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Date: May 20, 2014
To: HIV/AIDS Surveillance Group
From: Jerry Harms, HIV Surveillance Coordinator
Re: 2013 End-of-Year HIV/AIDS Surveillance Report

Attached is the 2013 end-of-year surveillance report for HIV and AIDS. Section 1 discusses sources and characteristics of surveillance data and defines terms found in the report. Section 2 presents data and trends in reference to six tables and ten figures located in Section 3. Here are a few points of interest:

- **122 HIV diagnoses in 2013.** Five more than in 2012, six more than the 5-year average (2008 through 2012).
- **34 females diagnosed; highest ever; up 62% over 2012.** There were three male diagnoses for every female diagnosis in 2013, a marked change from a five one to ratio from 2006 through 2012. Male diagnoses numbered 88 in 2013, a substantial drop from 96 in 2012 and the 5-year average. Diagnoses among females, averaging 20 per year from 2006 through 2012, climbed suddenly from 21 in 2012 to 34 in 2013. A 62% increase in such a relatively small number, 21, must be interpreted with caution. It will take more than one year of data collection to know if this is a transient fluctuation or whether it represents the beginning of a sustained increase among females.
- **50 diagnoses among persons ages 45 and older; highest ever; up 52% over 2012. Diagnoses among youths drop slightly.** Diagnoses in persons 45 years and older peaked at 39 in 2007, averaged 32 per year from 2008 through 2012, then accelerated from 33 in 2012 to 50, their highest number ever, in 2013. Eighteen youths ages 15 to 24 years were diagnosed in 2013, down from a peak of 28 in 2008 and the 21 diagnosed in 2012. While the decrease is encouraging, diagnoses in youth remain a concern. They averaged 22 per year from 2009 through 2013 compared to 14 per year from 2004 through 2008. At the same time, it is important not to lose sight of the fact persons 25 to 44 years of age accounted for nearly half (44%) of all diagnoses, with 54 diagnosed in 2013. Persons ages 45 and older accounted for 41% of all diagnoses while persons ages 15 to 24 years made up the remaining 15%.
- **Racial and ethnic minorities continue to be over-represented.**
 - Non-Hispanic black/African-American Iowans were 3% of Iowa's population, 23% of new HIV diagnoses, and 11 times more likely to be diagnosed than were white, non-Hispanic Iowans. Of the 28 diagnoses, 13 (46%) were among foreign-born persons.
 - Non-Hispanic Asians were 2% of Iowa's population, 7% of new diagnoses, and 5 times more likely to be diagnosed than were non-Hispanic white Iowans. All eight diagnoses were among the foreign born.
 - Hispanics were 5 percent of Iowa's population, 7% of new HIV diagnoses, and twice as likely as non-Hispanic whites to be diagnosed with HIV. Of the nine diagnoses, six (67%) were among the foreign born.
 - Regardless of such disparities, it is important to keep in mind that non-Hispanic, white Iowans accounted for over 60% of new HIV diagnoses and persons living with HIV/AIDS in 2013.
- **“Late testers,”** persons who are diagnosed with AIDS within 12 months of their initial HIV diagnosis, were 39% of all diagnoses in 2012, up from 35% in 2011. While data collection will not be complete until 2015, 48% of 2013 diagnoses already appear to meet the late tester definition.
- **The number of persons living with HIV or AIDS (HIV disease prevalence) continues to increase.** As of December 31, 2013, there were 2,100 persons living with HIV or AIDS who were Iowa residents at time of diagnosis, a prevalence of 68 per 100,000 people. This compares to 2,023 persons living with HIV or AIDS on the same date in 2012, a prevalence of 66 per 100,000.

See <http://www.idph.state.ia.us/HivStdHep/HIV-AIDS.aspx?prog=Hiv&pg=HivSurv> for this report and a 2013 slide set. As always, we welcome and appreciate your feedback. For questions or comments about the surveillance report, please call me at 515-242-5141 or email to Jerry.Harms@idph.iowa.gov.



State of Iowa HIV and AIDS End-of-Year Surveillance Report **January 1, 2013, through December 31, 2013**

Organization of the Surveillance Report

The report contains three sections. The first section discusses data sources. The second section is a narrative presentation of the data and references the third section, which uses charts, graphs, and tables to illustrate changes in Iowa's HIV epidemic over time.

Section 1: Sources of the Data

Core HIV/AIDS Surveillance Data

Core HIV/AIDS surveillance data are the primary source for this update. In addition, population data from the U.S. Census are utilized in the calculation of rates and the creation of maps displaying population distributions. Brief descriptions of these data sources follow.

AIDS Case Surveillance

AIDS has been a reportable disease in Iowa since February 1983. Only persons diagnosed with AIDS, reported in Iowa, and for whom last name, date of birth, race and ethnicity, sex, date of AIDS diagnosis, and living status (living or deceased at time of report) are known are included in this report. Cumulative AIDS cases include all reported cases, living or deceased.

The definition of AIDS has been modified several times since the original 1982 case definition. That original definition included a list of opportunistic infections and diseases in persons with no known cause for diminished immunological functioning. At that time, no tests for HIV or for antibodies to the virus were available to confirm the diagnosis. The definition was first updated in 1985 to reflect new tests that detected either antibodies to the virus or the virus itself. The 1985 revised definition included several more medical conditions, when the conditions were accompanied by a positive serological or virological test for HIV. Another revision occurred in 1987, adding three more conditions, including wasting syndrome. The most substantial revision occurred in 1993, when immunological conditions were added to the definition. A CD4+ cell count less than 200 cells per microliter or less than 14% of total lymphocytes was included as AIDS-defining, even in the absence of specific physical symptoms. Three additional medical conditions, pulmonary tuberculosis, recurrent pneumonia, and invasive cervical cancer were added to the list of 23 clinical conditions that met the criteria for AIDS. This revision, and particularly the inclusion of CD4+ cell counts as AIDS defining criteria, substantially increased the number of HIV-infected persons who were diagnosed with AIDS in 1992 and reported from 1992 to 1993. Each revision may affect the number of diagnoses in that year and in subsequent years, and may make assessing trends in the numbers of new cases more difficult.

HIV Case Surveillance

HIV became reportable by name in Iowa on July 1, 1998. Anonymous testing in Iowa ceased at that time except for those tests performed through home-collection kits (and these are not

reportable to the department). In 2013, at-home testing was approved by the Food and Drug Administration, providing another option for anonymous testing in Iowa. However, the at-home test option provides only a preliminary test result (i.e., there is no confirmatory test).

Persons older than 18 months are considered to be HIV infected if they have at least one confirmed positive test (antibody or antigen), a detectable quantity of virus or viral nucleic acid isolated (viral culture or polymerase chain reaction), or have a diagnosis of HIV infection documented by a physician. Only cases reported in Iowa and for whom last name, date of birth, race and ethnicity, sex, date of first HIV diagnosis, and living status (living or deceased at time of report) are known are included in this report. Persons diagnosed with HIV before July 1, 1998, but who have not had a viral detection test or CD4+ cell count completed since July 1, 1998, may not have been reported to the Iowa Department of Public Health. HIV diagnosis data include persons reported to have tested positive for HIV while a resident of Iowa, regardless of current diagnosis (HIV or AIDS). Also included are persons who were diagnosed with AIDS while residents of Iowa but for whom residence at time of HIV diagnosis was unknown.

Diagnosis Date and Completeness of Surveillance Data

Data will be presented by the year the case of either HIV or AIDS was diagnosed (regardless of when it was reported). Some cases reported in a given year will have been diagnosed in a previous year but not reported immediately.

Evaluations of the surveillance system indicate that at least 97% of diagnosed HIV/AIDS cases have been reported. For the most part, the data represent diagnosed cases well. They do not, however, include persons who have been infected but who have not been diagnosed.

Delays in reporting will mean that the number of cases in the most recent year will be a minimum estimate. Reporting delays may vary among exposure, geographical, racial/ethnic, age, and sex categories. To minimize the effects of reporting delays, case reports received through February 2014, have been used. These reports include only those diagnoses made through December 31, 2013. Computer programs developed by CDC indicate that over 96% of new Iowa diagnoses are reported to IDPH within six months of the initial diagnosis.

All data are provisional and are subject to change as further information becomes available.

Surveillance HIV Exposure Categories

For surveillance purposes, HIV and AIDS cases are counted only once in a hierarchy of exposure categories. Persons with more than one reported mode of exposure to HIV are classified in the exposure category listed first in the hierarchy, except for men with both a history of sexual contact with other men and a history of injection drug use. They make up a separate category (Centers for Disease Control and Prevention, HIV/AIDS Surveillance Report, 2001). The modes of exposure are categorized in this report according to the following hierarchy:

- “Men who have sex with men and inject drugs” (MSM/IDU) includes men who inject nonprescription drugs and report sexual contact with other men or who report sexual contact with both men and women.
- “Men who have sex with men” (MSM) includes men who report sexual contact with other men, and men who report sexual contact with both men and women.
- “Injection drug use” (IDU) includes persons who inject nonprescription drugs.

