

EPIDEMIOLOGIC PROFILE

OF HIV/AIDS IN OREGON



Oregon
Health
Authority

PUBLIC HEALTH DIVISION
HIV/STD/TB Program/HIV Data and Analysis

Epidemiologic Profile of HIV/AIDS in Oregon

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Executive summary, HIV/AIDS cases reported through December 31, 2012, and published in 2013

HIV/AIDS remains an important public health problem in Oregon. The number of people living with HIV/AIDS continues to grow, presenting challenges for prevention and clinical services.

New HIV/AIDS diagnoses

The rate of new HIV/AIDS infections by year of earliest reported diagnosis reached a high of 19 cases per 100,000 Oregon residents, a total of 542 cases, in 1991. The following year, however, saw the beginning of a decline. By 1997 the rate dropped to 9 cases per 100,000, and continued to decline steadily to a level of 7 cases per 100,000 in 2012. Oregon's decline in new diagnoses during the 1990s reflected similar trends throughout the United States. These declines probably resulted from a combination of factors, including earlier diagnosis, behavior changes, reduction in infection from a pregnant woman to her baby, and reduced infectiousness of HIV-infected people taking antiretroviral therapy. In Oregon, men are more likely to be infected than women. From 2008 through 2012, diagnosis rates in Oregon were 7 times higher among men relative to women (12.1 vs. 1.6 per 100,000). Men who have had sex with men (MSM) accounted for 72% of all male cases. Roughly half of female HIV cases were infected by sexual activity with a man, and injection drug use (IDU) accounted for 18% of female cases. Recently, new diagnoses have increased relatively among younger age groups. During 2008–2012, rates of new diagnoses among males aged 20–24 years remained elevated (22.4 per 100,000) compared to the diagnosis rate prior to 2005 (13.1 per 100,000). Relative increases among younger people might reflect an increased rate of new infections among younger people or earlier diagnosis. Blacks/African Americans and Hispanics continue to be more likely than whites to become infected. During 2008–2012, diagnosis rates were 3.8 times as high among blacks/African Americans and 1.6 times as high among Hispanics compared to whites.

Survival

The life span for those infected with HIV has increased. Eighty-eight percent of cases diagnosed with HIV from 1993 to 2005 survived at least five years compared to only 44% of cases diagnosed from 1981 to 1992. Some

increases in survival may reflect more timely diagnosis, but much of the improvement can be attributed to more effective treatment.

Delayed diagnosis still common

Despite these gains, many Oregonians continue to be diagnosed with HIV infection at a late stage of the disease. A delayed diagnosis is determined from an AIDS-defining event at the time of their HIV-infection diagnosis or within 12 months. Approximately 39% of the 1,256 cases diagnosed during 2007–2011 had AIDS at the time of their HIV-infection diagnosis, or their infection progressed to AIDS within 12 months. Late diagnosis was more common among older patients compared to younger patients, Hispanics compared to whites, IDU or unknown risk compared to MSM, and rural relative to urban cases.

Oregonians living with HIV/AIDS

From 1981 through the end of 2012, 9,307 Oregon residents diagnosed with HIV infection were reported to the Oregon Public Health Division. Forty percent had died by the end of 2012, leaving 5,581 people living with HIV/AIDS (PLWH/A). As of 2012, Multnomah County was home to 19% of the state's population, but 55% of PLWH/A were diagnosed in Multnomah County. People diagnosed in the Portland metropolitan area and living by the end of 2012 were more likely to be male and MSM than PLWH/A in the remainder of the state, where female cases and infection from IDU — although still a distinct minority — were slightly more common. Other counties that were home to 50 or more PLWH/A at the time of their diagnosis included Clackamas, Deschutes, Douglas, Jackson, Josephine, Lane, Linn, Marion, Yamhill and Washington. Many of these people have moved to other counties since diagnosis, some having been diagnosed more than two decades ago. Consequently, county of residence at diagnosis can be an inaccurate way to estimate the number of current residents with HIV/AIDS by county.

Co-infections with HIV

From 2008 to 2012, the average annual reported rate of early syphilis among male HIV/AIDS cases was 1,196 per 100,000 (compared to 4.4 cases per 100,000 in the general population in Oregon). The average annual reported rate of gonorrhea among male HIV/AIDS cases from 2008 to 2012 was 1,792 per 100,000 (compared to 40 cases per 100,000 in the general population in Oregon). The average annual reported rate of chlamydia among male HIV/AIDS cases from 2008 to 2012 was 1,673 per 100,000 (compared to 383 cases

per 100,000 in the general population in Oregon). From 2008 to 2012, 47% of 695 reported male syphilis cases and 2% of 18,684 reported male chlamydia cases occurred among males already infected with HIV. Among women living with HIV, there was one case of syphilis co-infection, two gonorrhea co-infections, and 13 chlamydia co-infections that occurred during 2008–2012. Among the 539 Oregon Medical Monitoring Project 2009–2010 respondents, 20% reported ever having hepatitis B and 15% reported ever having hepatitis C. In contrast to the high incidence of sexually transmitted diseases among PLWH/A, Oregon has never observed a substantial number of cases of tuberculosis (TB) among those with HIV/AIDS. Of 386 TB cases in Oregon from 2008 to 2012, only 16, or 4%, were known to also have HIV.

Clinical care in Oregon

An important part of planning for HIV treatment and prevention is estimating the number of PLWH/A in Oregon who are aware of their infection and receiving continuous medical care. People who receive regular high-quality medical care for HIV/AIDS typically visit their medical provider three or more times a year and submit blood specimens for testing the quantity of HIV virus circulating in the blood (“viral load”) and immune function (such as “CD4 count”). Among AIDS Drug Assistance Program clients, 16% of 2,407 clients living with HIV infection in Oregon did not have any reported CD4 or viral load during 2012, suggesting approximately 16% of PLWH/A do not receive regular medical care. Among Oregon residents living with HIV who had a reported viral load test collected during July 2011 through December 2012, 72% (3,784/5,284) had an undetectable viral load (below the sensitivity of the test), and 87% (4,580/5,284) had a suppressed viral load (≤ 200 copies/mL).

HIV infection in Oregon

Introduction

HIV/AIDS remains an important public health problem in Oregon. From 1981 through 2012, 9,307 Oregonians were diagnosed and reported with HIV infection; approximately 40% have since died (Figure 1).

Since 1997, approximately 274 new diagnoses were reported each year in Oregon. The number of Oregon cases* living with HIV has continued to increase each year, nearly doubling from 2,753 in 1997 to 5,581 in 2012.

Recent diagnoses (2008–2012)

Half (641/1,271) of those diagnosed with HIV during 2008–2012 were Multnomah County residents. Statewide, men were about seven times (12.1 vs. 1.6 per 100,000) more likely than women to be diagnosed with HIV. The average age at diagnosis was 37.7 for males and 36.5 for females (Figure 2).

Oregon HIV facts at a glance:

As of December 31, 2012:

- 9,307 Oregonians were diagnosed with HIV.
- 3,726 Oregonians with HIV have died.
- 5,581 Oregonians were living with HIV.
- During the last 15 years, approximately 274 Oregonians were diagnosed with HIV each year.
- Over the past decade, an average of 84 persons with HIV died each year.
- Diagnosis rates for HIV have increased among 20–24 year-olds since 2006.
- Fifty-five percent of people living with HIV in Oregon resided in Multnomah County when they were diagnosed.

* For this report, a “case” is defined as an Oregon resident diagnosed with HIV/AIDS before being diagnosed in another state. Only those cases reported to the Oregon Health Authority HIV Program were included. People living with HIV in Oregon not counted in this report include those who resided in another state when they were diagnosed and approximately 1,010 who are infected but have yet to be tested [Hall, H. (2013). “Differences in human immunodeficiency virus care and treatment among subpopulations in the United States.” JAMA Intern Med 173(14): 1337–1344].

Cases of HIV infection, diagnosis and death, Oregon, 1981–2012

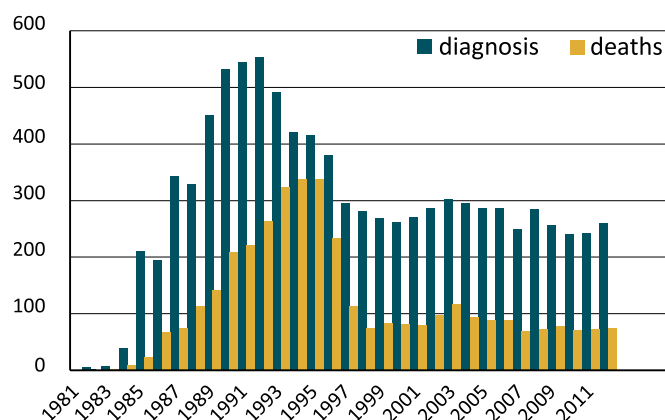


Figure 1

HIV infection, by age at diagnosis, Oregon, 2005–2012

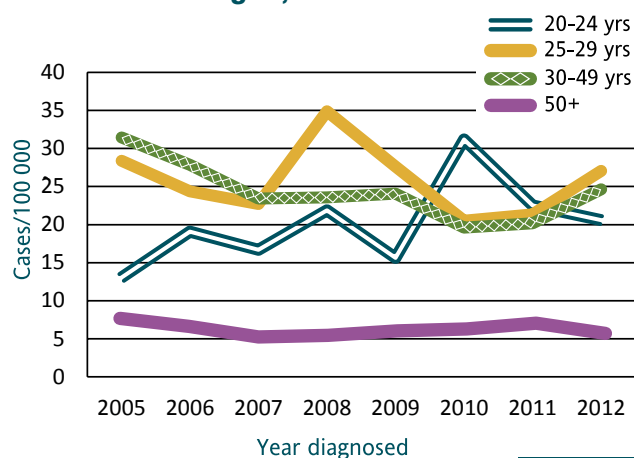


Figure 2

New diagnosis rates were 3.8 times higher among blacks and African Americans than whites (22.1 vs. 5.8 per 100,000).^{*} The rate of new diagnoses for Hispanics was 1.6 times higher than for white non-Hispanics (9.6 vs. 5.8 per 100,000); other races/ethnicities accounted for roughly 4% of all diagnoses (Figure 3).

Among males, men who have sex with men (MSM) accounted for 72% of cases diagnosed during 2008–2012 (807/1,117). Other transmission categories included men who use injection drugs (5%), MSM who also use injection drugs (9%), and men who likely or possibly[†] acquired their infection from heterosexual transmission (2%). About 12% of recent male diagnoses lacked sufficient information to assign a transmission category. Among female cases, injection drug users accounted for 18% of cases and women who likely or possibly[‡] acquired their infection by heterosexual transmission accounted for half (51%) of cases. The remainder included cases that lacked sufficient information for classification.

Oregonians living with HIV/AIDS

As of December 31, 2012, 5,581 Oregonians diagnosed with HIV since 1981 were believed to be living. Fifty-five percent (3,076/5,581) of those people lived in Multnomah County at the time they were diagnosed (Figure 4).

^{*} Approximately 31% (29/94) of black/African American cases are believed to have immigrated to the U.S. after becoming infected in another country.

[†] Includes men who affirmed having sex with women and denied injection drug use, transfusions or transplants during the time they were not being adequately screened for HIV.

[‡] Includes women who affirmed sex with men and denied injection drug use, sex with men or transfusions or transplants during the time they were not being adequately screened for HIV.

HIV diagnoses by race/ethnicity, Oregon, 2008–2012

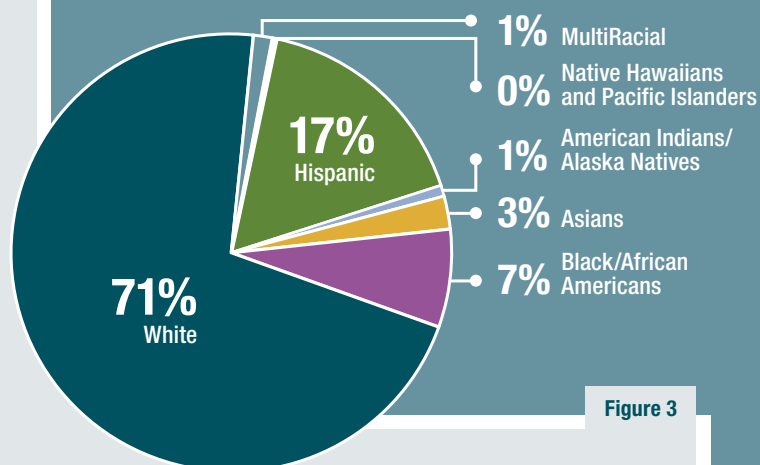


Figure 3

Living cases of HIV infection by county of residence at diagnosis, Oregon, 2012

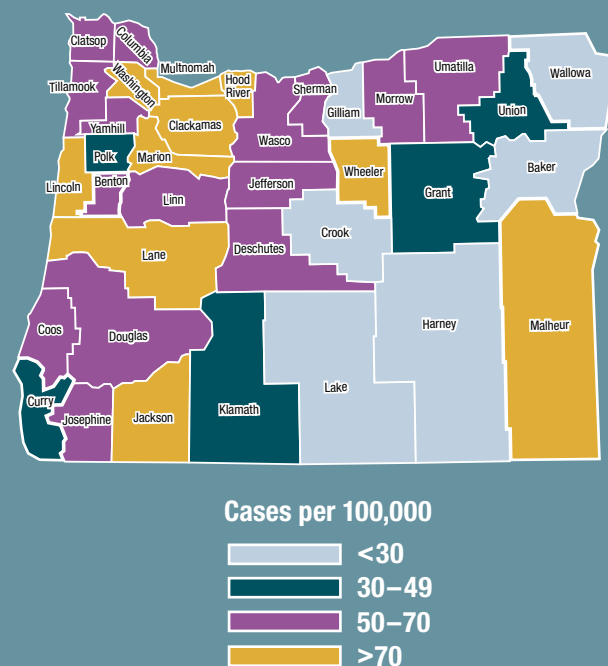


Figure 4

Epidemiologic resources:

Oregon Health Authority, HIV/AIDS epidemiology: <https://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/HIVData/Pages/index.aspx>

Centers for Disease Control and Prevention: www.cdc.gov/hiv

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OHA 9985 (Rev. 02/2014)

Age and HIV in Oregon

Introduction

On average, the interval between HIV infection and diagnosis appears to be decreasing in Oregon. If true, this is encouraging because earlier diagnosis can lead to earlier treatment, longer life expectancy, and reduced risk of transmitting HIV to others. Overall, the number of newly diagnosed HIV cases* in Oregon has declined slightly in recent years. An increase in the number of new HIV diagnoses among people aged 20–24 has been offset by declines among people aged 25–49 years (Figure 1).

Age and HIV in Oregon

Although the total number of new infections in Oregon each year has not been increasing, people already living with HIV are living longer. This is, of course, a positive development. As a consequence, the number of Oregonians aged ≥ 50 years and living with HIV continues to increase. The average age of living cases in Oregon increased from 45 in 2008 ($n=4,880$) to 47 ($n=5,581$) by the end of 2012. This fact sometimes leads people to conclude, erroneously, that more people are becoming newly HIV-infected after age 50 years. This is not the case. Most Oregonians aged ≥ 50 years and living with HIV were actually infected when they were much younger.

* For this report, a “case” is defined as an Oregon resident diagnosed with HIV/AIDS before being diagnosed in another state. Only those cases reported to the Oregon Health Authority HIV Program were included. People living with HIV in Oregon not counted in this report include those who resided in another state when they were diagnosed and approximately 1,010 who are infected but have yet to be tested [Hall, H. (2013). “Differences in human immunodeficiency virus care and treatment among subpopulations in the United States.” JAMA Intern Med 173(14): 1337–1344].

Age and HIV facts at a glance:

- Recent trends suggest an increase in rate of diagnoses among 20–24 year-old males.
- Increased numbers of diagnoses before age 28 and decreases in diagnoses among people aged 25–49 years suggest that the period between infection and diagnosis has likely been decreasing.
- The average age of people living with HIV at the end of 2012 was 47 years compared to 45 years in 2008.

Males HIV infection by age at diagnosis
Oregon 2005–2011

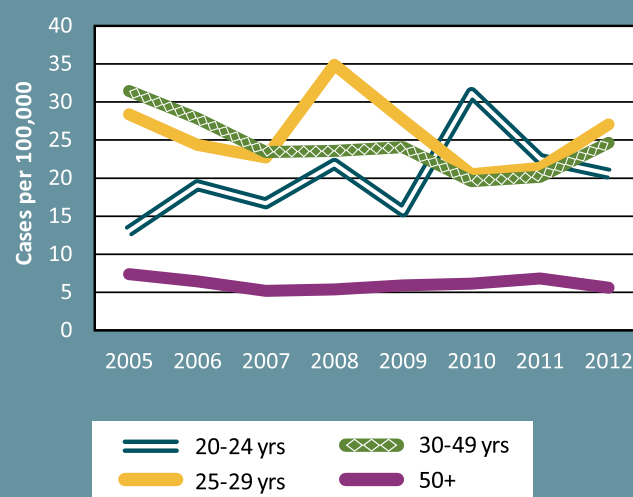


Figure 1

Recent HIV diagnoses among people aged 50 and older

During 2008–2012, an average of 46 cases older than age 50 were diagnosed each year in Oregon. The average age at HIV diagnosis during 2008–2012 was 37.7 years for males and 36.5 for females. The actual date of infection is rarely known precisely, but it can occur as many as 10 or more years before it is recognized (i.e., diagnosed).

