

# **HIV/STI Integrated Epidemiologic Profile 2012**

**Infectious Disease Branch  
Center for Health Protection  
Arkansas Department of Health**



**Arkansas Department of Health**  
*Keeping Your Hometown Healthy*

**Acknowledgements:**

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**Disclaimer:**

Since January 2014 the Arkansas HIV Surveillance Program has been conducting data cleaning activities on Arkansas surveillance data to ensure the most accurate picture of the HIV epidemic in Arkansas. Data presented in this document may differ from previous reports of cases diagnosed in Arkansas from 2008 thru 2012. Due to the timing of the report, the data presented are more representative of the time period as it accounts for reporting delays.

Also important to note, is that all cases presented in this document are classified based upon the 2008 HIV case definition.

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## EXECUTIVE SUMMARY

At the end of 2012, there were 5,041 persons living with HIV/AIDS (PLWHA) in the State of Arkansas. Of these, 2,256 (44.8%) were AIDS cases and 2,785 (55.2%) were HIV cases. This is a 57.1% increase in the number of persons living with HIV/AIDS since 2000.

During 2012, a total of 306 newly diagnosed HIV/AIDS cases were reported to the HIV Surveillance Program, for an incidence rate of 10.4 per 100,000 persons in Arkansas. The distribution of newly diagnosed cases between HIV and AIDS has been stable since 2008. Of the 306 newly diagnosed cases from 2008 to 2012, 111 (36.3%) were AIDS cases and 195 (63.7%) were HIV cases.

HIV/AIDS is disproportionately distributed across Arkansas's population. Non-Hispanic blacks were more likely to be newly diagnosed than any other racial/ethnic group. Blacks accounted for 53.6% of all new HIV/AIDS diagnoses in 2012 in Arkansas. The rate of newly diagnosed HIV/AIDS among blacks in 2012 was 35.2 per 100,000, over 6 times that among whites and over 3 times that among Hispanics. Male-to-male sexual contact (MSM) was the most common known mode of transmission, followed by high-risk heterosexual transmission. These patterns are congruent with national statistics. The most impacted age groups in 2012 were 25-to-34-year-olds, with 93 newly diagnosed cases, and 15-to-24-year-olds, with 76 newly diagnosed cases. The number of new diagnoses among youth aged 15–24 increased by 49 % from 2008 to 2012 in Arkansas. This is consistent with a national increase in the percentage of cases among youth. CDC recently reported that approximately 7% of the 1.1 million persons living with HIV/AIDS are between the ages of 15 and 24.<sup>1</sup>

Highlights of the regional trends were as follows:

- Forty-nine percent of all newly diagnosed HIV/AIDS cases from 2008 to 2012 resided in the Central Public Health Region. This region also had the highest rate (260.8 per 100,000) and the highest regional percentage (42.1%) of persons living with HIV/AIDS at the end of 2012.
- The Northwest Public Health Region had the greatest regional percentage of newly diagnosed HIV/AIDS cases among whites (67.7%) between 2008 and 2012. This region had the second-largest regional percentage of newly diagnosed cases having a risk factor of MSM (60.5%) between 2008 and 2012, after the Central Region (60.8%).
- The Southeast Public Health Region had the greatest regional percentage of newly diagnosed HIV/AIDS cases among blacks (75.3%) between 2008 and 2012, as well as the largest regional percentage of newly diagnosed cases in youth aged 15 to 24 (32.5%). This region also had the second-highest rate of persons living with HIV/AIDS at the end of 2012 (252.7 per 100,000).

# INTRODUCTION

## **Introduction**

This epidemiologic profile provides detailed information about the current HIV/AIDS epidemic in the State of Arkansas. Data from the HIV Surveillance Program and multiple other sources were reviewed to create this document that addresses the following key questions:

What are the socio-demographic characteristics of the general population in Arkansas?

What is the scope of the HIV/AIDS epidemic in Arkansas?

What are the indicators of risk for HIV/AIDS infection in Arkansas?

What are the patterns of utilization of HIV services for persons in Arkansas?

What are the number and characteristics of person who know they are HIV positive but who are not receiving primary medical care?

Each of the questions represents a section of the report, which includes relevant data and interpretation.

### **Data Sources**

Data were compiled from a variety of sources to provide the most complete picture of the epidemic in Arkansas. When interpreting the data, keep in mind that each of the data sources has strengths and limitations. A brief description of each data source is provided below.

#### **Arkansas Department of Health**

##### **Core HIV/AIDS Surveillance**

The Arkansas Department of Health (ADH) began conducting HIV/AIDS surveillance in 1983. On July 1, 1999, the Arkansas statutes requiring confidential name-based HIV reporting were instituted. All HIV and AIDS cases diagnosed or treated in the State of Arkansas are reportable to the Arkansas Department of Health's HIV/AIDS Surveillance Program. Standardized case report forms are used to collect demographics, vital status, laboratory and clinical results, as well as risk factor information on all cases. All surveillance data are entered into the HIV/AIDS Reporting System (eHARS), the standardized database developed by CDC.

**Limitations:** HIV Surveillance data can provide only a minimum of estimates of the number of persons known to be infected with the condition. HIV/AIDS surveillance is totally reliant on positive laboratory test results and the fulfillment of disease reporting requirements by providers and laboratories.

##### **Ryan White Part B Program**

The Ryan White Part B Program in the State of Arkansas has been assisting Arkansans living with HIV and AIDS via a variety of resources since 1991, after the enactment of the Federal Comprehensive AIDS Resources Emergency (CARE) Act in 1990. The Ryan White CARE Act (RWCA) ensures quality and availability of care for medically underserved individuals and families affected by HIV/AIDS. The Ryan White Part B Program in Arkansas maintains a database within the STI/HIV/TB/Hepatitis C Section at ADH. Data collected include client demographics, diagnostic status, financial eligibility and vital status information.

**Limitations:** Data are collected only from clients who know their HIV status and who are eligible for Ryan White services.



### **AIDS Drug Assistance Program (ADAP)**

The ADAP is a state-administered program located within the Arkansas Department of Health's STI/HIV/Hepatitis C/TB Section that provides medications free of charge to persons living with HIV/AIDS who meet program eligibility requirements.

**Limitations:** The data is not generalizable to all HIV-infected persons in Arkansas because data is only collected on persons who know their HIV status. Clients in ADAP are eligible to receive care / treatment services through the Ryan White Part B Program or are financially eligible to receive ADAP services because of partial medication coverage through public or private insurance.

### **Sexually Transmitted Disease (STD) Surveillance**

The Arkansas Department of Health STI Program conducts statewide surveillance of chlamydia, gonorrhea and syphilis infections. Services provided include partner counseling, referral services and treatment. Data are collected in the Sexually Transmitted Disease Management Information System (STD\*MIS). These data can serve as a surrogate marker for unsafe sexual practices and demonstrate the prevalence of changes in specific behaviors.

**Limitations:** The data is dependent upon compliance with reporting laws and is limited to positive test results. In the case of some STDs, the patient may be asymptomatic.

### **Health Statistics Data**

The Vital Records Branch collects information on all births and deaths that occur in the State of Arkansas. A Cause of Death query was performed on the publicly available Arkansas Center for Health Statistics Query System, at <http://www.healthy.arkansas.gov/programsServices/healthStatistics>. The yearly numbers and rates of HIV-associated deaths occurring in Arkansas were determined for 1990 to 2012, using ICD-10 diagnosis codes for HIV (B20–B24).

**Limitations:** Deaths resulting from HIV or with HIV as an underlying cause may be underreported on death certificates. Death records are less timely than AIDS case reports. Notably, in 1999 a new cause-of-death tabulation was developed in the form of ICD-10 (International Classification of Diseases) codes. Before 1999, the ICD-9 classification was used. There are differences in mortality rates between the two codes. In this document, no adjustments have been made in mortality rates with respect to ICD-9 and ICD-10 codes.

### **Behavioral Risk Factor Surveillance System**

The Arkansas Department of Health compiles and analyzes statewide survey data from the CDC-sponsored Behavioral Risk Factor Surveillance System (BRFSS), which asks respondents over the telephone about behavioral health risk factors. BRFSS data are representative of the general, non-institutionalized population of an area. A question on whether the respondent has ever had an HIV test (not including those done because of blood donation) has been asked annually as part of the Standard Core Questions. We present results from 2004 to 2010 for Arkansas.

**Limitations:** BRFSS data are self-reported and thus, the information may be subject to recall bias. As a telephone survey, the sample is limited to households with a telephone. In 2011, the methodology of the BRFSS changed substantially to include cell phone numbers and college students living in dormitories. Therefore, results from 2011 and later years are not comparable to those from earlier years.

### **Hospitalizations**

All non-federal hospitals report procedure charges to the Arkansas Department of Health. Data come from existing hospital administrative records and include demographics, diagnoses, procedures performed, and charges. The data are accessible at the Agency for Healthcare Research and Quality's Healthcare Cost and Utilization Project (HCUP), <http://hcupnet.ahrq.gov/>

**Limitations:** ADH does not collect this data from hospital emergency departments, hospital outpatient clinics, physicians' offices, free-standing outpatient surgery centers, or hospices. Notably, ADH does not collect data from out-of-state hospitals that likely treat a number of Arkansas residents living near the state borders.

### **Pregnancy Risk Assessment Monitoring System (PRAMS)**

The Pregnancy Risk Assessment Monitoring System (PRAMS) is a joint research project between the Health Statistics Branch of the Arkansas Department of Health and the U.S. Centers for Disease Control and Prevention (CDC). The PRAMS survey was started by the CDC in 1987 to provide states information they needed to reduce the number and percentage of babies that are low birth weight and to prevent infant mortality. The PRAMS survey collects information from new mothers about their experiences and behaviors before, during, and after their pregnancy that might affect the health of their baby.

**Limitations:** PRAMS data are self-reported and subject to social desirability bias and recall bias, which could lead to inaccurate estimates.

### **Population Data**

#### **U.S. Census Bureau, National Center for Health Statistics**

#### **Bridged-Race Postcensal Population Estimates, Vintage 2012**

To provide population estimates by single-race categories, the National Center for Health Statistics provides "bridged-race" estimates starting with the 2000 Census. These estimates combine the Census's 31 categories (5 single-race and 26 multiple-race) into 4 single-race categories: White, Black, American Indian or Alaska Native, and Asian/Pacific Islander. Hispanic ethnicity is shown separately, exclusive of the racial categories.

**Limitations:** Because persons reporting multiracial backgrounds in the Census are statistically assigned a dominant race in the bridged-race dataset, subpopulation totals by race are statistical estimates, not actual counts.

### **Sociodemographic Data**

#### **U.S. Census Bureau, American Community Survey**

#### **2008–2012 Five-year Estimates**

The American Community Survey (ACS) covers a broad range of topics about social, economic, demographic, and housing characteristics of the U.S. population. It is a continuous, ongoing survey with results updated yearly. ACS results for poverty, educational attainment, and insurance by race/ethnicity were obtained for Arkansas. ACS results are presented for five single races: White, Black, Asian, American Indian or Alaska Native, and Asian/Pacific Islander. Persons of Hispanic or Latino ethnicity can belong to any racial category.

**Limitations:** Because the 2008–2012 5-Year Estimates include people sampled over a broad time range, it is inappropriate to interpret the results as coming from any one year or time point within this period. These results are not comparable to single-year or 3-year estimates from the ACS or other sources. The totals shown in tables derived from the ACS are the number of people surveyed, not the total population.

### **Direct and Indirect Measures of Risk Behavior**

#### **Arkansas Department of Human Services, Division of Behavioral Health Services**

#### **Alcohol/Drug Management Information System (ADMIS) Substance Table, April 2014**

The Arkansas Department of Human Services provided data on the number of intramuscular and intravenous drug users treated from 2008 to 2012, stratified by sex, race, and age. Primary drug types used by clients were condensed into the most common types listed.

**Limitations:** These data come from state-funded inpatient treatment facilities. The treated inpatients are a subset of all injecting-drug users (IDU) that does not include clients being treated as outpatients, clients not receiving treatment, and clients receiving non-state funded care.

**Centers for Disease Control and Prevention, Youth Risk Behavior Survey (YRBS)**

The Youth Risk Behavior Survey is a national survey of students in secondary schools that is conducted biennially in odd-numbered years. It asks students about their behavior in six categories of health-risk behaviors.

**Limitations:** Because the YRBS relies on self-reported information, reporting of sensitive behavioral information may not be accurate; under- or over-reporting may occur. Answers are subject to recall bias. The results are representative of young people who are enrolled in high school, and cannot be generalized to all young people in an area.

# **CORE EPIDEMIOLOGIC QUESTIONS**

## Question 1

### What are the socio-demographic characteristics of the general population in Arkansas?

#### SUMMARY

**Population:** In 2012, the estimated total population for the State of Arkansas was 2,949,131. This represents a 10.3% increase from the 2000 Census report of 2,673,400. According to 2012 estimates, the population of Arkansas' 75 counties ranges from 5,307 in Calhoun County to 388,953 in Pulaski County.

With a total land area of 53,179 square miles, the population density of Arkansas was 56 persons per square mile in 2010. County-level population density ranged from 8.5 persons/square mile in Calhoun County to 504 persons/square mile in Pulaski County. Fifty-six percent of the state population lives in urban areas, compared to 44% in rural areas.

**Public Health Regional Structure:** The State of Arkansas is geographically divided into five Public Health Regions: Northwest, Northeast, Central, Southwest, and Southeast. They range in size from 7 counties (Central) to 19 counties (Northwest and Northeast) and in population from 267,129 (Southeast) to 814,569 (Central). Each region includes at least one metropolitan area, as defined by the Census: Fayetteville-Bentonville and Fort Smith in Northwest, Memphis and Jonesboro in Northeast, Little Rock in Central, Pine Bluff in Southeast, and Texarkana and Hot Springs in Southwest.

**Demographic Composition:** From 2000 to 2010, Arkansas became more diverse as the total population increased. Hispanics, Asians, and Pacific Islanders increased as a percentage of the total population. In 2012, the racial and ethnic composition of the state was estimated to be 75% White non-Hispanic, 16% Black non-Hispanic, 7% Hispanic, 2% Asian/Pacific Islander, and 1% American Indian.

**Age and Sex:** Along with the rest of the nation, Arkansas' population is getting older. In 2010 the median age was 37.4 years, compared to 36.0 years in 2000. In 2012, this pattern remained relatively stable. Males and females are about equally represented in Arkansas—at 49.9% and 50.1% of the population, respectively.

**Poverty, Income, and Education:** The median household income of Arkansans in 2008–2012 was \$40,531. In the same years, 18.7% of Arkansans were living below poverty level, compared to 14.9% of Americans. Of Arkansans aged 25 or more, 83.3% had received a high school diploma (not including a GED) and 19.8% held a Bachelor's degree or higher by 2008–2012.

**Insurance Status:** In 2012, Arkansas was ranked 12<sup>th</sup> in the country in the percentage of uninsured. Among those aged 18 to 64, 1 out of every 5 Americans was uninsured, compared to 1 in 4 Arkansans. Arkansans belonging to minority racial and ethnic groups were more likely to be uninsured in 2008–2012.

# DEMOGRAPHICS

From 2000 to 2010, Arkansas became more diverse as the total population increased.<sup>1</sup> Hispanics, Asians, and Pacific Islanders increased as a percentage of the total population. People of Hispanic or Latino ethnicity increased from 3.2% to 6.4% of the population, more than doubling in number. Asians increased from 0.8% to 1.2%, almost doubling in number. Native Hawaiian and other Pacific Islanders increased from 0.06% to 0.2%, more than tripling in number. In the same period, the percentage of whites decreased from 80.0% to 77.0% and the percentage of blacks remained similar, from 15.7% to 15.4%. In 2012, minorities continued to increase their share of the general population (Figure 1, Table 1).

Figure 1.

**Distribution of the Population of Arkansas by Race/ethnicity, 2012**

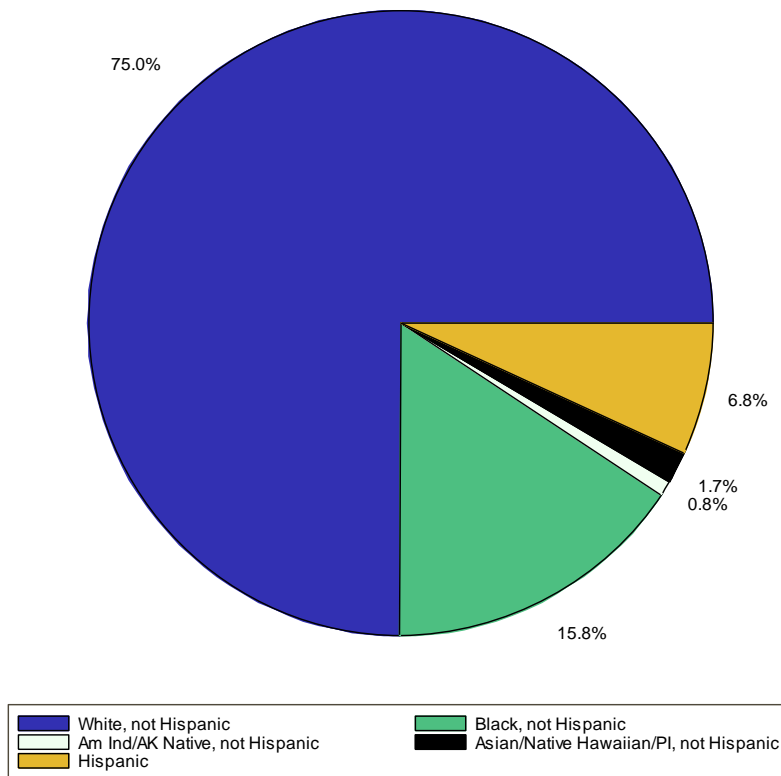


Table 1. Percentage distribution of the population by race/ethnicity for each sex, Arkansas 2012

<b>Race/ethnicity</b>	<b>Male (n = 1,448,490)</b>	<b>Female (n = 1,500,641)</b>	<b>Total</b>
<b>White, non Hispanic</b>	74.9%	75.0%	75.0%
<b>Black, non Hispanic</b>	15.3%	16.3%	15.8%
<b>Hispanic</b>	7.4%	6.2%	6.8%
<b>Asian/Native Hawaiian/PI, non Hispanic</b>	1.6%	1.7%	1.7%
<b>Am Ind/AK Native, non Hispanic</b>	0.8%	0.8%	0.8%

Source: National Center for Health Statistics, Vintage 2012 Bridged-Race Postcensal Population Estimates

The racial makeup of Arkansas follows a geographic pattern. Blacks contribute a higher proportion of the population along the Mississippi River Delta and southern parts of the state and are less well represented in the north and northwest.<sup>2</sup> The Public Health Regions reflect this pattern as well, with the Southeast having the highest percentage of blacks (52.7%) and the Northeast the lowest (3.6%).

Hispanics are most concentrated in the Northwest Region, where they make up 15.3% of the population. Asians and Pacific Islanders are also found in greatest numbers in the Northwest (4.2%), largely because of immigration from the Marshall Islands.

Along with the rest of the nation, Arkansas' population is getting older. In 2010 the median age was 37.4 years, compared to 36.0 years in 2000.<sup>1</sup> The younger age groups, from 15 to 44 years of age, have decreased their representation over time, while the older age groups, ages 45 and up, increased as a proportion of the total population. In 2012, this pattern remained relatively stable (Table 2). Males and females are about equally represented in Arkansas, at 49.9% and 50.1% of the population, respectively.

Table 2. Distribution of the general population by age group and sex, Arkansas 2012

Age group (yrs.)	Males (n = 1,448,490)	Females (n = 1,500,641)	Total (n = 2,949,131)
<13	18.3%	16.8%	17.5%
13–14	2.8%	2.6%	2.7%
15–24	14.3%	13.3%	13.8%
25–34	13.2%	12.7%	13.0%
35–44	12.7%	12.3%	12.5%
45–54	13.8%	13.7%	13.8%
55–64	11.9%	12.4%	12.2%
65+	13.0%	16.1%	14.6%

Source: National Center for Health Statistics, Vintage 2012 Bridged-Race Postcensal Population Estimates

## **SOCIOECONOMIC STATUS**

### **Poverty**

In 2008–2012, 14.1% of Arkansans were living below poverty level, compared to 14.9% of Americans. Urban areas of the state were more poverty stricken than the rural areas (15.9% vs. 12.0%, respectively). The Southeast Region led the state with 19.3% of residents living in poverty, while the Central Region experienced the least poverty, 11.0% (Table 3). In the counties most affected by the HIV epidemic, 4 of the 5 with poverty levels greater than 20% were in the Southeast Region (Phillips, Lee, St. Francis, Monroe).; the fifth was Crittenden County.

Table 3. Percentage of the population under the poverty level statewide, in Public Health Regions, and in selected counties, Arkansas 2008–2012

Area*	Percent under poverty level	Margin of error (+/-)
<b>Arkansas</b>	<b>18.7%</b>	<b>0.3%</b>
<b>Arkansas -- Urban</b>	<b>20.6%</b>	<b>0.4%</b>
<b>Arkansas -- Rural</b>	<b>16.3%</b>	<b>0.3%</b>
<b>Central</b>	<b>13.5%</b>	<b>0.5%</b>
Garland	19.0%	1.7%
Pulaski	17.2%	0.8%
<b>Northwest</b>	<b>19.8%</b>	<b>0.5%</b>
Benton	12.1%	0.8%
Sebastian	20.5%	1.4%
Washington	19.5%	1.0%
<b>Northeast</b>	<b>21.4%</b>	<b>0.7%</b>
Craighead	20.4%	1.6%
Crittenden	24.8%	2.3%
<b>Southwest</b>	<b>21.2%</b>	<b>0.8%</b>
Miller	20.1%	2.1%
Union	20.9%	2.1%
<b>Southeast</b>	<b>25.1%</b>	<b>0.9%</b>
Cleveland	18.3%	3.7%
Jefferson	23.3%	1.5%
Lee	30.9%	4.1%
Monroe	26.6%	4.0%
Phillips	32.2%	3.5%
St. Francis	27.8%	2.8%

\*Statewide, Public Health Regions, and selected counties are shown. These counties were ranked in the top 10 for HIV prevalence or HIV prevalence rate in 2012.

Source: Census Bureau. American Community Survey 2008–2012 Five-year Estimates, Table B17018 - Poverty Status in the Past 12 Months of Families by Household Type by Educational Attainment of Householder. Available at [www.census.gov/acs/www/data\\_documentation/summary\\_file/](http://www.census.gov/acs/www/data_documentation/summary_file/)

### **Educational attainment**

In Arkansans aged 25 or older, 77.3% had received a high school diploma (not including a GED) and 19.8% held a Bachelor’s degree or higher by 2008–2012.<sup>3</sup> Slightly more urban than rural residents had a high school diploma (79.3% vs 74.9%), and substantially more urban residents had a college degree (24.4% vs. 14.5%).

### **Insurance status**

In 2012, Arkansas was ranked 12<sup>th</sup> in the country in the percentage of uninsured.<sup>3</sup> While 1 out of every 5 Americans aged 18 to 64 was uninsured, 1 in 4 Arkansans in the same age group did not have public or private health care coverage. Compared to 20.8% of working-age Americans, 24.7% of working-age Arkansans were uninsured.



Many counties in the Northwest region had higher uninsured levels in 2012 than the statewide average, especially Yell County (34.8%).<sup>4</sup> Many counties in the Southwest also had higher levels of uninsured, especially Sevier County (41.3%). Except for Garland County, Central region counties had fewer uninsured than the state average.

Arkansans belonging to minority racial and ethnic groups were more likely to be uninsured in 2008–2012. At 52.1%, a much larger percentage of the Hispanic population in Arkansas was uninsured than the black (27.8%) or white (23.5%) population (Table 4). The least populated minority groups, American Indian or Alaska Native, and Native Hawaiian or other Pacific Islander, also had noticeably higher uninsured levels (30.4% and 36.7%, respectively). Although the percentage of uninsured AI/AN and NH/PI is greater than that for whites or blacks, these estimates are less precise than those for larger populations.