- “Hemophilia/Coagulation disorder” includes persons who received Factor VIII (Hemophilia A), Factor IX (Hemophilia B), or other clotting factors.
- “Heterosexual contact” includes persons who report specific heterosexual contact with a person with documented HIV infection, or heterosexual contact with a person at increased risk for HIV infection, such as an injection drug user, person with hemophilia, transfusion recipient with documented HIV infection, or bisexual male. A person who reports heterosexual contact with partners whose specific HIV risks and HIV status are unknown is considered to have “no risk reported or identified” (NIR). Adults and adolescents born, or who had sex with someone born, in a country where heterosexual transmission was believed to be the predominant mode of HIV transmission (formerly classified as Pattern-II countries by the World Health Organization) are no longer classified as having heterosexually acquired HIV. Similar to case reports for other persons who are reported without behavioral or transfusion risks for HIV, these reports are now classified (in the absence of other risk information that would classify them in another exposure category) as “NIR” (MMWR 1994;43:155-60).
- “Transfusion” includes persons who received blood or blood components (other than clotting factor).
- “Received transplant” includes persons who received tissues, organs, or artificial insemination. These cases have been combined with “transfusion” cases in this report because of the low number of cases in Iowa in each category alone.
- “No risk reported or identified (NIR)/other” includes persons with no identified history of exposure to HIV through any of the routes listed in the hierarchy of exposure categories. These cases are investigated further over time to identify a risk. In addition, the category includes persons whose exposure history is incomplete because they died, declined to be interviewed, or were lost to follow-up. It also includes persons who had no risk other than working in a health-care or clinical laboratory setting. There has been one confirmed case of transmission in a health-care or clinical setting in Iowa.

Population Data

U.S. Census Bureau

The Census Bureau collects and provides timely information about the people and economy of the United States. The Census Bureau’s Web site (<http://www.census.gov>) includes data on demographic characteristics (e.g., age, race, ethnicity, and sex) of the population, family structure, educational attainment, income level, housing status, and the proportion of persons who live at or below the poverty level. Summaries of the most requested information for states and counties are provided, as well as analytical reports on population changes, age, race, family structure, and apportionment. State- and county-specific data are easily accessible, and links to other Web sites with census information are included. IDPH has used the 2012 census estimates to calculate rates in this report.

Definitions

HIV diagnoses reflect all cases of HIV infection diagnosed for the first time, regardless of AIDS status. Some persons may also be counted among AIDS cases, if they received an AIDS diagnosis during the same calendar year. Age is the age at time of first diagnosis of HIV.

AIDS diagnoses reflect all residents of Iowa who first met the criteria for AIDS in that time period, regardless of when the case was reported to the state. Age is age at time of first diagnosis of AIDS.

Persons living with HIV/AIDS reflect persons diagnosed with HIV or AIDS who were alive as of December 31 of a given year.

Pediatric exposures – Persons reported as adolescents or adults may have had pediatric exposures. These persons will be categorized as adult/adolescent at time of diagnosis, but are listed under pediatric exposures in tables that display data by mode of exposure.

Section 2: The Data

Overall HIV Diagnoses

Although there has been year-to-year variability, HIV diagnoses have been increasing at a rate of about 1.4 per year since 2004. There were 122 HIV diagnoses in 2013, an increase of 5 (4%) from the 117 diagnoses reported in 2012, and 6 (5%) more than the average of 116 for the previous five years. In 2013, there were 4.0 HIV diagnoses per 100,000 population, compared to 3.8 HIV diagnoses per 100,000 population in 2012 and 2011. Table 2.1 characterizes HIV diagnoses in 2013, while Table 2.3 and Figure 2.1 chart the number of HIV diagnoses by year for the years 2004 through 2013.

Late Diagnosis of HIV

A person who is diagnosed with AIDS within 12 months of initial HIV diagnosis is termed a “late tester.” Given this definition, 2012 is the most recent year for which complete late tester analysis is available. After peaking at 61% in 2001, late testers as a proportion of all HIV diagnoses for a given year declined over time to 35% in 2011, only to climb again to 39% in 2012. Preliminary analysis of 2013 data indicates late testers already account for 48% of the 122 persons diagnosed (but final analysis can’t be completed until December 2014). Historically, about 90% of late testers are diagnosed with HIV and AIDS concurrently. If this relationship holds true, the final proportion of late testers for 2013 could exceed 50%. Late tester status may be more an indication of prevention failure than of treatment failure or access to care. Figure 2.2 charts the proportion of late testers by year of HIV diagnosis from 1997 through 2013.

HIV Diagnoses by Sex

While males have always accounted for the majority of HIV diagnoses, the disproportionation peaked in 2009, and the gap has since began to narrow. Diagnoses among males increased steadily from 78 in 2004 to 105 in 2009. Since then, they remained relatively steady, averaging 97 per year from 2010 through 2012. In 2013, diagnoses in males dropped to 88, accounting for 72% of HIV diagnoses. In contrast, diagnoses among females decreased from 27 in 2004 to 20 in 2006, hovered around that mark through 2012, then climbed from 21 in 2012 to 34 in 2013, a 62% jump. Such an increase in a relatively small number, 21, must be interpreted with caution. It will take more than one year of data collection to know if this is a transient fluctuation or if it represents the beginning of a sustained increase in diagnoses among females. From 2006 through 2012, there were about five male diagnoses for every one female diagnosed. This is in contrast to three males to one female in 2013. Table 2.3 and Figure 2.3 chart the number of HIV diagnoses by sex for the years 2004 through 2013.

HIV Diagnoses by Country of Origin

Diagnoses of HIV among the foreign born reached a 10-year high in 2010, when 28 (24%) of the 119 persons diagnosed with HIV were foreign born. In 2012 there were 20 (17%) diagnoses among the foreign born, matching the average for the five years from 2008 through 2012. By comparison, 27 (22%) of the 122 persons diagnosed in 2013 were born in a country other than the United States or one of its dependencies. While IDPH does not monitor the immigration status of persons diagnosed with HIV, resettlement of refugees in Iowa and secondary migration of immigrants from areas of the world with higher prevalence of HIV may be contributing to diagnoses among the population of foreign born. Tables 2.1 and 2.2 show the number of foreign-born persons living with HIV/AIDS as of December 31, 2013. Table 2.3 shows the number of foreign-born persons diagnosed each year from 2004 through 2013.

HIV Diagnoses by Age at Diagnosis

The gradual increase in HIV diagnoses since 2004 can be attributed to increases in diagnoses among males. The increases have been most remarkable among persons 15 to 24 years of age and 45 years and older. For the past five years (2009 through 2013), diagnoses among persons 15 to 24 years of age have averaged 22 per year compared to the previous five year average of 14 diagnoses per year from 2004 to 2008. Eighteen persons aged 15 to 24 years were diagnosed in 2013, down from the peak of 28 in 2008 and the 21 diagnosed in 2012. Encouragingly, 2013 was the first year since 2006 in which diagnoses among 15 to 24 year olds numbered less than 20. Not so encouraging, however, was the 52% jump in diagnoses among persons 45 years and older, from 33 in 2012 to 50 in 2013. Diagnoses in this age group had increased steadily from 24 in 2004 to a peak of 39 in 2007, and then stabilized at an average of 32 diagnoses per year from 2008 through 2012, before accelerating in 2013 to their highest number ever. While diagnoses in the aforementioned groups are concerning, it is important not to lose sight of the fact that diagnoses among persons 25 to 44 years of age accounted for nearly half of all diagnoses, with 54 (44%) persons diagnosed in 2013. Persons ages 45 and older accounted for 41% of all diagnoses while persons ages 15 to 24 years accounting for the remaining 15%. There were no pediatric HIV diagnoses in 2013. Table 2.3 and Figure 2.4 show data on HIV diagnoses by age.

For persons 13 years of age and older (adults and adolescents), the median age at diagnosis in 2013 was 39.5 years, more than three years above the five-year average of 36 years for the years from 2008 to 2012. In 2013, adult/adolescent males had a median age at diagnosis of 40 years, somewhat older than the median of 38.5 years for females. The respective median ages for males and females in 2013 are above the five year (2008 through 2012) median ages of 36.8 years for males and 32.9 years for females.

HIV Diagnoses by Race and Ethnicity

There were 28 diagnoses in 2013 among non-Hispanic black/African-American persons, the same as in 2012, but 5 more than the five-year average of 23 from 2008 through 2012. Thirteen (46%) were foreign born. While non-Hispanic black/African-American persons made up almost three percent of Iowa's population in 2013, they accounted for 23 percent of the new HIV diagnoses. This equates to 30.2 diagnoses per 100,000 non-Hispanic black/African-American persons.