Mode of infection and at-risk groups do not differ much by age. That is to say, HIV continues to be mostly sexually transmitted. As in other age groups, most new HIV diagnoses among Oregonians over 50 years in age occur in men who have sex with men, with fewer diagnoses among women and injection drug users of either sex. People in this age group (≥ 50 years) do have some unique challenges that might increase their risk for infection if they are exposed. These include:

- Lower rates of condom use than younger people;
- Less frequent testing for HIV and other sexually transmitted diseases than younger people;
- Inaccurate perception of risk of infection by both individuals and their medical providers;
- Similarity of some HIV symptoms to those of aging;
- Reduced willingness to seek testing or advice about safe sex.

Epidemiologic resources:

Oregon Health Authority, HIV/AIDS epidemiology: <https://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/HIVData/Pages/index.aspx>

Centers for Disease Control and Prevention: www.cdc.gov/hiv

HIV infection in Oregon among men who have sex with men

Newly diagnosed HIV infection among men who have sex with men, 2008–2012

Men who have sex with men (MSM) accounted for 63% (807/1,271) of all Oregon HIV/AIDS cases* diagnosed during 2008–2012 among all genders, and 72% (807/1,117) of all new cases among men (Figure 1). Nationally, MSM** account for about three out of five (63%)¹ of all newly diagnosed HIV infections. This is the only category in the United States for which new HIV infections are increasing.

Male transmission categories among Oregon cases of HIV infection, 2008–2012

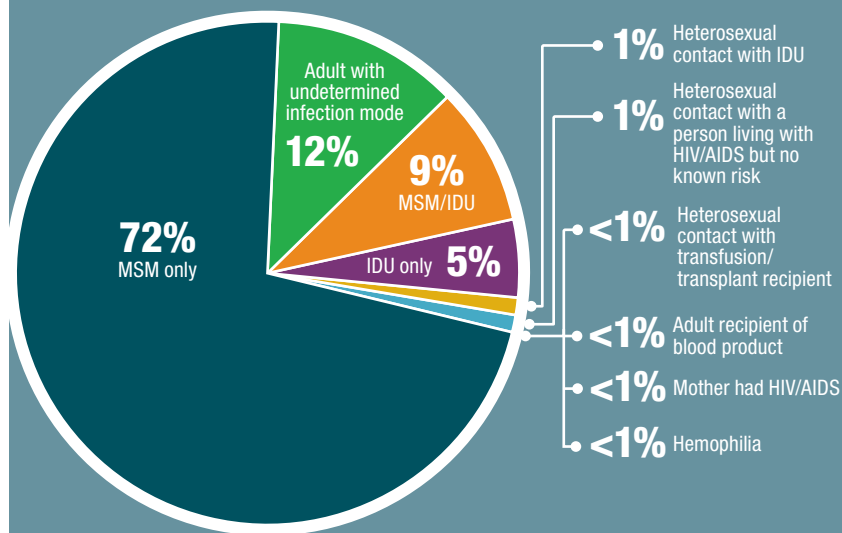


Figure 1

HIV infection and MSM at a glance:

- MSM represent 64% of all Oregon HIV cases living at the end of 2012.
- Among living MSM, Oregon HIV cases, 35% had AIDS upon or within 12 months of diagnosis.
- Only 8% of all living MSM Oregon HIV cases are under the age of 30, but from 2007 to 2012, 35% of MSM HIV diagnoses were under the age of 30.

An additional 9% of male cases reported having sex with other men in addition to having used injection drugs (MSM/IDU). Heterosexual transmission among men is relatively rare in Oregon. During 2008–2012, about 2% (n=23) of newly diagnosed men were assumed to have acquired the infection from a female partner who was infected with HIV or used injection drugs.

¹ CDC fact sheet “HIV and AIDS among Gay and Bisexual Men,” March 2013. <http://www.cdc.gov/hiv/topics/msm/pdf/msm.pdf>

* For this report, a “case” is defined as an Oregon resident diagnosed with HIV/AIDS before being diagnosed in another state. Only those cases reported to the Oregon Health Authority HIV Program were included. People living with HIV in Oregon not counted in this report include those who resided in another state when they were diagnosed and approximately 1,010 who are infected but have yet to be tested [Hall, H. (2013). “Differences in human immunodeficiency virus care and treatment among subpopulations in the United States.” JAMA Intern Med 173(14): 1337–1344].

** For the purposes of this report, men who have sex with men (MSM) is defined as a male who has anal and/or oral sex with another male.

Twelve percent of cases among men (135/1,117) were missing information about transmission risk. To the extent that cases of possible heterosexual transmission include men who did not disclose sex with other men or injection drug use, this might lead to an underestimate of MSM and IDU HIV transmission.

From 2008 to 2012, the average age at diagnosis among MSM HIV cases was 37 years. About one-third (35%) were under 30 years of age at diagnosis; 15% were older than 50 years of age. Roughly one of every five (22%) MSM cases diagnosed from 2008 to 2012 also reported having had one or more female sex partners. Twelve percent of MSM cases were foreign-born. During 2008–2012, 73% of cases diagnosed were white, 17% were Hispanic, and 5% were black or African American. Sexually transmitted diseases were common among MSM living with HIV during 2008–2012. MSM with HIV during 2008–2012 represented 17% (120/711) of all syphilis cases. Among MSM cases diagnosed with HIV from 2008 to 2012, 47% had AIDS upon or within 12 months of diagnosis. MSM cases were more likely to receive medical care for HIV/AIDS in 2011 than male IDU cases and MSM/IDU cases.[§]

MSM living with HIV in Oregon

Among all Oregon HIV cases reported since 1981 and living at the end of 2012, MSM HIV cases represented 64% and an additional 8% were MSM who also reported using injection drugs (MSM/IDU). Among all living MSM cases, 8% were under 30 years of age and 45% were over 50 years of age at the end of 2012. The average age of living MSM cases at the end of 2012 was 48 years. At least 4% (158/3,546) of living MSM cases also had a reported case of chronic co-infection of hepatitis C. By the

end of 2012, 60% of all living MSM cases were residents in Multnomah County at the time of their diagnosis. Eight percent of all living MSM cases in Oregon were foreign-born. Eighty-two percent (2,907/3,546) of living MSM were white, 11% (391/3,546) were Hispanic, and 4% (152/3,546) were black or African American. Fifteen percent of living MSM cases in Oregon mentioned having had sex with females at the time their infection was reported. Among all living MSM cases, 35% had AIDS upon or within 12 months of diagnosis, an indicator of delayed diagnosis.

Summary

Men who have sex with men continue to comprise the largest proportion of HIV/AIDS cases diagnosed in Oregon by presumed route of transmission. All of the reasons for disproportionate prevalence among MSM are not known. Some explanations include:

- The risk of transmission of HIV per sex act when a condom is not used is higher for anal intercourse than for other forms of sex.
- Other sexually transmitted diseases, such as syphilis and gonorrhea, increase risk of transmitting or acquiring HIV during sex, and these diseases are more prevalent among MSM.
- A minority of MSM with unrecognized HIV infection might be responsible for disproportionate rates of transmission by virtue of concurrent high-risk sex with multiple partners.
- Some men who have sex with men may not feel comfortable disclosing that fact, leading to unrecognized and undiagnosed infections that might be transmitted to others.

[§] Measured by evidence of having at least one CD4 or viral load laboratory test during the year.

Presently available approaches to reducing the rate of new infections among MSM include frequent HIV testing to reduce the number of unrecognized infections, increasing condom use, reducing the total number of partners, minimizing multiple concurrent partners, and antiretroviral treatment to reduce seminal and bloodstream amounts of virus and risk of transmission per sex act. Post- and pre-exposure prophylaxis may be useful strategies in a limited number of MSM.

Epidemiologic resources:

Oregon Health Authority, HIV/AIDS epidemiology:

<http://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/HIVData/Pages/index.aspx>

Centers for Disease Control and Prevention: www.cdc.gov/hiv



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OHA 9994 (02/2014)

Injection drug use and HIV in Oregon

Background

Injection drug use (IDU) is a risk factor for HIV and can be associated with high-risk sexual behaviors.¹ People who inject drugs (PWID) account for 19% of all people living with HIV in the United States, and African Americans and Latinos face disproportionately high rates of HIV due, in part, to injection drug use.² HIV-positive people who inject drugs can have difficulty gaining access to consistent and quality medical care, including antiretroviral treatment.* These circumstances can contribute to increased morbidity and mortality from AIDS-related illnesses and other causes, including liver disease and overdose.³

Probable route of transmission among men recently diagnosed with HIV/AIDS, Oregon, 2008–2012

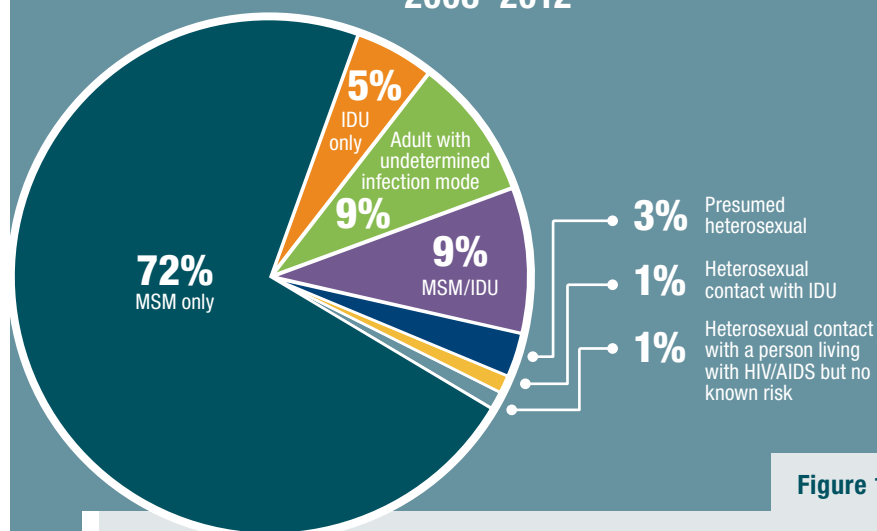


Figure 1

HIV infection and IDU at a glance:

- Nineteen percent of Oregon HIV cases used injection drugs prior to becoming infected.
- An additional 3% of Oregon HIV cases never used injection drugs themselves before becoming infected but had a sex partner who did.
- The percentage of newly diagnosed Oregon HIV cases who report past injection drug use has declined from 24% during 1997 to 10% during 2012.
- People with HIV who used injection drugs are more likely than others to have advanced disease at the time of diagnosis.

Recent diagnoses of HIV infection among injection drug users

During 2008–2012, 14% (178/1,271) of all people newly diagnosed with HIV acknowledged past injection drug use. (This includes men who have sex with men and used injection drugs, men who do not have sex with men but used injection drugs, and women who used injection drugs.) (Figure 1, Figure 3). There were an additional 1% of men (n=11) and 12% of women (n=18) newly diagnosed with HIV who reported heterosexual contact with someone who used injection drugs. During this period, race and ethnicity among PWID was similar to people presumed to have been infected by other routes such as MSM (men who have sex with men) or high-risk heterosexual exposures (race/ethnicity of all

* HIV cases who had used injection drugs were also less likely to be engaged in HIV-specific medical care. Among Oregon HIV cases living in 2010, MSM (men who have sex with men) were more likely to have had a CD4 or viral load count than male IDU (75% vs. 65%).

cases diagnosed during 2008–2012: 71% white, 17% Hispanic, 7% black and African American, 3% Asian, 1% American Indian/Alaska Native and 3% multiracial).

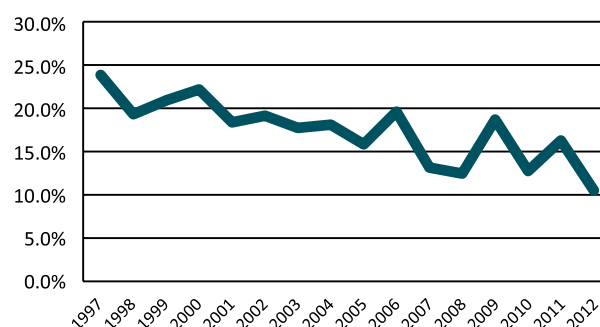
Role of IDU in HIV transmission in Oregon, 1981–2012

Among all HIV/AIDS cases reported during 1981–2012 among Oregon residents, 19% (1,742/9,307) of cases** reported a history of injection drug use, either in addition to MSM or as a sole risk factor for HIV transmission. In addition, another 3% of Oregon HIV cases reported during 1981–2012 (229/9,307) identified heterosexual contact with a person who injected drugs, suggesting that IDU was the indirect source of their infection. Since 1997, the percentage of all HIV/AIDS cases reported among Oregon residents who reported having used injection drugs has fallen from 24% (71/298) to 10% (27/260) during 2012 (Figure 2).

In absolute terms, more men (667) than women (250) with HIV reported IDU as the sole potential transmission route, but proportionally, 26% (250/972) of women and 8% of men (667/8,335) with reported cases of HIV in Oregon reported IDU as their sole transmission risk category.

Survival after diagnosis is lower among PWID. According to cumulative survival analysis of Oregon cases, men diagnosed during 2003 through the end of 2012 who likely acquired HIV through IDU were 15% less likely to survive 10 years after diagnosis relative to MSM with HIV but no history of drug use (75% relative to 90% estimated survival at 10 years). Similarly, women diagnosed during the same period who likely acquired HIV through IDU were 18% less likely to survive 10 years after diagnosis relative to women with HIV and no history of IDU (77% relative to 95% estimated survival at 10 years). These differences were statistically significant.

Percentage of newly diagnosed HIV cases that acknowledges injection drug use[†] by year, Oregon, 1997–2012



[†] Injection drug use includes men who acknowledged sex with other men and injection drug use, men who denied sex with other men but acknowledged injection drug use, and women who reported having used injection drugs.

Figure 2

Probable route of transmission among women recently diagnosed with HIV/AIDS, Oregon, 2008–2012

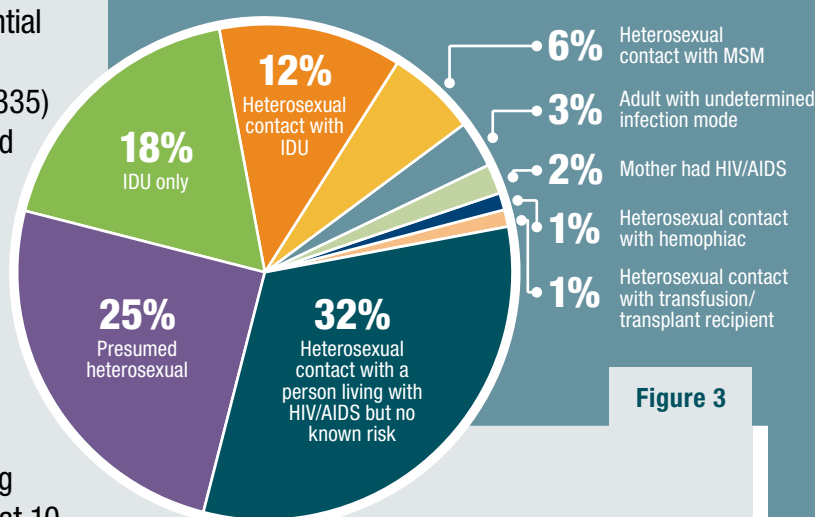


Figure 3

** For this report, a “case” is defined as an Oregon resident diagnosed with HIV/AIDS before being diagnosed in another state. Only those cases reported to the Oregon Health Authority HIV Program were included. People living with HIV in Oregon not counted in this report include those who resided in another state when they were diagnosed and approximately 1,010 who are infected but have yet to be tested [Hall, H. (2013). “Differences in human immunodeficiency virus care and treatment among subpopulations in the United States.” JAMA Intern Med 173(14): 1337–1344].

Impact of delayed diagnosis

Many people who use or have used injection drugs and are diagnosed with HIV infection, experience delayed diagnosis[‡]. Forty-seven percent of men and 26% of women who had used injection drugs and were diagnosed with HIV during 2007–2011 met criteria for AIDS within 12 months of their first positive HIV test. This means that they had been infected for up to a decade before diagnosis. Delayed diagnosis and treatment contribute to further spread of HIV.

HIV, IDU and hepatitis C

Among Oregon HIV cases diagnosed during 2008–2012 who reported IDU, at least 33% (50/150) of men and 61% (17/28) of women also reported a case of chronic hepatitis C. HIV-hepatitis C co-infection may limit treatment options for HIV and result in poorer outcomes.⁴

[‡]Delayed diagnosis is determined from an AIDS-defining event at the time of their HIV-infection diagnosis or within 12 months.

