

HIV Integrated Epidemiological Profile, 2011

State of Alabama

Alabama Department of Public Health
Division of HIV/AIDS Prevention and Control

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EXECUTIVE SUMMARY

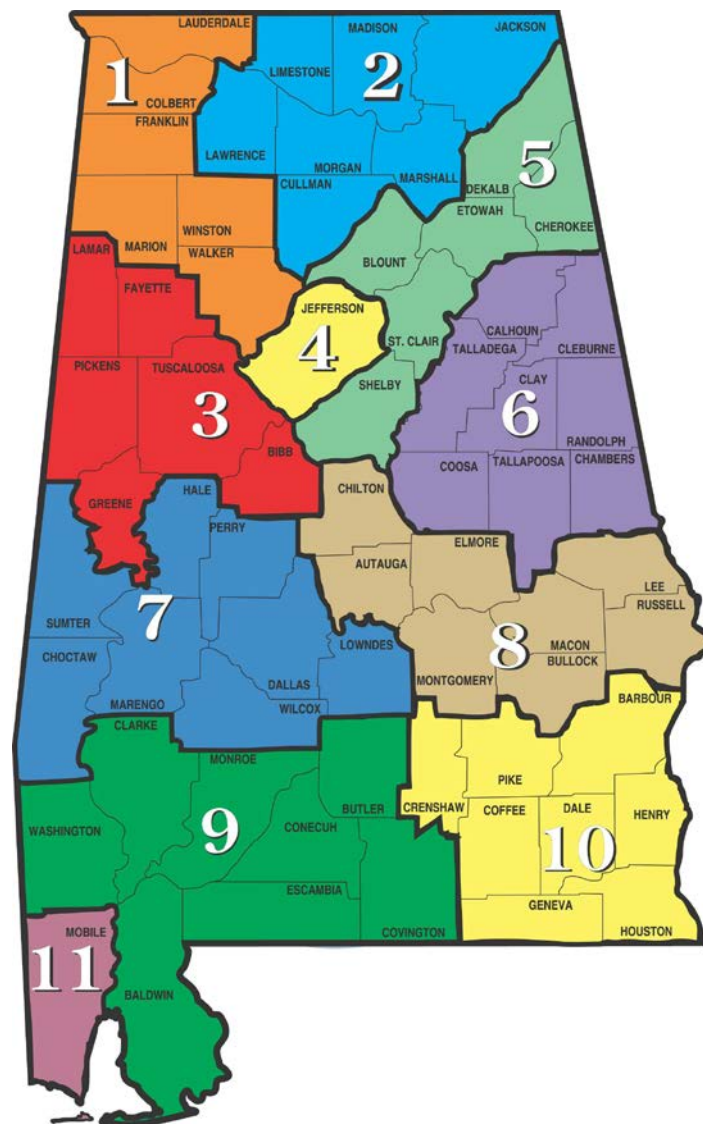
One point two million (1,200,000) people in the United States are living with HIV infection. The Centers for Disease Control and Prevention (CDC) estimate that 18% of these people are unaware of their infection. Between 1982 and 2011, a total of 17,227 cases of HIV infection were reported to the Alabama Department of Public Health (ADPH). At the end of 2011, 66% (11,403) were known to be living. An additional 3,000 Alabama residents are likely infected and unaware of their positive HIV status. During 2011, 707 newly diagnosed HIV infections were reported in Alabama. The HIV epidemic in Alabama is classified as one of moderate magnitude when compared to the experience of other states.

Following the 2010 decennial census, the United States Census Bureau reported 4,779,736 persons reside in Alabama. The majority of residents (62%) were between the ages of 18 and 54 years, 24% were younger than 18 years, and 14% were 65 or older (median age = 37.8). The largest number of newly diagnosed HIV infections in Alabama occurred among teenagers and young adults aged 13 to 34 years during 2011, with 58% of new diagnoses occurring in this age group. In contrast, the majority of persons living with HIV infection (i.e., prevalent cases) were 35 years or older during 2011 (78% of prevalent cases are ≥35 years). Males accounted for three-quarters (76%) of newly diagnosed cases in 2011, with African American males representing about half (49%) of all new HIV infections. White males represented another 21% of 2011 newly diagnosed HIV infections; African American females followed closely representing 19%.

