State of Iowa HIV Disease End-of-Year 2017 Surveillance Report

IDPH
Iowa Department of Public Health

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Executive Summary

Here are a few points drawn from our 2017 HIV data:

- **125 Iowans Diagnosed with HIV in 2017**. HIV diagnoses were down nearly 10% from last year's all-time high of 137, but they still remain above the five-year average of 119 diagnoses. The recent high number of diagnoses from 2015 through 2017 may be an indication that people who are at risk for HIV are being reached by HIV prevention programs and social media messages, and are getting tested. Despite the overall decrease in diagnoses, diagnoses among US-born people increased by 3% in 2017. This is largely due to increases among US-born black/African-American and among US-born Hispanic/Latino people. The increase in the number of people diagnosed among these populations is likely a sign of improved access to health care and concerted efforts to reach those at most risk of HIV in Iowa. HIV diagnoses among U.S.-born White, non-Hispanic people decreased by 13% from 2016 to 2017, and diagnoses among foreign-born black/African-American people decreased by 52%.
- **Sex:** Overall, males and females experienced decreases in diagnoses equally. The number of females diagnosed with HIV decreased from 32 in 2016 to 24 in 2017, and fell below 20% of all people diagnosed. Males diagnosed with HIV continued to outnumber females by a ratio of about four to one.
- **Age:** People aged 25 through 44 years continued to make up the largest proportion (43%) and number.(54) of people diagnosed with HIV. The number of youth and young adults 15 through 24 years of age who were diagnosed with HIV increased from 28 in 2016 (21% of all people diagnosed with HIV) to 31 (25% of all people diagnosed) in 2017.
- **Racial and ethnic minorities are over-represented:**
  - Non-Hispanic black/African-American people represent 3% of Iowa's general population, but experienced 30% of new diagnoses among Iowans in 2017. However, overall diagnoses among black/African-American, non-Hispanic people decreased from 46 (34% of all people diagnosed) in 2016 to 38 (30% of all people diagnosed) in 2017. The decrease in diagnoses among black/African-American Iowans was driven by a 52% decrease in diagnoses among foreign-born black people. Conversely, the number of U.S.-born African-American people diagnosed with HIV increased 24%, from 21 diagnoses in 2016 to 26 diagnoses in 2017. Males accounted for 18 (69%) of the 26 U.S-born African-American persons diagnosed in 2017, and among these, 14 (89%) were men who had sex with men. Of the 38 black/African-American persons diagnosed in 2017, 12 (32%) were foreign born. Males represented 58% of foreign-born black Iowans who were diagnosed with HIV in 2017.
  - Hispanics/Latinos represent 6% of Iowa's population, and experienced 13% of all HIV diagnoses in 2017. Nine Hispanic/Latino persons diagnosed (56%) were foreign born. Of these, eight were males, and seven were men who had sex with men. Similarly, four of the five U.S.-born Hispanic/Latino males who were diagnosed were MSM.
- **Late testers:** The proportion of people diagnosed with AIDS within three months of their initial HIV diagnosis ("late testers") increased by 5 % from 2016 to 2017. Overall, late diagnoses have decreased significantly since 2013 when 46% of people diagnosed were considered to be late testers. In 2017, 28% of people diagnosed were late testers. This is further confirmation that people at risk for HIV are getting timelier access to testing.
- **HIV prevalence:** As of December 31, 2017, there were 2,790 people living with HIV with a current address in Iowa, a prevalence of 88 per 100,000 persons. As of December 31, 2017, 96 of Iowa's 99 counties had at least one resident living with HIV. Prevalence in nine counties was greater than 100 per 100,000 population (0.1%). Polk County, with 167 per 100,000, had the highest prevalence, followed by Pottawattamie County (133 per 100,000), and Scott County (130 per 100,000).
- **Continuum of HIV Care:** Of 2,662 persons diagnosed with HIV disease on or before December 31, 2016, and living in Iowa as of December 31, 2017, 2,211 (83%) were retained in HIV-related care, and 2,070 (78%) were virally suppressed. This is significantly higher than many parts of the country. National estimates vary, but most suggest that approximately 60% of people with HIV are virally suppressed. When Iowans are retained in care (i.e., have two or more visits to an HIV primary care provider during a year), viral suppression rises to 94%.

Organization of the Surveillance Report

This end-of-year report presents surveillance data on HIV disease in Iowa. It describes HIV disease for the state and of its population subgroups. It includes information on the HIV care continuum and partner services offered to people newly diagnosed with HIV while residing in Iowa. There are four sections to the report: Section 1 describes **data sources**; Section 2 is a **narrative summary** with key highlights; Section 3 employs **charts, graphs, and tables** to illustrate trends; and Section 4 outlines the **reporting requirements** for HIV in Iowa.

Definitions

HIV diagnoses reflect all people diagnosed with HIV for the first time, regardless of AIDS status, who were residents of Iowa at diagnosis. Some may also have been counted among AIDS diagnoses 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 people who first met the criteria for AIDS while living in Iowa during the specified time period, regardless of when the case was reported to the state. Age is age at time of first diagnosis of AIDS.

People living with HIV disease reflect people diagnosed with HIV (regardless of AIDS status) who were alive as of December 31 of a given year.

Pediatric exposures: A person diagnosed at 13 years of age or older (adult/adolescent) may have had a pediatric exposure to HIV. In such an instance, the person would be classified as adult/adolescent at time of diagnosis, but would be listed under pediatric exposures in tables that display data by category of exposure. Pediatric exposure categories include mother with HIV; hemophilia or coagulation disorder with exposure to contaminated Factor VIII (Hemophilia A), Factor IX (Hemophilia B), or other clotting factors; or receipt of contaminated blood, blood components, or tissue.

Section 1: SOURCES OF DATA

Core HIV Surveillance Data

eHARS Data System

The enhanced HIV and AIDS reporting system (eHARS) stores information on all people with HIV disease who have been reported to the Iowa Department of Public Health (IDPH) HIV Surveillance Program. All people with HIV disease who were first diagnosed while living in Iowa, or who have lived in Iowa at some point in time after diagnosis with HIV, or who have accessed care at an Iowa facility and have been reported to IDPH, are included in eHARS. eHARS is the primary source of data for this report.

Surveillance Case Definition of HIV Disease

The surveillance case definition of HIV infection (the cause of AIDS) was originated by CDC in 1982 and has been modified several times to respond to advances in testing and diagnosis of HIV disease. The most recent revision occurred in April 2014. For inclusion in eHARS and for purposes of this report, people are considered to be HIV infected if they meet the current CDC surveillance case definition [Richard M. Selik, Eve D. Mokotoff, Bernard Branson, et al., *Revised Surveillance Case Definition for HIV Infection – United States, 2014*. MMWR 2014; 63(No. RR-3):1-10].

Diagnosis Date and Completeness of Surveillance Data

Only people reported in Iowa and for whom last name, date of birth, race and ethnicity, sex, date of HIV diagnosis, and vital status (living or deceased at time of report) are known are included in this report.

Evaluations of the IDPH surveillance system indicate that at least 99% of newly diagnosed HIV has been reported. While the data represent people who have been diagnosed with HIV well, they do not include people who have contracted the virus but who have not been diagnosed. Nationally, CDC estimates that 12.8% of people living with HIV remain undiagnosed. At the same time, CDC cautions that the national estimate may not apply to individual states.

CDC-developed computer programs run against IDPH data suggest that a delay in reporting diagnoses among Iowa residents is extremely unlikely. Nonetheless, to eliminate possible reporting delays, case reports received through March 2018 have been used. This report includes only those people diagnosed through December 31, 2017. Data are presented by the year of HIV or AIDS diagnosis regardless of when the diagnosis was reported. All data are provisional and are subject to change as further information becomes available.

Surveillance HIV Exposure Categories

People diagnosed with HIV can describe multiple routes of exposure to HIV, but are counted only once in a hierarchy of exposure categories. People 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. 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 people who inject nonprescription drugs.

- **"**Hemophilia/Coagulation disorder" includes people who received Factor VIII (Hemophilia A), Factor IX (Hemophilia B), or other clotting factors.
- "Heterosexual contact" includes people who report specific heterosexual contact with a person with documented HIV, or heterosexual contact with a person at increased risk for HIV, such as someone who reports injection drug use, a person with hemophilia, a transfusion recipient with documented HIV, or a bisexual male. A person who reports heterosexual contact with partners whose specific HIV exposures 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 people who are reported without behavioral or transfusion exposures for HIV, these reports are now classified (in the absence of other information that would classify them in another exposure category) as "NIR" (MMWR 1994:43:155-60).
- "Transfusion" includes people who received blood or blood components (other than clotting factor).
- "Received transplant" includes people who received tissues, organs or artificial insemination. The "received transplant" category has been combined with "transfusion" in this report because of the low number of people diagnosed in Iowa in each category alone.
- "No risk reported or identified (NIR)/other" includes people with no identified history of exposure to HIV through any of the routes listed in the hierarchy of exposure categories. Further investigation over time can help to clarify exposure history. In addition, the category includes people whose exposure history is incomplete because they died, declined to be interviewed, or were lost to follow-up. It also includes people who had no exposure 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

The surveillance program has used the 2016 population estimates from the U.S. Census Bureau (http://www.census.gov) to calculate prevalence rates.

