2007 Supplement to the 2005 Epidemiological Profile for Iowa

HIV and AIDS

Acknowledgments

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An electronic version of the supplement will be available at:

http://www.idph.state.ia.us/adper/hiv_aids_programs.asp#surveillance

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EXECUTIVE SUMMARY

This supplement updates HIV epidemiology for diagnoses made through December 31, 2007. In addition to age, race, sex, and exposure data, the supplement takes a closer look at three populations of special interest. The first of these, men who have sex with men (MSM), is of interest because diagnoses among MSM continue to rise, and they account for more than half of new HIV diagnoses yearly. African Americans and other black persons compose the second population of interest, and Hispanic/Latino persons compose the third. When compared to their presence in the general population of Iowa, black and Hispanic persons are over-represented among persons with HIV. In 2007, black persons accounted for only 2.5% of the general population, but they accounted for 20% of persons diagnosed with HIV. Hispanic persons accounted for 4% of the general population, but they accounted for 9% of persons diagnosed with HIV in 2007.

In 2007, there were 128 new HIV diagnoses, an increase from 116 cases in 2005, and the highest number of cases diagnosed since HIV case reporting by name began in 1998. Eighty-four percent of newly diagnosed individuals were male, a marked increase from 2005, when 76% were male. Diagnoses among males rose for the fourth consecutive year, an 80% increase since 2003. In particular, white, non-Hispanic, U.S.-born males experienced the most dramatic increases.

Male-to-male sex was the transmission risk reported for 64% of cases among males in 2007. Heterosexual contact accounted for 67% of cases among females. Risk had not been determined for 13% of new diagnoses (male and female combined).

Over half of the persons diagnosed in 2007 (59%) were 25 to 44 years of age, 33% were 45 years of age and older, and about 9% were 13 to 24 years of age. HIV diagnoses among persons 45 years and older have more than doubled since 2003 and have increased each of the past four years. There were no pediatric HIV diagnoses in 2007. The median age at HIV diagnosis was 40. Males were slightly older than females; the median age at first diagnosis was 41 years for males while the median age for females was 37 years.

Ninety-one percent of Iowa's population is white and non-Hispanic; 2.5% are black and non-Hispanic; 4% are Hispanic; and 2.5% are other races and ethnicities. However, illustrating a substantial disparity in diagnoses among some racial and ethnic minorities, only 70% of persons diagnosed with HIV in 2007 were white, non-Hispanic persons. Twenty percent were black, non-Hispanic persons, 9% were Hispanic, and 1% were persons of other races. The HIV diagnosis rate in 2007 was 33.8 cases per 100,000 population for black, non-Hispanic persons; 9.2 for Hispanics; and 3.3 for white, non-Hispanic persons in Iowa. Thus, black persons were over ten times more likely to have been diagnosed with HIV than white persons in Iowa. Hispanic persons were over three-and-one-half times more likely to have been diagnosed with HIV than white persons in 2007.

Other notable elements of Iowa's epidemic include:

- Fifty percent of persons living with HIV or AIDS on December 31, 2007, reported male-to-male sexual contact (MSM) as their primary risk, 18% reported heterosexual contact, 10% reported injection drug use (IDU), and 7% reported both IDU and MSM. Transfusion or transplant recipients accounted for 1% of persons living with HIV or AIDS and 1% reported having hemophilia. Thirteen percent had no risk identified;

- Diagnoses have increased substantially among U.S.-born persons since 2003 while they have decreased during this same period among foreign-born persons. In 2007, approximately 86% of diagnoses were among U.S.-born persons; and

- Nearly 75% of new diagnoses in 2007, and for the period from 2003 through 2007, were among residents of the 10 most populous counties in Iowa, particularly the counties of Polk, Johnson, Linn, Scott, Black Hawk, Woodbury and Pottawattamie.

Overall, the most significant feature of Iowa's HIV epidemic is the continued increase in the number of persons living with HIV and AIDS. Steady diagnoses of HIV infection, combined with effective antiretroviral therapies that have delayed the onset of AIDS and decreased deaths among persons with HIV/AIDS, have increased the number of persons living with HIV disease to unprecedented levels. On December 31, 2007, 1,522 Iowans were reported to be living with HIV or AIDS. The Iowa Department of Public Health estimates that another 566 persons are infected but have not yet been diagnosed.

INTRODUCTION

This supplement to the *2005 Epidemiological Profile for Iowa* selectively updates the epidemiology of HIV and AIDS in Iowa through 2007. A more complete profile will be developed for release in the fourth quarter of 2009 as part of the state's next comprehensive HIV/AIDS prevention and care plan. It will include data on HIV/AIDS, other sexually transmitted diseases, and patterns of utilization of HIV services and care and will serve to guide prevention and service efforts, to quantify unmet need for prevention and care programs, and to evaluate programs and policies in Iowa.

In contrast to the anticipated comprehensive profile, this supplement to the *2005 Epidemiological Profile for Iowa* is designed only to update salient HIV and AIDS surveillance data through 2007. The report characterizes the distribution of HIV/AIDS in terms of geography, race, gender, age, and exposure category. **In addition to presenting basic data, this report highlights three populations of special interest:** men who have sex with men, African American and other black persons, and Hispanic/Latino persons. All three populations are at increased risk for acquiring HIV infection in Iowa.

SOURCES OF 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 calculation of rates and development of maps displaying population distributions. Brief descriptions of these sources follow.

Core HIV/AIDS Surveillance Data

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. The 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 must be considered when assessing trends in the numbers of new cases.

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 a 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 who are 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 and ethnic, age, and gender categories. To minimize the effects of reporting delays, case reports received through December 31, 2008, will be used. These reports include only those diagnoses made through December 31, 2007.

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

Surveillance 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 and 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 statuses are unknown is considered to have "no risk reported or identified" (NIR). For this reason, this category will be an underestimate of cases acquired heterosexually. 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.

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GUIDELINES FOR INTERPRETATION OF THE DATA

The following guidelines are intended to facilitate interpretation of the figures presented in this profile.

Carefully examine the entire graph. Read the title of the figure and look closely at the type of information presented on the vertical and horizontal axes. Are the data showing the number of cases or a percentage of the total cases? Pie graphs and stacked bar graphs can show total numbers or percentages. Examine how the graphs are scaled. Does the number of cases increase by 5, 10, 100, or some other factor? What is the time period covered? Have any data been excluded from total counts?

These data have certain limitations. This report will present both AIDS case-report data and HIV infection case-report data. The first AIDS case reported in Iowa was diagnosed in 1983. Reporting of HIV-infected persons in Iowa began July 1, 1998. The number of HIV-infected persons reported by name is relatively small and covers a diagnosis period from July 1, 1998 to December 31, 2007. HIV surveillance reports may not be representative of all infected persons because not all infected persons have been tested or reported. AIDS case-report data span 23 years and are relatively complete. However, because HIV infection may take many years to develop into AIDS, AIDS case reports may not represent current or emerging trends in the HIV epidemic. There are also reporting delays of HIV and AIDS cases. The tables and figures in this profile do not account for these reporting delays. Both HIV and AIDS data are from the entire state of Iowa, but data represent only those individuals living in Iowa at the time of diagnosis. State and county of diagnosis do not change even if a person later changes counties or moves out of state.

Be careful not to over-interpret small changes or differences from year to year. Comparing one year with another year may be misleading, particularly given the low numbers of cases reported in Iowa annually. Significant changes over time will be highlighted in the narrative of this document.

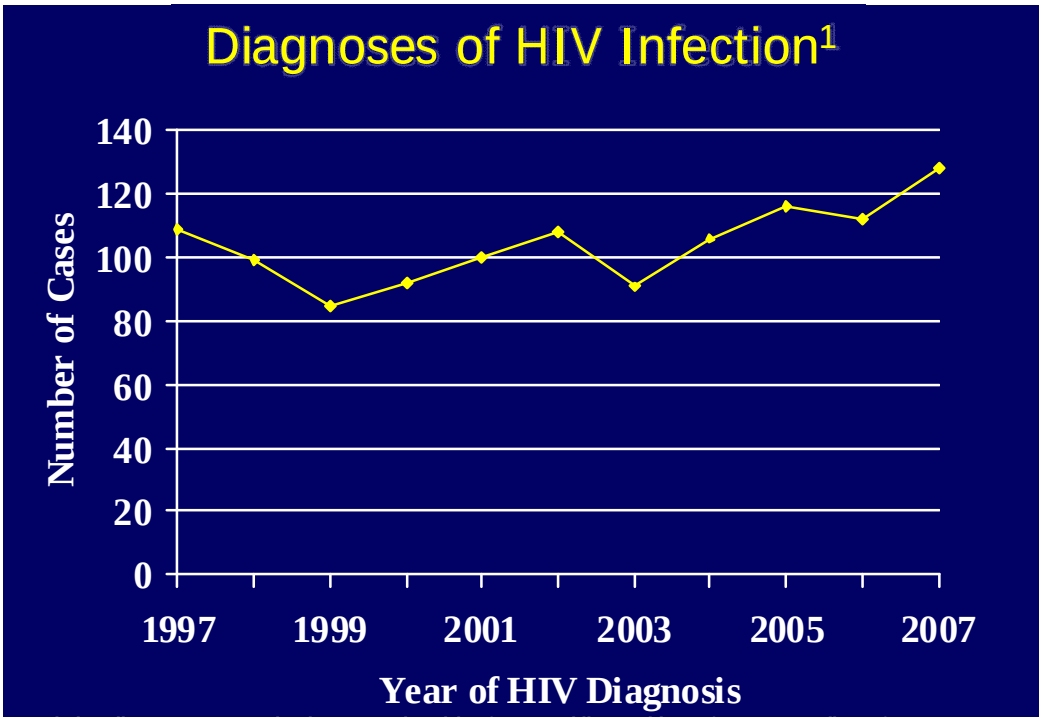
Look for consistencies with other information sources. Different findings should be examined carefully. All data sources are not equivalent in their generalizability to the population of Iowa. In particular, scientific studies should be examined for their purposes and for the population studied.

Case rates have been calculated for 12-month periods per 100,000 population. The denominator for calculating rates is based on 2007 population estimates from the U.S. Census Bureau. The numerator is the number of cases reported during the 12-month period. This number is divided by the population estimate and multiplied by 100,000. Race-specific rates are the number of cases reported for a particular racial or ethnic group during the preceding 12-month period divided by the projected population for that race or ethnicity, multiplied by 100,000.

OVERALL TRENDS

Figure 1
Diagnoses of HIV Infection

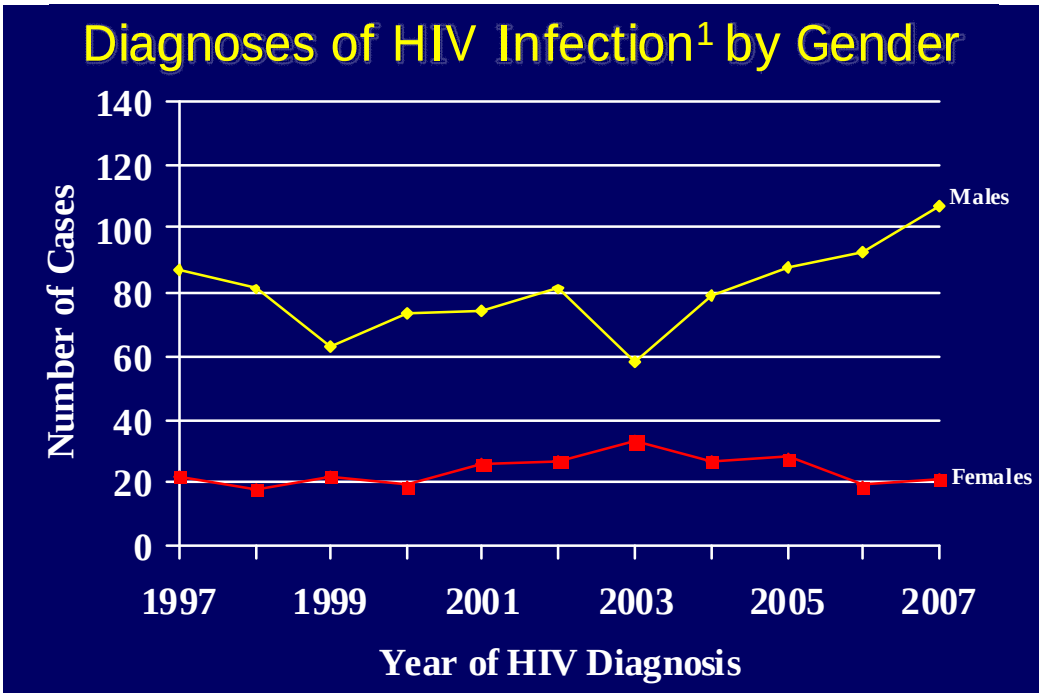
While HIV diagnoses in Iowa averaged 102 annually for the 10 years from 1997 through 2006, a gradual upward trend in diagnoses can be seen in Figure 1. There were 128 HIV diagnoses in 2007, the most since HIV reporting began in 1998. These diagnoses represent a 14% increase over 2006 and exceed the previous peak of 116 diagnoses in 2005. The 128 diagnoses in 2007 equate to 4.3 per 100,000 population, an increase from 3.8 per 100,000 in 2006 and 3.9 per 100,000 in 2005.