New infections are disproportionately occurring in Alabama's African American population. Although African Americans comprised only 26% of the state's population in 2011, they represented 68% of newly diagnosed HIV infections. The rate of HIV diagnosed among African Americans (38.0 per 100,000) was more than seven times higher than among Whites (5.3 per 100,000). The rate of newly diagnosed HIV infections in African American males (59.0 per 100,000) was more than six times higher than White males (9.0 per 100,000). Sixty-five percent of males diagnosed with HIV in 2011 were African American. A similar trend was seen among females, with 77% of new diagnoses in females occurring in African Americans. The rate of newly diagnosed HIV infections in African American females (19.7 per 100,000) was 12 times higher than White females (1.7 per 100,000) and twice the rate among White males.

Alabama's population can be divided into 3 geographical groupings: major urban centers (>200,000 population), minor urban centers (100,000-200,000 population), and rural areas (<100,000 population). Major urban centers include Jefferson, Madison, Mobile, and Montgomery Counties. In 2010, these major urban centers represented 34% (1,635,632) of the state's total population and 61% (10,597) of cumulative HIV cases reported to ADPH. Minor urban centers include eight counties and comprised 24% (1,156,292) of the state's population and 14% (2437) of cumulative HIV cases. Rural areas accounted for 25% (4256) of cumulative HIV cases. Alabama is considered primarily rural with 55 of the 67 counties located outside of the state's major and minor urban population centers (Figure 1).

Figure 1. Alabama Public Health Area Map



Source: Alabama Department of Public Health

Following the 2010 census, Alabama ranked 42nd nationally in per capita income with 23% of the population living in poverty. Alabama's agricultural Black Belt region (Bullock, Butler, Choctaw, Crenshaw, Dallas, Greene, Hale, Lowndes, Macon, Marengo, Perry, Pickens, Sumter, and Wilcox counties) has the highest poverty and unemployment rates in the state. Strikingly, the region also encounters disproportionately high rates of HIV infection. Though only representing 5% of Alabama's total population, the rate of newly diagnosed HIV infections in the Black Belt region was 17.2 per 100,000 residents in 2011. Statewide, the rate of new diagnoses per 100,000 persons was highest in Lowndes (53.1), Hale (44.4), Chambers (32.1), Montgomery (32.1), and Jefferson (31.7) counties.

HIV clinics and service organizations apply to ADPH for Ryan White funding to provide defined core service priorities and support services, with appropriate justification based on United States Health

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Resources and Services Administration (HRSA) guidelines. Funding decisions are made using a formula based on Alabama's current service utilization, unmet need, and data provided in the HIV Integrated Epidemiologic Profile. Social workers, case managers and clinicians employed in Ryan White funded HIV clinics and service organizations are responsible for coordinating direct care and service delivery. The majority of HIV care providers and services are located in Alabama's major urban centers. However, alternate care and services are offered at satellite clinics located in many rural areas across the state.

People living with HIV infection are experiencing increased longevity due primarily to positive HIV and AIDS treatment outcomes. As of December 2010, Alabama's AIDS Drug Assistance Program (ADAP) offers medication services with an enrollment cap of 1700; restrictions apply, and a waiting list is currently enforced. The ADAP formulary offers 72 medications, and includes at least one drug from each class of HIV medications. In addition, medications to treat opportunistic infections are available through ADAP. Average enrollment in fiscal year 2011 exceeded the 1700 enrollment cap at 1758 enrollees, with an average medication pick-up rate of approximately 85%. Alabama's public health care system and resources are significantly stressed as the care and service needs of people living with HIV infection in Alabama's urban and rural areas continues to increase.

The HIV epidemic affects persons in all gender, age, race, ethnicity, and socioeconomic groups in every county in Alabama. However, the effect has not been the same for all groups. Recent trends suggest a shift in the HIV epidemic toward African Americans and high-risk heterosexual activity. With the number of deaths among people diagnosed with HIV continuing to decline and the number of people living with HIV continuing to increase, the importance of identifying populations most affected and at risk for HIV infection is paramount. Alabama must be diligent in planning effective HIV prevention and care efforts with the allocation of limited resources.