Section 2: NARRATIVE SUMMARY

Iowans Diagnosed with HIV

There were 125 persons diagnosed with HIV in 2017. Although this is the second largest number of people diagnosed with HIV in the last five years, it is 12 (9%) fewer persons from 2016. Still, 125 diagnoses represents 6 (5%) more the average of 119 for the previous five years. As seen in Figure 3.1, the annual number of people diagnosed with HIV has remained relatively steady since 2006, but it increased sharply in the last three years after a significant drop in 2014. The 137 people diagnosed with HIV in 2016 was the largest number ever recorded in a single year in Iowa since HIV reporting began in 1998, and the 125 people diagnosed in 2017 was the second largest number recorded in a single year since 2009.

With an estimate of more than 300 Iowans yet to be diagnosed, Iowa may experience several more years of higher numbers of people diagnosed with HIV before the state sees more continuous declines in diagnoses. An expansion of HIV testing at IDPH-funded testing sites coupled with an increase in people diagnosed at private clinics, suggests that diagnoses will remain higher than have been normally observed. The decrease from 2016 to 2017 was due to a significant decrease in diagnoses among foreign-born people, which is usually influenced by migration into the state. Diagnoses among foreign-born people accounted for 22% of all diagnoses during the last five years. U.S.-born African-American males experienced a 19% increase in diagnoses from 2016 to 2017. This is likely a positive sign of increased access to health care and concerted efforts to reach those at most risk for HIV in Iowa. Research indicates that racial disparities in people diagnosed with HIV involve complex social factors, such as stigma, poverty, discrimination, inequitable treatment in the health care system, and disproportionate incarceration rates. These social circumstances may limit a person's access to health care and the opportunity to engage in a healthy lifestyle. The increase in HIV diagnoses experienced by U.S.-born African-American Iowans continues to receive further analysis by IDPH.

In 2017, there were 4.0 HIV diagnoses per 100,000 Iowans, compared to 4.4 HIV diagnoses per 100,000 Iowans in 2016 and 4.0 HIV diagnoses per 100,000 Iowans in 2015.

A total of 61 persons were diagnosed with AIDS (also termed stage 3 HIV disease) in 2017, compared to 60 in 2016. The 61 AIDS diagnoses in 2017 are fewer than the average of 68 for the five years 2012 through 2016.

Sex

Males experienced 81% (101) of the 125 HIV diagnoses in 2017, slightly higher than the 5-year average of 78%. The number of females diagnosed with HIV dropped to 24 (19%) in 2017 from 32 (23%) in 2016. This is lower than the average of 22% for the previous five years. Year-to-year variations notwithstanding, there continue to be about four males diagnosed with HIV for every one female diagnosed.

Ethnicity and Race

The number of non-Hispanic black/African-American people diagnosed with HIV decreased from 46 (34% of all people diagnosed) in 2016 to 38 (30%) in 2017. Of the 38 black/African-American persons diagnosed in 2017, 12 (32%) were foreign born. Black/African-American people make up almost 3% of Iowa's general population, but have experienced 21% of HIV diagnoses, on average, over the previous five years. The 38 non-Hispanic black/African-American persons diagnosed with HIV in 2017 equates to 34.7 diagnoses per 100,000 non-Hispanic black/African-American Iowans. When the numbers of people diagnosed per 100,000 population are compared, non-Hispanic blacks/African Americans were almost 15 times more likely to have been diagnosed with HIV in 2017 than non-Hispanic white people in Iowa.

Among U.S.-born black/African-American people diagnosed in 2017, 69% were male, and among

these, 89% were men who had sex with men. Nationally, black gay and bisexual men is one population that has yet to see decreases in new diagnoses. In Iowa, concerted efforts to reach this and other populations at risk for HIV are ongoing. There was only one late diagnosis among black men who have sex with men, indicating that preventive messages are likely reaching this population.

The number of Hispanic/Latino Iowans diagnosed with HIV increased from 10 (7% of all people diagnosed) in 2016 to 16 (13%) in 2017. Of the 16 Hispanic/Latino persons diagnosed in 2017, 9 (56%) were foreign born. Hispanic/Latino people make up about 6% of Iowa's population, but have experienced 9% of HIV diagnoses, on average, over the last five years. The 16 diagnoses in 2017 equate to 8.8 diagnoses per 100,000 persons, which means that Hispanic/Latino Iowans were about four times more likely to have been diagnosed with HIV in 2017 than Iowans who are white and not Hispanic.

The number of non-Hispanic Asians in Iowa diagnosed with HIV may seem low, but over the past five years it has still been disproportionate to the size of the population in Iowa. The number of diagnoses is primarily influenced by immigration, as nearly all non-Hispanic Asians diagnosed with HIV since 2006 have been foreign born. The number of non-Hispanic Asians diagnosed reached a peak in 2013 at 7% of all diagnoses. There were three (2%) non-Hispanic Asians diagnosed with HIV in 2017. Non-Hispanic Asian people make up about 2% of Iowa's population, but have made up 4% of people diagnosed with HIV, on average, over the previous five years. The three diagnoses among non-Hispanic Asians in 2017 equates to 3.9 diagnoses per 100,000 non-Hispanic Asian Iowans, about 1.6 times higher than for white, non-Hispanic Iowans.

While the largest proportion of cases of HIV diagnosed in Iowa are among non-Hispanic, white Iowans, the proportion and rate experienced among this population continues to fall. Of the 125 people diagnosed with HIV in 2017, 64 (51%) were among non-Hispanic, white people, compared to the five-year average of 73 (61%). Since the beginning of the epidemic in 1982, non-Hispanic, white people made up 73% of people diagnosed with HIV in Iowa. The 64 diagnoses among non-Hispanic, white persons in 2017 equate to 2.4 diagnoses per 100,000 non-Hispanic, white Iowans.

Birth Country

The number of foreign-born Iowans diagnosed with HIV dropped from an historic high of 39 (28%) of the 137 people diagnosed in 2016 to 24 (19%) of the 125 people diagnosed with HIV in Iowa in 2017. While diagnoses among foreign-born people decreased in 2017, diagnoses among US-born Iowans increased, primarily driven by a 19% increase in diagnoses among US-born African-American, non-Hispanic Iowans.

On average, approximately 19% of HIV diagnoses occur among foreign-born Iowans. Foreign-born people who are diagnosed in Iowa may not necessarily indicate new diagnoses or even transmissions that occurred in the U.S. By convention, foreign-born people with HIV disease who initially immigrated to Iowa (refugees, spouses, or other immigrants), especially those with no clear documentation of previous diagnoses, are considered to have new diagnoses in Iowa even if they may have been aware of their HIV diagnoses previously. Linkage to and retention in care are the primary goals for recent immigrants in Iowa who may have HIV.

Age at Diagnosis

The number of people 15 through 24 years of age diagnosed with HIV increased from 28 (20%) in 2016 to 31 (25%) in 2017. Over the previous five years, this group experienced 19% of all diagnoses among Iowans. The number of people 25 through 44 years of age diagnosed with HIV decreased by 25% from 72 (53% of people diagnosed) in 2016 to 54 (43% of people diagnosed) in 2017. The number of people aged 45 years and older experiencing HIV diagnoses has remained fairly level since 2006, but saw a 21% increase from 2016 (33 diagnoses) to 2017 (40 diagnoses). There were no pediatric HIV diagnoses in 2017.

For people 13 years of age and older (adults and adolescents), median age at diagnosis in 2017 was 32.0 years, lower than the previous five-year median of 36.5 years. In 2017, the median age of diagnosis for adult/adolescent males, 30.0 years, was lower than that for adult/adolescent females, at 33.5 years.

HIV Exposure Category

Men who have sex with men (MSM) remained the leading exposure category for HIV in Iowa. Of the 125 HIV diagnoses in 2017, 70 (56%) were among MSM, less than the previous five-year average of 70 (59%). Overall, MSM have experienced 56% of HIV diagnoses since the beginning of the epidemic in Iowa.

Numbers (and proportions) of other HIV exposure categories in 2017 were as follows: injection drug use (IDU), 6 (5%); men who have sex with men and inject drugs (MSM/IDU), 10 (8%); heterosexual contact, 26 (21%); and no identified risk (NIR), 13 (10%). Experience has shown that while newly diagnosed people may initially be reluctant to disclose their probable mode of HIV exposure to their health care provider or to health department staff, they become less reticent as time progresses. Some exposures will be ascertained over time through follow-up calls to health care providers. By the end of 2018, exposure category will be ascertained for most of the remaining people diagnosed in 2017.

