction	1
Purpose	1
Audience	
Data Sources and Strengths and Weaknesses	1
Methods	
Limitations of this document	3
Executive Summary	
What are the sociodemographic characteristics of the population in Idaho?	
What is the scope of the HIV/AIDS epidemic in Idaho?	
Cumulative HIV and AIDS	
Presumed Living With HIV/AIDS	
HIV/AIDS Trends	13
Populations of Interest	
Men Who Have Sex With Men (non-IDU)	
Men Who Have Sex With Men and Inject Drugs	
Injection Drug Users (Non-MSM)	
Heterosexuals	
Women	
Youth	
Public Health Districts	
What are the indicators of risk for HIV and AIDS in the population in Idaho?	
Sexually Transmitted Diseases	
HIV Testing	
Youth Risk Behavior Survey (YRBS)	
Appendixes	
Appendix A: Data Sources - Strenghs and Weaknesses	
Appendix B: Trend Tables	
Appendix C. Planning Group Epidemiologic Profile Feedback Form	
Appendix D. Glossary	
References	61

# **List of Tables**

Table 1. Estimated population by health district—Idaho, 2007	6
Table 2. Estimated population by age group—Idaho, 2007	7
Table 3. Estimated population by race/ethnicity—Idaho, 2007	7
Table 4. Selected population characteristics 3-year estimates—Idaho and the U.S., 2005–2007	7
Table 5. Characteristics of cumulative non-duplicated Idaho resident HIV & AIDS diagnosed through	
12/31/2007	9
Table 6. Presumed living with an HIV/AIDS by sex and current age group—Idaho, 2007	11
Table 7. Presumed living HIV and AIDS cases by sex and race/ethnicity—Idaho, 2007	11
Table 8. Presumed living HIV/AIDS cases by sex and mode of exposure—Idaho, 2007	12
Table 9. Presumed living HIV/AIDS cases by district—Idaho, 2007	12
Table 10. HIV/AIDS diagnoses among MSM (non-IDU) by race/ethnicity and age group—Idaho, 2003	_
2007	16
Table 11. HIV/AIDS diagnoses among MSM/IDU by age group and race/ethnicity—Idaho, 2003–2007	16
Table 12. HIV/AIDS diagnoses among IDU (non-MSM) by sex, age group and race/ethnicity—Idaho,	
2003–2007	17
Table 13. HIV/AIDS diagnoses among persons reporting heterosexual mode of exposure by race/ethr	
and sex—Idaho, 2003–2007	18
Table 14. HIV/AIDS diagnoses among persons reporting heterosexual mode of exposure by reported	
partner risk, age group, expanded mode of exposure, and sex, 2001–2005	18
Table 15. HIV/AIDS diagnoses among women (≥ 13 years) by age group and mode of exposure—Ida	
2003–2007	19
Table 16. HIV/AIDS diagnoses among women (≥ 13 years) by race/ethnicity and mode of exposure—	c
Idaho, 2003–2007	19
Table 17. HIV/AIDS diagnoses among youth (aged 13-24 yrs) by sex, race/ethnicity, and mode of	10
exposure—Idaho, 2003–2007	20
Table 18. Newly diagnosed HIV infections (including AIDS)—health district 1, 2003–2007	
Table 19. Number of persons presumed living with HIV/AIDS—health district 1, 2007	
Table 20. Newly diagnosed HIV infections (including AIDS)—health district 2, 2003–2007	
Table 21. Number of persons presumed living with HIV/AIDS—health district 2, 2007	
Table 22. Newly diagnosed HIV infections (including AIDS)—health district 2, 2007———————————————————————————————————	
	26
Table 24. Newly diagnosed HIV infections (including AIDS)—health district 4, 2003–2007	
Table 25. Number of persons presumed living with HIV/AIDS—health district 4, 2007	
Table 26. Newly diagnosed HIV infections (including AIDS)—health district 5, 2003–2007	
Table 27. Number of persons presumed living with HIV/AIDS—health district 5, 2007	
Table 28. Newly diagnosed HIV infections (including AIDS)—health district 6, 2001–2005	
Table 29. Number of persons presumed living with HIV/AIDS—health district 6, 2007	
Table 30. Newly diagnosed HIV infections (including AIDS)—health district 7, 2001–2005	
Table 31. Number of persons presumed living with HIV/AIDS—health district 7, 2007	
Table 32. Frequency of reported risks among interviewed syphilis cases (all stages) by report year, 20	
2007	40
Table 33. HIV testing and percent positive tests at counseling and testing sites by sex—Idaho, 2003–	
	42
Table 34. HIV testing and positivity of tests at counseling and testing sites by race/ethnicity—Idaho,	
2003–2007	
Table 35. HIV testing and positivity of tests at counseling and testing sites by age group—Idaho, 2003	
2006*	42
Table 36. HIV testing and positivity of tests at counseling and testing sites by risk category —Idaho,	
2003–2007	43
Table 37. Percentage of students who reported using a needle to inject any illegal drug into their body	/
one or more times during their life—Idaho, 2007	44
Table 38. Percentage of students who reported ever having sexual intercourse— Idaho, 2007	
Table 39. Percentage of students who reported sexual intercourse for the first time before age 13—Id	
2007	
Table 40. HIV/AIDS diagnoses by sex and year of first diagnosis—Idaho, 2002–2007	
Table 41. HIV/AIDS diagnoses by age group and year of first diagnosis—Idaho, 2002–2007	53

Figure 1. Idaho health district boundaries	Table 42. HIV/AIDS diagnoses by race/ethnicity and year of diagnosis—Idaho, 2002–200753 Table 43. HIV/AIDS diagnoses by exposure category and year of report—Idaho, 2002–200753
Figure 2. HIV/AIDS cases ever reported*, deaths, and presumed living by year—Idaho, 1984–2007	List of Figures
Figure 2. HIV/AIDS cases ever reported*, deaths, and presumed living by year—Idaho, 1984–2007	Figure 1 Idaho health district houndaries 6
Figure 3. 2-year aggregate rate of HIV/AIDS diagnoses by sex—Idaho, 2003–2007	
Figure 4. 2-year aggregate rate of HIV/AIDS diagnoses by selected age group—Idaho, 2003–2007	
Figure 5. 2-year aggregate rate of HIV/AIDS diagnoses by selected race/ethnicity—Idaho, 2003–200714 Figure 6. 2-year aggregate number of HIV/AIDS diagnoses by selected race/ethnicity—Idaho, 2003–2007	
Figure 6. 2-year aggregate number of HIV/AIDS diagnoses by selected race/ethnicity—Idaho, 2003–2007  14  Figure 7. 2-year aggregate number of HIV/AIDS diagnoses by selected mode of exposure—Idaho, 2003–2007	
Figure 7. 2-year aggregate number of HIV/AIDS diagnoses by selected mode of exposure—Idaho, 2003—2007	
Figure 7. 2-year aggregate number of HIV/AIDS diagnoses by selected mode of exposure—Idaho, 2003—2007	
Figure 8. Reported chlamydia incidence and rate by year of report—Idaho, 2003–2007	Figure 7. 2-year aggregate number of HIV/AIDS diagnoses by selected mode of exposure—Idaho, 2003—
Figure 9. Reported chlamydia incidence rate by sex and year of report—Idaho, 2003–2007	
Figure 10. Reported chlamydia incidence rate by selected age group and year of report—Idaho, 2003—2007	
2007	
Figure 11. Reported chlamydia incidence rate by race/ethnicity and year of report—Idaho, 2003–200737 Figure 12. Reported gonorrhea incidence and rate by year of report—Idaho, 2003–2007	Figure 10. Reported chlamydia incidence rate by selected age group and year of report—Idaho, 2003–
Figure 12. Reported gonorrhea incidence and rate by year of report—Idaho, 2003–2007	
Figure 13. Reported gonorrhea incidence rate by sex and year of report—Idaho, 2003–2007	
Figure 14. Reported gonorrhea incidence rate by selected age group and year of report—Idaho, 2003—2007	
2007	
Figure 15. Reported gonorrhea incidence by race/ethnicity and year of report—Idaho, 2003–2007	
Figure 16. Reported early syphilis incidence and rate by year of report—Idaho, 2003–200739 Figure 17. Reported early syphilis incidence by race/ethnicity and year of report—Idaho, 2003–200740	
Figure 17. Reported early syphilis incidence by race/ethnicity and year of report—Idaho, 2003–200740	
Figure 18 HIV tests through IDHW-funded HIV counseling and testing sites—Idaho, 2003–2007 41	Figure 18. HIV tests through IDHW-funded HIV counseling and testing sites—Idaho, 2003–200741

# **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

# Case Counting

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 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 Over 50.

### 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.

Heterosexual contact 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, part of the observed increase is real. As stated above, a person must have intimate knowledge about his/her partner to meet the criteria for heterosexual mode of exposure. Often cases will not be certain about their partners' HIV status or risk. Additionally, 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 heterosexual contact, MSM, and/or IDU increase, a larger number of cases without a specified risk would be expected.

A recent study by the Centers for Disease Control and Prevention used statistical methods to redistribute risk among female HIV/AIDS cases with unspecified risk. The results are helpful but are based on national data that are not necessarily applicable to the state or local level. Speculation regarding the distribution of risk behaviors among those with unspecified risk is difficult, especially in men, for whom not even a national study is available.

#### **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**

### Overall

- Idaho's 2007 population was estimated at 1,499,402. A large majority (88%) of residents are White; about 10% are Hispanic. Idaho's population ranks 4<sup>th</sup> youngest in the U.S. with an average age of 34.2 years. 9% of families and 13% of individuals live below the poverty level.
- 1,026 HIV and AIDS cases have been diagnosed in Idaho residents. Idaho cases are 0.16 of the total HIV cases and 0.06% of the total AIDS cases reported in the U.S.
- 1,028 individuals are presumed to be living with HIV or AIDS in Idaho. Improvements in HIV treatment have reduced the number of deaths from 26 per year during 1984–1995 to 15 per year from 1996–2007.
- Males have been diagnosed with HIV/AIDS at a higher 2-year aggregate rate than females during 2002–2007. However, the 2-year aggregate rate trend among females is increasing and has risen 67% during 2002–2007.
- There was a 147% increase in the 2-year aggregate rate among persons aged 20-29 years and a 45% decrease among persons aged 30-39 years during 2002–2007.
- Whites were 77% of diagnoses during 2002–2007. Increasing numbers of diagnoses were noted among Hispanics and Blacks.
- MSM continues to be the most reported mode of exposure (43%) during 2002–2007, and the number of IDUs and MSM/IDUs increased. There was no consistent trend in heterosexual mode of exposure.

