Iowa Department of Public Health
Promoting and Protecting the Health of Iowans

State of Iowa HIV and AIDS End-of-Year Surveillance Report
January 1, 2008 through December 31, 2008

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 the 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, gender, 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. Persons older than 18 months were considered to be HIV infected if they had 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 had 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, gender, 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+ 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). Many cases reported in a given year will have been diagnosed in some previous year but not reported immediately.

Evaluations of the surveillance system indicate that 98% of diagnosed HIV/AIDS cases have been reported. Persons diagnosed before July 1998, when HIV reporting by name began in Iowa, and persons not in care are the most likely not to 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 gender categories. To minimize the effects of reporting delays, case reports received through February 2, 2009, have been used. These reports include only those diagnoses made through December 31, 2008.

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.

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 reflects persons diagnosed with HIV or AIDS who were alive on 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 for 2008

Overall HIV Diagnoses

There were 108 HIV diagnoses in 2008, a decrease of 20 (16%) from the record-setting 128 diagnoses reported in 2007. The number of diagnoses in 2008 falls above the 10-year (1998 through 2007) average of 104 diagnoses but below the average of 111 diagnoses for the last five years (2003 through 2007). There were 3.6 HIV diagnoses per 100,000 population in 2008, compared to 4.3 HIV diagnoses per 100,000 population in 2007. Figure 2.1 charts the number of HIV diagnoses by diagnosis year for the years 1998 through 2008.

HIV Diagnoses by Gender

After increasing for four years in a row, the number of males diagnosed dropped to 89 in 2008, a decrease of 18 from the 107 diagnoses reported in 2007. The number of diagnoses among females dropped to 19 in 2008 from 21 in 2007. While the decrease in diagnoses among males in 2008 was larger than it was for females (17% vs. 10%), males still accounted for the majority (82%) of diagnoses in 2008. This was only a slight decrease from the proportion who were male (84%) in 2007. Figure 2.2 charts the number of HIV diagnoses by gender by diagnosis year for the years 1998 through 2008.

HIV Diagnoses by Age at Diagnosis

After more than doubling from 2003 to 2007, the number HIV diagnoses among persons 45 years of age and older decreased in 2008. While the number of diagnoses in persons 25 to 44 years of age also decreased, they still accounted for over half of the diagnoses in 2008. Despite decreases in diagnoses overall, diagnoses among those less than 25 years of age increased in 2008. In particular, diagnoses among persons 13 to 24 years of age increased by 45%. There was one pediatric diagnosis, a child born to an HIV-infected mother, in 2008. For persons 13 years of age and older (adults and adolescents), the median age at diagnosis was 38 years. For adult/adolescent males the median was 39.5 years; for females it was 32 years. Figure 2.3 shows the number of diagnoses by age for the years 1998 through 2008.

HIV Diagnoses by Race and Ethnicity – Overall Trends

The number of diagnoses decreased slightly in 2008 in the three major racial and ethnic groups – non-Hispanic white; non-Hispanic black/African American; and Hispanic. Figure 2.4 shows the trends in these groups for the period 1998 through 2008. HIV diagnoses among Iowans who considered themselves to be black/African-American or Hispanic continued to be disproportionate to their representation in the general population of the state. Figure 2.5 depicts these disparities. Discussion of specific categories follows below.

HIV Diagnoses by Race and Ethnicity – Non-Hispanic Black Persons

Diagnoses among black, non-Hispanic persons continue to be markedly disproportionate to the size of the population. Blacks make up 2.5% of Iowa's population, but accounted for 16% of the new HIV diagnoses in 2008. Seventeen blacks were diagnosed, equating to 23.0 per 100,000 population. Non-Hispanic black persons were 8.1 times more likely to be diagnosed with HIV than were non-Hispanic white persons in Iowa.

HIV Diagnoses by Race and Ethnicity – Hispanic Persons

Hispanic persons are also overrepresented among persons diagnosed with HIV. While making up 4.0% of Iowa's population, Hispanic persons accounted for 9.3% of new HIV diagnoses in 2008. Ten Hispanic persons were diagnosed, equating to 8.4 per 100,000 population. Hispanic persons were 2.9 times more likely to be diagnosed with HIV than were white, non-Hispanic persons in Iowa.

HIV Diagnoses by Race and Ethnicity – Non-Hispanic White Persons
Despite the disparities among blacks and Hispanics, the largest proportion of new diagnoses in Iowa continued to be among white, non-Hispanic persons. They accounted for 71.3% of new HIV diagnoses. Seventy-seven non-Hispanic white persons were diagnosed, equating to 2.8 per 100,000 population.

HIV Diagnoses by Country of Birth
Diagnoses of HIV among the foreign born have declined since 2002. Only 15 (14%) of the 108 persons diagnosed in 2008 were born in a country other than the United States or one of its dependencies. In 2002, 32 (30%) of the 108 persons diagnosed were foreign born. Figure 2.6 maps the countries of birth of persons living with HIV/AIDS on December 31, 2008, who were Iowa residents at their first HIV diagnosis in the United States.

HIV Diagnoses by Exposure Category – Both Sexes
Exposure categories describe the risk factors that an individual may have had. The selection of the most likely route of transmission is based on a hierarchical order of routes of exposure that was developed by the Centers for Disease Control and Prevention (CDC) in the early years of the AIDS epidemic. A person is categorized according to patient self-report of risk and/or an investigation by partner services staff.

Men-who-have-sex-with-men (MSM) remained the leading category for mode of exposure to HIV infection. While the number of diagnoses among MSM decreased to 64, MSM accounted for 59% of reported cases, up from 54% in 2007. Reported numbers (with percentages in parentheses) of other modes of HIV exposure in 2008 were as follows: injection drug use (IDU), 10 (9%); men-who-have-sex-with-men and inject drugs (MSM/IDU), 2 (2%); heterosexual contact, 16 (15%); and no identified risk (NIR), 15 (14%). As previously noted, there was one pediatric diagnosis (1%) in 2008, a perinatally acquired infection.