Table 4. Adults aged 18–64 without health insurance in Arkansas by race/ethnicity, 2008–2012

<b>Race/ethnicity</b>	<b>Adults aged 18 to 64</b>	<b>Number of uninsured</b>	<b>Uninsured (%)</b>	<b>Margin of error (%)</b>
White	1,378,413	323,731	23.5%	0.4%
Black or African American	268,478	74,570	27.8%	0.7%
Hispanic or Latino*	104,216	54,285	52.1%	1.6%
Asian	24,792	5,952	24.0%	2.5%
American Indian or Alaska Native (AI/AN)	11,026	3,349	30.4%	4.3%
Native Hawaiian or other Pacific Islander (NH/PI)	2,981	1,094	36.7%	8.4%

\*Respondents who identified as being of Hispanic, Latino, or Spanish origin. People in this category could be of any race.

Source: American Community Survey 2008–2012 Five-year Estimates, Tables C27001A, C27001B, C27001I, C27001D, C27001C, C27001E: Health Insurance Coverage Status by Age (race/ethnicity). Accessed at [www.census.gov/acs/www/data\\_documentation/summary\\_file/](http://www.census.gov/acs/www/data_documentation/summary_file/)

## Question 2

### What is the scope of the HIV/AIDS epidemic in Arkansas?

In 1983, ADH began monitoring the disease known as Acquired Immunodeficiency Syndrome (AIDS). This surveillance was further enhanced on July 1, 1999, with the addition of legislation instituting confidential name-based reporting of Human Immunodeficiency Virus (HIV) infection.

As the epidemic continues to change and the number of people living with the disease continues to grow, it is becoming more challenging to plan for HIV prevention and care in Arkansas. Due to limited resources, it is imperative that efforts are focused on identifying those populations most affected and most at risk for HIV infection.

This section provides detailed information about demographic and risk characteristics of HIV infected persons and trends in the statewide epidemic. It describes cases diagnosed through 2012 and reported through April 2014. The regional epidemiological profiles included at the end of this section, provides a more detailed description of the epidemic in each public health region. Unless otherwise noted, all data comes from Arkansas eHARS (enhanced HIV/AIDS Reporting System).

#### HIGHLIGHTS

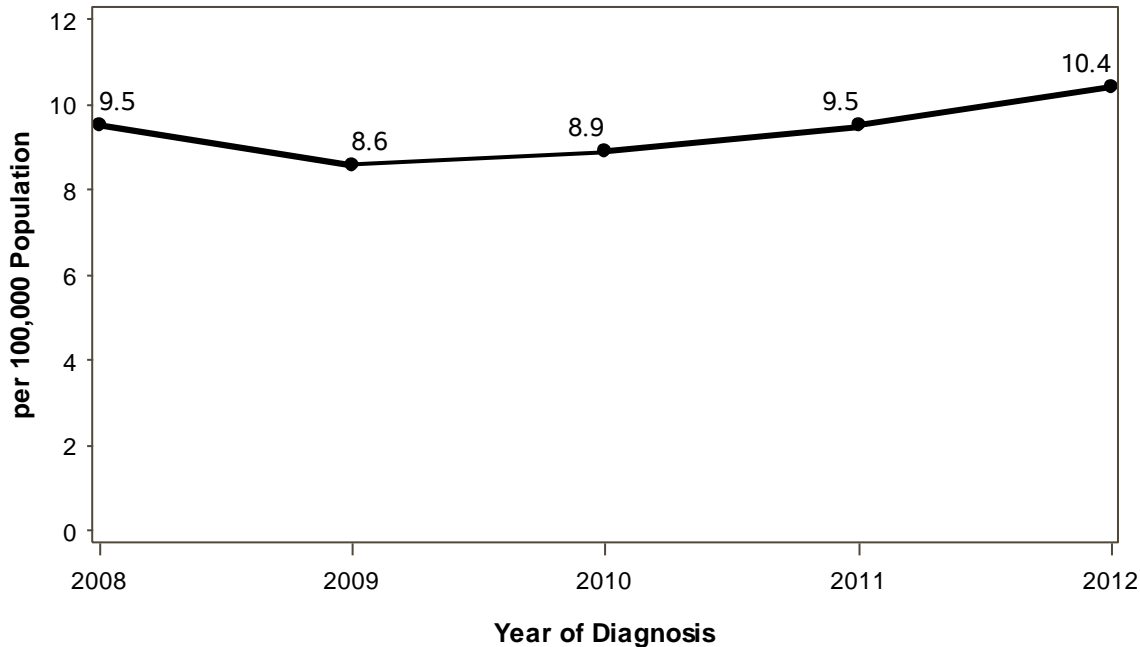
- During 2012, among all newly diagnosed HIV/AIDS cases, 111 (36.3%) were AIDS cases and 195 (63.7%) were HIV (non-AIDS) cases.
- At the end of 2012, 5,041 persons were presumed to be living with HIV/AIDS in Arkansas. Of those, 44.8% (2,256 persons) had an AIDS diagnosis.
- The number of deaths due to AIDS continues to decline as HIV/AIDS Antiretroviral Therapy (HAART) becomes more advanced. From 2008 to 2012, there was an average of 65 deaths per year.
- The HIV/AIDS infection rate for blacks (35.2 per 100,000) continues to rise and is disproportionately high compared to other racial and ethnic groups in the state; in 2012 the infection rate for blacks was over six times higher than that for whites (5.2 per 100,000) and over three times that for Hispanics (10.0 per 100,000).
- In 2012, over 53% of the newly diagnosed HIV/AIDS cases were black non-Hispanic.
- Black men (56.4 per 100,000) and Hispanic men (17.8 per 100,000) had the highest rate of infection compared to any other racial or ethnic groups in Arkansas.

## **OVERALL HIV/AIDS TRENDS**

In 2012, there were a total of 306 newly diagnosed cases of HIV/AIDS in the State of Arkansas. This number reflects those persons whose HIV infection (including AIDS) was first diagnosed in 2012 and was reported to the Arkansas Department of Health. From 2008 to 2012, the rate of newly diagnosed HIV/AIDS cases increased from 9.5 per 100,000 in 2008 to 10.4 per 100,000 in 2012 (Figure 2).

Figure 2.

### **HIV/AIDS Incidence Rates by Year Arkansas, 2008-2012**

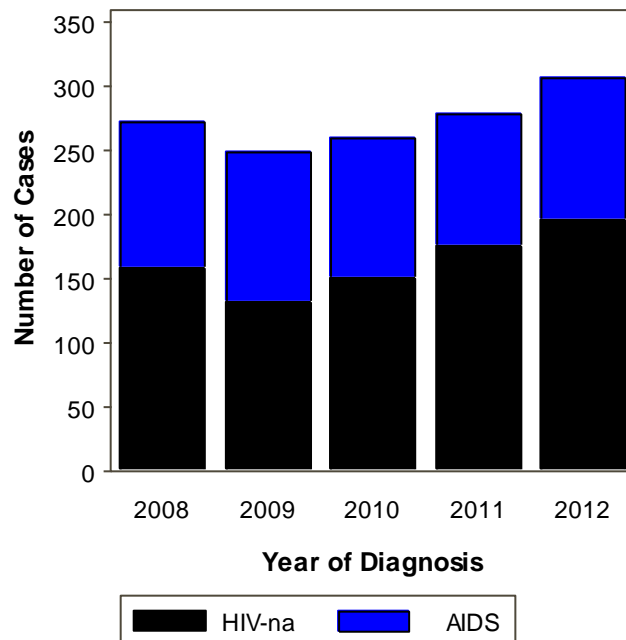


In 2012, 111 AIDS cases and 195 HIV cases were newly diagnosed and reported in the State of Arkansas. This is a 22.6% increase in HIV cases and a 2.6% decrease in AIDS cases, compared to those newly diagnosed and reported in 2008 (Figure 3). Since 2008, an average of 273 new cases of HIV/AIDS have been diagnosed and reported annually to the surveillance program.

The number of newly diagnosed cases of HIV/AIDS in Arkansas has been on an upward trend since 2009 (Figure 3). In 2012, there was a 22.9% increase in the number of newly diagnosed HIV/AIDS cases relative to 2009.

Figure 3.

### HIV/AIDS Cases by Year of Diagnosis Arkansas, 2008-2012



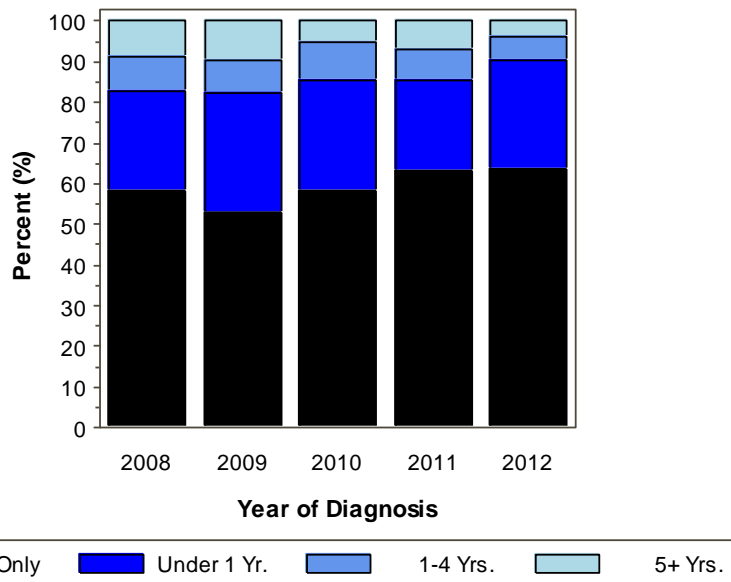
Note: na= not AIDS

It is possible to have cases diagnosed simultaneously as AIDS and HIV, due to delays in testing. If a person is diagnosed with AIDS and HIV in the same year, they are counted as an AIDS case to prevent “double-counting.” Once diagnosed with AIDS, a person does not re-enter the HIV “pool,” even if they no longer meet the case definition of AIDS. For example, a person who is HIV positive in 2007 and subsequently develops *Pneumocystis pneumonia* (PCP), an AIDS-defining condition, in 2012, becomes an AIDS case in 2012. However, if the condition is resolved, the person is not reclassified as an HIV case.

Among the newly diagnosed cases of HIV infection in 2012, 71 (23.2%) were simultaneously diagnosed with both HIV and AIDS at the time of initial diagnosis. The proportion of cases reported as converting from HIV to AIDS within one year has remained relatively stable over the past 5 years (Figure 4A). On average, Arkansas has approximately 80 cases annually that enter the system with a simultaneous diagnosis of HIV and AIDS. The time between conversion from HIV to AIDS is usually a good indicator of time of infection. Usually there is about a 10-year period between initial HIV infection and progression to AIDS. In light of this, caution should be taken when assessing the age at diagnosis of AIDS cases, because cases having a simultaneous diagnosis of HIV and AIDS had more than likely been positive for a number of years and unaware of their status. In Arkansas from 2008-2012 approximately 60-75 percent of new AIDS cases were diagnosed as AIDS at initial testing or within one year of being tested (Figure 4B).

Figure 4 A.

### HIV/AIDS Cases by Year and Conversion Time from HIV to AIDS Arkansas, 2008-2012



According to the CDC, approximately one-third of all diagnoses still occur late (where the diagnosis of AIDS occurs concurrently or within a year of HIV diagnosis)<sup>5</sup>. In Arkansas, approximately 25–40% of HIV/AIDS cases historically have been diagnosed at an already immunocompromised state, as shown by progression to AIDS within a year (Figure 5). Cases entering HIV medical care at such a late stage tend to have poor treatment outcomes and survival rates.

Figure 4 B.

### AIDS Cases by Year and Conversion Time from HIV to AIDS Arkansas, 2008-2012

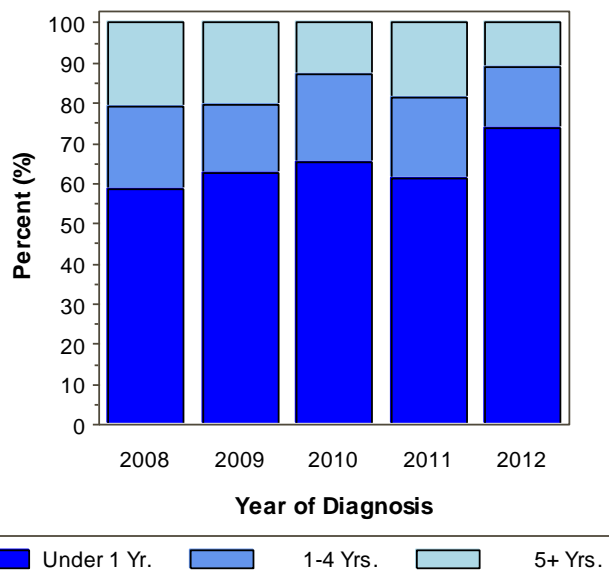
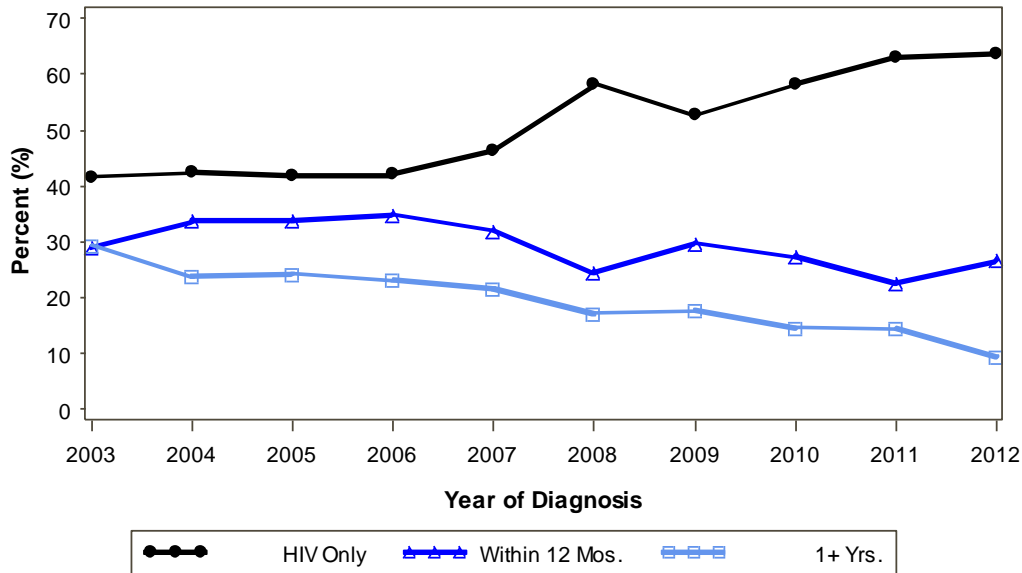


Figure 5.

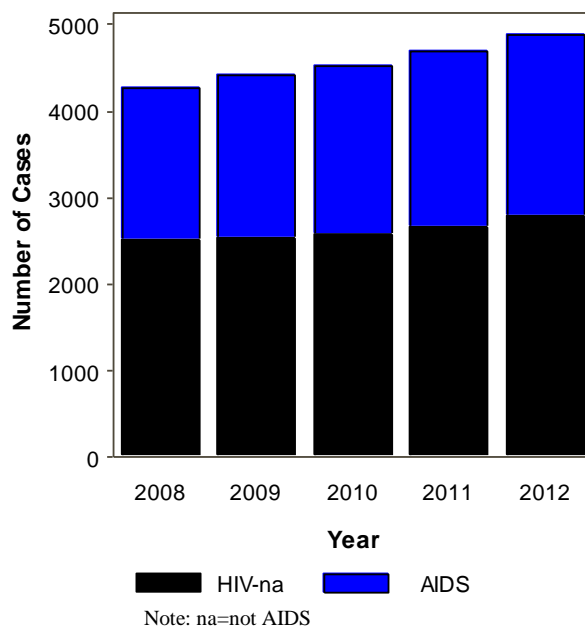
### Time from Initial Positive Test to AIDS Diagnosis Arkansas, 2003-2012



As of December 31, 2012, there were 5,041 persons living with HIV/AIDS in the State of Arkansas and reported to the surveillance program. This estimated prevalence is an approximation of the number of persons actually living with HIV/AIDS at a particular period of time. The estimate does not include persons who are infected but have not been tested for the virus, or persons who have been tested but not reported to surveillance. The estimated number of prevalent cases in Arkansas has consistently increased from 2008 to 2012 (Figure 6).

Figure 6.

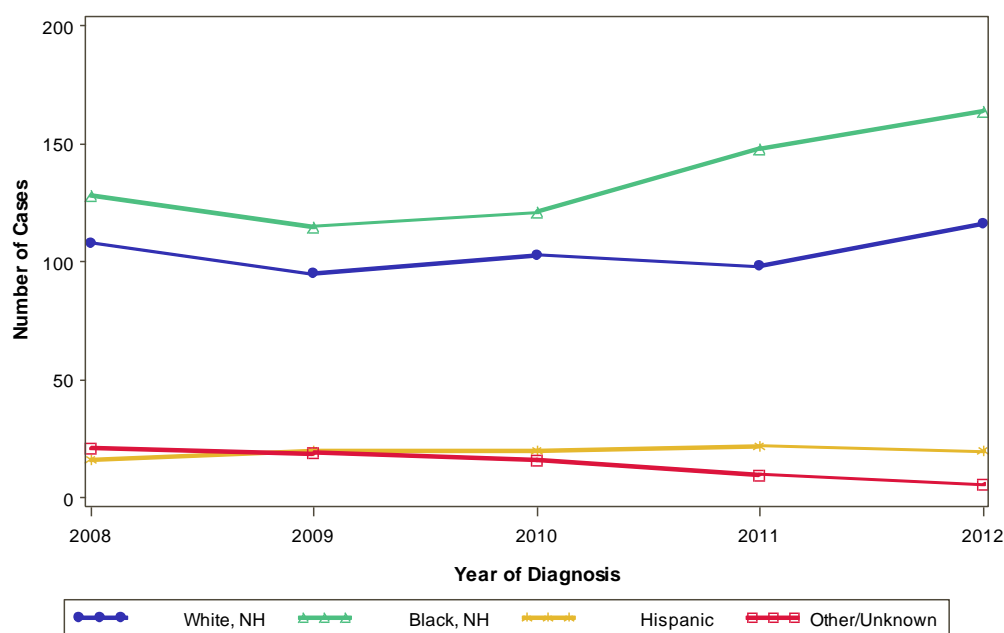
### HIV/AIDS Prevalence by Year Arkansas, 2008-2012



Assessing the true prevalence of persons living with HIV/AIDS in Arkansas is a difficult task. Our jurisdiction has a large number of transient cases. There are a number of HIV/AIDS cases residing in Arkansas that were diagnosed in other jurisdictions (*not* included in our totals), as well as a large number of cases initially diagnosed in Arkansas that have moved to other locations (that *are* included in our totals). Interstate migration is a common occurrence nationally. In Arkansas, we see this effect with the State of Texas in the Texarkana metropolitan area, and with the State of Tennessee in the West Memphis/Memphis metropolitan area. There is also no more than a three-hour drive to any of the six neighboring states. There were approximately 2,256 persons living with AIDS in Arkansas at the end of 2012, compared to 1,337 at the end of 2000 (not shown). The number of persons living with HIV (not AIDS) has also increased, from 1,871 in 2000 to 2,785 at the end of 2012.

Figure 7.

**HIV/AIDS Incidence by Race/ethnicity  
Arkansas, 2008-2012**



In Arkansas, minority populations continue to be disproportionately affected by HIV/AIDS. Although only 26% of the state’s population is composed of racial/ethnic minorities, these groups represented 62% of the newly diagnosed HIV/AIDS cases in 2012 and 50% of persons living with HIV/AIDS. The percentage of HIV/AIDS cases diagnosed among minorities in Arkansas has steadily increased since 2000 by 21.7% (not shown).

The greatest number of newly diagnosed cases of HIV/AIDS in 2012 was among non-Hispanic blacks (164) (Figure 7). The racial/ethnic group having the next-highest number of newly diagnosed cases in 2012 was non-Hispanic whites (116), followed by Hispanics (20). Since 2009, the percentage of newly diagnosed cases in non-Hispanic blacks has increased from 48.4% to 53.6%.

In 2012, the disease burden was greatest among blacks. Non-Hispanic blacks comprised 53.6% of the 306 newly diagnosed cases in 2012, while only representing 15.4% of Arkansas’ population. Blacks have the highest rate of HIV/AIDS infection (35.2 per 100,000) (Table 5)—over six times that in whites (5.2 per 100,000) and over three times that in Hispanics (10.0 per 100,000). Hispanics currently

comprise 6.8% of the state's population; the burden of disease for this racial/ethnic group is also disproportionate to their demographic makeup in the state.

Of the newly diagnosed HIV/AIDS cases in Arkansas in 2012, 82.4% were male and 17.6% were female. Fifty-five percent of the newly diagnosed cases of HIV/AIDS in 2012 were between the ages of 15 and 34 (Table 5). Young adults between the ages of 15 and 24 made up 25% of the newly diagnosed cases in 2012; this is comparable to the 21% living with HIV/AIDS in the state. Another 20% of newly diagnosed HIV/AIDS cases were between the ages of 45 and 54.

The Central and Northwest Regions continue to be the most affected regions in the state, by numbers and percentages of newly diagnosed HIV/AIDS cases and persons living with HIV/AIDS. These areas contain large metropolitan areas. On the other hand, the Southeast Region has the second-highest *rates* of newly diagnosed HIV/AIDS (12.4 per 100,000) and persons living with HIV/AIDS (252.7 per 100,000). The Central Region continues to have the highest rates of newly diagnosed HIV/AIDS cases (17.6 per 100,000) and persons living with HIV/AIDS (260.8 per 100,000) (Table 5).



**Table 5. Characteristics of Persons Infected with HIV/AIDS  
Arkansas, 2012**

	HIV/AIDS Incidence*			HIV/AIDS Prevalence**		
	N	%	Rate	N	%	Rate
<b>Gender</b>						
Male	245	80.1%	16.9	3855	76.5%	266.1
Female	61	19.9%	4.1	1186	23.5%	79.0
<b>Race/ethnicity</b>						
White, non-Hispanic	116	37.9%	5.2	2457	48.7%	111.1
Black, non-Hispanic	164	53.6%	35.2	2166	43.0%	464.8
Hispanic	20	6.5%	10.0	242	4.8%	121.2
Other, non-Hispanic	6	2.0%	-	108	2.1%	-
Unknown	0	0.0%	-	68	1.3%	-
<b>Age Group</b>						
<13	0	0.0%	0.0	36	0.7%	7.0
13-14	0	0.0%	0.0	8	0.2%	10.0
15-24	76	24.8%	18.8	870	17.3%	215.3
25-34	93	30.4%	24.2	1743	34.6%	453.6
35-44	60	19.6%	16.5	1520	30.2%	418.0
45-54	54	17.6%	13.6	655	13.0%	165.0
55-64	17	5.6%	4.7	175	3.5%	48.1
65+	6	2.0%	1.4	33	0.7%	7.5
Unknown	0	0.0%	-	1	0.0%	-
<b>Public Health Region</b>						
Central	143	46.7%	17.6	2124	42.1%	260.8
Northeast	45	14.7%	8.1	697	13.8%	126.1
Northwest	59	19.3%	6.0	1035	20.5%	104.8
Southeast	33	10.8%	12.4	675	13.4%	252.7
Southwest	26	8.5%	7.9	507	10.1%	154.7
Unknown	0	0.0%	-	3	0.1%	-
<b>Total</b>	<b>306</b>	<b>100.0%</b>	<b>10.4</b>	<b>5041</b>	<b>100.0%</b>	<b>170.9</b>

\* HIV/AIDS Incidence is defined as the number of new HIV and new AIDS cases diagnosed during the period specified.

\*\* HIV/AIDS Prevalence is defined as the number of persons living with HIV/ AIDS during the period specified.

+ Rates are per 100,000 population.

- No available denominator for these categories.

