

HIV EPIPROFILE

Montana 2010

Issued March 2012

**Number of newly diagnosed HIV cases —
Montana, 2000–2010**

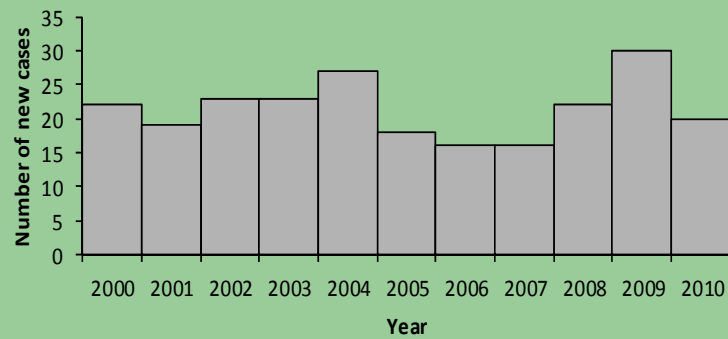


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HIV/AIDS

- ◆ From 1985, when AIDS reporting was initiated in Montana, to December 31, 2010, a total of 1,025 cases of human immunodeficiency virus (HIV) and acquired immune deficiency syndrome (AIDS) have been reported to the Montana Department of Public Health and Human Services (DPHHS).
- ◆ As of June 2011, 532 persons were known to be living with HIV infection (PLWH) in Montana.
- ◆ From 2000–2010, there were 16–31 newly diagnosed cases of HIV infection reported each year. Montana is considered a “low incidence” state.
- ◆ Nearly 9 of every 10 reported cases of HIV infection have occurred in men.
- ◆ The most frequently reported risk characteristic for HIV infection reported by newly diagnosed males is men who have sexual contact with men (MSM). The most frequently reported risk characteristic for HIV infection reported by newly diagnosed females is heterosexual contact.
- ◆ Nearly 90% of reported cases of HIV infection occurred in persons classified as non-Hispanic white, a classification that represents about 90% of Montana’s population. Approximately 7% of the reported cases of HIV infection occurred in persons classified as American Indian/Alaska Native (AI/AN), a classification that represents about 6% of Montana’s population.
- ◆ Since 2000, the average age at HIV diagnosis is approximately 37 years.
- ◆ In 2010, among persons known to be living with HIV infection in Montana, nearly 80% are reported to be receiving medical care.
- ◆ Cases of other sexually transmitted diseases (STDs) were reported from 48 of the 56 counties in 2010. *Chlamydia trachomatis* infection (chlamydia; 3,077 cases in 2010) remains the most commonly reported STD followed by *Neisseria gonorrhoea* infection (gonorrhea; 101 cases in 2010).
- ◆ The majority of chlamydia and gonorrhea infections were reported in people who self-identify as non-Hispanic white. However, the chlamydia reported incidence rate was 1,132 cases/100,000 population among American Indian/Alaska Native persons, compared to 199 cases/100,000 population among non-Hispanic white persons.
- ◆ In 2010, the majority of chlamydia and gonorrhea infection cases were reported among persons 20–29 years of age.
- ◆ Five cases of *Treponema pallidum* infection (syphilis) were reported in Montana in 2010.

Introduction

This report provides information about HIV and other sexually transmitted diseases (STDs) in Montana, including an overview of the case characteristics. The intended use of this profile is to provide information and to assist planners of HIV and STD prevention and control programs.

In Montana, reporting of HIV/AIDS began in 1985 with name-based reporting of HIV infection in 2006. Newly diagnosed cases of HIV infection and previously diagnosed cases among persons diagnosed outside Montana, who are now Montana residents, are reportable. The Department of Public Health and Human Services receives reports through both passive and active surveillance. Standardized case report forms provide systematic data collection of demographic, risk factor, treatment, vital status, and laboratory and sentinel clinical information (i.e., opportunistic infections indicating progression of HIV infection to AIDS). Data are managed in the enhanced HIV/AIDS Reporting System (eHARS). Information is confidential and de-identified prior to national reporting. Sexually transmitted diseases are also reportable conditions. Standardized case report forms provide systematic data collection, which is managed in the sexually transmitted disease management information system (STD-MIS). Both HIV and STD databases are routinely updated and maintained.

Data extracted from eHARS December 29, 2010 were used to analyze 2010 HIV incidence. A backlog of HIV data was entered into eHARS from December 30, 2010 through June 26, 2011. Using data extracted from eHARS on June 27, 2011, this additional information was included in the analysis of HIV prevalence. STD data for this report were extracted year-end, December 2010. Year 2010 population data was used unless otherwise noted.

This report is subject to several limitations:

- ◆ Bias towards reporting STD cases in women, compared with men, because more women seek reproductive health services that might also include STD screening;
- ◆ Reporting of HIV and STD cases might be biased towards those who seek healthcare. As a result, individuals who are asymptomatic and do not seek healthcare or have limited access to healthcare may go undiagnosed, and not be reported;
- ◆ The reported number of HIV cases is likely to be underestimated because of delayed and under-reporting;
- ◆ Incomplete reporting might affect interpretation of the data, (e.g. case rates might appear higher in counties with more complete reporting compared with counties with missing or incomplete reporting); and
- ◆ Small numbers of reported cases limit detailed analysis, particularly in comparing rates. Small case numbers can lead to large fluctuations in case rates from year to year, which do not necessarily indicate the true frequency or burden. For example, in Beaverhead county, an increase in chlamydia cases from one to two would increase the incidence rate from 10.8 per 100,000 population to 21.6 per 100,000 population.

This profile was prepared by the DPHHS HIV Surveillance program in collaboration with the STD, Ryan White CARE, and HIV Programs. For questions or comments call: (406) 444-0273.

Montana Demographics

The Montana population was 989,415 in the 2010 census. Populations in the 56 counties range from fewer than 500 persons (Petroleum County) to more than 140,000 persons (Yellowstone County). Forty-five counties are classified as frontier (6 or fewer persons per square mile), 10 as rural (6–50 persons per square mile), and one as urban (50 or more persons per square mile). There are seven American Indian reservations in Montana (Figure 2).

Figure 1. Montana county populations, 2009

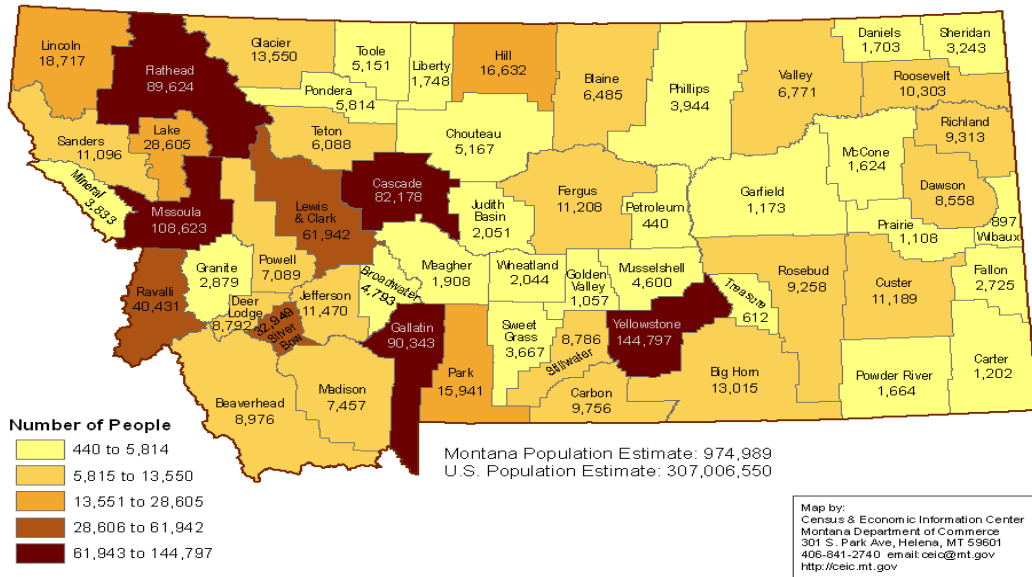


Figure 2. Location of tribal lands in Montana



Demographic Composition

The proportion of the Montana population by sex is about 50% female and 50% male. In Montana, the median age is 39.0 years compared with 36.5 years in the United States.[†] Table 1 shows the proportion of the population (averaged for years 2007 to 2009) within each selected age group in Montana and the United States.