Hispanics were also overrepresented among persons diagnosed with HIV. While making up five percent of Iowa's population, Hispanics accounted for seven percent of new HIV diagnoses in

2013. A total of nine Hispanic persons were diagnosed in 2013, equating to 5.5 per 100,000 Hispanic persons. Six (67%) persons were foreign born.

While the numbers are small, there was a substantial increase in diagnoses among non-Hispanic Asians. Diagnoses increased from three in 2012 to eight in 2013, equating to 13.6 per 100,000 non-Hispanic Asian persons. All eight Asians were born in foreign countries. While making up two percent of Iowa's population, non-Hispanic Asians were seven percent of new HIV diagnoses in 2013, the same proportion as Hispanics.

Despite the racial and ethnic disparities noted above, the largest proportion of new diagnoses continued to be among non-Hispanic white persons, who accounted for 61 percent of new HIV diagnoses in 2013. A total of 75 non-Hispanic white persons were diagnosed in 2013, equating to 2.8 per 100,000 non-Hispanic whites.

When the numbers of persons diagnosed per 100,000 population are compared, non-Hispanic blacks/African Americans were 11 times more likely to have been diagnosed with HIV in 2013 than non-Hispanic whites. Non-Hispanic Asians were almost five times more likely, and Hispanic persons two times more likely to have been diagnosed with HIV in 2013 than non-Hispanic white persons. Tables 2.1 and 2.3, and Figures 2.5 and 2.6 all present information on HIV diagnoses by race and ethnicity.

HIV Diagnoses by HIV Exposure Category

Men who have sex with men (MSM) remained the leading category for mode of exposure to HIV infection. Diagnoses among MSM in 2013 numbered 72, higher than the five-year average of 66 from 2008 to 2012. In 2013, MSM accounted for 59% of all diagnoses compared to a five-year (2008 to 2012) average of 57%. It is important to note that 12 (67%) of the 18 diagnoses in young men between the ages of 15 and 24 were among MSM.

Numbers (and proportions) of other modes of HIV exposure in 2013 were as follows: injection drug use (IDU), 8 (7%); men-who-have-sex-with-men and inject drugs (MSM/IDU), 2 (2%); heterosexual contact, 35 (29%); and no identified risk (NIR), 5 (4%). Experience has shown that while newly diagnosed persons may initially be reluctant to disclose risk to their health care provider or to health department staff, they become less reticent as they come to trust their providers. Such knowledge led to a successful reduction of NIR cases accomplished through follow-up calls to care providers. By the end of 2014, risk will have been ascertained for almost all of the remaining persons diagnosed in 2013. As noted above, there were no reported infections passed from mother to child during pregnancy or labor and delivery in 2013. Such infections are termed "perinatal" or "vertical" transmission. Tables 2.1, 2.3, 2.4 and 2.5, and Figure 2.7 all present information on HIV diagnoses by mode of exposure to HIV.

Persons Living with HIV or AIDS (HIV/AIDS Prevalence)

HIV/AIDS prevalence continues to increase. As of December 31, 2013, there were 2,100 persons living with HIV or AIDS who were Iowa residents at time of diagnosis of HIV or AIDS, a prevalence of 68 per 100,000 people. This compares to 2,023 persons living with HIV/AIDS on the same date in 2012, a prevalence of 66 per 100,000. Tables 2.1 and 2.2 describe the population of persons living with HIV or AIDS as of December 31, 2013. Figure 2.8 depicts the upward trend in the estimated number of persons living with HIV or AIDS, as documented at the end of each calendar year. The top tier of the graph represents the estimated numbers of

undiagnosed/unreported persons, based on the surveillance program's estimate of the completeness of case reporting and on CDC's estimate of the number of persons who are infected but have not been diagnosed. When the number of 2,100 is adjusted for underreporting (1%) of diagnosed HIV and AIDS and for CDC's estimated percentage of undiagnosed infections (15.8%), there may have been as many as 2,524 Iowans living with HIV or AIDS at the end of 2013. Figure 2.9 maps the number of persons living with HIV/AIDS on December 31, 2013, by county of residence at diagnosis.

As of December 31, 2013, 93 of Iowa's 99 counties had at least one person living with HIV or AIDS. As demonstrated in Figures 2.9 and 2.10, persons living with HIV or AIDS (PLWHA) are not evenly distributed among the counties of Iowa. Prevalence in three counties was greater than 100 per 100,000 population. Polk County, with 137 per 100,000 topped the list, followed by Scott County with 124 per 100,000, and Johnson County with 117 per 100,000. To add perspective, national and regional prevalence data for 2010, the most recent year available, are as follows: United States, 282 per 100,000; Midwestern United States, 151 per 100,000; Southern United States, 323 per 100,000; and Northeastern United States, 422 per 100,000. (Centers for Disease Control and Prevention. *HIV Surveillance Report, 2011*; vol. 23. <http://www.cdc.gov/hiv/topics/surveillance/resources/reports/>. Published February 2013. Accessed April 9, 2014.) When placed in that context, Iowa is a low-prevalence state.

AIDS Diagnoses

Eighty-two persons were diagnosed with AIDS in 2013, compared to 71 in 2012, and down from 91 (the highest number since 1996) in 2009. The 82 diagnoses in 2013 are higher than the average of 75 for the five years 2008 through 2012. Table 2.6 shows the number of AIDS diagnoses by year from 1982 through 2013.

Deaths of Persons with HIV or AIDS

Table 2.6 presents HIV (not AIDS) diagnoses, AIDS diagnoses, HIV (not AIDS) deaths, and AIDS deaths for the years 1982 through 2013. It is important to note that the deaths in Table 2.6 are due to all causes, and are not limited to those persons for whom the direct cause of death was certified to be related to HIV or AIDS.

Section 3: Tables and Figures

Table 2.1 Characteristics of Iowans Diagnosed with HIV or AIDS in 2013 Compared to Iowans Living with HIV or AIDS as of December 31, 2013

Table 2.2 Iowans Living with HIV or AIDS in Iowa by Sex, Age, Ethnicity and Race, Country of Birth and Mode of Exposure as of December 31, 2013

Table 2.3 Iowa HIV Diagnoses by Sex, Age, Ethnicity and Race, Country of Birth and Mode of Exposure by Year of Diagnosis: 2004 through 2013

Table 2.4 HIV Diagnoses among Iowa Males 13 Years of Age and Older by Exposure Category by Year of HIV Diagnosis: 2004 through 2013

Table 2.5 HIV Diagnoses among Iowa Females 13 Years of Age and Older by Exposure Category by Year of HIV Diagnosis: 2004 through 2013

- Table 2.6 Iowa HIV Diagnoses, AIDS Diagnoses, HIV (not-AIDS) Deaths, and AIDS Deaths: 1982 through 2013
- Figure 2.1 Diagnoses of HIV Infection in Iowans: 2004 through 2013
- Figure 2.2 Percentage of Iowa Late HIV Diagnoses (“Late Testers”): 1997 through 2013
- Figure 2.3 Iowa Diagnoses of HIV Infection by Sex: 2004 through 2013
- Figure 2.4 Age in Years of Iowans at Diagnosis of HIV: 2004 through 2013
- Figure 2.5 Iowa Diagnoses of HIV Infection by Ethnicity and Race: 2004 through 2013
- Figure 2.6 Disparities in the Racial Composition of the General Population of Iowa and that of Iowans Diagnosed with HIV in 2013
- Figure 2.7 Diagnoses of Adult HIV Infection by Exposure Category: 2004 through 2013
- Figure 2.8 Estimated Number of Persons Living with HIV or AIDS in Iowa as of December 31 of each Year: 1987 through 2013
- Figure 2.9 Number of Iowans Living with HIV or AIDS as of December 31, 2013, by County of Residence at Diagnosis of HIV or AIDS
- Figure 2.10 Prevalence of HIV Disease by County of Residence at Diagnosis: Iowans Living with HIV or AIDS per 100,000 Population as of December 31, 2013

**Table 2.1 Characteristics of Iowans Diagnosed with HIV or AIDS in 2013
Compared to Iowans Living with HIV or AIDS as of December 31, 2013**