Late Diagnosis of HIV Disease

Here is some very good news. After peaking at 58% of all diagnoses in 1999, late testers as a proportion of all people diagnosed with HIV for a given year declined over time to 28% in 2017. A person who is diagnosed with AIDS within three months of initial HIV diagnosis is termed a "late tester." Without treatment, a person will generally progress to AIDS approximately 8 to 10 years after initial infection. This means that having an AIDS diagnosis within three months of an HIV diagnosis is an indication of a long-standing infection that may have an impact on long-term health outcomes and opportunities to transmit HIV to partners.

People Living with Diagnosed HIV or AIDS (HIV Disease Prevalence)

The number of people living with diagnosed HIV disease in Iowa at the end of 2017 was 2,790, a prevalence of 89.0 per 100,000 persons. This number includes all people whose current addresses were in Iowa at the end of 2017. It may include people initially diagnosed in Iowa plus people who were initially diagnosed while living in another state, but who now reside in Iowa. When the number of 2,790 is adjusted for our estimated percentage of undiagnosed people in Iowa (14%), there may have been as many as 3,181 Iowans living with HIV or AIDS at the end of 2017, with an estimated 391 persons undiagnosed.

As of December 31, 2017, 96 of Iowa's 99 counties had at least one person living with diagnosed HIV disease. Prevalence in nine counties was 100 persons living with HIV per 100,000 population (0.1%) or more. Polk County, with 167 per 100,000 had the highest prevalence, followed by Pottawattamie County with 133 per 100,000, Scott County with 130 per 100,000, Fremont County with 129 per 100,000, Johnson County with 126 per 100,000, Benton County with 125 per 100,000, Linn County with 124 per 100,000, Buena Vista County with 108 per 100,000, and Woodbury County with 100 per 100,000.

To put these numbers into more perspective, national and regional prevalence data at the end of 2015 (the most recent year available) are as follows: United States, 303.5 per 100,000; Midwest, 170.6 per 100,000; West, 248.6 per 100,000; South, 359.3 per 100,000; and Northeast, 417.8 per 100,000. (CDC. *HIV Surveillance Report, 2015*; vol. 28. https://www.cdc.gov/hiv/library/reports/hiv-surveillance.html. Published November 2016. Accessed April 30, 2018.)

Deaths of People with HIV or AIDS

The number of deaths among people living with HIV who were diagnosed in Iowa continues to decrease since peaking at 103 deaths in 1995. As of December 31, 2017, a total of 1,305 deaths had been reported in Iowa among people diagnosed with HIV or AIDS. Of those deaths, 64% were caused in some part by the underlying HIV disease, 31% of deaths were not HIV related, and for 5%, the cause was unknown. Death data linkage for 2017 has been completed with only the Iowa vital records. Additional death information may be obtained after the National Death Index data linkage is completed later in 2018.

HIV Continuum of Care and Partner Services

Continuum of HIV Care

HIV care continuum analysis is based upon people with diagnosed HIV disease by the end of 2016 and currently residing in Iowa at the end of 2017. A total of 2,662 persons were diagnosed with HIV disease on or before December 31, 2016, and living in Iowa as of December 31, 2017. Of the 2,662, 83% (2,211 people) had been retained in HIV care, and 78% (2,070 people) had an HIV viral load less than 200 copies per milliliter of blood (viral suppression) at the end of 2017. This means that 94% of people retained in HIV care were virally suppressed. There is strong evidence to support retention in care and viral suppression as strategies to limit virus transmission and optimize clinical outcomes.

HIV Partner Services

All of the 125 persons newly diagnosed with HIV disease in 2017 were assigned for partner services. The goal of partner services is to have a disease intervention specialist (DIS) contact the patient to provide education about HIV care and services, link the patient to care, and offer assistance in notifying sex and needle-sharing partners. The 125 persons assigned for partner services named 283 partners. Of these, 186 were located in Iowa and were of unknown HIV status. Of the remaining 97, 58 were out-of-state contacts and 39 were already known to be living with HIV. Of the 186 contacts with unknown HIV status, 121 (65%) were subsequently tested, and 15 were found to be HIV positive (12% positivity).

Section 3: TABLES AND FIGURES

Table 3.1 Iowans Diagnosed with HIV or AIDS or Dying with HIV in 2017 Compared to Iowans Living with HIV Disease as of December 31, 2017

Characteristics	HIV Disease Diagnoses[1]		AIDS Diagnoses[2]		Deaths[3]		People Living with HIV Disease[4]	
	Number	(%)	Number	(%)	Number	(%)	Number	(%)
Sex at Birth								
Male	101	(81)	45	(74)	22	(81)	2,186	(78)
Female	24	(19)	16	(26)	5	(19)	604	(22)
Age at Diagnosis								
Under 13	0	--	0	--	0	--	45	(2)
13-14	0	--	0	--	0	--	1	--
15-24	31	(25)	10	(16)	2	(7)	497	(18)
25-34	40	(32)	14	(23)	9	(33)	988	(35)
35-44	14	(11)	15	(25)	6	(22)	730	(26)
45-54	23	(18)	14	(23)	8	(30)	375	(13)
55-64	15	(12)	7	(11)	2	(7)	135	(5)
65 or older	2	(2)	1	(2)	0	--	19	(1)
Ethnicity/Race								
Hispanic, All Races	16	(13)	4	(7)	2	(7)	250	(9)
Not Hispanic, White	64	(51)	31	(51)	17	(63)	1,713	(61)
Not Hispanic, Black/African American	38	(30)	24	(39)	7	(26)	646	(23)
Not Hispanic, Asian	3	(2)	0	--	1	(4)	64	(2)
Not Hispanic, Native Hawaiian/Pacific Islander	0	--	0	--	0	--	1	--
Not Hispanic, American Indian/Alaska Native	0	--	0	--	0	--	5	--
Not Hispanic, Multi-race	4	(3)	2	(3)	0	--	111	(4)
Country of Birth								
United States or Dependency	101	(81)	43	(70)	22	(81)	2,275	(82)
Other Countries	24	(19)	18	(30)	5	(19)	515	(18)
Mode of Exposure[5]								
Men who have sex with men (MSM)	70	(56)	19	(31)	11	(41)	1,485	(53)
Injection Drug Use (IDU)	6	(5)	5	(8)	3	(11)	199	(7)
MSM and Injection Drug Use (MSM/IDU)	10	(8)	6	(10)	3	(11)	203	(7)
Heterosexual Contact	26	(21)	16	(26)	6	(22)	532	(19)
Hemophilia/Coagulation disorder	0	--	0	--	0	--	6	--
Receipt of blood or tissue	0	--	0	--	0	--	3	--
Risk not reported/Other (NIR)	13	(10)	15	(24)	4	(15)	318	(11)
Pediatric/Other	*0*	--	*0*	--	*0*	--	*44*	*(2)*
TOTALS	**125**	**(100)**	**61**	**(100)**	**27**	**(100)**	**2,790**	**(100)**

[1] **HIV disease diagnoses** reflect all people diagnosed with HIV disease for the first time, regardless of AIDS status, who were residing in Iowa at time of diagnosis. Some may also be counted in the AIDS diagnoses column 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 people who first met the criteria for AIDS while residing in Iowa, regardless of where they were residing when first diagnosed with HIV disease or when the diagnosis was reported to IDPH. Age is age at time of first diagnosis of AIDS.

[3] **Deaths** reflect deaths in 2017 of people diagnosed in Iowa with HIV disease. Includes both HIV- and non-HIV-related causes of death. All deaths may not have been reported.

[4] **People living with HIV disease** reflect HIV-diagnosed people (HIV or AIDS) living in the state of Iowa and alive as of December 31, 2017. All deaths may not have been reported.