# Populations of interest

- 74 MSM were diagnosed with HIV/AIDS during 2003–2007. MSM account for over 40% of HIV/AIDS diagnosed during that time. Similar proportions of MSM aged 20-29, 30-39, and 40-49 years were diagnosed. Diagnoses among non-White MSM were distributed toward comparatively younger age groups than Whites
- 18 MSM/IDU were diagnosed during 2003–2007. All but one were White. 44% were 30-39 years at diagnosis.
- 16 non-MSM IDU were diagnosed during 2003–2007. 63% were male. In women, the highest proportions were aged 20-29 years at diagnosis, whereas for men, the highest proportion were aged 40-49 years. 88% overall were White.
- 14 heterosexual mode of exposure diagnoses were reported during 2003–2007. 79% were female. Heterosexual females are distributed toward younger age groups compared to males. All of the males diagnosed were aged 40 years or older. Conversely, a large majority (76%) of women were aged less than 40 years at diagnosis.
- 30 women (females aged ≥13 years) were diagnosed during 2003–2007. Where mode of exposure was identified, 11 were heterosexual partners of high-risk males; 6 were IDU. A high proportion of women (43%) were non-White. 30% were Hispanic.
- 19 of the 25 HIV/AIDS cases in youth (aged 13-24 at diagnosis) were males; most (95%) males were White and 68% of males were MSM. The 6 female youth HIV/AIDS diagnoses were 50% non-White and had evenly distributed mode of exposure.

# 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 2007 at 1,499,402. 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 27.9% in District 4 (Table 1).

Idaho's population ranks 4<sup>th</sup> youngest among states and the District of Columbia. The U.S. Census Bureau, based on the American

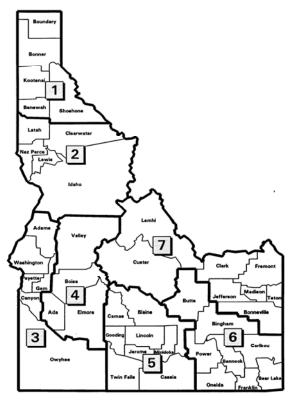


Figure 1. Idaho health district boundaries

Community Survey 2007, calculated the median age to be 34.2 years, compared to the U.S. median age of 36.4. According to U.S. Census Bureau estimates for 2007, 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, 2007

Health district	N	%
District 1	208,445	13.9%
District 2	102,388	6.8%
District 3	243,156	16.2%
District 4	418,778	27.9%
District 5	174,057	11.6%
District 6	162,880	10.9%
District 7	189,698	12.7%
TOTAL	1,499,402	100.0%

Source: National Center for Health Statistics. Estimates of the July 1, 2007, United States resident population from the Vintage 2007 postcensal series by county, age, sex, race, and Hispanic origin, prepared under a collaborative arrangement with the U.S. CensusBureau, 9/5/2008.

The majority of Idaho's population are non-Hispanic Whites (86.5%). Hispanics (any race) are 9.8% of the population (Table 3). All other race/ethnic categories make up the remaining 3.7% of the 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). 9.4% of families and 13% of individuals live below the poverty level.

Table 2. Estimated population by age group—Idaho, 2007

Age Group	N	%
0-12	295,520	19.7%
13-19	154,797	10.3%
20-29	217,286	14.5%
30-39	192,338	12.8%
40-49	202,754	13.5%
50 +	436,707	29.1%
TOTAL	1,499,402	100.0%

Source: National Center for Health Statistics. Estimates of the July 1, 2007, United States resident population from the Vintage 2007 postcensal series by county, age, sex, race, and Hispanic origin, prepared under a collaborative arrangement with the U.S. CensusBureau, 9/5/2008.

Table 3. Estimated population by race/ethnicity—Idaho, 2007

Race/Ethnicity	N	%
Hispanic	147,426	9.8%
White (non-Hispanic)	1,297,603	86.5%
Black (non-Hispanic)	13,370	0.9%
American Indian/Alaska Native (Al/AN) (non-Hispanic)	20,346	1.4%
Asian/Pacific Islander (A/PI) (non-Hispanic)	20,657	1.4%
TOTAL	1,499,402	100.0%

Table 4. Selected population characteristics 3-year estimates—Idaho and the U.S., 2005–2007

Characteristic	Idaho	U.S.
Population 25 years and over:		
High school graduate or higher	87.4%	84.0%
Bachelor's degree or higher	23.6%	27.0%
Foreign born (all ages)	5.6%	12.5%
Married males (population 15 years and over)	58.5%	52.6%
Married females (population 15 years and over)	56.6%	48.5%
Speak a language other than English at home (5 years and over)	9.9%	19.5%
Families below poverty level	9.4%	9.8%
Individuals below poverty level	13.0%	13.3%

Source: U.S. Census Bureau, 2005-2007 American Community Survey 3-Year Estimates

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

#### **Cumulative HIV and AIDS**

While all states report HIV infection, CDC only accepts HIV reports from states with mature name-based reporting systems, like Idaho. Idaho accounts for 4% of total HIV cases and 0.06% of total AIDS cases reported in the U.S. since the beginning of the HIV/AIDS epidemic, according to the 2006 CDC HIV/AIDS Surveillance Report.

#### HIV

A total of 419 residents were first diagnosed with HIV (not yet AIDS) in Idaho from 1984—2007. The great majority (79%) were male (Table 5); 79% were White. By age, the highest proportion of HIV cases were diagnosed in persons aged 20-29 years (40%), and persons aged 30-39 years accounted for more than one third of diagnoses. The most frequently reported exposure category was MSM, although the proportion was less than half of the total. IDU, MSM/IDU, heterosexual contact, and undetermined risk accounted for notable proportions. Five were pediatric cases.

#### **AIDS**

A total of 607 residents were first diagnosed and reported with AIDS in Idaho from 1984—2007 (Table 5). An even greater majority (86%) were male compared to HIV cases, and 87% were White. Over half of diagnosed cases were among MSM. Other prominent exposure categories were Heterosexual contact, IDU, and MSM/IDU. Two cases were pediatric. Compared with HIV cases, the age at diagnosis was distributed toward older age groups. Over forty percent of persons with AIDS were aged 30–39 years at their AIDS diagnosis; 29% were aged 40–49 years.

Table 5. Characteristics of cumulative non-duplicated Idaho resident HIV & AIDS diagnosed through 12/31/2007

		Disease/Condition			
	H	ΗV	Α	IDS	
	<u>N</u>	%	N	%	
Sex					
Male	331	79%	523	86%	
Female	88	21%	84	14%	
Total	419	100%	607	100%	
Race/ethnicity					
Hispanic	54	13%	53	9%	
American Indian/Alaska Native	10	2%	9	1%	
Asian/Pacific Islander	3	1%	0	0%	
Black	21	5%	13	2%	
White	330	79%	528	87%	
Unknown	1	0%	4	1%	
Total	419	100%	607	100%	
Exposure categories - adults					
Men who have sex with men (MSM)	181	44%	323	53%	
Injection drug use	59	14%	72	12%	
MSM and inject drugs	39	9%	50	8%	
Hemophilia/Coagulation disorder	1	0%	18	3%	
Heterosexual Contact	59	14%	77	13%	
Receipt of blood, components, or tissue	4	1%	12	2%	
Other/risk not reported or identified	71	17%	54	9%	
Total	414	100%	606	100%	
Exposure categories - pediatric					
Mother with/at risk for HIV infection	3	60%	0	0%	
Receipt of blood, components, or tissue	0	0%	2	100%	
Other/Undetermined	2	40%	0	0%	
Total	5	60%	2	100%	
Age group at first diagnosis					
< 13	5	1%	2	0%	
13-19	10	2%	3	0%	
20-29	166	40%	94	15%	
30-39	143	34%	258	43%	
40-49	72	17%	173	29%	
Over 49	23	5%	77	13%	
Total	419	100%	607	100%	
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## **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 2). As of 12/31/2007, 1028 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.

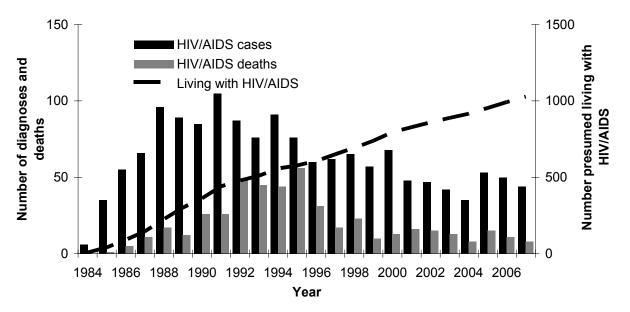


Figure 2. HIV/AIDS cases ever reported\*, deaths, and presumed living by year—Idaho, 1984–2007 \*Regardless of residence at first diagnosis.

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 4:1. The proportion distribution by age for males was toward older age groups than for females. Overall, the prevalence 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, 2007

		Males		F	emales			Total	
Current age									
group	N	%	Rate	N	%	Rate	N	%	Rate
<13	2	0%	1.3	3	2%	2.1	5	0%	1.7
13-19	4	0%	5.1	8	4%	10.6	12	1%	7.8
20-29	72	9%	62.8	34	18%	33.1	106	10%	48.8
30-39	204	24%	208.1	51	27%	54.1	255	25%	132.6
40-49	382	46%	375.7	71	37%	70.2	453	44%	223.4
50+	172	21%	81.9	25	13%	11.0	197	19%	45.1
TOTAL	836	81%	110.8	192	19%	25.8	1028	100%	68.6

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.