Table 1. Percent of population by age group – Montana and United States, 2007-2009[†]

| Age in Years | Montana (%) | US (%) |
|---------------------|-------------|--------|
| 14 and under | 18.7 | 20.3 |
| 15–24 | 15.1 | 14.1 |
| 25–34 | 11.8 | 13.4 |
| 35–44 | 12.3 | 14.2 |
| 45–54 | 15.6 | 14.5 |
| 55–64 | 12.5 | 10.8 |
| 65 and older | 14.1 | 12.6 |

The majority of Montanans classify themselves as either non-Hispanic white (87.9%) or American Indian/Alaska Native (5.9%).

Table 2. Percent of population by race/ethnicity – Montana and United States, 2007-2009[†]

| Race/Ethnicity | Montana (%) | US (%) |
|---|-------------|--------|
| Non-Hispanic white | 87.9 | 65.8 |
| American Indian/Alaska Native | 5.9 | 0.7 |
| Hispanic or Latino, any race | 2.8 | 15.1 |
| Other[‡] | 2.1 | 1.8 |
| Asian | 0.7 | 4.3 |
| Black or African American | 0.5 | 12.1 |
| Native Hawaiian and Other Pacific Islander | 0.1 | 0.1 |

[‡] Other race or two or more races

Key Points – Demographics:

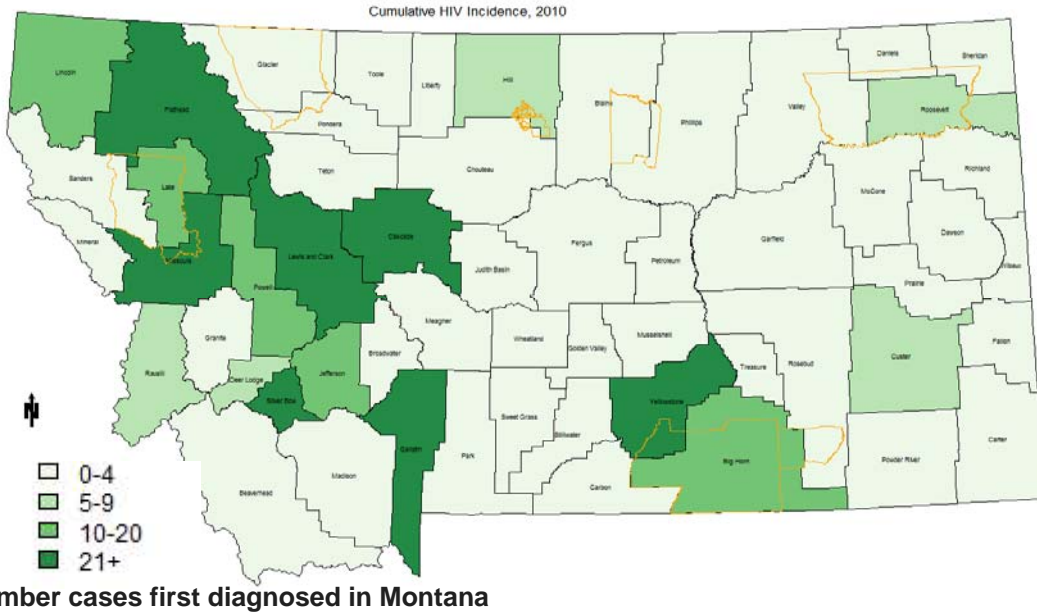
- ◆ Fifty-five of Montana’s 56 counties are classified as frontier or rural.
- ◆ Nearly 40% of Montana’s population is 45 years and older.
- ◆ Nearly 90% of Montana’s population is non-Hispanic white.
- ◆ Montana’s largest minority population is American Indian/Alaska Native.
- ◆ Montana has seven American Indian reservations.

[†] U.S. Census Bureau American Community Survey annual estimates: July 2007 to July 2009

Cumulative HIV Data

Since 1985, 1,025 cases of HIV infection have been reported in Montana. This total includes 607 (59%) individuals newly diagnosed in Montana. Among newly diagnosed cases, 70% reported residing in one of the seven most populated Montana counties (Cascade, Flathead, Gallatin, Lewis & Clark, Missoula, Ravalli, or Yellowstone) at the time of diagnosis (Figure 3).

Figure 3. Reported county of residence at time of HIV diagnosis – Montana, 1985-2010



Over time, the proportion of persons with HIV infection known to have died has decreased compared with the proportion of those living with HIV infection (Figure 4).

Figure 4. Cumulative frequency of persons with HIV infection who were living or had died (n=1,025) by year – Montana, 1985-2010

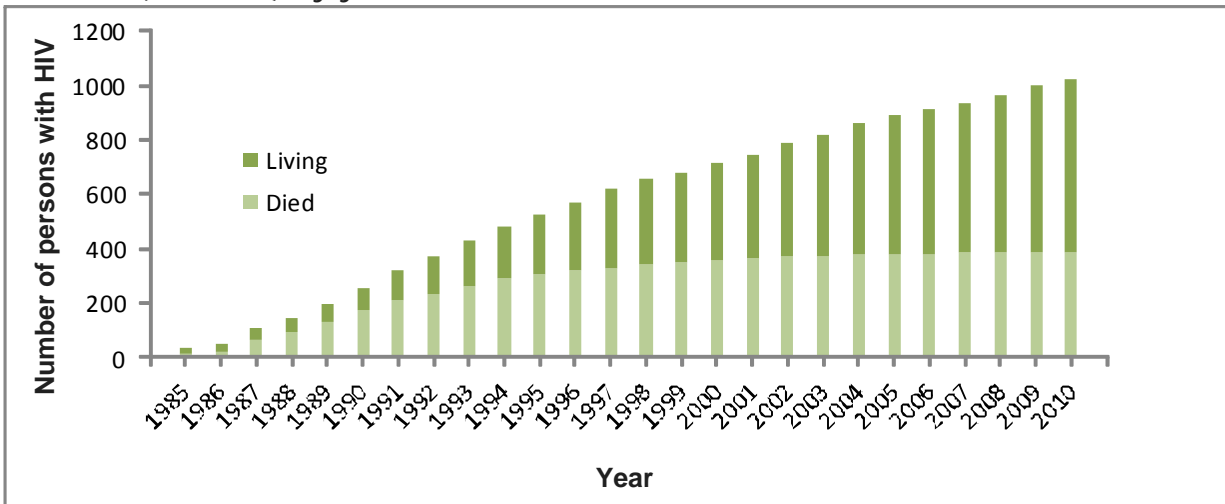


Table 3. Cumulative reported HIV cases (n=1,025) by selected characteristics – Montana, 1985-2010

| Characteristic | Cumulative Reported Cases* (n=1,025) | Cumulative Reported Cases Diagnosed in Montana (n=607) |
|-------------------------------------|---|---|
| | Number (%) | Number (%) |
| Sex | | |
| Male | 898 (88) | 523 (86) |
| Female | 127 (12) | 84 (14) |
| Age at Diagnosis (years) | | |
| Under 13 | 5 (0) | 4 (1) |
| 13–14 | 1 (0) | 0 — |
| 15–24 | 152 (15) | 85 (14) |
| 25–34 | 410 (40) | 226 (37) |
| 35–44 | 295 (29) | 182 (30) |
| 45–54 | 117 (11) | 74 (12) |
| 55–64 | 33 (3) | 26 (4) |
| Over 65 | 12 (1) | 10 (2) |
| Race | | |
| American Indian/Alaska Native | 64 (6) | 45 (7) |
| Other | 79 (7) | 42 (7) |
| White | 882 (86) | 520 (86) |
| Mode of Exposure† | | |
| Men Who Have Sex with Men (MSM) | 546 (53) | 317 (52) |
| Injection Drug Use (IDU) | 132 (13) | 76 (13) |
| MSM & IDU | 129 (13) | 55 (9) |
| Heterosexual | 101 (10) | 72 (12) |
| Other (Transfusion/Perinatal) | 27 (3) | 22 (4) |
| No risk identified/No risk reported | 90 (9) | 65 (11) |
| Total‡ | 1,025 100 | 607 100 |