¹ Van Tieu, H. and B.A. Koblin. HIV, alcohol, and noninjection drug use. *Current Opinion in HIV and AIDS*, 2009. 4(4): p. 314-318.

² CDC. Drug-Associated HIV Transmission Continues in the United States. 2002.

³ Sayles, J.N., et al. Experiences of social stigma and implications for healthcare among a diverse population of HIV positive adults. *Journal Of Urban Health: Bulletin Of The New York Academy Of Medicine*, 2007. 84(6): p. 814-828.

⁴ Kim, A.Y. and R.T. Chung. Coinfection with HIV-1 and HCV — a one-two punch. *Gastroenterology*, 2009. 137(3): p. 795-814.



Epidemiologic resources:

Oregon Health Authority, HIV/AIDS epidemiology: <http://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/HIVData/Pages/index.aspx>

Centers for Disease Control and Prevention: www.cdc.gov/hiv

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OHA 9988 (02/2014)

HIV infection among blacks and African Americans in Oregon

Background

Of the 9,307 cases* of HIV reported among Oregon residents from 1981–2012, 556 (6%) were black and African American. Since that time, 158 of the 556 have died. During 2008–2012, a similar proportion (7.2%, 92/1,271) of all newly reported HIV cases were black and African American, and the mean annual rate of new HIV diagnoses among blacks and African Americans was four times the rate for whites (22.1 vs. 5.9 per 100,000 Oregon residents) (Figure 1).

Country of birth

Among Oregon black and African American HIV cases diagnosed since 1981 and living at the end of 2012, 28% (113/398) were born in another country; all but four of these were born in Africa. Among the 92 blacks and African Americans diagnosed from 2008–2012, about one-third (31%, n=29/92) were foreign-born (8 of 66 males, or 12%; 19 of 26 females, or 73%). The proportion has fluctuated, as shown in Figure 2.

Facts at a glance:

- Blacks and African Americans in Oregon were four times more likely than whites to acquire HIV infection during 2008–2012.
- Approximately 7% of people living with HIV in Oregon are black and African American.
- Among blacks and African Americans recently diagnosed with HIV in Oregon, 71% were men.
- During 2008–2012, black and African American men were less likely than white men to report having had sex with other men (73% vs. 83%).
- Foreign-born blacks comprise 28% of living Oregon black and African American HIV cases.

* For this report, a “case” is defined as an Oregon resident diagnosed with HIV/AIDS before being diagnosed in another state. Only those cases reported to the Oregon Health Authority HIV Program were included. People living with HIV in Oregon not counted in this report include those who resided in another state when they were diagnosed and approximately 1,010 who are infected but have yet to be tested [Hall, H. (2013). “Differences in human immunodeficiency virus care and treatment among subpopulations in the United States.” JAMA Intern Med 173(14): 1337–1344].

HIV diagnosis rates by race/ethnicity

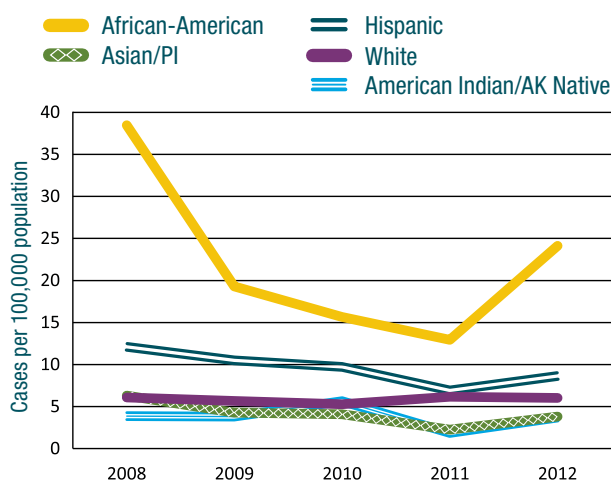


Figure 1

Black and African American Oregon HIV cases, diagnosed 1998–2012

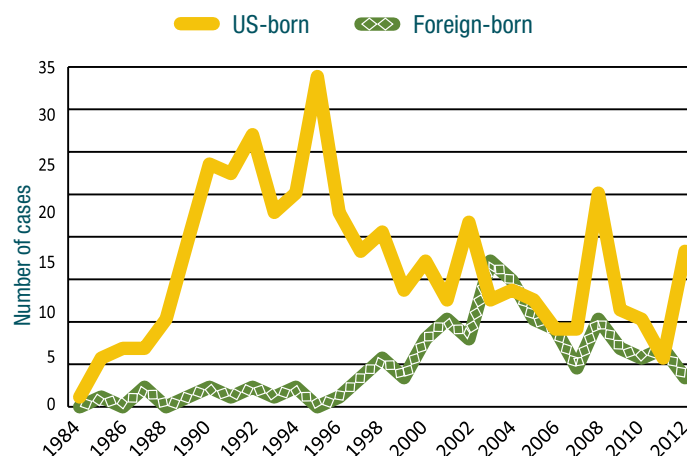


Figure 2

While the location where HIV was acquired is rarely known with certainty, some of the 29 recently diagnosed foreign-born black cases may have been infected outside the United States.

Race and sex, and route of transmission

During 2008–2012, 48% (48/92) of black and African American men with recently diagnosed infection acknowledged having had sex with other men. But, black and African American men with recently diagnosed HIV infection were proportionally less likely than white men to report sex with other men. Relatively few men in either racial group were assigned to the “presumed heterosexual” category (Table 1).

Likely HIV transmission route by race/ethnicity among males and females Oregon, 2008–2012

Likely transmission route [‡]	Race or ethnicity [†] (%)		
	Hispanic	Black and African American	White
Males			
MSM	140 (73)	43 (65)	590 (73)
IDU	6 (3)	3 (5)	39 (5)
MSM and IDU	9 (5)	5 (8)	82 (10)
High-risk heterosexual partner	6 (3)	3 (5)	15 (2)
Presumed heterosexual	6 (3)	4 (6)	19 (2)
Undetermined	25 (13)	7 (11)	67 (8)
Mother had HIV/AIDS	0	1 (2)	0
Total	192 (100%)	66 (100%)	812 (100%)
Females			
IDU	4 (20)	1 (4)	19 (21)
High-risk heterosexual partner	11 (55)	16 (62)	45 (49)
Presumed heterosexual	4 (20)	8 (31)	23 (25)
Undetermined	0	0	5 (5)
Mother had HIV/AIDS	1 (5)	1 (4)	0
Total	20 (100%)	26 (100%)	92 (100%)

Twenty-six black and African American women were diagnosed with HIV during 2008–2012, with high-risk heterosexual exposure the most common transmission category (Table 1). Only one African American woman (4% of 26) acknowledged injection drug use alone among the possible transmission categories (vs. 19/92= 21% of white women and 4/20= 20% of Hispanic women). Eight (31% of 26) of the African American women were assigned to the “presumed heterosexual female” category, a slightly higher proportion than the 23 (25% of 92) white women.

[†] For this table, transmission category (also known sometimes as “risk category”) has been assigned based on a schema used by the Centers for Disease Control and Prevention that assigns people of Hispanic ethnicity to that category regardless of whether they identify as white or black/African American race. People of non-Hispanic ethnicity can be assigned to black/African American, white, Asian/Pacific Islander, Native American/Alaska Native or mixed race. Only the Hispanic, black/African American and white categories are included here.

[‡] Based on a hierarchical algorithm applied to case history. A case can only be assigned to a single category: MSM=man who has sex with men; IDU=person who injects drugs; high-risk heterosexual partners=someone who had a partner of the opposite sex who was MSM, IDU or person with known HIV infection; presumed heterosexual=someone who denies all other defined risk categories.

Epidemiologic resources:

Oregon Health Authority, HIV/AIDS epidemiology: <https://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/HIVData/Pages/index.aspx>

Centers for Disease Control and Prevention: www.cdc.gov/hiv

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HIV infection among Hispanics in Oregon

Background

Of the 9,307 people with reported cases* of HIV in Oregon from 1981 to 2012, 899 (10%) were Hispanic. One hundred ninety-one of the 899 cases have since died.

Among the 212 Hispanics diagnosed with HIV during 2008–2012, the mean rate of new HIV diagnoses was nearly twice as high among Hispanics compared to whites (9.6 vs. 5.9 per 100,000 residents, Figure 1). During the same period, Hispanics diagnosed with HIV were mostly men (91%). Seventy-one percent (427/601) of all cases were men who reported sex with other men (MSM), with or without a concurrent history of injection drug use (IDU). No likely transmission category was reported for 13% (25/192) of recently diagnosed Hispanic men.

Fifty-five percent (11/20) of Hispanic women reported having had a high-risk male sexual partner** diagnosed during 2008–2012 and another 20% (4/20) were presumed to have acquired their infection via sex with a man† (Table 1). During

Facts at a glance:

- Among all HIV cases diagnosed since 1981 and living in Oregon at the end of 2012, 12% are Hispanic (687/5,581).
- During 2008–2012, 17% of reported HIV cases were Hispanic.
- No transmission category was identified for 13% (25/192) of Hispanic men diagnosed during 2008–2012.
- A majority (59%) of Hispanic cases diagnosed since 1981 and living at the end of 2012 were born outside the United States, predominantly in Mexico.
- Many foreign-born Hispanics with HIV have concerns about legal status or deportation.

* For this report, a “case” is defined as an Oregon resident diagnosed with HIV/AIDS before being diagnosed in another state. Only those cases reported to the Oregon Health Authority HIV Program were included. People living with HIV in Oregon not counted in this report include those who resided in another state when they were diagnosed and approximately 1,010 who are infected but have yet to be tested [Hall, H. (2013). “Differences in human immunodeficiency virus care and treatment among subpopulations in the United States.” JAMA Intern Med 173(14): 1337–1344].

** High-risk male partners of women include men who also have sex with men, use injection drugs or are known to be HIV-infected.

HIV diagnosis rates by race/ethnicity

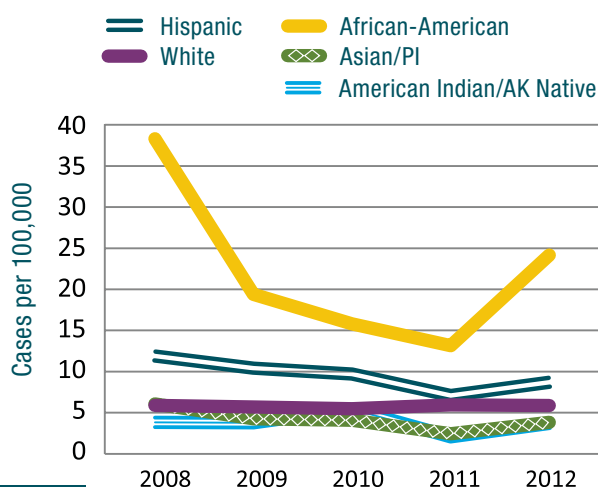


Figure 1

Hispanic Oregon HIV cases, 1998–2012

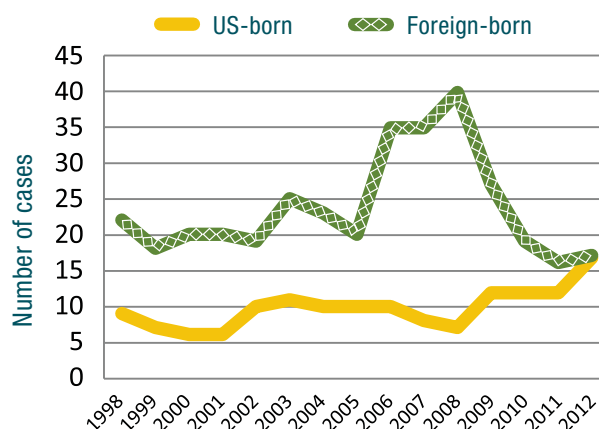


Figure 2

2007–2011, Hispanics also were more likely than whites to progress to AIDS within 12 months of testing positive (45% vs. 39%), an indication of a prolonged period of infection prior to diagnosis.

Among 687 Hispanic HIV cases believed to be living at the end of 2012, 59% were born in another country with 82% (336/408) born in Mexico. Foreign-born Hispanic cases were more likely to be male (87%) than female (13%). Among the 212 Hispanics diagnosed during 2008–2012, roughly half were foreign-born (119/212 or 56%). From 1998 to 2012, new foreign-born Hispanic cases exceeded U.S.-born Hispanic cases (Figure 2).

Likely HIV transmission route by race/ethnicity among males and females, Oregon, 2008–2012

Likely transmission route	Race or ethnicity (%)		
	Hispanic	Black/African American	White
Males			
MSM	140 (73)	43 (65)	590 (73)
IDU	6 (3)	3 (5)	39 (5)
MSM and IDU	9 (5)	5 (8)	82 (10)
High risk heterosexual partner	6 (3)	3 (5)	15 (2)
Presumed heterosexual	6 (3)	4 (6)	19 (2)
Undetermined	25 (13)	7 (11)	67 (8)
Mother had HIV/AIDS	0	1 (2)	0
Total	192 (100)	66 (100)	812 (100)
Females			
IDU	4 (20)	1 (4)	19 (21)
High risk heterosexual partner	11 (55)	16 (62)	45 (49)
Presumed heterosexual	4 (20)	8 (31)	23 (25)
Undetermined	0	0	5 (5)
Mother had HIV/AIDS	1 (5)	1 (4)	0
Total	20 (100)	26 (100)	92 (100)

Interviews with Hispanics

Oregon's Public Health Division interviewed 25 of 56 Hispanics with HIV cases reported from Oct. 1, 2009 to March 31, 2010. Three (12%) did not consider themselves to be Hispanic, indicating that Hispanic ethnicity as collected from a medical record is not always consistent with self-report. Among the 22 cases who identified as Hispanic, five were born in the United States, 12 were born in Mexico, and the remainder were born in Central America or the Caribbean. Travel between countries was uncommon: 10 of 17 interviewed, foreign-born cases said they never return to their home countries. Half of the Hispanic cases interviewed (11/22) were diagnosed in a local health department and almost one-third (7/22) were diagnosed in an urgent care/hospital setting. Only a third of respondents said they had tested prior to their diagnosis. Most of the foreign-born cases (14/17) said that they have concerns about their legal status, and 10 expressed concerns about deportation because of the lack of available health care in their country of origin.

[†] Includes cases that denied injection drug use and reported having had sex with men, but denied having a male partner whom they knew to also have sex with men, to use injection drugs, or to be HIV-infected.

[‡] Schema prioritizes Hispanic identity over white or black/African American race, i.e., a theoretical person who identifies as black or African American and Hispanic would be classified here as Hispanic.

[§] Based on a hierarchical algorithm applied to case history. A case can only be assigned to a single category.

Epidemiologic resources:

Oregon Health Authority, HIV/AIDS epidemiology: <http://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/HIVData/Pages/index.aspx>

Centers for Disease Control and Prevention: www.cdc.gov/hiv

The intersection between HIV and other sexually transmitted diseases in Oregon

Other sexually transmitted diseases among people infected with HIV

Sexually transmitted diseases (STDs) are indicators of ongoing high-risk sexual behavior, such as multiple concurrent partners and inconsistent condom use. Having another concurrent STD can increase the likelihood that someone with HIV might transmit HIV to uninfected partners.

Rates of other STDs among Oregon men with previously reported HIV infection* are much higher than they are in the general population. During 2008–2012, the average annual rates reported among HIV-infected males aged 13 years and older were 1,673 (chlamydia), 2,040 (gonorrhea) and 1,363 (syphilis) cases per 100,000 population (Figure 1). Among women living with HIV, there was one case of syphilis co-infection, two gonorrhea co-infections, and 13 chlamydia co-infections occurred during 2008–2012. During 2008–2012 the average annual rates of reported STDs in the general Oregon population were 383 (chlamydia), 40 (gonorrhea) and 4.4 (syphilis) cases per 100,000.

Rates of STDs among male cases of HIV aged 13 years and older, Oregon, 2008–2012

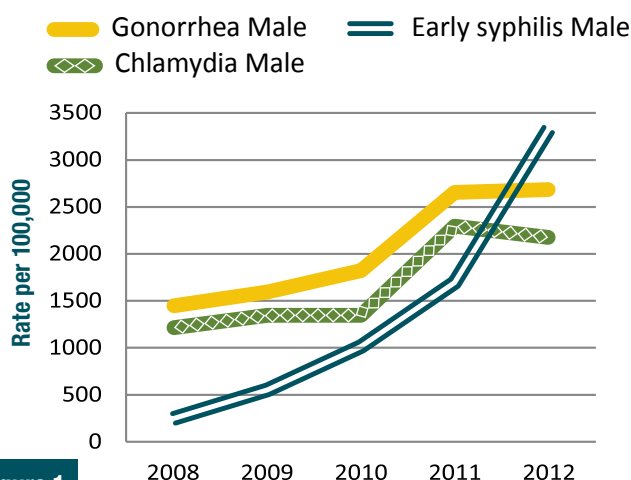


Figure 1

Oregon HIV-STD facts at a glance:

- During 2008–2012, the average annual rate of syphilis was 272 times higher among people with HIV than among the general population (1,196 per 100,000 vs. 4.4 per 100,000).
- During 2008–2012, the average annual rate of gonorrhea was 45 times higher among people with HIV than among the general population (1,792 per 100,000 vs. 40 per 100,000).
- Among people living with HIV as of Dec. 31, 2012, the following were more likely to acquire another STD in addition to HIV in the previous five years:
 - » People younger than 26 relative to older people (26–44);
 - » Men who have sex with men relative to other male probable transmission categories;
 - » Men with less advanced HIV (never progressed to AIDS); and
 - » Urban dwellers relative to rural residents.
- Syphilis and HIV often occur together: During 2008–2012, 47% (323/695) of all Oregon syphilis cases also had HIV.