[1] Includes all persons reported to have tested positive for HIV while a resident of Iowa, regardless of current diagnosis (HIV or AIDS). Also includes persons who were diagnosed with AIDS while residents of Iowa but for whom residence at time of HIV diagnosis was unknown.

Figure 2
Diagnoses of HIV Infection by Gender

The increase in HIV diagnoses since 2003 has occurred almost exclusively among males. As illustrated in Figure 2, HIV diagnoses among males increased for the fourth year in a row, rising from 58 in 2003 to 107 in 2007, an 84% increase. Males accounted for 84% of new HIV diagnoses in 2007. The increase among females from 2001 through 2003 was due to an increase in diagnoses among foreign-born females only.



[1] Includes all persons reported to have tested positive for HIV while a resident of Iowa, regardless of current diagnosis (HIV or AIDS). Also includes persons who were diagnosed with AIDS while residents of Iowa but for whom residence at time of HIV diagnosis was unknown.

Figure 3
Diagnoses of HIV Infection by Age at Diagnosis In 2007, 75 persons aged 25 to 44 years were diagnosed with HIV, accounting for more than half (59%) of all diagnoses. However, as shown in Figure 3, it is important to note that the number of diagnoses among those 45 years and older has more than doubled since 2003. There were 42 diagnoses in 2007 but only 18 in 2003. Persons in that age group accounted for 33% of diagnoses in 2007. There were 11 persons aged 13 to 24 years, accounting for 9% of diagnoses. There were no pediatric HIV diagnoses in 2007. The median age at diagnosis was 40 years of age; slightly higher (41) for males and a bit lower (37) for females.

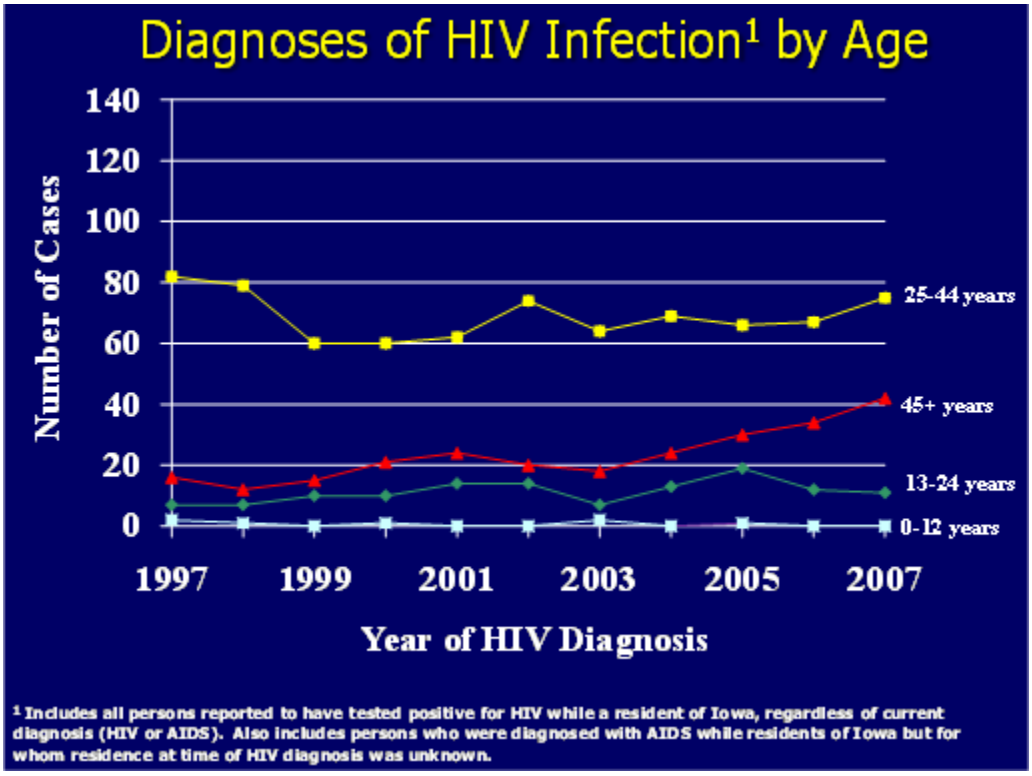


Figure 4
Diagnoses of HIV Infection by Country of Origin In 2002, it seemed that the focus of the epidemic in Iowa was shifting to foreign-born persons. Since that time, however, diagnoses in Iowa have increased substantially among U.S.-born persons while they have decreased among foreign-born persons. In 2007, 86% of HIV diagnoses were among U.S.-born persons, compared to only 70% of diagnoses in 2003.

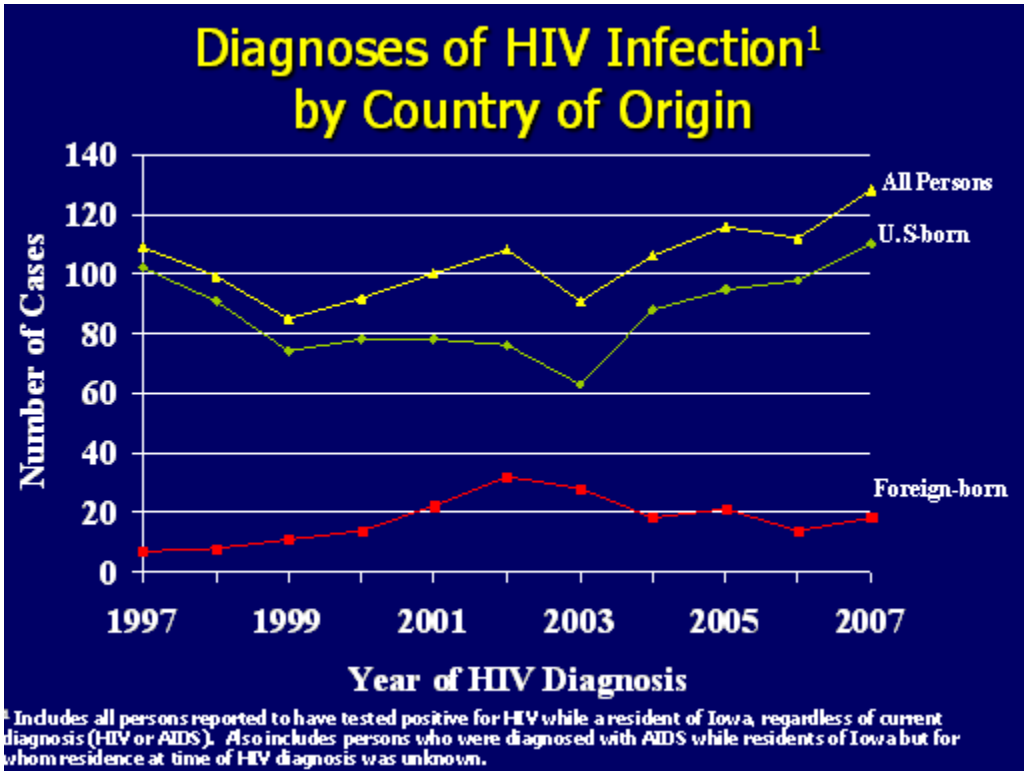


Figure 5

Diagnoses of HIV Infection in Adult, U.S.-born, White, non-Hispanic Males by Age at Diagnosis of HIV Most of the increase in diagnoses of U.S.-born persons since 2002 has been among males. Of the persons diagnosed with HIV in 2007, 110 (86%) were born in the United States. U.S.-born, white, non-Hispanic males, with 79 diagnoses, accounted for the largest proportion (62%) of HIV diagnoses in 2007. The greatest number of diagnoses among U.S.-born, white, non-Hispanic males remains among those 25-44 years of age. Diagnoses among persons in this age group doubled from 21 in 2003 to 42 in 2007. However, it must be noted that since 2003, the largest percentage increase in diagnoses has been among those 45 years and older. Diagnoses among persons in that age group grew from 9 in 2003 to 33 in 2007, an increase of 267%. The median age at diagnosis for U.S.-born, white, non-Hispanic males in 2007 was 42 years of age – slightly higher than for all males (41).

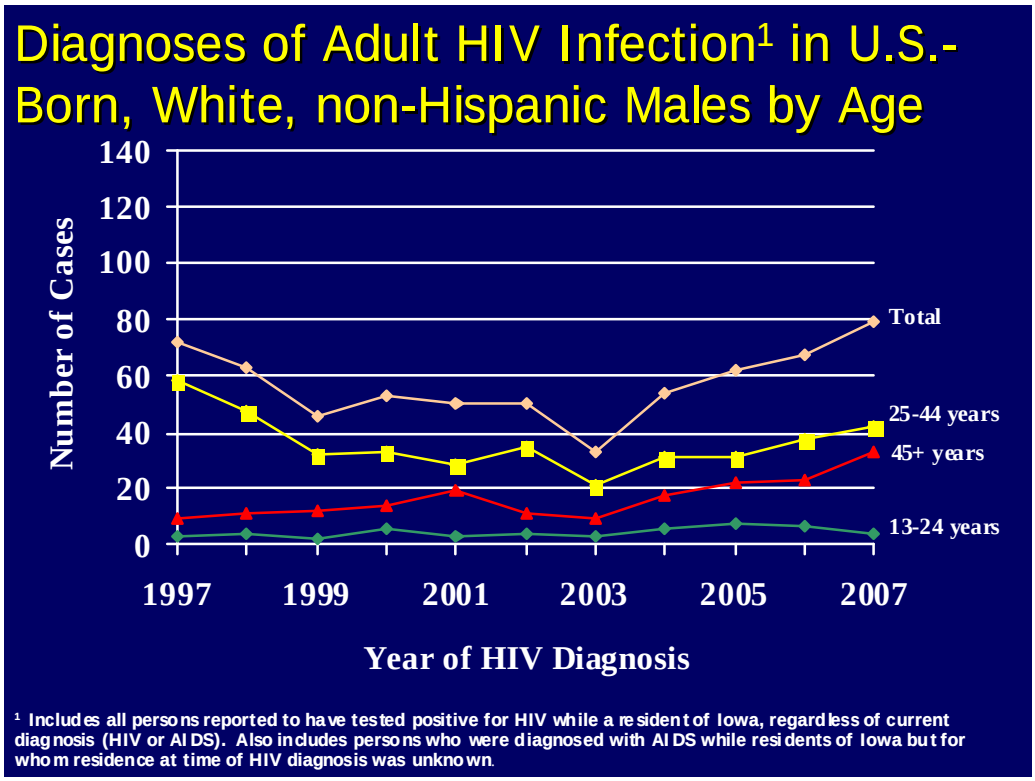


Figure 6

Diagnoses of HIV Infection for All Persons by Race and Ethnicity The number of white, non-Hispanic persons diagnosed with HIV doubled from 2003 to 2007. This occurred after many years of continuous declines in diagnoses in this population. Diagnoses among black, non-Hispanic and among Hispanic populations increased from 1999 to 2002 largely due to increases in diagnoses among foreign-born persons (see Figure 4). After 2002, diagnoses among these two minority groups decreased somewhat, but did not return to pre-1999 levels.