Table 7. Presumed living HIV and AIDS cases by sex and race/ethnicity—Idaho, 2007

		Males			Female	s		Total	
Race/Ethnicity	N	%	Rate	Ν	%	Rate	Ν	%	Rate
Hispanic	81	10%	102.7	27	14%	39.4	108	11%	73.3
AI/AN	18	2%	177.0	6	3%	59.0	24	2%	118.0
A/PI	5	1%	52.0	0	0%	0.0	5	0%	24.2
Black	38	5%	512.1	22	11%	369.8	60	6%	448.8
White	688	82%	106.1	137	71%	21.1	825	80%	63.6
Unknown	6	1%	-	0	0%	-	6	1%	
TOTAL	836	81%	110.8	192	19%	25.8	1028	99%	68.6

Over half of males living with HIV/AIDS in Idaho had MSM mode of exposure classification (Table 8). IDUs accounted for 11% and the dual-category MSM/IDUs were an additional 14%. Almost half of females living with HIV/AIDS had heterosexual risk at report. Almost one third indicated IDU risk, a slightly higher proportion than in males, even if IDU is combined with MSM/IDU. 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. Rates in districts 1, 2, 3, 5, and 6 were relatively similar and differed from each other by less than 10 per 100,000. The rate in health district 7, however, was much lower than other districts.

Table 8. Presumed living HIV/AIDS cases by sex and mode of exposure—Idaho, 2007

	Males		Fen	nales	Total		
Exposure category	N	%	N	%	N	%	
Adult							
MSM	462	55%	N/A	-	462	45%	
IDU	95	11%	53	28%	148	14%	
MSM/IDU	118	14%	N/A	-	118	11%	
Hemophiliac	4	0%	1	1%	5	0%	
Heterosexual contact	52	6%	85	44%	137	13%	
Transfusion/transplant	9	1%	4	2%	13	1%	
Risk not specified	93	11%	40	21%	133	13%	
Pediatric							
Mother with/at risk HIV	2	0%	6	3%	8	1%	
Transfusion/transplant	0	0%	1	1%	1	0%	
Other/undetermined	1	0%	2	1%	3	0%	
TOTAL	836	81%	192	19%	1028	100%	

Table 9. Presumed living HIV/AIDS cases by district—Idaho, 2007

District	N	%	Rate
1	130	13%	62.4
2	57	6%	55.7
3	139	14%	57.2
4	447	43%	106.7
5	100	10%	57.5
6	86	8%	52.8
7	69	7%	36.4
TOTAL	1028	100%	68.6

#### **HIV/AIDS Trends**

The majority of cases of HIV/AIDS in Idaho are male. The 2-year aggregate rates of HIV/AIDS diagnoses in males were variable during the time period (Figure 3), but it appeared to increase steadily in females, rising 67% from 0.6 per 100,000 in 2002–2003 to 1.0 in 2006–2007.

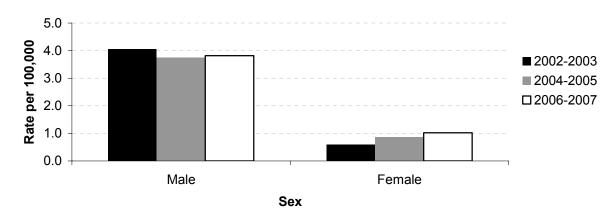


Figure 3. 2-year aggregate rate of HIV/AIDS diagnoses by sex—Idaho, 2003–2007

HIV diagnoses appeared to be increasing notably in persons 20-29 years of age. 2-year aggregate rates of HIV/AIDS diagnoses by age group showed an increase of 141% among 20-29 year-olds and a 45% decrease among 30-39 year-olds (Figure 4) during 2002–2007. The highest 2-year aggregate rate occurred among persons aged 30-39 years during 2002–2003, but trended downward in the following years. By 2006–2007, persons aged 20-29 years had the highest 2-year aggregate rate.

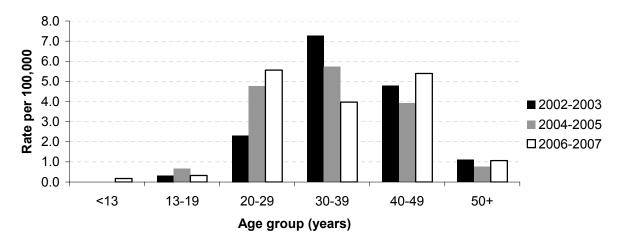


Figure 4. 2-year aggregate rate of HIV/AIDS diagnoses by selected age group—Idaho, 2003–2007

A very large majority of diagnoses (75%) during the time frame were White (Figure 6), although the 2-year aggregate rate among Whites was at times lower than Blacks and Hispanics (Figure 5). Blacks had the highest 2-year aggregate rates in most years. The 2-year aggregate rates have been increasing in Blacks and Hispanics, but the low number of cases and low population

denominators for these and other non-White race/ethnicity categories makes interpretations based on rates difficult.

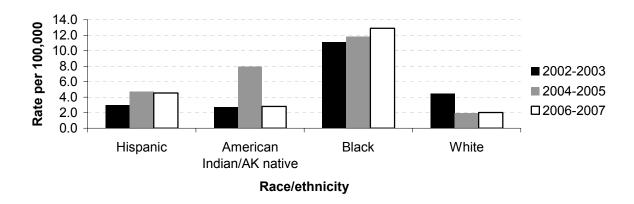


Figure 5. 2-year aggregate rate of HIV/AIDS diagnoses by selected race/ethnicity—Idaho, 2003–2007

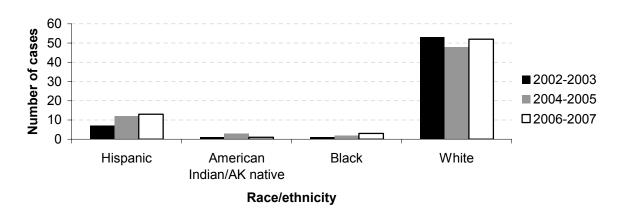


Figure 6. 2-year aggregate number of HIV/AIDS diagnoses by selected race/ethnicity—Idaho, 2003–2007

MSM was the most frequently reported mode of exposure during each 2-year period from 2002–2007, and 43% (n=85) of all diagnoses during that time fell into this exposure category (Figure 7). The trend among heterosexual IDUs appeared to be increasing, but the number with this reported risk was small. Other mode of exposure categories had variable trends.

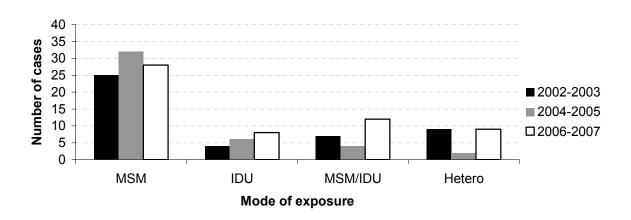


Figure 7. 2-year aggregate number of HIV/AIDS diagnoses by selected mode of exposure—Idaho, 2003–2007

# **Populations of Interest**

Reported cases of HIV/AIDS diagnosed in Idaho residents during the past 5 years (2003–2007) were chosen for this section to highlight the characteristics of the most recent cases in these special populations. During this time period, 168 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, and Youth.

# Men Who Have Sex with Men (non-IDU)

Over 40% (n=74) of HIV/AIDS cases diagnosed during 2003–2007 (n=168) were MSM. MSMs are the most frequently reported mode of exposure category during the time period. The largest proportion (85%) were White and 11% were Hispanic (Table 10). Although MSMs aged 40-49 years were the highest proportion of diagnoses by age group, those aged 20-29 and 30-39 years were of similar proportion. Diagnoses among non-White MSM appeared to be distributed toward comparatively younger age groups than Whites.

Table 10. HIV/AIDS diagnoses among MSM (non-IDU) by race/ethnicity and age group—Idaho, 2003–2007

A = = =	Hisp	anic	Al	/AN	В	lack	WI	nite	Othe	er/Unk	TO	TAL
Age Group	N	%	N	%	N	%	N	%	N	%	N	%
13-19	0	0%	0	0%	0	0%	3	5%	0	0%	3	4%
20-29	2	25%	0	0%	1	100%	18	29%	1	100%	22	30%
30-39	4	50%	1	100%	0	0%	14	22%	0	0%	19	26%
40-49	2	25%	0	0%	0	0%	21	33%	0	0%	23	31%
50+	0	0%	0	0%	0	0%	7	11%	0	0%	7	9%
TOTAL	8	11%	1	1%	1	1%	63	85%	1	1%	74	100%

### Men Who Have Sex with Men and Inject Drugs

During 2003–2007, 18 persons diagnosed with HIV/AIDS were reported to be MSM and also IDU. Persons with both characteristics may represent a unique population and are usually presented separately. All but one of the MSM/IDU cases diagnosed during 2003–2007 was White. The proportion by age group was highest in persons aged 30-39 years (Table 11).

Table 11. HIV/AIDS diagnoses among MSM/IDU by age group and race/ethnicity—Idaho, 2003–2007

	Black		White		TOTA	۸L
Age						
Group	N	%	N	%	N	%
13-19	0	0%	1	6%	1	6%
20-29	0	0%	4	24%	4	22%
30-39	1	100%	7	41%	8	44%
40-49	0	0%	3	18%	3	17%
50+	0	0%	2	12%	2	11%
TOTAL	1	6%	17	94%	18	100%

# <u>Injection Drug Users (Non-MSM)</u>

Most of the 16 non-MSM IDUs diagnosed during 2003–2007 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. 88% of cases were White; the remaining 13% were American Indian/Alaska Native.

Table 12. HIV/AIDS diagnoses among IDU (non-MSM) by sex, age group and race/ethnicity—Idaho, 2003–2007

			ļ	thnicity			
		Αl	/AN	TC	TAL		
	Age						
	Group	N	%	N	%	N	%
Males	13-19	0	0%	0	0%	0	0%
	20-29	0	0%	1	11%	1	10%
	30-39	0	0%	3	33%	3	30%
	40-49	1	100%	4	44%	5	50%
_	50+	0	0%	1	11%	1	10%
	TOTAL	1	10%	9	90%	10	100%
Females	13-19	0	0%	0	0%	0	0%
	20-29	0	0%	3	60%	3	50%
	30-39	1	100%	1	20%	2	33%
	40-49	0	0%	1	20%	1	17%
_	50+	0	0%	0	0%	0	0%
	TOTAL	1	17%	5	83%	6	100%
Total	13-19	0	0%	0	0%	0	0%
	20-29	0	0%	4	29%	4	25%
	30-39	1	50%	4	29%	5	31%
	40-49	1	50%	5	36%	6	38%
	50+	0	0%	1	7%	1	6%
·	TOTAL	2	13%	14	88%	16	100%

Note: percentages may not equal 100 due to rounding

#### Heterosexuals

More women than men were reported with heterosexual mode of exposure during 2003–2007 (Table 13), and a higher proportion were non-White. Sex with IDU and sex with someone with HIV/AIDS were the only reported partner risks for individuals with heterosexual mode of exposure (Table 14). The proportion of these partner risks was similar for both sexes. Heterosexual females were distributed toward younger age groups compared to males. All of the males diagnosed were aged 40 years or older. Conversely, a large majority (76%) of women were aged less than 40 years at diagnosis.