[5] **Exposure**: 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 3.2 Iowans Diagnosed with HIV[1] by Sex, Age, Ethnicity and Race, Country of Birth, and Mode of Exposure to HIV: 2007 through 2017

Characteristics	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Sex at Birth											
Male	103	81	105	95	98	97	87	78	97	105	101
Female	20	19	20	19	20	21	33	20	26	32	24
Age in Years at Diagnosis											
Under 13	0	1	3	1	1	2	0	2	0	4	0
13-14	0	0	0	0	0	0	0	0	0	0	0
15-24	12	14	23	21	27	21	16	18	32	28	31
25-34	35	30	36	30	33	33	29	27	28	44	40
35-44	37	22	35	28	27	27	25	17	27	28	14
45-54	24	23	15	27	21	24	28	18	22	20	23
55-64	12	10	10	7	7	9	17	14	13	12	15
65 or older	3	0	3	0	2	2	5	2	1	1	2
Ethnicity/Race											
Hispanic, All Races	11	11	7	8	15	8	9	10	16	10	16
Not Hispanic, White	89	71	84	71	71	75	73	68	74	73	64
Not Hispanic, Black/African American	19	12	17	26	22	26	25	12	23	46	38
Not Hispanic, Asian	1	1	6	4	6	4	8	1	6	5	3
Not Hispanic, Native Hawaiian/Pacific Islander	0	0	0	0	0	0	0	0	0	0	0
Not Hispanic, American Indian/Alaska Native	0	0	1	0	0	0	0	0	0	0	0
Not Hispanic, Multi-race	3	5	10	5	4	5	5	7	4	3	4
Country of Birth											
United States or Dependency	104	85	107	95	90	98	93	84	94	98	101
Other Countries	19	15	18	19	28	20	27	14	29	39	24
Mode of Exposure – Adult/Adolescent[2]											
Men who have sex with men (MSM)	69	64	67	63	66	66	71	61	76	78	70
Injection Drug Use (IDU)	9	9	12	6	3	11	7	8	10	4	6
MSM and Injection Drug Use (MSM/IDU)	6	1	4	10	12	11	3	4	5	6	10
Heterosexual Contact	22	17	26	25	29	22	34	20	24	34	26
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)	17	8	13	9	7	6	5	3	8	11	13
Pediatric/other	*0*	*1*	*3*	*1*	*1*	*2*	*0*	*2*	*0*	*4*	*0*
TOTALS	**123**	**100**	**125**	**114**	**118**	**118**	**120**	**98**	**123**	**137**	**125**

[1] HIV diagnoses reflect all people diagnosed with HIV disease for the first time, regardless of AIDS status, who were residing in Iowa at the time of diagnosis.

[2] People diagnosed as adolescents or adults may have had pediatric exposures. These people will be classified as adult/adolescent at time of diagnosis, but are listed under pediatric exposures.

Table 3.3 Iowa Males 13 Years of Age and Older Diagnosed with HIV: 2003 through 2017

Characteristics	Year of HIV Diagnosis[1]													
	2008 through 2012[5]		2003 through 2012[4]		2013		2014		2015		2016		2017[2]	
	#	(%)	#	(%)	#	(%)	#	(%)	#	(%)	#	(%)	#	(%)
Age at Diagnosis[3]														
13-14	0	--	0	--	0	--	0	--	0	--	0	--	0	--
15-24	88	(19)	130	(15)	12	(14)	15	(19)	25	(26)	22	(21)	25	(25)
25-34	125	(27)	228	(26)	22	(25)	21	(27)	22	(23)	34	(32)	36	(36)
35-44	120	(26)	266	(30)	17	(20)	14	(18)	22	(23)	23	(22)	10	(10)
45-54	93	(20)	174	(20)	10	(23)	15	(19)	17	(18)	17	(16)	18	(18)
55-64	28	(8)	69	(8)	12	(14)	12	(15)	10	(10)	8	(8)	10	(10)
65 or older	5	(1)	11	(1)	4	(5)	1	(1)	1	(1)	1	(1)	2	(2)
Ethnicity/Race														
Hispanic, All Races	39	(8)	85	(10)	8	(9)	9	(12)	13	(13)	10	(10)	13	(13)
Not Hispanic, White	330	(70)	617	(70)	63	(72)	59	(76)	61	(63)	65	(62)	56	(55)
Not Hispanic, Black/African American	63	(13)	127	(14)	10	(11)	5	(6)	16	(16)	25	(24)	25	(25)
Not Hispanic, Asian	15	(3)	20	(2)	2	(2)	1	(1)	4	(4)	2	(2)	3	(3)
Not Hispanic, Multi-race	21	(4)	27	(3)	4	(5)	4	(5)	3	(3)	3	(3)	3	(4)
Other	1	--	2	--	0	--	0	--	0	--	0	--	0	--
Country of Birth														
United States or Dependency	407	(87)	750	(85)	76	(87)	69	(88)	78	(80)	86	(82)	83	(82)
Other Countries	62	(13)	128	(15)	11	(13)	9	(12)	19	(20)	19	(18)	18	(18)
Mode of Exposure														
Men who have sex with men (MSM)	326	(70)	571	(65)	71	(82)	61	(78)	76	(78)	78	(74)	70	(69)
Injection Drug Use (IDU)	27	(6)	60	(7)	5	(6)	6	(8)	6	(6)	4	(4)	4	(4)
MSM and IDU	38	(8)	72	(8)	3	(3)	4	(5)	5	(5)	6	(6)	10	(10)
Heterosexual Contact	44	(9)	80	(9)	5	(6)	5	(6)	7	(7)	10	(10)	9	(9)
Blood, blood products, tissue	0	--	2	--	0	--	0	--	0	--	0	--	0	--
Risk not reported(NIR)/Other	34	(7)	93	(11)	3	(3)	2	(3)	3	(3)	7	(7)	8	(8)
Any MSM (MSM + MSM/IDU)	*364*	*(78)*	*643*	*(73)*	*74*	*(85)*	*65*	*(83)*	*81*	*(84)*	*84*	*(80)*	*80*	*(79)*
Any IDU (IDU + MSM/IDU)	*65*	*(14)*	*132*	*(15)*	*8*	*(9)*	*10*	*(13)*	*11*	*(11)*	*10*	*(10)*	*14*	*(14)*
Totals	**469**	**(100)**	**878**	**(100)**	**87**	**(100)**	**78**	**(100)**	**97**	**(100)**	**105**	**(100)**	**101**	**(100)**

[1] After decreasing from 2013 to 2014, diagnoses among males increased by 8% from 2015 to 2016 and the decreased by 4% from 2016 to 2017.

[2] HIV exposure category for eight males in 2017 has yet to be ascertained. More than 70% of annual diagnoses since 2013 are among men who have sex with men.

[3] Males age 25 to 44 years experienced more than half (56%) of all adult/adolescent (≥ 13 years of age at time of diagnosis) diagnoses among males from 2003 through 2017.

[4] 878 males age 13 years or older were diagnosed from 2003 through 2012.

[5] 469 males age 13 years or older were diagnosed from 2008 through 2017.

Table 3.4 Iowa Females 13 Years of Age and Older Diagnosed with HIV: 2003 through 2017

Characteristics	Year of HIV													
	2008 through 2012[4]		2003 through 2012[3]		2013		2014		2015		2016		2017[2]	
	#	(%)	#	(%)	#	(%)	#	(%)	#	(%)	#	(%)	#	(%)
Age at Diagnosis[2]														
13-14	0	--	0	--	0	--	0	--	0	(0)	0	(0)	0	(0)
15-24	18	(18)	40	(18)	4	(12)	3	(17)	7	(27)	6	(21)	6	(25)
25-34	37	(38)	85	(38)	7	(21)	6	(33)	6	(23)	10	(36)	4	(17)
35-44	19	(19)	48	(22)	8	(24)	3	(17)	5	(19)	5	(18)	4	(17)
45-54	17	(17)	38	(17)	8	(24)	3	(17)	5	(19)	3	(11)	5	(21)
55-64	5	(5)	7	(3)	5	(15)	2	(11)	3	(12)	4	(14)	5	(21)
65 or older	2	(2)	4	(2)	1	(3)	1	(6)	0	--	0	--	0	--
Ethnicity/Race														
Hispanic, All Races	10	(10)	20	(9)	1	(3)	1	(6)	3	(12)	0	--	3	(33)
Not Hispanic, White	40	(41)	103	(46)	10	(30)	8	(44)	13	(50)	8	(29)	8	(33)
Not Hispanic, Black/African American	38	(39)	82	(37)	15	(45)	7	(39)	7	(27)	18	(64)	13	(54)
Not Hispanic, Asian	5	(5)	7	(3)	6	(18)	0	--	2	(8)	2	(7)	0	--
Not Hispanic, Multi-race	5	(5)	10	(5)	1	(3)	2	(11)	1	(4)	0	--	0	--
other	0	--	0	--	0	--	0	--	0	--	0	--	0	--
Country of Birth[5]														
United States or Dependency	65	(66)	155	(70)	17	(52)	14	(78)	16	(62)	12	(43)	18	(75)
Other Countries	33	(34)	67	(30)	16	(48)	4	(22)	10	(38)	16	(57)	6	(25)
Mode of Exposure														
Injection Drug Use (IDU)	14	(14)	26	(12)	2	(6)	2	(11)	4	(15)	0	--	2	(8)
Heterosexual Contact	75	(77)	151	(68)	29	(88)	15	(83)	17	(65)	24	(86)	17	(71)
other	0	--	0	--	0	--	0	--	0	--	0	--	0	--
Risk not reported/Other (NIR)	9	(9)	45	(20)	2	(6)	1	(6)	5	(19)	4	(14)	5	(21)
TOTALS	**98**	**(100)**	**222**	**(100)**	**33**	**(100)**	**18**	**(100)**	**26**	**(100)**	**28**	**(100)**	**24**	**(100)**

[1] After peaking at 33 in 2013, diagnoses among females decreased to 24 (19%) in 2017, still higher than the average of 20 from 2008 through 2012.
[2] Females aged 25 to 44 years have experienced more than half (60%) of all adult/adolescent (≥ 13 years of age at time of diagnosis) diagnoses among females from 2003 through 2017.
[3] 222 females aged 13 years or more were diagnosed from 2003 through 2012.
[4] 98 females age 13 years or more were diagnosed from 2008 through 2012.
[5] Foreign-born females experienced 25% of diagnoses among females in 2017. In contrast, foreign-born males experienced 18% of all diagnoses among males in 2017.