* Includes cases diagnosed outside of Montana

† Mode of Exposure defined in Glossary, page 25

‡ Section total may not sum to overall total due to missing information

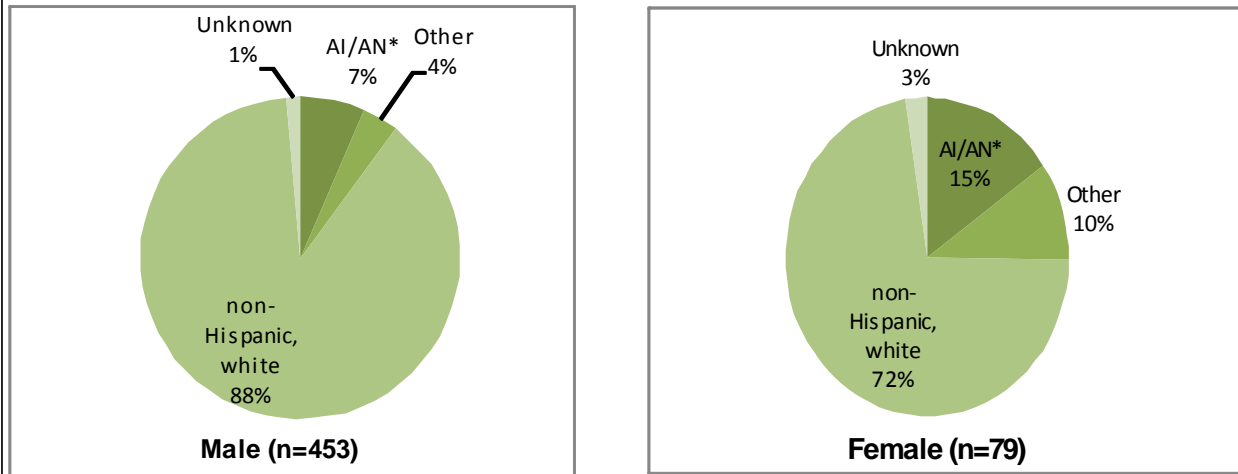
Reported Prevalent HIV Cases in Montana, June 2011[†]

The following figures show characteristics of persons known to be living with HIV infection (PLWH) in Montana, including those originally diagnosed out-of-state. As of June 30, 2011 there were 532 PLWH in Montana, among whom approximately 62% were known to be living with AIDS. Nationally, the Centers for Disease Control and Prevention (CDC) estimates that 20% of HIV infected persons (aged ≥ 13 years) are undiagnosed. Prevalence of HIV cases is likely to be underestimated in Montana as well, and the actual number of PLWH would be greater than 532 persons.

Most persons in Montana living with HIV infection (85.2%) are male. This proportion is greater than the national rate of 75.0%. And among male HIV cases, the racial make-up of PLWH reflects the state-wide racial representation. The greatest proportion of HIV cases in males is among non-Hispanic whites (88%) followed by 7% among American Indian/Alaska Native.

Among female HIV cases in Montana, minority races constitute a larger proportion of cases among females than among males (Figure 5). While non-Hispanic females still represent the majority of cases (72%), 15% of female HIV cases are American Indian/Alaska Native.

Figure 5. Prevalence of reported HIV cases (n=532), by sex and race – Montana, June 2011[†]



* American Indian/Alaska Native

[†] Data extraction June, 2011

Reported Prevalent HIV Cases in Montana, June 2011[†]

The majority of males known to be living with HIV infection reported sexual contact with men as their primary mode of exposure. The majority of females known to be living with HIV infection reported heterosexual contact as their primary mode of exposure (Figure 6).

Figure 6. Persons living with HIV infection (n=532) by sex and risk factor – Montana, June 2011[†]



MSM Men who have sex with men

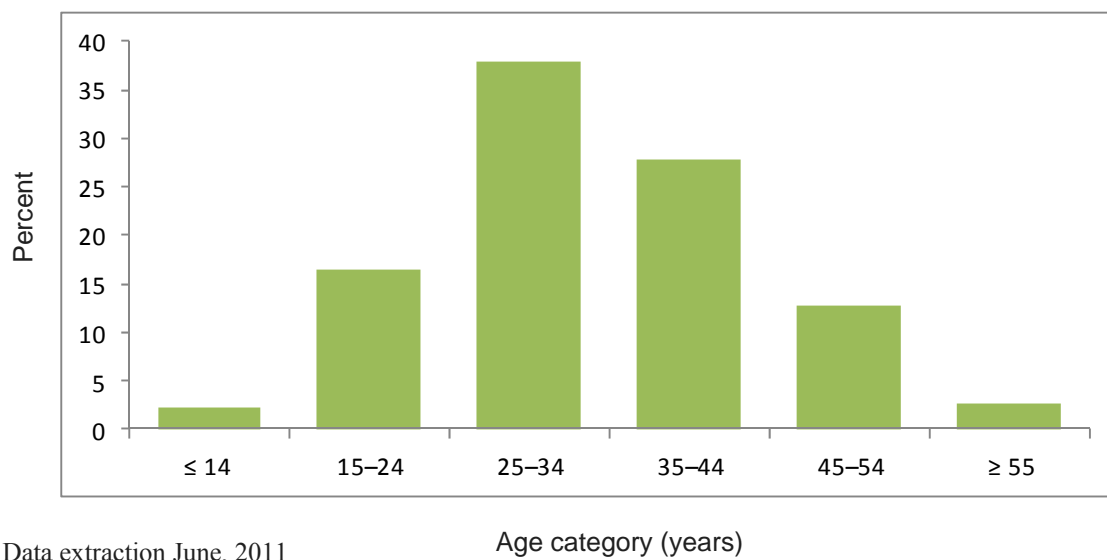
IDU Injection drug use

MSM/IDU Men who have sex with men and injection drug use

NIR/NRR No identified risk/No reported risk (exposure history may not have been reported, be missing due to lost to follow-up, or the reported risk factor was heterosexual contact with a person not known to have, or be at high risk, for HIV)

The majority of persons known to be living with HIV infection were diagnosed between 25 and 44 years of age (Figure 7).

Figure 7. Percent of persons living with HIV infection (n=532) by age category at time of diagnosis – Montana, June 2011[†]



[†] Data extraction June, 2011

Ryan White CARE Act

In 1990, the Ryan White CARE Act established a federal program to help state, city, and local organizations provide HIV-related services. Montana receives Ryan White CARE Act funds to support drug assistance, public clinics, and program planning and evaluation. Missoula and Billings receive funds to support community-based healthcare providers. Ryan White funds support seven clinics in Montana.

Approximately 20% of known PLWH in Montana received no medical treatment for HIV infection in 2010 (Table 4). Receiving medical treatment is defined and measured by having a laboratory result, CD4+ (count or percent) or HIV viral load, reported to the state by a public or private healthcare provider or laboratory.

Table 4. Percent of persons known to be living with HIV infection (n=454) that accessed medical treatment,* by diagnosis status, sex, and race – Montana, 2010[†]

| Persons known to be living with HIV infection (PLWH) | |
|--|------|
| Percent of PLWH in care | |
| Diagnostic Status | |
| AIDS | 81.4 |
| HIV | 76.2 |
| Sex | |
| Male | 79.5 |
| Female | 79.7 |
| Race[*] | |
| White | 79.9 |
| American Indian/Alaska Native | 88.2 |
| Other | 61.1 |

[†] Did not have a CD4 or HIV viral load reported to the state from a public or private provider in 2010

[‡] Data set extracted December 2010

* There are 8 PLWH who have an unknown or missing race

Ryan White CARE Act

Table 5 shows the of the proportion of PLWH who are known to be in care by selected age category. For nearly all age groups, approximately 80% of PLWH are in care. For PLWH who are ≥ 65 years of age, almost 90% are in care.