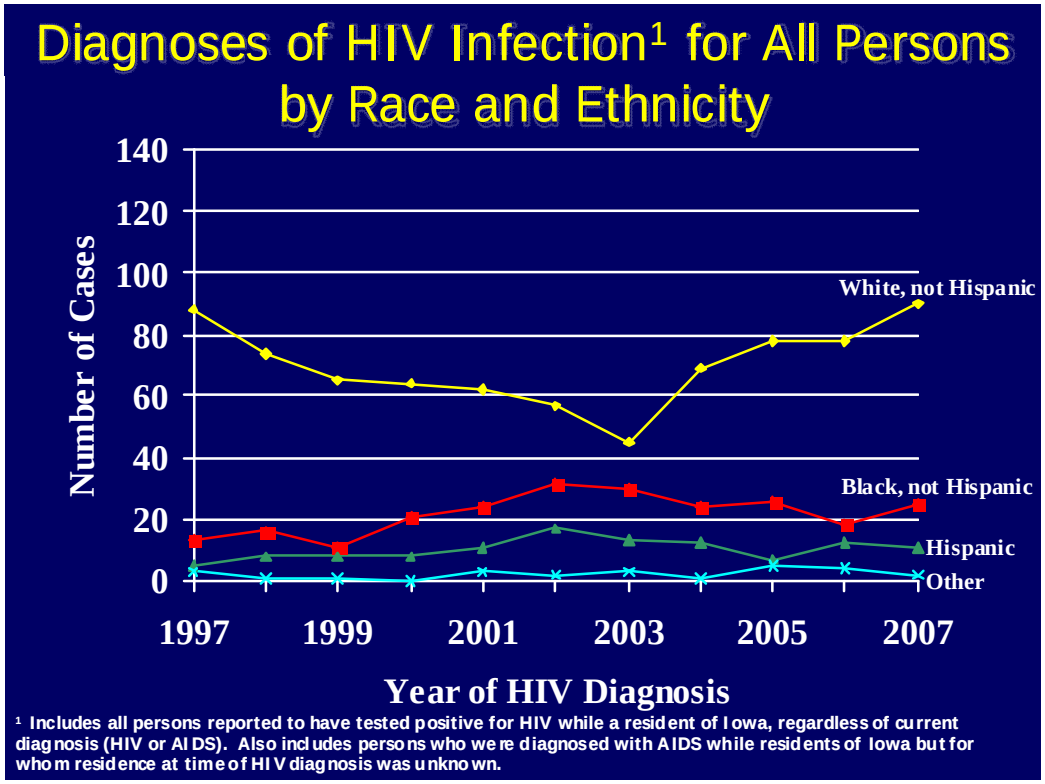


Figure 7
Diagnoses of HIV Infection for U.S.-born Persons by Race and Ethnicity Comparing Figure 6 to Figure 7 shows that nearly all diagnoses among white, non-Hispanic persons occur in U.S.-born persons. However, nearly all diagnoses among Hispanic persons occur in foreign-born persons (i.e., there are few cases among U.S.-born Hispanics). Diagnoses among African Americans (i.e., U.S.-born blacks) have been relatively stable over time, although somewhat higher from 2002 to 2007 (an average of 17 per year) than from 1997 to 2001 (an average of 12 per year).

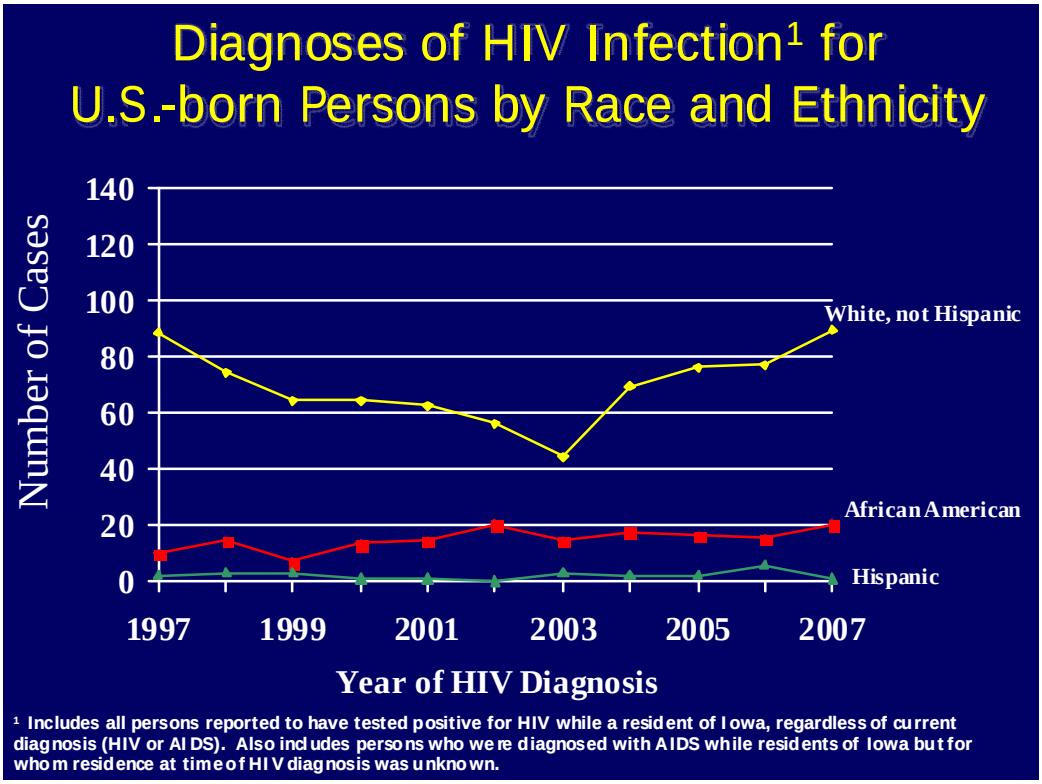


Figure 8
Diagnoses of Adult HIV Infection by Exposure Category Since 2003, the number of diagnoses among "all MSM" (this includes the categories of "MSM" and "MSM/IDU") has increased dramatically, almost doubling from 39 cases in 2003 to 75 in 2007. Diagnoses among heterosexual persons increased slightly over the same period, averaging 25 per year from 2004 to 2007, an increase from 16 diagnoses in 2002. Diagnoses among injection drug users (IDU) have remained low over the last five years, ranging from 4 to 11, with a median of 9 diagnoses per year. On average, 17% of cases have no transmission risk identified (NIR).

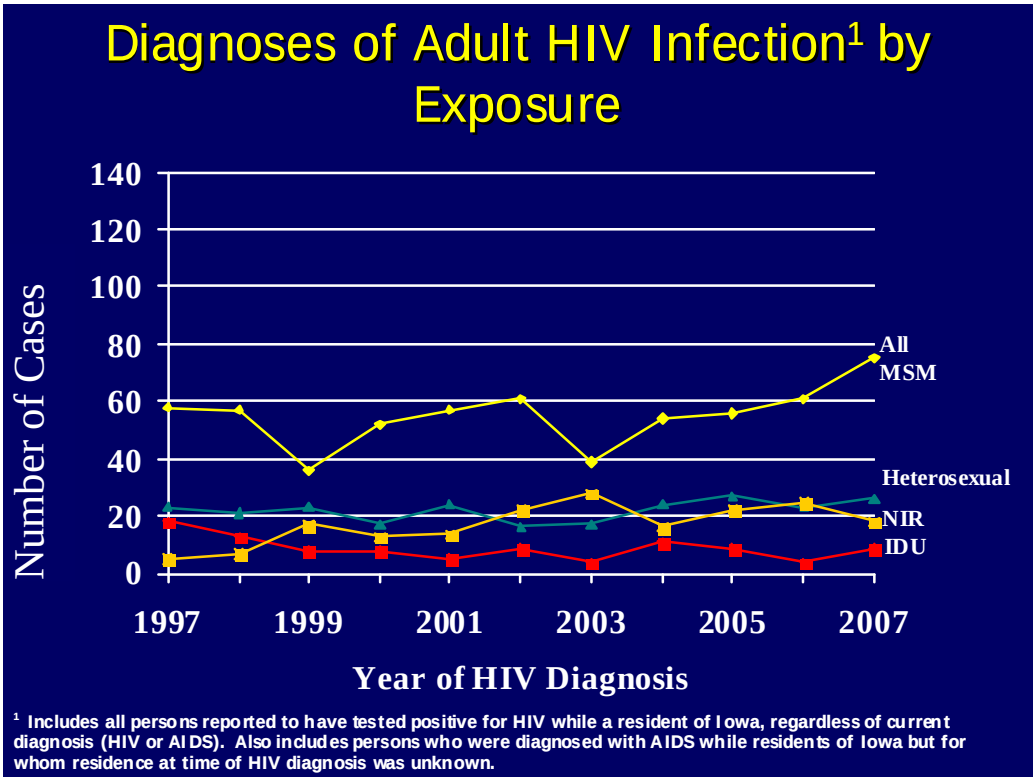


Figure 9
Mode of Exposure by Race and Ethnicity The predominant mode of exposure to HIV varies by race and ethnicity. Male-to-male sex predominates among whites and Hispanics, while heterosexual sex predominates among African Americans. Figure 9 shows the distribution of the four most common modes of exposure among the four most impacted racial and ethnic groups. Most foreign-born, black persons with HIV have come to this country as political refugees seeking asylum in the U.S. In general, they have acquired their HIV infections prior to coming to the U.S. This factor makes it difficult to ascertain a mode of exposure in a manner consistent with the Centers for Disease Control and Prevention's (CDC) guidelines, and leads to a high proportion of unidentified risk among foreign-born, black persons.

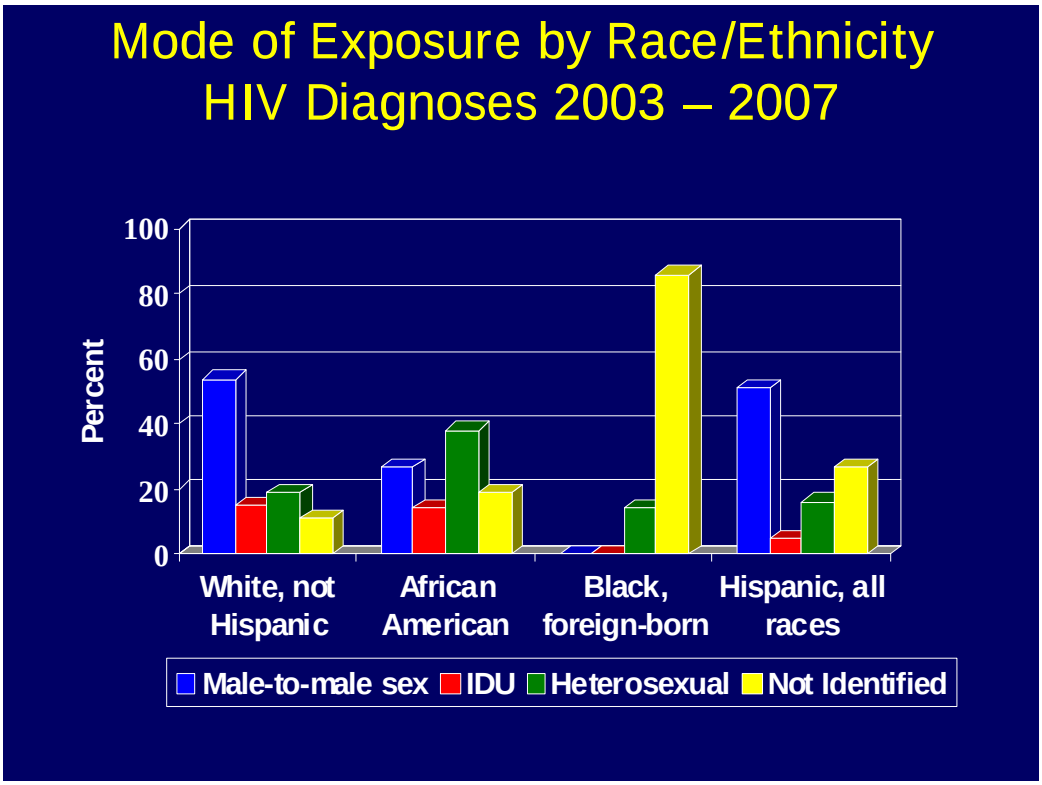


Figure 10
Estimated Number of Persons Living with HIV or AIDS Increasing diagnoses, combined with low numbers of deaths, have led to an increased number of persons living with HIV/AIDS. On December 31, 2007, 1,522 Iowans are reported to be living with HIV or AIDS. The Iowa Department of Public Health estimates that another 566 persons are infected but have not yet been diagnosed. Figure 10 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 tier of the graph represents the estimated number of undiagnosed persons, based in part on estimates from the CDC that as many as 25% of persons who are infected with HIV may be undiagnosed.