INTRODUCTION

The HIV Integrated Epidemiologic Profile provides information about the current HIV epidemic in Alabama. This profile describes the socio-demographic, economic, and geographic characteristics of people living with HIV and at risk for HIV infection in Alabama. The profile is a resource for guiding prevention and intervention strategies as well as service delivery efforts. The profile is also utilized to justify and obtain funding for the implementation of prevention and service programs and to improve and evaluate HIV-related programs and policies in Alabama.

The profile is divided into five key sections:

- I. SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE GENERAL POPULATION
- II. SCOPE OF THE HIV EPIDEMIC
- III. INDICATORS OF RISK FOR HIV INFECTION
- IV. PATTERNS OF UTILIZATION OF HIV SERVICES
- V. CHARACTERISTICS OF HIV POSITIVE PERSONS WHO ARE NOT IN CARE

I. SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE GENERAL POPULATION

A. HIGHLIGHTS

Population

The U.S. Census Bureau reported 4,779,736 persons resided in Alabama in 2010. Alabama is composed of 67 counties, ranging in population from (Greene County) 9,045 to 658,466 (Jefferson County). Alabama is considered largely rural with 55 of 67 counties having a population < 100,000. However, Alabama does have four major urban centers located in Jefferson, Madison, Montgomery and Mobile Counties and one large metropolitan statistical area that represents 24% (1,128,047) of Alabama's total population and includes seven adjacent counties (Bibb, Blount, Chilton, Jefferson, St. Clair, Shelby and Walker Counties).

Public Health Structure

Alabama is divided into eleven geographically distinct public health areas (PHAs) with the two most populous counties representing single PHAs (Figure 1). The remaining PHAs encompass six to eight counties each. Seven of Alabama's 19 Black Belt counties comprise PHA 7. Each area has authority to provide core public health services to the community including HIV counseling and testing, sexually transmitted disease (STD) screening and treatment, maternal and child health, vaccine preventable immunizations, family planning, home health services, and adult health clinics.

Demographic Composition

The 2010 U.S. Census Bureau reports 70% of Alabama residents are White, not Hispanic (Table 1). Non-Hispanic African Americans compose about one-quarter (26%) of the population in Alabama. The remainder of the population identified themselves as Hispanic (2%), Asian (1%), or Native American (<1%). The racial and ethnic distribution is the same when assessed by gender.

Table 1. Population Distribution by Race/Ethnicity and Sex, Alabama 2010

Race/Ethnicity	Males		Females		Total Population	
	N=2,323,317	%	N=2,461,981	%	N=4,785,298	%
White, not Hispanic	1656912	71.3%	1707553	69.4%	3364465	70.3%
African American, not Hispanic	588483	25.3%	673858	27.4%	1262341	26.4%
Hispanic	34703	1.5%	35271	1.4%	69974	1.5%
Native American	16854	0.7%	16154	0.7%	33008	0.7%
Asian	26365	1.1%	29145	1.2%	55510	1.2%

Source: 2010 United States Census Bureau.

Note: Percentages may not sum 100% due to rounding.

Approximately one-half (53%) of Alabama residents are between the ages of 25 and 64 years (Table 2). Twenty-six percent are 25 to 44 years and 27% are 45 to 64 years. One-third of residents (34%) are younger than 25 years with 15 to 24 year olds representing 15%, 5 to 14 years old representing 14%, and children less than 5 years old representing 7%. The remainder of Alabama residents is age 65 years or older (14%). The female to male ratio in Alabama is 1:1.

Table 2. Population Distribution by Age Group and Sex, Alabama 2010

Age Group (years)	Males		Females		Total Population	
	N=2,320,188	%	N=2,461,981	%	N=4,785,298	%
<5	155196	6.7%	149644	6.1%	304840	6.4%
5-14	320516	13.8%	306923	12.5%	627439	13.1%
15-24	342342	14.8%	335763	13.6%	678105	14.2%
25-44	604687	26.1%	624560	25.4%	1229247	25.7%
45-64	620967	26.8%	664878	27.0%	1285845	26.9%
≥65	279609	12.1%	380213	15.4%	659822	13.8%

Source: 2010 United States Census Bureau.