Table 13. HIV/AIDS diagnoses among persons reporting heterosexual mode of exposure by race/ethnicity and sex—Idaho, 2003–2007

	Males		Fem	ales	To	otal	
Race/Ethnicity	Ν	%	Ν	%	Ν	%	
Hispanic - any race	0	0%	2	18%	2	14%	
American Indian/AK native	0	0%	1	9%	1	7%	
Asian/Pacific Islander	0	0%	0	0%	0	0%	
Black	0	0%	0	0%	0	0%	
White	3	100%	8	73%	11	79%	
Unknown	0	0%	0	0%	0	0%	
TOTAL	3	21%	11	79%	14	100%	

Table 14. HIV/AIDS diagnoses among persons reporting heterosexual mode of exposure by reported partner risk, age group, expanded mode of exposure, and sex, 2001–2005

		Reported partner risk										
					AIDS							
		IE	)U	diagı	nosis	TOT	AL					
	Age											
	Group	N	%	N	%	N	%					
Males	13-19	0	0%	0	0%	0	0%					
	20-29	0	0%	0	0%	0	0%					
	30-39	0	0%	0	0%	0	0%					
	40-49	1	50%	1	100%	2	67%					
	50+	1	50%	0	0%	1	33%					
	TOTAL	2	67%	1	33%	3	100%					
Females	13-19	0	0%	1	33%	1	9%					
	20-29	3	38%	1	33%	4	36%					
	30-39	3	38%	1	33%	4	36%					
	40-49	1	13%	0	0%	1	9%					
	50+	1	13%	0	0%	1	9%					
	TOTAL	8	73%	3	27%	11	100%					
Total	13-19	0	0%	1	25%	1	7%					
	20-29	3	30%	1	25%	4	29%					
	30-39	3	30%	1	25%	4	29%					
	40-49	2	20%	1	25%	3	21%					
	50+	2	20%	0	0%	2	14%					
·	TOTAL	10	71%	4	29%	14	100%					

# Women

Two thirds of the diagnoses among women during 2003–2007 were 20-39 years old (Table 15). Of those with known risk, most had heterosexual mode of exposure and about one third reported IDU risk. The proportion of women with unspecified mode of exposure was high. Non-White women are overrepresented among women diagnosed during the time frame compared with Idaho's population distribution (Table 16). Only 57% were White; almost one third were Hispanic. Comparatively, the U.S. Census Bureau estimated females among Idaho's 2005 population, the middle year of the time period of interest, was 88% White (non-Hispanic) and 9% Hispanic.

Table 15. HIV/AIDS diagnoses among women (≥ 13 years) by age group and mode of exposure—Idaho, 2003–2007

	IE	)U	Risk not Heterosexual specified TOTAL							
Age Group	N	%	N	%	N	%	N	%		
13-19	0	0%	0	0%	5	38%	5	17%		
20-29	3	50%	4	36%	3	23%	10	33%		
30-39	2	33%	4	36%	4	31%	10	33%		
40-49	1	17%	2	18%	1	8%	4	13%		
50+	0	0%	1	9%	0	0%	1	3%		
TOTAL	6	20%	11	37%	13	43%	30	100%		

Table 16. HIV/AIDS diagnoses among women (≥ 13 years) by race/ethnicity and mode of exposure—Idaho, 2003–2007

Darak	ID	υU	Hetero	sexual	Risk spec		TOTAL		
Race/ Ethnicity	N	%	N	%	N	%	N	%	
Hispanic	0	0%	2	18%	7	54%	9	30%	
AI/AN	1	17%	1	9%	1	8%	3	10%	
Black	0	0%	0	0%	1	8%	1	3%	
White	5	83%	8	73%	4	31%	17	57%	
TOTAL	6	20%	11	37%	13	43%	30	100%	

# Youth (aged 13-24)

15% of diagnoses during 2003–2007 were among youth. Over three quarters were males (Table 17); all but one male 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, IDU, heterosexual, and unspecified modes of exposure were reported in equal proportions.

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

								He	tero-	Ri	sk not		
		M:	SM		IDU	MSN	M/ IDU	se	xual	Sp	ecified	TO	DTAL
	Race/Ethnicity	Ν	%	Ν	%	Ν	%	Ν	%	Ν	%	Ν	%
	Hispanic –												
Males	any race	0	0%	0	0%	0	0%	0	-	0	0%	0	0%
	AI/AN	0	0%	0	0%	0	0%	0	-	0	0%	0	0%
	Black	1	7%	0	0%	0	0%	0	-	0	0%	1	5%
	White	13	93%	1	100%	3	100%	0	-	1	100%	18	95%
	TOTAL	14	74%	1	5%	3	16%	0	0%	1	5%	19	100%
	Hispanic –												
Females	any race	N/A	-	0	0%	N/A	-	0	0%	1	50%	1	17%
	AI/AN	N/A	-	0	0%	N/A	-	1	50%	0	0%	1	17%
	Black	N/A	-	0	0%	N/A	-	0	0%	1	50%	1	17%
	White	N/A	-	2	100%	N/A	-	1	50%	0	0%	3	50%
	TOTAL	N/A	-	2	33%	N/A	-	2	33%	2	33%	6	100%
	Hispanic - any												
TOTAL	race	0	0%	0	0%	0	0%	0	0%	1	33%	1	4%
	AI/AN	0	0%	0	0%	0	0%	1	50%	0	0%	1	4%
	Black	1	7%	0	0%	0	0%	0	0%	1	33%	2	8%
	White	13	93%	3	100%	3	100%	1	50%	1	33%	21	84%
	TOTAL	14	56%	3	12%	3	12%	2	8%	3	12%	25	100%

# **Public Health Districts**

Cases diagnosed in Idaho during 2003–2007 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.

Table 18. Newly diagnosed HIV infections (including AIDS)—health district 1, 2003–2007

		Ma	les	Fen	nales	T	otal
	_	N	%	N	%	Ν	%
Age							
group	<13	0	0%	0	0%	0	0%
	13-19	1	6%	0	0%	1	5%
	20-29	4	24%	0	0%	4	21%
	30-39	4	24%	2	100%	6	32%
	40-49	5	29%	0	0%	5	26%
	50+	3	18%	0	0%	3	16%
	TOTAL	17	100%	2	100%	19	100%
Race/							
Ethnicity	Hispanic	1	6%	0	0%	1	5%
	AI/AN	0	0%	0	0%	0	0%
	A/PI	0	0%	0	0%	0	0%
	Black	0	0%	0	0%	0	0%
	White	16	94%	2	100%	18	95%
	Unknown	0	0%	0	0%	0	0%
	TOTAL	17	100%	2	100%	19	100%
Exposure							
category	Adult						
	MSM	10	59%	N/A	-	10	53%
	IDU	1	6%	0	0%	1	5%
	MSM/IDU	4	24%	N/A	-	4	21%
	Hemophiliac	0	0%	0	0%	0	0%
	Heterosexual contact	0	0%	2	100%	2	11%
	Transfusion/transplant	0	0%	0	0%	0	0%
	Risk not specified	2	12%	0	0%	2	11%
	Pediatric						
	Mother with/at risk HIV	0	0%	0	0%	0	0%
	Other/undetermined	0	0%	0	0%	0	0%
	TOTAL	17	89%	2	11%	19	100%

Table 19. Number of persons presumed living with HIV/AIDS—health district 1, 2007

		Ма	les	Fen	nales	Т	otal
		Ν	%	Ν	%	Ν	%
	-						
Age							
group	<13	0	0%	1	3%	1	1%
	13-19	1	1%	3	10%	4	3%
	20-29	8	8%	1	3%	9	7%
	30-39	19	19%	8	28%	27	21%
	40-49	45	45%	11	38%	56	43%
	50+	28	28%	5	17%	33	25%
	TOTAL	101	100%	29	100%	130	100%
Race/							
Ethnicity	Hispanic	3	3%	1	3%	4	3%
	AI/AN	2	2%	0	0%	2	2%
	A/PI	0	0%	0	0%	0	0%
	Black	0	0%	2	7%	2	2%
	White	96	95%	26	90%	122	94%
	Unknown	0	0%	0	0%	0	0%
	TOTAL	101	100%	29	100%	130	100%
_							
Exposure	Adult						
category	MSM	56	55%	N/A		56	43%
	IDU	15	55% 15%	1N/A 8	28%	23	43% 18%
	MSM/IDU	15	15%	o N/A	20%	23 15	12%
			0%		0%		0%
	Hemophiliac	0		0		0	
	Heterosexual contact	6	6% 0%	16	55%	22	17%
	Transfusion/transplant	0	0%	1	3%	1	1%
	Risk not specified	9	9%	0	0%	9	7%
	Pediatric	•	00/	4	4.40/	4	20/
	Mother with/at risk HIV	0	0%	4	14%	4	3%
	Other/undetermined	0	0%	0	0%	0	0%
	TOTAL	101	100%	29	100%	130	100%

Table 20. Newly diagnosed HIV infections (including AIDS)—health district 2, 2003-2007

		M	1ales	Fer	nales	7	Γotal
		N	%	N	%	N	%
Age group	<13	0	0%	0	0%	0	0%
	13-19	1	9%	0	0%	1	7%
	20-29	4	36%	1	33%	5	36%
	30-39	3	27%	1	33%	4	29%
	40-49	3	27%	1	33%	4	29%
	50+	0	0%	0	0%	0	0%
	TOTAL	11	100%	3	100%	14	100%
Race/							
Ethnicity	Hispanic	0	0%	0	0%	0	0%
,	AI/AN	1	8%	0	0%	1	7%
	A/PI	0	0%	0	0%	0	0%
	Black	1	8%	0	0%	1	7%
	White	10	83%	2	100%	12	86%
	Unknown	0	0%	0	0%	0	0%
	TOTAL	12	100%	2	100%	14	100%
Exposure							
category	Adult						
· · · · · · · · · · · · · · · · · · ·	MSM	6	50%	N/A	_	6	43%
	IDU	1	8%	0	0%	1	7%
	MSM/IDU	0	0%	N/A	_	0	0%
	Hemophiliac	0	0%	0	0%	0	0%
	Heterosexual contact	1	8%	2	100%	3	21%
	Transfusion/transplant	0	0%	0	0%	0	0%
	Risk not specified	4	33%	0	0%	4	29%
	Pediatric	-		-	•	-	•
	Mother with/at risk HIV	0	0%	0	0%	0	0%
	Other/undetermined	0	0%	0	0%	0	0%
	TOTAL	12	86%	2	14%	14	100%