Table 5. Percent of persons known to be living with HIV infection (n=450) that accessed medical treatment,[†] by current age – Montana, 2010[‡]

| Persons known to be living with HIV in infection (PLWH) | |
|---|----------------------|
| Age Category (years) [*] | Percent PLWH in care |
| Under 24 | 83.3 |
| 25–34 | 78.6 |
| 35–44 | 78.1 |
| 45–54 | 82.5 |
| 55–64 | 77.3 |
| 65 and older | 88.2 |

* Four missing values.

For nearly all known exposure categories, approximately 80% of PLWH are in care. Seventy-two percent PLWH who reported MSM/IDU as an exposure are in care (Table 6).

Table 6. Percent of persons known to be living with HIV infection (n=454) that accessed medical treatment,[†] by exposure – Montana, 2010[‡]

| Persons known to be living with HIV in infection (PLWH) | |
|---|-------------------------|
| Exposure at diagnosis | Percent of PLWH in care |
| MSM | 81.7 |
| IDU | 80.7 |
| MSM/IDU | 72.1 |
| Heterosexual | 77.8 |
| Heterosexual/IDU | 79.2 |
| Other risk | 78.6 |
| Unknown | 75.7 |

[†] Did not have a CD4 or HIV viral load reported to the state in 2010

[‡] Data extracted December 2010

Newly Diagnosed HIV Cases

The number of newly diagnosed cases of HIV reported annually during 2000–2010 ranged from 16 to 31 cases. In 2010, 20 newly diagnosed cases of HIV were reported, a case rate of 2.0 cases per 100,000 population (Figure 8). From 2000 to 2010, the rate of newly diagnosed cases ranged from 1.7 to 3.2 cases per 100,000 population.

Figure 8. Rate of newly diagnosed HIV/AIDS cases — Montana, 2000-2010

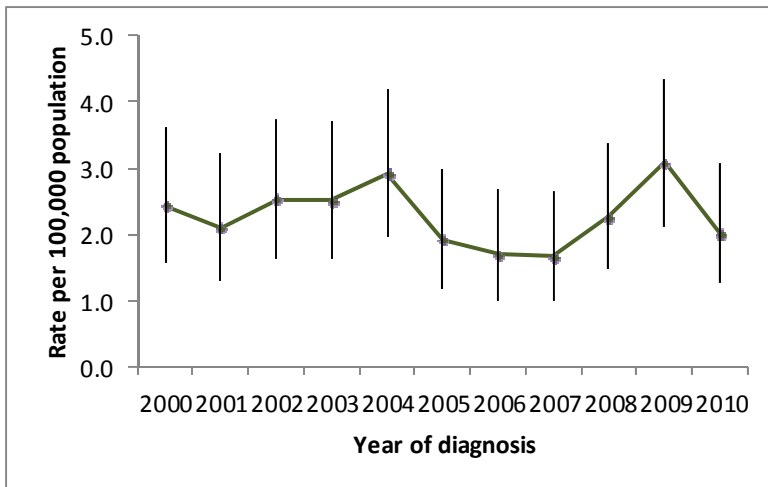


Table 7 compares selected characteristics of newly diagnosed cases in five time periods. Most newly diagnosed cases of HIV infection occur among white MSM. The majority of new cases also lived in one of the seven most populated Montana counties at the time of their diagnosis. The percentage of persons diagnosed with AIDS less than one year after initial HIV diagnosis ranged from 25–50%.

Table 7. Comparison of Newly Diagnosed HIV Cases by Selected Characteristics — Montana, 2000-2010

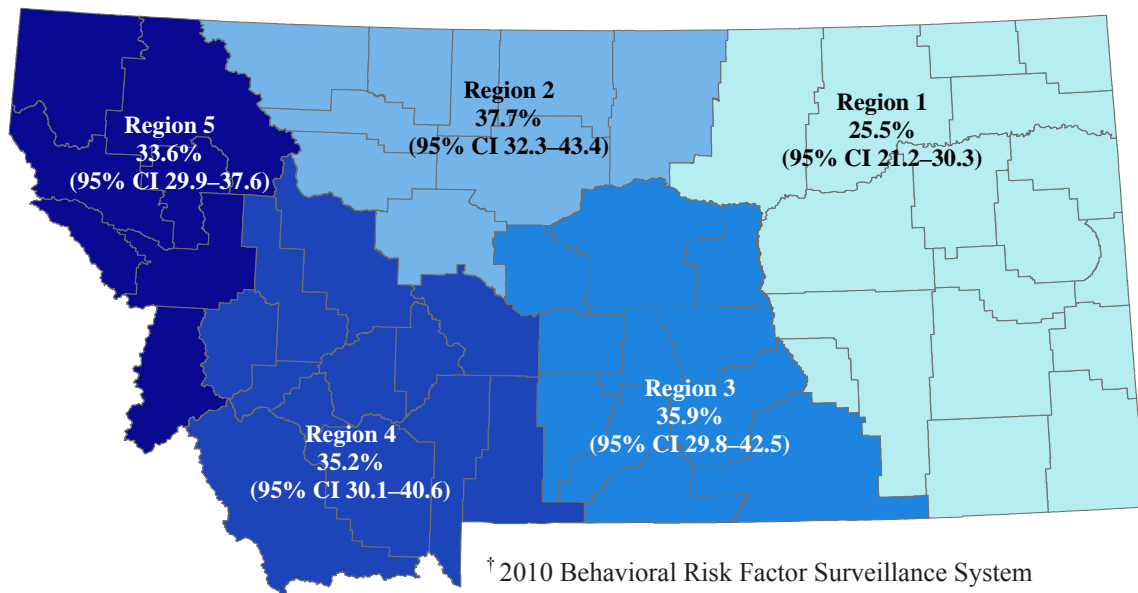
| Characteristic | 2000–2004 | 2005–2007 | 2008 | 2009 | 2010 |
|---|-------------|-------------|------|------|------|
| Number of newly diagnosed HIV cases | (avg/yr) 23 | (avg/yr) 17 | 22 | 31 | 20 |
| Mean age at diagnosis (years) | 37 | 39 | 37 | 36 | 31 |
| Percent male | 83 | 92 | 73 | 97 | 85 |
| Percent reporting race other than white | 11 | 10 | 18 | 10 | 15 |
| Percent of modes of exposure reported | | | | | |
| -Men who have sex with men (MSM) | 49 | 62 | 50 | 71 | 70 |
| -Injection drug use (IDU) | 9 | 2 | 5 | 6 | 5 |
| -MSM/IDU | 8 | 6 | 0 | 13 | - |
| -Heterosexual sex | 13 | 12 | 27 | 3 | 20 |
| -No identified risk/ no reported risk | 21 | 18 | 18 | 6 | 5 |
| Percent receiving AIDS diagnosis <1 year after initial HIV diagnosis | 35 | 50 | 45 | 39 | 25 |
| Percent of newly diagnosed cases residing in the 7 most populated counties [†] | 68 | 76 | 82 | 87 | 75 |

[†] Yellowstone, Missoula, Gallatin, Flathead, Cascade, Lewis & Clark, and Ravalli counties.

HIV Testing—Behavioral Risk Factor Surveillance System

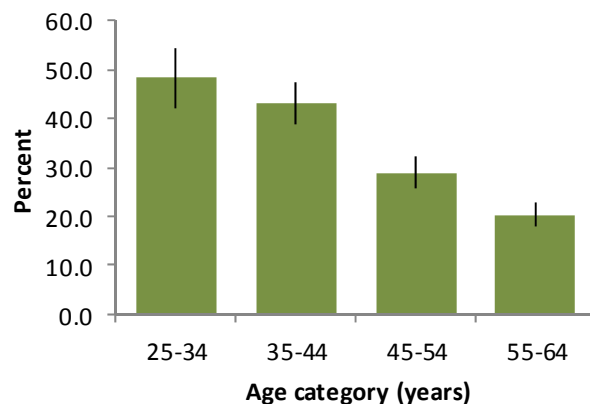
The percent of people aged 18–64 years tested for HIV/AIDS in Montana was estimated to be 34.4% (95% Confidence Interval (CI) 32.0–36.8). Region 1 has a lowest percent of the population being tested than the other four regions. Regions 2–5, which have a greater prevalence of HIV, have higher testing rates with little variation among the regions (Figure 9).