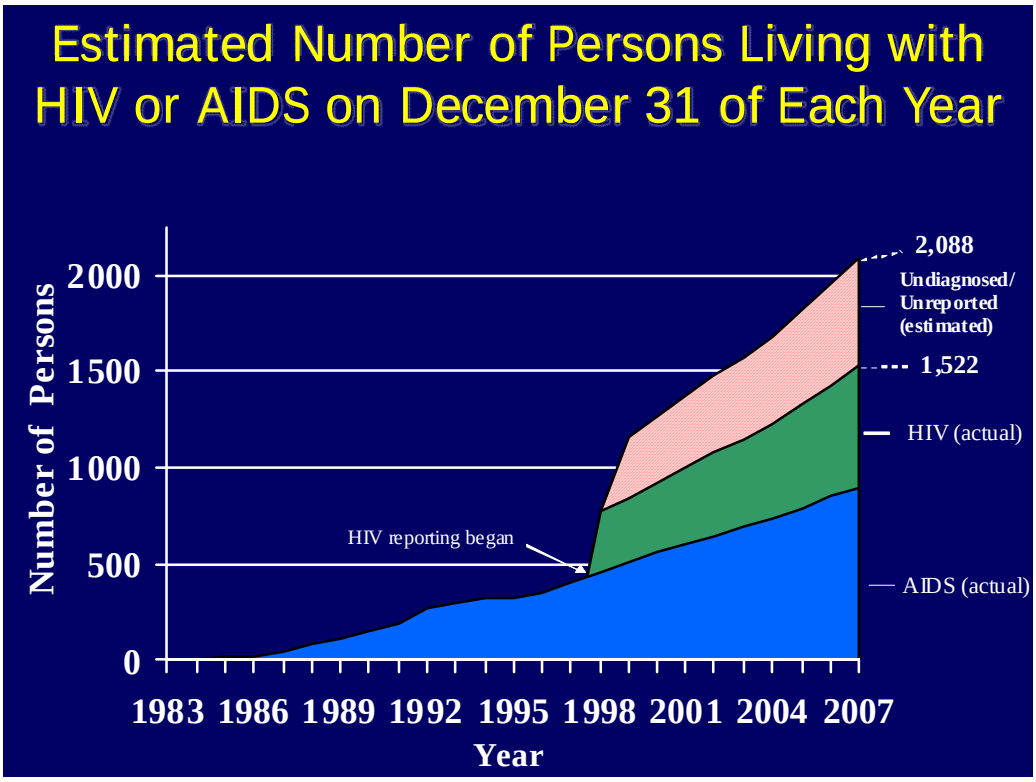


Figure 11
Number of Persons Living with HIV/AIDS by Race and Gender As depicted in Figure 11, white males compose the largest group of persons living with HIV/AIDS, numbering more than four times each of the next two largest groups, black males and white females, respectively. The number of HIV-positive, Hispanic males is roughly equal to the number of HIV-positive, black females. HIV-positive males outnumber females in each racial and ethnic group.

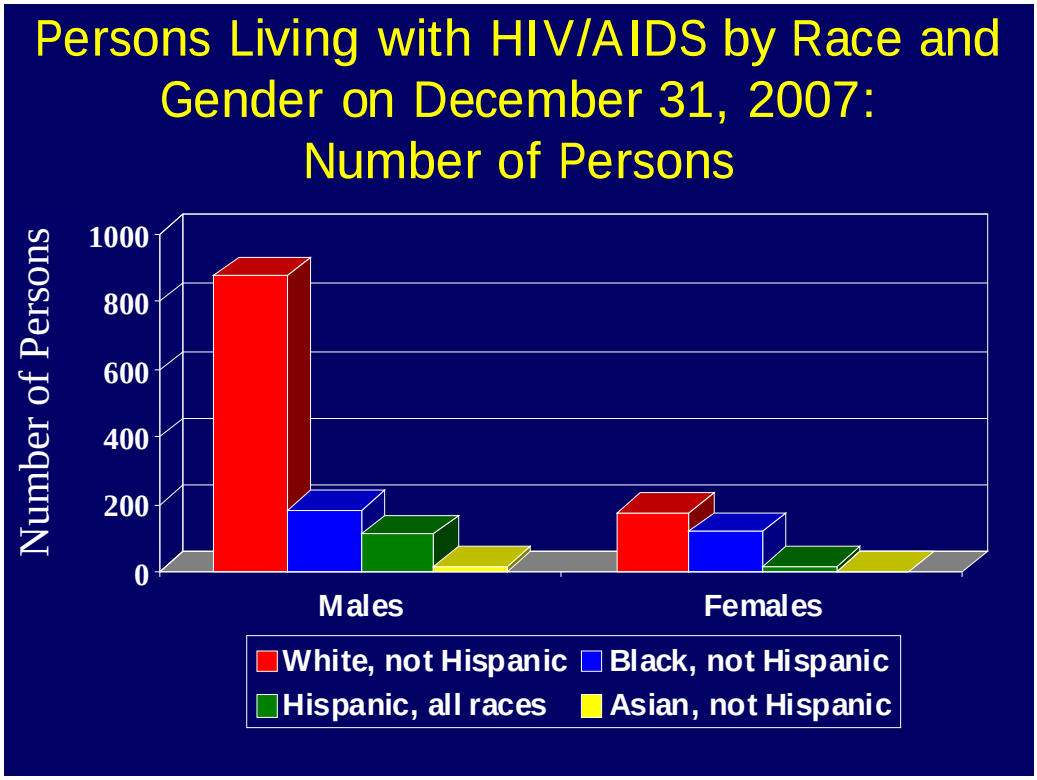


Figure 12
Persons per 100,000 Population Living with HIV/AIDS by Race and Gender The number of persons living with HIV/AIDS per 100,000 population at a given point in time is also known as the HIV/AIDS "prevalence." This measure accounts for the size of a given population, and it most directly illustrates the impact of HIV on a specific population. On December 31, 2007, HIV/AIDS prevalence in Iowa was highest in black males at 458 cases per 100,000 population, followed by black females at 316 per 100,000 population, and then by Hispanic males at 177 per 100,000. Clearly, black, non-Hispanic persons are most disproportionately impacted by HIV in Iowa. Prevalence for the other five race-gender groups was less than 70 cases per 100,000 population. In each racial or ethnic category, the prevalence for males was greater than that for females. Iowa's overall HIV/AIDS prevalence on December 31, 2007, was 52 cases per 100,000 population.

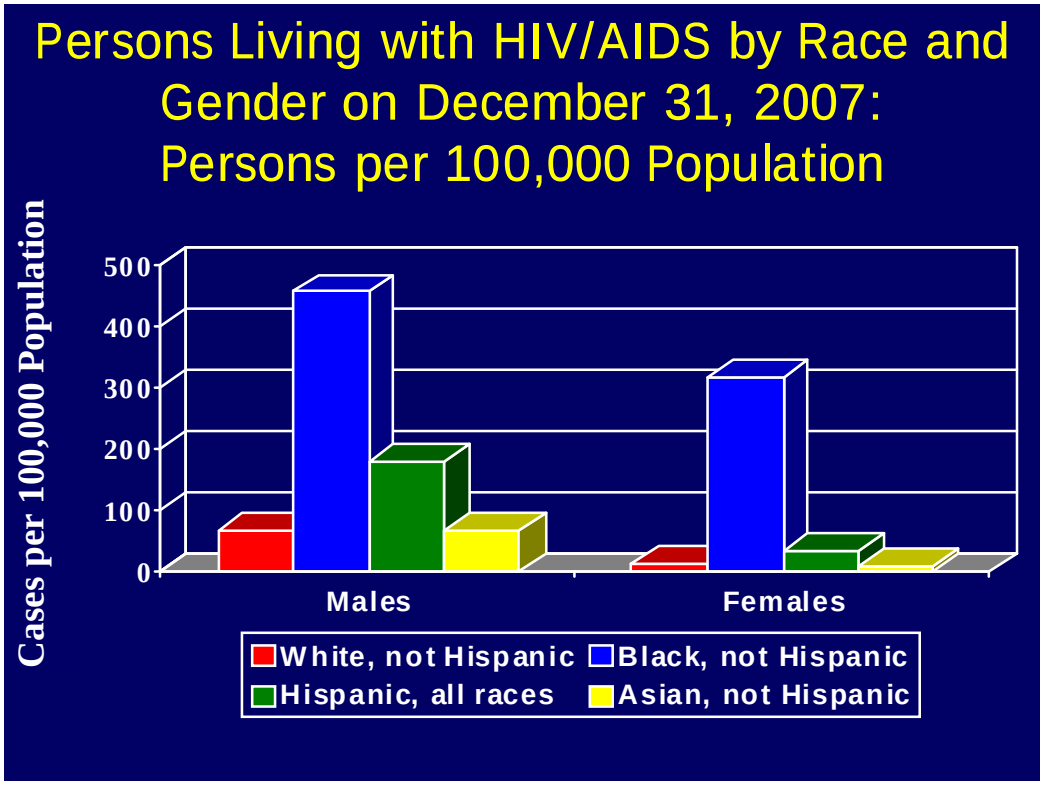


Figure 13
Prevalence of Diagnosed HIV and AIDS by County of Residence at Diagnosis This figure illustrates that HIV is not equally distributed throughout the state, nor does county population size necessarily predict disease burden. One county, Polk, at 106 cases per 100,000 population, has reached a ***diagnosed*** prevalence of over 0.1% (i.e., a prevalence of 100 cases per 100,000 population). Scott and Johnson counties follow closely behind. Other counties have a diagnosed prevalence that is quite a bit below those top three counties. In terms of new diagnoses, the state's ten most populous counties, containing 49% of Iowa's population, accounted for almost 75% of new HIV diagnoses during the period from 2003 through 2007. Among the 10 most populous counties, seven – Polk, Scott, Johnson, Pottawattamie, Black Hawk, Woodbury, and Linn – were the most notable. The remaining three – Story, Dallas and Dubuque counties – contributed to a lesser extent. Figure 13 compares HIV/AIDS prevalence as of December 31, 2007, for counties with more than six cases.

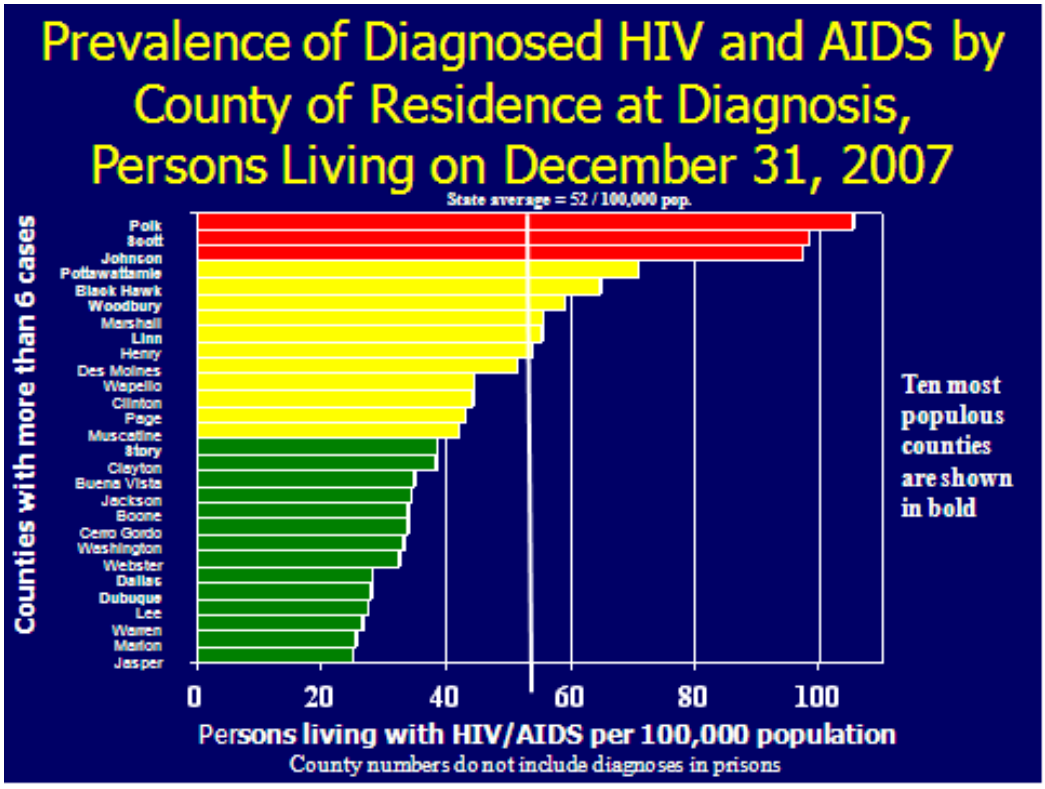
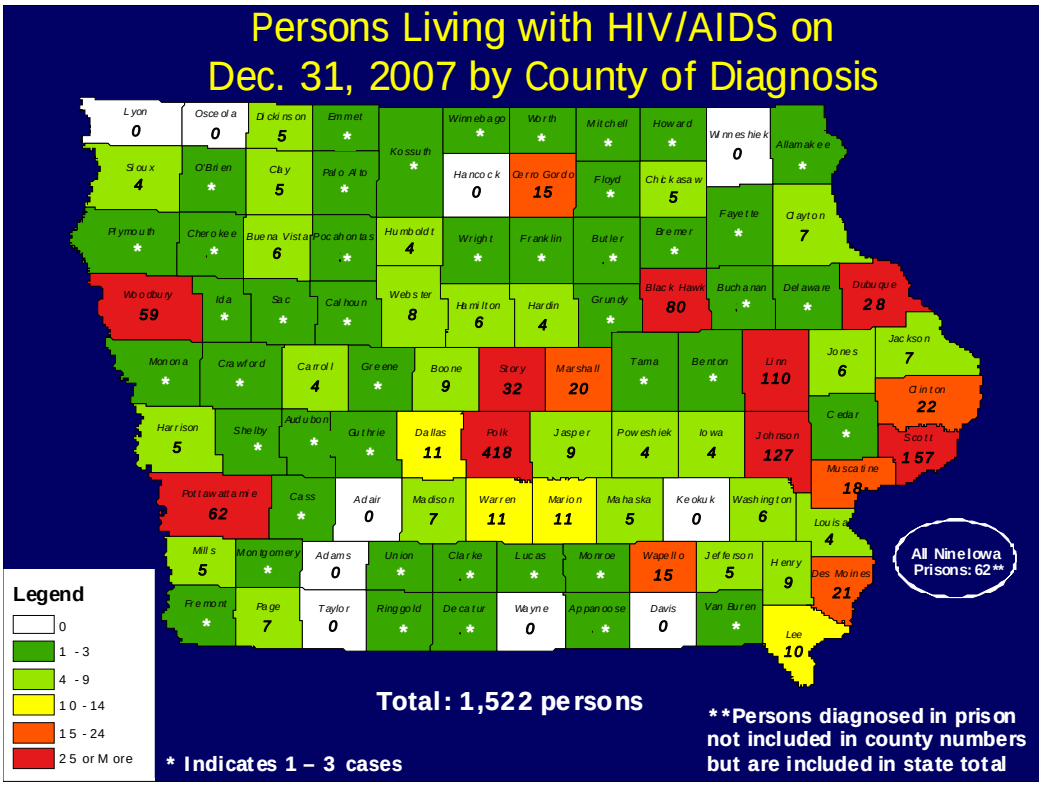