Table 21. Number of persons presumed living with HIV/AIDS—health district 2, 2007

		Males		Females		Total	
		Ν	%	Ν	%	Ν	%
	·						,
Age							
group	<13	0	0%	1	8%	1	2%
	13-19	1	2%	0	0%	1	2%
	20-29	4	9%	2	17%	6	11%
	30-39	12	27%	2	17%	14	25%
	40-49	19	42%	7	58%	26	46%
	50+	9	20%	0	0%	9	16%
	TOTAL	45	100%	12	100%	57	100%
Race/							
Ethnicity	Hispanic	2	4%	2	17%	4	7%
	AI/AN	0	0%	1	8%	1	2%
	A/PI	0	0%	0	0%	0	0%
	Black	2	4%	1	8%	3	5%
	White	41	91%	8	67%	49	86%
	Unknown	0	0%	0	0%	0	0%
	TOTAL	45	100%	12	100%	57	100%
Exposure							
category	Adult						
	MSM	18	40%	N/A	-	18	32%
	IDU	6	13%	4	33%	10	18%
	MSM/IDU	9	20%	N/A	-	9	16%
	Hemophiliac	2	4%	0	0%	2	4%
	Heterosexual contact	3	7%	5	42%	8	14%
	Transfusion/transplant	1	2%	0	0%	1	2%
	Risk not specified	6	13%	2	17%	8	14%
	Pediatric						
	Mother with/at risk HIV	0	0%	0	0%	0	0%
	Other/undetermined	0	0%	1	8%	1	2%
	TOTAL	45	100%	12	100%	57	100%

Table 22. Newly diagnosed HIV infections (including AIDS)—health district 3, 2003–2007

		Males		Females		Total	
		Ν	%	Ν	%	Ν	%
Age group	<13	0	0%	0	0%	0	0%
	13-19	0	0%	0	0%	0	0%
	20-29	4	19%	3	43%	7	25%
	30-39	7	33%	3	43%	10	36%
	40-49	5	24%	0	0%	5	18%
	50+	5	24%	1	14%	6	21%
	TOTAL	21	100%	7	100%	28	100%
Race/	Liberaria	40	400/	_	740/	45	E 40/
Ethnicity	Hispanic	10	48%	5	71%	15	54%
	AI/AN	0	0%	0	0%	0	0%
	A/PI	0	0%	0	0%	0	0%
	Black	0	0%	0	0%	0	0%
	White	11	52%	2	29%	13	46%
	Unknown	0	0%	0	0%	0	0%
	TOTAL	21	100%	7	100%	28	100%
Evposuro							
Exposure category	Adult						
oatogory	MSM	5	24%	N/A	_	5	18%
	IDU	1	5%	0	0%	1	4%
	MSM/IDU	1	5%	N/A	-	1	4%
	Hemophiliac	0	0%	0	0%	0	0%
	Heterosexual contact	0	0%	3	43%	3	11%
	Transfusion/transplant	0	0%	0	0%	0	0%
	Risk not specified	14	67%	4	57%	18	64%
	Pediatric		2. 75	•	J. 70	. •	2.70
	Mother with/at risk HIV	0	0%	0	0%	0	0%
	Other/undetermined	0	0%	0	0%	0	0%
	TOTAL	21	75%	7	25%	28	100%
	. •=		. 5 , 5	•	_3,0		

Table 23. Number of persons presumed living with HIV/AIDS—health district 3, 2007

		Males		Females		Total	
		Ν	%	Ν	%	Ν	%
							,
Age							
group	<13	0	0%	0	0%	0	0%
	13-19	0	0%	2	6%	2	1%
	20-29	9	8%	6	19%	15	11%
	30-39	27	25%	8	26%	35	25%
	40-49	49	45%	10	32%	59	42%
	50+	23	21%	5	16%	28	20%
	TOTAL	108	100%	31	100%	139	100%
Race/							
Ethnicity	Hispanic	25	23%	13	42%	38	27%
	AI/AN	0	0%	2	6%	2	1%
	A/PI	0	0%	0	0%	0	0%
	Black	2	2%	1	3%	3	2%
	White	79	73%	15	48%	94	68%
	Unknown	2	2%	0	0%	2	1%
	TOTAL	108	100%	31	100%	139	100%
Exposure							
category	Adult						
	MSM	45	42%	N/A	-	45	32%
	IDU	17	16%	4	13%	21	15%
	MSM/IDU	17	16%	N/A	-	17	12%
	Hemophiliac	2	2%	0	0%	2	1%
	Heterosexual contact	2	2%	13	42%	15	11%
	Transfusion/transplant	1	1%	2	6%	3	2%
	Risk not specified	24	22%	10	32%	34	24%
	Pediatric						
	Mother with/at risk HIV	0	0%	1	3%	1	1%
	Other/undetermined	0	0%	1	3%	1	1%
	TOTAL	0	0%	0	0%	0	0%

Table 24. Newly diagnosed HIV infections (including AIDS)—health district 4, 2003-2007

		Males		Females		Total	
		Ν	%	Ν	%	Ν	%
Age group	<13	1	1%	0	0%	1	1%
	13-19	2	3%	0	0%	2	3%
	20-29	17	24%	3	38%	20	25%
	30-39	20	28%	1	13%	21	27%
	40-49	24	34%	3	38%	27	34%
	50+	7	10%	1	13%	8	10%
	TOTAL	71	100%	8	100%	79	100%
Race/		_	00/	_	20/	_	20/
Ethnicity	Hispanic	6	8%	0	0%	6	8%
	AI/AN	0	0%	0	0%	0	0%
	A/PI	2	3%	0	0%	2	3%
	Black	4	6%	1	13%	5	6%
	White	58	82%	7	88%	65	82%
	Unknown	1	1%	0	0%	1	1%
	TOTAL	71	100%	8	100%	79	100%
Exposure							
category	Adult						
0 ,	MSM	46	65%	N/A	_	46	58%
	IDU	4	6%	2	25%	6	8%
	MSM/IDU	10	14%	N/A	_	10	13%
	Hemophiliac	0	0%	0	0%	0	0%
	Heterosexual contact	1	1%	2	25%	3	4%
	Transfusion/transplant	0	0%	0	0%	0	0%
	Risk not specified	9	13%	4	50%	13	16%
	Pediatric						
	Mother with/at risk HIV	0	0%	0	0%	0	0%
	Other/undetermined	1	1%	0	0%	1	1%
	TOTAL	71	90%	8	10%	79	100%

Table 25. Number of persons presumed living with HIV/AIDS—health district 4, 2007  $\,$ 

		Males		Females		Total	
		N %		Ν	%	Ν	%
Age							
group	<13	2	1%	1	2%	3	1%
	13-19	2	1%	1	2%	3	1%
	20-29	31	8%	8	14%	39	9%
	30-39	88	23%	16	28%	104	23%
	40-49	190	49%	24	41%	214	48%
	50+	76	20%	8	14%	84	19%
	TOTAL	389	100%	58	100%	447	100%
Race/							
Ethnicity	Hispanic	27	7%	3	5%	30	7%
	AI/AN	10	3%	0	0%	10	2%
	A/PI	5	1%	0	0%	5	1%
	Black	25	6%	13	22%	38	9%
	White	318	82%	42	72%	360	81%
	Unknown	4	1%	0	0%	4	1%
	TOTAL	389	100%	58	100%	447	100%
Exposure category	Adult						
category	MSM	241	62%	N/A		241	54%
	IDU	37	10%	22	38%	59	13%
	MSM/IDU	50	13%	N/A	JO 70 -	50	11%
	Hemophiliac	0	0%	0	0%	0	0%
	Heterosexual contact	22	6%	19	33%	41	9%
	Transfusion/transplant	5	1%	13	2%	6	1%
	Risk not specified	31	8%	15	26%	46	10%
	Pediatric	31	O /0	13	20 /0	+0	10 /0
	Mother with/at risk HIV	2	1%	0	0%	2	0%
	Other/undetermined	1	0%	1	2%	2	0%
	TOTAL	389	100%	<u>'</u> 58	100%	447	100%
	IOIAL	309	100 /0	50	100 /0	441	100 /0

# District 5

Table 26. Newly diagnosed HIV infections (including AIDS)—health district 5, 2003–2007

		M	1ales	Fer	nales	7	otal
		N	%	Ν	%	Ν	%
Age group	<13	0	0%	0	0%	0	0%
	13-19	0	0%	0	0%	0	0%
	20-29	1	25%	3	100%	4	57%
	30-39	1	25%	0	0%	1	14%
	40-49	2	50%	0	0%	2	29%
	50+	0	0%	0	0%	0	0%
	TOTAL	4	100%	3	100%	7	100%
_							
Race/	Historia	0	00/	2	4000/	2	400/
Ethnicity	Hispanic	0	0%	3	100%	3	43%
	AI/AN	0	0%	0	0%	0	0%
	A/PI	0	0%	0	0%	0	0%
	Black	0	0%	0	0%	0	0%
	White	4	100%	0	0%	4	57%
	Unknown	0	0%	0	0%	0	0%
	TOTAL	4	100%	3	100%	7	100%
Exposure							
category	Adult						
0 ,	MSM	0	0%	N/A	-	0	0%
	IDU	3	75%	0	0%	3	43%
	MSM/IDU	0	0%	N/A	_	0	0%
	Hemophiliac	0	0%	0	0%	0	0%
	Heterosexual contact	0	0%	1	33%	1	14%
	Transfusion/transplant	0	0%	0	0%	0	0%
	Risk not specified	1	25%	2	67%	3	43%
	Pediatric						
	Mother with/at risk HIV	0	0%	0	0%	0	0%
	Other/undetermined	0	0%	0	0%	0	0%
	TOTAL	4	57%	3	43%	7	100%

Table 27. Number of persons presumed living with HIV/AIDS—health district 5, 2007