Figure 9. Percent of the population reporting having ever been tested for HIV/AIDS, by health planning region — Montana, 2010[†]



According to the 2010 BRFSS, individuals in the 25–34 years of age category had higher HIV testing rates than any other age group. Additionally, the proportion of individuals tested for HIV in each age group decreases as the age category increases (Figure 10). And of all survey respondents age 18–64 years, 2.6% (CI 1.6–4.2) responded “yes” to having used intravenous drugs, been treated for an STD, given money or drugs in exchange for sex, or had anal sex without a condom in the past year.

Figure 10. Percentage of persons aged 18–64 years having ever been tested for HIV/AIDS by selected age category — Montana, 2010^{†‡}

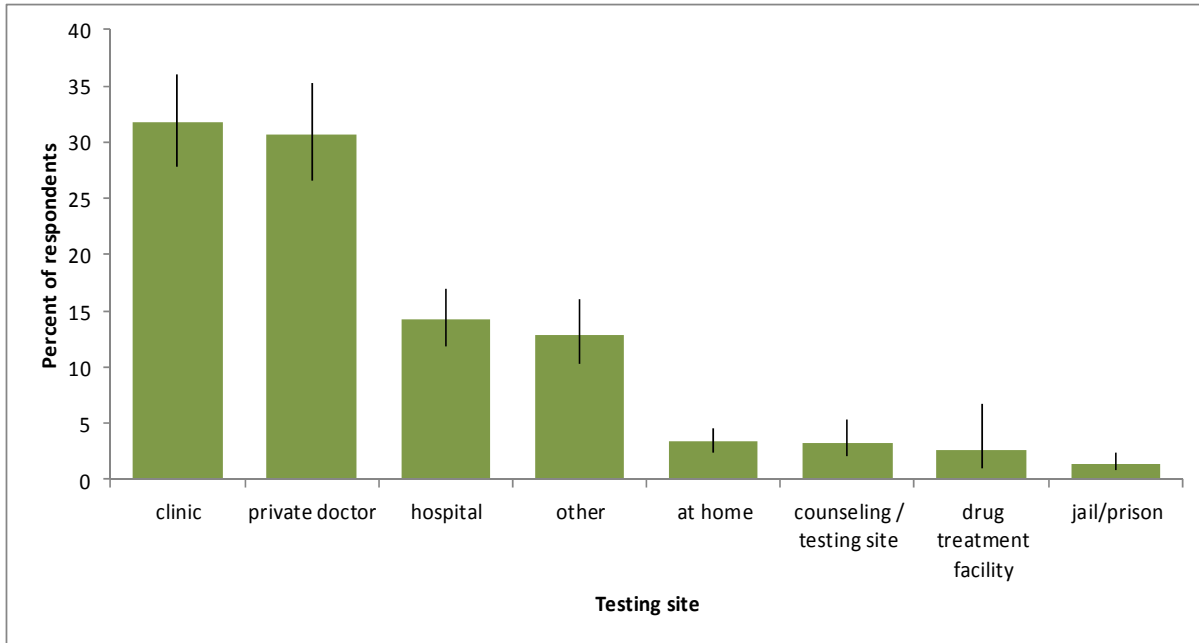


[†] 2010 Behavioral Risk Factor Surveillance System
[‡] There were too few respondents age 18–24 years to report.

HIV Testing – BRFSS

The most frequent sites for HIV testing[†] were in a public health clinic (31.8%) or a private doctor’s office (30.7%) (Figure 11).

Figure 11. Percentage of Montana residents, aged 18-64 years, who reported having ever been tested for HIV/AIDS, by site – Montana, 2010



[†] Excludes testing for HIV infection as part of blood donation screening. Data from the Behavioral Risk Factor Surveillance System (BRFSS).

In 2006, the CDC changed the national recommendations for HIV testing. The CDC now recommends routine HIV screening in healthcare settings for all adults aged 18–64 years. CDC also recommends more frequent testing of persons likely to be at high risk for contracting HIV. In 2010, CDC noted in the Morbidity and Mortality Weekly Report (MMWR) that the number of persons in the US who ever report having been tested is increasing and that fewer persons are being diagnosed late in their infection.

The national testing rate for 18–64 years-of-age population having been tested for HIV in their lifetime was 40.3% according to unpublished 2010 BRFSS Survey data from the Kaiser Family Foundation. The Montana rate was 34.4%. Among the 50 states, South Dakota (23.5%) had the lowest rate and Maryland (51.5%) had the highest rate. Overall, the District of Columbia had the highest rate (68.2%).

Testing within the last 12 months may be a more relevant indicator of improvements in testing rates for the 18–64 years-of-age population. In 2010, 20.1% of the 18–64 years-of-age population in Montana reported they were tested for HIV within the previous 12 months. The National rate in 2010 was 21.5%.

HIV Testing Among Patients Seeking Other STD Testing and Treatment

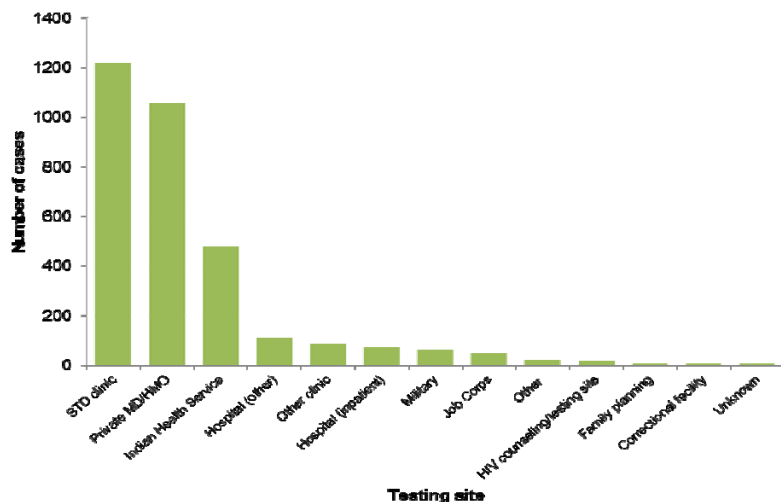
Data collected from the STD-MIS show results on HIV testing and STD screening. The CDC’s 2010 STD treatment guidelines recommend all persons who seek evaluation and treatment for STDs should be screened for HIV infection not considering the presence of known behavioral risk factors for HIV. Healthcare providers serving patients at high risk for HIV (e.g., STD clinics) should discuss the risk for HIV infection and prevention opportunities with their patients. During 2010, less than one-half of chlamydia and gonorrhea cases are known to have received pre-test HIV counseling and approximately one-quarter of chlamydia and gonorrhea cases were known to have been tested for HIV infection (Table 8). However, data are missing for more than half the patients.

Table 8. Percent of STD cases counseled about HIV risk and tested for HIV infection – Montana, 2010

| Pre-Test HIV Counseling | | | | | |
|-------------------------|------------------|-----------------|--------------|------------------|-------------|
| | Y (%) | N (%) | Refused (%) | Unknown (%) | Total |
| Chlamydia | 1471 (48) | 71 (2) | — | 1535 (50) | 3077 |
| Gonorrhea | 29 (29) | 1 (1) | — | 71 (70) | 101 |
| Other STD | 2 (40) | 0 | — | 3 (60) | 5 |
| Total | 1502 (47) | 72 (2) | — | 1609 (51) | 3183 |
| HIV Testing | | | | | |
| | Y (%) | N (%) | Refused (%) | Unknown (%) | Total |
| Chlamydia | 820 (27) | 600 (19) | 1 (0) | 1656 (54) | 3077 |
| Gonorrhea | 16 (16) | 13 (12) | 0 (0) | 72 (72) | 101 |
| Other STD | 2 (40) | 0 (0) | 0 (0) | 3 (60) | 5 |
| Total | 838 (26) | 613 (19) | 1 (0) | 1731 (55) | 3183 |

In 2010, the majority of chlamydia and gonorrhea cases were diagnosed in three types of healthcare facilities: STD clinics, private physician offices, and Indian Health Service facilities (Figure 12).