Figure 14
Persons Living with HIV/AIDS by County of Diagnosis The map in Figure 14 shows the number of persons living with HIV or AIDS on December 31, 2007. It indicates where persons resided at the time of diagnosis of AIDS, for those persons living with AIDS, or of diagnosis of HIV infection, for those persons living with HIV (not AIDS). Some of the persons may not be currently living in the counties where they were diagnosed, and all deaths may not have been reported. Prisoners were diagnosed while being held in the following counties: Henry (2), Jasper (4), Johnson (51), Page (1), Polk (3), and Webster (1), but are not reflected in the



data from those counties. Counties with 25 or more persons living with HIV or AIDS include Polk, Scott, Johnson, Linn, Black Hawk, Pottawattamie, Woodbury, Story, and Dubuque. There were 10 counties with no persons diagnosed as residents and living with HIV/AIDS.

POPULATIONS OF SPECIAL INTEREST – MSM

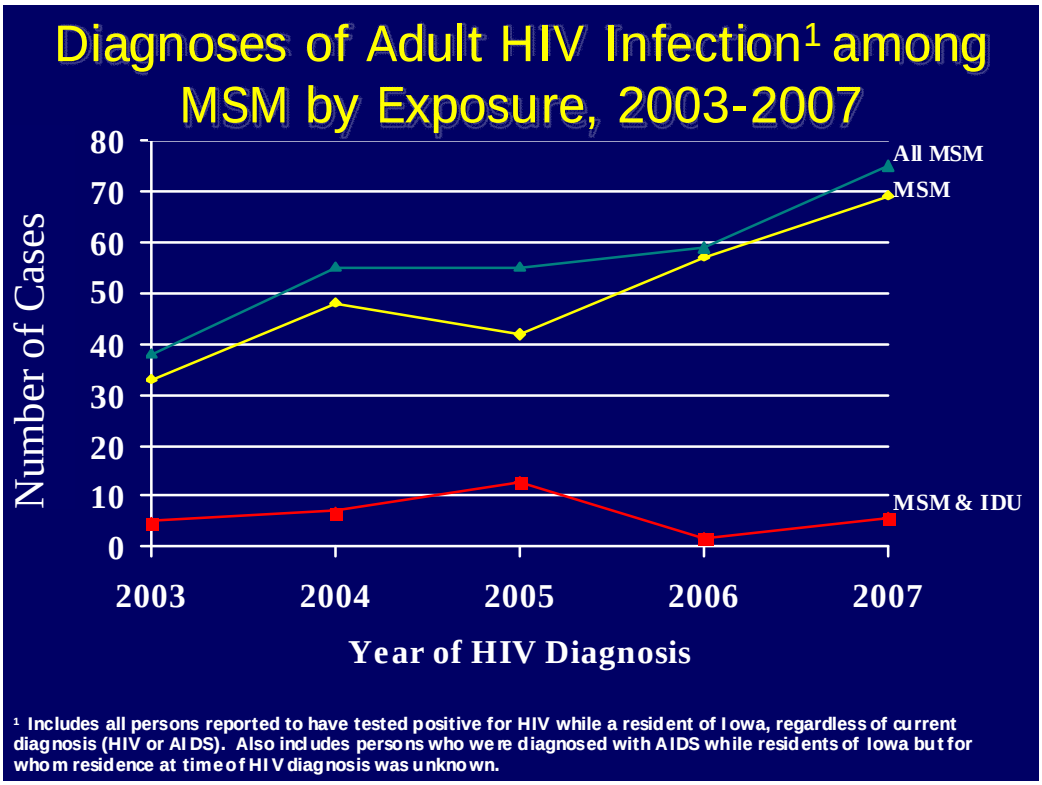


Figure 15
Diagnoses of Adult HIV Infection among MSM by Exposure Category

The Centers for Disease Control and Prevention recognize two separate HIV exposure categories for persons who report male-to-male sexual activity: MSM and MSM/IDU (for MSM who also report a history of injection drug use). Figure 15 shows that diagnoses among non-injecting MSM have more than doubled in the past five years, increasing from 33 diagnoses in 2003 to 69 in 2007. At the same time, diagnoses in the MSM/IDU category have varied between 2 and 13, with a median value of 6. Since 2003, the number of diagnoses among "all MSM" (combining the categories of "MSM" and "MSM/IDU") has increased dramatically, almost doubling, from 39 in 2003 to 75 in 2007. When both MSM categories are taken together, there were a total of 282 diagnoses from 2003 to 2007, an average of more than 56 per year. Men who have sex with men accounted for 52% of HIV diagnoses among all adults and adolescents in the five years from 2003 through 2007, and 67% of adult or adolescent *males* diagnosed during that same period.

Figure 16
Diagnoses of HIV Infection in MSM by Age at Diagnosis
Since 2003, diagnoses have increased in MSM who were 25 and older. Diagnoses among persons 13 to 24 years of age are much less common, appear to have peaked in 2005, and have declined slightly since then. The median age at diagnosis for MSM diagnosed from 2003 through 2007 is 39 years but was above that in 2006 and 2007.

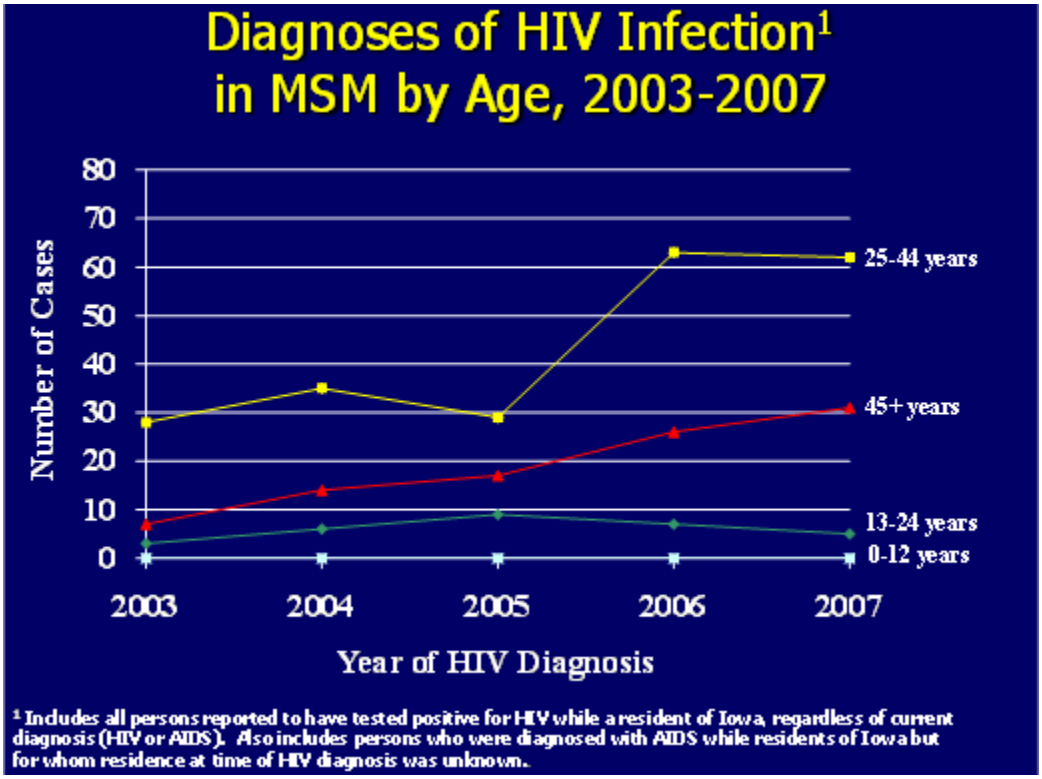


Figure 17
Diagnoses of Adult HIV Infection among MSM by Exposure Category and Race and Ethnicity
As seen in Figure 17, most of the diagnoses in MSMs from 2003 through 2007 were among white, non-Hispanic males, with a total of 221 cases. Their median age at diagnosis was 41 years. There were 24 MSM diagnoses among black, non-Hispanic males (median age of 34 years) and 29 (median age of 31 years) among Hispanics.

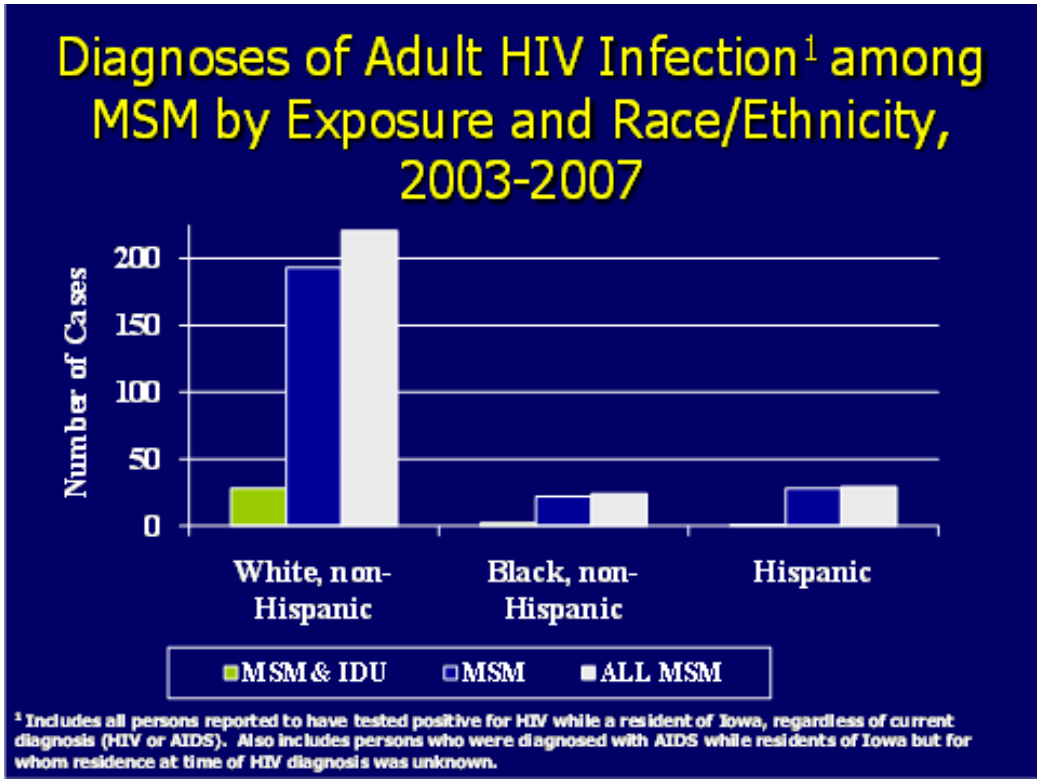
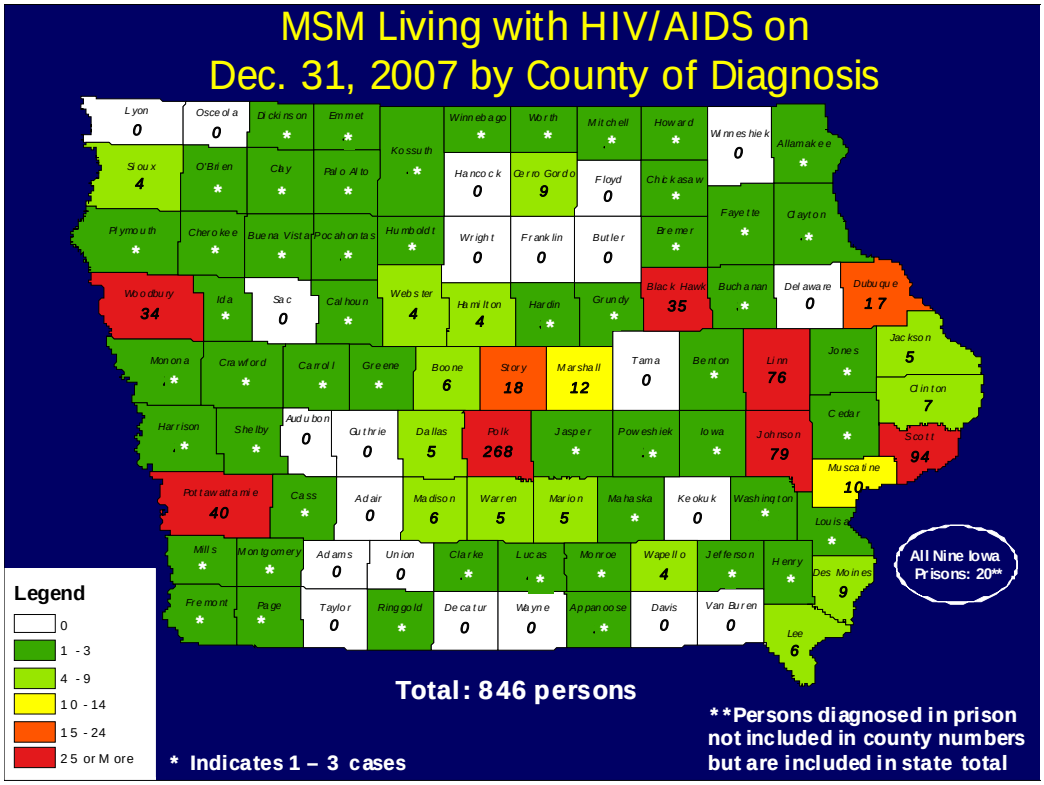