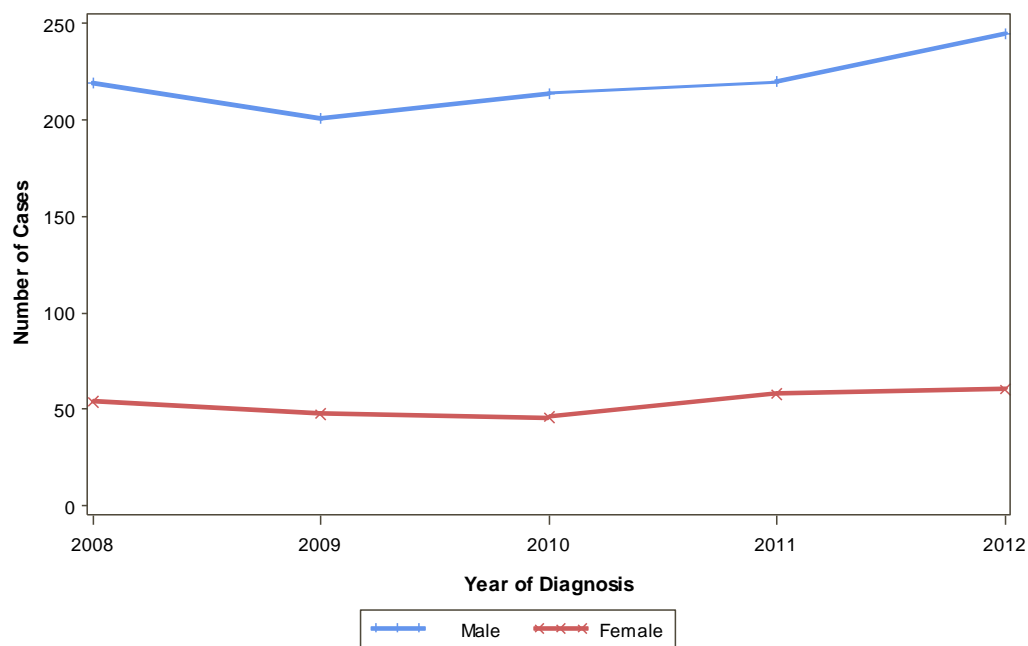
Data Source: Arkansas eHARS (enhanced HIV/AIDS Reporting System) retrieved April 24, 2014.

## **HIV/AIDS, BY SEX AND RACE/ETHNICITY**

In 2012, there were 5,041 people in Arkansas living with HIV/AIDS. As of December 31st of the same year, there were 306 newly diagnosed cases of HIV/AIDS. Of those newly diagnosed, 245 were male and 61 were female (Table 5). The burden of infection has traditionally been within the male population in Arkansas, as it is nationally. New HIV/AIDS cases among males in Arkansas have increased slightly over the past 5 years, with an average of 220 males being diagnosed annually. The number of female cases has been relatively stable from 2008 to 2012, with an average of 53 females per year being diagnosed with HIV/AIDS (Figure 8).

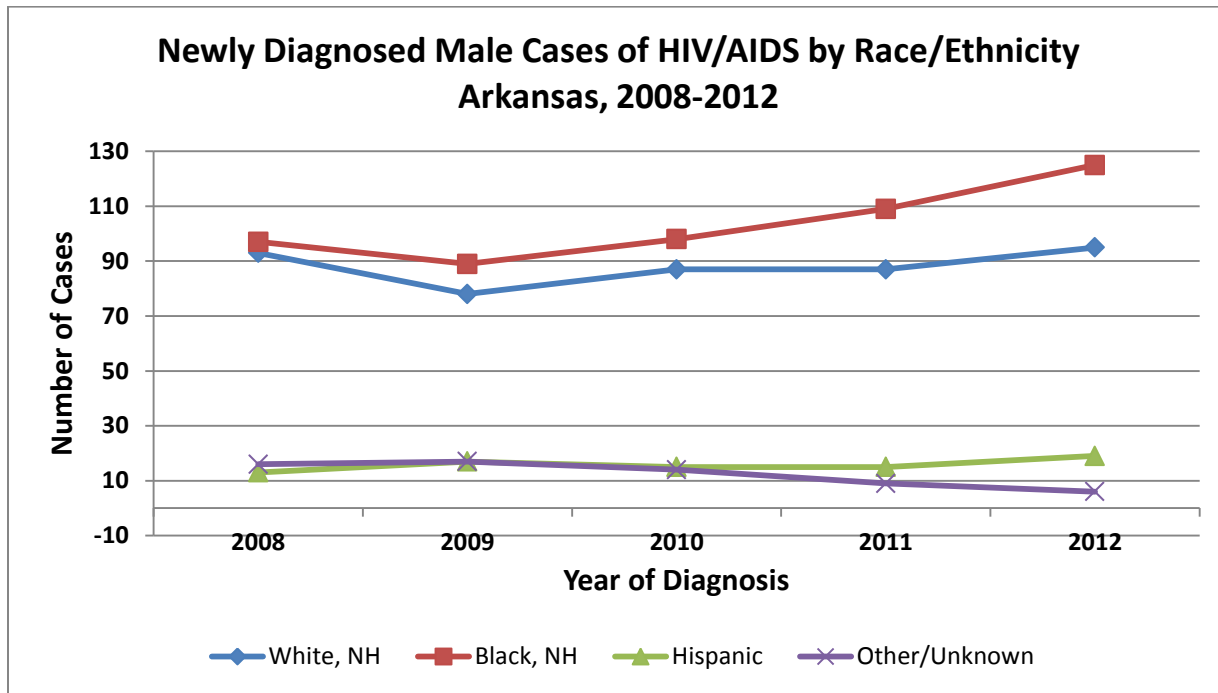
Figure 8.

**HIV/AIDS Incidence by Gender**  
Arkansas, 2008-2012



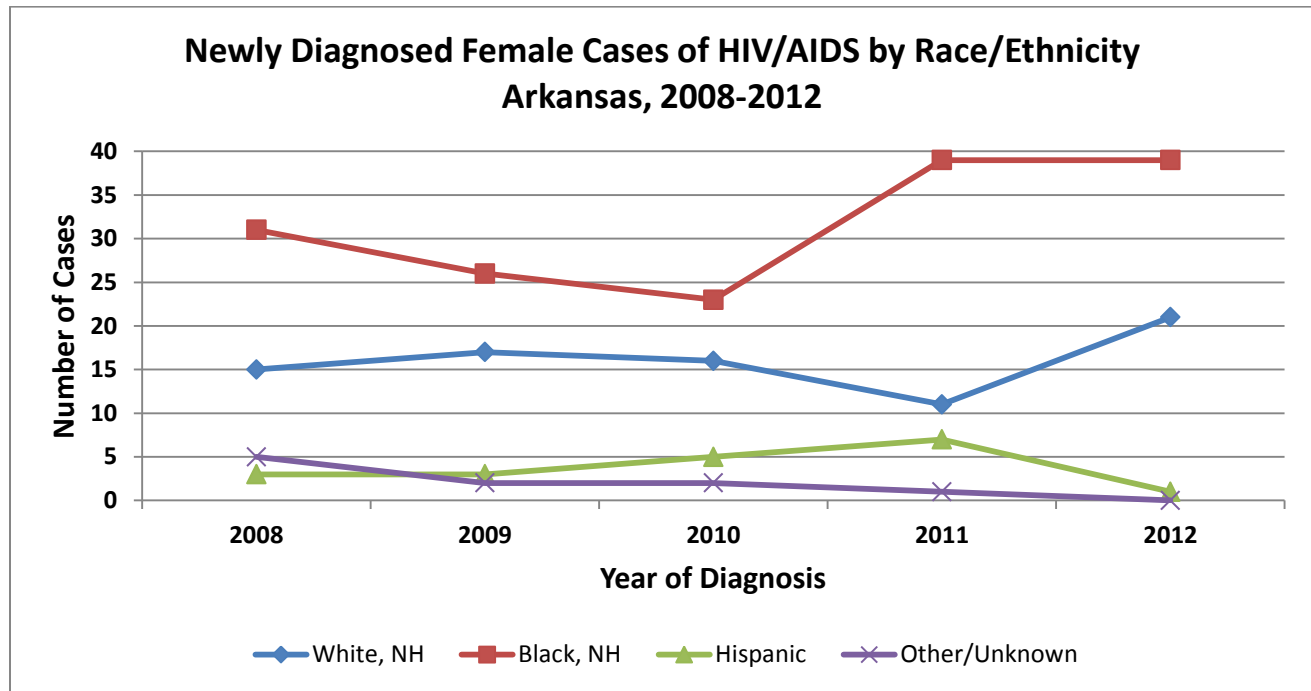
Roughly 80% of newly diagnosed cases in 2012 were in males. Of these cases, 38.8% were white, 51.0% black, 7.8% Hispanic, and the remaining 2.5% were Asian/Pacific Islander, American Indian/Alaska Native, multi-race, or unknown. The greatest number of newly diagnosed male cases is in blacks, followed by whites and Hispanics (Figure 9). Relative to their population, black males have been consistently disproportionately impacted. The rate of new infection among black males (56.4 per 100,000) was 6.4 times higher than that of white males (8.8 per 100,000) and 3.2 times that of Hispanic males (17.8 per 100,000).

Figure 9.



Since 2008, the number of cases among black females and white females has varied (Figure 10). The numbers of cases among Hispanic women and the Other/Unknown category have remained relatively stable. Of the 61 newly diagnosed females in 2012, 34.4% were white, 63.9% were black, and 1.6% were Hispanic. The greatest burden of new infection among females in 2012 was in non-Hispanic blacks, at 16 per 100,000, compared to 1.1 per 100,000 among Hispanic females and 1.9 per 100,000 among non-Hispanic whites.

Figure 10.



The HIV/AIDS epidemic in Arkansas disproportionately affects both males and females in the black community. Arkansas statistics show congruence with the national data in this regard. Although blacks make up only 15.4% of the population in Arkansas, they have the highest rate of infection compared to any other racial or ethnic group (Table 6). In 2012, blacks accounted for 53.6% of the newly diagnosed HIV/AIDS cases in Arkansas. Black women comprised 12.7% of all newly diagnosed cases of HIV/AIDS in 2012, compared to white women comprising 6.9% and Hispanic women comprising only 0.3% of all new cases (Table 6).

Table 6. HIV/AIDS Incidence\* by Race/ethnicity and Gender  
Arkansas, 2012

Race/ethnicity	Males		Females		Total		
	N	%**	N	%**	N	%**	Rate+
White, non-Hispanic	95	31.0%	21	6.9%	116	37.9%	5.2
Black, non-Hispanic	125	40.8%	39	12.7%	164	53.6%	35.2
Hispanic	19	6.2%	1	0.3%	20	6.5%	10.0
Other, non-Hispanic	6	2.0%	0	0.0%	6	2.0%	-
<b>Total</b>	<b>245</b>	<b>80.1%</b>	<b>61</b>	<b>19.9%</b>	<b>306</b>	<b>100.0%</b>	<b>10.4</b>

\* HIV/AIDS Incidence is defined as the number of new HIV and new AIDS cases diagnosed during the period specified.

\*\* Calculated as a percentage of all newly diagnosed HIV disease in 2012.

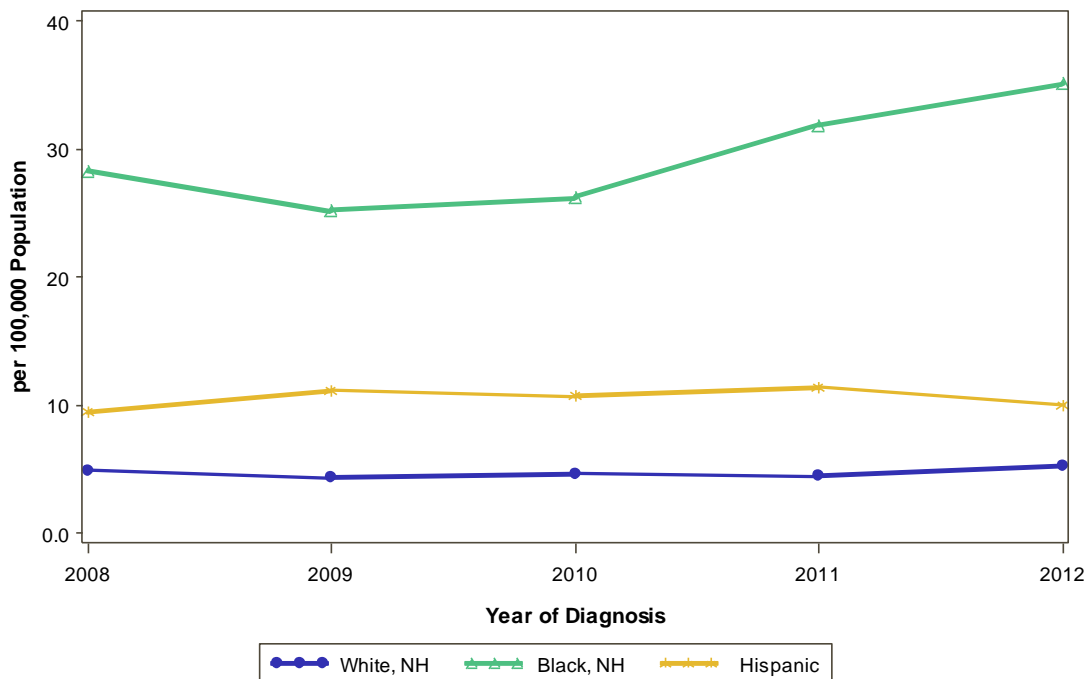
+ Rates are per 100,000 population.

Data Source: Arkansas eHARS (enhanced HIV/AIDS Reporting System) retrieved April 24, 2014.

From 2008 to 2012, the rate of infection among blacks in Arkansas increased (Figure 11). In 2012, the rate in non-Hispanic blacks was 35.2 per 100,000. This is over 6 times greater than the rate in non-Hispanic whites (5.2 per 100,000) and over 3 times greater than the rate in Hispanics (10.0 per 100,000) during the same year (Figure 11, Table 5).

Figure 11.

**HIV/AIDS Incidence Rates by Race/ethnicity  
Arkansas, 2008-2012**



## **HIV/AIDS, BY AGE GROUP**

In 2012, persons between the ages of 15 and 34 accounted for over half (55.2%) of the 306 newly diagnosed HIV/AIDS cases (Table 7). Although this age range is the most impacted in Arkansas, nationally the 25-to-44 age range is the most impacted by HIV. In males, 15-to-34-year-olds contributed 57.5% of newly diagnosed HIV/AIDS cases in Arkansas, compared to 51% in 2008. On the other hand, the majority of newly diagnosed cases among women (50.8%) in Arkansas occurred in the 25-to-44 age range. In 2012, 24.8% of the newly diagnosed HIV/AIDS cases in Arkansas were between the ages of 13 and 24 (Table 7). This is comparable to the national statistic of 26% of all new HIV infections occurring between the ages of 13 and 24.<sup>6</sup> Persons over the age of 55 made up 7.6% of newly diagnosed HIV/AIDS cases in Arkansas in 2012.

**Table 7. HIV/AIDS Incidence\* by Age Group and Gender  
Arkansas, 2012**

Age Group	Male		Female		Total	
	N	%	N	%	N	%
<13	0	0.0%	0	0.0%	0	0.0%
13-14	0	0.0%	0	0.0%	0	0.0%
15-24	63	25.7%	13	21.3%	76	24.8%
25-34	78	31.8%	15	24.6%	93	30.4%
35-44	44	18.0%	16	26.2%	60	19.6%
45-54	41	16.7%	13	21.3%	54	17.6%
55-64	14	5.7%	3	4.9%	17	5.6%
65+	5	2.0%	1	1.6%	6	2.0%
<b>Total</b>	245	100.0%	61	100.0%	306	100.0%

\* HIV/AIDS Incidence is defined as the number of new HIV and new AIDS cases diagnosed during the period specified.

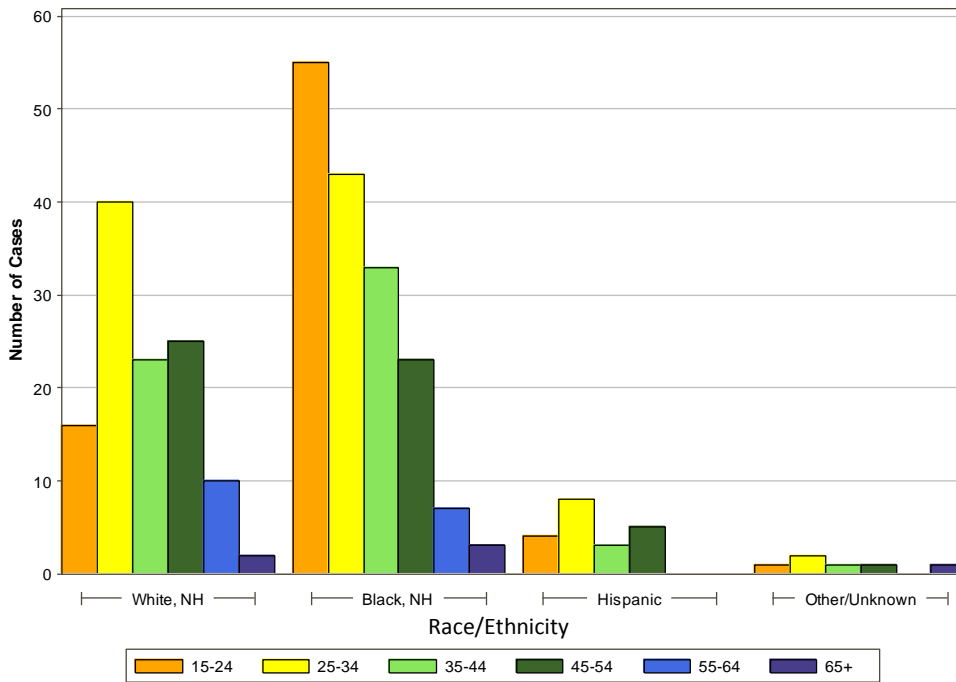
Data Source: Arkansas eHARS (enhanced HIV/AIDS Reporting System) retrieved April 24, 2014.

## HIV/AIDS, BY RACE/ETHNICITY AND AGE GROUP

Fifteen-to-twenty-four-year-olds who were black had the most newly diagnosed HIV/AIDS cases in 2012, compared to all other combined age, race, and ethnicity groups (Figure 12). This group also had the highest rate of new HIV/AIDS diagnoses, at 70.3 per 100,000 (Figure 13). Nationally, approximately 60% of new infections occur in black youth.<sup>6</sup> The next most impacted age and race/ethnicity groups in Arkansas were 25-to-34-year-old blacks and whites, respectively.

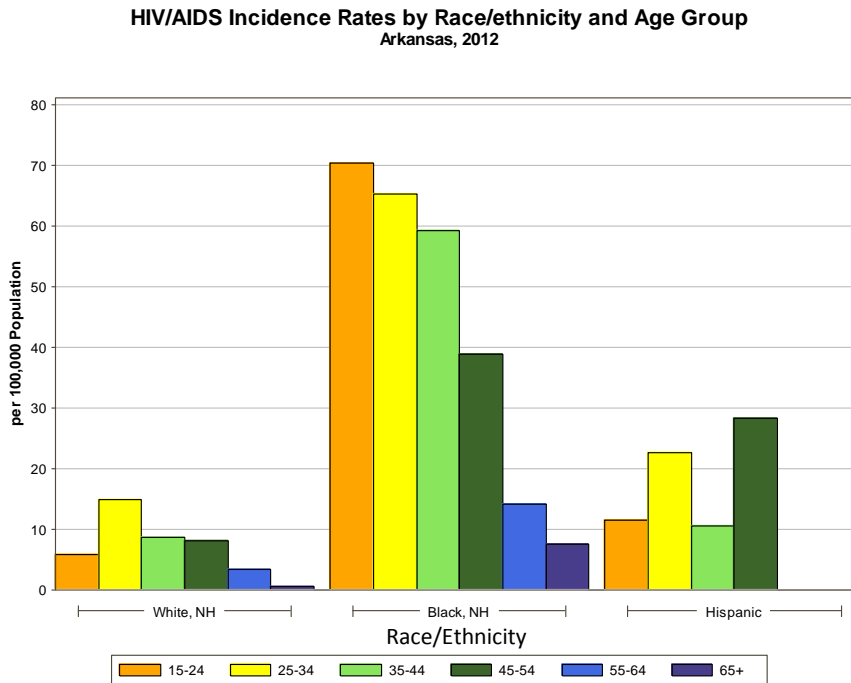
Figure 12.

**HIV/AIDS Incidence by Race/ethnicity and Age Group**  
Arkansas, 2012



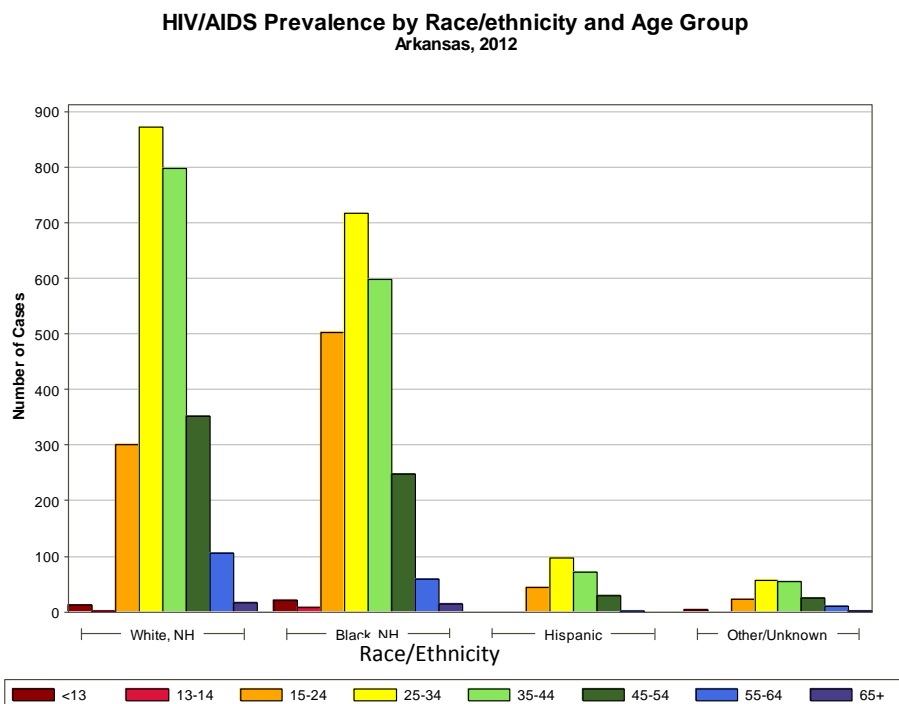
Although the number of newly diagnosed cases between blacks and whites was similar within some age groups, the *rate* of new diagnoses shows vast disparities between age, race, and ethnicity groups by taking population size into account. For instance, while the number of cases in 25-to-34-year-olds was 43 in blacks and 40 in whites, the incidence rate in this age group was 65.3 per 100,000 in blacks, versus 14.8 per 100,000 in whites (Figure 13). The rates of new diagnoses show that blacks experience a disproportionately large burden of HIV/AIDS in all age groups, when compared to whites (Figure 13). Hispanics also share a disproportionate burden of new diagnoses when compared to whites, especially in the 45–54 age group.

Figure 13.



Comparing the estimated prevalence at the end of 2012 among age and racial/ethnic groups shows similar patterns to those in the newly diagnosed cases. Across race/ethnicity groups, whites had the most people living with HIV/AIDS in the 25-to-34, 35-to-44, and 45-to-54 age groups (Figure 14).