Characteristics	HIV/AIDS Diagnoses ¹		AIDS Diagnoses ²		Persons Living with HIV/AIDS ³	
	Number	(Percent)	Number	(Percent)	Number	(Percent)
Sex						
Male	88	(72)	60	(73)	1,671	(80)
Female	34	(28)	22	(27)	429	(20)
Age at Diagnosis						
Under 13	0	--	0	--	23	(1)
13-14	0	--	0	--	1	--
15-24	18	(15)	6	(7)	336	(16)
25-34	28	(23)	13	(16)	728	(35)
35-44	26	(21)	23	(28)	596	(28)
45-54	28	(23)	21	(26)	303	(14)
55-64	17	(14)	14	(17)	99	(5)
65 or older	5	(4)	5	(6)	14	(1)
Current Age⁴						
Under 13					10	--
13-14					0	--
15-24					78	(4)
25-34					308	(15)
35-44					505	(24)
45-54					690	(33)
55-64					398	(19)
65 or older					111	(5)
Ethnicity/Race						
Hispanic, All Races	9	(7)	9	(11)	187	(9)
Not Hispanic, White	75	(61)	53	(65)	1,391	(66)
Not Hispanic, Black/African American	28	(23)	15	(18)	431	(21)
Not Hispanic, Asian	8	(7)	4	(5)	49	(2)
Not Hispanic, Native Hawaiian/Pacific Islander	0	--	0	--	0	--
Not Hispanic, American Indian/Alaska Native	0	--	0	--	3	--
Not Hispanic, Multi-race	2	(2)	1	(1)	39	(2)
Country of Birth						
United States or Dependency	95	(78)	65	(79)	1,759	(84)
Other Countries	27	(22)	17	(21)	341	(16)
Mode of Exposure – Adult/Adolescent⁵						
Men who have sex with men (MSM)	72	(59)	53	(65)	1,112	(53)
Injection Drug Use (IDU)	8	(7)	3	(4)	176	(8)
Men who have sex with men and Injection Drug Use (MSM/IDU)	2	(2)	1	(1)	140	(7)
Heterosexual Contact	35	(29)	21	(26)	412	(20)
Hemophilia/Coagulation disorder	0	--	0	--	8	--
Receipt of blood or tissue	0	--	0	--	7	--
Risk not reported/Other (NIR)	5	--	4	(5)	222	(11)
Adult/Adolescent Total	122	(100)	82	(100)	2,077	(99)
Mode of Exposure – Pediatric						
Mother with/at risk of HIV infection	0	--	0	--	18	(1)
Hemophilia/coagulation disorder	0	--	0	--	4	--
Receipt of blood or tissue	0	--	0	--	1	--
Risk not reported/other (NIR)	0	--	0	--	0	--
Pediatric Total	0	--	0	--	23	(1)
TOTALS	122	(100)	82	(100)	2,100	(100)

¹ HIV diagnoses reflect all persons diagnosed with HIV infection for the first time, regardless of AIDS status, who were residents of Iowa at diagnosis. Some may also be counted as AIDS cases if they received an AIDS diagnosis during the same period of time. Age is the age at time of first diagnosis of HIV.

² AIDS diagnoses reflect all residents of Iowa who first met the criteria for AIDS in that time period, regardless of when the case was reported to the state. Age is age at time of first diagnosis of AIDS.

³ Reflects persons diagnosed with HIV or AIDS as a resident of Iowa and who were living as of December 31, 2013. All deaths may not have been reported.

⁴ Current age is age as of December 31, 2013, and is reported only for persons living with HIV or AIDS as of that date.

⁵ A person diagnosed at 13 years of age or older (adult/adolescent) may have had a pediatric exposure. In such an instance, the person would be classified as adult/adolescent at time of diagnosis, but would be listed under pediatric exposures.

Table 2.2 Iowans Living with HIV or AIDS by Sex, Age, Ethnicity and Race, Country of Birth and Mode of Exposure as of December 31, 2013

Characteristics	Living with HIV ¹		Living with AIDS ²		Persons Living with HIV/AIDS ³	
	Number	(Percent)	(Number)	(Percent)	Number	(Percent)
Sex						
Male	673	(78)	998	(80)	1,671	(80)
Female	185	(22)	244	(20)	429	(20)
Age in Years at Diagnosis						
Under 13	9	(1)	14	(1)	23	(1)
13-14	0	--	1	--	1	--
15-24	174	(20)	162	(13)	336	(16)
25-34	284	(33)	444	(36)	728	(35)
35-44	224	(26)	372	(30)	596	(28)
45-54	123	(14)	180	(14)	303	(14)
55-64	41	(5)	58	(5)	99	(5)
65 or older	3	--	11	(1)	14	(1)
Current Age in Years⁴						
Under 13	8	(1)	2	(0)	10	(0)
13-14	0	--	0	--	0	--
15-24	56	(7)	22	(2)	78	(4)
25-34	182	(21)	126	(10)	308	(15)
35-44	212	(25)	293	(24)	505	(24)
45-54	240	(28)	450	(36)	690	(33)
55-64	124	(14)	274	(22)	398	(19)
65 or older	36	(4)	75	(6)	111	(5)
Ethnicity/Race						
Hispanic, All Races	66	(8)	121	(10)	187	(9)
Not Hispanic, White	569	(66)	822	(66)	1,391	(66)
Not Hispanic, Black/African American	174	(20)	257	(21)	431	(21)
Not Hispanic, Asian	29	(3)	20	(2)	49	(2)
Not Hispanic, Native Hawaiian/Pacific Islander	0	--	0	--	0	--
Not Hispanic, American Indian/Alaska Native	2	--	1	--	3	--
Not Hispanic, Multi-race	18	(2)	21	(2)	39	(2)
Country of Birth						
United States or Dependency	717	(84)	1,042	(84)	1,759	(84)
Other Countries	141	(16)	200	(16)	341	(16)
Mode of Exposure - Adult-Adolescent⁵						
Men who have sex with men (MSM)	458	(53)	654	(53)	1,112	(54)
Injection Drug Use (IDU)	68	(8)	108	(9)	176	(8)
Men who have sex with men and Injection Drug Use (MSM/IDU)	57	(7)	83	(7)	140	(7)
Heterosexual Contact	184	(21)	228	(18)	412	(20)
Hemophilia/Coagulation disorder	0	--	8	(1)	8	--
Receipt of blood or tissue	3	--	4	--	7	--
Risk not reported/Other (NIR)	79	(9)	143	(12)	222	(11)
Adult/Adolescent Total	849	(99)	1,228	(99)	2,077	(99)
Mode of Exposure - Pediatric						
Mother with/at risk of HIV infection	9	(1)	9	(1)	18	(1)
Hemophilia/Coagulation disorder	0	(0)	4	--	4	--
Receipt of blood or tissue	0	(0)	1	--	1	--
Risk not reported/Other (NIR)	0	(0)	0	--	0	--
Pediatric Total	9	(1)	14	(1)	23	(1)
TOTALS	858	(100)	1,242	(100)	2,100	(100)

¹ Reflects persons diagnosed with HIV (not AIDS) as a resident of Iowa who were living as of December 31, 2013.

² Reflects persons diagnosed with AIDS as a resident of Iowa who were living as of December 31, 2013.

³ Reflects persons diagnosed with HIV or AIDS as a resident of Iowa who were living as of December 31, 2013.

⁴ Current age is age as of December 31, 2013.

⁵ A person diagnosed at 13 years of age or older (adult/adolescent) may have had a pediatric exposure. In such an instance, the person would be classified as adult/adolescent at time of diagnosis, but would be listed under pediatric exposures.

Table 2.3 Iowa HIV Diagnoses¹ by Sex, Age, Ethnicity and Race, Country of Birth and Mode of Exposure by Year of Diagnosis: 2004 through 2013

Characteristics	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
TOTALS	105	113	108	124	101	126	115	119	117	122
Sex										
Male	78	86	88	104	82	105	96	99	96	88
Female	27	27	20	20	19	21	19	20	21	34
Age in Years at Diagnosis										
Under 13	0	1	0	0	1	3	1	1	2	0
13-14	0	0	0	0	0	0	0	0	0	0
15-24	13	19	13	12	14	23	21	27	21	18
25-34	29	31	27	36	30	37	31	33	33	28
25-44	39	32	36	37	22	35	28	28	28	26
45-54	15	24	24	24	24	15	27	21	22	28
55-64	6	5	7	12	10	10	7	7	9	17
65 or older	3	1	1	3	0	3	0	2	2	5
Race/Ethnicity										
Hispanic, All Races	12	7	12	11	10	7	8	15	8	9
Non Hispanic, White	68	77	74	90	75	85	70	71	74	75
Non Hispanic, Black/African American	23	24	17	21	14	20	30	24	28	28
Non Hispanic, Asian	1	2	3	2	1	7	4	5	4	8
Non Hispanic, Native Hawaiian/Pacific Islander	0	0	0	0	0	0	0	0	0	0
Non Hispanic, American Indian/Alaska Native	0	1	0	0	0	1	0	0	0	0
Non Hispanic, Multi-race	1	2	2	0	1	6	3	4	3	2
Country of Birth										
United States or Dependency	87	92	93	106	86	106	96	91	97	95
Other Countries	18	21	15	18	15	20	19	28	20	27
Mode of Exposure – Adult/Adolescent²										
Men who have sex with men (MSM)	48	40	56	70	64	66	63	69	67	72
Injection Drug Use (IDU)	12	10	9	9	9	13	5	3	9	8
Men who have sex with men and Injection Drug Use (MSM/IDU)	7	14	2	6	1	3	10	8	8	2
Heterosexual Contact	22	28	22	22	16	27	26	28	24	35
Hemophilia/Coagulation disorder	0	0	0	0	0	0	0	0	0	0
Receipt of blood or tissue	0	1	0	0	0	0	0	0	0	0
Risk not reported/other (NIR)	16	19	19	17	10	14	10	10	7	5
Mode of Exposure – Pediatric										
Mother with/at risk of HIV infection	0	1	0	0	1	3	1	1	2	0
Hemophilia/coagulation disorder	0	0	0	0	0	0	0	0	0	0
Receipt of blood or tissue	0	0	0	0	0	0	0	0	0	0
Risk not reported/other (NIR)	0	0	0	0	0	0	0	0	0	0

¹ HIV diagnoses reflect all persons diagnosed with HIV infection for the first time, regardless of AIDS status, who were residents of Iowa at the time of diagnosis.