Figure 18
MSM Living with HIV/AIDS by County of Diagnosis

Figure 18 shows the distribution of cases by county of diagnosis for those men living with HIV/AIDS on December 31, 2007, and whose reported mode of exposure to HIV was having sex with other men (either MSM alone or MSM with injection drug use). Counties with 25 or more cases include Polk, Scott, Linn, Johnson, Pottawattamie, Woodbury, and Black Hawk. These seven counties account for nearly 75% of the cases. Counties with 10 to 24 cases include Story, Dubuque, Marshall, and Muscatine. The 11 counties named above accounted for 82% (232) of the 282 HIV diagnoses among MSM from 2003 through 2007.



POPULATIONS OF SPECIAL INTEREST – BLACKS AND HISPANICS

Figure 19
HIV/AIDS Prevalence by Race and Ethnicity Compared to Iowa's Population

Although African Americans and other blacks make up approximately 2.5% of Iowa's population, they account for 20% of persons living with HIV/AIDS. Similarly, Hispanic persons make up about 4% of the state's population but account for 8% of persons living with HIV/AIDS. Figure 19 illustrates these large disparities.

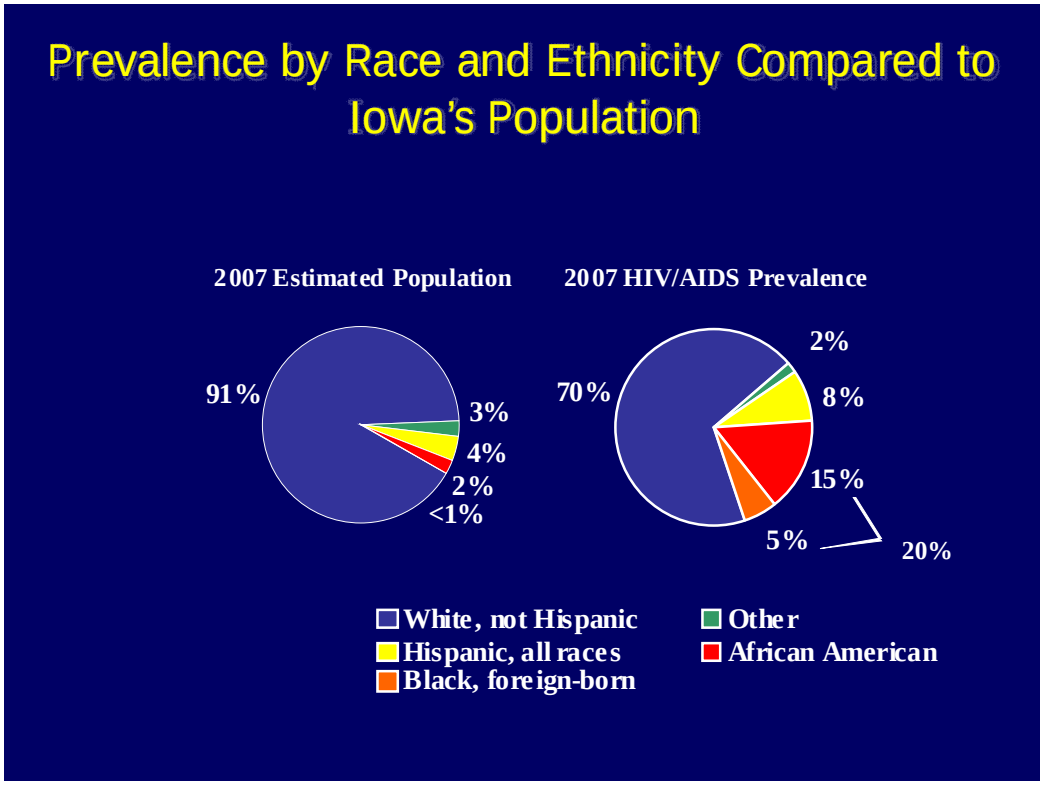


Figure 20
Diagnoses of HIV Infection for All Persons by Race and Ethnicity Figure 20 was previously presented as Figure 6. It is presented again here to provide context for consideration of blacks and Hispanics as populations of special interest. As shown in Figure 20, diagnoses among white, non-Hispanic persons doubled from 2003 to 2007. Increases in diagnoses among foreign-born persons occurred from 1999 to 2002 among black and Hispanic populations but were not sustained after 2002. While the numbers of diagnoses in blacks and Hispanics have not shown the dramatic increase seen among whites, it is very important to note that the numbers of diagnoses in black and Hispanic persons is markedly disproportionate to the size of the black and Hispanic populations, respectively, in the state. In fact, when population size is considered, blacks were 10 times more likely to be diagnosed with HIV in 2007 than were white, non-Hispanic persons. Similarly, Hispanic persons were almost 4 times more likely to be diagnosed with HIV in 2007 than were white, non-Hispanic persons.

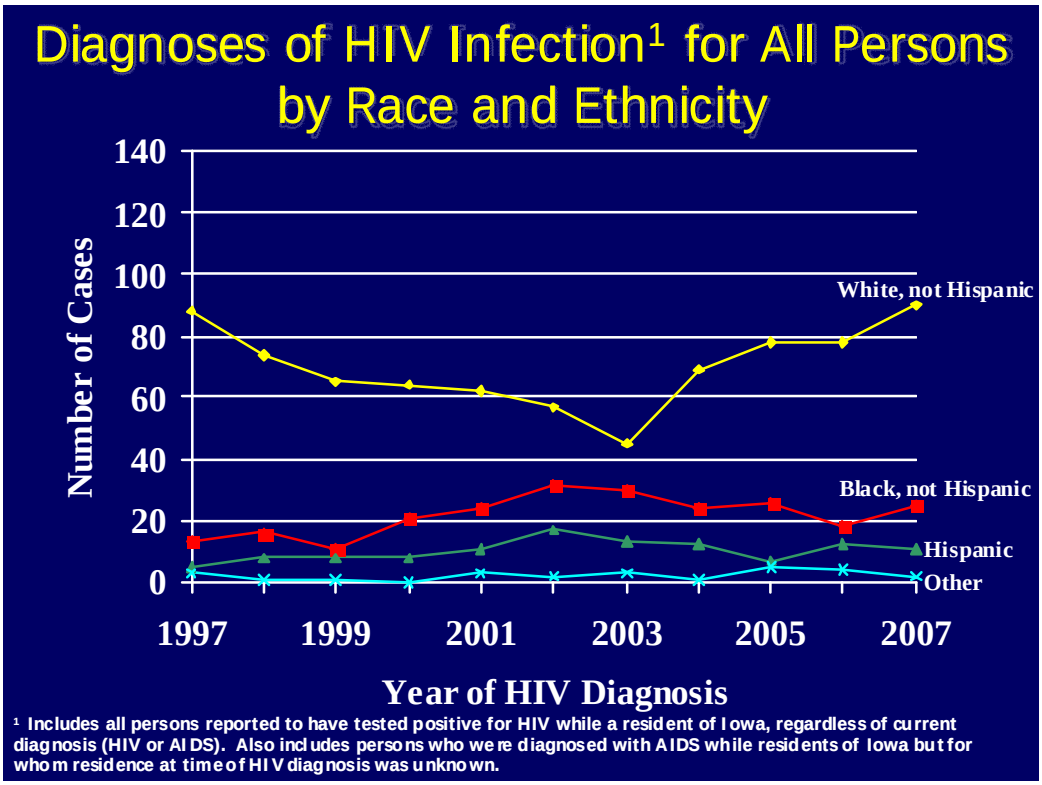
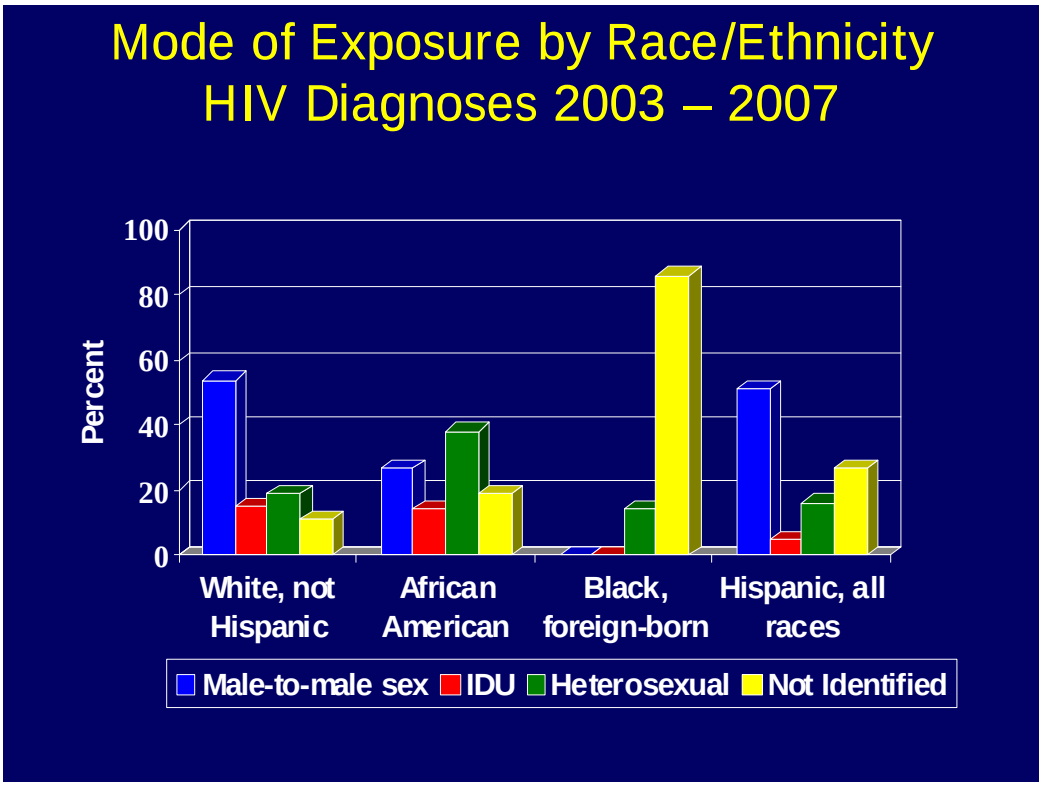


Figure 21
Mode of HIV Exposure by Race and Ethnicity The predominant mode of exposure to HIV varies by race and ethnicity. Male-to-male sex predominates among whites and Hispanics, while heterosexual sex predominates among African Americans. Figure 21 shows the distribution of the four most common modes of exposure among the four most impacted racial and ethnic groups. Most HIV-positive, foreign-born, black persons have come to this country from Africa as political refugees seeking asylum in the U.S. In general, they have acquired their HIV infections prior to



coming to the U.S. The Centers for Disease Control and Prevention no longer allow adults or adolescents born, or who had sex with someone born, in a country where heterosexual exposure was believed to be the predominate mode of HIV transmission to be classified as having heterosexually acquired HIV. This leads to a high proportion of persons with "no identified risk" (NIR) among persons who are foreign born.