* For this report, a “case” is defined as an Oregon resident diagnosed with HIV/AIDS before being diagnosed in another state. Only those cases reported to the Oregon Health Authority HIV Program were included. People living with HIV in Oregon not counted in this report include those who resided in another state when they were diagnosed and approximately 1,010 who are infected but have yet to be tested [Hall, H. (2013). “Differences in human immunodeficiency virus care and treatment among subpopulations in the United States.” JAMA Intern Med 173(14): 1337–1344].

Among Oregon HIV/AIDS cases living as of Dec. 31, 2012, some groups had higher rates of STDs in the previous five years. After their HIV diagnosis, the risk of acquiring an STD during 2008–2012 was higher among men than women (12% vs. 2%, respectively), younger people (aged 18–25 years) than older (26–44 years) (39% vs. 19%, respectively), men who have sex with other men (MSM) than male injection drug users (IDU) (14% vs. 2%, respectively), and men with less advanced HIV disease (never progressed to AIDS) more likely than men with advanced disease (17% vs. 7%, respectively). People living with HIV/AIDS from Multnomah County (urban) had a higher risk of acquiring an STD during 2008–2012 than those from other counties in Oregon (mixed urban/rural and rural) (14%, 9% and 4%, respectively).

Early syphilis cases among males by MSM status, 2008–2012

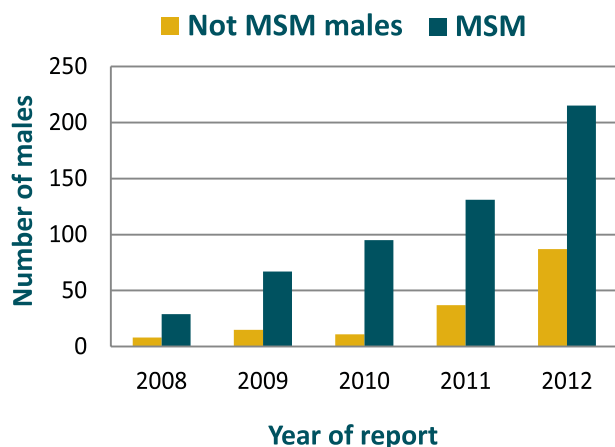


Figure 2

Overlapping risk

STDs can increase susceptibility to HIV infection and can be markers for risky sexual practices that can lead to HIV infection. Accordingly, people with another STD, such as syphilis, are more likely than others to be subsequently diagnosed with HIV. In particular, syphilis is strongly associated with MSM. In Oregon during 2008–2012, 97% (695/715) of reported syphilis cases occurred in men. Among men with syphilis during 2008–2012 who answered questions about sex partners, 93% (537/576) reported having sex with men (Figure 2). Forty-seven percent (323/695) of syphilis cases reported during 2008–2012 occurred among men with already reported HIV. Therefore, approximately half of men with syphilis in Oregon acquired their infection from someone who also had HIV.

The HIV-STD overlap is less evident among chlamydia cases. Only 2.1% (387/18,684) of male chlamydia cases reported from 2008 to 2012 were among males with previously reported HIV infection. The reason for this difference is not entirely clear. The overlap among HIV and chlamydia would be small as observed, if chlamydia is truly more prevalent among people with primarily heterosexual partners. Alternatively, chlamydia might simply be under-recognized in MSM with HIV because these cases can be asymptomatic in men and testing for rectal or pharyngeal chlamydia is less prevalent.

Epidemiologic resources:

Oregon Health Authority, HIV/AIDS epidemiology:
<http://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/HIVData/Pages/index.aspx>

Centers for Disease Control and Prevention:
www.cdc.gov/hiv

HIV and mortality in Oregon

HIV mortality in Oregon, 1981–2012

Of 9,220 cumulative cases* of HIV infection diagnosed in Oregon through the end of 2012, 3,710 (40%) had died. The advent of antiretroviral medications in the mid-1990s dramatically improved treatment outcomes with five-year survival increasing from about 42% of people diagnosed in 1990 to roughly 88% of people surviving 10 years that had been diagnosed during 2003–2012. From 2008 to 2012, an average of 254 people each year were diagnosed with HIV in Oregon, and during the same period an average of 72 deaths per year occurred among Oregon HIV cases (Figure 1). The number of recent HIV diagnoses and deaths has not been this low in Oregon since prior to 1987.

* For this report, a “case” is defined as an Oregon resident diagnosed with HIV/AIDS before being diagnosed in another state. Only those cases reported to the Oregon Health Authority HIV Program were included. People living with HIV in Oregon not counted in this report include those who resided in another state when they were diagnosed and approximately 1,010 who are infected but have yet to be tested [Hall, H. (2013). “Differences in human immunodeficiency virus care and treatment among subpopulations in the United States.” JAMA Intern Med 173(14): 1337–1344].

HIV and mortality facts at a glance:

- During 2012, the annual number of deaths among people with HIV declined (from 338 deaths during 1994 to 75 cases during 2012).
- Overall cumulative probability of surviving 10 years after diagnosis was 88% among Oregonians newly diagnosed with HIV infection during 2003–2012.
- Cumulative probability of surviving 10 years after diagnosis is highest among blacks/African Americans (97%) relative to all other races.
- Cumulative probability of surviving 10 years after diagnosis was lower for:
 - » American Indians or Alaska Natives relative to white non-Hispanics;
 - » People aged >36 years at diagnosis relative to younger age groups;
 - » People with CD4 counts <50 cells/mm³ at diagnosis relative to those with higher CD4 counts at diagnosis;
 - » People who acquired HIV via injection drug use (IDU) relative to survival among people with other modes of transmission.
- During 2008–2012, HIV disease remained the leading underlying cause of death (48%) among people with HIV who died. Cancer (16% of deaths) was the second most common underlying cause listed.

Oregon cases of HIV infection, diagnoses and deaths, 1981–2012

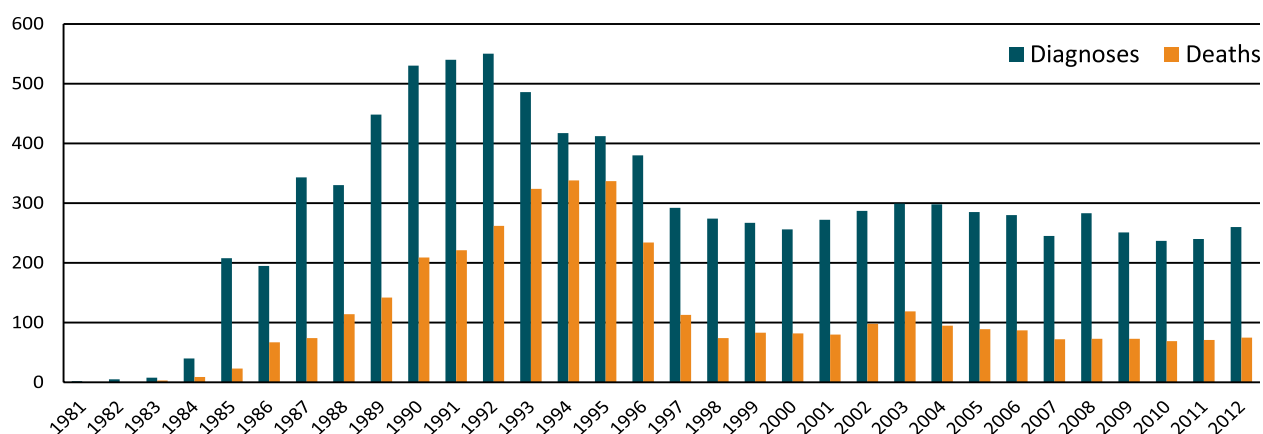


Figure 1

Ten-year survival among HIV cases in Oregon

The Oregon Public Health Division examined mortality among Oregon HIV cases using survival analysis techniques. Survival analyses yield a cumulative probability of survival for a selected time after diagnosis in addition to an indication of whether any observed differences in survival probability among groups are statistically significant. We found that the cumulative probability of surviving 10 years after diagnosis among all Oregon HIV cases diagnosed from 2003 to 2012 was 88%. We then examined survival by race, age group, severity of disease at diagnosis, and likely mode of acquisition of HIV infection.

Survival probability varied significantly by race/ethnicity with 10-year cumulative survival probability being lowest (65%) among American Indian/Alaska Native (AI/AN) cases relative to whites (88%) and highest among blacks/African Americans (97%) (Figure 2). Survival probability was similar among Hispanics, whites, Asian and multiracial cases. Age is related both to severity of disease at diagnosis and to expected survival, HIV infection notwithstanding. Predictably, we found that the higher the age group at the time of HIV diagnosis, the lower the cumulative 10-year survival probability (Figure 3).

Again predictably, severity of disease at diagnosis, as indicated by CD4 count, was also significantly related to cumulative survival probability (Figure 4). HIV cases whose first CD4 count** following diagnosis was less than 50 cells/mm³ had a lower cumulative probability of survival at 10 years (76%) than people with a CD4 count from 50 to 199 cells/mm³ (83%) who in turn had a lower probability of survival at 10 years than those with a CD4 count of at least 200 cells/mm³ (95%).

Then, we examined cumulative probability of survival at 10 years by likely mode of acquisition of HIV infection, sometimes called “risk” (Figure 5). We found that those who

Ten-year survival probability by race/ethnicity

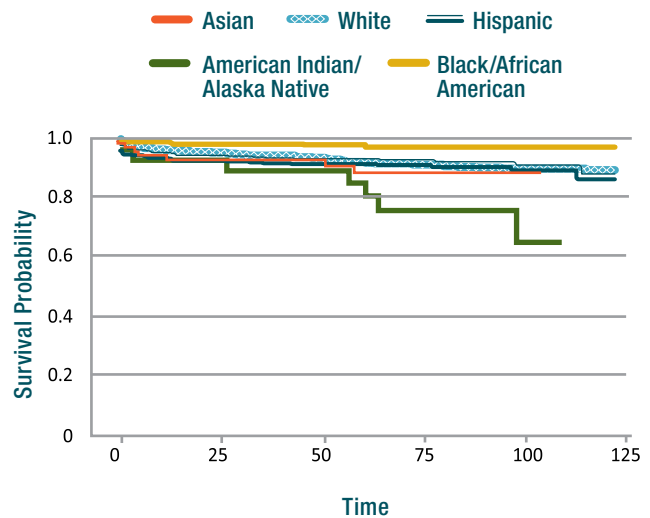


Figure 2

Ten-year survival probability by age group

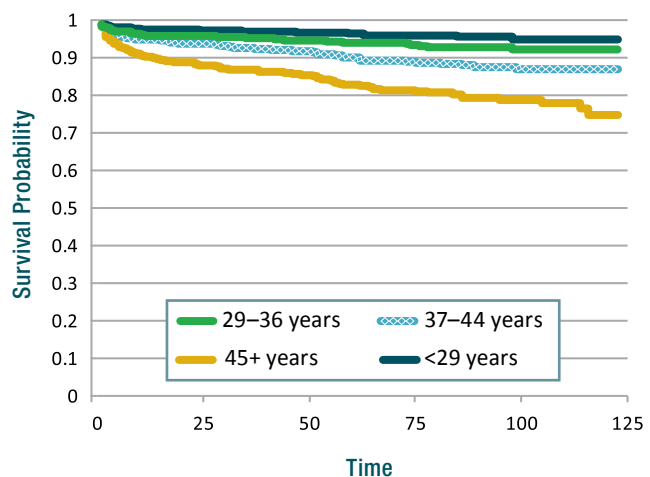


Figure 3

** CD4 cells are a type of white blood cell that fights infection. The CD4 count is indicative of the strength of the immune system and when less than 200 copies/mm³, is definitive for AIDS. The normal range of CD4 counts among healthy individuals is 750–1,500 copies/mm³.

likely acquired infection through injection drug use had a much lower cumulative survival probability (75%) relative to men who acquired infection via sex with other men (90%), or men and women who acquired infection by heterosexual contact (94%).

Next we used a related time-to-event technique to assess the independent effects of sex, race/ethnicity, age group and mode of transmission upon risk of mortality (Table 1). After accounting for the other factors, American Indian/Alaska Native ethnicity was associated with a 2.7-fold higher risk of mortality, and black/African American race was associated with a 67% lower risk of mortality. An increase in age at diagnosis was also independently associated with an increase in risk of mortality. For every year older at HIV/AIDS diagnosis, the risk of mortality increases by 6%. Injection drug use as likely mode of transmission was associated with a 2.5-fold risk of mortality.

Underlying cause of death among people with HIV/AIDS infection in Oregon, 2008–2012

Data from Oregon Vital Statistics on underlying causes of death among people with HIV who died during 2008–2012, show that HIV disease was the underlying cause of death in 48% (213/441) of deaths among people with known HIV infection (Table 2). As a proportion of deaths among people with known HIV disease, cancer increased (70/441 cases) as a primary cause. Among the 70 people whose death was attributed to cancer, 29% (20/70) were reported to have died of lung cancer. Those whose underlying cause of death was not HIV disease most commonly died of unrelated cancers, chronic lung disease, chronic liver disease, heart disease or diabetes.

Ten-year survival probability by first CD4+ count following diagnosis

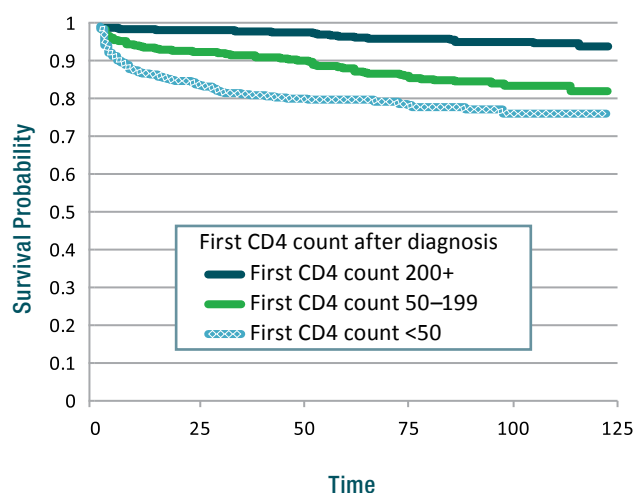


Figure 4

Ten-year survival probability by likely mode of acquisition of HIV infection

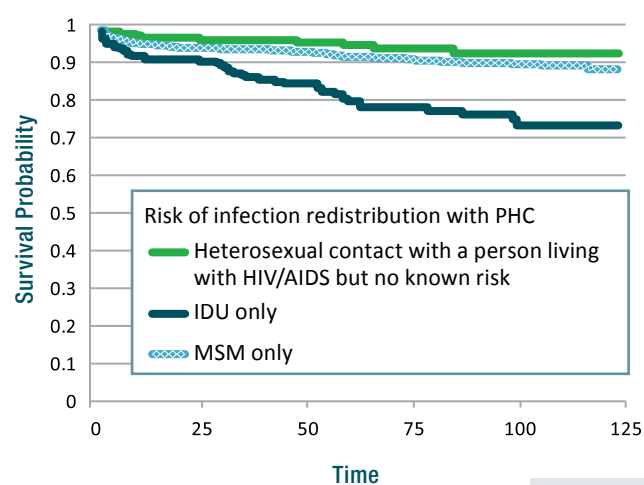


Figure 5

Table 1. Hazard ratios for 10-year survival among Oregon residents diagnosed with HIV/AIDS, 2003–2012

Parameter	Hazard ratio	95% Confidence Interval	p-value
Age at diagnosis	1.06	1.05–1.07	<0.01
Injection drug use only	2.54	1.79–3.62	<0.01
Sex	0.78	0.52–1.18	0.25
American Indian/Native Alaskan	2.67	1.24–5.74	0.01
Black/African American	0.33	0.14–0.81	0.01

Table 2. Underlying cause of death, 2008–2012^{†,‡}

Underlying cause of death		
	Total	Percent
HIV Disease	213	48.3%
Cancer	70	15.8%
All other causes	40	9.0%
Heart disease	23	5.2%
Suicide	20	4.5%
Chronic liver disease	18	4.0%
Unintentional injury	17	3.8%
Chronic lung disease	15	3.4%
Diabetes mellitus	8	1.8%
Viral hepatitis	3	0.6%
Benign neoplasm	3	0.6%
Cerebrovascular disease	3	0.6%
Hypertension	2	0.4%
Nutritional deficiencies	1	0.2%
Parkinson disease	1	0.2%
Pneumonia or influenza	1	0.2%
Nephritis or nephrosis	1	0.2%
Total	441	100.00%

[†] Only deaths for which HIV was listed as the underlying cause or for which HIV was among the other conditions reported at death were included. If a person with HIV died of another cause and HIV was not listed on the death certificate, that person would not be included in this table.