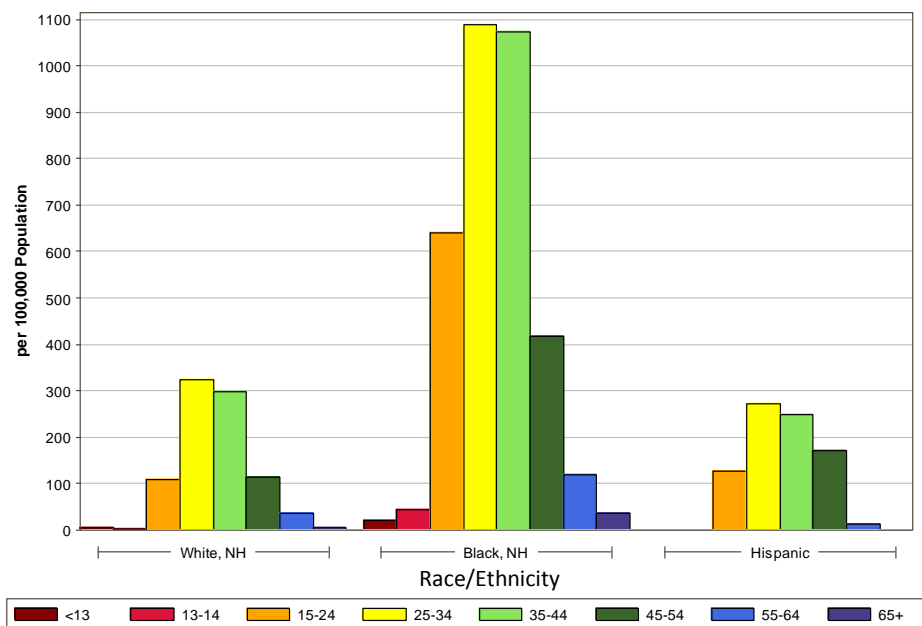
Figure 14.





However, the prevalence rates for whites in the same age groups (323.5, 296.5, and 113.2, respectively) were considerably lower than the prevalence rates for blacks in the same age groups (1,089.0; 1,074.6; and 417.7; respectively) (Figure 15).

Figure 15.  
**HIV/AIDS Prevalence Rates by Race/ethnicity and Age Group**  
 Arkansas, 2012



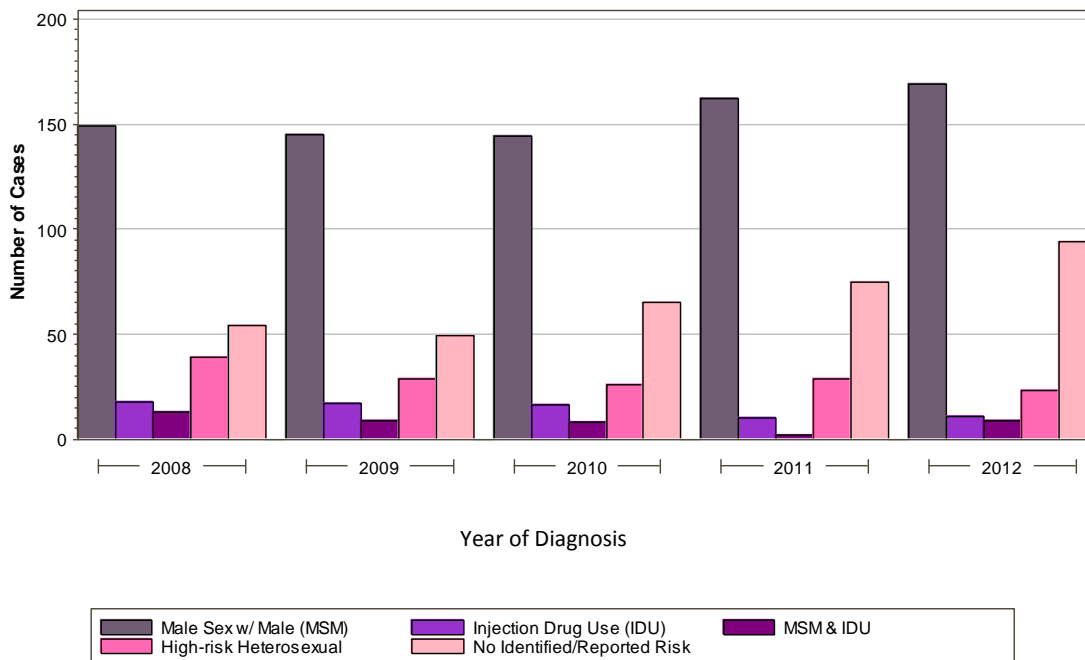
## HIV/AIDS, BY MODE OF EXPOSURE

The mode of exposure looks at behaviors that put people at risk for becoming infected with HIV/AIDS. There is a hierarchy of behaviors that place people at greater risk of infection. Below, the top four categories of reported risks are shown, alongside cases with “no identified risk” (NIR) (Figure 16). Male-to-male sexual contact (MSM) continues to be the predominant known exposure category for newly diagnosed cases of HIV/AIDS in Arkansas. This trend is consistent with national findings.

The number of newly diagnosed cases with MSM as the primary risk factor has increased in the last five years, from 149 in 2008 (54.6% of all cases) to 169 in 2012 (55.2% of all cases). The second most commonly noted mode of exposure was high-risk heterosexual contact—sexual contact with a partner known to be HIV-infected or at high risk for HIV. From 2008 to 2012, cases reporting high-risk heterosexual contact decreased from 39 in 2008 (14.3%) to 23 in 2012 (7.5%). In 2012, another 3.6% of cases noted injection drug use (IDU), and 2.9% indicated both MSM and IDU.

Figure 16.

**HIV/AIDS Incidence by Mode of Exposure**  
Arkansas, 2008-2012

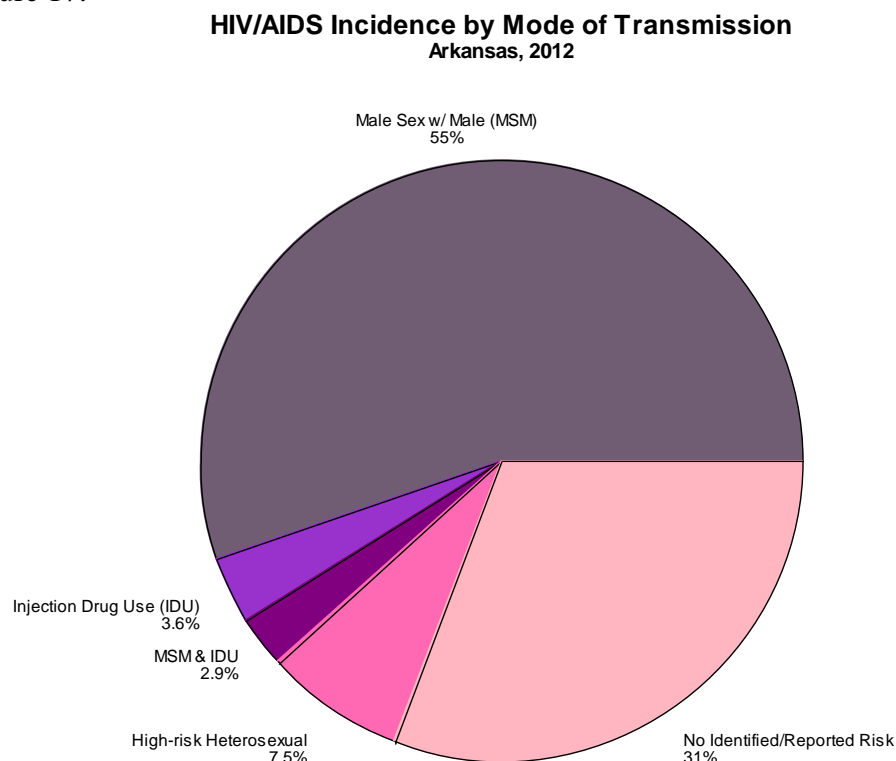


In 2012, 30.7% of newly diagnosed HIV/AIDS cases had no identified risk factors (Figure 16), an increase from 19.8% of cases in 2008. Obtaining risk factor information has become increasingly difficult over the years. This denotes an increased need for provider education on the importance of discussing risk factors with patients at the time of diagnosis.

According to the Centers for Disease Control and Prevention (CDC) guidelines, risk factors correspond to the one-year period “before the first positive HIV test or AIDS diagnosis.” The CDC considers risk factor ascertainment a high priority in the collection of surveillance data. Identification of risk factors enables the HIV Prevention Program and community planning bodies to identify target groups and focus their programs and messages accordingly.

Arkansas has a small percentage of cases attributing risk to intravenous drug use (IDU). This finding is consistent with data collected since the institution of HIV and AIDS case reporting in Arkansas. This is comparable to national statistics, which note that HIV transmission via IDU has decreased substantially since 1993.

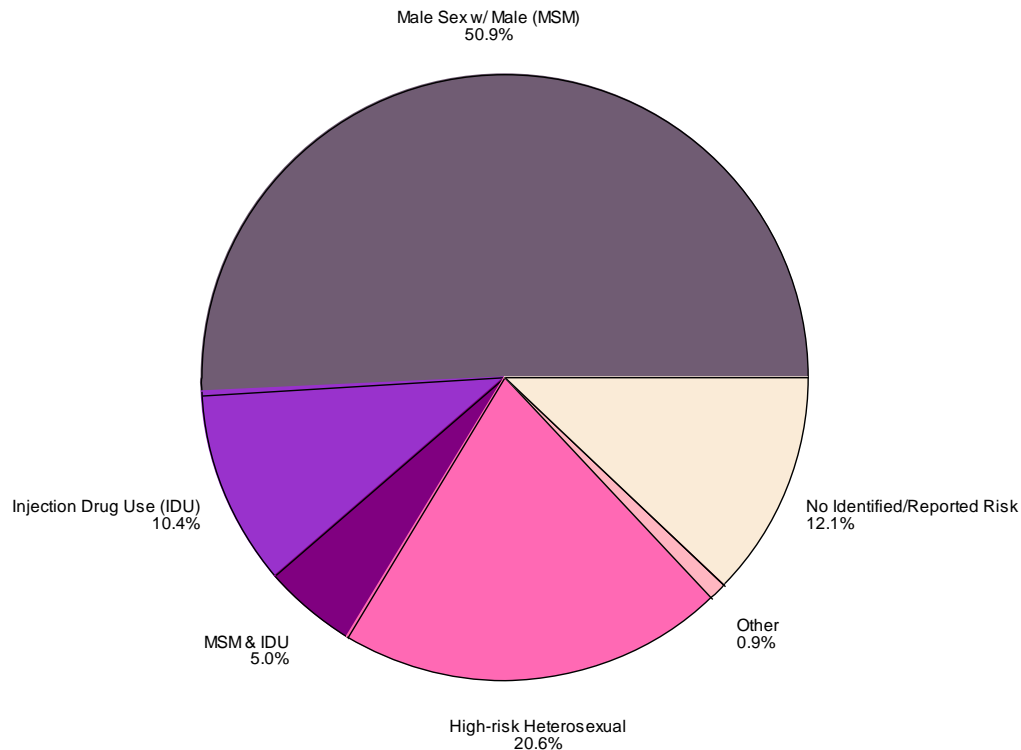
Figure 17.



Persons living with HIV/AIDS in 2012 had a higher percentage of identified risks, 87.8% (Fig. 18), when compared to newly diagnosed cases in 2012 with identified risk factors, 69.2% (Fig. 17). In general, the percentage of cases attributed to each known risk factor was greater in 2012-prevalent cases than in newly diagnosed cases. However, 55.2% of newly diagnosed cases in 2012 noted MSM (Figure 17), compared to 50.9% of prevalent cases in 2012 (Figure 18). This may indicate that persons diagnosed in recent years are more willing to disclose a risk status of MSM.

Figure 18.

### HIV/AIDS Prevalence by Mode of Transmission Arkansas, 2012



Regional comparisons of exposure categories provide a basis for targeted prevention intervention development in various areas across the state. These data provide several key planning variables such as geographic location and raw case numbers, which provide insight into the type and amount of resources needed in a particular area. Regionally, male-to-male sexual contact continues to be the predominant mode of exposure among persons living with HIV/AIDS in Arkansas. The Central and Northwest Regions had the greatest percentages of cases reporting MSM as a risk factor. The Southeast Region had the largest proportion of cases reporting injection drug use (IDU) as a risk factor in the state, followed by the Northwest and Southwest Regions. The Southwest Region had the greatest percentage of cases noting high-risk heterosexual contact as their primary risk factor, followed by the Northeast Region (Table 8).

**Table 8. HIV/AIDS Prevalence by Exposure Category and Public Health Region  
Arkansas, 2012**

Exposure Category	Central	Northeast	Northwest	Southeast	Southwest	Unknown	Total
<b>Male Sex w/ Male (MSM)</b>	1201	305	573	276	212	1	2568
<b>Injection Drug Use (IDU)</b>	161	77	127	101	58	1	525
<b>MSM &amp; IDU</b>	100	27	71	30	25	0	253
<b>High-risk Heterosexual</b>	360	192	168	171	149	0	1040
<b>Other</b>	20	6	10	6	5	0	47
<b>No Identified Risk</b>	282	90	86	91	58	1	608
<b>Total</b>	2124	697	1035	675	507	3	5041

\*\* HIV/AIDS Prevalence is defined as the number of persons living with HIV/ AIDS during the period specified.

Data Source: Arkansas eHARS (enhanced HIV/AIDS Reporting System) retrieved April 24, 2014.

**Table 8. HIV/AIDS Prevalence by Exposure Category and Public Health Region  
Arkansas, 2012**

Exposure Category	Central (% in region)	Northeast (% in region)	Northwest (% in region)	Southeast (% in region)	Southwest (% in region)	Unknown	Total Cases
<b>Male Sex w/ Male (MSM)</b>	56.5%	43.8%	55.4%	40.9%	41.8%	33.3%	2568
<b>Injection Drug Use (IDU)</b>	7.6%	11.0%	12.3%	15.0%	11.4%	33.3%	525
<b>MSM &amp; IDU</b>	4.7%	3.9%	6.9%	4.4%	4.9%	0.0%	253
<b>High-risk Heterosexual</b>	16.9%	27.5%	16.2%	25.3%	29.4%	0.0%	1040
<b>Other</b>	0.9%	0.9%	1.0%	0.9%	1.0%	0.0%	47
<b>No Identified Risk</b>	13.3%	12.9%	8.3%	13.5%	11.4%	33.3%	608
<b>Total Cases</b>	2124	697	1035	675	507	3	5041

\*\* HIV/AIDS Prevalence is defined as the number of persons living with HIV/ AIDS during the period specified.

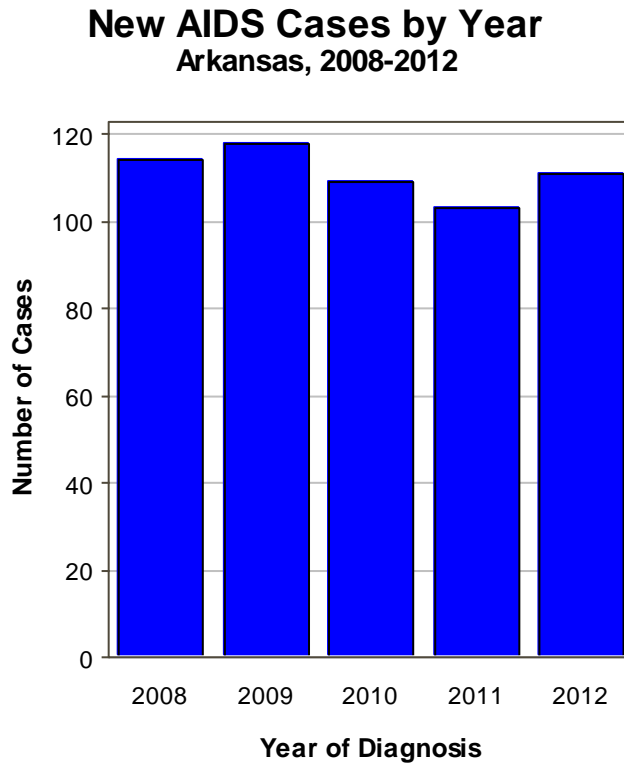
Data Source: Arkansas eHARS (enhanced HIV/AIDS Reporting System) retrieved April 24, 2014.

## **AIDS TRENDS AND HIV/AIDS MORTALITY**

### **AIDS Trends**

Since 2009, there has not been a consistent trend in the number of newly diagnosed cases of AIDS in Arkansas (Figure 19). The number of newly diagnosed AIDS cases decreased from 118 in 2009 to 103 in 2011, then increased to 111 in 2012 (Figure 19).

Figure 19.

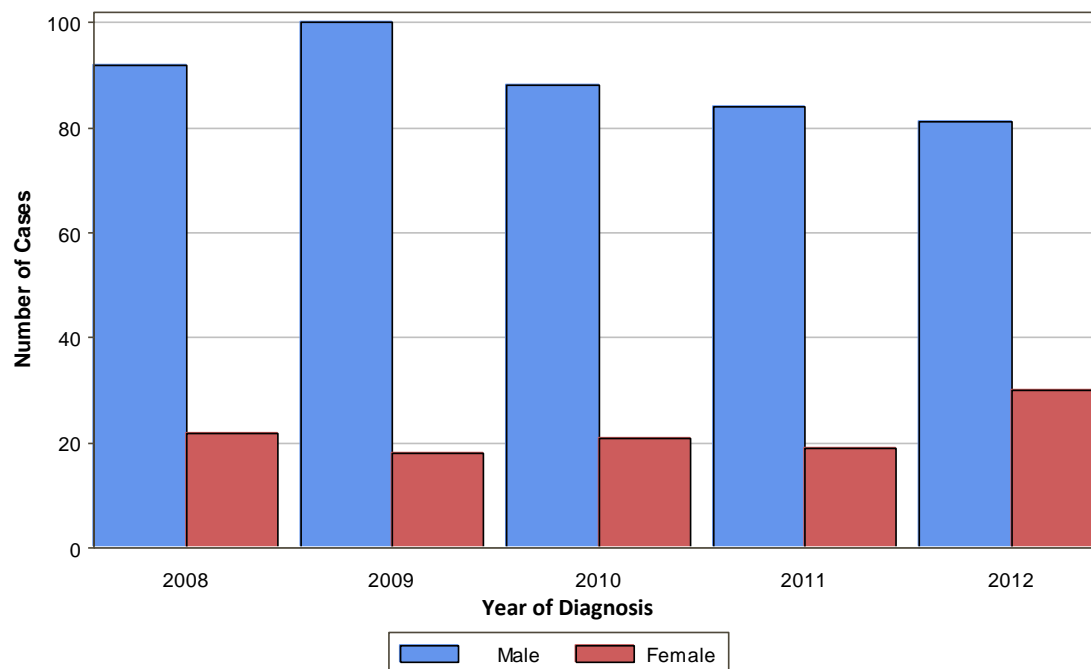


Males continue to be the gender most impacted by AIDS in Arkansas, as well as nationally. In 2012, there were 81 newly diagnosed AIDS cases among males in Arkansas, a 19% decrease from 2009. After holding relatively steady from 2008 to 2011, the number of newly diagnosed females with AIDS increased 58% in the last year, from 19 in 2011 to 30 in 2012 (Figure 20).

The face of HIV/AIDS is rapidly changing in Arkansas. Over the past few years, the proportion of cases among minorities has continued to increase. For example, the percentage of newly diagnosed AIDS cases among minorities in 2012 was 64.0%, compared to 50.9% in 2008. This shift towards minorities is also being seen nationally. The rate of infection among non-Hispanic blacks is higher than that for any other minority group in Arkansas. From 2008 to 2012, the number of newly diagnosed AIDS cases in non-Hispanic blacks has increased or remained steady, while the number of newly diagnosed AIDS cases in whites has decreased (Figure 21). The number of newly diagnosed AIDS cases in Hispanics has increased slightly over the same time period.

Figure 20.

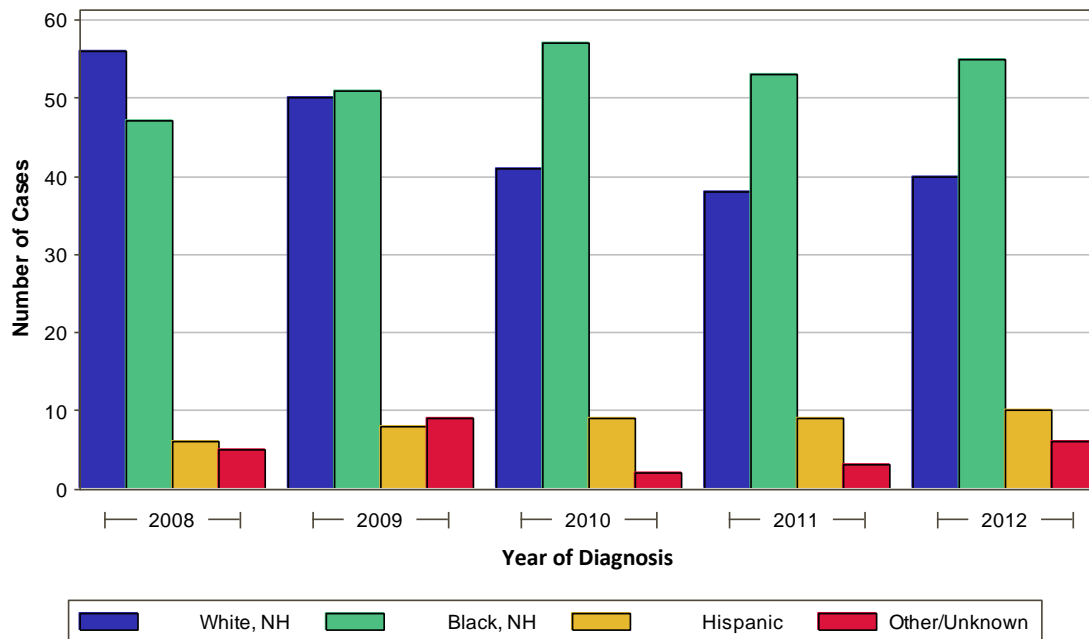
### New AIDS Cases by Gender and Year Arkansas, 2008-2012



Men made up the majority of newly diagnosed and prevalent AIDS cases at the end of 2012 (Table 9). Minorities (blacks, Hispanics, and “Other”) contributed 63.9% of newly diagnosed AIDS cases in 2012 but only represented 48.6% of people living with AIDS in 2012. This could indicate disparities in care or in the severity of disease progression at the time of AIDS diagnosis. Among prevalent AIDS cases, the most common ages at the time of diagnosis were 25–34 years and 35–44 years. Newly diagnosed AIDS cases were more evenly distributed among the 25–34, 35–44, and 45–54 year age groups. This could indicate that late diagnoses (with the diagnosis coming well after HIV infection occurred) are still occurring in Arkansas.

Figure 21.

**New AIDS Cases by Race/ethnicity and Year**  
**Arkansas, 2008-2012**



Regionally, the highest percentages of AIDS cases were located in the Central and Northwest Public Health Regions, home to the major metropolitan areas of the state. The Little Rock-North Little Rock-Conway metropolitan statistical area (MSA) continues to have the largest concentration of newly diagnosed cases and prevalent cases. This MSA accounted for approximately 40.5% of the newly diagnosed AIDS cases and 35.5% of the prevalent AIDS cases in Arkansas. The Central Region had the highest AIDS prevalence rate (114.8 per 100,000 population) in the State of Arkansas in 2012. The Southeast Region had the second-highest prevalence rate in the state, at 106.7 per 100,000.



**Table 9. Characteristics of Persons with AIDS  
Arkansas, 2012**

	AIDS Incidence*		AIDS Prevalence*	
	N	%	N	%
<b>Gender</b>				
Male	81	73.0%	1791	79.4%
Female	30	27.0%	465	20.6%
<b>Race/ethnicity</b>				
White, non-Hispanic	40	36.0%	1157	51.3%
Black, non-Hispanic	55	49.5%	920	40.8%
Hispanic	10	9.0%	118	5.2%
Other, non-Hispanic	6	5.4%	58	2.6%
Unknown	0	0.0%	3	0.1%
<b>Age Group</b>				
<13	0	0.0%	18	0.8%
13-14	0	0.0%	1	0.0%
15-24	14	12.6%	182	8.1%
25-34	28	25.2%	765	33.9%
35-44	30	27.0%	821	36.4%
45-54	27	24.3%	360	16.0%
55-64	8	7.2%	94	4.2%
65+	4	3.6%	15	0.7%
Unknown	0	0.0%	0	0.0%
<b>Public Health Region</b>				
Central	44	39.6%	935	41.4%
Northeast	17	15.3%	299	13.3%
Northwest	28	25.2%	501	22.2%
Southeast	15	13.5%	285	12.6%
Southwest	7	6.3%	235	10.4%
Unknown	0	0.0%	1	0.0%
<b>Total</b>	<b>111</b>	<b>100.0%</b>	<b>2256</b>	<b>100.0%</b>

\* AIDS Incidence is defined as the number of new AIDS cases diagnosed during the period specified.