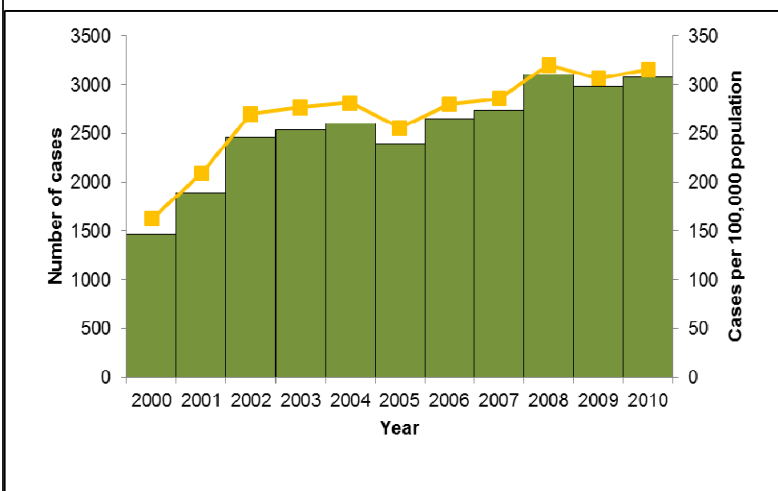
Figure 12. Chlamydia and gonorrhea cases diagnosed by healthcare facility type – Montana, 2010



Chlamydia

Other sexually transmitted diseases, such as chlamydia, gonorrhea, and syphilis infections, are reportable conditions to DPHHS. These infections are transmitted by sexual contact, which is a transmission route for HIV infection. The presence of other STD infections, like chlamydia, gonorrhea, or syphilis, might indicate risk for HIV infection.

Figure 13. Chlamydia cases and incidence rate* — Montana, 2000-2010

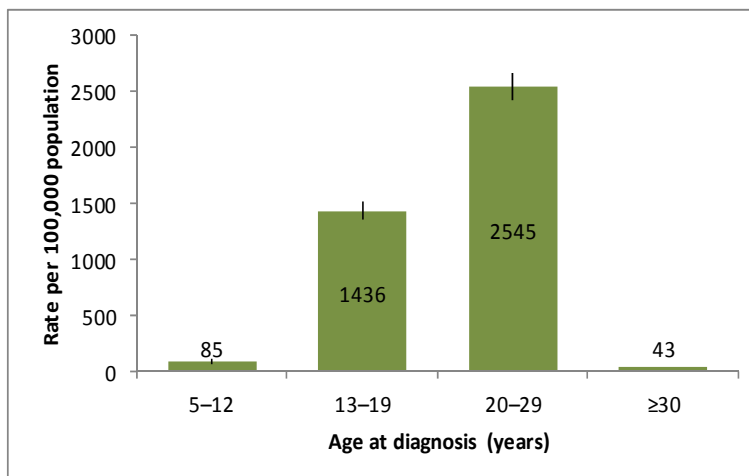


Chlamydial genital infection, 3,077 in 2010, is the most commonly reported infectious disease in Montana and the U.S. Since 2000, the number of reported cases and the incidence rate has approximately doubled in Montana (Figure 13); in 2009 the rate in Montana was 316/100,000 population compared with a U.S. rate of 409/100,000 population. The increase in cases reported over the previous decade might be related to increased screening, improved sensitivity of diagnostic testing and reporting, and/or an increased burden of disease.

* Incidence rates calculated using U.S. Census mid-year population estimates for 2009.

In 2010, the highest chlamydia incidence rates occurred among persons aged 13–19 years and 20–29 years (Figure 14). Ninety percent of chlamydia cases occurred among persons aged 13–29 years. While the disease burden is probably highest among these age groups, the high disease incidence is also attributable to STD screening recommendations that all sexually active females aged 25 years and younger who present for routine healthcare visits undergo screening for chlamydia and gonorrhea.

Figure 14. Chlamydia incidence rates* by age category — Montana, 2010

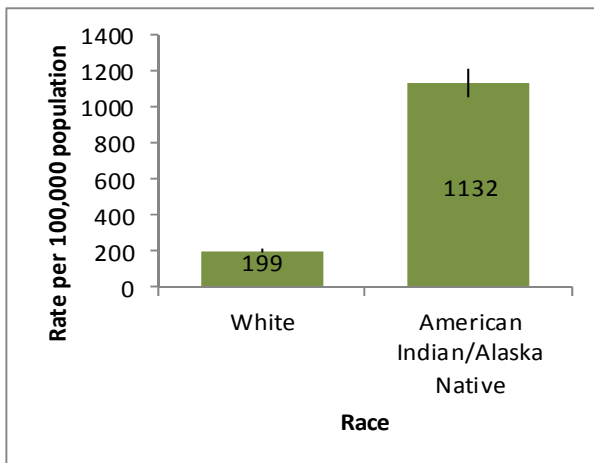


* Incidence rates calculated using National Center for Health Statistics 2009 population estimates.

Chlamydia

In 2010, the chlamydia incidence rate for persons classified as AI/AN was nearly six times greater than those classified as white (Figure 15). However, because of the larger percentage of Montana residents classified as white, the number of chlamydia cases among white persons is greater. The incidence rates could change significantly, as 383 (12%) chlamydia cases did not have a race classification. Assignment of a race classification to these cases could increase or decrease the incidence rate ratio between white and AI/AN. Moreover, broadly targeted STD screening practices among AI/AN may contribute to the higher reported chlamydia incidence rate in this population. However, the specific magnitude of the contribution has not been measured.

Figure 15. Chlamydia incidence rates* by race classification – Montana, 2010



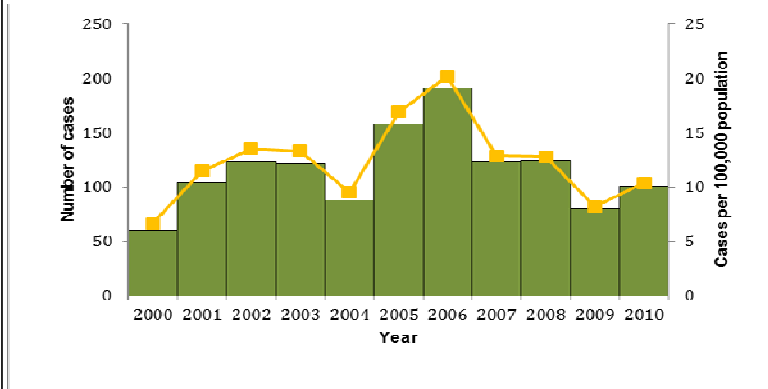
In 2010, notable variability occurred in the chlamydia incidence rates among Montana counties. Chlamydia incidence rates varied from 0 cases/100,000 population (8 counties) to nearly 1,500 cases/100,000 population in Roosevelt County. The seven counties with the highest incidence rates are also home to American Indian reservations.

*Incidence rates calculated using National Center for Health Statistics 2009 population estimates.

Gonorrhea

Gonococcal infections are the second most commonly reported STD in Montana and the U.S. There were 101 cases reported in Montana in 2010.

Figure 16. Gonorrhea cases and incidence rate* – Montana, 2000–2010



Since 2000, the gonorrhea incidence rate in Montana has ranged between 7 and 20 cases/100,000 population and is lower than the U.S rate (Figure 16). In 2010, the incidence rate in Montana was 10/100,000 population compared with 99/100,000 population in the U.S. in 2009.

*2010 incidence rates using U.S. Census mid-year population estimates for 2009.

In 2010, persons aged 20–29 years accounted for the majority of reported gonorrhea cases (Figure 17). As with chlamydia, the high disease incidence in this age category might be partially attributable to routine STD screening practices for sexually active women 25 years of age and younger.