[‡] These data exclude deaths of Oregon cases that occurred outside of Oregon.

Epidemiologic resources:

Oregon Health Authority, HIV/AIDS epidemiology: <http://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/HIVData/Pages/index.aspx>

Centers for Disease Control and Prevention: www.cdc.gov/hiv

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HIV infection among American Indians and Alaska Natives in Oregon

Introduction

American Indians/Alaska Natives account for less than 2% of the total number of HIV/AIDS cases reported in Oregon. Nationally, the rate of American Indian/Alaska Native AIDS diagnosis has exceeded that of whites since 1995.¹ High rates of HIV/AIDS diagnosis among American Indians/Alaska Natives are attributed to disproportionate rates of STDs, alcohol and substance abuse, and low socioeconomic status.²

American Indian/Alaska Native cases of HIV infection

Since 1981, 157 American Indian/Alaska Native cases* of HIV infection have been diagnosed in Oregon (157/9,307). One hundred and twenty cases were men and 37 cases were women.

Of all Oregon cases living at the end of 2012, 91/5,581 (1.6%) were American Indian/Alaska Native. The proportion of HIV diagnoses during 2007–2011 progressing to AIDS within 12 months among American

HIV and American Indian/Alaska Native facts at a glance:

- Of all people diagnosed with HIV in Oregon and living as of the end of 2012, 1.6% were American Indian/Alaska Native.
- During 2008–2012, the rate of HIV diagnosis among American Indians/Alaska Natives was comparable to whites (6.1 vs. 5.8 per 100,000).
- During 2008–2012, females accounted for 31% (5/16) of recent diagnoses of HIV infection among American Indians/Alaska Natives.
- The rate of diagnosis among American Indian/Alaska Native females was more than three times higher than white females (3.8 vs. 1.2 per 100,000).
- During 2008–2012, injection drug use (IDU) was relatively high among American Indian/Alaska Native HIV cases compared to all Oregon HIV/AIDS cases.
- American Indians/Alaska Natives are 23% less likely to survive 10 years after HIV diagnosis when compared to whites (65% vs. 88%).

HIV diagnosis rates by race/ethnicity 2002–2012

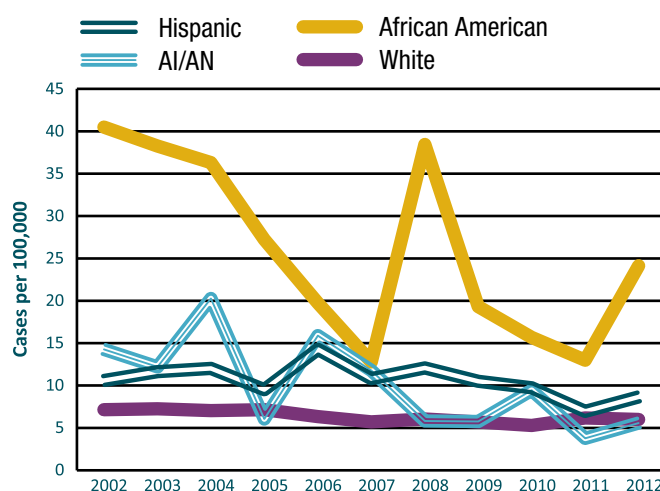


Figure 1

*To identify a case as American Indian/Alaska Native, a comparison of tribal health clinic patients and the Oregon HIV/AIDS reporting system was performed in collaboration with the Northwest Portland Area Indian Health Board (Oct. 2011).

¹ CDC HIV/AIDS Fact Sheet. HIV/AIDS among American Indians and Alaska Natives, Rev ed. 2008. Atlanta: US Department of Health and Human Services, CDC: Available at <http://www.cdc.gov/hiv/resources/factsheets/aian.htm#1>

² Indian Health Service. IHS Fact Sheets HIV/AIDS, 2012. Available at http://www.ihs.gov/PublicAffairs/IHSBrochure/HIV_AIDS.asp

Indians/Alaska Natives was comparable to whites (35% vs. 36%). A greater proportion of American Indian/Alaska Native HIV cases were from rural regions as opposed to whites (17% vs. 10%).

Recent diagnoses of HIV infection among American Indians/Alaska Natives (2008–2012)

During 2008–2012, 1.25% (16/1,271) of cases diagnosed in Oregon were American Indian/Alaska Native. The average annual rate of diagnosis per 100,000 was 6.1 American Indian/Alaska Native cases which is similar to 5.8 white cases. The rate of diagnosis for American Indians/Alaska Natives in Oregon is lower than the rate among blacks or African Americans (21.4 per 100,000) and Hispanics (11.4 per 100,000).

The female diagnosis rate among American Indians/Alaska Natives was 3.8 cases per 100,000 compared to 1.2 cases per 100,000 among white females. Within the 16 American Indians/Alaska Natives recently diagnosed, 11 were male and five female. Female cases account for 31% (5/16) of the recent diagnoses for American Indians/Alaska Natives compared to 10.2% among white females.

Among American Indians/Alaska Natives, 64% of male cases reported ever having had sex with another man and 60% of female cases reported injection drug use.

Survival among American Indian/Alaska Native cases of HIV infection

Of all Oregon cases diagnosed with HIV infection from 2003 to 2012, American Indian/Alaska Native cases were 23% less likely to survive 10 years from HIV diagnosis than whites (65% vs. 88%).



Epidemiologic resources:

Oregon Health Authority, HIV/AIDS epidemiology:
<http://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/HIVData/Pages/index.aspx>

Centers for Disease Control and Prevention:
www.cdc.gov/hiv

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OHA 9997 (02/2014)

HIV infection among women in Oregon

Women diagnosed with HIV in Oregon, 1981–2012

From 1981 to 2012, 972 females were diagnosed with HIV in Oregon, accounting for 10% (972/9,307) of all Oregon HIV cases.* Females accounted for 12% of HIV cases diagnosed since 1981 and living at the end of 2012 in Oregon (689/5,581). Among female cases living in Oregon at the end of 2012, high-risk heterosexual contact was the presumed mode of transmission for 72% and injection drug use for 22%. The average age of diagnosis for women was 37 years of age.

Women recently diagnosed with HIV in Oregon, 2008–2012

From 2008 to 2012, an average of 23 females (1.6 cases per 100,000 female population) were diagnosed with HIV each year in Oregon. During the same period, the rate of diagnosis was highest among black or African American females at 12.7 cases per 100,000, a rate 11 times higher than the rate among white females (1.2 per 100,000). Rate of diagnosis among Hispanic females during 2008–2012 was 1.9 cases per 100,000. Sixty percent (12/20) of Hispanic females diagnosed from 2008 to 2012 were foreign-born, compared to 73% (19/26) of black or African American females and 1% (1/92) of white females. Among females during this same time period, IDU was the presumed mode of transmission for 18% (28/154) (Figure 1). Eighty-two percent (23/28) of female IDU cases were white.

HIV and women facts at a glance:

- From 2008 to 2012, black or African American females were 11 times more likely to be diagnosed with HIV than white females (12.7 per 100,000 vs. 1.2 per 100,000).
- Females accounted for 12% of all living Oregon cases as of the end of 2012.
- From 2008–2012, 18% of female cases reported past injection drug use.
- No child has been born with HIV in Oregon since 2006.

Female transmission categories among Oregon cases of HIV infection, 2008–2012

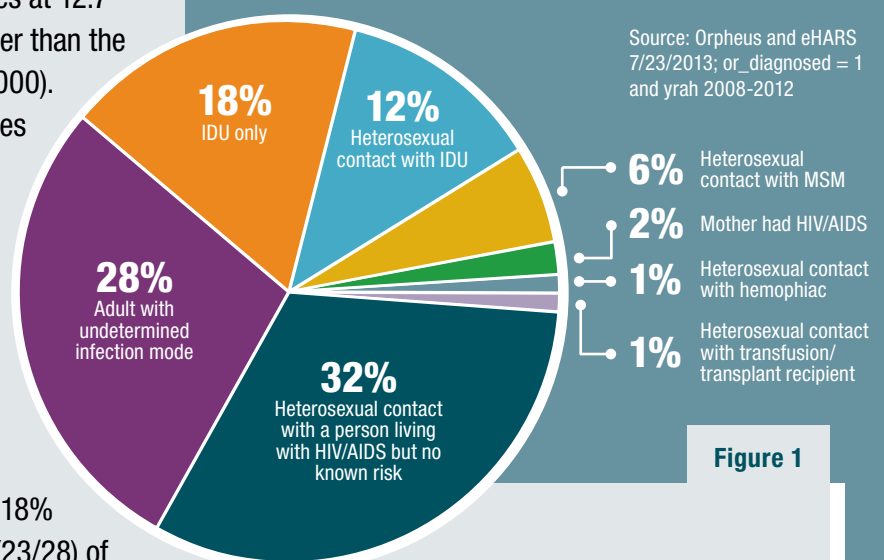


Figure 1

* For this report, a “case” is defined as an Oregon resident diagnosed with HIV/AIDS before being diagnosed in another state. Only those cases reported to the Oregon Health Authority HIV Program were included. People living with HIV in Oregon not counted in this report include those who resided in another state when they were diagnosed and approximately 1,010 who are infected but have yet to be tested [Hall, H. (2013). “Differences in human immunodeficiency virus care and treatment among subpopulations in the United States.” JAMA Intern Med 173(14): 1337–1344].

Reproductive health

From September 2008 to Dec. 31, 2010,** 10 pregnant females tested positive for HIV in Oregon. Two of those had been diagnosed with HIV prior to pregnancy, and the remaining eight were diagnosed during pregnancy. During this time period, 22 children under the age of 5 were tested due to suspected perinatal risk, all of whom tested negative for HIV. Due to mandatory HIV testing during pregnancy, the rate of children born with HIV in Oregon has rapidly decreased. From 2002–2010, there were six Oregon HIV cases under the age of 10. Three of those cases were children born with HIV in Oregon, the most recent of whom was born in 2006. The other three cases under the age of 10 were born outside the U.S. On Dec. 31, 2010, there were 28 cases under the age of 18 living in Oregon.

** September 2008 to Dec. 31, 2010 was the time period analyzed for reproductive health by using Orpheus (Oregon's HIV/AIDS database). Orpheus was accessed on March 26, 2012

Epidemiologic resources:

Oregon Health Authority, HIV/AIDS epidemiology: <http://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/HIVData/Pages/index.aspx>

Centers for Disease Control and Prevention: www.cdc.gov/hiv



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OHA 9995 (02/2014)

HIV and viral hepatitis co-infection in Oregon

Liver-related mortality in people with HIV

Approximately 15% of global deaths in people with HIV are liver-related. In Oregon, hepatitis C (HCV) is an increasingly prevalent factor in mortality of HIV-infected people.* For example, from 2006 to 2012, chronic hepatitis was among the underlying causes of death for 5% of HIV-infected people (25/503) who died in Oregon. The rate of age-adjusted deaths due to HCV in Oregon was 8.5 deaths per 100,000 during 2010 compared to the national average of 4.7 HCV deaths per 100,000 in the general U.S. population (Figure 1). As people live longer with HIV infections, and detection and public health monitoring of both diseases improves, we expect the proportion of deaths among HIV-infected people attributable to viral hepatitis to increase.

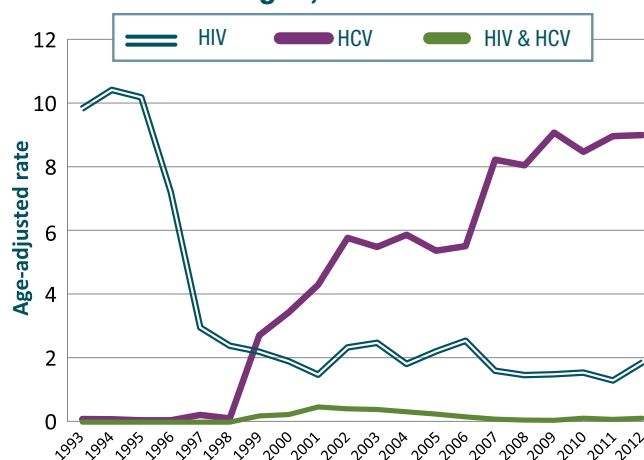
HCV-related morbidity in people with HIV

HCV, a bloodborne infection, is endemic among people who use injection drugs (IDU), as the virus is 10 times more likely to be transmitted than HIV after a single bloodborne exposure. Consequently, HCV infection is often acquired before HIV among IDU, and it is vastly more prevalent among HIV-infected people who have IDU than among people who are thought to have acquired their HIV infection via sexual transmission. While sexual transmission of HCV

Oregon HIV and viral hepatitis facts at a glance:

- At least 5% of deaths in people with HIV are liver-related, most of these from chronic hepatitis C.
- Fifteen percent of Oregonians with HIV report ever having hepatitis C and 20% of Oregonians with HIV report ever having hepatitis B.** Prevalence of hepatitis among Oregonians with HIV might be higher because of underreporting.
- Chronic HCV is a more severe infection in people with HIV than in people who are not HIV-infected.

Age-adjusted death rate for HIV and HCV, Oregon, 1993–2012†



† Listed as underlying cause or among other causes of death on death certificate.

Figure 1

* For this report, a “case” is defined as an Oregon resident diagnosed with HIV/AIDS before being diagnosed in another state. Only those cases reported to the Oregon Health Authority HIV Program were included. People living with HIV in Oregon not counted in this report include those who resided in another state when they were diagnosed and approximately 1,010 who are infected but have yet to be tested [Hall, H. (2013). “Differences in human immunodeficiency virus care and treatment among subpopulations in the United States.” JAMA Intern Med 173(14): 1337–1344].

** Data collected by Medical Monitoring Project (MMP) during 2009–2010 interviewed 539 people receiving HIV medical care in Oregon. MMP examines clinical outcomes and behaviors of adults receiving HIV care in the U.S.

is rare, it can occur. HIV infection does appear to increase risk of sexual acquisition of HCV among men who have sex with men, perhaps because of HIV-related changes in the lining of the rectum that make it more vulnerable to hepatitis C infection.¹

HCV outcomes are generally worse in people who also have HIV. Individuals who are coinfecting with HIV and HCV are more likely to experience chronic HCV, faster progression of fibrosis, faster hepatic decomposition, and reduced expectation of sustained viral response after treatment for HCV.

HBV-related morbidity in people with HIV

Like HIV, hepatitis B (HBV) is transmitted vertically from mother to newborn, sexually, and through IDU. Because of efficient screening of the U.S. blood supply, neither is commonly transmitted anymore through transplants or transfusions. Worldwide, up to 90% of HIV-infected persons had evidence of past HBV infection and 10% had chronic HBV in studies done during the later 1980s.² Like HCV, HBV is more efficiently transmitted via bloodborne exposure than HIV, and consequently, evidence of past HBV infection is widespread among networks of IDU, many of whom were infected by HBV prior to HIV acquisition. Unlike HCV, HBV is preventable by vaccination, and everyone with HIV who does not have evidence of HBV infection should be immunized. As HBV vaccination

becomes more prevalent worldwide, public health officials hope to see these proportions of HBV infection decline.

HIV and viral hepatitis co-infection in Oregon

In Oregon, HIV, HBV and HCV are all mandatory notifiable diseases for licensed health care providers and laboratories. Chronic HCV infection is the most recent addition to this list in 2005 (previously, only acute HCV infection was reportable). As of the end of 2012, out of 9,307 cases of HIV reported among Oregon residents since 1981, 5,581 were still living. Of those living cases, 10% (539/5,581) participated in the 2009–2010 Oregon Medical Monitoring Project (MMP). Among MMP participants, 15% reported ever having HCV and 20% ever having HBV. Nationally, 20–30% of people with HIV/AIDS are co-infected with HCV. Among people with HIV who report IDU, up to 80% of cases may have HCV. Although Oregon's reported HIV/HCV prevalence was lower than national estimates, distribution of cases does follow expectations in that HIV/HCV co-infection is about 10 times more prevalent among people living with HIV who report IDU than among those who do not. No substantial racial differences were noted in prevalence of HCV co-infection.

¹ Kim, A.Y. and R.T. Chung, Coinfection with HIV-1 and HCV--a one-two punch. *Gastroenterology*, 2009. 137(3): p. 795-814.

² Lacombe, K., et al., HIV/hepatitis B virus co-infection: current challenges and new strategies. *Journal of Antimicrobial Chemotherapy* (JAC), 2010. 65(1): p. 10-17.