Figure 22

HIV Diagnoses among Black Persons by Gender As depicted in Figure 22, there were more black women than black men diagnosed with HIV in 2003. Beginning in 2004, there were more black males than black females diagnosed each year through 2007. The difference, however, is not a large one, with males averaging almost 14 persons diagnosed per year and females about 10.

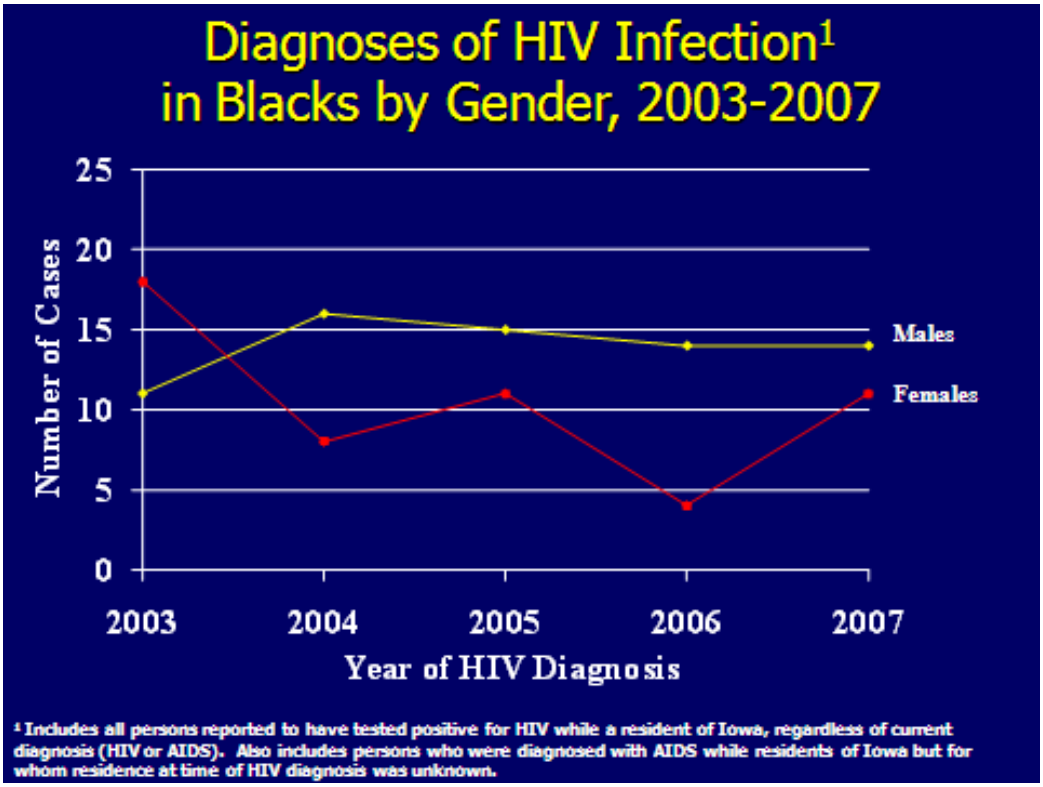


Figure 23

HIV Diagnoses among Black Persons by Age Persons aged 25 to 44 years, who generally make up the largest proportion of diagnoses among blacks, accounted for 83 diagnoses from 2003 to 2007. The average was 17 diagnoses per year, with a range from 11 to 20. Diagnoses among those 13 to 24 years of age remained low from 2003 through 2007. No one younger than 13 years of age has been diagnosed with HIV since 2003. The median age for black persons diagnosed from 2003 through 2007 was 34 years. This was lower than the median of 38 years for all persons diagnosed in Iowa during the same period.

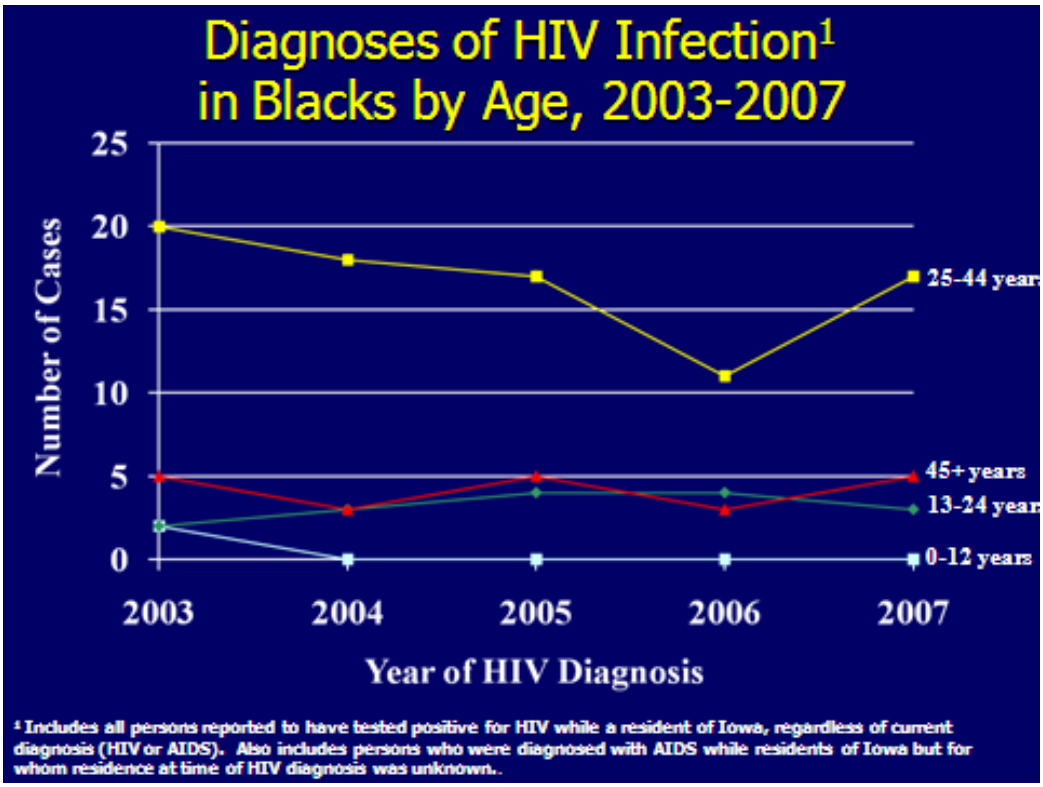


Figure 24
Black Persons in the General Population of Iowa by County of Residence The map in Figure 24 depicts the population distribution of black Iowans by county of residence, based upon 2007 population estimates from the U.S. Census Bureau. Polk, Scott, Black Hawk, Linn, Johnson, and Woodbury counties all have populations of more than 2,500 black, non-Hispanic persons.

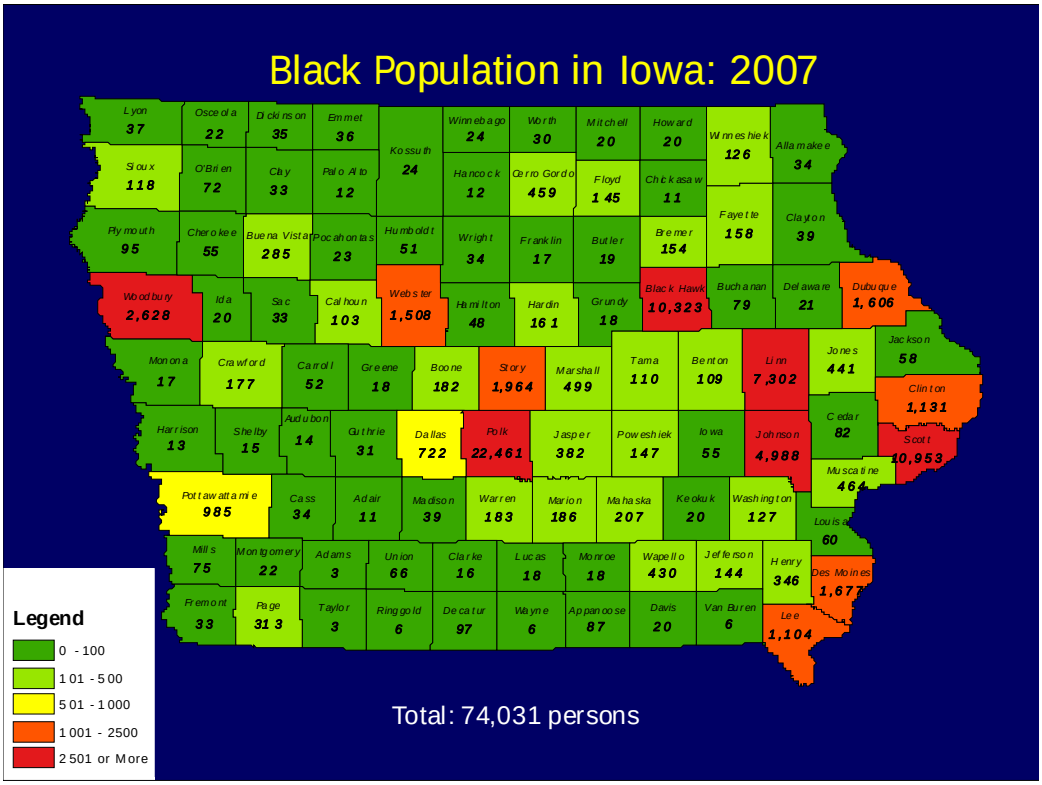


Figure 25
Black Persons Living with HIV/AIDS by County of Diagnosis The map in Figure 25 shows the distribution of black persons living with HIV/AIDS by county of diagnosis on December 31, 2007. Polk, Scott, Johnson and Black Hawk counties all have 25 or more black persons living with HIV/AIDS. Twenty-four black persons were diagnosed while in the state prison system. The bottom number in each county gives the number of black persons living with HIV/AIDS *per 100,000 population* in that county. While Polk County has the largest number of black residents diagnosed with HIV/AIDS, Johnson County has the highest prevalence (per 100,000 population).

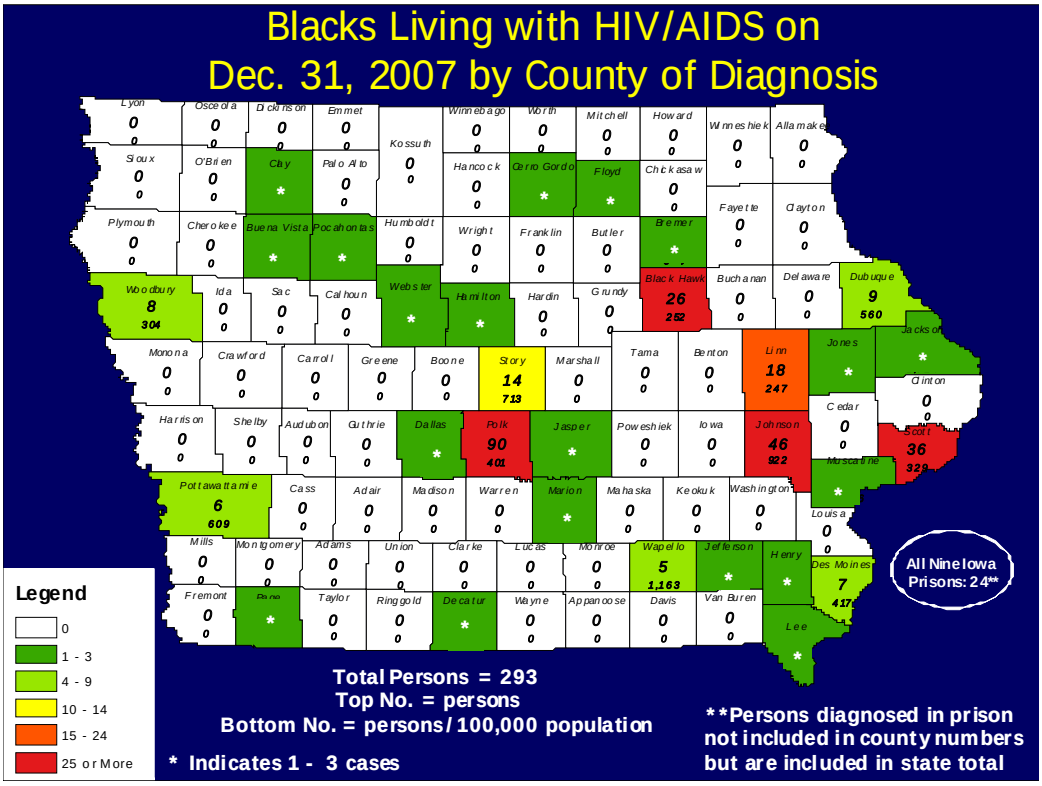


Figure 26
HIV Diagnoses among Hispanic Persons by Gender
HIV diagnoses among Hispanic males outnumbered those among Hispanic females by more than four-to-one for the period from 2003 to 2007. There were a total of 44 diagnoses among Hispanic males during this period and 10 among Hispanic females. After a two-year decrease in diagnoses from 2003 to 2005, diagnoses in males have rebounded to 2003 levels. On the other hand, diagnoses in females have dropped from four in 2004 to zero in 2007.