Note: Percentages may not sum 100% due to rounding.

Poverty, Income, and Education

According to the 2010 U.S. Census Bureau, Alabama is the tenth most poverty stricken state in the nation. Seventeen percent of individuals residing in Alabama live below the federal poverty level (Table 3). Another 15% of all families and 45% of families with a female head of household and no husband present have incomes below the poverty level. One-quarter (25%) of children less than 18 years, 16% of adults aged 18 to 64 years, and 10% of the elderly aged 65 years and older live below the federal poverty level. Average personal income in Alabama is \$22,984 and the median household income is \$42,081.

Table 3. Socioeconomic Characteristics of Population, Alabama and United States 2010

Characteristic	Alabama	United States
Income		
Average Per Capita Income	\$22,984	\$27,334
Median Household Income	\$42,081	\$51,914
Federal Poverty Level		
Individuals	17.3%	15.1%
Families	15.4%	11.7%
Female HOH†, no husband present	45.1%	42.2%
Federal Poverty Level by Age Group (years)		
<18	24.8%	22.0%
18-64	15.9%	13.7%
≥65	10.3%	9.0%

Source: 2010 Current Population Survey, United States Census Bureau.

Note: Percentages may not sum 100% due to rounding. †HOH – Head of Household

The most common level of education attained in Alabama among people aged 25 years and older is a high school diploma or its equivalent (30%), according to 2010 U.S. Census reports (Table 4). While 21% of Alabama residents age 25 years and older report some college experience, only 19% successfully obtain a bachelor's degree or higher. One-quarter (25%) of residents age 25 years and older fail to graduate high school with 6% reporting less than a ninth grade education. Assessing Alabama's four most populous counties (Jefferson, Madison, Mobile, and Montgomery Counties), with populations ranging from 229,363 in Montgomery County to 658,466 in Jefferson County, shows roughly the same education distribution.

Table 4. Educational Attainment (Age ≥25 Years) for Counties of >200,000 Population, Alabama 2010

Education	Jefferson N=658,466	Madison N=334,811	Mobile N=412,992	Montgomery N=229,363	Alabama N=4,779,736
High School Diploma or Equivalent	28.1%	22.2%	34.3%	27.5%	30.4%
Some College	22.7%	21.5%	20.9%	21.1%	20.5%
Associate’s Degree	7.0%	6.7%	7.3%	5.5%	5.4%
Bachelor’s Degree	18.1%	23.9%	13.1%	18.2%	12.2%
Graduate or Professional Degree	10.7%	13.5%	6.7%	12.3%	6.9%

Source: 2010 Site and County Quick facts for Alabama, United States Census Bureau.

Note: Percentages may not sum 100% due to rounding.

B. DEMOGRAPHICS

The 2010 U.S. Census Bureau reports the population of Alabama is 4,779,736 persons (Table 2). The female to male ratio is 1:1 and the majority of the population between 25 and 64 years old (53%). The proportion of women age 65 years or older was significantly higher than that of their male counterparts (58% to 42%, respectively). The 2000 U.S. Census expanded the collection of race and ethnicity information to allow persons the opportunity to report belonging to more than one race, as well as to report Hispanic ethnicity. Despite this expansion, 70% of Alabama’s population reported themselves as White, not Hispanic during the 2010 U.S. Census (Table 1). African Americans comprised 26% of the population while Hispanics, Native Americans, and Asians constituting 3% of the total population.

Alabama is divided into eleven PHAs for the purpose of public health planning and disease intervention (Figure 1). PHA 2 has the largest combined population with 798,074 residents while PHA 4 (Jefferson County) has the second largest population with 658,466 residents (Table 5). PHA 7 has the smallest population with only 141,789 residents and is part of the agricultural Black Belt region. PHA 7 has the lowest percentage of White residents (34%) and the highest percentage of African American residents (51%) in Alabama. Statewide, the number of persons reported as White ranges from 34% in PHA 7 to 86% in PHA 1. Alabama’s African American population ranges from only 8% in PHA 1 to 51%, in PHA 7. Hispanics comprise between 4% Alabama’s population (range 1% in PHA 7 – 6% in PHA 5).