² Patients reported as adolescents or adults may have had pediatric exposures. These persons will be classified as adult/adolescent at time of diagnosis, but are listed under pediatric exposures.

Table 2.4 HIV Diagnoses among Iowa Males 13 Years of Age and Older by Exposure Category by Year of HIV Diagnosis: 2004 through 2013

Exposure Category	Year of HIV Diagnosis									
	2013 ¹		2012 ²		2011 ³		2002 to 2011 ⁴		2007 to 2011 ⁵	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Male-to-male sexual contact (MSM)	72	(82)	67	(71)	69	(70)	560	(65)	332	(69)
Injection drug use (IDU)	6	(7)	5	(5)	1	(1)	60	(7)	30	(6)
Male-to-male sexual contact and injection drug use (MSM/IDU)	2	(2)	8	(8)	8	(8)	65	(8)	28	(6)
Any MSM (MSM + MSM/IDU)	74	(84)	75	(79)	77	(79)	625	(72)	360	(75)
Any IDU (IDU + MSM/IDU)	8	(9)	13	(14)	9	(9)	125	(14)	58	(12)
Heterosexual contact	5	(6)	9	(9)	11	(11)	77	(9)	43	(9)
Hemophilia/coagulation disorder	0	--	0	--	0	--	0	--	0	--
Receipt of blood, components or tissue	0	--	0	--	0	--	2	--	0	--
No identified risk, other (NIR)	3	(3)	6	(6)	9	(9)	101	(12)	47	(10)

¹ 88 males age 13 years or older were diagnosed in 2013

² 95 males age 13 years or older were diagnosed in 2012

³ 98 males age 13 years or older were diagnosed in 2011

⁴ 865 males age 13 years or older were diagnosed from 2002 through 2011

⁵ 480 males age 13 years or older were diagnosed from 2007 through 2011

Table 2.5 HIV Diagnoses among Iowa Females 13 Years of Age and Older by Exposure Category by Year of HIV Diagnosis: 2004 through 2013

Exposure Category	Year of HIV Diagnosis									
	2013 ¹		2012 ²		2011 ³		2002 to 2011 ⁴		2007 to 2011 ⁵	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Injection drug use (IDU)	2	(6)	4	(20)	2	(10)	22	(10)	9	(9)
Heterosexual contact	30	(88)	15	(75)	17	(85)	150	(65)	76	(77)
Hemophilia/coagulation disorder	0	--	0	--	0	--	0	--	0	--
Receipt of blood, components or tissue	0	--	0	--	0	--	0	--	0	--
No identified risk, other (NIR)	2	(6)	1	(5)	1	(5)	58	(25)	14	(14)

¹ 34 females age 13 years or older were diagnosed in 2013

² 20 females age 13 years or older were diagnosed in 2012

³ 20 females age 13 years or older were diagnosed in 2011

⁴ 230 females age 13 years or older were diagnosed from 2002 through 2011

⁵ 99 females age 13 years or older were diagnosed from 2006 through 2011

Table 2.6 Iowa HIV Diagnoses, AIDS Diagnoses, HIV (not-AIDS) Deaths, and AIDS Deaths: 1982 through 2013

Year	HIV ¹		AIDS ²	
	Diagnoses	Deaths ³	Diagnoses	Deaths ⁴
1982	–		1	1
1983	–		1	1
1984	–		7	3
1985	–		24	8
1986	–		23	16
1987	–		46	24
1988	–		49	22
1989	–		68	35
1990	–		76	40
1991	–		117	77
1992	–		157	70
1993	–	1	103	80
1994	–	0	110	86
1995	–	1	104	102
1996	–	1	97	66
1997	70	0	75	30
1998 ⁵	73	1	60	18
1999	64	2	77	24
2000	92	2	80	28
2001	95	3	80	32
2002	105	2	75	34
2003	88	4	75	32
2004	105	1	70	32
2005	113	4	78	24
2006	108	2	79	22
2007	124	5	68	31
2008	101	4	66	20
2009	126	4	91	29
2010	115	4	73	23
2011	119	6	73	25
2012	117	6	71	29
2013 ⁶	122	3	82	16
Total	–	56	2,256	1,080

¹ HIV diagnoses reflect all persons diagnosed with HIV infection for the first time, regardless of AIDS status, who were residents of Iowa at diagnosis. Some may also be counted as AIDS cases if they received an AIDS diagnosis during the same period of time.

² AIDS diagnoses reflect all persons who first met the criteria for AIDS while residing in Iowa regardless of their residence at initial diagnosed HIV infection

³ Data include persons whose diagnosis at time of death was HIV (not-AIDS). Deaths are from all causes, not just HIV disease.

⁴ Data include persons whose diagnosis at time of death was AIDS. Deaths are from all causes, not just HIV disease.

⁵ HIV reporting by name began on July 1, 1998. HIV diagnosis data for 1998 and the preceding years are unreliable and have been denoted by a dash (–).

⁶ Death data for 2013 are incomplete. Matching in August 2014 to death databases will provide updated death data.

Trends in Diagnoses of HIV Infection among Iowans

Figure 2.1

- Although there has been some variability from year to year, HIV diagnoses have been increasing at the rate of 1.4 per year since 2004.
- In 2013, diagnoses increased to 122 from 117 in 2012, above the 5-year average of 116 for 2008 through 2012.

Fig. 2.1. Diagnoses of HIV Infection in Iowans: 2004 through 2013

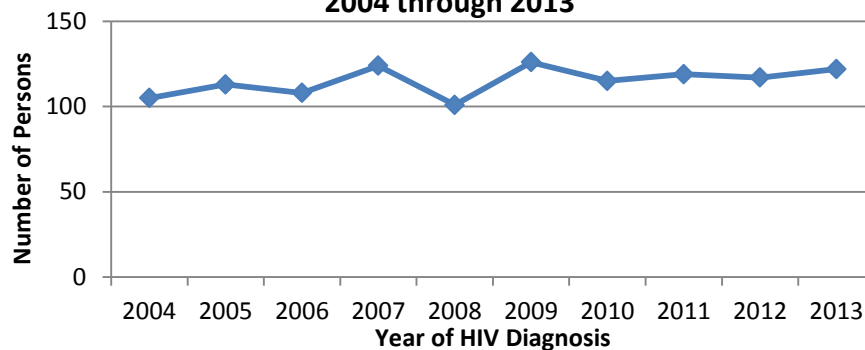


Figure 2.2

- Late diagnoses dipped from a high of 61% in 2001 to a low of 35% in 2011, only to increase to 39% in 2012.
- With 8 months yet to go, late diagnoses for 2013 already exceed 45%.

Figure 2.2. Percentage of Iowa Late HIV Diagnoses ("Late Testers"): 1997 through 2011
(AIDS diagnosed within 12 months of initial HIV diagnosis)

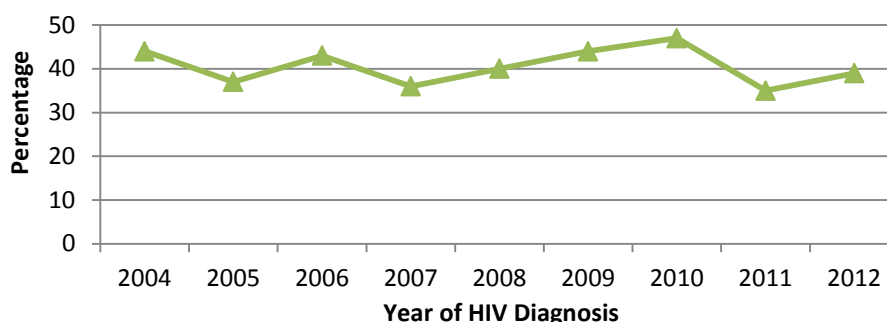


Figure 2.3

- While males have always accounted for the majority of HIV diagnoses, the gap has begun to narrow since peaking in 2009.
- After hovering around 20 per year since 2006, diagnoses among females jumped to 34 in 2013, a 62% increase from 21 in 2012.