The proportions of diagnoses in MSM and IDU were up slightly over 2007, while MSM/IDU and heterosexual contact were down slightly. The proportion of NIRs was unchanged from 2007. The perinatally acquired infection was the first such case reported since 2005.

Figure 2.7 shows the number of HIV diagnoses for the major modes of exposure by diagnosis year for the years 1998 through 2008.

HIV Diagnoses by Exposure Category – Males
<u>MSM</u> The proportion of males who reported male-to-male sexual contact increased from 64% in 2007 to 73% in 2008. This is above the average of 61% for the 10 years from 1998 through 2007 and 59% for the 5 years from 2003 through 2007.

<u>IDU</u> The proportion of males who reported injection drug use was 8% in 2008 compared to 7% in 2007, consistent with the 5- and 10-year averages of 7%.

<u>MSM/IDU</u> The proportion of males who reported male-to-male sexual contact in combination with injection drug use was 2% in 2008, compared to 6% in 2007. This contrasts with the 5- and 10-year averages of 8%.

<u>Any MSM</u> "Any MSM" is a category created by combining MSM and MSM/IDU. In 2008, "Any MSM" accounted for 75% of male exposure compared to 70% in 2007. The 5- and 10-year averages for the "Any MSM" category were 67% and 69%, respectively.

Any IDU "Any IDU" is a category created by combining IDU and MSM/IDU. In 2008, "Any IDU" accounted for 10% of male exposure, compared to 12% in 2007. The 5- and 10-year averages for the "Any IDU" category were both 15%.

Heterosexual contact Heterosexual contact was the reported risk for 6% of males in 2008, compared to 12% in 2007 and to 15% for both the 5-year and 10-year averages.

No identified risk Risk was not identified for 11% of males in 2008 and 2007, compared to an average of 15% of diagnoses during the 5 years from 2003 through 2007 and to 13% for the 10 years from 1998 through 2007.

The distribution of cases among males 13 years of age and older by exposure category is displayed in Table 2.4.

HIV Diagnoses by Transmission Category – Females

Heterosexual contact Heterosexual contact remains the predominate mode of transmission reported by females. Fifty-eight percent of females diagnosed in 2008 reported heterosexual transmission, compared to 67% in 2007, to 60% for the 5 years from 2003 through 2007, and to 59% for the 10 years from 1998 through 2007. Please keep in mind that because the numbers of diagnoses are small, a minimal change in the number of diagnoses may translate to a more substantial change in the proportion, but may nonetheless have little practical or statistical significance.

Injection drug use The number of diagnoses among injection drug users increased from 2 in 2007 to 3 in 2008. IDU as a proportion of female diagnoses was 16% in 2008, compared to 10% in 2007, and to an average of 9% for the 5 years from 2003 through 2007 and 10% for the 10 years from 1998 through 2007.

No identified risk Persons without a known exposure accounted for 26% of cases among females in 2008, 24% in 2007, 32% for 2003 through 2007, and 31% for 1998 through 2007. The proportion of NIRs tends to be higher in females than in males because the proportion of heterosexuals is higher among females and because CDC's definition of heterosexual exposure requires a partner with a documented risk or with documented HIV infection. Therefore, the proportion of cases among heterosexual women is likely to be higher than reported.

The distribution of cases among females 13 years of age and older by exposure category is displayed in Table 2.5.

AIDS Diagnoses and Deaths among Persons with HIV/AIDS

AIDS diagnoses continued to decline, with 65 diagnose in 2008, down from 67 in 2007 and 79 in 2006. Deaths among persons with HIV/AIDS increased to 33 in 2008, a 57% increase from the 21 reported in 2007. The number of deaths in 2008 will most likely increase when matches to death registries take place later in the year. See Table 2.3 for further data on HIV and AIDS diagnoses and deaths by year.

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

HIV/AIDS prevalence continues to increase. On December 31, 2008, there were 1,616 persons living with HIV or AIDS who were Iowa residents at time of diagnosis, a prevalence of 53.8 per 100,000 population. This compares to 1,522 persons living with HIV/AIDS on the same date in 2007, a prevalence of 51.0 per 100,000. Figure 2.8 shows 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 (striped) tier of the graph represents the estimated numbers of undiagnosed persons, based upon the surveillance program's estimate of the timeliness of case reporting and CDC's estimate of persons who may be undiagnosed. The figure indicates there may be as many as 601 persons who are undiagnosed or unreported.

Most of the persons living with HIV/AIDS were diagnosed between the ages of 25 and 44 years. Most of these persons are now between 35 and 54 years of age. Figure 2.9 compares current ages of the persons living with HIV or AIDS to their ages at diagnosis.

Section 3: Tables, Charts and Graphs

Table 2.1 **Iowa HIV and AIDS by Gender, Age at Diagnosis, Race/Ethnicity, Country of Birth and Mode of Exposure: Diagnosis Year 2008**

Table 2.2 **Iowa HIV Diagnoses by Gender, Age at Diagnosis, Race/Ethnicity, Country of Birth and Mode of Exposure by Year of Diagnosis: 1998 through 2008**

Table 2.3 **Iowa HIV and AIDS Diagnoses and Deaths among Persons with HIV/AIDS: 1982 through 2008**

Table 2.4 **HIV Diagnoses among Iowa Males 13 Years of Age and Older by Exposure Category by Year of HIV Diagnosis: 1998 through 2008**

Table 2.5 **HIV Diagnoses among Iowa Females 13 Years of Age and Older by Exposure Category by Year of HIV Diagnosis: 1998 through 2008**

Figure 2.1 **Iowa HIV Diagnoses: 1998 through 2008**

Figure 2.2 **Iowa HIV Diagnoses by Gender: 1998 through 2008**

Figure 2.3 **Iowa HIV Diagnoses by Age in Years at Diagnosis: 1998 through 2008**

Figure 2.4 **Iowa HIV Diagnoses by Race: 1998 through 2008**

Figure 2.5 **Disparities in the Racial Composition of the General Population of Iowa and that of Iowans Living with HIV/AIDS on December 31, 2008**