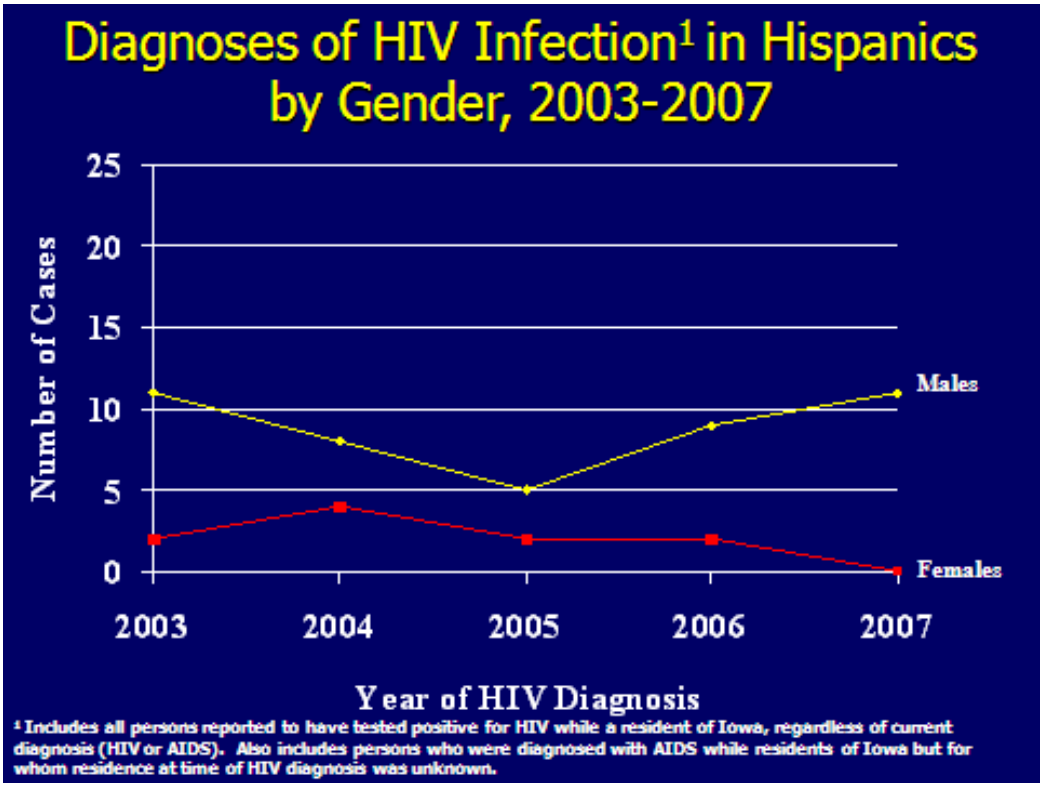


Figure 27
HIV Diagnoses among Hispanic Persons by Age
Figure 27 shows the distribution of age at diagnosis of HIV for Hispanics for the years 2003 through 2007. The median age of diagnosis for Hispanic persons was 33 years of age. Persons 25 to 44 years of age had the highest number of diagnoses, ranging between 7 and 12 diagnoses per year, with an average of 9. Diagnoses among persons 13 to 24 years of age ranged between 0 and 2 with an average of 1. There were no diagnoses in persons 0 to 12 years of age.

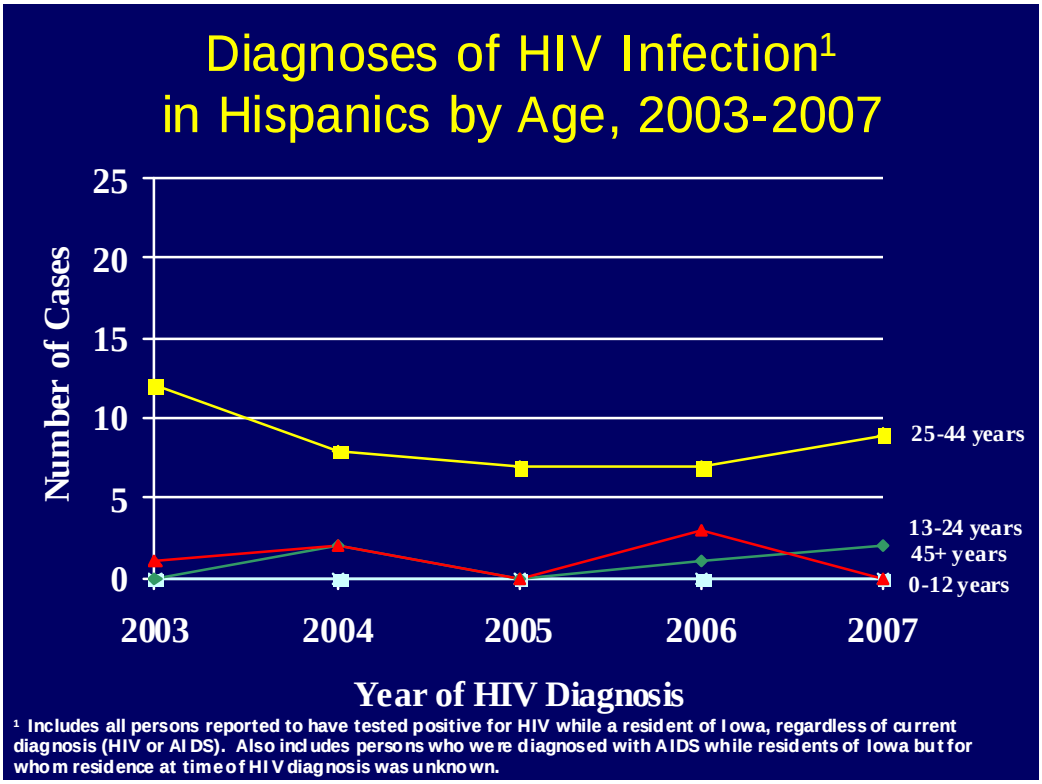


Figure 28
Hispanic Persons in the General Population of Iowa by County of Residence The map in Figure 28 depicts the population distribution of Hispanic Iowans by county of residence, based upon 2007 population estimates from the U.S. Census Bureau. The counties of Black Hawk, Buena Vista, Crawford, Dallas, Johnson, Linn, Marshall, Muscatine, Pottawattamie, Polk, Scott, and Woodbury all have Hispanic populations of more than 2,500 persons.

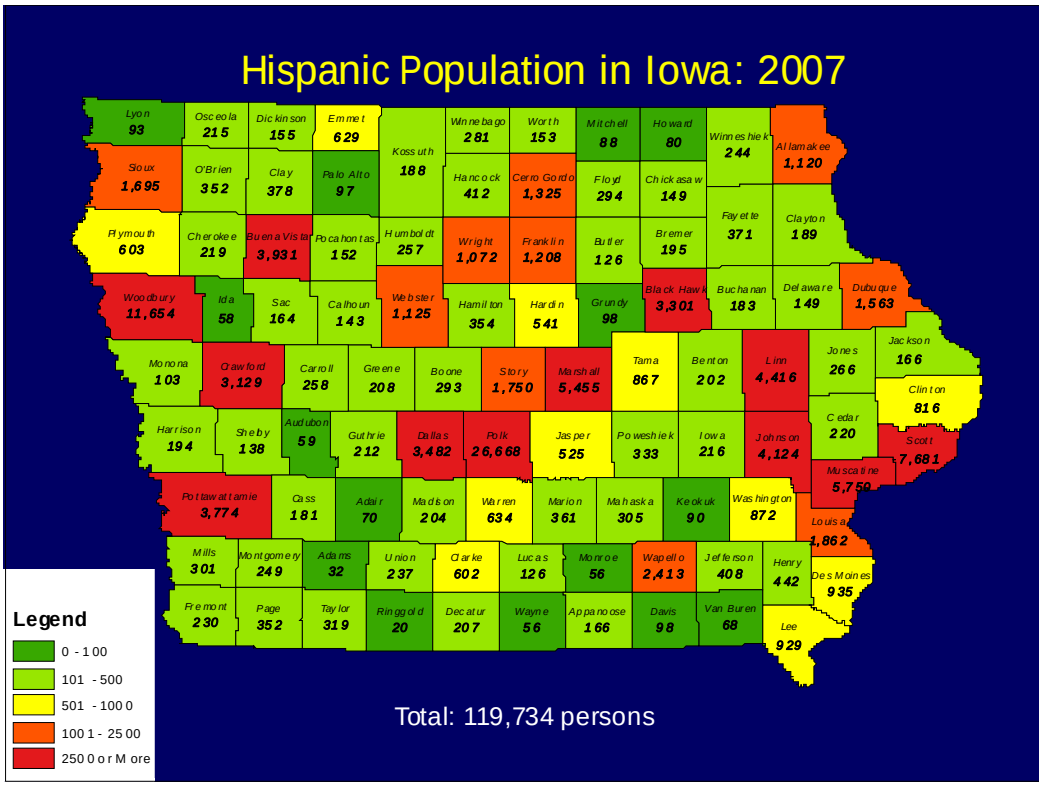
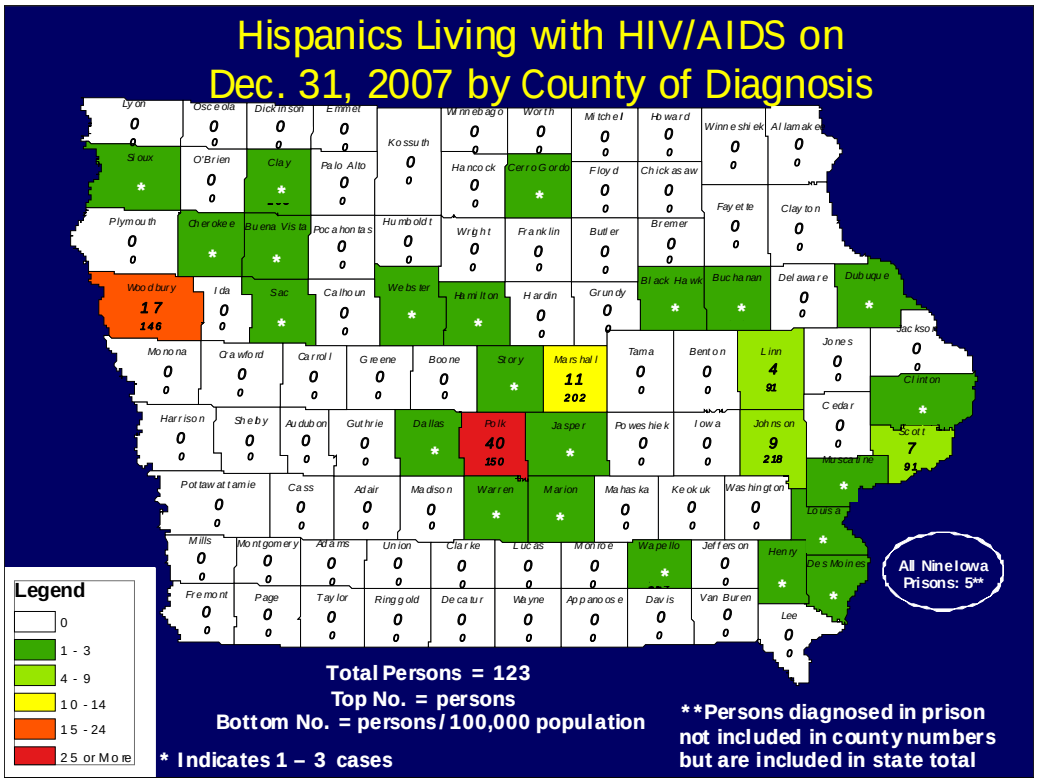



Figure 29
Hispanic Persons Living with HIV/AIDS by County of Diagnosis The map in Figure 29 shows the distribution of Hispanics living with HIV/AIDS on December 31, 2007, by county of diagnosis. Polk is the only county with more than 25 cases. Woodbury and Marshall are the only other counties with more than 10 cases. The bottom number in each county gives the number of Hispanic persons living with HIV/AIDS *per 100,000 population* in that county. While Polk County has the largest number of Hispanic residents diagnosed with HIV/AIDS, Marshall County has the highest prevalence (per 100,000 population).