Figure 2.3. Iowa Diagnoses of HIV Infection by Sex: 2004 through 2013

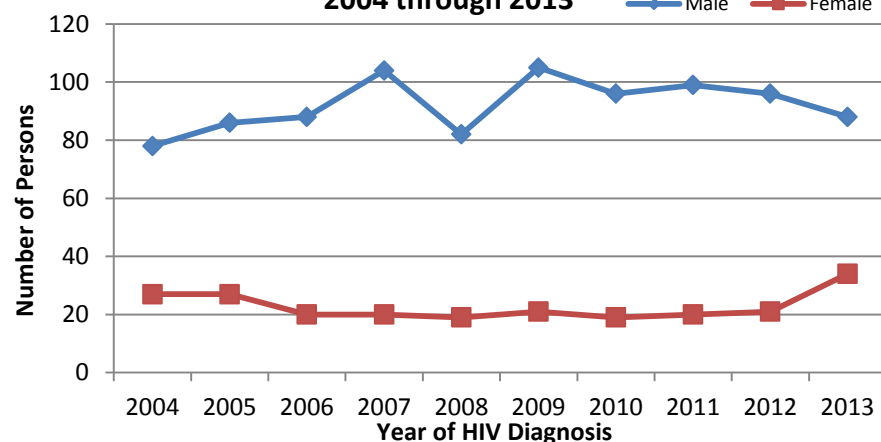


Figure 2.4. Age in Years of Iowans at Diagnosis of HIV: 2004 through 2013

Figure 2.4

- Diagnoses among persons 45 years of age and older jumped 50%, from 33 in 2012 to 50 in 2013.
- Persons 25 to 44 years of age have usually made up the largest proportion of diagnoses, and did so again in 2013 at 44%. But this was almost matched by those 45 and older at 41%.
- For the first time in 6 years, the number of diagnoses among those 13 to 24 years of age dropped below 20.

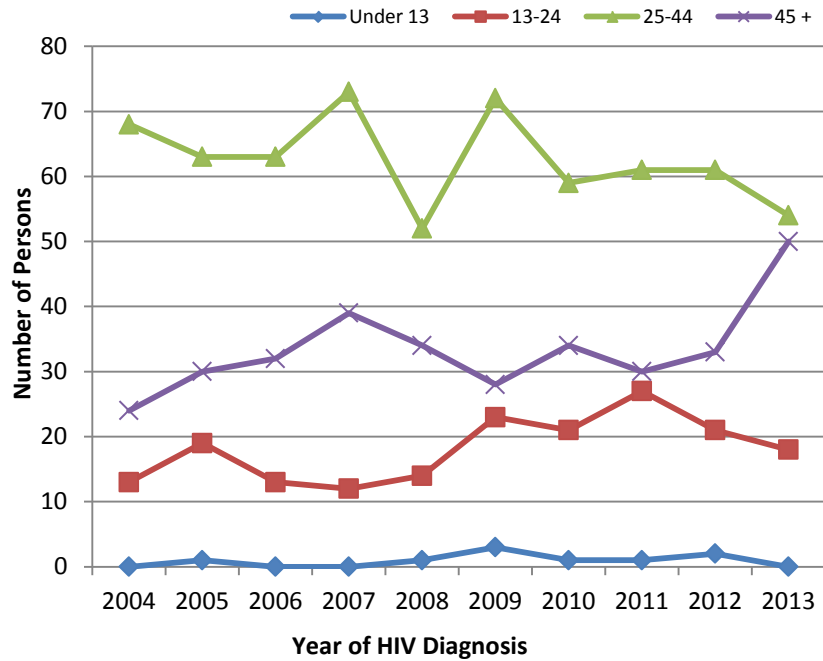


Figure 2.5. Iowa Diagnoses of HIV Infection by Ethnicity and Race: 2004 through 2013

Figure 2.5

- Diagnoses among white, non-Hispanic persons continued to inch upward from 2010's substantial drop.
- Diagnoses among black/African American persons remained steady in 2013.
- Diagnoses among Hispanics remained steady 2013.
- Diagnoses among non-Hispanic Asians rose from 3 in 2012 to 8 in 2013.

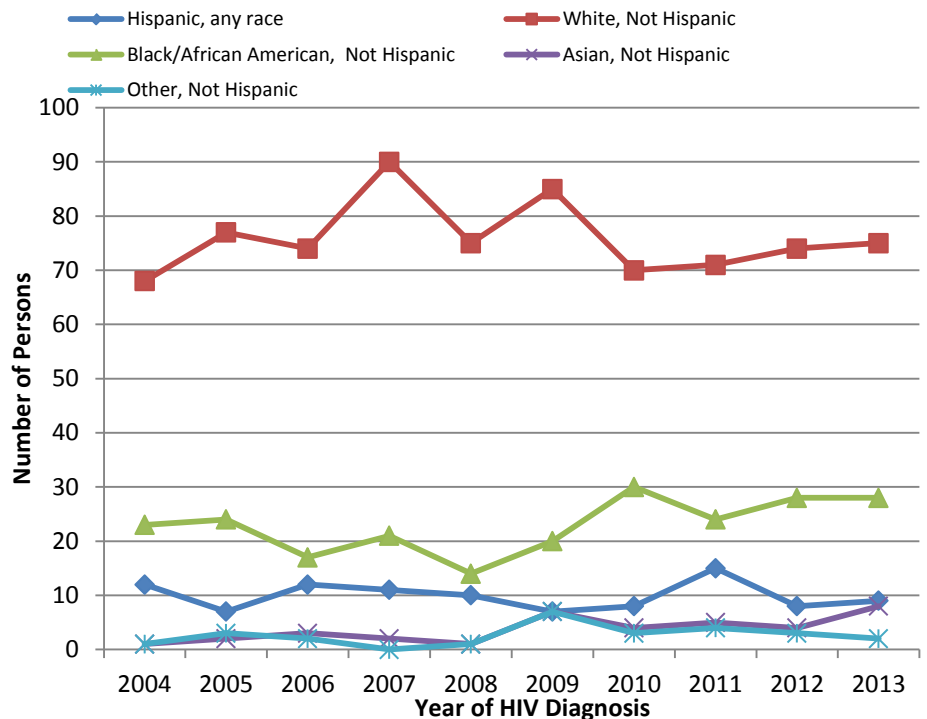


Figure 2.6. Disparities in the Racial Composition of the General Population of Iowa and that of Iowans Diagnosed with HIV Infection in 2013

Population of Iowa by Ethnicity and Race: 2013

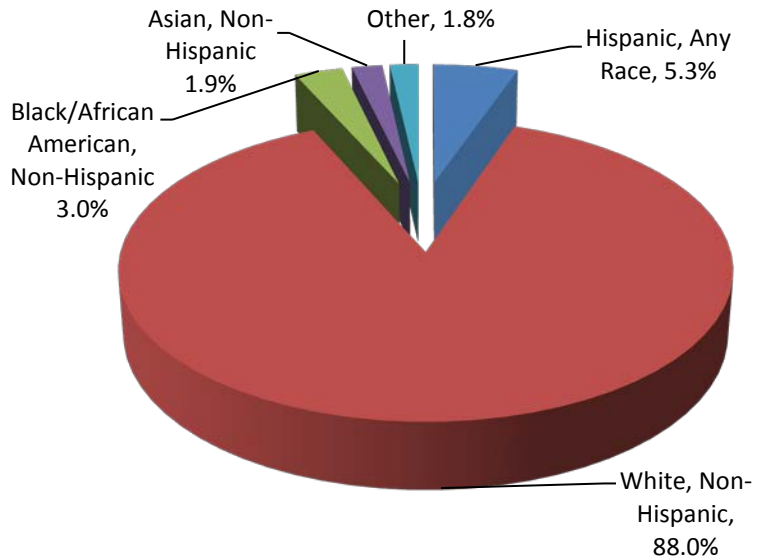


Figure 2.6

- Non-Hispanic blacks/African Americans, non-Hispanic Asians, and Hispanics are over-represented among persons with HIV diagnoses in comparison to the sizes of their respective populations in Iowa.