Figure 2.6 **Countries of Birth of Persons Living with HIV/AIDS on December 31, 2008, who were Iowa Residents at First Diagnosis in the U.S.**

Figure 2.7 **Iowa HIV Diagnoses by Mode of Exposure to HIV: 1998 through 2008**

Figure 2.8 **Estimated Number of Persons Living with HIV or AIDS in Iowa on December 31 of Each Year: 1984 through 2008**

Figure 2.9 **Current Age vs. Age at Diagnosis for Iowans Living with HIV/AIDS on December 31, 2008**

Figure 2.10 **Persons Living with HIV/AIDS on December 31, 2008, by County of Residence at Diagnosis**

Figure 2.11 **Persons Living with HIV/AIDS on December 31, 2008, by County of Current Residence**

Table 2.1 Iowa HIV and AIDS by Gender, Age at Diagnosis, Race/Ethnicity, Country of Birth and Mode of Exposure: Diagnosis Year 2008

Characteristics	HIV Diagnoses[1]		Aids Diagnoses[2]		Persons Living with HIV/AIDS[3]	
	Number	(%)	Number	(%)	Number	(%)
Gender						
Male	89	(82)	49	(75)	1,273	(79)
Female	19	(18)	16	(25)	343	(21)
Age at Diagnosis						
Under 13	1	--	0	--	11	--
13 - 14	0	--	0	--	1	--
15 - 24	16	(15)	3	(5)	228	(14)
25 - 34	30	(28)	19	(29)	586	(36)
35 - 44	26	(24)	20	(31)	505	(31)
45 - 54	25	(23)	19	(29)	216	(13)
55 - 64	10	(9)	4	(6)	60	(4)
65 or Older	0	--	0	--	9	--
Current Age[4]						
Under 13	1	--	0	--	2	--
13 - 14	0	--	0	--	1	--
15 - 24	15	(14)	3	(5)	51	(3)
25 - 34	30	(14)	16	(25)	266	(17)
35 - 44	23	(21)	19	(29)	514	(32)
45 - 54	24	(22)	18	(28)	546	(34)
55 - 64	10	(9)	3	(5)	194	(12)
65 or Older	0	--	0	--	42	(3)
Race/Ethnicity						
Hispanic/Latino - All Races	10	(9)	6	(9)	137	(9)
White	77	(71)	45	(69)	1,121	(69)
Black/ African American	17	(16)	13	(20)	322	(20)
Asian	1	--	1	--	19	--
Native Hawaiian/Pacific Islander	0	--	0	--	1	--
American Indian/Alaskan Native	0	--	0	--	2	--
Multi-race	3	(3)	0	--	14	--
Country of Birth						
United States or dependency	93	(86)	55	(85)	1,395	(86)
Other Countries	15	(14)	10	(15)	221	(14)
Mode of Exposure – Adult[5]						
Men who have sex with men (MSM)	64	(59)	35	(54)	798	(49)
Injecting drug use (IDU)	10	(9)	4	(6)	158	(10)
Men who have sex with men and inject drugs (MSM/IDU)	2	(2)	4	(6)	114	(7)
Heterosexual Contact	16	(15)	9	(14)	286	(18)
Hemophilia/coagulation disorder	0	--	0	--	9	--
Receipt of blood or tissue	0	--	0	--	10	--
Risk not reported/other (NIR)	15	(14)	13	(20)	223	(14)
Total Adult Cases	107	(99)	65	(100)	1,598	(99)
Mode of Exposure – Pediatric[5]						
Mother with/at risk for HIV infection	1	--	0	--	12	--
Hemophilia/coagulation disorder	0	--	0	--	5	--
Receipt of blood or tissue	0	--	0	--	1	--
Risk not reported/other (NIR)	0	--	0	--	0	--
Total Pediatric Cases	1	(1)	0	--	18	(1)
TOTAL CASES	108		65		1,616	

[1] HIV Diagnoses reflect all cases of HIV infection diagnosed for the first time, regardless of AIDS status. 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 on December 31, 2008. All deaths may not have been reported. Current age is the person's age on December 31, 2008.

[4] Current age is age on December 31, 2008, and is reported only for persons alive as of that date.

[5] Patients reported as adolescents or adults (13 years of age and older) may have had pediatric exposures. These persons will be classified as adult/adolescent at time of diagnosis, but are listed under pediatric exposures.

Table 2.2 Iowa HIV Diagnoses[1] by Gender, Age at Diagnosis, Race/Ethnicity, Country of Birth and Mode of Exposure by Year of Diagnosis: 1998 through 2008

Year of Diagnosis	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998
TOTAL CASES	108	128	110	115	106	90	108	100	92	85	96
Characteristics											
Gender											
Male	89	107	91	87	79	57	81	74	73	63	78
Female	19	21	19	28	27	33	27	26	19	22	18
Age at Diagnosis											
Under 13	1	0	0	1	0	2	0	0	1	0	1
13 - 14	0	0	0	0	0	0	0	0	0	0	0
15 - 24	16	11	12	20	13	7	14	14	10	10	7
25 - 34	30	37	27	31	30	31	37	24	27	28	36
35 - 44	26	38	38	33	39	32	37	38	33	32	42
45 - 54	25	26	24	24	15	15	15	16	17	9	9
55 - 64	10	13	8	5	6	3	5	8	3	4	0
65 or Older	0	3	1	1	3	0	0	0	1	2	1
Race/Ethnicity											
Hispanic/Latino - All Races	10	11	11	7	12	13	17	11	7	9	8
White	77	90	77	77	69	45	57	62	63	64	71
Black/ African American	17	25	18	26	24	29	32	24	21	10	16
Asian	1	2	2	2	1	1	2	0	0	1	1
Native Hawaiian/Pacific Islander	0	0	0	0	0	0	0	0	0	0	0
American Indian/Alaskan Native	0	0	0	1	0	0	0	0	0	0	0
Multi-race	3	0	2	1	0	2	0	1	1	1	0
Country of Birth											
United States or dependency	93	110	91	94	88	62	76	78	78	74	
Other Countries	15	18	19	21	18	28	32	22	14	11	
Mode of Exposure – Adult[2]											
Men who have sex with men (MSM)	64	69	57	42	48	33	54	51	46	32	50
Injecting drug use (IDU)	10	9	6	9	11	4	9	5	8	8	13
Men who have sex with men and inject drugs (MSM/IDU)	2	6	2	13	7	5	7	7	6	4	5
Heterosexual Contact	16	27	23	29	24	18	16	24	17	23	21
Hemophilia/coagulation disorder	0	0	0	0	0	0	0	0	0	0	0
Receipt of blood or tissue	0	0	0	0	0	1	0	0	1	1	0
Risk not reported/other (NIR)	15	17	22	20	16	27	22	13	13	17	6
Total Adult Cases	107	128	110	113	106	88	108	100	91	85	95
Mode of Exposure – Pediatric[2]											
Mother with/at risk for HIV infection	1	0	0	1	0	2	0	0	1	0	1
Hemophilia/coagulation disorder	0	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	0
Risk not reported/other (NIR)	0	0	0	0	0	0	0	0	0	0	0
Total Pediatric Cases	1	0	0	1	0	2	0	0	1	0	1