PUBLIC HEALTH DIVISION

Epidemiologic resources:

Oregon Health Authority, HIV/AIDS epidemiology:
<http://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/HIVData/Pages/index.aspx>

Centers for Disease Control and Prevention: www.cdc.gov/hiv

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OHA 9996 (02/2014)

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Data Sources

Orpheus: Oregon Public Health Epidemiologists' User System is an integrated electronic disease surveillance system. Orpheus is intended for local and state public health epidemiologists and disease investigators to efficiently manage communicable disease reports.

eHARS: Centers for Disease Control and Prevention HIV/AIDS Reporting System

NCHS: National Center for Health Statistics

Reported cases of HIV infection, Oregon, 1981–2012*

Source: Orpheus and eHARS; July 23, 2013 (surveillance definition of cases)

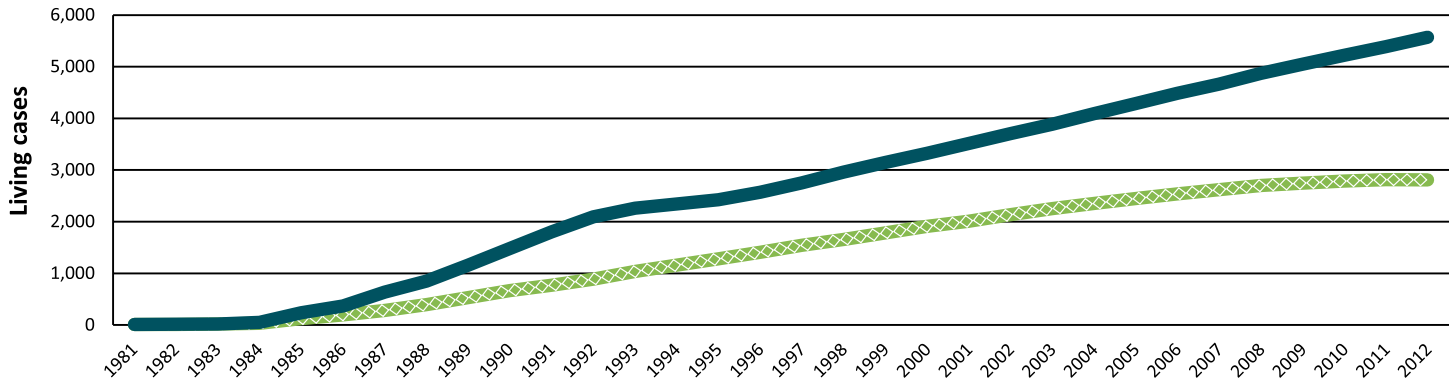
Year	Diagnoses		Deaths		Living		Year	Diagnoses		Deaths		Living	
	Non-Oregon	Oregon cases	Non-Oregon	Oregon cases	Non-Oregon	Oregon cases		Non-Oregon	Oregon cases	Non-Oregon	Oregon cases	Non-Oregon	Oregon cases
1981	0	2	0	0	0	2	1997	162	297	23	113	1,545	2,753
1982	3	5	0	0	3	7	1998	136	281	22	74	1,659	2,960
1983	5	7	0	3	8	11	1999	141	269	16	83	1,784	3,146
1984	16	39	0	9	24	41	2000	141	262	11	82	1,914	3,326
1985	92	212	3	23	113	230	2001	118	271	18	80	2,014	3,517
1986	90	196	16	67	187	359	2002	150	288	22	98	2,142	3,707
1987	102	344	15	74	274	629	2003	138	303	21	118	2,259	3,892
1988	142	329	26	114	390	844	2004	123	297	21	95	2,361	4,094
1989	166	452	31	142	525	1,154	2005	115	287	22	90	2,454	4,291
1990	175	533	38	209	662	1,478	2006	116	287	25	89	2,545	4,489
1991	159	545	57	222	764	1,801	2007	116	250	31	71	2,630	4,668
1992	170	554	50	263	884	2,092	2008	100	286	18	74	2,712	4,880
1993	200	490	48	324	1,036	2,258	2009	67	257	24	79	2,755	5,058
1994	209	422	87	338	1,158	2,342	2010	66	241	25	72	2,796	5,227
1995	199	417	76	337	1,281	2,422	2011	51	243	23	73	2,824	5,397
1996	180	381	55	234	1,406	2,569	2012	24	260	28	76	2,820	5,581

* All cases included were Oregon residents at diagnosis.

Living Oregon and out-of-state cases of HIV infection, 1981–2012

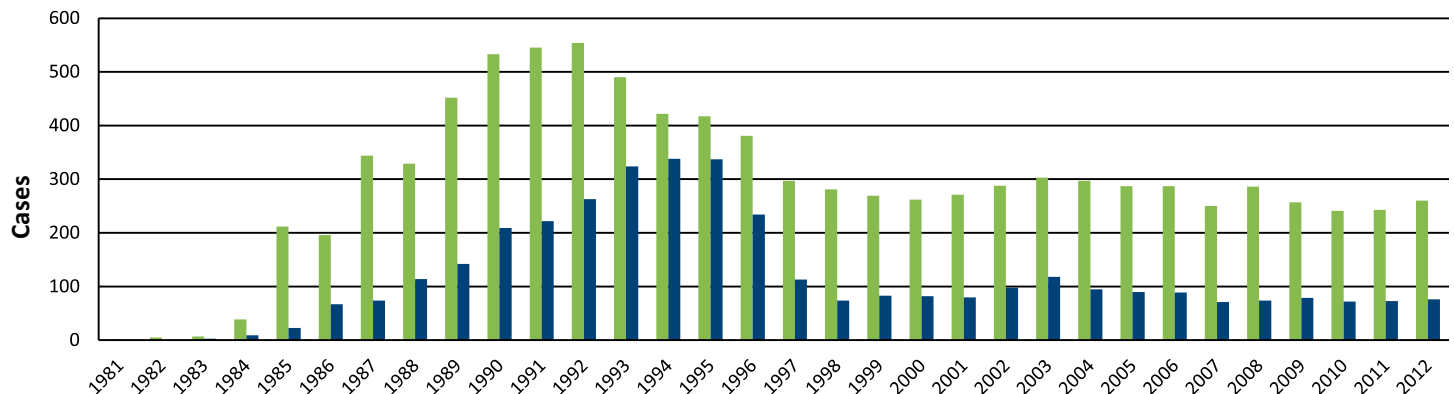
Out-of-state Oregon cases*

* Oregon cases were Oregon residents at diagnosis; out-of-state cases resided in another state at diagnosis and then moved to Oregon.



HIV infection, diagnoses and deaths, Oregon, 1981–2012

Diagnoses Deaths



HIV cases by sex and age, Oregon, 2005–2012*

Source: Orpheus and eHARS; July 23, 2013; NCHS 2013; Cases diagnosed in Oregon

Age group at first diagnosis

	Male											
	0–12	13–19	20–24	25–29	30–34	35–39	40–44	45–49	50–54	55–59	60–64	65+
2005	0	4	17	35	42	39	42	39	25	10	3	2
2006	0	7	25	31	37	43	40	24	21	8	2	5
2007	0	11	22	30	30	39	25	27	17	7	3	3
2008	0	4	29	47	29	38	27	28	11	10	5	6
2009	1	3	21	38	37	35	28	25	17	9	7	3
2010	0	5	39	27	27	32	17	23	17	13	6	7
2011	0	5	29	28	24	27	32	19	23	13	7	6
2012	0	5	27	35	30	28	42	25	16	13	6	6
	Female											
	0–12	13–19	20–24	25–29	30–34	35–39	40–44	45–49	50–54	55–59	60–64	65+
2005	0	2	1	4	7	3	4	2	2	2	0	0
2006	1	3	3	8	2	9	2	3	5	0	0	1
2007	0	4	0	2	6	4	5	6	1	1	2	0
2008	2	1	3	9	11	6	2	4	5	3	3	0
2009	0	2	3	6	2	1	6	4	1	1	1	0
2010	0	2	3	5	3	5	1	1	0	3	1	0
2011	0	1	2	8	2	4	2	3	4	1	0	0
2012	1	1	1	5	4	2	2	3	5	2	1	0

* All cases included were Oregon residents at diagnosis.

National Center for Health Statistics population estimates

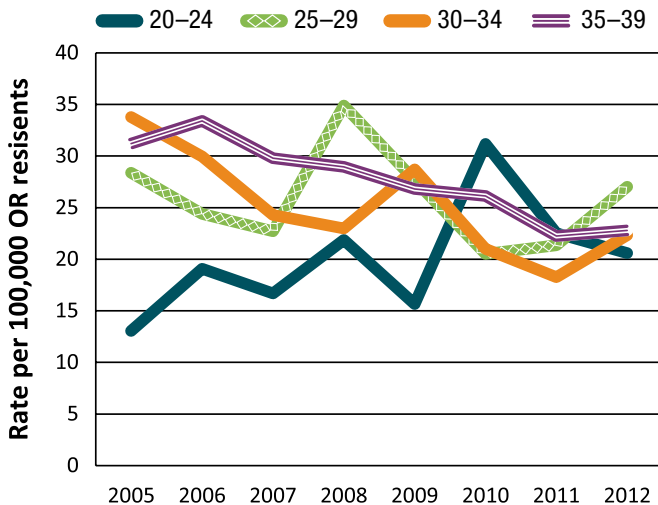
	Male											
	0–12	13–19	20–24	25–29	30–34	35–39	40–44	45–49	50–54	55–59	60–64	65 +
2005	305,939	178,713	130,252	123,302	124,382	125,028	130,763	135,272	134,647	117,436	84,696	204,422
2006	309,566	179,034	131,039	127,128	123,548	128,742	128,309	136,305	135,967	124,959	88,618	210,722
2007	313,545	179,298	131,944	132,114	123,607	130,864	126,591	135,634	137,344	126,171	97,545	216,517
2008	317,207	179,287	132,594	134,665	126,235	131,257	125,279	134,910	137,072	128,954	103,681	224,373
2009	319,309	178,025	134,263	137,477	128,871	130,536	125,392	134,314	135,974	131,891	109,428	232,137
2010	302,575	171,145	125,111	131,587	128,595	122,530	122,632	131,666	141,502	141,362	122,049	297,557
2011	301,768	168,593	128,816	131,076	131,507	121,408	125,210	127,685	140,825	142,762	129,297	304,817
2012	300,785	167,149	131,128	129,455	134,294	122,834	126,459	124,041	139,039	143,908	130,152	319,397
	Female											
	0–12	13–19	20–24	25–29	30–34	35–39	40–44	45–49	50–54	55–59	60–64	65 +
2005	293,487	168,873	124,281	118,839	116,789	118,869	129,642	139,357	139,062	120,879	88,834	263,322
2006	296,622	169,274	124,712	123,840	116,209	122,201	127,145	139,617	141,291	129,346	92,877	268,672
2007	300,712	169,874	125,633	128,403	117,659	124,069	124,242	138,821	143,023	130,938	102,430	273,855
2008	304,587	169,353	126,922	131,658	120,183	124,922	122,199	137,538	143,477	134,700	108,554	280,989
2009	306,490	168,597	127,748	133,934	123,519	123,797	121,529	136,040	142,071	138,827	114,885	288,004
2010	317,195	179,959	129,006	133,995	131,900	127,147	125,843	130,087	135,111	133,637	116,230	239,791
2011	316,271	177,394	132,368	133,742	134,277	125,279	128,768	126,857	134,739	134,344	122,899	247,527
2012	315,139	176,218	135,209	132,643	136,689	125,932	130,523	124,512	132,987	135,255	123,383	262,222

Rates of new HIV diagnosis by age per 100,000 Oregon residents, 2005–2012

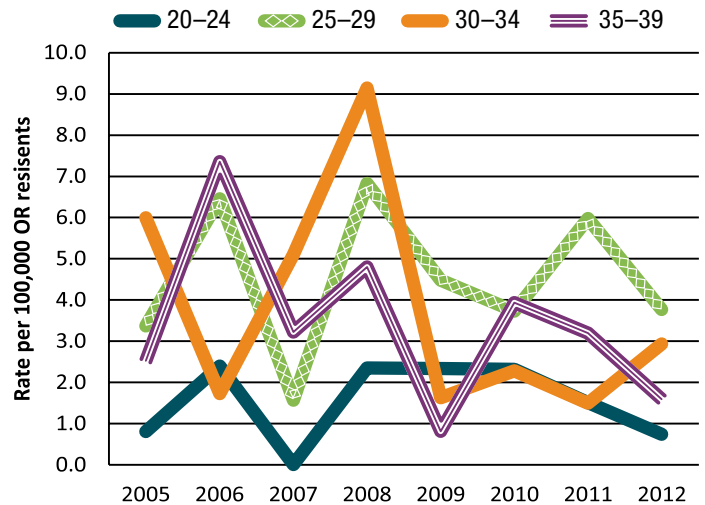
	Male											
	0–12	13–19	20–24	25–29	30–34	35–39	40–44	45–49	50–54	55–59	60–64	65+
2005	0.0	2.2	13.1	28.4	33.8	31.2	32.1	28.8	18.6	8.5	3.5	1.0
2006	0.0	3.9	19.1	24.4	29.9	33.4	31.2	17.6	15.4	6.4	2.3	2.4
2007	0.0	6.1	16.7	22.7	24.3	29.8	19.7	19.9	12.4	5.5	3.1	1.4
2008	0.0	2.2	21.9	34.9	23.0	29.0	21.6	20.8	8.0	7.8	4.8	2.7
2009	0.3	1.7	15.6	27.6	28.7	26.8	22.3	18.6	12.5	6.8	6.4	1.3
2010	0.0	2.9	31.2	20.5	21.0	26.1	13.9	17.5	12.0	9.2	4.9	2.4
2011	0.0	3.0	22.5	21.4	18.2	22.2	25.6	14.9	16.3	9.1	5.4	2.0
2012	0.0	3.0	20.6	27.0	22.3	22.8	33.2	20.2	11.5	9.0	4.6	1.9

	Female											
	0–12	13–19	20–24	25–29	30–34	35–39	40–44	45–49	50–54	55–59	60–64	65+
2005	0.0	1.2	0.8	3.4	6.0	2.5	3.1	1.4	1.4	1.7	0.0	0.0
2006	0.3	1.8	2.4	6.5	1.7	7.4	1.6	2.1	3.5	0.0	0.0	0.4
2007	0.0	2.4	0.0	1.6	5.1	3.2	4.0	4.3	0.7	0.8	2.0	0.0
2008	0.7	0.6	2.4	6.8	9.2	4.8	1.6	2.9	3.5	2.2	2.8	0.0
2009	0.0	1.2	2.3	4.5	1.6	0.8	4.9	2.9	0.7	0.7	0.9	0.0
2010	0.0	1.1	2.3	3.7	2.3	3.9	0.8	0.8	0.0	2.2	0.9	0.0
2011	0.0	0.6	1.5	6.0	1.5	3.2	1.6	2.4	3.0	0.7	0.0	0.0
2012	0.3	0.6	0.7	3.8	2.9	1.6	1.5	2.4	3.8	1.5	0.8	0.0

Age at HIV diagnosis among males, 2005–2012



Age at HIV diagnosis among females, 2005–2012



HIV cases by sex and race/ethnicity, Oregon, 2008–2012*

Source: Orpheus and eHARS; July 23, 2013; Oregon residents

Diagnosed in Oregon

Year	Male						Female					
	Hispanic	American Indian/Alaska Native	Asian/Pacific Islander	Black	White	Multiracial	Hispanic	American Indian/Alaska Native	Asian/Pacific Islander	Black	White	Multiracial
2008	45	1	5	20	161	2	5	1	5	11	26	1
2009	40	2	5	12	161	4	5	0	2	4	15	1
2010	41	1	7	10	147	7	3	2	0	3	16	0
2011	29	1	4	6	173	0	3	0	0	5	18	1
2012	37	1	6	18	170	1	4	1	1	3	17	1

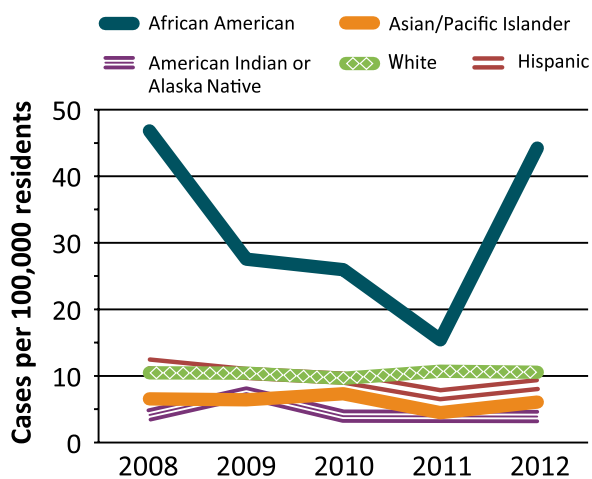
Nation Center for Health Statistics population estimates