Figure 17. Gonorrhea incidence rates* by age category – Montana 2010

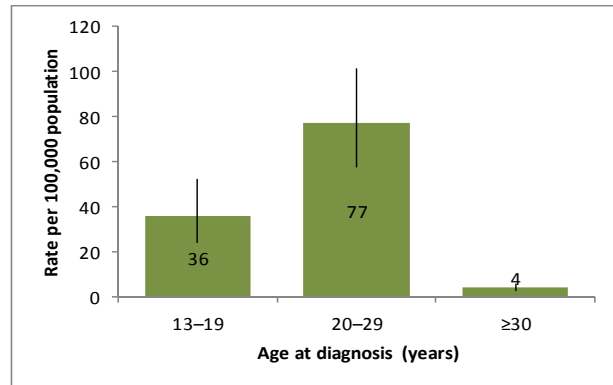
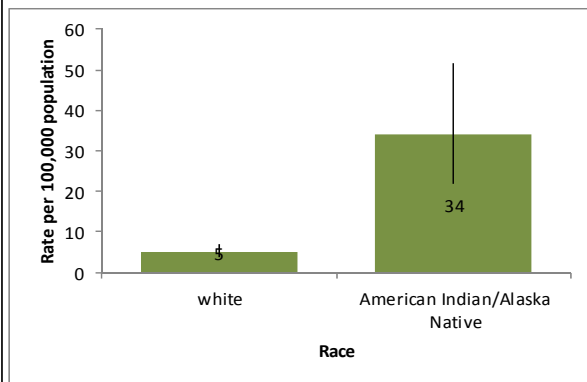


Figure 18. Gonorrhea incidence rates* by race classification – Montana, 2010



*Incidence rates calculated using National Center for Health Statistics 2009 population estimates.

In 2010, the gonorrhea incidence rate was highest among persons who had a race classification of “other” (79.4/100,000 population) or AI/AN (34.4/100,000 population) (Figure 18). Of the 101 reported gonorrhea cases in 2010, 18 (18%) had no racial classification. Assignment of a race classification to these cases could significantly change the incidence rate for each racial classification.

*Incidence rates calculated using National Center for Health Statistics 2009 population estimates.

Primary and Secondary Syphilis

Figure 19. All stages of reported syphilis[†] cases – Montana, 2000-2010

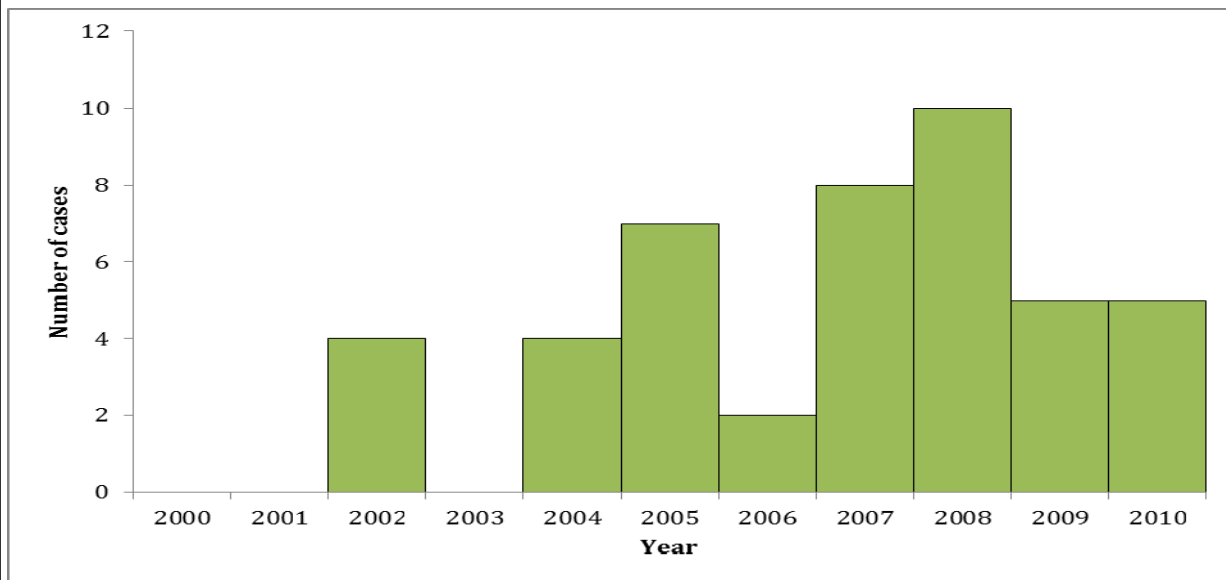


Table 9. Characteristics of reported syphilis[†] cases – Montana, 2010

| Characteristic | Number |
|--------------------|--------|
| Age (years) | |
| Median | 40 |
| Range | 21–49 |
| Stage | |
| Primary | 2 |
| Secondary | 1 |
| Early latent | 2 |
| HIV | |
| Positive | 3 |
| Negative | 2 |

Syphilis is an STD caused by *Treponema Pallidum*.[‡] Syphilis is characterized into stages for the purposes of treatment and follow-up. Since 2000, 10 or fewer cases of syphilis have been reported in Montana each year (Figure 19). In 2010, five cases of syphilis were reported. The cases ranged in age from 21 to 49 years. And Four cases were male (Table 9). Three patients were HIV-positive at the time of diagnosis.

[†] All stages of syphilis includes primary, secondary, latent (including early latent, late latent, and latent syphilis of unknown duration), neurosyphilis, late (including late syphilis with clinical manifestations other than neurosyphilis), and congenital syphilis.

[‡] Centers for Disease Control and Prevention. Sexually Transmitted Disease Surveillance 2009. Atlanta, U.S. Department of Health and Human Services; 2010.

| Cases Reported in 2010 | | | | | | | | | | |
|------------------------|-----------|-------|-------|---------|-------|-----------|-------|-------|---------|-------|
| County | Chlamydia | | | | | Gonorrhea | | | | |
| BEAVERHEAD | | | | | 27 | | | | | 0 |
| BIG HORN | | | | | 69 | | | | | 1 |
| BLAINE | | | | | 36 | | | | | 1 |
| BROADWATER | | | | | 3 | | | | | 1 |
| CARBON | | | | | 5 | | | | | 0 |
| CARTER | | | | | 3 | | | | | 1 |
| CASCADE | | | | | 363 | | | | | 13 |
| CHOUTEAU | | | | | 6 | | | | | 0 |
| CUSTER | | | | | 36 | | | | | 0 |
| DANIELS | | | | | 0 | | | | | 0 |
| DAWSON | | | | | 15 | | | | | 0 |
| DEER LODGE | | | | | 12 | | | | | 0 |
| FALLON | | | | | 2 | | | | | 0 |
| FERGUS | | | | | 19 | | | | | 0 |
| FLATHEAD | | | | | 231 | | | | | 4 |
| GALLATIN | | | | | 231 | | | | | 12 |
| GARFIELD | | | | | 0 | | | | | 0 |
| GLACIER | | | | | 116 | | | | | 0 |
| GOLDEN VALLEY | | | | | 3 | | | | | 0 |
| GRANITE | | | | | 0 | | | | | 0 |
| HILL | | | | | 187 | | | | | 9 |
| JEFFERSON | | | | | 14 | | | | | 0 |
| JUDITH BASIN | | | | | 0 | | | | | 0 |
| LAKE | | | | | 134 | | | | | 5 |
| LEWIS AND CLARK | | | | | 144 | | | | | 1 |
| LIBERTY | | | | | 2 | | | | | 0 |
| LINCOLN | | | | | 34 | | | | | 0 |
| MADISON | | | | | 5 | | | | | 0 |
| MCCONE | | | | | 1 | | | | | 0 |
| MEAGHER | | | | | 2 | | | | | 0 |
| MINERAL | | | | | 3 | | | | | 0 |
| MISSOULA | | | | | 388 | | | | | 16 |
| MUSSELSHELL | | | | | 9 | | | | | 0 |
| PARK | | | | | 22 | | | | | 0 |
| PETROLEUM | | | | | 0 | | | | | 0 |
| PHILLIPS | | | | | 3 | | | | | 0 |
| PONDERA | | | | | 4 | | | | | 0 |
| POWDER RIVER | | | | | 0 | | | | | 0 |
| POWELL | | | | | 7 | | | | | 0 |
| PRAIRIE | | | | | 0 | | | | | 0 |
| RAVALLI | | | | | 64 | | | | | 4 |
| RICHLAND | | | | | 28 | | | | | 0 |
| ROOSEVELT | | | | | 155 | | | | | 5 |
| ROSEBUD | | | | | 69 | | | | | 0 |
| SANDERS | | | | | 14 | | | | | 4 |
| SHERIDAN | | | | | 3 | | | | | 0 |
| SILVER BOW | | | | | 94 | | | | | 3 |
| STILLWATER | | | | | 14 | | | | | 0 |
| SWEET GRASS | | | | | 10 | | | | | 0 |
| TETON | | | | | 7 | | | | | 0 |
| TOOLE | | | | | 14 | | | | | 0 |
| TREASURE | | | | | 0 | | | | | 0 |
| VALLEY | | | | | 6 | | | | | 0 |
| WHEATLAND | | | | | 3 | | | | | 0 |
| WIBAUX | | | | | 0 | | | | | 0 |
| YELLOWSTONE | | | | | 467 | | | | | 22 |
| UNKNOWN | | | | | 2 | | | | | 0 |
| Total (including race) | 761 | 1790 | 165 | 370 | 3086 | 23 | 49 | 14 | 16 | 102 |
| | AI/AN | White | Other | Unknown | Total | AI/AN | White | Other | Unknown | Total |