[1] HIV Diagnoses reflect all cases of HIV infection diagnosed for the first time, regardless of AIDS status. 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] 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 2.3 Iowa HIV and AIDS Diagnoses and Deaths among Persons with HIV/AIDS: 1982 through 2008

- Deaths are not necessarily HIV related. Persons who died before receiving a diagnosis of AIDS are included under "HIV Deaths".
- Deaths for 2008 are incomplete. Matching to the state death registry and the Social Security Death Master File in July of 2009 will provide updated death data.
- HIV diagnoses reflect all cases of HIV infection diagnosed for the first time, regardless of AIDS status. Some may also be counted as AIDS cases if they received an AIDS diagnosis during the same calendar year. HIV reporting by name began July 1, 1998.

	HIV		AIDS	
Year	Diagnoses	Deaths	Diagnoses	Deaths
1982	--		1	
1983	--		1	
1984	--		7	
1985	--		24	
1986	--		23	
1987	--		44	
1988	--		49	
1989	--		66	
1990	--		74	
1991	--		119	
1992	--		161	
1993	--		103	79
1994	--	1	110	85
1995	--	1	104	103
1996	--	1	97	66
1997	--	1	75	28
1998	99	2	60	16
1999	85	2	77	22
2000	92	2	80	28
2001	100	3	80	31
2002	108	2	75	32
2003	90	5	75	28
2004	106	2	70	28
2005	115	5	78	22
2006	110	2	79	19
2007	128	6	67	27
2008	108	3	65	14

Table 2.4 HIV Diagnoses among Iowa Males 13 Years of Age and Older by Exposure Category by Year of HIV Diagnosis: 1998 through 2008

	Year of HIV Diagnosis							
	2008[1]		2007[2]		1998 to 2007[3]		2003 to 2007[4]	
Exposure category	no.	(%)	no.	(%)	no.	(%)	no.	(%)
Male-to-male sexual contact (MSM)	64	(73)	69	(64)	458	(61)	249	(59)
Injection drug use (IDU)	7	(8)	7	(7)	53	(7)	28	(7)
Male-to-male sexual contact and injection drug use (MSM/IDU)	2	(2)	6	(6)	61	(8)	33	(8)
Any MSM (MSM + MSM/IDU)	66	(75)	75	(70)	519	(69)	282	(67)
Any IDU (IDU + MSM/IDU)	9	(10)	13	(12)	114	(15)	61	(15)
Heterosexual contact	5	(6)	13	(12)	79	(11)	46	(11)
Hemophilia/coagulation disorder	0	--	0	--	0	--	0	--
Receipt of blood, components or tissue	0	--	0	--	4	--	2	--
No identified risk, other (NIR)	10	(11)	12	(11)	96	(13)	62	(15)

[1] 88 males age 13 years or older were diagnosed in 2008
[2] 107 males age 13 years or older were diagnosed in 2007.
[3] 751 males age 13 years or older were diagnosed from 1998 through 2007.
[4] 420 males age 13 years or older were diagnosed from 2003 through 2007.

Table 2.5 HIV Diagnoses among Iowa Females 13 Years of Age and Older by Exposure Category by Year of HIV Diagnosis: 1998 through 2008

Exposure Category	Year of HIV Diagnosis							
	2008[1]		2007[2]		1998 to 2007[3]		2003 to 2007[4]	
	no.	(%)	no.	(%)	no.	(%)	no.	(%)
Injection drug use (IDU)	3	(16)	2	(10)	24	(10)	11	(9)
Heterosexual contact	11	(58)	14	(67)	135	(59)	75	(60)
Hemophilia/coagulation disorder	0	--	0	--	0	--	0	--
Receipt of blood, components or tissue	0	--	0	--	0	--	0	--
No identified risk, other (NIR)	5	(26)	5	(24)	70	(31)	40	(32)

[1] 19 females age 13 years or older were diagnosed in 2008.
[2] 21 females age 13 years or older were diagnosed in 2007.
[3] 229 females age 13 years or older were diagnosed from 1998 through 2007.
[4] 126 females age 13 years or older were diagnosed from 2003 through 2007.

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. On that same date, laboratory reporting was initiated, infants born to HIV-infected women (i.e., perinatal exposures) became reportable, and anonymous testing, except for those tests performed through home-collection kits, ceased in Iowa.