Table 3.5 Iowans Diagnosed with HIV, Diagnostic Status at Death, and Underlying Cause of Death (UCD): 1982 through 2017

Year	HIV[1] Diagnoses	HIV (not-AIDS) Deaths [2]	AIDS Deaths	Total Deaths	UCD[4] (HIV)	UCD (Other)	UCD (Unk)
1982	1		1	1	0	1	0
1983	1		1	1	0	1	0
1984	27		3	3	0	2	1
1985	57		8	8	0	6	2
1986	66		16	16	0	15	1
1987	85		24	24	17	5	2
1988	105		22	22	17	4	1
1989	118		35	35	30	4	1
1990	110		40	40	26	13	1
1991	134		77	77	60	12	5
1992	128		70	70	56	13	1
1993	100	1	80	81	64	14	3
1994	105	1	85	86	64	18	4
1995	88	2	101	103	78	23	2
1996	103	2	65	67	53	9	5
1997	106	1	29	30	19	9	2
1998[5]	97	2	17	19	10	8	1
1999	83	3	23	26	15	9	2
2000	91	2	28	30	20	8	2
2001	95	4	32	36	20	14	2
2002	104	3	33	36	28	8	0
2003	87	4	32	36	17	18	1
2004	105	3	30	33	26	6	1
2005	112	6	22	28	18	10	0
2006	109	2	23	25	11	13	1
2007	123	7	29	36	20	14	2
2008	100	5	19	24	16	8	0
2009	125	6	28	34	16	15	3
2010	114	5	22	27	16	8	3
2011	118	8	25	33	18	14	1
2012	118	7	30	37	20	15	2
2013	120	11	35	46	20	24	2
2014	98	5	42	47	22	20	5
2015	123	9	22	31	14	16	1
2016	137	5	25	30	9	17	4
2017[6]	125	6	21	27	13	13	1

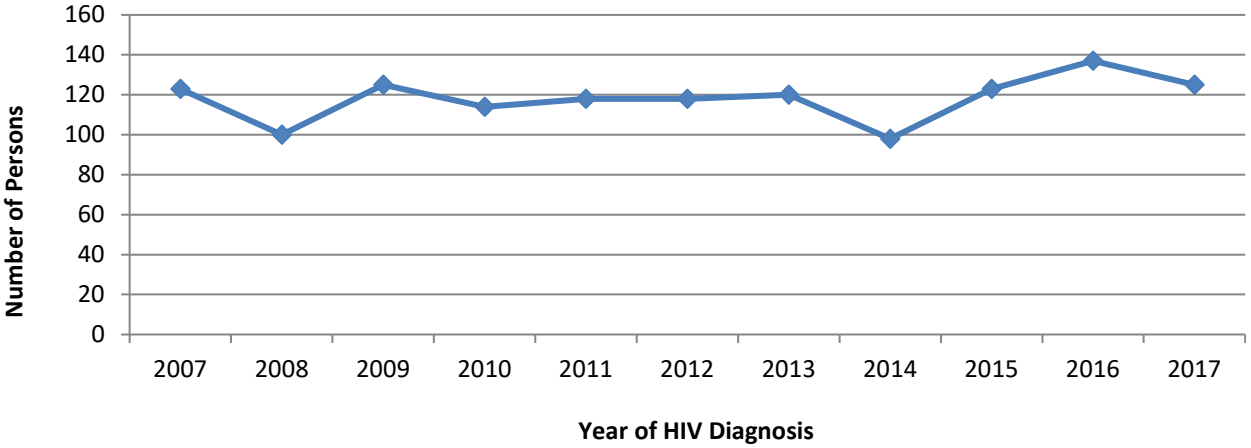
[1] Diagnoses reflect all people diagnosed with HIV disease for the first time, regardless of AIDS status, who were residents of Iowa at time of diagnosis.
[2] Data include people whose diagnosis status at time of death was HIV (not-AIDS). Less than 10% of deaths occur in people whose diagnostic status at the time of death is HIV (not-AIDS). Decedents may have been diagnosed in any year up to and including the year of death.
[3] Data include people whose diagnosis at time of death was AIDS. More than 90% of deaths occur in people whose diagnostic status at the time of death is AIDS. Decedents may have been diagnosed in any year up to and including the year of death.
[4] The underlying HIV infection is listed on the death certificate as a cause of 64% of all deaths of HIV-infected people diagnosed in Iowa.
[5] HIV infection became reportable by name in 1998.
[6] Death data for 2017 are incomplete. Matching in 2018 to National Death Index files may provide more complete death data.

Terms: UCD (HIV) – underlying HIV infection was listed on the death certificate as contributing to the death of the individual
UCD (Other) – underlying HIV infection was not listed as contributing to death of the individual
UCD (Unk) – cause of death is unknown

Trends in Iowans Diagnosed with HIV Disease

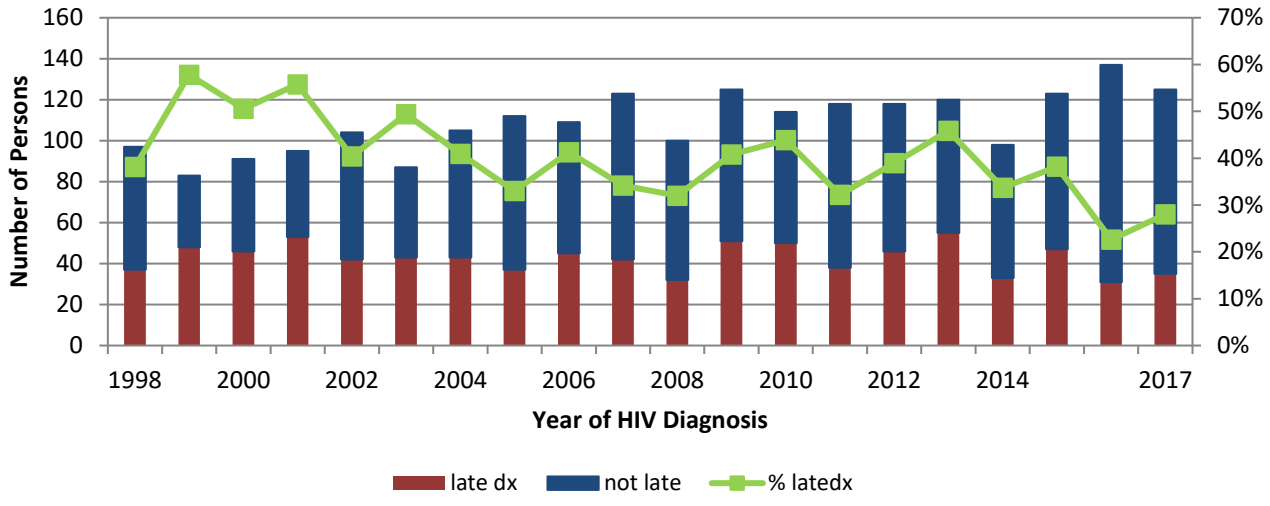
The number of people diagnosed with HIV in 2017 was 125. This is down 9% from 2016, but is 4% more than the 5-year average of 121, and the second highest number of diagnoses since 2009.

Figure 3.1
Iowans Diagnosed with HIV: 2007 through 2017



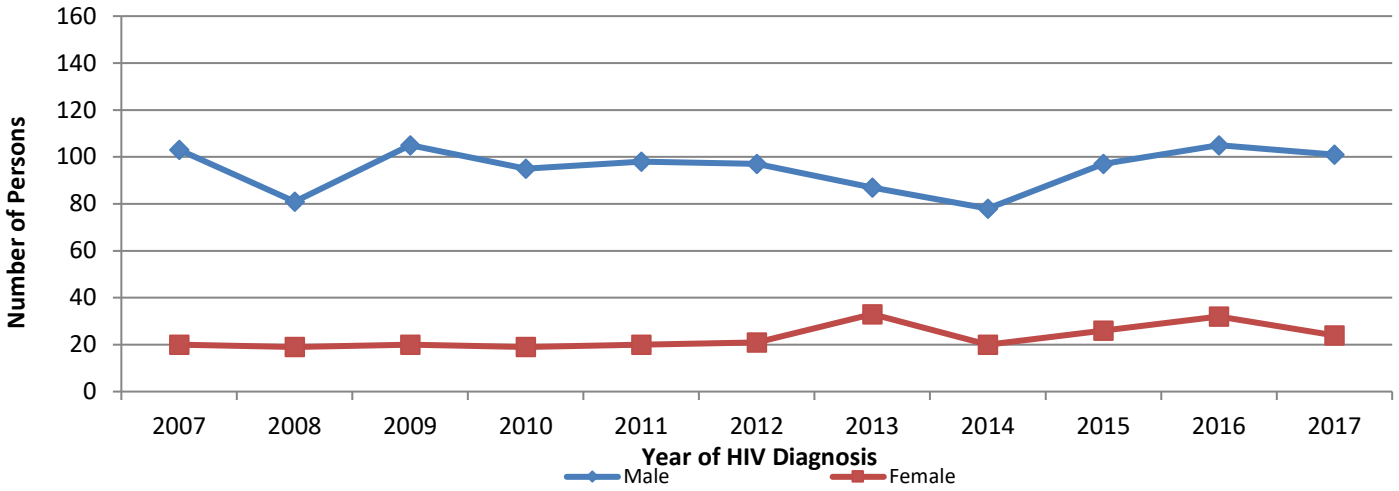
"Late testers" are people who receive AIDS diagnoses within three months of their HIV diagnoses. Over 90% of "late testers" in Iowa were diagnosed with AIDS concurrently (within one month of their HIV diagnoses). The proportion of late testers has been decreasing recently, a positive trend, even though it increased slightly in 2017.