\*\* AIDS Prevalence is defined as the number of persons living with AIDS during the period specified.

Data Source: Arkansas eHARS (enhanced HIV/AIDS Reporting System) retrieved April 24, 2014.

## Mortality

The introduction of Highly Active Antiretroviral Therapy (HAART) in 1996 has greatly impacted the life span of persons living with HIV and AIDS. These medications have been extremely effective in the treatment of HIV infection—so much so, that they have altered the natural progression of HIV disease. According to the CDC, studies have shown that patients taking HAART have experienced significant reductions in HIV viral loads, even reductions to undetectable levels. HAART has also aided in decreasing the incidence of opportunistic infections (which are one of the main indicators of HIV infection progressing to AIDS), hospitalizations and deaths.<sup>7</sup> Arkansas surveillance data reflects the national trend of sharp declines in AIDS-related deaths compared to previous years. AIDS surveillance data no longer accurately represent trends in HIV transmission; rather, AIDS surveillance data now reflect differences in access to testing and treatment, as well as the failure of certain treatments. Consequently, AIDS incidence and deaths since 1996 provide a measure for identifying and describing the populations for whom treatment may not have been accessible, or effective.

### HIV/AIDS Mortality

According to causes of death listed on Arkansas death certificates, the number of HIV-related deaths rose sharply from the early to mid-1990s, during the height of the HIV epidemic. From the peak in 1995, HIV-related deaths dropped precipitously with the widespread introduction of HAART in 1996.<sup>8</sup> Since 1997, annual HIV-related deaths in Arkansas have remained relatively stable (Figure 22), at a rate of 2–4 deaths per 100,000 population (Figure 23). In 2012 the number of HIV-related deaths was the lowest recorded since 1990.

Figure 22.

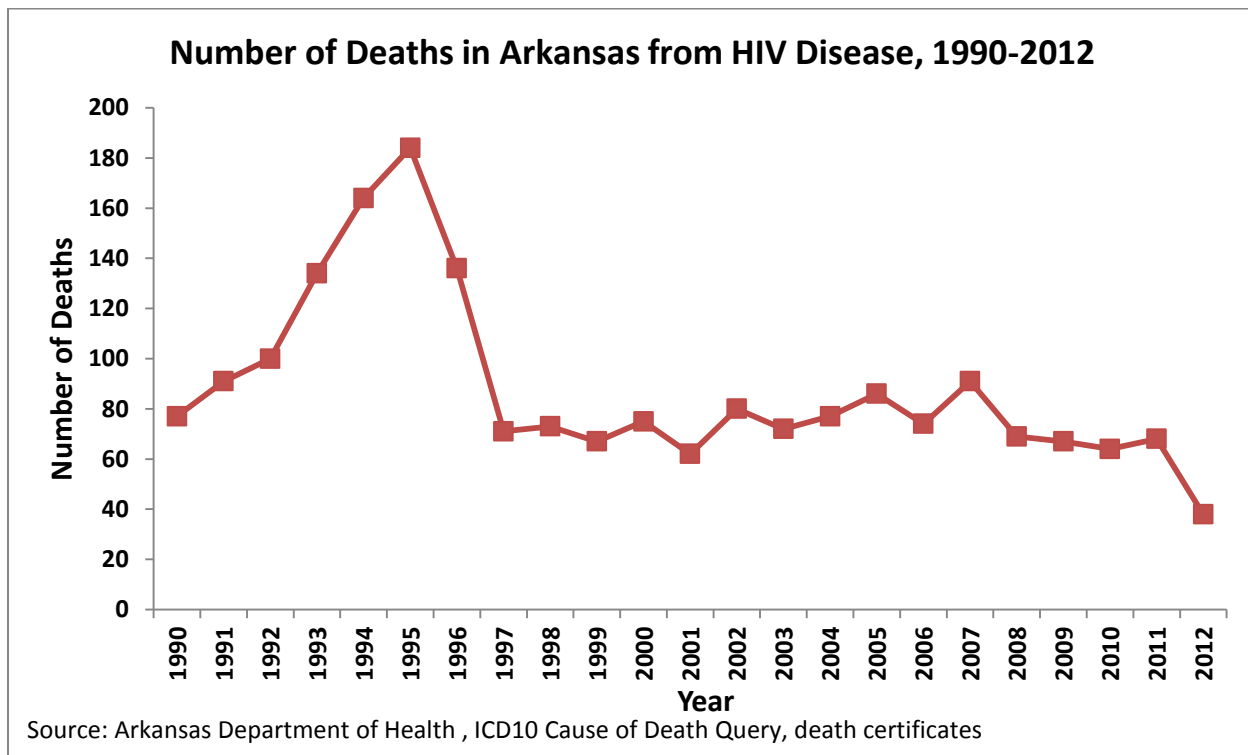
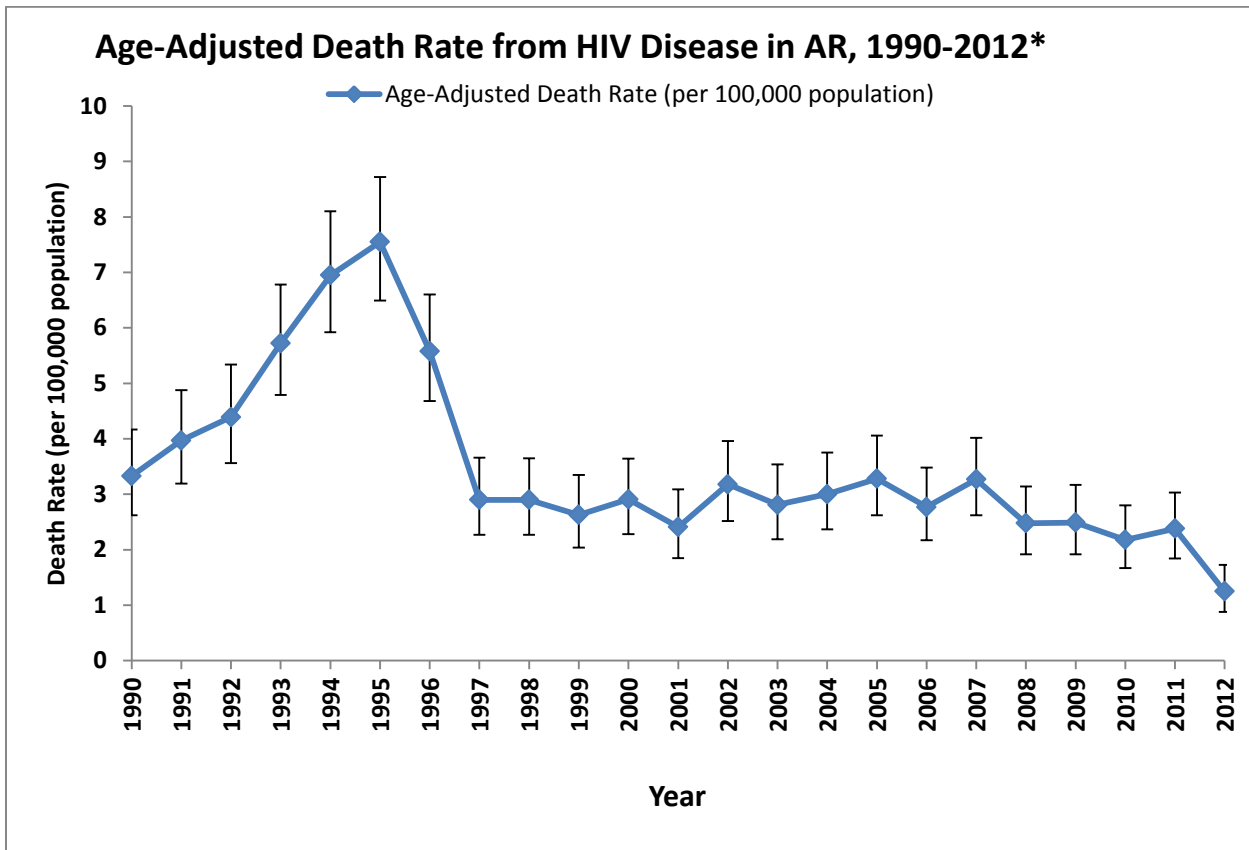


Figure 23.



\*bars indicated the 95% confidence interval around each point

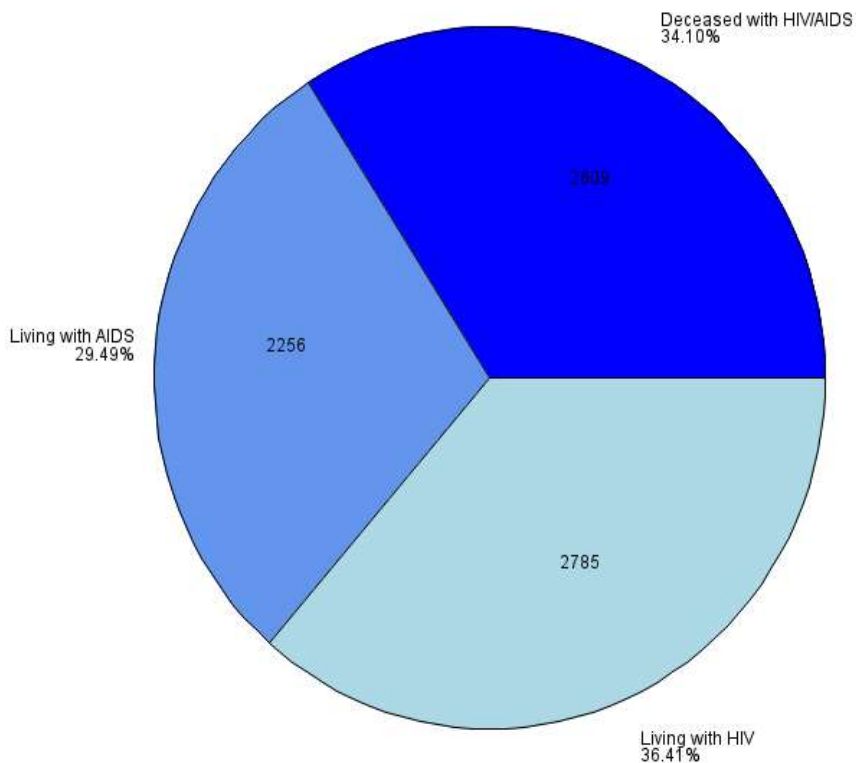
Source: Arkansas Department of Health, ICD10 Cause of Death Query, death certificates

The number of deaths due to HIV/AIDS in Arkansas continues to decrease. According to the Arkansas HIV/AIDS surveillance system data, 2,682 deaths have been attributed to HIV/AIDS as of December 31, 2012 (Figure 24, Table 10). The majority of persons with HIV/AIDS who have died were men (82.0%); this is consistent with the 78.6% of persons living with AIDS in Arkansas who were men (Table 10). The greatest percentage of deaths occurred among cases with a reported risk of MSM (52.6%). Approximately 56.5% of the deceased cases were white, 41.1% were black, and 1.4% were Hispanic.

Year

Figure 24.

**Cumulative Reported HIV/AIDS Cases by Current Status**  
Arkansas, 2012



The Central Region had the greatest percentage of HIV/AIDS-related deaths (38.9%), compared to other regions of the state (Table 10). The Central Region also had the greatest percentage of persons living with AIDS (41.4%) as of December 31, 2012. The number of persons living with AIDS has remained stable across all demographic groups in the state. In 2012, the AIDS prevalence rate was 76.5 per 100,000, compared to 72.8 per 100,000 in 2008.

Table 10. Characteristics of Persons with HIV/AIDS Who Died and Persons Living with HIV/AIDS  
Arkansas, 2012

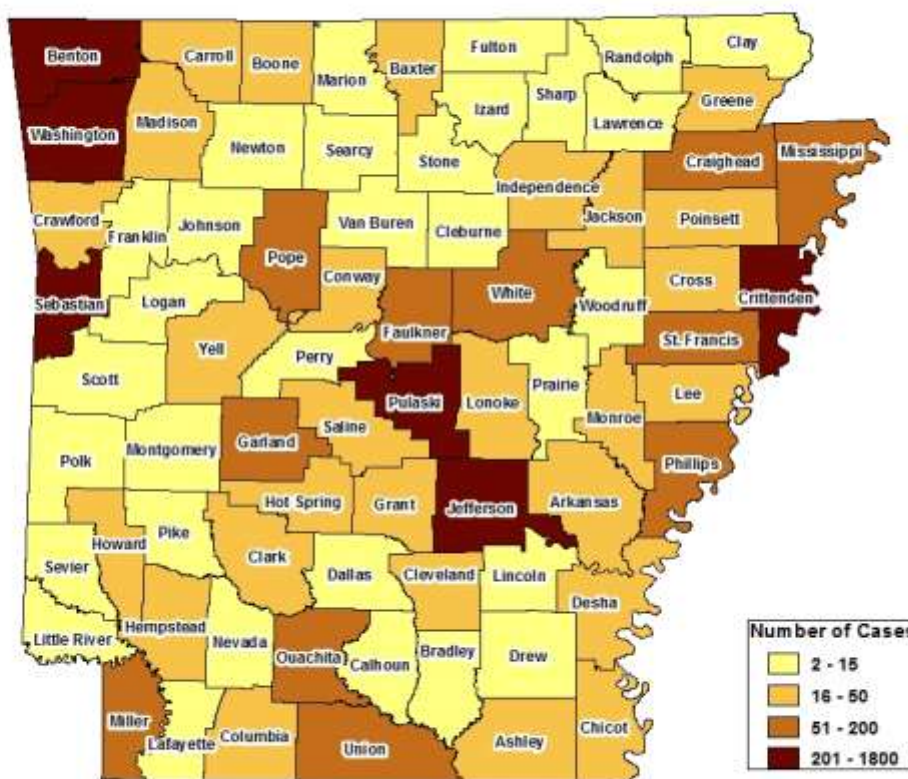
	Deaths among Persons with HIV/AIDS through 2012		Persons Living with AIDS through 2012	
	N	%	N	%
<b>Gender</b>				
Male	2,140	82.0%	1,791	79.4%
Female	469	18.0%	465	20.6%
<b>Race/Ethnicity</b>				
White, non-Hispanic	1,480	56.7%	1,157	51.3%
Black, non-Hispanic	1,068	40.9%	920	40.8%
Hispanic	34	1.3%	118	5.2%
Other, non-Hispanic	27	1.0%	58	2.6%
Unknown	0	0.0%	3	0.1%
<b>Age Group</b>				
<13	18	0.7%	18	0.8%
13-14	3	0.1%	1	0.0%
15-24	214	8.2%	182	8.1%
25-34	930	35.7%	765	33.9%
35-44	849	32.5%	821	36.4%
45-54	383	14.7%	360	16.0%
55-64	149	5.7%	94	4.2%
65+	63	2.4%	15	0.7%
Unknown	12	0.5%	0	0.0%
<b>Exposure Category</b>				
Male Sex w/ Male (MSM)	1,382	53.0%	1,238	54.9%
Injection Drug Use (IDU)	373	14.3%	247	10.9%
MSM & IDU	219	8.4%	128	5.7%
High-risk Heterosexual	457	17.5%	458	20.3%
Other	67	2.6%	28	1.2%
No Identified Risk	111	4.3%	157	7.0%
<b>Public Health Region</b>				
Central	1,016	38.9%	935	41.4%
Northeast	378	14.5%	299	13.3%
Northwest	556	21.3%	501	22.2%
Southeast	357	13.7%	285	12.6%
Southwest	297	11.4%	235	10.4%
Unknown	5	0.2%	1	0.0%
<b>Total</b>	<b>2,609</b>	<b>100.0%</b>	<b>2,256</b>	<b>100.0%</b>

Data Source: Arkansas eHARS (enhanced HIV/AIDS Reporting System) retrieved April 24, 2014.

# **REGIONAL PROFILES**

The following pages present each ADH Public Health Region in detail from 2008–2012. Public Health Regions having fewer identified cases and smaller numbers of prevalent cases will not be discussed as thoroughly as those with larger numbers. This is done to assure the confidentiality of infected persons. Also, smaller numbers mean that rates and proportions are statistically unstable, and any conclusions drawn from them have the potential to be erroneous. Changes across years may reflect true change, but are more likely the result of normal variation in smaller numbers.

### Arkansas HIV/AIDS Prevalence\* Cases by County as of December 31, 2012



Date: July 17, 2014  
Source: Arkansas Department of Health  
Map created by: Joyce Biddle

\*Prevalence is defined as the number of persons living with HIV/AIDS during the specified time period.  
Data Source: Arkansas eHARS (enhanced HIV/AIDS Reporting System) Data System

<b>CENTRAL REGION</b>	
<b>Counties in Central Region</b>	Faulkner, Garland, Grant, Lonoke, Perry, Pulaski, Saline
<b>2012 Estimated Population of Central Region</b>	814,569
<b>Prevalent HIV/AIDS Presumed Living in Central Region</b>	2,124

### **Regional Information**

The Central Region is located in the center of Arkansas and includes seven counties as well as the state capital, Little Rock. This is geographically the smallest region in the state. Non-Hispanic whites make up 71.7% of the region’s population, non-Hispanic blacks 21.2%, Hispanics 5.0%, Asian or Pacific Islanders 1.7%, and less than 1% of the population is Native American. The Central Region contains the highest and the sixth-highest counties, by total population density.

### **Newly Diagnosed HIV/AIDS, 2008–2012**

In the Central Region, there were 613 newly diagnosed HIV/AIDS cases between 2008 and 2012 (Table 11). The majority of the cases were males (84.2%). The infection rate for this region during this time was 15.4 per 100,000 per year, the highest in the state. During this time period, blacks made up the majority of the newly diagnosed HIV/AIDS cases (56.0%), followed by whites (34.3%), Hispanics (5.2%), unknown race/ethnicity (2.1%), and other races (2.4%). Approximately 30.3% of the newly diagnosed cases between 2008 and 2012 were between the ages of 25 and 34 years old. This region also had a large percentage of cases reported among youth and young adults aged 15 to 24 (23.5%). Male-to-male sexual contact (MSM) was the primary known risk factor (60.8%). Less common primary risk factors were heterosexual contact (8.6% of cases), injection drug use (IDU) (2.4%), and MSM & IDU (1.5%). At the time of reporting, 26.4% of cases had no identified risk factors.



Table 11. Central Public Health Region — HIV/AIDS Incidence and Prevalence as of December 31, 2012

	HIV Incidence 2008-2012		AIDS Incidence 2008-2012		HIV/AIDS Incidence 2008-2012		HIV Prevalence as of Dec. 2012		AIDS Prevalence as of Dec. 2012		HIV/AIDS Prevalence as of Dec. 2012	
	N	%	N	%	N	%	N	%	N	%	N	%
<b>Gender</b>												
Male	328	84.5	188	83.6	516	84.2	955	80.3	765	81.8	1,720	81.0
Female	60	15.5	37	16.4	97	15.8	234	19.7	170	18.2	404	19.0
<b>Age Group</b>												
<13	2	0.5	0	0.0	2	0.3	8	0.7	9	1.0	17	0.8
13-14	0	0.0	0	0.0	0	0.0	3	0.3	0	0.0	3	0.1
15-24	112	28.9	32	14.2	144	23.5	294	24.7	88	9.4	382	18.0
25-34	128	33.0	58	25.8	186	30.3	425	35.7	299	32.0	724	34.1
35-44	76	19.6	58	25.8	134	21.9	292	24.6	337	36.0	629	29.6
45-54	50	12.9	51	22.7	101	16.5	126	10.6	156	16.7	282	13.3
55-64	19	4.9	21	9.3	40	6.5	34	2.9	39	4.2	73	3.4
65+	1	0.3	5	2.2	6	1.0	6	0.5	7	0.7	13	0.6
Unknown	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	1	0.0
<b>Race/Ethnicity</b>												
White, non-Hispanic	133	34.3	77	34.2	210	34.3	529	44.5	445	47.6	974	45.9
Black, non-Hispanic	216	55.7	127	56.4	343	56.0	571	48.0	422	45.1	993	46.8
Hispanic	18	4.6	14	6.2	32	5.2	35	2.9	39	4.2	74	3.5
Other, non-Hispanic	8	2.1	7	3.1	15	2.4	24	2.0	28	3.0	52	2.4
Unknown	13	3.4	0	0.0	13	2.1	30	2.5	1	0.1	31	1.5
<b>Exposure Category</b>												
Male Sex w/ Male (MSM)	243	62.6	130	57.8	373	60.8	637	53.6	564	60.3	1,201	56.5
Injection Drug Use (IDU)	7	1.8	8	3.6	15	2.4	79	6.6	82	8.8	161	7.6
MSM & IDU	4	1.0	5	2.2	9	1.5	50	4.2	50	5.3	100	4.7
High-risk Heterosexual	27	7.0	26	11.6	53	8.6	209	17.6	151	16.1	360	16.9
Other	1	0.3	0	0.0	1	0.2	8	0.7	12	1.3	20	0.9
No Identified Risk	106	27.3	56	24.9	162	26.4	206	17.3	76	8.1	282	13.3
<b>Total</b>	<b>388</b>	<b>100.0</b>	<b>225</b>	<b>100.0</b>	<b>613</b>	<b>100.0</b>	<b>1189</b>	<b>100.0</b>	<b>935</b>	<b>100.0</b>	<b>2124</b>	<b>100.0</b>

Note: Due to rounding, percentages may not add to 100.

Data Source: Arkansas eHARS (enhanced HIV/AIDS Reporting System) retrieved April 24, 2014.

<b>NORTHEAST REGION</b>	
<b>Counties in Northeast Region</b>	Cleburne, Clay, Craighead, Crittenden, Cross, Fulton, Izard, Greene, Independence, Jackson, Lawrence, Mississippi, Poinsett, Randolph, Sharp, Stone, White, Woodruff
<b>2012 Estimated Population of Northeast Region</b>	552,632
<b>Prevalent HIV/AIDS Presumed Living in Northeast Region</b>	697

### **Regional Information**

The Northeast Region, comprises part of the Memphis Transitional Grant Area (TGA) for HIV services, as it borders Tennessee in this part of the state. It consists of 18 counties, including the Jonesboro area where Arkansas State University is located. This region has the largest percentage of Non-Hispanic whites, at 82.6% of the population. Non-Hispanic blacks comprise 13.2% of the population and Hispanics 3.2%. Asians and Native Americans comprise less than 2% of the population.

### **Newly Diagnosed HIV/AIDS, 2008–2012**

Between 2008 and 2012, the Northeast Region had a total of 211 newly diagnosed HIV/AIDS cases. The HIV infection rate for the Northeast Region was 7.7 per 100,000 per year. Males made up the majority (73.0%) of newly diagnosed HIV cases. Blacks made up the largest percentage of newly diagnosed HIV cases (51.2%), followed by whites (38.9%) and Hispanics (6.2%). Cases occurred most commonly in the 25-34 age group (25.1%), followed by the 35-44 age group (24.6%) and the 45-54 age group (23.2%). Notably, 20.4% of all newly diagnosed HIV/AIDS cases occurred in 15-24-year olds. The most common known primary risk was male-to-male sexual contact (MSM) (48.3%), followed by high-risk heterosexual contact (15.2%), injection drug use (IDU) (8.1%), and MSM & IDU (4.3%). The remaining 24.2% had no identified risk factors.