Reportable events

- Confirmed positive results on any HIV diagnostic test, including antibody tests, antigen tests, cultures, and qualitative polymerase chain reaction (PCR) tests.
- A positive result or report of a detectable quantity on any other HIV detection (non-antibody) tests, and results of all viral loads, including non-detectable levels.
- Acquired Immune Deficiency Syndrome (AIDS) and AIDS-defining conditions, including all levels of CD4+ T-lymphocyte counts.
- Birth of an infant to an HIV-infected mother (perinatal exposure) or <u>any</u> (positive, negative, or undetectable) non-antibody detection test (antigen test, viral culture, viral load, or qualitative PCR detection test) on an infant less than or equal to 18 months of age. These are tests indicative of perinatal exposures. Negative <u>antibody</u> tests (EIA, immunofluorescence, or Western blot) are not reportable.
- Death resulting from an AIDS-related condition, or death of a person with HIV/AIDS.

Who shall report and how – <u>reports must be made within seven days of the reportable event</u>

- Hospitals – by mail or phone, report cases and births to HIV-infected women
- Laboratories – by mail, report results of positive HIV detection tests, cultures, and all levels of viral loads and CD4+ cell counts
- Physicians, report by mail or by telephone
  - all new HIV diagnoses
  - all new AIDS diagnoses
  - all new patients with HIV disease, <u>regardless of whether they are newly diagnosed</u>
  - all deaths of HIV infected persons

For forms and other questions about reporting, call Jerry Harms at 515-242-5141 or Rob Walker at 515-281-6918.

Iowa Department of Public Health
Bureau of HIV, STD, and Hepatitis
321 East 12th Street
Des Moines, IA 50319-0075

See **http://www.idph.state.ia.us/adper/hiv_aids_programs.asp#surveillance** for a full epidemiological profile.

Trends in Diagnoses of HIV Infection among Iowans

Figure 2.1

- 108 diagnosed in 2008, down from 128 in 2007
- 1998 to 2007 average = 104
- 2003 to 2007 average = 111

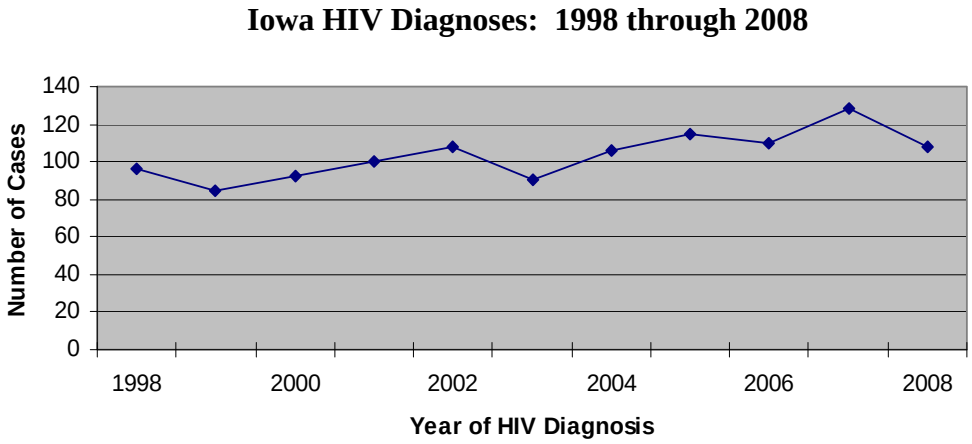


Figure 2.2

- Diagnoses in males fell to 89 in 2008 from 107 in 2007
- 19 diagnoses in females consistent with 2006 & 2007

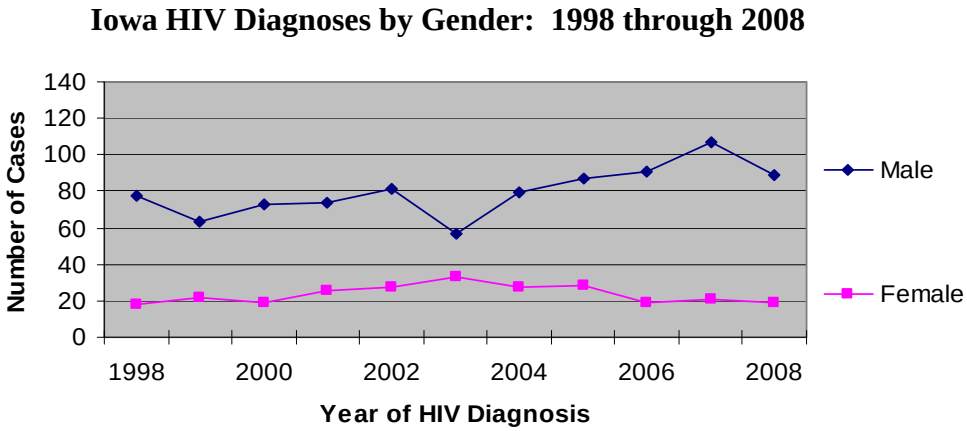


Figure 2.3

- After more than doubling from 2003 to 2007, diagnoses in persons 45+ years of age fell in 2008
- Diagnoses in persons 25 to 44 years decreased but still accounted for over half of diagnoses in 2008
- Diagnoses increased among persons 13 to 24 years of age
- One child, born to an HIV-infected mother, was diagnosed with HIV

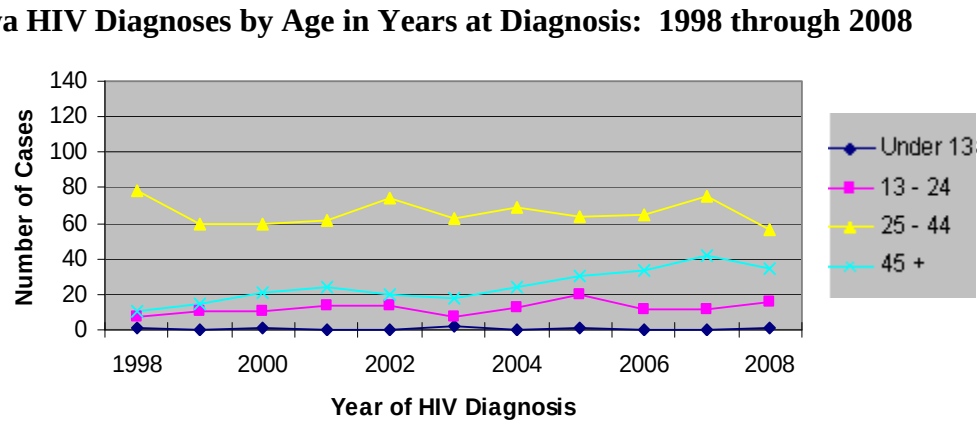


Figure 2.4

- Diagnoses in the three major racial and ethnic groups decreased slightly in 2008