Iowa HIV Diagnoses by Ethnicity and Race: 2013

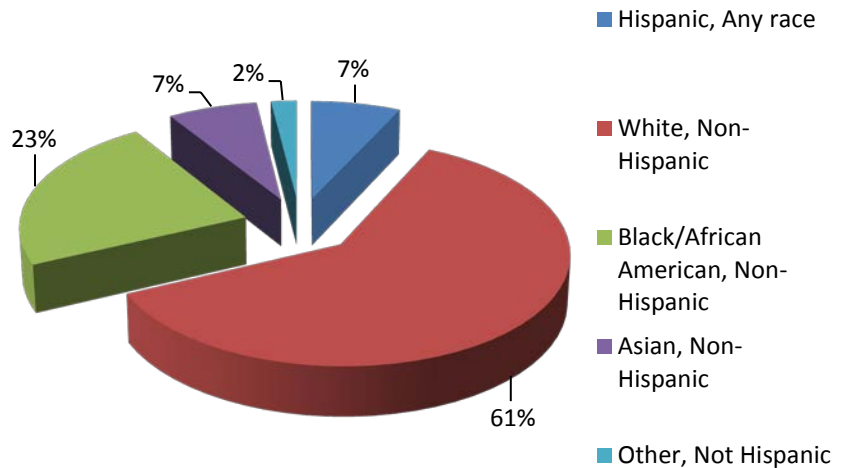


Figure 2.7

- Diagnoses among MSM increased slightly in 2013, and have remained at 60 or above since 2007. MSM is the leading mode of exposure.
- Diagnoses among heterosexuals increased substantially to a new peak in 2013. Diagnoses among IDUs remained steady in 2013 after declining from 2009 to 2012.

Figure 2.7 Diagnoses of Adult HIV Infection by Exposure Category: 2004 through 2013

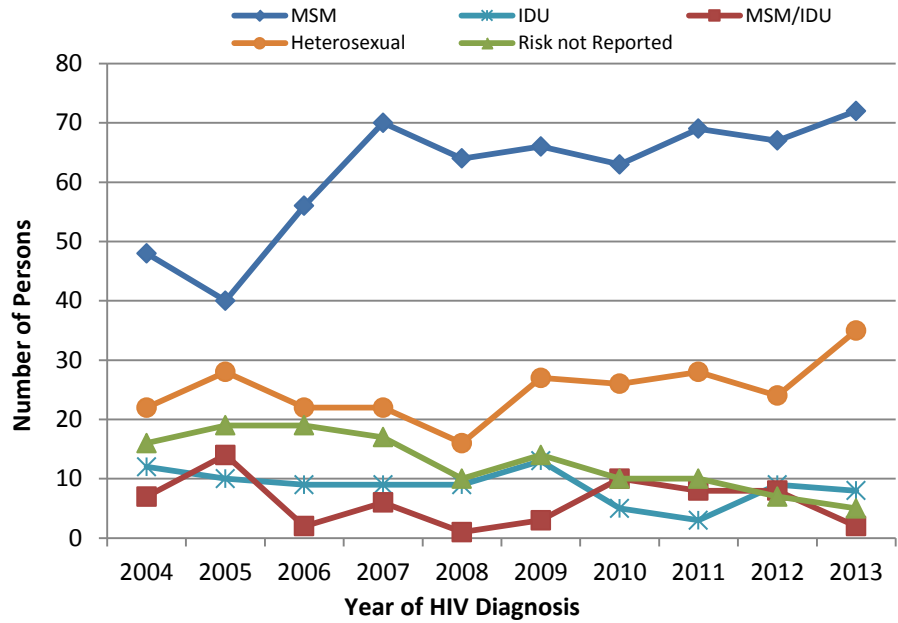


Figure 2.8. Estimated Number of Persons Living with HIV or AIDS in Iowa as of December 31 of each year: 1987 through 2013

Figure 2.8

- Prevalence continues its upward climb.
- On December 31, 2013, 2,100 persons were living with HIV/AIDS, a prevalence of 68.3 per 100,000 population.
- When estimates of unreported diagnoses (1%) and undiagnosed persons (15.8%) are included, there may have been as many as 2,524 persons living with HIV/AIDS as of December 31, 2013.

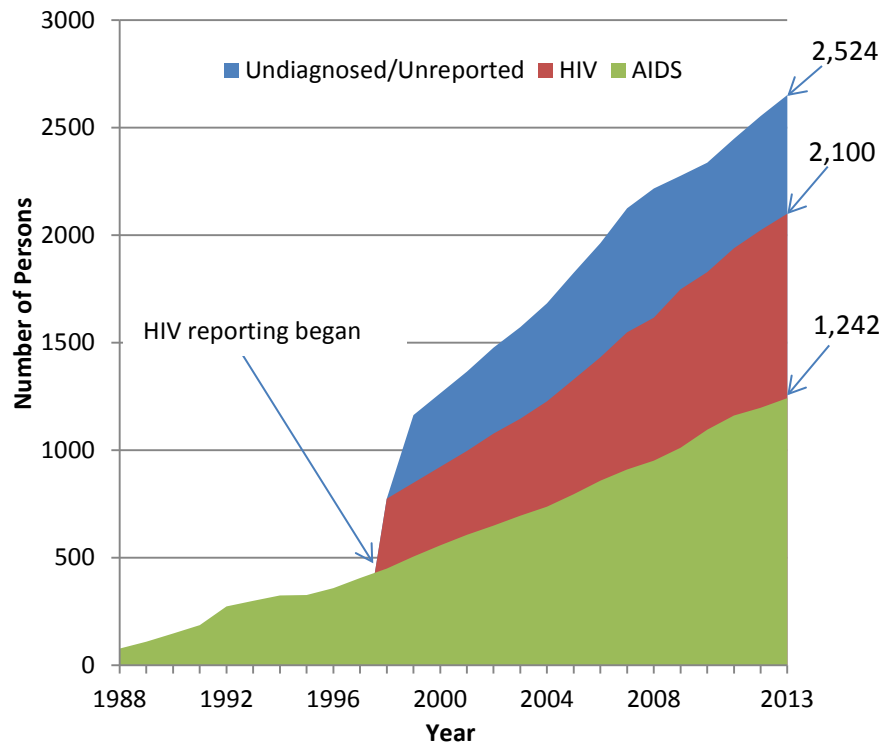
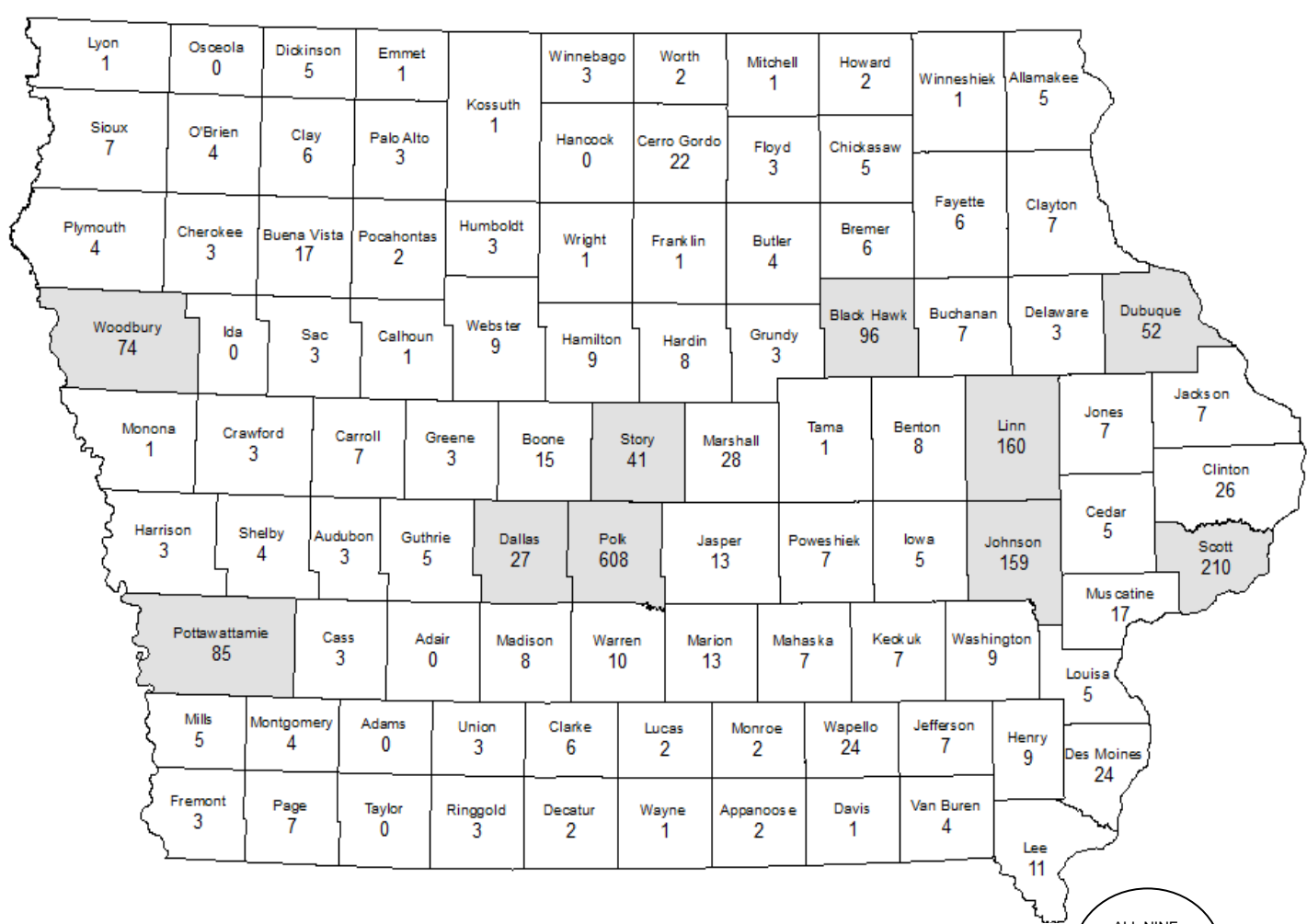