Figure 3.2
Number and Percentage of Iowans Diagnosed Late with HIV ("Late Testers"): 2007 through 2017



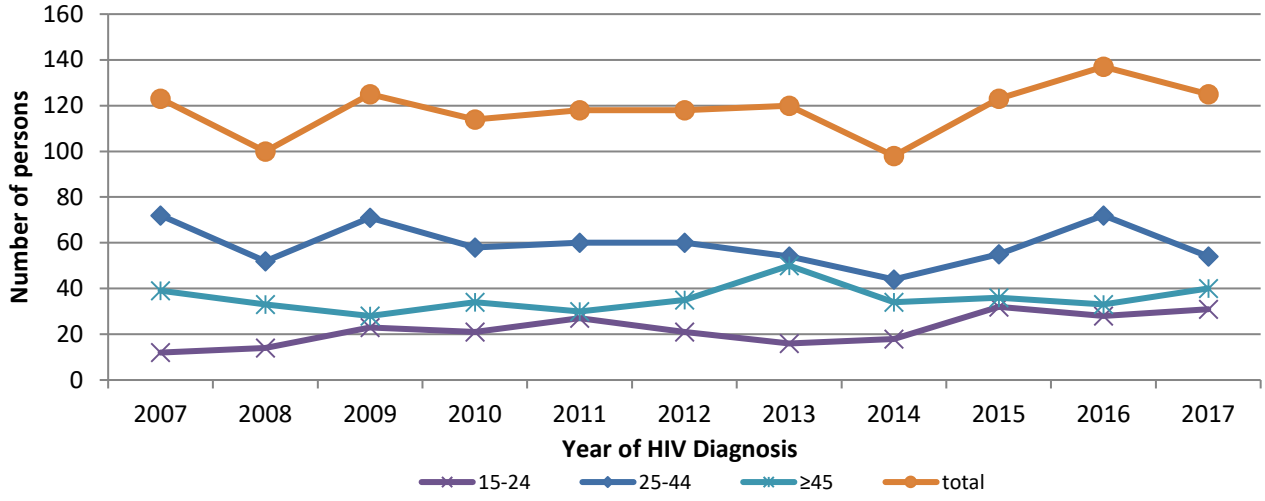
From 2007 through 2017, there were about four males diagnosed for every female diagnosed. The decrease in females diagnosed with HIV in 2017 was among foreign-born women only. This population saw a 70% decrease in diagnoses; diagnoses among U.S.-born women increased by 50% in 2017. The decrease among males in 2017 was among U.S.-born white males, a population that has experienced decreased diagnoses nationally, as well.

Figure 3.3
Iowans Diagnosed with HIV by Sex: 2007 through 2017



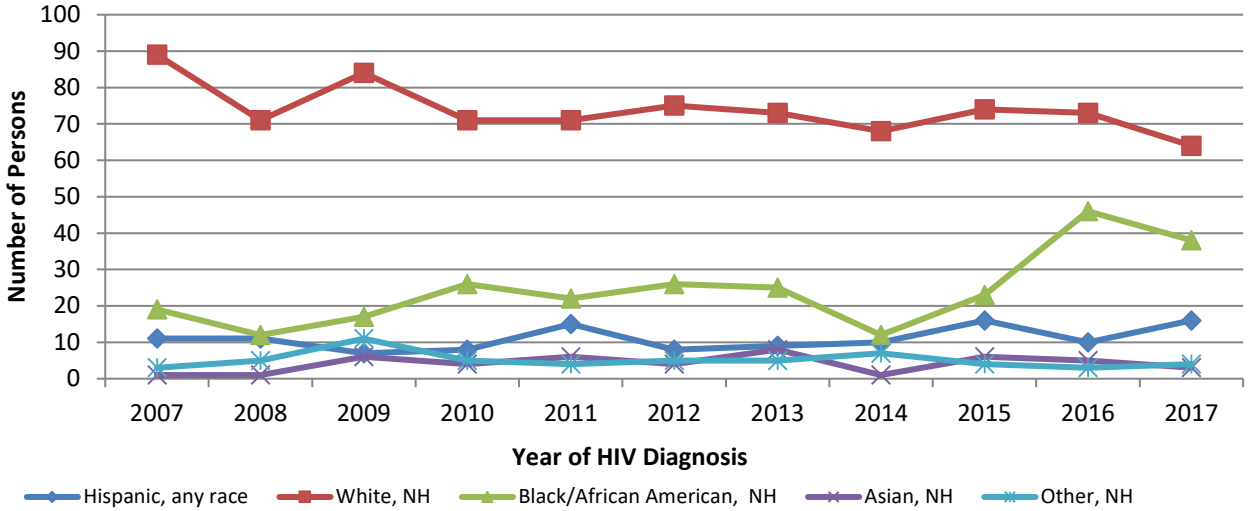
Diagnoses among people who were 15 through 24 years of age decreased from an all-time high of 32 in 2015 (26% of people diagnosed) to 31 in 2017 (25%). Over half of all people diagnosed with HIV annually, on average, are 25 through 44 years of age. However, in 2017, only 43% of people diagnosed with HIV were 25 to 44 years of age.

Figure 3.4
Age in Years at Diagnosis of Iowa HIV: 2007 through 2017



Diagnoses among non-Hispanic black/African-American Iowans decreased from a high of 46 (34%) in 2016 to 38 (30%) in 2017, but higher than the five-year average of 26 (21%). Twelve (32%) of the 38 non-Hispanic black/African-American persons diagnosed in 2016 were foreign born. Nine (56%) Hispanic/Latino persons diagnosed in 2017 were foreign born. Non-Hispanic white people make up the largest proportion (60%) of people diagnosed with HIV in Iowa, on average, but this proportion decreased to 51% in 2017.

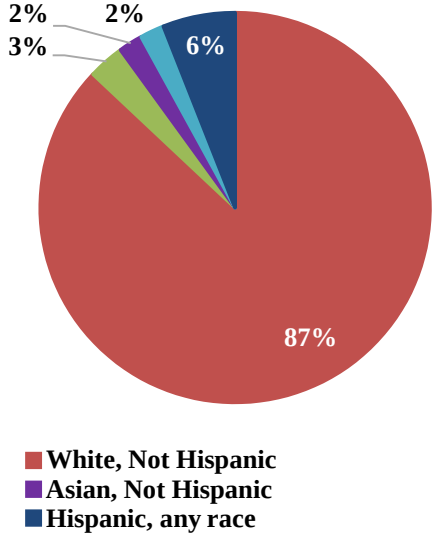
Figure 3.5
Iowans Diagnosed with HIV by Ethnicity and Race: 2007 through 2017



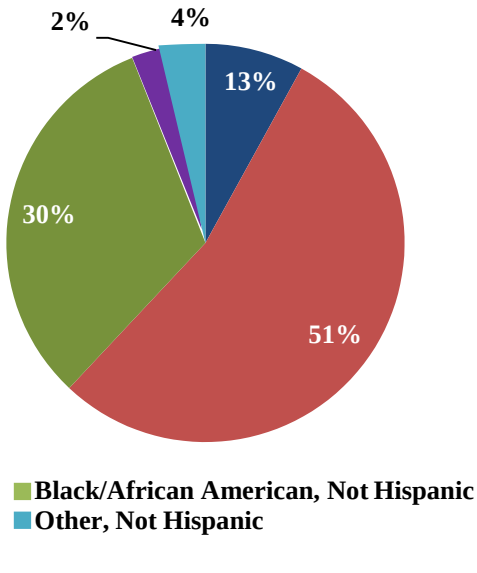
About 87% of Iowa's population is white and non-Hispanic. Blacks/African Americans, Asians, and Hispanics/Latinos are over-represented among people diagnosed with HIV in comparison to the sizes of their respective populations in Iowa. Black/African-American people comprise 3% of Iowa's population, but experience 30% of HIV diagnoses in Iowa in 2017. Black/African-American people were nearly 15 times more likely to be diagnosed than non-Hispanic white people, and Hispanic/Latino people were almost four times more likely to be diagnosed with HIV in Iowa than were non-Hispanic white people in 2017.