Iowa HIV Diagnoses by Race: 1998 through 2008

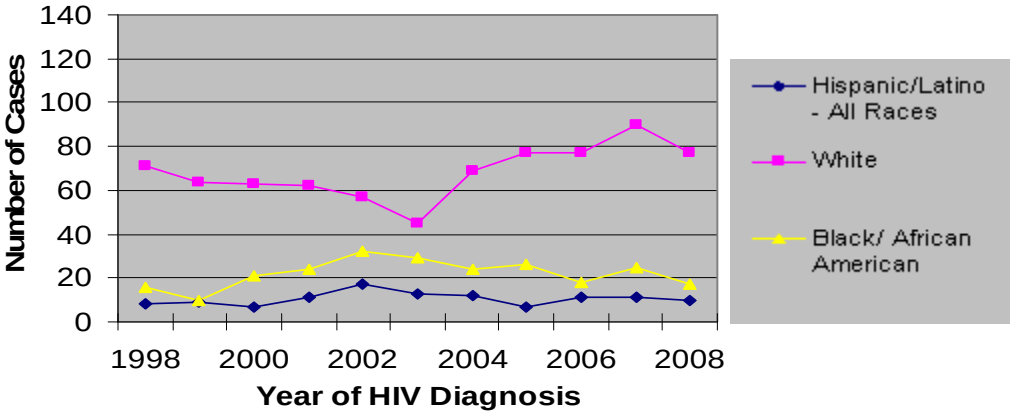


Figure 2.5

- African-Americans, Hispanics, and foreign-born blacks continue to be over-represented in comparison to the sizes of their populations in Iowa

Disparities in the Racial Composition of the General Population of Iowa and that of Iowans Living with HIV/AIDS on December 31, 2008

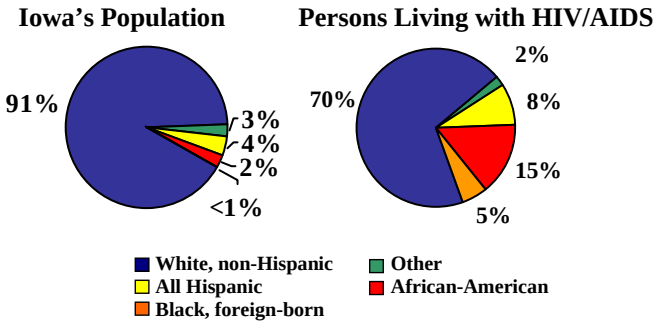
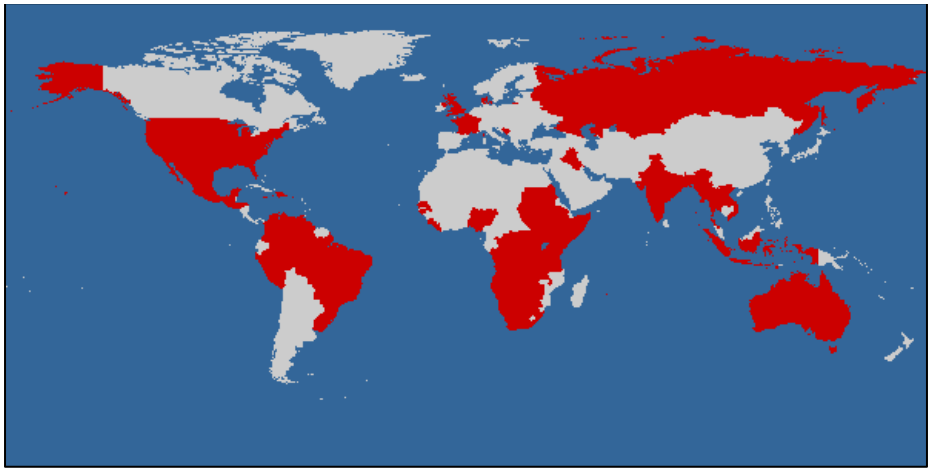


Figure 2.6

- Diagnoses in foreign-born persons have dropped from 32 in 2002 to 15 in 2008
- 14% of persons living with HIV/AIDS are foreign born

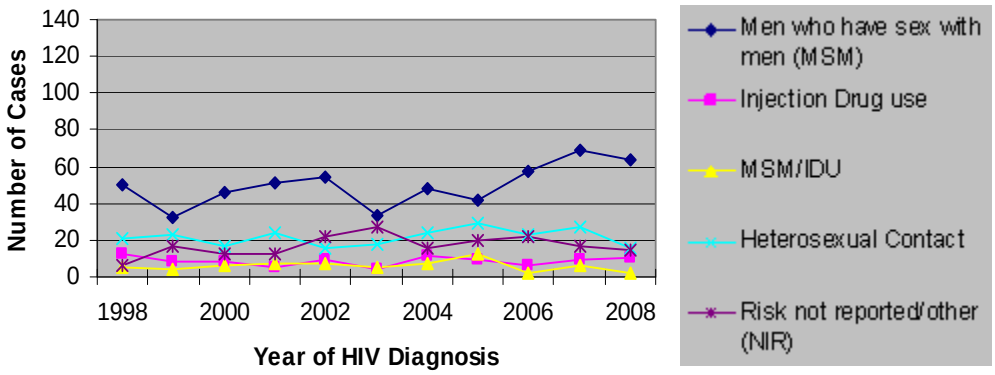
Countries of Birth of Persons Living with HIV/AIDS on December 31, 2008, who were Iowa Residents at First HIV Diagnosis in the U.S.