Table 5. Population Distribution by Race/Ethnicity and Public Health Area, Alabama 2010

PHA†	White	%	Black	%	Hispanic	%	Other	%	Total	%
PHA 1	260144	86.4	24281	8.1	10463	3.5	6236	2.1	301124	6.3
PHA 2	606127	75.9	111824	14.0	45756	5.7	34367	4.3	798074	16.7
PHA 3	183765	66.1	81536	29.3	7121	2.6	5745	2.1	278167	5.8
PHA 4	340213	51.7	275511	41.8	25488	3.9	17254	2.6	658466	13.8
PHA 5	444985	82.8	46379	8.6	31366	5.8	14798	2.8	537528	11.2
PHA 6	239121	70.3	48085	14.1	8727	2.6	7114	2.1	340050	7.1
PHA 7	48593	34.3	71934	50.7	1233	0.9	1326	0.9	141789	3.0
PHA 8	356247	56.3	86522	13.7	22699	3.6	20118	3.2	632440	13.2
PHA 9	263566	73.4	60262	16.8	10187	2.8	11050	3.1	359006	7.5
PHA 10	217737	68.0	41302	12.9	12626	3.9	10407	3.3	320100	6.7
PHA 11	243904	59.1	142272	34.4	9936	2.4	16880	4.1	412992	8.6
Total	3204402	67.0	989908	20.7	185602	3.9	145295	3.0	4779736	100

Source: 2011 Auburn University at Montgomery Center for Demographic Research.

Note: Percentages may not sum 100% due to rounding. †PHA-Public Health Area

According to 2010 U.S. Census statistics, the distribution of race/ethnicity varies in Alabama's four major urban centers, defined as counties with populations >200,000 (Table 6). In Madison County, 66% of the population reported themselves as White, not Hispanic, compared with 59% in Mobile County, 52% in Jefferson County, and 38% in Montgomery County. Montgomery County reports the highest percent of African American, not Hispanics (55%), followed by Jefferson County (42%), Mobile County (35%), and Madison County (24%). Madison County reports the highest Hispanic population (5%).

Table 6. Population Distribution by Race/Ethnicity for Counties of >200,000 Population, Alabama 2010

Race/Ethnicity	Jefferson N=658,466	Madison N=334,811	Mobile N=412,992	Montgomery N=229,363	Alabama N=4,779,736
White, not Hispanic	51.7%	66.1%	59.1%	38.4%	67.0%
Black, not Hispanic	41.8%	23.8%	34.5%	54.5%	20.7%
Hispanic	3.9%	4.6%	2.4%	3.6%	3.9%
Other	1.7%	5.5%	4.1%	3.5%	3.0%

Source: 2011 Auburn University at Montgomery Center for Demographic Research.

Note: Percentages may not sum 100% due to rounding.

C. SOCIOECONOMIC STATUS

Alabama is the tenth most poverty stricken state in the nation with 17% of Alabama residents living below the federal poverty level (Table 3). In 2008, the rate of Alabamians living below poverty level decreased with age, with the highest proportion of persons living below the poverty level being less than 25 years old and the lowest proportion being 65 or older (Table 7). Analyses of Alabama's four most populous counties mirror this trend with Mobile and Montgomery Counties displaying the highest poverty rates in persons less than 25 years. In each of the four most populous counties and statewide, more women than men live below federal poverty level in all age groups.

Table 7. Rate of People Living Below Poverty Level by Age Group and Sex for Counties of >200,000 Population, Alabama 2008

Age Group (years)	Jefferson		Madison		Mobile		Montgomery		Alabama	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
<25	6.6	6.4	6.4	5.3	8.7	10.4	8.7	10.0	7.4	7.7
25-44	2.0	3.7	2.3	2.4	3.4	5.4	1.9	4.3	2.8	4.3
45-64	2.3	2.9	1.2	1.8	2.8	3.8	2.7	3.6	2.4	3.3
≥65	0.8	1.8	0.2	1.1	0.9	1.9	0.9	2.1	0.9	2.3

Source: 2008 American Community Survey Estimates, United States Census Bureau.