Figure 3.6

Population of Iowa by Ethnicity and Race: 2016



Iowans Diagnosed with HIV by Race: 2017



Men who have sex with men (MSM) and people who identified as having been exposed through heterosexual contact experienced a decrease in diagnoses in 2017, 10% and 24% respectively. The numbers of diagnoses among all other exposure categories increased in 2017.

Figure 3.7
Iowa Adults Diagnosed with HIV by Exposure Category:
2007 through 2017

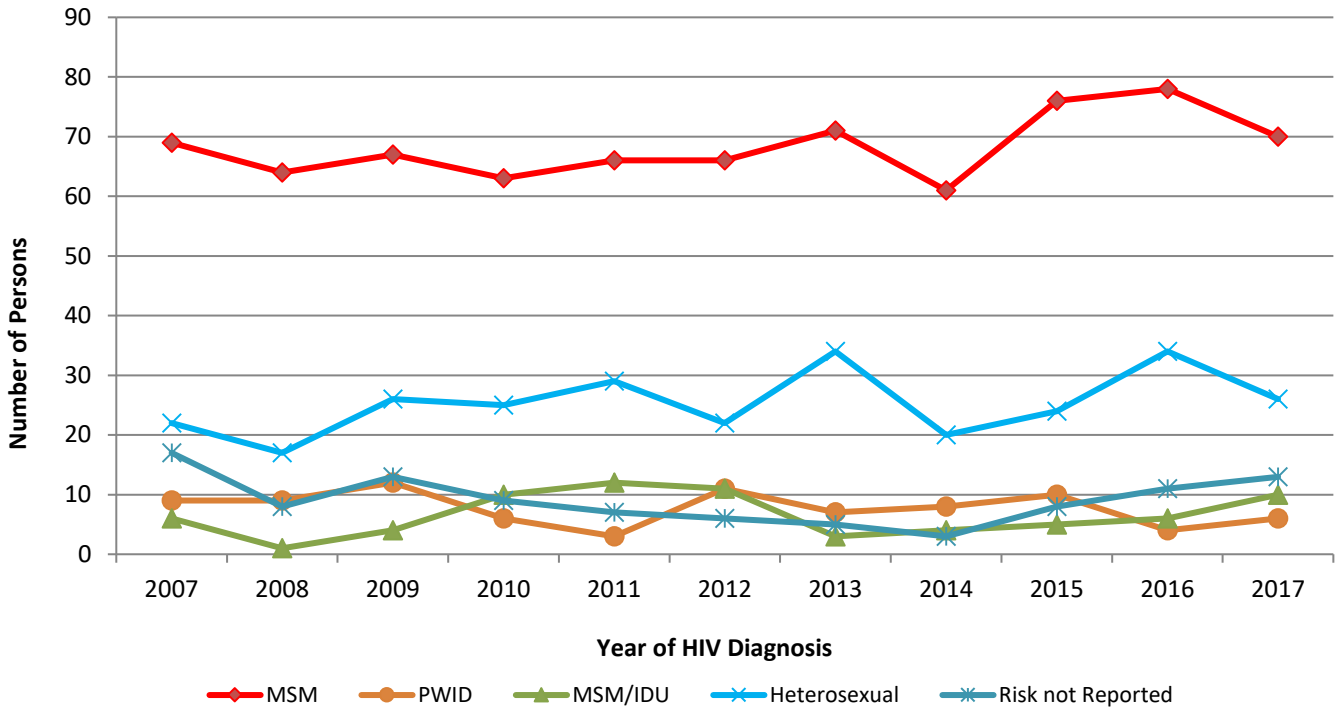
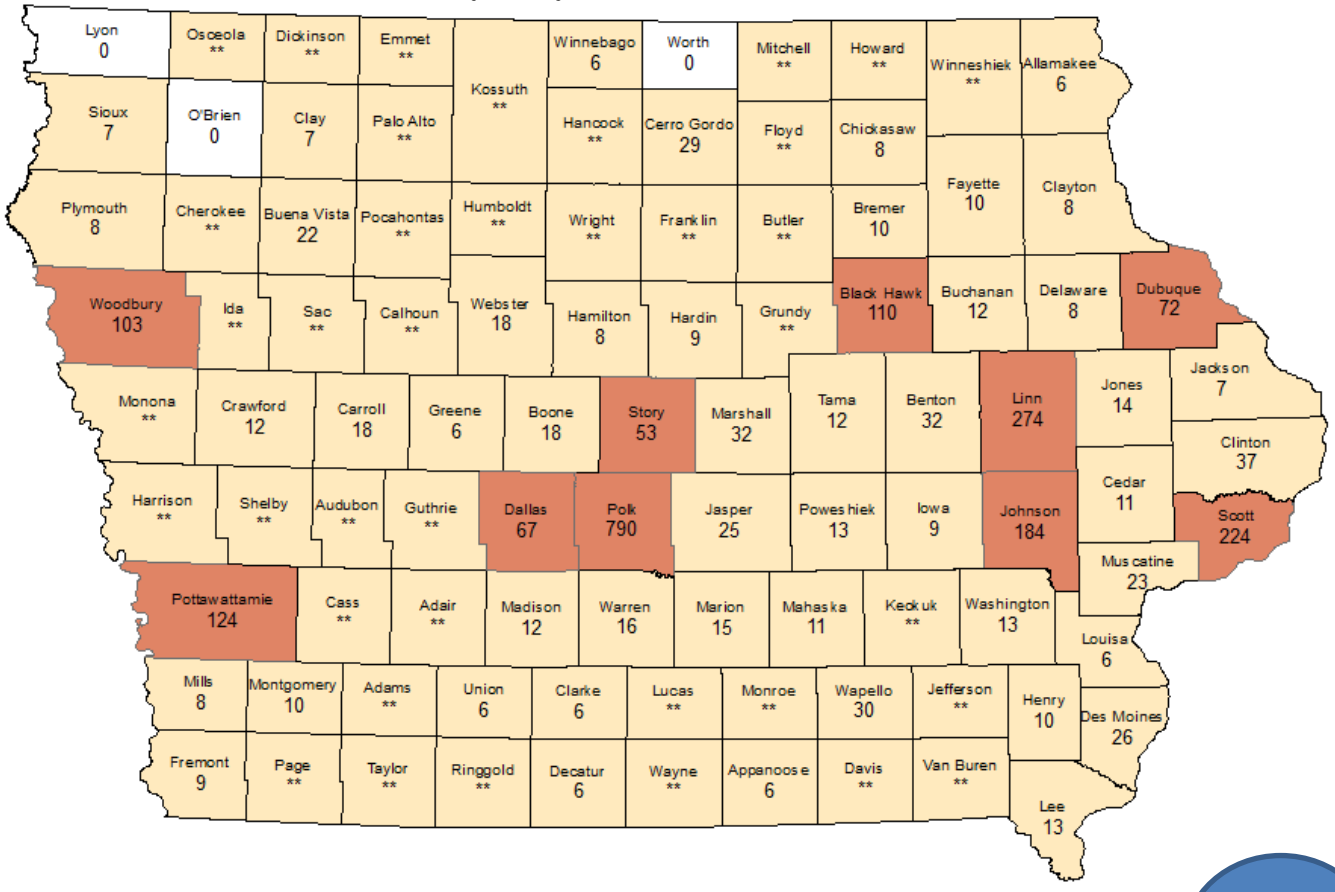


Figure 3.8
Number of Iowans Living with Diagnosed HIV Disease as of December 31, 2017,
by County of Current Residence