(Table 12)

Table 12. Northeast Public Health Region — HIV/AIDS Incidence and Prevalence as of December 31, 2012

	HIV Incidence 2008-2012		AIDS Incidence 2008-2012		HIV/AIDS Incidence 2008-2012		HIV Prevalence as of Dec. 2012		AIDS Prevalence as of Dec. 2012		HIV/AIDS Prevalence as of Dec. 2012	
	N	%	N	%	N	%	N	%	N	%	N	%
<b>Gender</b>												
Male	89	74.2	65	71.4	154	73.0	241	60.6	217	72.6	458	65.7
Female	31	25.8	26	28.6	57	27.0	157	39.4	82	27.4	239	34.3
<b>Age Group</b>												
<13	1	0.8	0	0.0	1	0.5	4	1.0	1	0.3	5	0.7
13-14	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3	1	0.1
15-24	33	27.5	10	11.0	43	20.4	110	27.6	27	9.0	137	19.7
25-34	33	27.5	20	22.0	53	25.1	134	33.7	88	29.4	222	31.9
35-44	23	19.2	29	31.9	52	24.6	97	24.4	107	35.8	204	29.3
45-54	21	17.5	28	30.8	49	23.2	42	10.6	62	20.7	104	14.9
55-64	6	5.0	4	4.4	10	4.7	8	2.0	11	3.7	19	2.7
65+	3	2.5	0	0.0	3	1.4	3	0.8	2	0.7	5	0.7
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
<b>Race/Ethnicity</b>												
White, non-Hispanic	42	35.0	40	44.0	82	38.9	184	46.2	160	53.5	344	49.4
Black, non-Hispanic	63	52.5	45	49.5	108	51.2	190	47.7	122	40.8	312	44.8
Hispanic	9	7.5	4	4.4	13	6.2	13	3.3	12	4.0	25	3.6
Other, non-Hispanic	2	1.7	2	2.2	4	1.9	3	0.8	5	1.7	8	1.1
Unknown	4	3.3	0	0.0	4	1.9	8	2.0	0	0.0	8	1.1
<b>Exposure Category</b>												
Male Sex w/ Male (MSM)	57	47.5	45	49.5	102	48.3	156	39.2	149	49.8	305	43.8
Injection Drug Use (IDU)	14	11.7	3	3.3	17	8.1	51	12.8	26	8.7	77	11.0
MSM & IDU	4	3.3	5	5.5	9	4.3	14	3.5	13	4.3	27	3.9
High-risk Heterosexual	11	9.2	21	23.1	32	15.2	109	27.4	83	27.8	192	27.5
Other	0	0.0	0	0.0	0	0.0	3	0.8	3	1.0	6	0.9
No Identified Risk	34	28.3	17	18.7	51	24.2	65	16.3	25	8.4	90	12.9
<b>Total</b>	<b>120</b>	<b>100.0</b>	<b>91</b>	<b>100.0</b>	<b>211</b>	<b>100.0</b>	<b>398</b>	<b>100.0</b>	<b>299</b>	<b>100.0</b>	<b>697</b>	<b>100.0</b>

Note: Due to rounding, percentages may not add to 100.

Data Source: Arkansas eHARS (enhanced HIV/AIDS Reporting System) retrieved April 24, 2014.

<b>NORTHWEST REGION</b>	
<b>Counties in Northwest Region</b>	Baxter, Benton, Boone, Carroll, Conway, Crawford, Franklin, Johnson, Logan, Madison, Marion, Newton, Pope, Searcy, Sebastian, Scott, Van Buren, Washington, Yell
<b>2012 Estimated Population of Northwest Region</b>	987,173
<b>Prevalent HIV/AIDS Presumed Living in Northwest Region</b>	1,035

### **Regional Information**

The Northwest Region which borders Missouri and Oklahoma is made up of 19 counties, including the Fort Smith, Fayetteville-Springdale-Rogers, and Bentonville metropolitan areas. Also located in this region are the University of Arkansas and the headquarters for Wal-Mart, J. B. Hunt, and Tyson. This region is arguably the most economically advantaged area of the state. Non-Hispanic whites account for 81.4% of the population, non-Hispanic blacks 2.9%, Hispanics 11.5%, Asians 2.7%, and Native Americans 1.4%. This region holds the largest percentage of Hispanics in the state, and many Marshallese have made the Northwest their home.

### **Newly Diagnosed HIV/AIDS, 2008–2012**

The Northwest Region had a total of 266 newly diagnosed HIV/AIDS cases between 2008 and 2012. Of these, 81.2% were male and 18.8% were female. The rate of infection during this period was 4.7 per 100,000 per year. Most newly diagnosed cases in this region were white (67.7%), while 12.0% were black and 14.3% were Hispanic. The major age groups impacted were the 25-34 age group (30.5%), followed by the 35-44 age group (29.7%) and the 45-54 age group (19.5%). The most common known primary risk factor was male-to-male sexual contact (MSM) (60.5%), followed by high-risk heterosexual contact (10.2%). Less common risk factors were injection drug use (IDU) (6.4%) and MSM & IDU (4.9%). The remaining 18.0% had no identified risk factors.

(Table 13)

Table 13. Northwest Public Health Region — HIV/AIDS Incidence and Prevalence as of December 31, 2012

	HIV Incidence 2008-2012		AIDS Incidence 2008-2012		HIV/AIDS Incidence 2008-2012		HIV Prevalence as of Dec. 2012		AIDS Prevalence as of Dec. 2012		HIV/AIDS Prevalence as of Dec. 2012	
	N	%	N	%	N	%	N	%	N	%	N	%
<b>Gender</b>												
Male	112	82.4	104	80.0	216	81.2	409	76.6	414	82.6	823	79.5
Female	24	17.6	26	20.0	50	18.8	125	23.4	87	17.4	212	20.5
<b>Age Group</b>												
<13	1	0.7	0	0.0	1	0.4	3	0.6	3	0.6	6	0.6
13-14	0	0.0	0	0.0	0	0.0	1	0.2	0	0.0	1	0.1
15-24	29	21.3	3	2.3	32	12.0	96	18.0	23	4.6	119	11.5
25-34	40	29.4	41	31.5	81	30.5	199	37.3	179	35.7	378	36.5
35-44	35	25.7	44	33.8	79	29.7	149	27.9	199	39.7	348	33.6
45-54	20	14.7	32	24.6	52	19.5	63	11.8	76	15.2	139	13.4
55-64	10	7.4	6	4.6	16	6.0	21	3.9	19	3.8	40	3.9
65+	1	0.7	4	3.1	5	1.9	2	0.4	2	0.4	4	0.4
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
<b>Race/Ethnicity</b>												
White, non-Hispanic	90	66.2	90	69.2	180	67.7	411	77.0	397	79.2	808	78.1
Black, non-Hispanic	19	14.0	13	10.0	32	12.0	55	10.3	37	7.4	92	8.9
Hispanic	19	14.0	19	14.6	38	14.3	51	9.6	53	10.6	104	10.0
Other, non-Hispanic	6	4.4	8	6.2	14	5.3	12	2.2	13	2.6	25	2.4
Unknown	2	1.5	0	0.0	2	0.8	5	0.9	1	0.2	6	0.6
<b>Exposure Category</b>												
Male Sex w/ Male (MSM)	85	62.5	76	58.5	161	60.5	278	52.1	295	58.9	573	55.4
Injection Drug Use (IDU)	6	4.4	11	8.5	17	6.4	64	12.0	63	12.6	127	12.3
MSM & IDU	8	5.9	5	3.8	13	4.9	36	6.7	35	7.0	71	6.9
High-risk Heterosexual	12	8.8	15	11.5	27	10.2	87	16.3	81	16.2	168	16.2
Other	0	0.0	0	0.0	0	0.0	5	0.9	5	1.0	10	1.0
No Identified Risk	25	18.4	23	17.7	48	18.0	64	12.0	22	4.4	86	8.3
<b>Total</b>	<b>136</b>	<b>100.0</b>	<b>130</b>	<b>100.0</b>	<b>266</b>	<b>100.0</b>	<b>534</b>	<b>100.0</b>	<b>501</b>	<b>100.0</b>	<b>1035</b>	<b>100.0</b>

Note: Due to rounding, percentages may not add to 100.

Data Source: Arkansas eHARS (enhanced HIV/AIDS Reporting System) retrieved April 24, 2014.

<b>SOUTHEAST REGION</b>	
<b>Counties in Southeast Region</b>	Arkansas, Ashley, Bradley, Chicot, Cleveland, Desha, Drew, Jefferson, Lee, Lincoln, Monroe, Phillips, Prairie, St. Francis
<b>2012 Estimated Population of Southeast Region</b>	267,129
<b>Prevalent HIV/AIDS Presumed Living in Southeast Region</b>	675

### **Regional Information**

The Southeast Region includes 14 counties. This region is dominated by the most economically deprived area of the state, known as the Mississippi Delta. It has the largest percentage of Non-Hispanic blacks in the state, at 43.2%. Non-Hispanic whites account for 52.5% of the population, Hispanics 3.3%, and Native Americans and Asians less than 1%.

### **Newly Diagnosed HIV/AIDS, 2008–2012**

There were 154 newly diagnosed HIV/AIDS cases between 2008 and 2012 in the Southeast Region. The average rate of infection was 11.3 per 100,000 per year over the five-year period. Of these, 72.7% were male and 27.3% were female. The racial breakdown was 75.3% black, 10.4% white, and 6.5% Hispanic. Almost a third of newly diagnosed cases were aged 25-34, compared to 22.1% of cases aged 35 to 44, the next most common age group. Notably, over 1 in 5 cases occurred in the 15-24 age group (20.8%). Male-to-male sexual contact (MSM) was the most commonly known risk factor (42.9%), followed by high-risk heterosexual contact (11.0%) and injection drug use (IDU) (11.0%), and MSM & IDU (2.6%). The remaining 32.5% of cases had no identified risk factors.

(Table 14)

Table 14. Southeast Public Health Region — HIV/AIDS Incidence and Prevalence as of December 31, 2012

	HIV Incidence 2008-2012		AIDS Incidence 2008-2012		HIV/AIDS Incidence 2008-2012		HIV Prevalence 2012		AIDS Prevalence 2012		HIV/AIDS Prevalence 2012	
	N	%	N	%	N	%	N	%	N	%	N	%
<b>Gender</b>												
Male	65	69.1	47	78.3	112	72.7	276	70.8	222	77.9	498	73.8
Female	29	30.9	13	21.7	42	27.3	114	29.2	63	22.1	177	26.2
<b>Age Group</b>												
<13	1	1.1	0	0.0	1	0.6	2	0.5	3	1.1	5	0.7
13-14	0	0.0	0	0.0	0	0.0	3	0.8	0	0.0	3	0.4
15-24	23	24.5	9	15.0	32	20.8	108	27.7	30	10.5	138	20.4
25-34	31	33.0	19	31.7	50	32.5	127	32.6	112	39.3	239	35.4
35-44	17	18.1	17	28.3	34	22.1	97	24.9	102	35.8	199	29.5
45-54	15	16.0	8	13.3	23	14.9	42	10.8	27	9.5	69	10.2
55-64	7	7.4	7	11.7	14	9.1	8	2.1	10	3.5	18	2.7
65+	0	0.0	0	0.0	0	0.0	3	0.8	1	0.4	4	0.6
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
<b>Race/Ethnicity</b>												
White, non-Hispanic	13	13.8	3	5.0	16	10.4	80	20.5	58	20.4	138	20.4
Black, non-Hispanic	68	72.3	48	80.0	116	75.3	275	70.5	212	74.4	487	72.1
Hispanic	7	7.4	3	5.0	10	6.5	18	4.6	6	2.1	24	3.6
Other, non-Hispanic	2	2.1	6	10.0	8	5.2	8	2.1	8	2.8	16	2.4
Unknown	4	4.3	0	0.0	4	2.6	9	2.3	1	0.4	10	1.5
<b>Exposure Category</b>												
Male Sex w/ Male (MSM)	37	39.4	29	48.3	66	42.9	152	39.0	124	43.5	276	40.9
Injection Drug Use (IDU)	8	8.5	9	15.0	17	11.0	56	14.4	45	15.8	101	15.0
MSM & IDU	2	2.1	2	3.3	4	2.6	12	3.1	18	6.3	30	4.4
High-risk Heterosexual	7	7.4	10	16.7	17	11.0	94	24.1	77	27.0	171	25.3
Other	0	0.0	0	0.0	0	0.0	2	0.5	4	1.4	6	0.9
No Identified Risk	40	42.6	10	16.7	50	32.5	74	19.0	17	6.0	91	13.5
<b>Total</b>	<b>94</b>	<b>100.0</b>	<b>60</b>	<b>100.0</b>	<b>154</b>	<b>100.0</b>	<b>390</b>	<b>100.0</b>	<b>285</b>	<b>100.0</b>	<b>675</b>	<b>100.0</b>

Note: Due to rounding, percentages may not add to 100.

Data Source: Arkansas eHARS (enhanced HIV/AIDS Reporting System) retrieved April 24, 2014.

<b>SOUTHWEST REGION</b>	
<b>Counties in Southwest Region</b>	Calhoun, Clark, Columbia, Dallas, Hempstead, Howard, Hot Spring, Lafayette, Little River, Miller, Montgomery, Nevada, Ouachita, Pike, Polk, Sevier, Union
<b>2012 Estimated Population of Southwest Region</b>	327,628
<b>Prevalent HIV/AIDS Presumed Living in Southwest Region</b>	507

### **Regional Information**

The Southwest Region consists of 17 counties. Included in this area is the bi-state city of Texarkana. Non-Hispanic whites account for 69.5% of the population, non-Hispanic blacks 23.4%, Hispanics 5.8%, and Asians or Native Americans less than 2%.

### **Newly Diagnosed HIV/AIDS, 2008–2012**

There were 122 newly diagnosed HIV/AIDS cases in the Southwest Region between 2008 and 2012. Of these, 82.5% were male and 17.5% were female. The average rate of infection in the Southwest Region was 7.4 per 100,000 per year. Most newly diagnosed cases occurred in blacks (63.3%), followed by whites (26.7%) and Hispanics (4.2%). The most common age group to be diagnosed was 15 to 24-year-olds (27.5%), followed by the 25-34 age group (23.3%) and the 35-44 age group (19.2%). Half of the cases had male-to-male sexual contact (MSM) as the primary risk factor. Less common known risk factors were high-risk heterosexual contact (14.2%), injection drug use (IDU) (5.0%), and MSM & IDU (5.0%). The remaining 20.8% of cases had no identified risk factors by the end of 2013.

(Table 15)



Table 15. Southwest Public Health Region — HIV/AIDS Incidence and Prevalence as of December 31, 2012

	HIV Incidence 2008-2012		AIDS Incidence 2008-2012		HIV/AIDS Incidence 2008-2012		HIV Prevalence 2012		AIDS Prevalence 2012		HIV/AIDS Prevalence 2012	
	N	%	N	%	N	%	N	%	N	%	N	%
<b>Gender</b>												
Male	59	81.9	40	83.3	99	82.5	181	66.5	173	73.6	354	69.8
Female	13	18.1	8	16.7	21	17.5	91	33.5	62	26.4	153	30.2
<b>Age Group</b>												
<13	0	0.0	0	0.0	0	0.0	1	0.4	2	0.9	3	0.6
13-14	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
15-24	31	43.1	2	4.2	33	27.5	80	29.4	14	6.0	94	18.5
25-34	21	29.2	7	14.6	28	23.3	92	33.8	86	36.6	178	35.1
35-44	10	13.9	13	27.1	23	19.2	64	23.5	76	32.3	140	27.6
45-54	4	5.6	17	35.4	21	17.5	21	7.7	39	16.6	60	11.8
55-64	5	6.9	9	18.8	14	11.7	10	3.7	15	6.4	25	4.9
65+	1	1.4	0	0.0	1	0.8	4	1.5	3	1.3	7	1.4
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
<b>Race/Ethnicity</b>												
White, non-Hispanic	17	23.6	15	31.3	32	26.7	96	35.3	96	40.9	192	37.9
Black, non-Hispanic	47	65.3	29	60.4	76	63.3	154	56.6	127	54.0	281	55.4
Hispanic	3	4.2	2	4.2	5	4.2	7	2.6	8	3.4	15	3.0
Other, non-Hispanic	1	1.4	2	4.2	3	2.5	3	1.1	4	1.7	7	1.4
Unknown	4	5.6	0	0.0	4	3.3	12	4.4	0	0.0	12	2.4
<b>Exposure Category</b>												
Male Sex w/ Male (MSM)	42	58.3	24	50.0	66	55.0	106	39.0	106	45.1	212	41.8
Injection Drug Use (IDU)	1	1.4	5	10.4	6	5.0	28	10.3	30	12.8	58	11.4
MSM & IDU	4	5.6	2	4.2	6	5.0	13	4.8	12	5.1	25	4.9
High-risk Heterosexual	9	12.5	8	16.7	17	14.2	83	30.5	66	28.1	149	29.4
Other	0	0.0	0	0.0	0	0.0	1	0.4	4	1.7	5	1.0
No Identified Risk	16	22.2	9	18.8	25	20.8	41	15.1	17	7.2	58	11.4
<b>Total</b>	<b>72</b>	<b>100.0</b>	<b>48</b>	<b>100.0</b>	<b>120</b>	<b>100.0</b>	<b>272</b>	<b>100.0</b>	<b>235</b>	<b>100.0</b>	<b>507</b>	<b>100.0</b>

Note: Due to rounding, percentages may not add to 100.

Data Source: Arkansas eHARS (enhanced HIV/AIDS Reporting System) retrieved April 24, 2014.

### Question 3

## **What are the indicators of risk for HIV/AIDS infection in Arkansas?**

The persons most likely to become infected with HIV are those who engage in high-risk behaviors and those who live in communities with a high prevalence of HIV. In an effort to assist our stakeholders with understanding the differing risks for HIV infection in Arkansas, this section examines the trends and characteristics of three high-risk populations: men who have sex with men (MSM), injection drug users (IDU), and heterosexual adults.

This section examines direct and indirect measures of risk behavior in the groups most at risk of acquiring HIV infection. Direct measures provide information about risk behavior that is directly associated with HIV transmission. Indirect measures do not directly describe HIV risk behaviors; rather, they are indicators of possible HIV risk that may need further investigation. For example, an increase in STD rates does not directly indicate that HIV exposure is increasing, but indicates an increase in unprotected sex, which increases the risk of HIV exposure.

### **HIGHLIGHTS**

- Since 2008, the number of syphilis cases in Arkansas has decreased by 30%.
- From 2008–2012, the proportion of early syphilis cases in MSM that were co-infected with HIV increased from 41% to 48%.
- The gonorrhea incidence rate in Arkansas was 145.2 per 100,000 persons in 2012.
- Primary and secondary syphilis incidence rates have declined since 2008, from 7.15 to 4.88 per 100,000 persons.

## **MEN WHO HAVE SEX WITH MEN (MSM)**

### **Direct Measures of Risk Behavior**

According to the CDC, MSM accounted for 63% of new HIV infections in the U.S. in 2010 and 52% of persons living with HIV nationally in 2009.<sup>9</sup> In Arkansas as well as nationally, male-to-male sexual contact (MSM) has historically been the most commonly reported risk behavior among newly diagnosed cases of HIV/AIDS. In 2012, 58.2% of newly diagnosed HIV/AIDS cases in Arkansas and 56.0% of persons living with HIV/AIDS in Arkansas had MSM or MSM & IDU as their primary risk factor (Figure 16 and Table 8, respectively).

Youth reporting a risk factor of MSM engage in behaviors that increase the risk of HIV infection, according to the latest Youth Risk Behavior Survey (YRBS). Among high school students who reported any sexual contact in 2009–2011, MSM were significantly more likely than other males to have had four or more sexual partners (39.4% vs. 26.9%) and to have ever injected any illegal drug (20.4% vs. 2.9%), but were less likely to report having ever been taught in school about AIDS or HIV (74.6% vs. 86.3%).<sup>10</sup>

### **Indirect Measures of Risk Behavior**

The prevalence of sexually transmitted infections in populations is often used as an indicator of high-risk behavior. Between 2008 and 2012, there was a 30% decrease in the total number of early syphilis cases in Arkansas (Figure 25). However, at the same time there was a 54% increase in the number of syphilis cases with risk factors of MSM or MSM & IDU (Figure 26).

From 2008–2012, the number of syphilis cases co-infected with HIV (having a previous HIV diagnosis or an HIV diagnosis up to a year after the syphilis diagnosis) increased by 58% (Figure 25), and the co-infected cases in MSM with syphilis increased by 69% (Figure 26). In each year during this period, 39.7% to 56.7% of syphilis cases in MSM were co-infected with HIV. In all years, the vast majority of co-infected syphilis-HIV cases (84.2% to 97.1%) were in MSM.

According to the CDC, MSM accounted for 75% of all primary and secondary syphilis in 32 states and the District of Columbia. Since the advent of highly active antiretroviral therapy (HAART), an unintended shift in attitude regarding the severity of becoming HIV-infected has occurred. Researchers have found a sense of complacency among MSM regarding the possibility of acquiring the virus. Researchers noted some of the following reasons for an increase in unprotected sexual activity among MSM: optimism about improved HIV treatment, recreational substance abuse, complex sexual decision making, and increased use of the internet to seek sexual partners<sup>11</sup>.

Figure 25.

**Early Syphilis and HIV Co-infected Syphilis, Total Population**  
Arkansas, 2008-2012

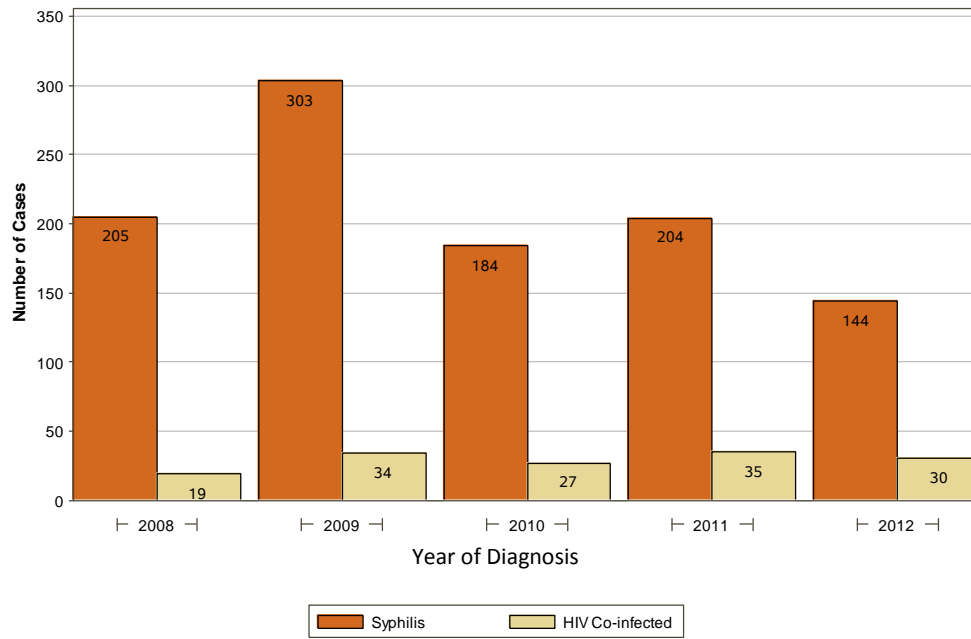
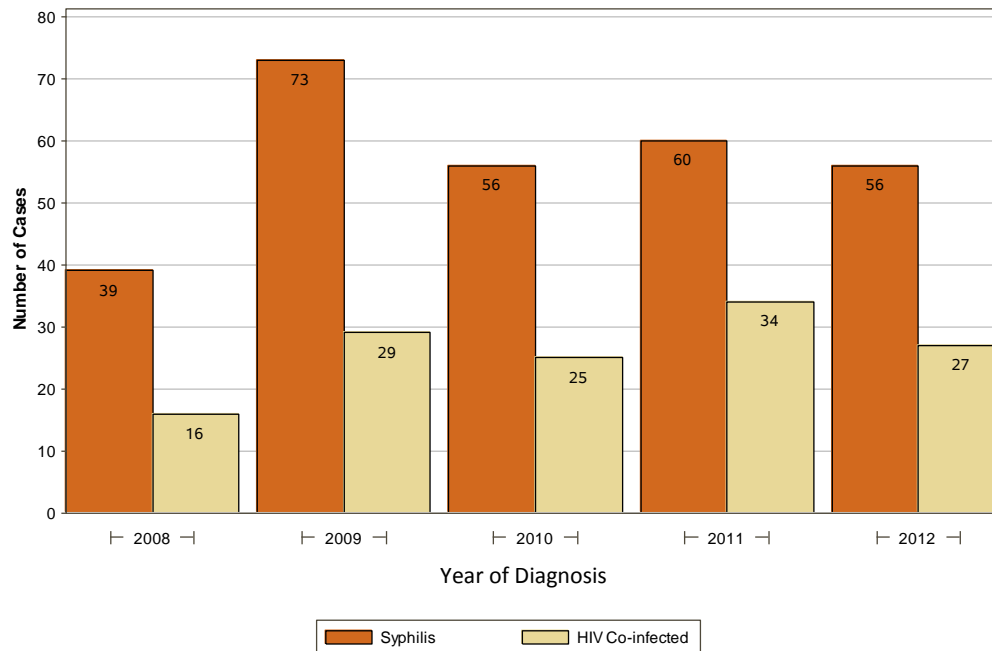


Figure 26.