| Cases reported in 2010 | | | | | | | | | | |
|------------------------|----------|-------|-------|---------|-------|-------|-------|-------|---------|-------|
| COUNTY | Syphilis | | | | HIV | | | | | |
| BEAVERHEAD | | | | | 1 | | | | | 0 |
| BIG HORN | | | | | 0 | | | | | 0 |
| BLAINE | | | | | 0 | | | | | 0 |
| BROADWATER | | | | | 0 | | | | | 0 |
| CARBON | | | | | 0 | | | | | 0 |
| CARTER | | | | | 0 | | | | | 0 |
| CASCADE | | | | | 0 | | | | | 2 |
| CHOUTEAU | | | | | 0 | | | | | 0 |
| CUSTER | | | | | 0 | | | | | 2 |
| DANIELS | | | | | 0 | | | | | 0 |
| DAWSON | | | | | 0 | | | | | 0 |
| DEER LODGE | | | | | 0 | | | | | 1 |
| FALLON | | | | | 0 | | | | | 0 |
| FERGUS | | | | | 0 | | | | | 0 |
| FLATHEAD | | | | | 0 | | | | | 1 |
| GALLATIN | | | | | 1 | | | | | 1 |
| GARFIELD | | | | | 0 | | | | | 0 |
| GLACIER | | | | | 0 | | | | | 0 |
| GOLDEN VALLEY | | | | | 0 | | | | | 0 |
| GRANITE | | | | | 0 | | | | | 0 |
| HILL | | | | | 0 | | | | | 0 |
| JEFFERSON | | | | | 0 | | | | | 0 |
| JUDITH BASIN | | | | | 0 | | | | | 0 |
| LAKE | | | | | 0 | | | | | 0 |
| LEWIS AND CLARK | | | | | 1 | | | | | 2 |
| LIBERTY | | | | | 0 | | | | | 0 |
| LINCOLN | | | | | 0 | | | | | 0 |
| MADISON | | | | | 0 | | | | | 0 |
| MCCONE | | | | | 0 | | | | | 0 |
| MEAGHER | | | | | 0 | | | | | 0 |
| MINERAL | | | | | 0 | | | | | 0 |
| MISSOULA | | | | | 0 | | | | | 0 |
| MUSSELSHELL | | | | | 0 | | | | | 0 |
| PARK | | | | | 0 | | | | | 0 |
| PETROLEUM | | | | | 0 | | | | | 0 |
| PHILLIPS | | | | | 0 | | | | | 1 |
| PONDERA | | | | | 0 | | | | | 0 |
| POWDER RIVER | | | | | 0 | | | | | 0 |
| POWELL | | | | | 0 | | | | | 1 |
| PRAIRIE | | | | | 0 | | | | | 0 |
| RAVALLI | | | | | 0 | | | | | 0 |
| RICHLAND | | | | | 0 | | | | | 0 |
| ROOSEVELT | | | | | 0 | | | | | 0 |
| ROSEBUD | | | | | 0 | | | | | 0 |
| SANDERS | | | | | 0 | | | | | 0 |
| SHERIDAN | | | | | 0 | | | | | 0 |
| SILVER BOW | | | | | 0 | | | | | 2 |
| STILLWATER | | | | | 0 | | | | | 0 |
| SWEET GRASS | | | | | 0 | | | | | 0 |
| TETON | | | | | 0 | | | | | 0 |
| TOOLE | | | | | 0 | | | | | 0 |
| TREASURE | | | | | 0 | | | | | 0 |
| VALLEY | | | | | 0 | | | | | 0 |
| WHEATLAND | | | | | 0 | | | | | 0 |
| WIBAUX | | | | | 0 | | | | | 0 |
| YELLOWSTONE | | | | | 2 | | | | | 7 |
| UNKNOWN | | | | | 0 | | | | | 0 |
| Total (including race) | 1 | 3 | 0 | 1 | 5 | 3 | 16 | 0 | 1 | 20 |
| | AI/AN | White | Other | Unknown | Total | AI/AN | White | Other | Unknown | Total |

ACS (American Community Survey) Nationwide survey designed to provide updated estimates for information such as race, age, income, home value, etc., between census years.

ADAP (AIDS Drug Assistance Program) Provides HIV-related prescription drugs to uninsured and underinsured people living with HIV.

AIDS (acquired immune deficiency syndrome) The condition that results after HIV infection defined by a clinical diagnosis of one of the 26 opportunistic infections or CD4 positive lymphocyte count below 200 or 14%. Now known as stage 3 HIV infection.

BRFSS (Behavioral Risk Factor Surveillance System) Phone based survey that collects state-based information on health risk behaviors among adult populations.

CARE Act (Comprehensive AIDS Resources Emergency Act) Federal legislation created to address the health and support needs of persons living with HIV and their families in the United States.

CDC (Centers for Disease Control and Prevention) Federal offices concerned with maintaining the health of the nation's population.

HAART (Highly Active Antiretroviral Therapy) Combination prescription drug therapy for persons living with HIV.

HIV (human immunodeficiency virus) The virus that is spread through blood products, sexual fluids, and from mother to baby. HIV is diagnosed by 1) positive result on a screening test for HIV antibody, i.e., reactive enzyme immunoassay followed by a positive confirmatory test, i.e., Western Blot or immunofluorescence antibody test or 2) a positive result or a detectable quantity on a virologic test, i.e., polymerase chain reaction, neutralization assay, or culture.

HCV (hepatitis C virus) Virus causing hepatitis C infection. May be transmitted from an infected to non-infected person through parenteral exposure (e.g. IDU).

HET (Heterosexual) Adults or adolescents 13 years of age or older who have history of sexual contact with a person known to have, or to be at high risk for, HIV infection.

IDU (Injection Drug User) Adults or adolescents 13 years of age or older who have injected illicit or nonprescription drugs.

MSM (Men Who Have Sex with Men) Male adults or adolescents 13 years of age or older who report sexual contact with other men, e.g., homosexual contact or men who report sexual contact with both men or women, e.g., bisexual contact.

MSM/IDU (Men Who Have Sex with Men and who are Injection Drug Users) Men who report both sexual contact with other men and injecting illicit or nonprescription drugs.

NIR/NRR (No Identified Risk/No Reported Risk) Assignment for exposure category when the outcome of HIV case investigation does not show any identified risk (NIR) or risk reported (NRR) for a reported case of HIV infection.

DPHHS (Montana Department of Public Health and Human Services)

OTHER (Other risk) Includes persons who received clotting factors to treat hemophilia or coagulation disorders, recipients of blood transfusion, recipients of organ transplants, and children infected perinatally.

STD (Sexually Transmitted Disease) A group of diseases that are transmitted through sexual contact, usually including gonorrhea, herpes, HIV, chlamydia, syphilis, genital warts, and occasionally, hepatitis C.

Endnotes

References

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Data Sources

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- Montana BRFSS data
- Montana Department of Commerce (CEIC)
- Montana HIV/AIDS Surveillance Database (eHARS), Centers for Disease Control and Prevention (CDC)
- Montana NEDSS Surveillance System (MIDIS)
- Montana STD Surveillance Database (STD*MIS)