Total: 2,767

ALL NINE IOWA PRISONS 23^^

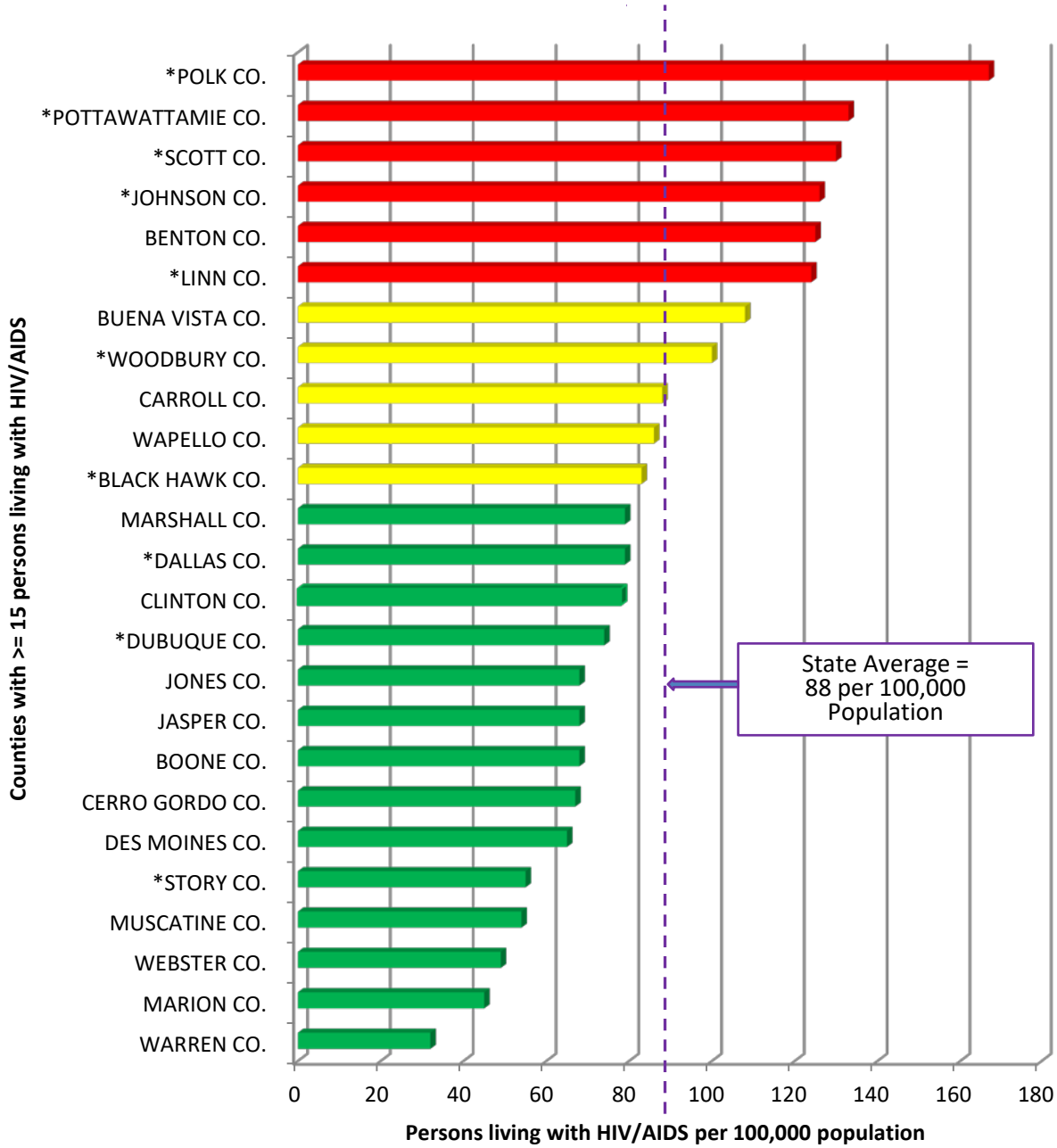
This map shows the number of people living with HIV disease as of December 31, 2017. It indicates counties where people were living at the end of 2017. All deaths may not have been reported. Offenders in the Iowa Department of Corrections were housed in the facilities in the following counties: Henry (4), Jasper (4), Johnson (7), Jones (3), Lee (1), Page (3), and Polk (1).

** Indicates counties with 1 to 5 persons living with HIV diagnosis. These values were suppressed to conform with state data security and confidentiality policies.

^^ Indicates people in Iowa Department of Corrections facilities. These people are excluded from county totals shown on the map.

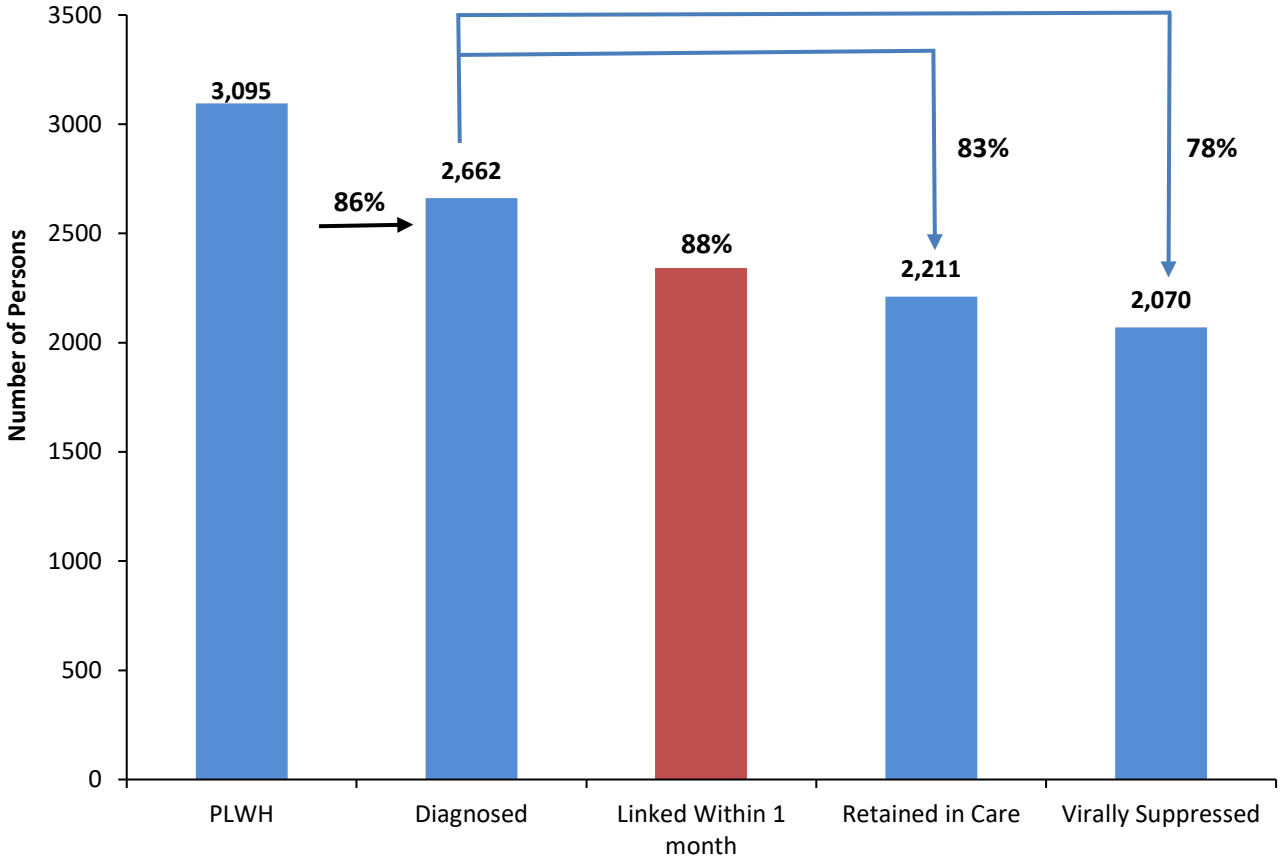
The 10 most populous counties (shaded) are home to 72% of Iowans with diagnosed HIV.

Figure 3.9
Prevalence of HIV Disease by County of Current Residence:
Iowans Living with Diagnosed HIV Disease (HIV or AIDS) per 100,000 Population
as of December 31, 2017



* Indicates one of the 10 most populous counties
– County rates do not include people diagnosed in the Iowa Department of Corrections system
– County populations are based on the 2017 U.S. Census estimates

Fig 3.10 Iowa HIV Care Continuum for 2017



People Living with HIV (PLWH): Estimated total number of Iowans with HIV, of which 433 are undiagnosed.

Diagnosed: People diagnosed with HIV disease as of December 31, 2016, and living in Iowa as of December 31, 2017.

- An estimated 3,095 Iowans were living with HIV disease as of December 31, 2017. Of these, 2,662 had been diagnosed as of December 31, 2016, and were alive in Iowa as of December 31, 2017.

Linked to Care: Newly diagnosed people who had a viral load or CD4 result reported within 1 month after diagnosis.

Retained in Care: Diagnosed people who had *two or more CD4 or viral load lab results at least three months apart in 2017* **or** who had only *one viral load lab result but it demonstrated viral suppression during 2017.*

Viral Suppression: People retained in care and whose most recent viral load in 2017 was less than 200 copies/mL.

- 2,211 (83%) of the 2,662 diagnosed Iowans had been retained in care at the end of 2017. Of those retained in care, 2,070 (94%) were virally suppressed.
- Viral suppression for all diagnosed people living in Iowa (in care and out of care) was 78%.

Section 4: 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 people who experience a reportable event while receiving services in the state, regardless of state of residence, shall be reported.

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https://docs.google.com/forms/d/e/1FAIpQLSd06oI9M7M_-T3H1ucJks0bdLj4AQCVZtP5bEgucFvuIpCggg/viewform

See http://idph.iowa.gov/hivstdhep/hiv/data for this report.

January 1, 2017, through December 31, 2017

Iowa Department of Public Health

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