Figure 2.9. Number of Iowans Living with HIV or AIDS as of December 31, 2013, by County of Residence at Diagnosis of HIV or AIDS



Total: 2,100

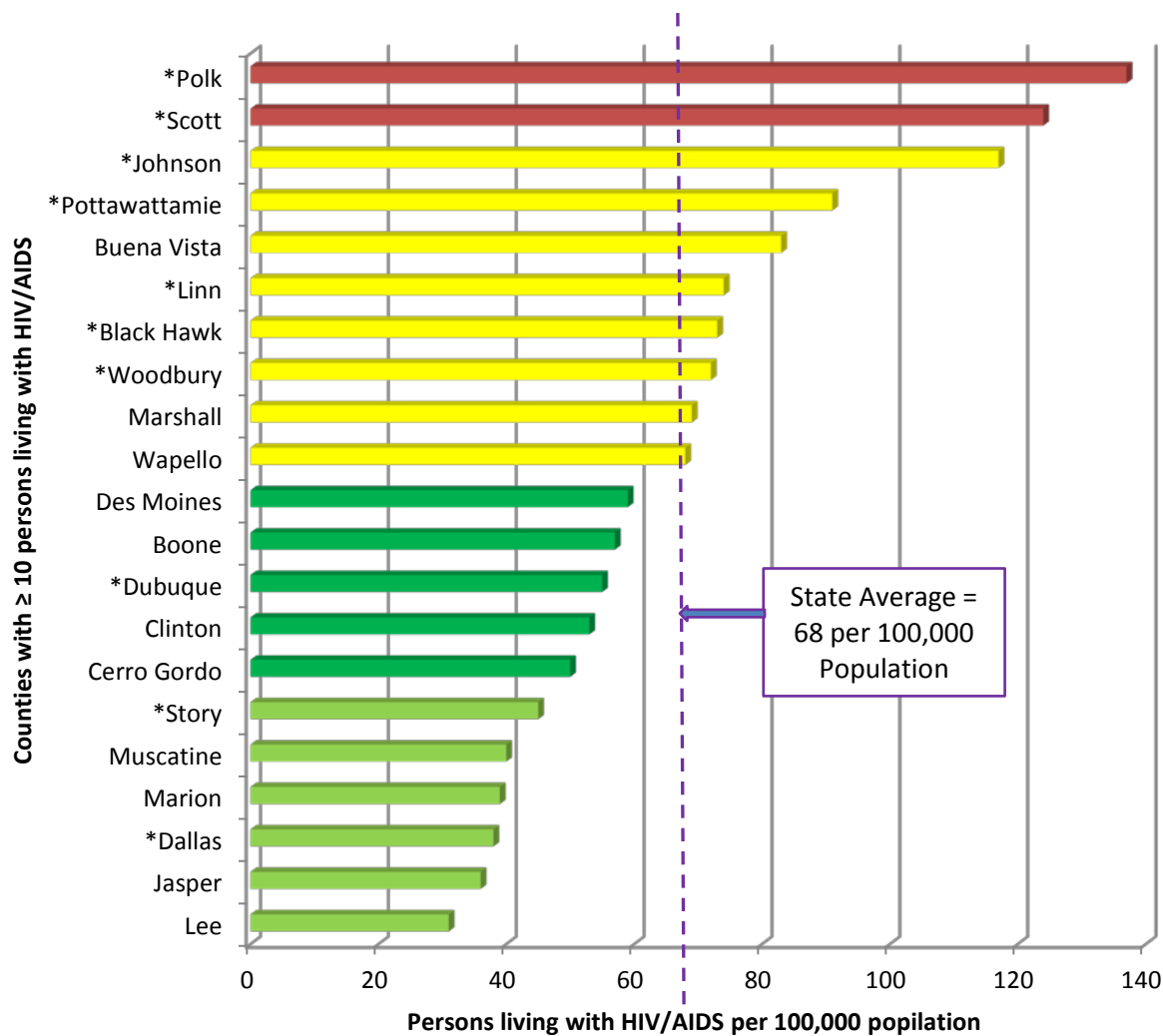
ALL NINE
IOWA
PRISONS
**
69**

This map shows the number of persons living with HIV or AIDS as of December 31, 2013. It indicates where persons resided at the time of diagnosis. Persons may not be currently living in these counties. All deaths may not have been reported. Prisoners were diagnosed while being held in Iowa Department of Corrections facilities in the following counties: Johnson (55), Jasper (5), Webster (2), Henry (2), Polk (3), Lee (1) and Page (1).

** Indicates prison diagnoses in Iowa Department of Corrections facilities. These persons are excluded from county totals shown on the map.

■ Ten Most Populous Counties

Figure 2.10. Prevalence of HIV Disease by County of Residence at Diagnosis: Iowans Living with HIV or AIDS per 100,000 Population as of December 31, 2013



- * Indicates one of the 10 most populous counties
- County rates do not include persons diagnosed in prison
- County populations are based on the 2012 U.S. Census estimates

Reporting HIV and AIDS in Iowa

What's reportable AIDS has been a reportable disease in Iowa since February 1983. HIV became reportable by name in Iowa on July 1, 1998. **Iowa Administrative Code 641—11.6**, below, establishes rules for reporting.

641—11.6(141A) Reporting of diagnoses and HIV-related tests, events, and conditions to the department.

11.6(1) The following constitute reportable events related to HIV infection:

a. A test result indicating HIV infection, including:

(1) Confirmed positive results on any HIV-related test or combination of tests, including antibody tests, antigen tests, cultures, and nucleic acid amplification tests.

(2) A positive result or report of a detectable quantity on any other HIV detection (non-antibody) tests, and results of all viral loads, including nondetectable levels.

b. AIDS and AIDS-related conditions, including all levels of CD4+ T-lymphocyte counts.

c. Birth of an infant to an HIV-infected mother (perinatal exposure) or any (positive, negative, or undetectable) non-antibody detection test (antigen test, viral culture, viral load, or qualitative nucleic acid amplification test) on an infant 18 months of age or younger.

d. Death resulting from an AIDS-related condition, or death of a person with HIV infection.

11.6(2) Within seven days of the receipt of a person's confirmed positive test result indicating HIV infection, the director of a plasma center, blood bank, clinical laboratory or public health laboratory that performed the test or that requested the confirmatory test shall make a report to the department on a form provided by the department.

11.6(3) Within seven days of the receipt of a test result indicating HIV infection, which has been confirmed as positive according to prevailing medical technology, or immediately after the initial examination or treatment of a person infected with HIV, the physician or other health care provider at whose request the test was performed or who performed the initial examination or treatment shall make a report to the department on a form provided by the department.

11.6(4) Within seven days of diagnosing a person as having AIDS or an AIDS-related condition, the diagnosing physician shall make a report to the department on a form provided by the department.

11.6(5) Within seven days of the death of a person with HIV infection, the attending physician shall make a report to the department on a form provided by the department.

11.6(6) Within seven days of the birth of an infant to an HIV-infected mother or a receipt of a laboratory result (positive, negative, or undetectable) of a non-antibody detection test (antigen test, viral culture, viral load, or qualitative nucleic acid amplification test) on an infant 18 months of age or younger, the attending physician shall make a report to the department on a form provided by the department.

11.6(7) The report shall include:

a. The person's name, address, date of birth, gender, race and ethnicity, marital status, and telephone number.

b. The name, address and telephone number of the plasma center, blood bank, clinical laboratory or public health laboratory that performed or requested the test, if a test was performed.

c. The address of the physician or other health care provider who requested the test.

d. If the person is female, whether the person is pregnant.

11.6(8) All persons who experience a reportable event while receiving services in the state, regardless of state of residence, shall be reported.

Need reporting forms? Want to call in a report? Have questions? Need surveillance data?

Jerry Harms, HIV Surveillance Coordinator: 515-242-5141; Jerry.Harms@idph.iowa.gov
Alagie "Al" Jatta, HIV Surveillance Epidemiologist: 515-281-6918; Alagie.Jatta@idph.iowa.gov

For free postpaid "03 CONFIDENTIAL" envelopes, call the Clearinghouse at 1-888-398-9696

See <http://www.idph.state.ia.us/HivStdHep/HIV-AIDS.aspx?prog=Hiv&pg=HivSurv> for this report and a 2013 slide set.