		Ма	les	Fen	nales	Т	otal
		Ν	%	Ν	%	Ν	%
Age							
group	<13	0	0%	0	0%	0	0%
	13-19	0	0%	0	0%	0	0%
	20-29	11	15%	6	23%	17	17%
	30-39	15	20%	8	31%	23	23%
	40-49	33	45%	6	23%	39	39%
	50+	15	20%	6	23%	21	21%
	TOTAL	74	100%	26	100%	100	100%
Deset							
Race/ Ethnicity	Hispanic	13	18%	5	19%	18	18%
	AI/AN	3	4%	0	0%	3	3%
	A/PI	0	0%	0	0%	0	0%
	Black	1	1%	1	4%	2	2%
	White	57	77%	20	77%	77	77%
	Unknown	0	0%	0	0%	0	0%
	TOTAL	74	100%	26	100%	100	100%
Exposure							
category	Adult						
	MSM	38	51%	N/A	-	38	38%
	IDU	13	18%	4	15%	17	17%
	MSM/IDU	9	12%	N/A	-	9	9%
	Hemophiliac	0	0%	0	0%	0	0%
	Heterosexual contact	8	11%	17	65%	25	25%
	Transfusion/transplant	0	0%	0	0%	0	0%
	Risk not specified	6	8%	5	19%	11	11%
	Pediatric						
	Mother with/at risk HIV	0	0%	0	0%	0	0%
	Other/undetermined	0	0%	0	0%	0	0%
	TOTAL	74	100%	26	100%	100	100%

# District 6

Table 28. Newly diagnosed HIV infections (including AIDS)—health district 6, 2001-2005

		Ν	lales	Fer	nales	7	Γotal
		N	%	Ν	%	Ν	%
Age group	<13	0	0%	0	0%	0	0%
	13-19	0	0%	0	0%	0	0%
	20-29	3	33%	0	0%	3	21%
	30-39	2	22%	2	40%	4	29%
	40-49	3	33%	3	60%	6	43%
	50+	1	11%	0	0%	1	7%
	TOTAL	9	100%	5	100%	14	100%
Race/		_	201	•	201	_	201
Ethnicity	Hispanic	0	0%	0	0%	0	0%
	AI/AN	1	11%	2	40%	3	21%
	A/PI	0	0%	0	0%	0	0%
	Black	0	0%	0	0%	0	0%
	White	8	89%	3	60%	11	79%
	Unknown	0	0%	0	0%	0	0%
	TOTAL	9	100%	5	100%	14	100%
Exposure							
category	Adult						
	MSM	5	56%	N/A	_	5	36%
	IDU	0	0%	1	20%	1	7%
	MSM/IDU	2	22%	N/A	_	2	14%
	Hemophiliac	0	0%	0	0%	0	0%
	Heterosexual contact	1	11%	2	40%	3	21%
	Transfusion/transplant	0	0%	0	0%	0	0%
	Risk not specified	1	11%	2	40%	3	21%
	Pediatric .						
	Mother with/at risk HIV	0	0%	0	0%	0	0%
	Other/undetermined	0	0%	0	0%	0	0%
	TOTAL	9	64%	5	36%	14	100%

Table 29. Number of persons presumed living with HIV/AIDS—health district 6, 2007

		Ма	les	Fen	nales	T	otal
		Ν	%	Ν	%	Ν	%
Age							
group	<13	0	0%	0	0%	0	0%
	13-19	0	0%	1	5%	1	1%
	20-29	6	9%	7	33%	13	15%
	30-39	22	34%	6	29%	28	33%
	40-49	24	37%	7	33%	31	36%
	50+	13	20%	0	0%	13	15%
	TOTAL	65	100%	21	100%	86	100%
Race/							
Ethnicity	Hispanic	5	8%	1	5%	6	7%
,	AI/AN	3	5%	3	14%	6	7%
	A/PI	0	0%	0	0%	0	0%
	Black	3	5%	4	19%	7	8%
	White	54	83%	13	62%	67	78%
	Unknown	0	0%	0	0%	0	0%
	TOTAL	65	100%	21	100%	86	100%
_							
Exposure	A deda						
category	Adult	0.4	<b>500</b> /	N1/A		0.4	400/
	MSM	34	52%	N/A	-	34	40%
	IDU	5	8%	6	29%	11	13%
	MSM/IDU	10	15%	N/A	-	10	12%
	Hemophiliac	0	0%	0	0%	0	0%
	Heterosexual contact	6	9%	9	43%	15	17%
	Transfusion/transplant	1	2%	0	0%	1	1%
	Risk not specified	9	14%	5	24%	14	16%
	Pediatric						
	Mother with/at risk HIV	0	0%	1	5%	1	1%
	Other/undetermined	0	0%	0	0%	0	0%
	TOTAL	65	100%	21	100%	86	100%

# District 7

Table 30. Newly diagnosed HIV infections (including AIDS)—health district 7, 2001-2005

		Ma	ales	Fem	ales	7	Γotal
		Ν	%	Ν	%	Ν	%
Age group	<13	0	0%	0	0%	0	0%
	13-19	0	0%	0	0%	0	0%
	20-29	1	20%	2	100%	3	43%
	30-39	2	40%	0	0%	2	29%
	40-49	2	40%	0	0%	2	29%
	50+	0	0%	0	0%	0	0%
	TOTAL	5	100%	2	100%	7	100%
Race/							
Ethnicity	Hispanic	1	20%	0	0%	1	14%
	AI/AN	0	0%	0	0%	0	0%
	A/PI	0	0%	0	0%	0	0%
	Black	0	0%	0	0%	0	0%
	White	4	80%	2	100%	6	86%
	Unknown	0	0%	0	0%	0	0%
	TOTAL	5	100%	2	100%	7	100%
Exposure							
category	Adult	_				_	/
	MSM	2	40%	N/A	-	2	29%
	IDU	0	0%	2	100%	2	29%
	MSM/IDU	1	20%	N/A	-	1	14%
	Hemophiliac	0	0%	0	0%	0	0%
	Heterosexual contact	0	0%	0	0%	0	0%
	Transfusion/transplant	0	0%	0	0%	0	0%
	Risk not specified	2	40%	0	0%	2	29%
	Pediatric					0	
	Mother with/at risk HIV	0	0%	0	0%	0	0%
	Other/undetermined	0	0%	0	0%	0	0%
	TOTAL	5	71%	2	29%	7	100%

Table 31. Number of persons presumed living with HIV/AIDS—health district 7, 2007

		Ма	les	Fen	nales	Т	otal
		N	%	Ν	%	Ν	%
Age							
group	<13	0	0%	0	0%	0	0%
	13-19	0	0%	1	7%	1	1%
	20-29	3	6%	4	27%	7	10%
	30-39	21	39%	3	20%	24	35%
	40-49	22	41%	6	40%	28	41%
	50+	8	15%	1	7%	9	13%
	TOTAL	54	100%	15	100%	69	100%
Race/		•	4.40/	•	400/	•	400/
Ethnicity	Hispanic	6	11%	2	13%	8	12%
	AI/AN	0	0%	0	0%	0	0%
	A/PI	0	0%	0	0%	0	0%
	Black	5	9%	0	0%	5	7%
	White	43	80%	13	87%	56	81%
	Unknown	0	0%	0	0%	0	0%
	TOTAL	54	100%	15	100%	69	100%
_							
Exposure	A alcald						
category	Adult	00	<b>500</b> /	N1/A		00	400/
	MSM	30	56%	N/A	-	30	43%
	IDU	2	4%	5	33%	7	10%
	MSM/IDU	8	15%	N/A		8	12%
	Hemophiliac	0	0%	1	7%	1	1%
	Heterosexual contact	5	9%	6	40%	11	16%
	Transfusion/transplant	1	2%	0	0%	1	1%
	Risk not specified	8	15%	3	20%	11	16%
	Pediatric						
	Mother with/at risk HIV	0	0%	0	0%	0	0%
	Other/undetermined	0	0%	0	0%	0	0%
	TOTAL	54	100%	15	100%	69	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

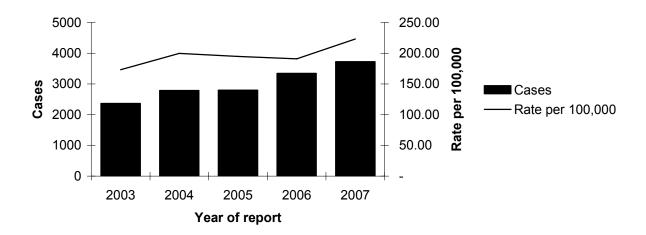


Figure 8. Reported chlamydia incidence and rate by year of report—Idaho, 2003-2007

Chlamydia incidence and rates had an overall increasing trend over the last five years (Figure 8). Females are reported with chlamydia at a higher rate than males in Idaho (Figure 9). Rates have increased from 2005-2007 in both males and females.

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.

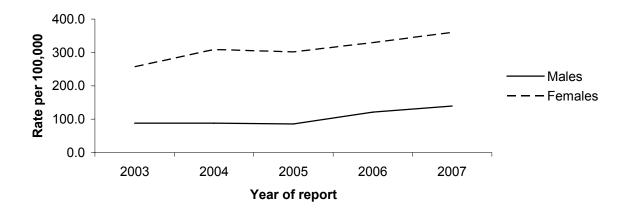


Figure 9. Reported chlamydia incidence rate by sex and year of report—Idaho, 2003–2007

95% of chlamydia cases reported during 2003–2007 were in persons 15-34 years old. The increasing rate of chlamydia was observed in most age groups. Cases among persons aged 20-24 years were reported at a much higher rate than other age groups and the trend appeared to increase more steeply than other age groups (Figure 10).

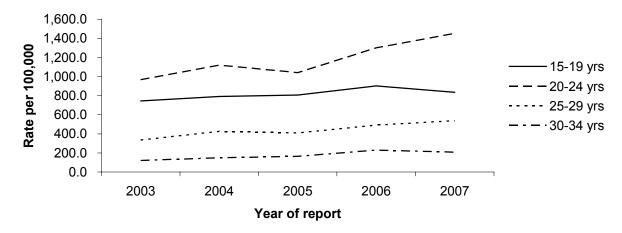


Figure 10. Reported chlamydia incidence rate by selected age group and year of report—Idaho, 2003–2007

Blacks were reported with chlamydia at a consistently higher rate than other races in Idaho (Figure 11), although the number of cases reported was low: cases among Blacks ranged from a minimum 27 in 2003 to a maximum 42 in 2006. Whites were reported at the lowest rate during most years, but Whites make up 73% of cases with known race/ethnicity. Again, caution should be used when interpreting these rates because 25% of reported cases in the years 2003–2007 were of unknown race.