Iowa HIV Diagnoses by Mode of Exposure to HIV: 1998 through 2008

Figure 2.7

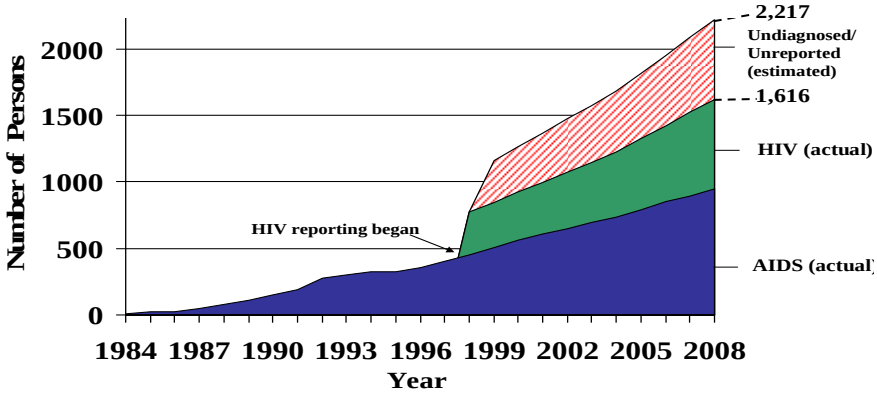
- Diagnoses among MSM fell but remained the leading mode of exposure
- Proportions of MSM & IDU rose slightly while MSM/IDU & heterosexual contact dropped very slightly



Estimated Number of Persons Living with HIV or AIDS in Iowa on December 31 of Each Year: 1984 through 2008

Figure 2.8

- Prevalence continues to increase
- 1,616 persons living with HIV/AIDS = 53.8 per 100,000 population



Current Age vs. Age at Diagnosis for Iowans Living with HIV/AIDS on December 31, 2008

Figure 2.9

- Most of the persons living with HIV/AIDS were 25 to 44 years of age at diagnosis. Most are now 35 to 54 years of age.

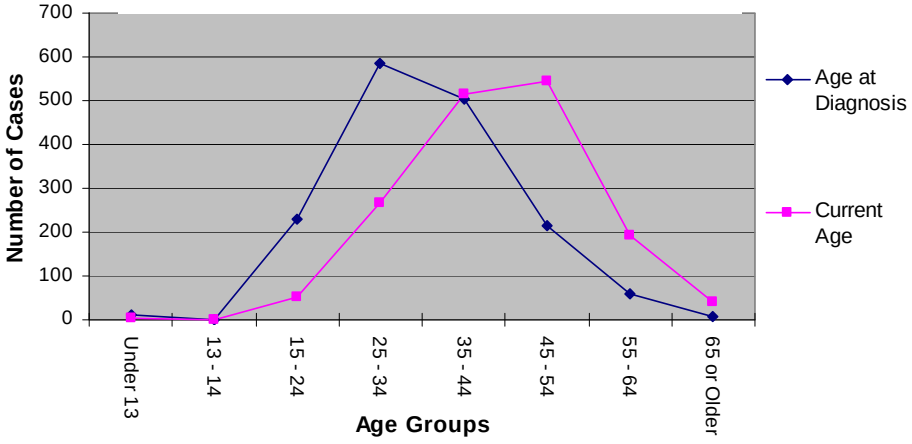
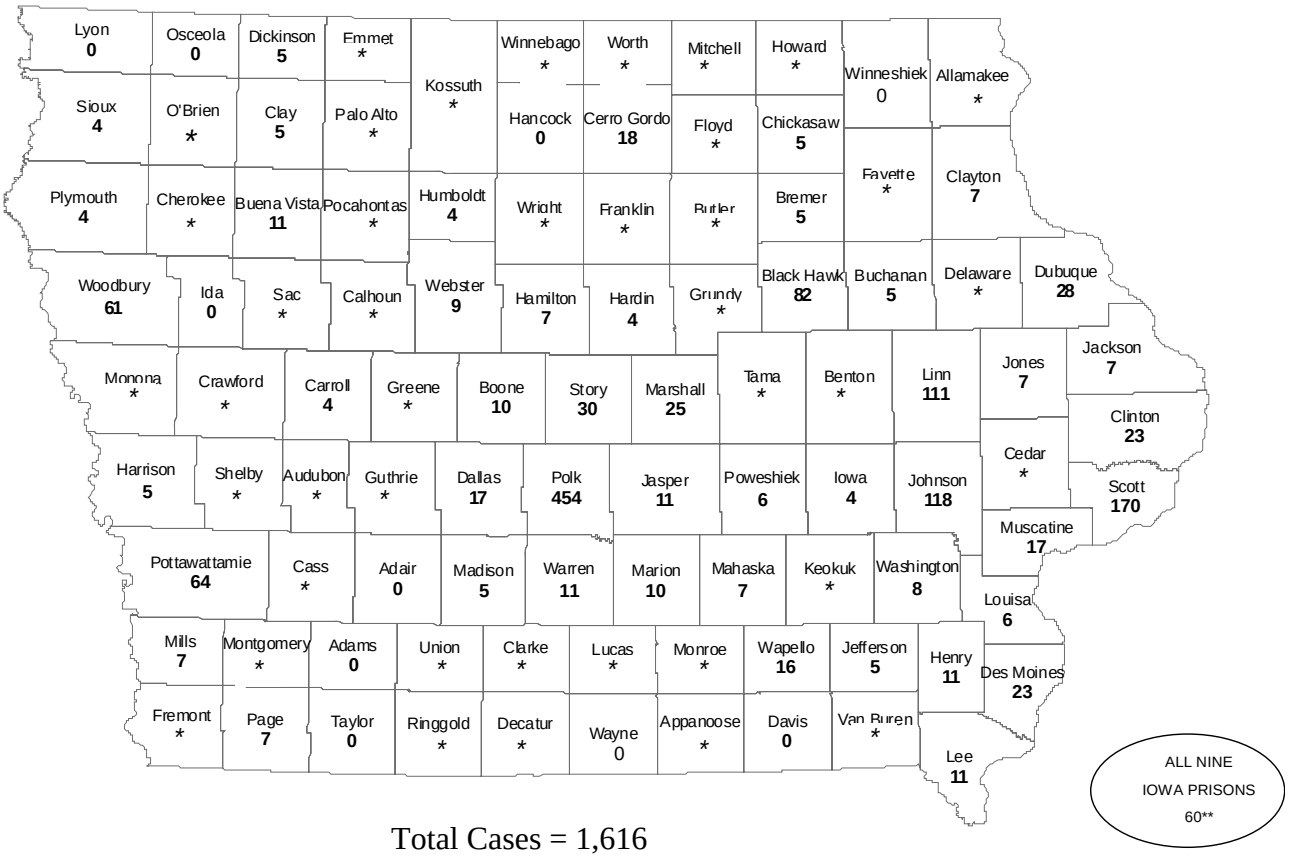