Year	Male					Female				
	Hispanic	American Indian/Alaska Native	Asian/Pacific Islander	Black	White	Hispanic	American Indian/Alaska Native	Asian/Pacific Islander	Black	White
2008	222,338	25,389	74,314	42,489	1,510,984	190,691	26,430	84,387	38,076	1,565,498
2009	230,208	25,786	76,484	43,660	1,521,479	198,008	26,613	86,786	39,262	1,574,772
2010	215,131	26,807	91,727	38,666	1,565,980	237,191	26,210	79,679	44,368	1,512,453
2011	220,434	27,050	94,751	39,570	1,571,959	242,479	26,371	82,402	45,390	1,517,823
2012	225,674	27,387	97,922	40,515	1,577,143	248,483	26,591	85,504	46,554	1,523,580

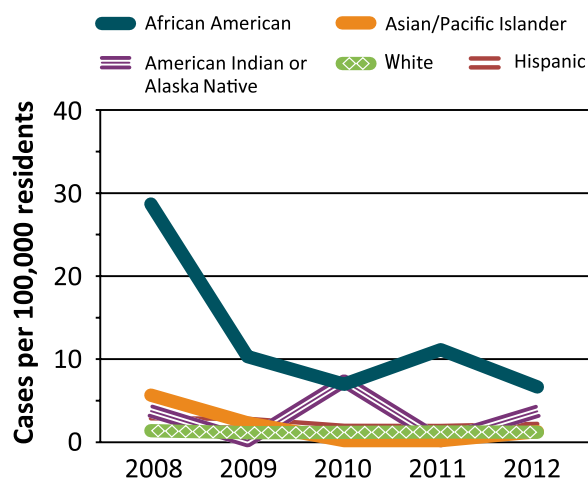
Male HIV diagnosis rate by race/ethnicity, Oregon 2008–2012

Year	Male					Female				
	Hispanic	American Indian/Alaska Native	Asian/Pacific Islander	Black	White	Hispanic	American Indian/Alaska Native	Asian/Pacific Islander	Black	White
2008	20.2	3.9	6.7	47.1	10.7	2.6	3.8	5.9	28.9	1.7
2009	17.4	7.8	6.5	27.5	10.6	2.5	0.0	2.3	10.2	1.0
2010	19.1	3.7	7.6	25.9	9.4	1.3	7.6	0.0	6.8	1.1
2011	13.2	3.7	4.2	15.2	11.0	1.2	0.0	0.0	11.0	1.2
2012	16.4	3.7	6.1	44.4	10.8	1.6	3.8	1.2	6.4	1.1

Male HIV diagnosis rates by race/ethnicity, Oregon 2008–2012*



Female HIV diagnosis rates by race/ethnicity, Oregon 2008–2012*



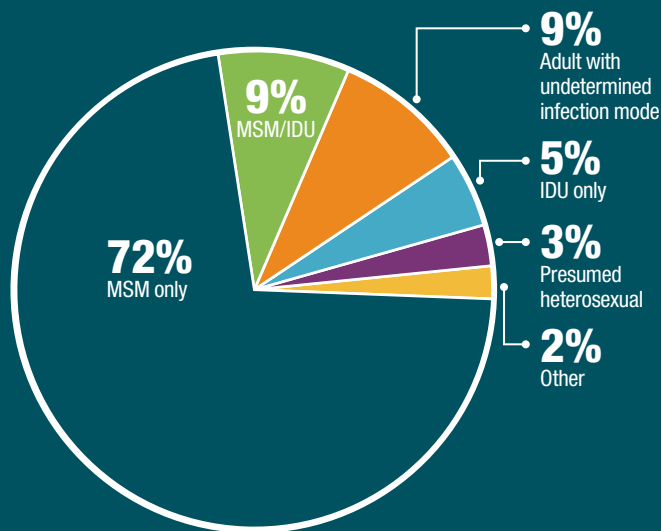
* All cases included were Oregon residents at diagnosis.

HIV diagnoses by sex and transmission category, Oregon, 2008–2012*

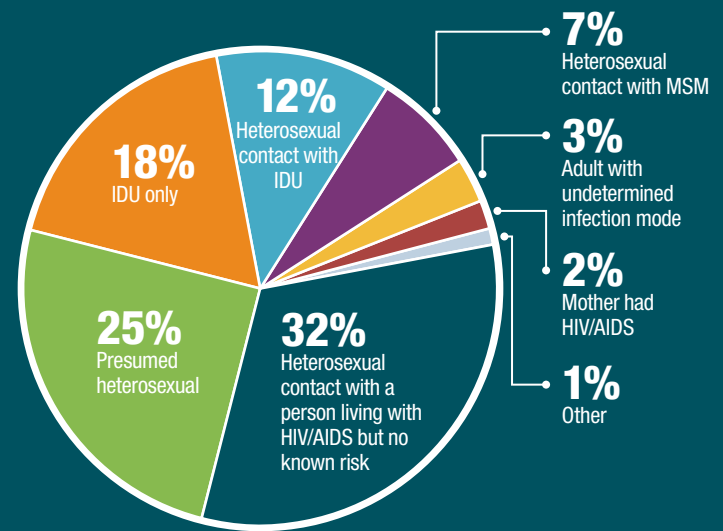
Source: Orpheus and eHARS; July 23, 2013

Risk of infection	Total		Transmission risk	Male		Transmission risk	Female	
	Frequency	Percent		Count	Percent		Count	Percent
MSM only	807	63%	MSM only	807	72%	IDU only	28	18%
IDU only	79	6%	IDU only	51	5%	Heterosexual contact with IDU	18	12%
MSM/IDU	99	8%	MSM/IDU	99	9%	Heterosexual contact with MSM	10	6%
Heterosexual contact with IDU	29	2%	Heterosexual contact with IDU	11	1%	Heterosexual contact with hemophiac	1	1%
Heterosexual contact with MSM	10	1%	Heterosexual contact with MSM	0	0%	Heterosexual contact with transfusion/transplant recipient	1	1%
Heterosexual contact with hemophiac	1	0%	Heterosexual contact with hemophiac	0	0%	Heterosexual contact with a person living with HIV/AIDS but no known risk	49	32%
Heterosexual contact with transfusion/transplant recipient	2	0%	Heterosexual contact with transfusion/transplant recipient	1	0%	Adult with undetermined infection mode	5	3%
Heterosexual contact with a person living with HIV/AIDS but no known risk	61	5%	Heterosexual contact with a person living with HIV/AIDS but no known risk	12	1%	Mother had HIV/AIDS	3	2%
Adult with undetermined infection mode	109	9%	Adult with undetermined infection mode	104	9%	Presumed heterosexual	39	25%
Mother had HIV/AIDS	4	0%	Mother had HIV/AIDS	1	0%	Total	154	100%
Presumed heterosexual	70	6%	Presumed heterosexual	31	3%			
Total	1271	100%	Total	1,117	100%			

Male transmission among HIV diagnosed in Oregon, 2008–2012



Female transmission among HIV diagnosed in Oregon, 2008–2012



* All cases included were Oregon residents at diagnosis.

HIV diagnoses by county of residence at diagnosis, Oregon, 1981–2012

County of residence	Year of first HIV diagnosis														
	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Baker	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0
Benton	0	0	0	0	1	1	3	2	6	6	2	5	1	1	2
Clackamas	0	0	0	1	8	9	21	7	18	20	29	25	28	16	21
Clatsop	0	0	0	0	0	0	2	0	1	3	3	1	3	2	0
Columbia	0	0	0	0	1	0	2	5	5	3	3	2	4	2	1
Coos	0	0	0	0	1	4	5	2	8	2	12	4	8	3	3
Crook	0	0	0	0	0	0	0	0	1	1	0	0	1	0	2
Curry	0	0	0	0	0	1	1	1	0	0	2	0	0	0	0
Deschutes	0	0	0	0	2	0	4	5	4	2	5	6	5	5	5
Douglas	0	0	0	0	1	3	4	4	8	9	8	13	9	9	5
Gilliam	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Grant	0	0	0	0	0	0	1	1	0	2	0	1	0	0	0
Harney	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0
Hood River	0	0	0	0	2	1	0	1	1	1	1	0	0	0	2
Jackson	0	0	0	1	2	5	8	11	6	13	8	18	16	15	13
Jefferson	0	0	0	0	1	0	1	0	0	0	1	1	1	1	2
Josephine	0	0	0	0	1	4	1	1	6	4	2	10	5	6	10
Klamath	0	0	0	0	0	0	0	1	0	5	3	3	3	3	2
Lake	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lane	0	0	0	2	18	6	21	23	27	29	25	35	48	17	18
Lincoln	0	0	0	0	1	3	0	2	2	2	3	3	1	5	3
Linn	1	0	0	1	1	1	7	2	3	8	5	5	10	5	9
Malheur	0	0	0	0	0	1	0	1	0	0	1	0	1	2	3
Marion	0	0	0	1	8	8	18	9	13	27	29	24	31	25	42
Morrow	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Multnomah	1	5	7	31	143	131	221	224	306	347	359	340	275	266	230
Polk	0	0	0	0	5	0	2	2	3	5	2	4	5	1	1
Tillamook	0	0	0	0	0	0	1	1	1	1	1	1	4	1	2
Umatilla	0	0	0	0	0	2	2	1	2	1	2	1	2	2	2
Union	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
Wallowa	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0
Wasco	0	0	0	0	1	1	0	0	1	4	1	4	1	1	3
Washington	0	0	1	2	9	13	14	21	23	25	28	40	19	26	23
Wheeler	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yamhill	0	0	0	1	1	1	3	2	1	8	5	3	3	3	7
Missing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	5	8	40	208	195	343	330	448	530	540	550	486	417	412

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Continued: HIV diagnoses by county of residence at diagnosis, Oregon, 1981–2012

County of residence	Year of first diagnosis																	TOTAL
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	
Baker	0	1	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	6
Benton	5	4	3	2	1	2	0	2	1	3	1	0	3	5	5	3	3	73
Clackamas	23	20	9	10	20	19	12	20	15	20	20	17	12	27	25	18	22	512
Clatsop	1	3	2	3	2	1	1	3	1	1	2	1	2	0	1	0	2	41
Columbia	3	0	1	1	2	0	1	0	1	1	1	0	4	1	1	0	1	46
Coos	5	2	4	1	0	0	3	2	0	1	1	1	0	0	1	1	2	76
Crook	0	1	0	2	0	1	0	1	0	0	1	0	0	0	0	1	0	12
Curry	1	2	2	0	2	1	0	2	0	1	0	0	0	0	3	0	0	19
Deschutes	5	2	6	7	6	5	7	4	3	3	4	5	4	6	4	5	6	125
Douglas	9	6	5	2	4	1	6	1	3	1	5	4	4	1	0	2	1	128
Gilliam	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grant	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	7
Harney	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Hood River	1	1	1	2	1	1	0	1	0	1	1	1	1	1	1	0	0	23
Jackson	13	10	9	11	8	11	16	7	11	5	10	7	8	8	7	6	11	274
Jefferson	3	2	1	0	0	1	1	1	2	0	0	1	0	2	0	2	0	24
Josephine	7	5	5	3	4	2	4	0	6	6	2	2	0	2	2	2	2	104
Klamath	2	1	1	5	2	3	2	0	4	0	0	1	3	1	2	3	1	51
Lake	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
Lane	18	22	23	13	12	15	23	13	18	16	13	13	10	13	8	21	7	527
Lincoln	10	1	3	4	0	1	5	5	3	1	1	2	2	0	1	3	2	69
Linn	3	2	2	3	6	5	4	3	2	3	3	3	0	8	1	4	3	113
Malheur	2	2	0	0	0	1	2	0	2	2	1	0	2	0	2	1	0	26
Marion	36	19	15	21	17	20	15	24	18	18	15	25	23	20	20	12	17	570
Morrow	1	1	1	2	0	0	0	0	0	0	1	1	0	0	0	1	0	8
Multnomah	202	154	154	143	140	145	143	164	150	159	149	112	150	119	111	120	141	5,342
Polk	1	4	1	1	2	2	1	3	0	4	0	0	2	2	2	1	1	57
Tillamook	0	0	0	2	0	2	1	1	2	0	0	2	3	0	0	2	1	29
Umatilla	2	3	2	4	2	5	3	1	4	1	3	6	3	0	2	1	3	62
Union	2	0	0	2	0	1	3	0	0	0	0	1	0	0	0	1	0	13
Wallowa	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	5
Wasco	0	0	0	0	0	2	0	1	2	1	2	0	2	0	3	1	0	31
Washington	20	19	17	20	23	24	30	35	42	34	42	38	41	33	31	27	28	748
Wheeler	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Yamhill	5	4	6	2	1	0	3	4	7	2	2	2	4	2	3	1	6	92
Missing	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	380	292	274	267	256	272	287	299	298	285	280	245	283	251	237	240	260	9,220

Living HIV cases by county of residence at last report, Oregon, 2012

Source: Orpheus and eHARS; July 23, 2013.

County of residence at last report	Living cases Dec. 31, 2012	Population estimate	Cases per 100,000 residents
Baker	2	15,909	12.6
Benton	48	86,430	55.5
Clackamas	357	383,857	93.0
Clatsop	25	37,301	67.0
Columbia	30	49,286	60.9
Coos	38	62,534	60.8
Crook	6	20,729	28.9
Curry	11	22,248	49.4
Deschutes	91	162,277	56.1
Douglas	62	107,164	57.9
Gilliam	0	1,953	0.0
Grant	3	7,317	41.0
Harney	1	7,212	13.9
Hood River	18	22,584	79.7
Jackson	161	206,412	78.0
Jefferson	14	21,749	64.4
Josephine	58	82,930	69.9
Klamath	25	65,912	37.9
Lake	2	7,771	25.7
Lane	301	354,542	84.9
Lincoln	43	46,151	93.2
Linn	63	118,360	53.2
Malheur	22	30,630	71.8
Marion	372	319,985	116.3
Morrow	7	11,244	62.3
Multnomah	3,076	759,256	405.1
Polk	33	76,353	43.2
Sherman	0	1,732	0.0
Tillamook	16	25,287	63.3
Umatilla	42	76,820	54.7
Union	12	25,759	46.6
Wallowa	2	6,821	29.3
Wasco	16	25,487	62.8
Washington	569	547,672	103.9
Wheeler	1	1,424	70.2
Yamhill	53	100,255	52.9
Missing	1	N/A	N/A
Total	5,581	3,899,353	143.1

Living cases by region and HIV/AIDS status, demographics and exposure category, Oregon, 2012

Source: Orpheus and eHARS; July 23, 2013

	Oregon				Balance of state				Portland metro area			
	HIV (non-AIDS)		AIDS		HIV (non-AIDS)		AIDS		HIV (non-AIDS)		AIDS	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Sex												
Male	1,792	86%	3,100	89%	380	79%	842	83%	1,412	88%	2,258	91%
Female	293	14%	396	11%	102	21%	172	17%	191	12%	224	9%
	2,085	100%	3,496	100%	482	100%	1,014	100%	1,603	100%	2,482	100%
Age group on Dec. 31, 2012												
0-12 years	7	0%	1	0%	2	0%	1	0%	5	0%	0	0%
13-19 years	20	1%	4	0%	6	1%	2	0%	14	1%	2	0%
20-24 years	91	4%	26	1%	24	5%	8	1%	67	4%	18	1%
25-29 years	193	9%	83	2%	38	8%	23	2%	155	10%	60	2%
30-34 years	218	10%	182	5%	51	11%	51	5%	167	10%	131	5%
35-39 years	251	12%	256	7%	48	10%	72	7%	203	13%	184	7%
40-44 years	306	15%	478	14%	68	14%	127	13%	238	15%	351	14%
45-49 years	301	14%	745	21%	77	16%	244	24%	224	14%	501	20%
50-54 years	276	13%	674	19%	61	13%	197	19%	215	13%	477	19%
55-59 years	185	9%	514	15%	45	9%	140	14%	140	9%	374	15%
60-64 years	135	6%	307	9%	34	7%	86	8%	101	6%	221	9%
65 years +	102	5%	226	6%	28	6%	63	6%	74	5%	163	7%
	2,085	100%	3,496	100%	482	100%	1,014	100%	1,603	100%	2,482	100%
Race/ethnicity												
Hispanic	240	12%	447	13%	71	15%	156	15%	169	11%	291	12%
American Indian/Alaskan Native	19	1%	32	1%	5	1%	10	1%	14	1%	22	1%
Asian	33	2%	58	2%	3	1%	11	1%	30	2%	47	2%
Black/African American	154	7%	244	7%	20	4%	42	4%	134	8%	202	8%
Native Hawaiian/Pacific Islander	8	0%	8	0%	1	0%	1	0%	7	0%	7	0%
White	1,603	77%	2,684	77%	374	78%	786	78%	1,229	77%	1,898	76%
Multiracial	28	1%	23	1%	8	2%	8	1%	20	1%	15	1%
	2,085	100%	3,496	100%	482	100%	1,014	100%	1,603	100%	2,482	100%
Male transmission												
MSM only	1,416	79%	2,130	69%	246	65%	493	59%	1,170	83%	1,637	72%
IDU only	77	4%	272	9%	29	8%	106	13%	48	3%	166	7%
MSM/IDU	136	8%	328	11%	35	9%	95	11%	101	7%	233	10%
Hemophilia	7	0%	16	1%	3	1%	8	1%	4	0%	8	0%
Heterosexual contact with IDU	7	0%	35	1%	2	1%	14	2%	5	0%	21	1%
Heterosexual contact with transfusion/transplant recipient	0	0%	3	0%	0	0%	0	0%	0	0%	3	0%
Heterosexual contact with a person living with HIV/AIDS but no known risk	31	2%	79	3%	9	2%	32	4%	22	2%	47	2%
Adult recipient of blood product	1	0%	2	0%	0	0%	1	0%	1	0%	1	0%
Adult with undetermined infection mode	85	5%	186	6%	40	11%	71	8%	45	3%	115	5%
Mother had HIV/AIDS	13	1%	5	0%	7	2%	3	0%	6	0%	2	0%
Child with undetermined infection mode	1	0%	1	0%	1	0%	1	0%	0	0%	0	0%
Presumed heterosexual male	18	1%	43	1%	8	2%	18	2%	10	1%	25	1%
	1,792	100%	3,100	100%	380	100%	842	100%	1,412	100%	2,258	100%