**Early Syphilis and HIV Co-infected Syphilis, MSM Population**  
Arkansas, 2008-2012



### **Risk Factors for Transmission in U.S. Youth**

Nationally, from 2009 to 2011, 72.1% of all new HIV infections in youths attending grades 9–12 were attributed to male-to-male sexual contact, 19.8% to heterosexual contact, 4.0% to injection drug use, and 3.7% to male-to-male sexual contact and injection drug use.<sup>10</sup> Among females, 85.7% of new infections were attributed to heterosexual contact vs. 12.9% attributed to injection drug use. Sexually active MSM were significantly more likely than other sexually active males to have used alcohol or drugs (38.5% vs. 24.3%) and less likely to have used a condom (44.3% vs. 70.2%), before their last sexual intercourse.

From 2009 to 2011, among the new HIV infections in U.S. youth attributed to male-to-male sexual contact, 54.4% were in black students, 21.6% were in Hispanic/Latino students, and 20.5% were in white students.<sup>12</sup> Because of the higher prevalence of HIV among blacks, black youth are at higher risk for infection even with similar levels of risk behaviors.<sup>13</sup>



## **INJECTION DRUG USE (IDU)**

### **Direct Measures of Risk Behavior**

Approximately 3% of the newly diagnosed cases of HIV/AIDS in Arkansas in 2012 reported injection drug use (IDU) as their primary risk factor. Another 2% reported MSM/IDU as their primary risk factor. At the end of 2012, approximately 10% of persons living with HIV/AIDS in Arkansas had reported injection drug use as their primary risk factor, followed by 5% reporting MSM/IDU.

### **Indirect Measures of Risk Behavior**

#### **HIV Risk Behaviors and HIV Prevalence in IDUs**

Although injecting drug users make up 2.6% of the national population, they account for 22% of all people living with HIV.<sup>14</sup> The first large assessment of HIV prevalence in IDUs in over 10 years reported that injection drug users in 20 Metropolitan Statistical Areas (MSAs) continued to engage in high-risk behaviors that increase the risk of HIV transmission.<sup>15</sup> Thirty-five percent of IDUs reported sharing syringes and 58% reported sharing other injection equipment. Seventy percent of men and 73% of women reported unprotected vaginal intercourse in the preceding 12 months, and 25% of men and 21% of women reported unprotected anal intercourse in the preceding 12 months.

Overall, 9% of survey participants had HIV infection. Four percent of participants were newly identified as being HIV positive; through testing done as part of the survey.<sup>15</sup> Black participants engaged in less risky practices than white IDUs but had a higher prevalence of HIV.

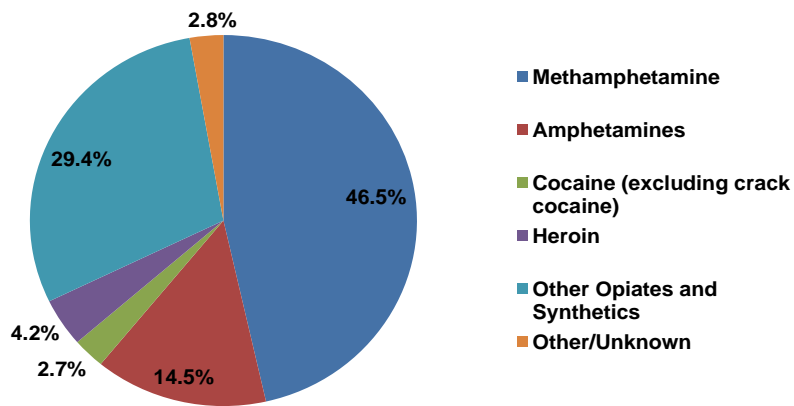
The most commonly injected drugs were heroin (90%), heroin and cocaine combined (58%), and cocaine or crack (49%). Most participants (74%) also reported use of non-injection drugs. Many of the survey participants were black (46%) and most were living below poverty level (80%).

#### **Inpatient treatment for substance abuse in Arkansas**

From 2008 to 2012, methamphetamines were the most common primary drug type used by injection drug users being treated in Arkansas for substance abuse (Figure 27). Primary usage of methamphetamine decreased from 48.0% to 46.5% of clients from 2008 to 2012, while primary usage of cocaine decreased from 7.7% to 2.7% of clients. Primary use of other opiates and synthetics increased in the same period, from 17.9% to 29.4% of treated IDUs. These trends occurred against a backdrop of 5-year and 3-year decreases in the total number of treated inpatients in Arkansas.

Figure 27.

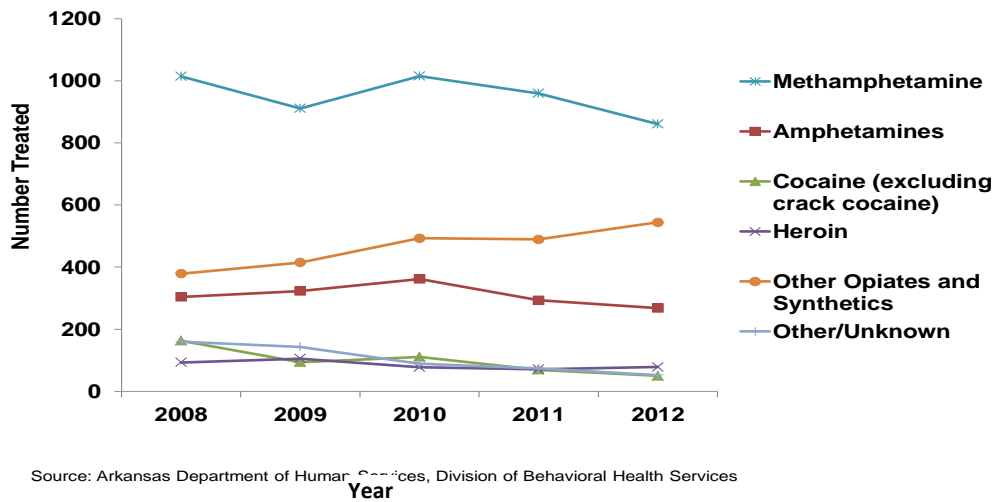
**Primary Drug Type Used among Intravenous or Intramuscular Drug Users Treated in Arkansas, 2012**



Source: Arkansas Department of Human Services, Division of Behavioral Health Services

Figure 28.

**Primary Drug Type Reported by Number of IDUs Treated in Arkansas, 2008–2012**



Source: Arkansas Department of Human Services, Division of Behavioral Health Services



Although the total number of treated inpatients fluctuated over time, it decreased by 13.9% from 2010 to 2012 (Figure 28). This decrease paralleled a drop in newly diagnosed HIV/AIDS cases having IDU or MSM & IDU as the primary mode of transmission, from 11.4% in 2008 to 6.5% in 2012.

In all years, the vast majority of treated inpatients (over 90%) were white and about 6 in 10 clients were male. About 60% of clients were between 20 and 34 years of age, and 20–25% of clients were 35 to 44 years old. Therefore, the 20-to-44-year-old age group comprised at least 80% of the client population each year. The percentage of black patients decreased over time, from 4.4% in 2008 to 1.7% in 2011.

# **HETEROSEXUAL POPULATIONS**

## **Direct Measures of Sexual Behavior**

In 2012, 7.5% of newly diagnosed HIV/AIDS cases in Arkansas reported heterosexual contact as their primary risk factor. Heterosexual risk is traditionally the most common exposure category in females diagnosed with HIV/AIDS, both nationally and in the State of Arkansas. Increasing reports of this particular risk factor are also being noted among newly diagnosed males.

## **Indirect Measures of Risk Behavior**

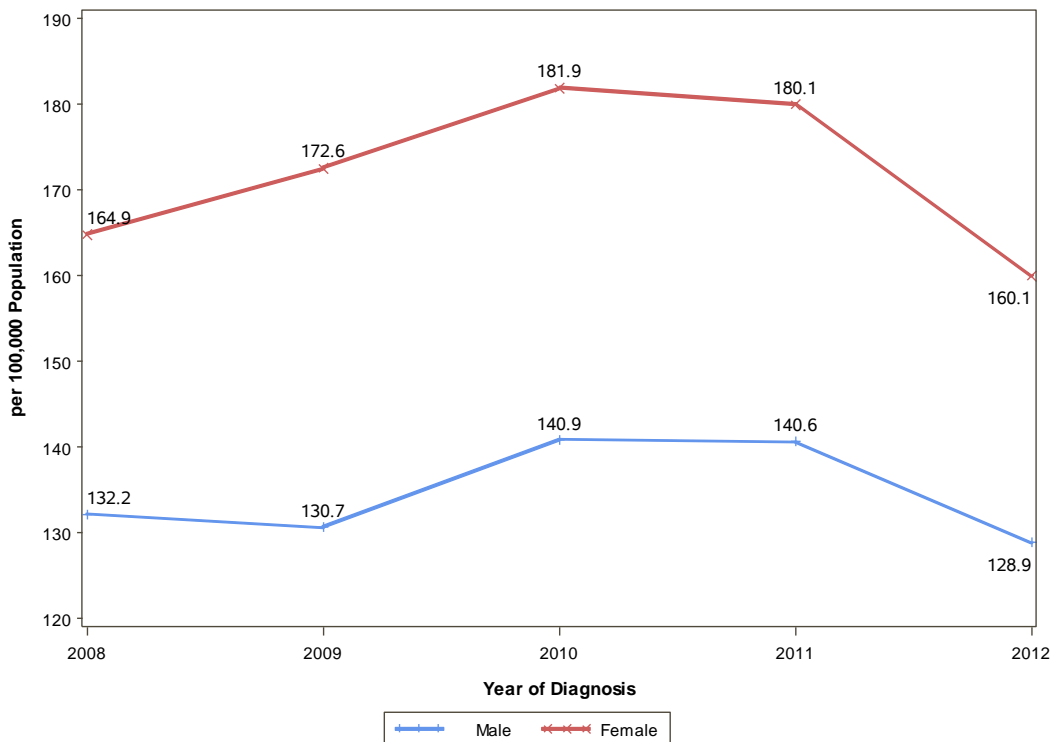
Sexually Transmitted Disease (STD) surveillance data provide information that may help to identify the potential occurrence of risky sexual behavior. Increases in STD rates do not directly indicate that HIV exposure is increasing. STD rates do, however, indicate an increase in unprotected sexual activity in a particular population. Since 2000, there has been a steady increase in the rate of STDs among Arkansans.

## **Gonorrhea**

In 2012, the overall rate for gonorrhea in the State of Arkansas was 145.2 per 100,000. This is a 3.2% decrease from 2008 but is well above the national rate of 107.5 per 100,000. From 2008 to 2012, the gonorrhea infection rates for women in Arkansas were consistently higher than those for men (Figure 29). This trend is consistent with 2012 national STD rates of 108.7 per 100,000 in women and 105.8 per 100,000 in men.<sup>16</sup> Gonorrheal infections in women are usually asymptomatic and often go undiagnosed.

Figure 29.

**Gonorrhea Morbidity Rates by Gender**  
Arkansas, 2008-2012



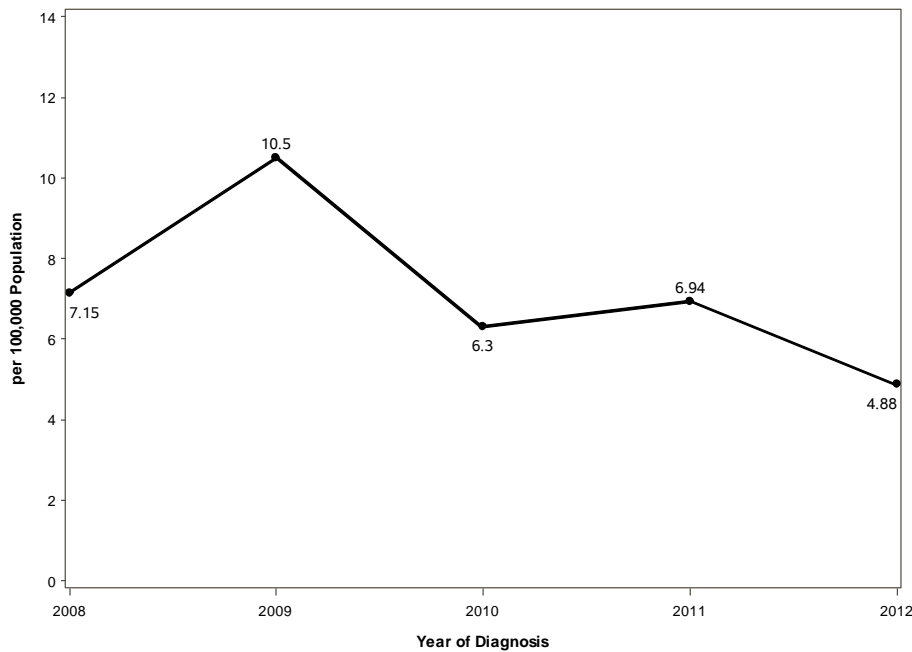
In 2012, there were 4,271 new cases of gonorrhea diagnosed in Arkansas. New cases of gonorrhea were diagnosed in 96% of the counties in the state. Seven counties had more than 150 new cases, one of which had over 1,000 new cases (Pulaski).

### **Syphilis**

Incidence rates of primary and secondary syphilis in Arkansas have declined over the past five years (Figure 30). In 2012, a total of 144 newly diagnosed early syphilis cases were reported in Arkansas. New cases of early syphilis were reported in 30 counties, with one county (Pulaski) reporting more than 50 cases.

Figure 30.

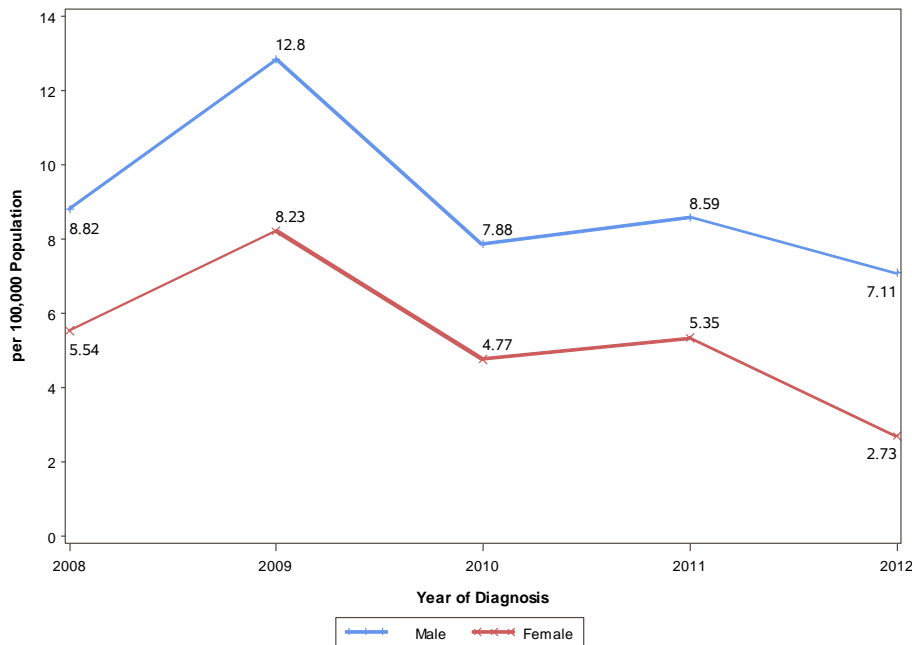
**Primary and Secondary Syphilis Rates by Year**  
Arkansas, 2008-2012



In Arkansas, the incidence rates of primary and secondary syphilis from 2008 to 2012 have been consistently higher in men than in women. In 2012, the incidence rate for men was 7.11 per 100,000 compared to 2.73 per 100,000 for women (Figure 31). This pattern may be because of an increase in syphilis among MSM. According to the CDC, the national incidence rate for men infected with syphilis increased from 3.3 cases per 100,000 in 2001 to 9.3 cases per 100,000 in 2012.<sup>16</sup>

Figure 31.

**Primary and Secondary Syphilis Rates by Gender**  
Arkansas, 2008-2012



**RYAN WHITE  
HIV/AIDS CARE ACT  
SPECIAL QUESTIONS AND  
CONSIDERATIONS**

## Question 1

### **What are the patterns of utilization for HIV services of persons in Arkansas?**

This section focuses on client utilization of HIV/AIDS services for Care Planning Groups, specifically, the patterns of use of HIV services in the State of Arkansas. The sources of the information were HRSA-funded programs and supplemental studies conducted to examine specific aspects of HIV care in Arkansas.

#### **HIGHLIGHTS**

- In 2012, a total of 1,730 clients were referred for services funded through the Ryan White Part B award in Arkansas.
- The racial/ethnic distribution of those referred in 2012 was primarily non-Hispanic whites (44.8%), followed by blacks (42.4%), Hispanics (6.5%) and Asian/PI (4.6%).
- Testing delays increase the spread of disease and have a severe impact on the health and welfare of HIV-positive individuals who are unaware of their status.
- The CDC recommends testing everyone between the ages of 13–64 for HIV.

In 2012, 1,730 clients were referred for services funded through the Ryan White Part B award in Arkansas. During 2012, the distribution of Ryan White Part B clients by race/ethnicity and sex was directly proportional to the distribution of characteristics among persons known to be living with HIV/AIDS in Arkansas at the end of 2012 (Table 16). The data indicate congruence between the percentages of persons living with HIV/AIDS and those referred for Ryan White care in Arkansas in 2012 by race and gender.

**Table 16. Characteristics of Ryan White Part B Clients  
and Persons Living with HIV/AIDS  
Arkansas, 2012**

	Ryan White Part B Clients	Persons Living with HIV/AIDS
	(N=1,730)	(N=5,287)
	%	%
<b>Race/Ethnicity</b>		
White, non-Hispanic	44.8	48.0
Black, non-Hispanic	42.4	43.2
Am Ind/AK Nat, non-Hispanic	1.0	0.2
Asian/HI/PI, non-Hispanic	4.6	0.4
Hispanic	6.5	4.9
Other, non-Hispanic	0.0	1.6
Unknown	0.7	1.8
<b>Gender</b>		
Male	75.4	76.4
Female	24.2	23.6
Transgender	0.4	
<b>Age Group</b>		
<13 Yrs	0.2	0.8
13-24 Yrs	7.4	20.8
25-44 Yrs	48.4	62.4
≥45 Yrs	44.0	15.0
Unknown	0.0	1.1

**Data Sources: Ryan White Part B Services Program and Arkansas eHARS  
(enhanced HIV/AIDS Reporting System) Data System**

The table below shows the clients served using Ryan White funds in 2012 (Table 17). The average number of visits per client for non-medical case management services was 15.2. The next service type having the greatest number of clients receiving services was medical case management. In 2012, a total of 1,270 clients received services, averaging 18 services each.

**Table 17. Utilization of Ryan White Part B Services, by Type of Service  
Arkansas, 2012**

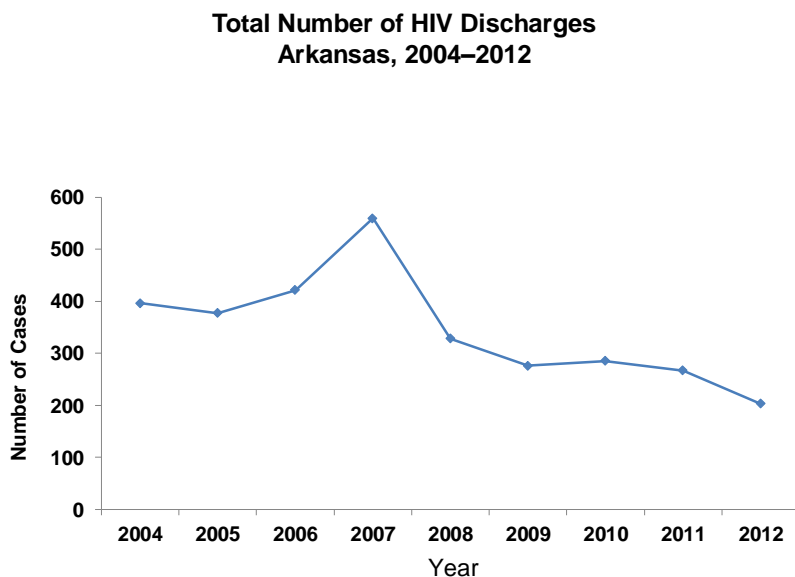
(N=1730)	Case Management	Medical Outpatient/Ambulatory	Health Insurance Continuation	Dental
<b>Clients Receiving Service (#)</b>	1,625	600	185	485
<b>Units of Service Per Client (Avg #)</b>	15.2	3.4	6.3	7.9

**Data Source: Ryan White Part B Services Program**

### Hospital Charges and Length of Stay for Principal Diagnosis – HIV

There were 203 HIV-related hospital stays and 22 stays for other sexually transmitted infections (not including hepatitis) in 2012 in Arkansas. The total number of HIV discharges increased between 2004 and 2007, then steadily declined through 2012 (Figure 32).

Figure 32.

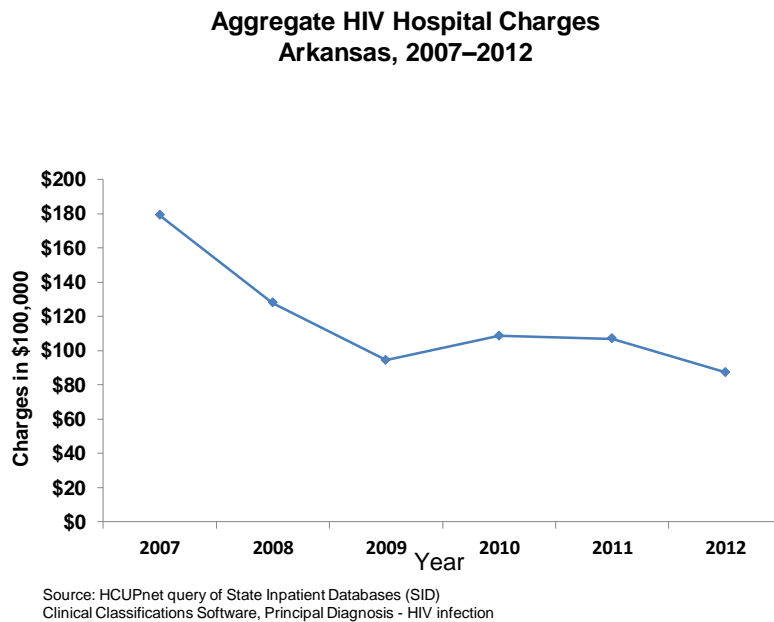


Source: HCUPnet query of State Inpatient Databases (SID)  
Clinical Classifications Software, Principal Diagnosis - HIV infection

In total, Arkansas hospitals charged \$8,736,984 for HIV-related stays and \$778,115 for stays related to other sexually transmitted infections (not including hepatitis) in 2012. Although the aggregate charges for HIV-related stays in Arkansas dropped from 2007 to 2009, then remained stable through 2012 (Figure 33), the average charge for HIV-related stays and for all stays has increased steadily since 2004 (Figure 34).

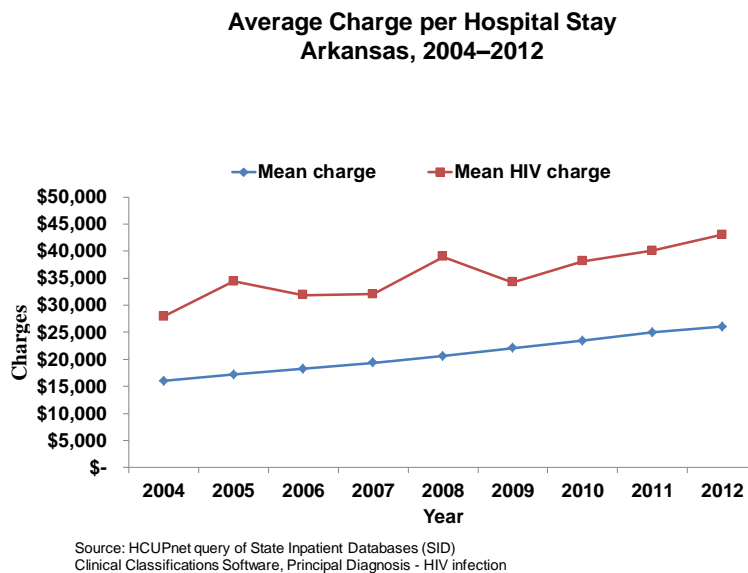


Figure 33.