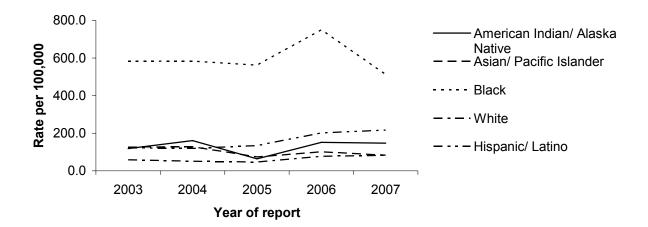


Figure 11. Reported chlamydia incidence rate by race/ethnicity and year of report—Idaho, 2003–2007

### Gonorrhea

Gonorrhea incidence and rates showed an upward trend over the last 5 years (Figure 13). Total cases reported from 2003–2007 ranged from 68 in 2003 to 269 in 2007. Rates increased from 5.0 to 13.7 per 100,000 over the time period, a 176% increase.

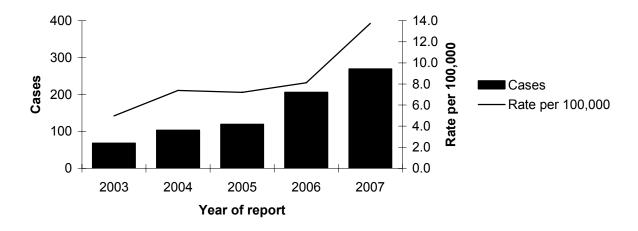


Figure 12. Reported gonorrhea incidence and rate by year of report—Idaho, 2003–2007

Historically in Idaho, females have reported with gonorrhea at rate relatively similar to males, but this has changed during 2003–2007 (Figure 14). Several factors may be contributing to this increase. Increases in gonorrhea have been observed in other states in the West. In addition, increasing resistance of gonorrhea to a class of commonly-used treatment drugs may have played a part. Lastly, combination chlamydia and gonorrhea Nucleic Acid Amplified Tests (NAAT) began to be used at district health departments in late 2006 which may have detected additional asymptomatic gonorrhea infections. The same may be said for private health care providers, but the rate of uptake of combination NAAT tests is unknown at this time.

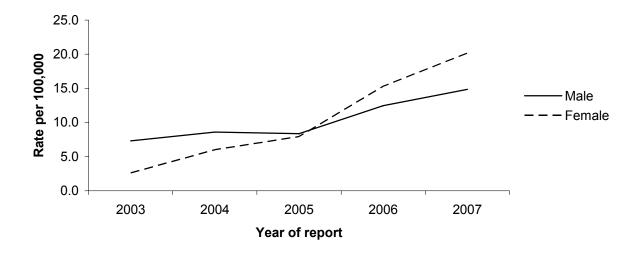


Figure 13. Reported gonorrhea incidence rate by sex and year of report—Idaho, 2003–2007

Age groups affected by gonorrhea were similar to those affected by chlamydia. 86% of cases during 2003–2007 were among 15-39 year olds. The highest rates were in 20-24 year olds during each year. Rates were less skewed toward younger age groups in 2003, but rates in the age groups for which women are screened routinely for chlamydia (15-24 years of age) have risen the most (Figure 15), suggesting that dual chlamydia and gonorrhea NAAT testing may have played a part in detecting asymptomatic gonorrhea and increasing the number of cases reported.

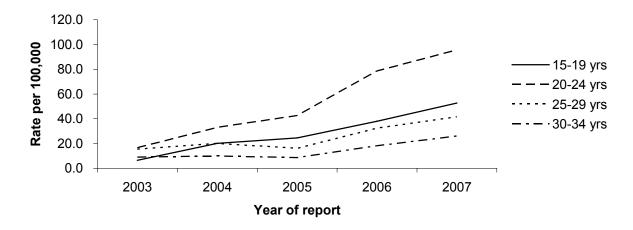


Figure 14. Reported gonorrhea incidence rate by selected age group and year of report—Idaho, 2003–2007

Among reported cases of known race during 2003–2007, most (64%) cases were White and about a quarter (26%) were Hispanic; both had increasing trends. However, caution should be used when interpreting trends of gonorrhea based on race because 30% of reported cases during 2003–2007 were of unknown race.

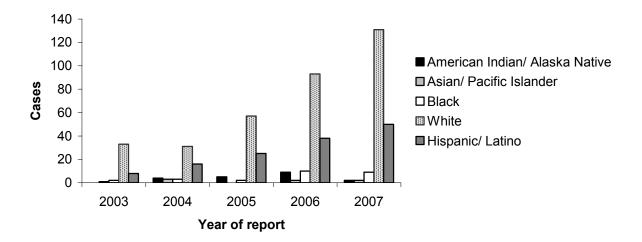


Figure 15. Reported gonorrhea incidence by race/ethnicity and year of report—Idaho, 2003–2007

### **Syphilis**

In Idaho, early syphilis (<1 year duration) cases were reported in high numbers from 2002–2005. The increase was due to a statewide syphilis outbreak, with the majority of cases residing in southwestern Idaho and with Hispanic ethnicity. Outbreak response measures enacted by OEFP and local health departments impacted the number of cases reported and by 2007, rates were back to pre-outbreak levels.

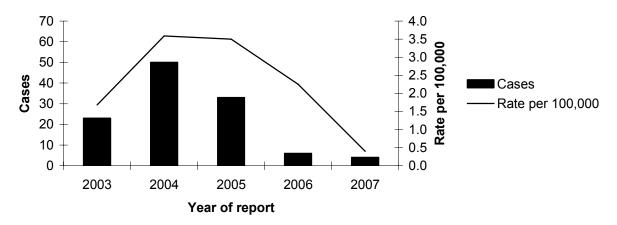


Figure 16. Reported early syphilis incidence and rate by year of report—Idaho, 2003–2007

Because early syphilis cases in Idaho are investigated and most individuals are interviewed, ethnicity is usually known. During 2003–2007, 92% of early syphilis cases had known race/ethnicity. The majority of early syphilis cases reported during 2003–2007 were among persons of Hispanic/Latino ethnicity (n=74/116, 64%).

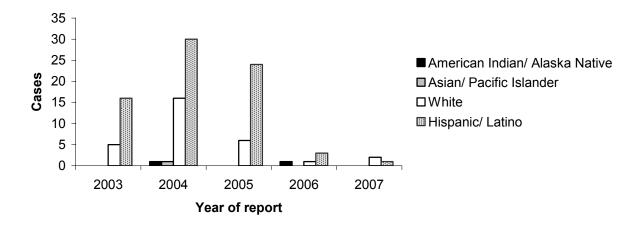


Figure 17. Reported early syphilis incidence by race/ethnicity and year of report—Idaho, 2003–2007

Another striking characteristic of Idaho's early syphilis cases during 2003–2005 was age at diagnosis. Over two thirds during that time period were among individuals aged 20-29 years at diagnosis. The distribution changed in the following years and in 2007, half of early syphilis cases were aged 40-44 years at diagnosis.

Outbreaks of syphilis among MSM have been reported in several U.S. cities in recent years, and are believed to be largely responsible for the increasing national syphilis rate. Recent CDC research suggests that more than 60 percent of all primary and secondary (P&S) syphilis cases in the U.S. reported in 2003 occurred among MSM.

In Idaho, this pattern has only recently been observed. Among syphilis cases interviewed in 2003–2005, heterosexual activity was the most reported risk factor by both males and females (Table 32). However, among males in 2006 and 2007 amid declining numbers of cases, the proportion who reported sex with other males became proportionally a more prominent reported risk.

Table 32. Frequency of reported risks among interviewed syphilis cases (all stages) by report year, 2003–2007

			Re	eport Ye	ear	
Patient						
Sex	Risk	2003	2004	2005	2006	2007
Male	Heterosexual sex with IDU	0	1	1	0	2
	Heterosexual sex with HIV-infected partner	0	0	0	0	2
	Sex for drugs/money	0	0	2	0	0
	Sex with female	10	23	18	3	3
	Sex with male	0	1	8	3	5
	Used IV drugs	0	3	2	1	4
Female	Heterosexual sex with bisexual male	0	0	1	0	0
	Heterosexual sex with IDU	1	5	4	0	1
	Sex for drugs/money	0	1	1	0	0
	Sex with female	0	3	1	0	0
	Sex with male	14	33	31	6	5
	Used IV drugs	1	5	6	0	0
	Work in health care	0	0	1	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 sitesfrom 3,003 in 2003 to 3,604 in 2007 (Figure 21). The largest change (+9%) was from 2006—2007.

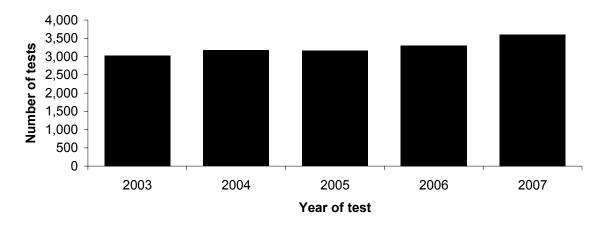


Figure 18. HIV tests through IDHW-funded HIV counseling and testing sites—Idaho, 2003–2007

11% more males than females were tested during 2003–2007 and tests among males were positive at twice the rate of females (Table 33). The highest proportion of tests (84%) and positive results were reported among Whites, but the percentage of positive tests was highest among Blacks (Table 34).

Due to forms scanning problems involving birthdates, age data in 2007 were compromised. Therefore, age group data are presented only through 2006. The highest proportion 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 35). The most positive tests were among persons aged 30-39 years.

Of all tests, a full 25% were from persons reporting a high-risk sex partner. Tests for persons reporting both MSM and IDU were just 1% of the total, but had the highest percentage of positive results (Table 36). MSM (non-IDU) had the next highest percentage of positives and had the most positive results.