Note: Rate per 100,000 persons.

A 2008 population survey found 18% of males and 16% of females aged 19-24 years in Alabama do not have health insurance coverage (Table 8). Of those insured, two-thirds (66% of men and 68% of women) receive health insurance coverage through their employer. Four percent of men and women purchase individual health insurance plans while 8% of men and women are insured by Medicaid and Medicare. Another 4% of men and women receive other public health insurance. State percentages of health insurance coverage status were similar to the national average.

Table 8. Distribution of Adults (Aged 19-24 years) by Health Insurance Coverage and Sex, Alabama 2007-2008, United States 2008

Health Insurance Coverage	Alabama		United States	
	Males	Females	Males	Females
Employer	66.1%	67.9%	61.4%	62.6%
Individual	4.1%	4.1%	5.6%	5.9%
Medicaid/Medicare	7.5%	8.4%	6.9%	10.2%
Other Public	4.3%	3.5%	3.2%	3.2%
Uninsured	18.1%	16.1%	22.9%	18.1%

Source: Kaiser Family Foundation, 2008.

Note: Percentages may not sum 100% due to rounding.

Forty-nine percent of Alabama children aged 0-18 years were covered under their parent or guardian's employer health insurance (Table 9). Another 39% of children aged 0-18 years were insured via Medicaid and 9% of children in Alabama were uninsured.

Table 9. Distribution of Children (Aged 0-18 years) by Health Insurance Coverage, Alabama 2007-2008, United States 2008

Health Insurance Coverage	Alabama	United States
Employer	49%	50%
Individual	NSD†	4%
Medicaid	39%	34%
Other Public	NSD†	2%
Uninsured	9%	10%

Source: Kaiser Family Foundation, 2010.

Note: Percentages may not sum 100% due to rounding. †NSD – No Statistical Data

II. SCOPE OF THE HIV EPIDEMIC

A. HIGHLIGHTS

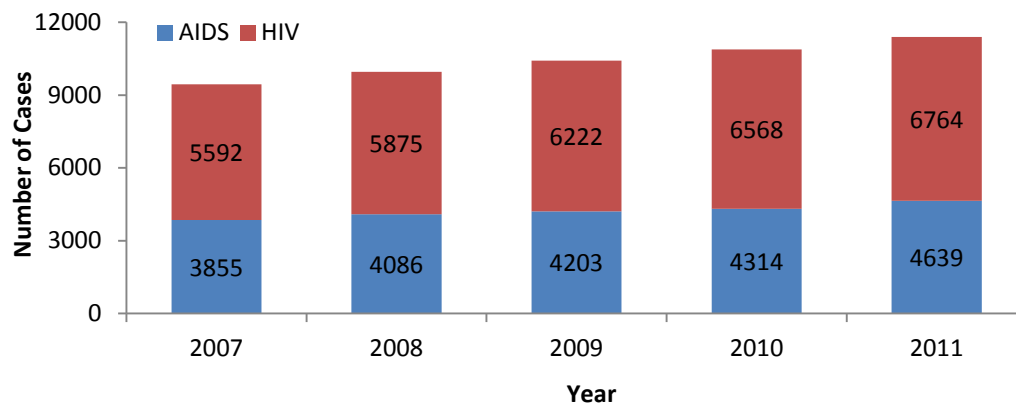
The HIV epidemic affects persons in all gender, age, race, ethnicity, and socioeconomic groups and in every county in Alabama. However, the effect has not been the same for all groups. At the beginning of the epidemic, the majority of HIV infections occurred in White men who have sex with men (MSM). Recent trends suggest a shift in the HIV epidemic toward African Americans and high-risk heterosexual activity. With the number of deaths among people diagnosed with HIV continuing to decline and the number of people living with HIV continuing to increase, the importance of identifying populations most affected and at risk for HIV infection is paramount. Alabama must be diligent in planning effective HIV prevention and care efforts with the allocation of limited resources. This section provides detailed information about demographics, risk characteristics, and trends of HIV infections diagnosed among Alabama residents diagnosed through 2011.