The mean charge per HIV-related hospital stay was \$43,039; ranking 65<sup>th</sup> among mean charges for 263 principal diagnoses averaging \$185,750 to \$4,204 per stay. The mean charge for other sexually transmitted infections (not including hepatitis) ranked 89<sup>th</sup>, at \$35,369 per stay.

Figure 34.



From 2004 to 2012, the average-length hospital stay for a principal diagnosis of HIV remained stable, at about 7–8 days compared to about 4–5 days for all diagnoses. In 2012, HIV-related hospital stays in Arkansas averaged 7.8 days, ranking 51<sup>st</sup> among 263 principal diagnoses with average stays of 37.8 to 1.4 days. The average hospital stay for other sexually transmitted infections (not including hepatitis) lasted 10.6 days, ranking 32<sup>nd</sup> among all principal diagnoses.

**AIDS Drug Assistance Program (ADAP)**

Since 1987, Congress has appropriated funds to assist states in providing antiretroviral therapy (ART), approved by the Federal Drug Administration (FDA), to AIDS patients. With the initial passage of the Ryan White Comprehensive AIDS Resources Emergency (CARE) Act in 1990, the assistance programs for ART were incorporated into Part B and became commonly known as ADAP. ADAP now provides FDA-approved HIV-related prescription drugs to the underinsured and uninsured persons living with HIV/AIDS. For many people with HIV, access to ADAP serves as a gateway to a broad array of health care and supportive services as well as other sources of coverage, including Medicaid, Medicare part D, and private insurance.

Persons enrolled in ADAP in Arkansas have been able to receive antiretroviral medications and other medications used to treat HIV related illnesses. According to the data collected in CAREWare, 941 clients were served in Arkansas during 2012 (Table 18). Most Arkansas ADAP clients served during this year were male (79.5%) and 25 years of age or older (92.8%). The racial/ethnic distribution of those served in 2012 was predominantly non-Hispanic white (46.1%), non-Hispanic black (38.1%), and Hispanic (8.5%).

**Table 18. Characteristics of Patients Served in the  
AIDS Drug Assistance Program  
Arkansas, 2012**

(N=941)	%
<b>Gender</b>	
<b>Male</b>	79.5
<b>Female</b>	20.1
<b>Transgender</b>	0.4
<b>Race/Ethnicity</b>	
<b>White, non-Hispanic</b>	46.1
<b>Black, non-Hispanic</b>	38.1
<b>Hispanic</b>	8.5
<b>Other, non-Hispanic</b>	7.3
<b>Age Group</b>	
<b>&lt;25 Yrs</b>	7.2
<b>25-44 Yrs</b>	53.8
<b>≥45 Yrs</b>	39.0

Data Source: Arkansas AIDS Drug Assistance Program

## **HIV TESTING DELAYS**

AIDS diagnoses are used by the CDC to compare data nationally. Because there are differences in testing behaviors and treatment outcomes among persons infected with HIV, there are significant variations within the population presenting with AIDS at any given time. With the increased availability of antiretroviral medications, which have often been successful in treating HIV-infected persons, it is important that people be tested early for HIV. Those who are tested early in the course of their infection can benefit from advances in treatment and effective drug combinations. However, a significant number of people are not tested until they are already immunosuppressed, or ill with an opportunistic infection.

According to the CDC, there are approximately 56,000 people diagnosed with HIV annually in the United States. Of the estimated one million persons living with HIV/AIDS in the country, approximately 25% are unaware of their status. The Centers for Disease Control and Prevention reports that this group of status-unaware accounts for approximately 54–70% of new infections in the country annually, compared to the 75% of status-aware, who contribute roughly 30–46% of new HIV infections in the country annually. In light of these facts, it is essential to improve testing initiatives to capture individuals earlier in their infection, to make them aware of their status and the availability of treatment and care. The CDC issued a revised set of recommendations in 2006 to address the late testing issue. The following suggestions were made:

- Routine voluntary HIV screening for all persons ages 13–64 in healthcare settings, not based on risk.
- Repeat screening of high-risk individuals annually.
- Initiate screening in areas of low or unknown prevalence.<sup>17</sup>

Table 19 shows the time between a person's first positive confidential HIV test and AIDS diagnosis, by demographic and risk characteristics in Arkansas. Of the newly diagnosed cases of HIV between 2003 and 2012 that progressed to AIDS within a year of HIV diagnosis, 66% were diagnosed with AIDS within a month of their initial HIV test (aka 'late testers'), indicating a simultaneous diagnoses of HIV and AIDS. This is higher than the national estimate of 40% of newly diagnosed cases having simultaneous diagnoses of HIV and AIDS.

Nationally, men tend to test later in their disease progression than women, and blacks have a tendency to test later in their infection than any other racial/ethnic group.<sup>5</sup> In Arkansas, concurrent diagnosis was most prominent among males, whites, people aged 35 to 44, and MSM.

According to the CDC, approximately one-third of all new diagnoses still occur late.<sup>5</sup> In Arkansas, 22.7% to 29.7% of new HIV/AIDS diagnoses from 2008 to 2012 entered the system at an already immunocompromised state; that is, either received simultaneous diagnoses of HIV and AIDS or progressed to AIDS within a year (Figure 4). Cases entering care at such late time frames tend to have poor treatment outcomes and survival rates. These data should be interpreted cautiously because a person may have been tested earlier, but anonymously.

**Table 19. AIDS Cases by Time between First Positive HIV Test and AIDS Diagnosis  
Arkansas, 2003-2012**

	<b>&lt;= 1 Month (%*)</b>	<b>&lt;= 3 Months (%*)</b>	<b>&lt;= 12 Months (%*)</b>
<b>Gender</b>			
<b>Male</b>	53.1%	16.2%	80.4%
<b>Female</b>	12.7%	67.5%	19.6%
<b>Race/ethnicity</b>			
<b>White, non-Hispanic</b>	31.1%	37.4%	43.9%
<b>Black, non-Hispanic</b>	26.5%	35.2%	43.0%
<b>Hispanic</b>	5.8%	7.4%	8.8%
<b>American Indian/AK Native, non-Hispanic</b>	0.1%	0.3%	0.3%
<b>Asian/HI/PI, non-Hispanic</b>	0.7%	0.8%	0.9%
<b>Multi-race</b>	1.6%	2.6%	3.1%
<b>Age Group</b>			
<b>&lt;13</b>	0.0%	0.0%	0.0%
<b>13-14</b>	0.0%	0.0%	0.0%
<b>15-24</b>	4.2%	6.9%	8.4%
<b>25-34</b>	14.9%	19.0%	24.8%
<b>35-44</b>	22.9%	28.3%	33.8%
<b>45-54</b>	16.3%	20.8%	23.2%
<b>55-64</b>	6.7%	7.7%	8.6%
<b>65+</b>	0.8%	1.0%	1.2%
<b>Exposure Category</b>			
<b>Male Sex w/ Male (MSM)</b>	36.1%	45.8%	54.8%
<b>Injection Drug Use (IDU)</b>	3.8%	5.2%	6.6%
<b>MSM &amp; IDU</b>	2.3%	2.9%	3.6%
<b>High-risk Heterosexual</b>	10.7%	14.3%	17.6%
<b>Transfusion/Hemophiliac</b>	0.0%	0.0%	0.0%
<b>Perinatal Exposure</b>	0.0%	0.0%	0.0%
<b>No Identified Risk</b>	12.8%	15.5%	17.4%
<b>Total Cases</b>	<b>581</b>	<b>740</b>	<b>884</b>
<b>Cumulative Percentage of 12-Month Total</b>	<b>65.7%</b>	<b>83.7%</b>	<b>100.0%</b>

\* Percentage of the total number of cases diagnosed with AIDS within 12 months of their first HIV test.  
Data Source: Arkansas eHARS (enhanced HIV/AIDS Reporting System) retrieved April 24, 2014.

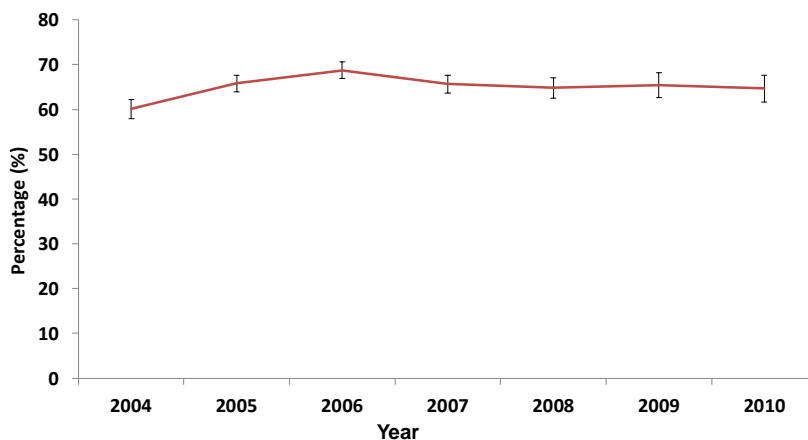
## HIV testing prevalence

HIV testing is necessary to identify who is infected, in order to provide medical care and supportive services. As of 2010, an estimated 15.8% of HIV-positive people were not aware of their HIV status.<sup>18</sup> Earlier diagnosis and linkage to care, otherwise known as “test and treat,” can prevent further transmission of HIV through behavioral change by those who are aware of their HIV status as well as through antiretroviral treatment.<sup>19</sup>

In every year from 2004 to 2010, at least 60% of Arkansans had never been tested for HIV (Figure 35). Results from 2011 and onward are not comparable to those from previous years, because of changes made to the survey methodology in 2011.<sup>20</sup>

Figure 35.

Percentage of Arkansans Never Having been Tested for HIV (ages 18–64)



Source: Behavioral Risk Factor Surveillance System (BRFSS)

In 2012, Arkansas was in the bottom group of states in the percentage of adults who had ever been tested for HIV. At 31.1%, Arkansas lagged behind the national percentage of 37.0%.<sup>21</sup>

## HIV Test during Pregnancy/Delivery

In Arkansas’ Pregnancy Risk Assessment Monitoring System (PRAMS) survey from 2009 to 2011, 4,062 new mothers were asked a series of questions about obtaining the HIV test during their most recent delivery. The first of these questions asked if they were counseled on getting the HIV test. The majority of the 2,591 women who answered yes were white (65.7%), followed by blacks (22.1%), Hispanics (9.6%) and other races (2.5%). Women between 25–34 years of age (48.0%) were the most likely to have received information on getting an HIV test, followed by women 18–24 years of age (45.3%) and those 35 years and over (6.7%).

Women were also asked if they had an HIV test at any time during their pregnancy/delivery; 2,348 answered yes. The percentage of women who received an HIV test (67%) was congruent with the percentage of mothers who were counseled on the HIV test (64%).

Most women who reported receiving the HIV test were white (66.4%). Blacks (23.5%), Hispanics (7.9%), and other races (2.3%) were less likely to have reported receiving an HIV test. The age group

most commonly reporting receiving the HIV test was 25–34 years (48.5%), followed by 18-to-24- year-olds (44.2%) and 35 years or older (7.3%).

The 1,013 women who replied no to receiving an HIV test were asked if they had been offered an HIV test during their most recent pregnancy or delivery. Of the 235 women who responded yes and whose age was known, 56.1% were 25-to-34-year-olds, followed by 18-to-24-year-olds (35.2%) with the remaining 8.7% being 35 and over. Most of the 251 women who reported being offered the test and for whom race/ethnicity was known were white (69.4%), followed by blacks (15.7%), Hispanics (13.2%) and other races (1.6%).

The 275 women who reported being offered an HIV test but did not receive one were asked if they turned down the test. Among the 92 women responding yes, 61.8% were 25–34 year olds, followed by 18–24 year olds (26.5%) and those 35 years and older (11.7%). The majority of new mothers who turned down the HIV test were white (84.2%), followed by black (7.5%), and Hispanic (8.3%).

## Question 2

**What are the number and characteristics of persons who know they are HIV positive but who are not accessing primary medical care?**

The HIV/AIDS Bureau of Health Resources and Services Administration (HRSA) has a guiding principle: that states “to better serve the underserved in response to the HIV/AIDS epidemic’s growing impact among underserved minority and hard to reach populations.” Jurisdictions are charged with assessing the shifting demographics of new HIV/AIDS cases throughout their state. In conjunction with this principle, the Arkansas HIV/AIDS Program is developing methods to better identify persons who know their status but who are not receiving primary medical care.

### **HIGHLIGHTS**

- Total unmet need (People Living with HIV/AIDS in Arkansas and not in care) as of December 31, 2012 2,867.
- Non-Hispanic Whites (48.9%) made up the highest proportion of cases not in care in 2012, when compared to the other major racial/ethnic groups (non-Hispanic Blacks: 42.4% and Hispanics: 5.1%).
- There was a high proportion of cases between the ages of 25–34 that were not in primary care (36.8%) in 2012.
- The Central Region (41.0%) had the highest percentage of cases not in care, followed by the Northwest Region (21.1%).



## **MEASURING UNMET NEED**

Arkansas statutes require that laboratories report all test results indicative of HIV infection in persons residing in Arkansas to the Arkansas Department of Health. Once the test results have been reported to the HIV/AIDS Surveillance Program, the results can be linked to the records in the HIV/AIDS case registry, which includes the known population of persons living with HIV in Arkansas. Consequently, each HIV-infected person can be characterized as “in care” or “not in care” in a specified time period by the presence or the absence of a laboratory test result (e.g., CD4 cell count or measurement of viral load) or presence on the active ADAP drug treatment rolls during that period. This method assumes that laboratory reporting is complete, all HIV-positive persons “in care” will have at least one reportable test result that is reported in Arkansas, and ADAP registration lists are up to date.

The characteristics of persons living with HIV/AIDS in Arkansas and persons “in care” and “not in care” are presented in Table 20. This data refers to cases with a current residence of Arkansas at the time of assessment. The not-in-care population was mostly male (76.9%). Almost half of those not in care were Non-Hispanic white (48.9%), compared to Non-Hispanic black (42.4%) or Hispanic (5.1%). The 25–34 year age group made up 36.8% of cases not in primary care, followed by the 35–44 year age group at 28.8%. The Central Region had the greatest percentage of cases “not in care” in 2012 (41.0%), followed by the Northwest Region (21.1%).

Caution should be noted when reviewing the number of persons not in care.<sup>22</sup> The results are limited to the completeness of reports of CD4 counts/percents and viral loads.

It is also important to note that there are a number of Arkansas HIV/AIDS cases that are currently residing in other states that may be accessing care in other jurisdictions. Arkansas regularly conducts routine case de-duplication with other states in efforts to better track cases. There may be some delays in reporting current residence and lab data for these cases that change locations, thus causing an unintentional error in the calculation of the number of Arkansas cases living with HIV/AIDS that are not in care or are unaccounted for at the time of analysis.

**Table 20. Characteristics of HIV/AIDS Prevalent\* Cases by Care Status  
Arkansas, 2012**

	Not in Care		In Care		HIV/AIDS Prevalence	
	N	%	N	%	N	%
<b>Gender</b>						
Male	2,205	76.9	1,650	75.9	3,855	76.5
Female	662	23.1	524	24.1	1,186	23.5
<b>Age Group</b>						
<13 Yrs	26	0.9	10	0.5	36	0.7
13-14 Yrs	6	0.2	2	0.1	8	0.2
15-24 Yrs	506	17.7	364	16.7	870	17.3
25-34 Yrs	1,055	36.8	688	31.7	1,743	34.6
35-44 Yrs	825	28.8	695	32.0	1,520	30.2
45-54 Yrs	344	12.0	311	14.3	655	13.0
55-64 Yrs	81	2.8	94	4.3	175	3.5
65+ Yrs	23	0.8	10	0.5	33	0.7
Unknown	1	0.0	0	0.0	1	0.0
<b>Race/Ethnicity</b>						
White, non-Hispanic	1,403	48.9	1,054	48.5	2,457	48.7
Black, non-Hispanic	1,215	42.4	951	43.7	2,166	43.0
Am Ind/AK Nat, non-Hispanic	6	0.2	1	0.1	7	0.1
Asian/HI/PI, non-Hispanic	13	0.5	5	0.2	18	0.4
Hispanic	145	5.1	97	4.5	242	4.8
Other, non-Hispanic	32	1.1	51	2.4	83	1.7
Unknown	53	1.9	15	0.7	68	1.4
<b>Exposure Category</b>						
Male Sex w/ Male (MSM)	1,354	47.2	1,214	55.8	2,568	50.9
Injection Drug Use (IDU)	348	12.1	177	8.1	525	10.4
MSM & IDU	162	5.7	91	4.2	253	5.0
High Risk Heterosexual	568	19.8	472	21.7	1,040	20.6
Transfusion/Hemophiliac	15	0.5	4	0.2	19	0.4
Perinatal Exposure	19	0.7	9	0.4	28	0.6
No Identified/Reported Risk	401	14.0	207	9.5	608	12.1
<b>Public Health Region</b>						
Central	1,174	41.0	950	43.7	2,124	42.1
Northeast	373	13.0	324	14.9	697	13.8
Northwest	606	21.1	429	19.7	1,035	20.5
Southeast	390	13.6	285	13.1	675	13.4
Southwest	321	11.2	186	8.6	507	10.1
Unknown	3	0.1	0	0.0	3	0.1
<b>Total</b>	<b>2,867</b>	<b>100.0</b>	<b>2,174</b>	<b>100.0</b>	<b>5,041</b>	<b>100.0</b>

\*HIV/AIDS Prevalence is defined as the number of persons living with HIV/ AIDS during the specified time period.  
Data Source: Arkansas eHARS (enhanced HIV/AIDS Reporting System) Data System; Retrieved April 24, 2014

The Arkansas HIV/AIDS Surveillance Program used the following components in the formula to calculate the unmet need in Arkansas:

## **Data Sources**

Several data sources were utilized based upon access and availability to laboratory data and treatment usage. The first was the enhanced HIV/AIDS Reporting System (eHARS). eHARS is a web-based database that allows for the collection of multiple documents pertaining to cases of HIV and AIDS, such as lab reports, case reports, death certificates, birth certificates, etc. The second was the CAREWare database used by the Ryan White Part B Program. CAREWare contains information pertaining to clients that are accessing care services and receiving assistance for antiretroviral drugs for treatment of HIV/AIDS supported by Ryan White funds.

## **Estimation Methods**

The process for updating the unmet need estimate began by determining the number of PLWHA as of December 31, 2012 from the enhanced HIV/AIDS Reporting System (eHARS). Once that information was established, then this information was analyzed for those individuals who had a viral load test or CD4 test obtained in CY 2013. Those persons that had a viral load or CD4 lab were considered to have a “met need.” To retrieve any potentially missed lab records, the surveillance epidemiologist matched the remaining names to the electronic laboratory files received in the NEDSS System handled by the Epidemiology Branch. Next, the names of the PLWHA were matched with the names of persons receiving at least one AIDS Drug Assistance Program (ADAP) service from January 1, 2013 to December 31, 2013. Those that had received an ADAP service were considered to have a “met need.”

”Met need” was defined as any living case of HIV/AIDS in Arkansas as of December 31, 2012, having a laboratory result (CD4 count/percent or viral load) or current on ADAP roles during a 12-month time frame between January 1, 2013 through December 31, 2013 in eHARS, NEDSS or CAREWare.

“Unmet need” was determined by estimating the number of living cases of HIV/AIDS in eHARS that were diagnosed prior to January 1, 2012, and did not have any current laboratory tests (CD4 or viral loads) or were not listed on ADAP roles for antiretroviral treatments between January 1, 2013 and December 31, 2013.

## **Limitations**

There are limitations to the unmet need estimation. This method assumes that laboratory reporting is complete and that all HIV-positive persons in care will have at least one test (CD4 count/percent or viral load) result that is reported to the HIV Surveillance program during the time frame specified. It should also be noted that the antiretroviral treatment rolls are limited in that they only contain information pertaining to cases that are currently enrolled in and receiving Ryan White Care. The data estimation is also dependent upon timely and accurate reporting of deaths among cases in Arkansas. If a person died prior to December 31, 2012, and the HIV Surveillance Program was not notified, that person would be counted in this estimate. The Arkansas HIV Surveillance Program conducts annual matches with its Vital Statistics Program to gain the most current death information on HIV/AIDS cases in Arkansas. In addition, persons who move out of state will automatically be counted among those listed as “unmet need” if the HIV Surveillance Program is not notified of changes in residency status or retention in care. The Arkansas HIV Surveillance Program does, however, participate in Routine Interstate Duplicate Review (RIDR), where Arkansas collaborates with other states to assess and resolve potential duplicate reports of cases between the states.

## GLOSSARY OF TERMS AND ACRONYMS

ADAP	AIDS Drug Assistance Program
ADH	Arkansas Department of Health
AIDS	Acquired Immune Deficiency Syndrome
BRFSS	Behavioral Risk Factor Surveillance System
CAREWare	The Ryan White Program data base containing information pertaining to cases accessing care services and receiving assistance for antiretroviral drugs for treatment of HIV/AIDS infections supported by Ryan White funds
CDC	Centers for Disease Control and Prevention
eHARS	enhanced HIV/AIDS Reporting System
HAART	Highly Active Antiretroviral Therapy
HIV	Human Immunodeficiency Virus
HRSA	Health Resources and Services Administration
IDU	Intravenous (Injection) Drug Use; illegal drugs administered into the body with a needle
Incidence	Number of new cases of a disease divided by the population at that specific time
MSM	Men who have sex with men (or male-to-male sexual contact)
MSM/IDU	Men who have sex with men and engage in Intravenous (Injection) Drug Use
NIR	No Identified Risk
NRR	No Risk Reported
PLWA	Persons Living With AIDS
PLWH	Persons Living With HIV
PLWHA	Persons Living With HIV/AIDS
PRAMS	Pregnancy Risk Assessment Monitoring System
Prevalence	Number of living cases of HIV or AIDS divided by the population at that specific time
Rate	The proportion of people with a disease in a specific population, over a specific time period
Risk factor	An aspect of personal behavior and environmental exposure, or an inborn or inherited characteristic that is associated with an increased occurrence of disease
STD	Sexually Transmitted Disease
Surveillance	The ongoing, systematic observation of a population for rapid and accurate detection of the occurrence of diseases
TGA	Transitional Grant Area
Unmet Need	The need for HIV-related health services by individuals with HIV who are aware of their status, but are not receiving regular primary health care

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## OUTCOMES OF SURVEILLANCE

Type of Data	Definition	How Data is Used
<b>Reported HIV/AIDS Diagnosis</b>	The number of cases reported in a specific population during a specific time period	Useful for understanding reporting changes in an area
<b>HIV/AIDS Prevalence Rate</b>	The HIV/AIDS prevalence for a specific population divided by the number of people in the population	Prevalence rates can better highlight health disparities than number of cases
<b>HIV/AIDS Incidence Rate</b>	The HIV incidence for a specific population divided by the number of people in that population	Incidence rates reflect rates of new infection within a population, and can highlight health disparities
<b>Estimated HIV/AIDS Diagnoses</b>	The number of cases estimated to be diagnosed in a specific population during a specific time period	Serves as a marker of new infections in areas without incidence surveillance
<b>HIV/AIDS Prevalence Estimate</b>	The number of people estimated to be living with HIV/AIDS in a specific area at a specific point in time	Planning and resource allocation, monitoring trends and discrepancies between groups
<b>HIV Incidence Estimate</b>	The number of people estimated to be newly infected with HIV in a specific area during a specific time period	Planning and allocating funds, as well as evaluating the success of prevention programs