Table 33. HIV testing and percent positive tests at counseling and testing sites by sex—Idaho, 2003–2007

	Tests	Positive Tests %	
Sex	N	N	positive
Male	8,539	55	0.6%
Female	7,679	22	0.3%
Unspecified	56	1	1.3%
TOTAL	16,274	78	0.5%

Table 34. HIV testing and positivity of tests at counseling and testing sites by race/ethnicity—Idaho, 2003–2007

	Tests	Positive	e Tests %
Race/ ethnicity	N	N	positive
White	13,750	63	0.5%
Black	270	3	1.1%
AI/AN	196	0	0.0%
Hispanic	1,593	8	0.5%
All others	465	4	0.9%
TOTAL	16,274	78	0.5%

Table 35. HIV testing and positivity of tests at counseling and testing sites by age group—Idaho, 2003–2006\*

	Tests	Positive	e Tests %
Age group	N	N	positive
< 13	31	0	0.0%
13-19	2,274	2	0.1%
20-29	5,757	20	0.3%
30-39	2,365	22	0.9%
40-49	1,491	15	1.0%
>= 50	666	6	0.9%
Not Spec.	86	0	0.0%
TOTAL	12,670	65	0.5%

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

Table 36. HIV testing and positivity of tests at counseling and testing sites by risk category —Idaho, 2003–2007

	Tests	Positive	
Risk category	N	N	% positive
MSM/IDU	178	11	6.2%
MSM	1,544	28	1.8%
IDU (Hetsx)	2,589	9	0.3%
Sex partner at risk	4,128	10	0.2%
STD diagnosis	1,498	3	0.2%
Sex while using non-injection			
drugs	1,937	3	0.2%
No acknowledged risk	2,190	3	0.1%
Heterosexual, no other risk	1,684	7	0.4%
All others	526	4	0.8%
TOTAL	16,274	78	0.5%

#### **Behavioral Risk Factor Surveillance Survey (BRFSS)**

The latest BRFSS survey was conducted in 2007 by random telephone survey. Respondents totaled 5,343. Data were released in 2008. Idahoans 18-65 years of age were interviewed in each health district. Not all participants answered each question.

With regard to HIV, almost one third (32.4%) of respondents had been tested for HIV in the past. 38.6% of 1,123 respondents were tested at their private doctor or HMO, 22.5% at a clinic, and 21.6% at a hospital. 19.2% of 184 respondents to a question about rapid testing indicated having one. No questions addressed HIV risk behaviors.

#### **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. Similar surveys were conducted in 1991, 1993, 1995, 2001, 2003, and 2005. Surveys were completed by 1,440 students in 45 public high schools. Results are weighted.

YRBS results indicate that 2.9% of Idaho high school students have used a needle to inject an illegal drug into their body at least once in their lives (Table 37). 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 each grade.

Table 37. Percentage of students who reported using a needle to inject any illegal drug into their body one or more times during their life—Idaho, 2007

Grade	Total	Female	Male
9th	2.4	1.3	3.4
10th	2.6	1.3	3.9
11th	2.1	1.7	2.5
12th	3.3	0.8	5.7
Idaho Overall	2.9	1.4	4.1
U.S. Overall	2.1	1.1	3.0

Source: Results of the 2007 Idaho Youth Risk Behavior Survey and the 2006 School Health Education Profile

42.1% of Idaho high school students have had sexual intercourse (Table 38), compared to 46.7% nationwide. The proportion increased with each grade level in females and overall.

Table 38. Percentage of students who reported ever having sexual intercourse—Idaho, 2007

Grade	Total	Female	Male
9th	29.7	25.4	33.4
10th	35.1	41.1	29.1
11th	45.5	46.5	44.5
12th	60.2	57.7	62.4
Idaho Overall	42.1	42.2	41.8
U.S. Overall	46.8	45.7	47.9

Source: Results of the 2007 Idaho Youth Risk Behavior Survey and the 2006 School Health Education Profile

The proportion of 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 39). This suggests the initiation of sexual intercourse is beginning to occur at a younger age (<13 years) more frequently in Idaho.

Table 39. Percentage of students who reported sexual intercourse for the first time before age 13—Idaho, 2007

Grade	Total	Female	Male
9th	7.1	4.6	9.6
10th	6.3	5.4	7.2
11th	2.5	1.6	3.4
12th	4.1	1.4	6.4
Idaho Overall	5.3	3.5	6.8
U.S. Overall	6.2	3.7	8.8

Source: Results of the 2007 Idaho Youth Risk Behavior Survey and the 2006 School Health Education Profile

# **Appendixes**

Appendix A. Data Sources - Strengths and Weaknesses

Appendix B. Trend Tables

Appendix C. Planning Group Epidemiologic Profile Feedback Form

Appendix D. Glossary

### **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.

# **Appendix B: Trend Tables**

Table 40. HIV/AIDS diagnoses by sex and year of first diagnosis—Idaho, 2002-2007

		Year of Diagnosis				
Sex	2002	2003	2004	2005	2006	2007
Male	27	28	19	34	29	28
Female	5	3	5	7	7	8
TOTAL	32	31	24	41	36	36

Table 41. HIV/AIDS diagnoses by age group and year of first diagnosis—Idaho, 2002–2007

			Year of D	Diagnosis	;	
Age group	2002	2003	2004	2005	2006	2007
<13	0	0	0	0	0	1
13-19	0	1	1	1	1	0
20-29	7	2	8	12	10	14
30-39	14	12	9	12	5	10
40-49	6	13	6	10	15	7
50+	5	3	0	6	5	4
TOTAL	32	31	24	41	36	36

Table 42. HIV/AIDS diagnoses by race/ethnicity and year of diagnosis—Idaho, 2002–2007

	Year of Diagnosis					
Race/ethnicity	2002	2003	2004	2005	2006	2007
Hispanic - any race	4	3	5	7	7	6
American Indian/AK						
native	0	1	1	2	0	1
Asian/Pacific Islander	1	0	0	0	0	2
Black	1	0	2	0	1	2
White	26	27	16	32	27	25
Other	0	0	0	0	1	0
Unknown	0	0	0	0	0	0
TOTAL	32	31	24	41	36	36

Table 43. HIV/AIDS diagnoses by exposure category and year of report—Idaho, 2002–2007

		`	ear of D	iagnosis		
Exposure category	2002	2003	2004	2005	2006	2007
Adult						
MSM	11	14	9	23	12	16
IDU	2	2	4	2	4	4
MSM/IDU	5	2	2	2	6	6
Hemophiliac	0	0	0	0	0	0
Heterosexual contact	6	3	0	2	4	5
Transfusion/transplant	0	0	0	0	0	0
Risk not specified	8	10	9	12	10	4
Pediatric						
Mother with/at risk						
HIV	0	0	0	0	0	0
Other/undetermined	0	0	0	0	0	1
TOTAL	32	31	24	41	36	36

# 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, 4<sup>th</sup> Floor
Boise, ID 83720

	450 West State Street, 4 <sup>th</sup> Floor Boise, ID 83720	
1.	What is your role on the Idaho Advisory Council on HIV and AIDS (or local) planning gro (if applicable)?	up
2.	Was the epidemiologic profile easy to read?	
	Yes	
	No	
	Somewhat	
3.	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:	
Ifr	YesNoSomewhat not, please explain why.	
5.	Was the epidemiologic profile useful to your planning process? YesNo	
	Somewhat	
If r	not, please explain why.	

6.	Describe how you used the epidemiologic profile in your planning activities.
7.	How can the next epidemiologic profile be improved?

### **Appendix D. Glossary**

**adjustments.** Statistical calculations that allow the comparison of different groups (when the difference may affect what you are studying) as though they are alike. Differences in populations or subgroups make it difficult to make comparisons; adjustments remove the influence of a specific factor (e.g., age, gender, race, or disease status) from the analysis.

**aggregated data.** Information, usually summary statistics, which is summed or presented together to prevent the identification of individuals.

**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.

**behavioral data.** Data collected from studies of human behavior that is relevant to disease risk. Relevant behaviors for HIV risk may include sexual activity, substance use, sharing of drug paraphernalia, condom use, or responses to primary and secondary prevention messages.

**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.

**core epidemiologic questions.** The questions in an epidemiologic profile that must be answered by all prevention and care grantees, regardless of HIV morbidity in their areas.

**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 <sup>3</sup>/<sub>4</sub>, four is the denominator.

**eligible metropolitan area (EMA).** A metropolitan statistical area that qualifies for Title I funding by reaching a certain threshold of AIDS cases. EMAs may cover 1 city, several cities or counties, or more than 1 state.

**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.

- 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.
- 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 persons who do not know the HIV status or risk behaviors of their sex partners.

**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 <sup>3</sup>/<sub>4</sub>, three is the numerator.

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

**prevalence.** The total number of cases of a disease in persons not known to have died in a given population at a specific time. Prevalence does not indicate how long a person has had a disease and cannot be used to calculate rates of disease. It can provide an estimate of risk for a disease at a specific time. For HIV/AIDS surveillance, prevalence refers to living persons with HIV disease, regardless of time of infection or date of diagnosis. Note the difference between prevalence of a condition in the population and the prevalence of cases, namely, that a case must be diagnosed according to a definition.

**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.

**Ryan White CARE Act.** The Ryan White Comprehensive AIDS Resources Emergency Act was created to provide federal assistance to increase the availability of primary health care and support services for persons living with HIV disease, to increase access to care for underserved populations, and to improve the quality of life of those affected by HIV infection. The CARE Act was first enacted by Congress in 1990 and was reauthorized in 1996 and 2000. HRSA implements the CARE Act and directs assistance through the following channels:

- Title I provides support to eligible metropolitan areas (EMAs) with the largest numbers of reported AIDS cases, to meet emergency service needs of persons living with HIV. Idaho does not have an eligible EMA and does not receive Title I funding.
- Title II provides support to all states and territories to improve the quality, availability, and organization of health care and support services for persons living with HIV and their families.
- Title III supports early-intervention outpatient HIV services through funding to public and private nonprofit entities.
- Title IV funds public and private nonprofit entities to conduct projects to coordinate services to children, youth, women, and families with HIV/AIDS. Idaho does not receive Title IV funding
- Part F provides support for Special Projects of National Significance (SPNS) to develop and evaluate innovative models of HIV/AIDS care, for AIDS Education and Training Centers (AETCs) to conduct education and training for health care providers, and for the HIV/AIDS

Dental Reimbursement Program to assist with providing oral health services to HIV-infected patients. Idaho does not receive Part F funding.

**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.

**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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