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Continued: Living cases by region and HIV/AIDS status, demographics and exposure category, Oregon, 2012

	Oregon				Balance of Oregon				Portland Metro			
	HIV (non-AIDS)		AIDS		HIV (non-AIDS)		AIDS		HIV (non-AIDS)		AIDS	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Female transmission												
IDU only	58	20%	91	23%	26	25%	46	27%	32	17%	45	20%
Heterosexual contact with IDU	33	11%	73	18%	17	17%	30	17%	16	8%	43	19%
Heterosexual contact with MSM	16	5%	22	6%	3	3%	10	6%	13	7%	12	5%
Heterosexual contact with hemophiac	2	1%	1	0%	1	1%	0	0%	1	1%	1	0%
Heterosexual contact with transfusion/transplant recipient	1	0%	1	0%	0	0%	0	0%	1	1%	1	0%
Heterosexual contact with a person living with HIV/AIDS but no known risk	115	39%	154	39%	34	33%	63	37%	81	42%	91	41%
Adult recipient of blood product	0	0%	2	1%	0	0%	1	1%	0	0%	1	0%
Adult with undetermined infection mode	12	4%	9	2%	3	3%	2	1%	9	5%	7	3%
Mother had HIV/AIDS	15	5%	3	1%	3	3%	2	1%	12	6%	1	0%
Pediatric recipient of blood product	0	0%	1	0%	0	0%	0	0%	0	0%	1	0%
Child with undetermined infection mode	0	0%	1	0%	0	0%	1	1%	0	0%	0	0%
Presumed heterosexual female	41	14%	38	10%	15	15%	17	10%	26	14%	21	9%
	293	100%	396	100%	102	100%	172	100%	191	100%	224	100%

HIV diagnoses by HIV/AIDS status, demographics and exposure category, Oregon 2012

Source: Orpheus and eHARS; July 23, 2013

	Oregon				Balance of Oregon				Portland Metro			
	HIV (non-AIDS)		AIDS		HIV (non-AIDS)		AIDS		HIV (non-AIDS)		AIDS	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Sex												
Male	154	91%	79	88%	31	82%	18	75%	123	93%	61	92%
Female	16	9%	11	12%	7	18%	6	25%	9	7%	5	8%
	170	100%	90	100%	38	100%	24	100%	132	100%	66	100%
Age group at diagnosis												
0-12 years	1	1%	0	0%	0	0%	0	0%	1	1%	0	0%
13-19 years	5	3%	1	1%	0	0%	0	0%	5	4%	1	2%
20-24 years	24	14%	4	4%	4	11%	0	0%	20	15%	4	6%
25-29 years	32	19%	8	9%	7	18%	3	13%	25	19%	5	8%
30-34 years	21	12%	13	14%	5	13%	3	13%	16	12%	10	15%
35-39 years	20	12%	10	11%	3	8%	1	4%	17	13%	9	14%
40-44 years	30	18%	14	16%	11	29%	2	8%	19	14%	12	18%
45-49 years	15	9%	13	14%	3	8%	4	17%	12	9%	9	14%
50-54 years	6	4%	15	17%	2	5%	6	25%	4	3%	9	14%
55-59 years	8	5%	7	8%	1	3%	3	13%	7	5%	4	6%
60-64 years	4	2%	3	3%	0	0%	1	4%	4	3%	2	3%
65 years +	4	2%	2	2%	2	5%	1	4%	2	2%	1	2%
	170	100%	90	100%	38	100%	24	100%	132	100%	66	100%

* All cases included were Oregon residents at diagnosis.

Continued on next page

Continued: HIV diagnoses by HIV/AIDS status, demographics and exposure category, Oregon, 2012

	Oregon				Balance of Oregon				Portland Metro			
	HIV (non-AIDS)		AIDS		HIV (non-AIDS)		AIDS		HIV (non-AIDS)		AIDS	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Race/ethnicity												
Hispanic	22	13%	19	21%	4	11%	5	21%	18	14%	14	21%
American Indian/Alaskan Native	1	1%	1	1%	0	0%	1	4%	1	1%	0	0%
Asian	5	3%	1	1%	0	0%	0	0%	5	4%	1	2%
Black/African American	17	10%	4	4%	3	8%	0	0%	14	11%	4	6%
Native Hawaiian/Pacific Islander	1	1%	0	0%	0	0%	0	0%	1	1%	0	0%
White	123	72%	64	71%	31	82%	18	75%	92	70%	46	70%
Multiracial	1	1%	1	1%	0	0%	0	0%	1	1%	1	2%
Unknown	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
	170	100%	90	100%	38	100%	24	100%	132	100%	66	100%
Male transmission												
MSM only	117	76%	50	63%	18	58%	10	56%	99	80%	40	66%
IDU only	3	2%	4	5%	1	3%	1	6%	2	2%	3	5%
MSM/IDU	13	8%	5	6%	4	13%	2	11%	9	7%	3	5%
Heterosexual contact with IDU	0	0%	1	1%	0	0%	1	6%	0	0%	0	0%
Heterosexual contact with transfusion/transplant recipient	0	0%	1	1%	0	0%	0	0%	0	0%	1	2%
Heterosexual contact with a person living with HIV/AIDS but no known risk	1	1%	3	4%	0	0%	2	11%	1	1%	1	2%
Adult with undetermined infection mode	19	12%	8	10%	8	26%	2	11%	11	9%	6	10%
Presumed heterosexual male	1	1%	7	9%	0	0%	0	0%	1	1%	7	11%
	154	100%	79	100%	31	100%	18	100%	123	100%	61	100%
Female transmission												
IDU only	1	6%	1	9%	1	14%	0	0%	0	0%	1	20%
Heterosexual contact with IDU	5	31%	2	18%	4	57%	2	33%	1	11%	0	0%
Heterosexual contact with MSM	0	0%	1	9%	0	0%	0	0%	0	0%	1	20%
Heterosexual contact with hemophiac	1	6%	0	0%	0	0%	0	0%	1	11%	0	0%
Heterosexual contact with a person living with HIV/AIDS but no known risk	1	6%	1	9%	0	0%	1	17%	1	11%	0	0%
Adult with undetermined infection mode	2	13%	1	9%	0	0%	0	0%	2	22%	1	20%
Mother had HIV/AIDS	1	6%	0	0%	0	0%	0	0%	1	11%	0	0%
Presumed heterosexual female	5	31%	5	45%	2	29%	3	50%	3	33%	2	40%
	16	100%	11	100%	7	100%	6	100%	9	100%	5	100%
Total	170		90		38		24		132		66	

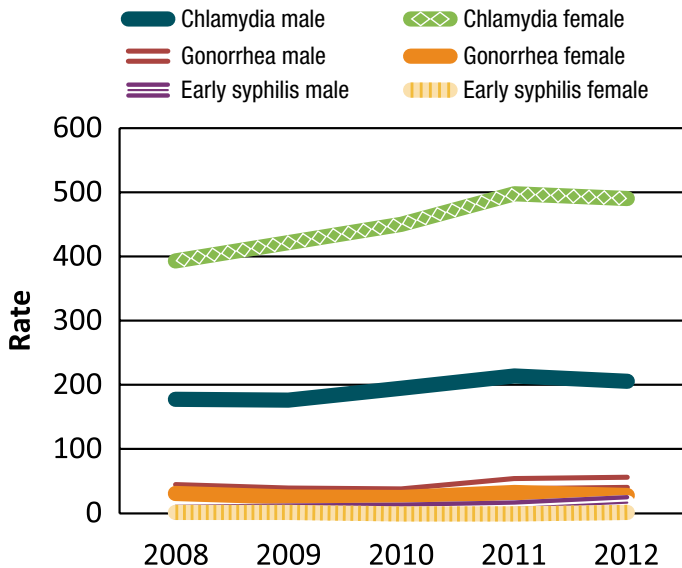
Other reported sexually transmitted infections (STIs) among people with reported HIV infection

Source: Orpheus STD and early syphilis; July 1, 2013

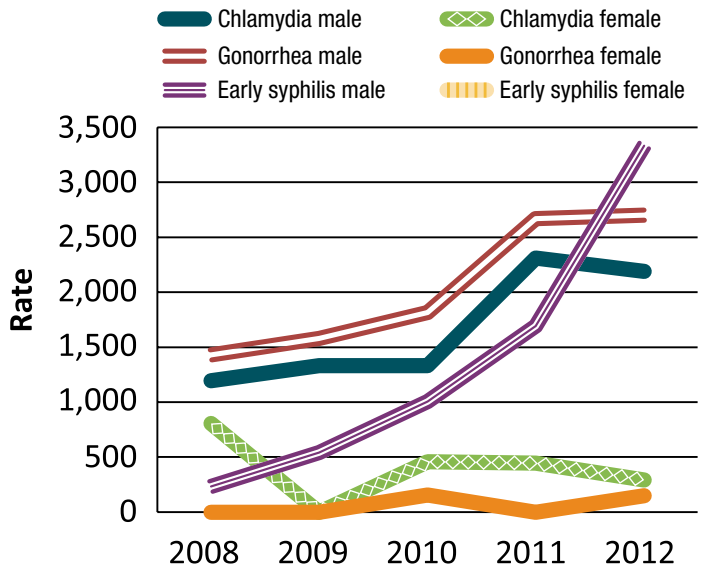
	Reported STIs among general Oregon population, 2012 (CT cases without a sex were excluded in 2008, 2009, 2010, 2012)								Rate per 100,000 Oregon residents					
	Chlamydia		Gonorrhea		Early syphilis		NCHS Oregon		Chlamydia		Gonorrhea		Early syphilis	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
2008	3,348	7,501	689	571	37	6	1,875,514	1,905,082	178.5	393.7	36.7	30.0	2.0	0.3
2009	3,362	8,121	611	505	82	3	1,897,617	1,925,441	177.2	421.8	32.2	26.2	4.3	0.2
2010	3,775	8,546	597	477	106	1	1,938,311	1,899,901	194.8	449.8	30.8	25.1	5.5	0.1
2011	4,157	9,511	886	603	168	1	1,953,764	1,914,465	212.8	496.8	45.3	31.5	8.6	0.1
2012	4,042	9,451	935	532	302	9	1,968,641	1,930,712	205.3	489.5	47.5	27.6	15.3	0.5

	Reported STIs among people living with HIV, Oregon, 2012								Rate per 100,000 living HIV cases					
	Chlamydia		Gonorrhea		Early syphilis		Living HIV		Chlamydia		Gonorrhea		Early syphilis	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
2008	51	5	61	0	10	0	4,257	623	1,198.0	802.6	1,432.9	0.0	234.9	0.0
2009	59	0	70	0	24	0	4,423	635	1,333.9	0.0	1,582.6	0.0	542.6	0.0
2010	61	3	83	1	46	1	4,572	655	1,334.2	458.0	1,815.4	152.7	1,006.1	152.7
2011	109	3	126	0	80	0	4,723	674	2,307.9	445.1	2,667.8	0.0	1,693.8	0.0
2012	107	2	132	1	163	0	4,892	689	2,187.2	290.3	2,698.3	145.1	3,332.0	0.0

Rate of STDs per 100,000
Oregon residents, 2008–2012



Rate of STDs per 100,000 living
Oregon HIV cases, 2008–2012



HIV/AIDS infection among TB cases, Oregon, 2001–2012

Source: TB Program; Jan. 7, 2013

Year	TB/HIV co-infected	Total number of TB cases	HIV cases per 100,000 TB	Living HIV cases	TB cases per 100,000 HIV
2001	8	123	6,504.1	3,517	227.5
2002	4	111	3,603.6	3,707	107.9
2003	5	106	4,717.0	3,892	128.5
2004	6	106	5,660.4	4,094	146.6
2005	1	103	970.9	4,291	23.3
2006	5	81	6,172.8	4,489	111.4
2007	6	94	6,383.0	4,668	128.5
2008	3	75	4,000.0	4,880	61.5
2009	6	89	6,741.6	5,058	118.6
2010	2	87	2,298.9	5,227	38.3
2011	4	74	5,405.4	5,397	74.1
2012	1	61	1,639.3	5,581	17.9

AIDS diagnosed within 12 months of first diagnosis by age, sex, transmission category and region, Oregon, 2007–2011*

Source: HIV cases reported to Oregon Public Health Division on or before Oct. 7, 2013

		HIV to AIDS longer than 12 months	AIDS within 12 months of first diagnosis	Total	Percent with AIDS in 12 months	Relative risk	SE	95% CI
Sex	Male	671	445	1116	0.40	1.21	0.12	0.96 - 1.53
	Female	108	53	161	0.33	Referent	.	.
Age group at diagnosis	0-12 years	3	0	3	0.00	†	.	.
	13-19 years	36	3	39	0.08	†	.	.
	20-24 years	121	31	152	0.20	0.50	0.18	0.35 - 0.71
	25-29 years	150	57	207	0.28	0.67	0.14	0.51 - 0.88
	30-34 years	123	54	177	0.31	0.74	0.14	0.56 - 0.98
	35-39 years	113	79	192	0.41	Referent	.	.
	40-44 years	71	76	147	0.52	1.26	0.12	1.00 - 1.58
	45-49 years	73	68	141	0.48	1.17	0.12	0.92 - 1.49
	50-54 years	42	54	96	0.56	1.37	0.12	1.07 - 1.75
	55-59 years	25	36	61	0.59	1.43	0.14	1.10 - 1.88
	60-64 years	15	20	35	0.57	1.39	0.17	1.00 - 1.94
	65 years +	7	20	27	0.74	1.80	0.14	1.36 - 2.38
Race/ethnicity	African American/Black	64	23	87	0.26	0.66	0.18	0.46 - 0.94
	American Indian/Alaska Native	4	5	9	0.56	†	.	.
	Asian/Pac.Islander/native-Hawaiian	21	14	35	0.40	1.00	0.21	0.66 - 1.51
	White	658	439	1097	0.40	Referent	.	.
	Multiple, other, unknown	32	17	49	0.35	0.87	0.20	0.59 - 1.28
	Hispanic	133	102	235	0.43	1.15	0.08	0.97 - 1.36
	Not Hispanic	644	391	1035	0.38	Referent	.	.
	Missing, unknown	2	5	7	0.71	†	.	.
Male transmission category	MSM only	527	271	798	0.34	Referent	.	.
	IDU only	32	25	57	0.44	1.29	0.16	0.95 - 1.76
	MSM/IDU	58	37	95	0.39	1.15	0.14	0.88 - 1.50
	High-risk heterosexual contact	15	12	27	0.44	1.31	0.22	0.85 - 2.02
	Adult recipient of blood product	0	8	8	1.00	†	.	.
	Adult with other confirmed risk	0	4	4	1.00	†	.	.
	Adult unknown risk	38	88	126	0.70	2.06	0.08	1.77 - 2.39
	Pediatric	1	0	1	0.00	†	.	.
	All males	671	445	1116	0.40	Group total	.	.
Female transmission category	IDU only	26	9	35	0.26	0.85	0.33	0.44 - 1.63
	High-risk heterosexual contact	60	26	86	0.30	Referent	.	.
	Adult recipient of blood product	1	0	1	0.00	†	.	.
	Adult with other confirmed risk	0	1	1	1.00	†	.	.
	Adult unknown risk	19	17	36	0.47	1.56	0.24	0.97 - 2.50
	Perinatal	1	0	1	0.00	†	.	.
	Pediatric	1	0	1	0.00	†	.	.
	All females	108	53	161	0.33	Group total	.	.
Region	Urban	421	198	619	0.32	Referent	.	.
	Mixed urban/rural	305	237	542	0.44	1.37	0.08	1.18 - 1.59
	Rural	53	63	116	0.54	1.70	0.10	1.39 - 2.08
Total		779	498	1277	0.39			

Data are provisional and subject to change. When county of first diagnosis is not known, region of first diagnosis cannot be determined.

* Above table summarizes cases diagnosed from during the five-year period from 2007 through 2011, with follow-up information through 2012.

† Too few cases for meaningful risk calculation.



PUBLIC HEALTH DIVISION

HIV/STD/TB Program/HIV Data and Analysis

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