B. OVERALL HIV TRENDS

The state of Alabama continues to experience an HIV epidemic of moderate magnitude when contrasted to the experience of other states. From 1982 through December 31, 2011, ADPH received a cumulative total of 17,227 HIV case reports among Alabama residents since reporting began. During 2011, 707 newly diagnosed HIV infections were reported among Alabama residents.

The proportion of persons living with HIV infection increased 21% between 2007 and 2011 (Figure 2). This trend is largely due to the introduction of effective drug treatment and therapies, which can often delay the progression from HIV to AIDS and from AIDS to death. A total of 11,403 persons diagnosed with HIV in Alabama were known to be living at the end of 2011, and 4,639 (41%) of these individuals have progressed to AIDS. This number represents a minimum estimate because it does not include HIV infected persons who have not been tested or account for reporting delays. An additional 3,000 Alabama residents are likely infected and unaware of their status.

Figure 2. Persons Living with HIV and AIDS (PLWHA[†]), Alabama 2007-2011



Source: Alabama Department of Public Health, Division of HIV/AIDS Prevention and Control.

† PLWHA include persons living as of December 31, 2011.

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The majority of the newly diagnosed HIV infections in 2011 (58%) occurred in teenagers and young adults aged 13 to 34 years old (Table 10). Twenty-nine percent were diagnosed among 13 to 24 year olds and 30% were diagnosed among 25 to 34 year olds. Another 18% were diagnosed in adults between 35 and 44 years old. The majority of persons living with HIV (i.e., prevalent cases) were age 50 or older (35%) while another 25% were 35 and 44 years old and 18% were 45 to 49 years old. The HIV population is aging as a result of effective use of drug treatment and therapies. This will eventually impact the State of Alabama's ability to provide adequate medical and social services (i.e. Ryan White and Medicare) for the aging HIV population. This is a major concern not only in Alabama, but also for all states.

Table 10. Characteristics of Newly Diagnosed and Prevalent HIV Cases, Alabama 2011

Characteristic	Newly Diagnosed Cases (N=707), Number (%)	Prevalent Cases (N=11,403), Number (%)
Gender		
Male	534 (75.5)	8115 (71.6)
Female	173 (24.5)	3227 (28.5)
Race/Ethnicity		
White, Not Hispanic	178 (25.2)	3408 (30.1)
Black, Not Hispanic	480 (67.9)	7389 (65.2)
Hispanic	16 (2.3)	244 (2.2)
Other/Unknown	33 (4.7)	301 (2.7)
Age Group (years)*		
0-12	6 (0.9)	88 (0.8)
13-24	202 (28.6)	521 (4.6)
25-34	211 (29.8)	1926 (16.9)
35-44	124 (17.5)	2860 (25.1)
45-49	70 (9.9)	2010 (17.6)
≥ 50	94 (13.3)	3998 (35.1)
Public Health Area (PHA)		
PHA 1	12 (1.7)	192 (1.9)
PHA 2	68 (9.6)	933 (9.0)
PHA 3	32 (4.5)	411 (4.0)
PHA 4	209 (29.6)	2946 (28.5)
PHA 5	35 (5.0)	392 (3.8)
PHA 6	36 (5.1)	466 (4.5)
PHA 7	30 (4.2)	313 (3.0)
PHA 8	120 (17.0)	1937 (18.8)
PHA 9	34 (4.8)	457 (4.4)
PHA 10	33 (4.7)	622 (6.0)
PHA 11	95 (13.4)	1602 (15.5)
Other/Unknown	3 (0.4)	50 (0.5)

Source: Alabama Department of Public Health, Division of HIV/AIDS Prevention and Control.

Note: Prevalent age group represents current age. Percentages may not sum 100% due to rounding.

African Americans continue to be disproportionately affected by HIV. Although only 26% of the state's population is African American, 68% of newly diagnosed HIV cases and 65% of all persons living with HIV were African American during 2011 (Table 10). Only 25% of newly diagnosed cases and 30% of all persons living with HIV were White during 2011, despite White comprising 70% of Alabama's population.