Figure 2.10 Persons Living with HIV/AIDS as of December 31, 2008, by County of Residence at Diagnosis



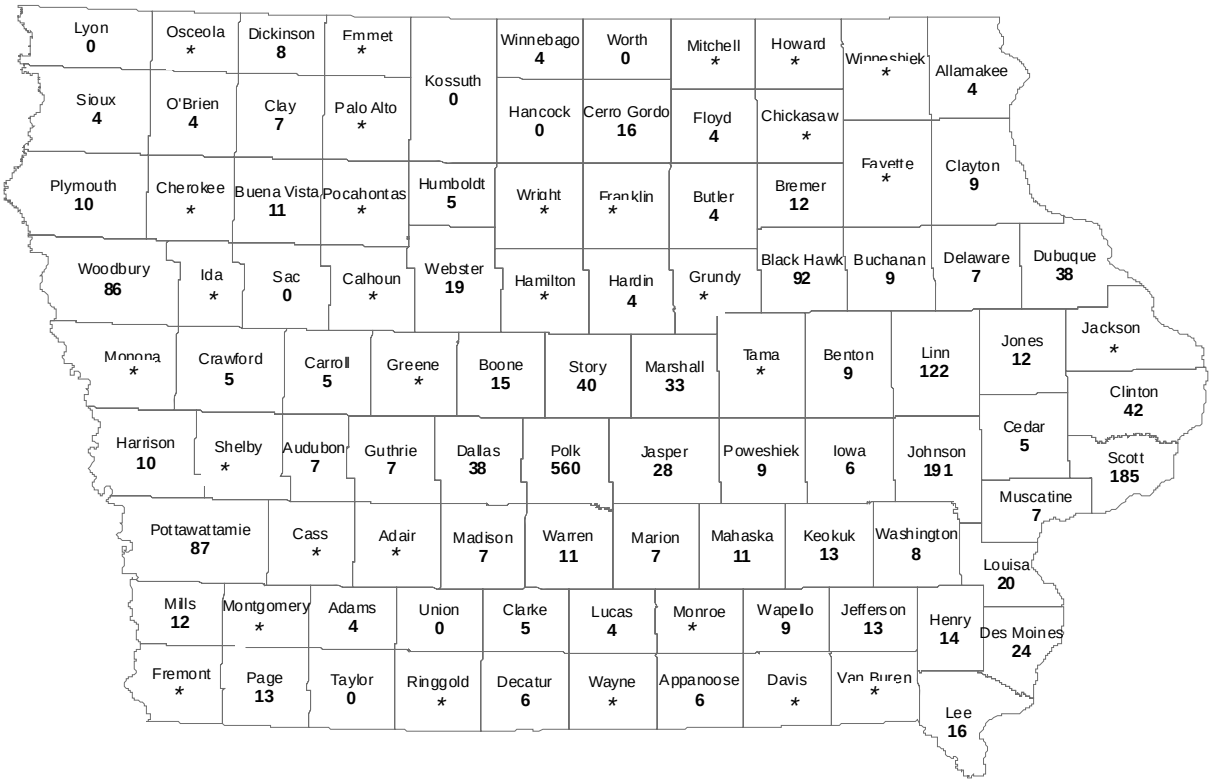
Total Cases = 1,616

This map shows the number of persons living with HIV or AIDS on December 31, 2008. It indicates where persons resided at the <u>time of diagnosis</u> of AIDS, for those persons living with AIDS, or of diagnosis of HIV infection, for those persons living with HIV (not AIDS). Persons may not be currently living in these counties. All deaths may not have been reported.

* Indicates 1-3 persons living with HIV/AIDS. These persons are included in the total of 1,616 but are not shown on the map.

**** Prisoners were diagnosed while being held in the following counties: Henry (2), Jasper (4), Johnson (49), Page (1), Polk (3), and Webster (1), but are not reflected in the data from those counties.**

Figure 2.11 Persons Living with HIV/AIDS on December 31, 2008, by County of Current Residence



Total Cases = 2,045

There were 2,045 persons thought to be living with HIV/AIDS in Iowa on December 31, 2008, regardless of their states of residence at time of diagnosis. For comparison, there were 1,616 persons who were Iowa residents at the time of diagnosis and who were living (but not necessarily in Iowa) on December 31, 2008.

Caution: Data may over-estimate persons living with HIV/AIDS in Iowa. Iowa's HIV/AIDS surveillance system does very well at collecting information on new HIV and AIDS diagnoses when the individual is living in Iowa at the time of diagnosis. Similarly, when a person who was initially diagnosed in another state moves to Iowa and enters care, labs and physicians begin to send reports to the surveillance office. Also, if death occurs in Iowa, surveillance is able to keep close track of HIV/AIDS deaths. In contrast, when an Iowa resident with HIV disease moves to another state and seeks HIV care there, Iowa must depend upon the surveillance program of the new state of residence for notification. As might be expected, some states do better at this than others. Thus, because the program is not always aware of when people leave the state, these data may over-estimate the number of persons living with HIV or AIDS, and should be interpreted with caution.

* Indicates 1 to 3 persons living with HIV/AIDS. These persons are not shown on the map but are included in the total of 2,045.