Alabama’s population can be divided into 3 geographical groupings: major urban centers (>200,000 population), minor urban centers (100,000-200,000 population), and rural areas (<100,000 population). In 2011, major urban centers represented 34% (1,635,632) of the state’s total population and 61% (428) of newly diagnosed HIV cases (Table 11). Jefferson County accounted for 30% of all newly diagnosed HIV cases in 2011. Minor urban centers comprised 24% (1,156,292) of the population and 17% (117) of newly diagnosed HIV cases while rural areas represented 42% (1,987,792) of the population and 23% (162) of newly diagnosed HIV cases.

Table 11. Newly Diagnosed HIV Cases by Geographic Population Density, Alabama 2011

	Newly Diagnosed HIV Cases (N=707),		Total Population (N=4,779,736)	
	Number (%)		Number (%)	
Major Urban Centers†				
Jefferson County	209	(29.6)	658466	(13.8)
Madison County	44	(6.2)	334811	(7.0)
Mobile County	95	(13.4)	412992	(8.6)
Montgomery County	80	(11.3)	229363	(4.8)
Minor Urban Centers‡				
Baldwin County	20	(2.8)	182265	(3.8)
Calhoun County	12	(1.7)	118572	(2.5)
Etowah County	12	(1.7)	104430	(2.2)
Houston County	11	(1.6)	101547	(2.1)
Lee County	17	(2.4)	140247	(2.9)
Morgan County	10	(1.4)	119490	(3.1)
Shelby County	9	(1.3)	195085	(4.1)
Tuscaloosa County	26	(3.7)	194656	(4.1)
Rural Areas*	162	(22.9)	1987812	(41.6)

Source: Alabama Department of Public Health, Division of HIV/AIDS Prevention and Control.

Note: Percentages may not sum 100% due to rounding. † Major urban centers represent counties with >200,000 population. ‡ Minor urban centers represent counties with between 100,000-200,000 population. * Rural areas represent counties with < 100,000 population.

Jefferson, Mobile, Montgomery, and Madison Counties have consistently reported the highest number of new HIV cases each year from 2007– 2011, accounting for over half of HIV infections diagnosed in Alabama each year (Table 12). Jefferson County reports approximately 27% of newly diagnosed HIV infections every year.

Table 12. Counties with Highest Frequency of Newly Diagnosed HIV Cases, Alabama 2007 – 2011

County	2007		2008		2009		2010		2011	
	No. (%)	Rate	No. (%)	Rate	No. (%)	Rate	No. (%)	Rate	No. (%)	Rate
Jefferson	154 (23.3)	23.4	187 (26.2)	28.6	193 (27.8)	29.3	194 (28.0)	29.5	209 (29.6)	31.7
Madison	41 (6.2)	12.2	48 (6.7)	14.3	38 (5.5)	11.3	35 (5.1)	10.5	44 (6.2)	13.4
Mobile	125 (18.9)	23.4	100 (14.3)	24.2	109 (15.7)	26.6	92 (13.3)	22.3	95 (13.4)	23.0
Montgomery	85 (12.9)	37.1	90 (12.6)	40.1	84 (12.1)	36.6	76 (11.0)	33.1	80 (11.3)	34.9
Statewide	660 (100)	13.8	713 (100)	14.9	694 (100)	14.5	692 (100)	14.5	707 (100)	14.8

Source: Alabama Department of Public Health, Division of HIV/AIDS Prevention and Control.

Note: Percentages may not sum 100% due to rounding. All rates are per 100,000 county population, calculated using the 2010 United States Census report.

However, the rate of new HIV cases among Alabama counties varies from year to year. Montgomery County has consistently ranked among the top 5 Alabama counties with the highest rate of HIV

diagnosed each year from 2007– 2011 (Table 13). Greene, Hale, and Lowndes Counties recently emerged as hot spots for new HIV diagnoses beginning in 2009. These three counties are considered extremely rural, with populations between 9,045 - 15,760 residents per county. The high rates recently seen in these counties indicate a need for increased HIV prevention efforts in focused rural areas.

Table 13. Counties Among Top 5 HIV Incidence Rate Rankings, Alabama 2007-2011

County	2007, N=660	2008, N=713	2009, N=694	2010, N=692	2011, N=707
Bullock	9.2	36.7	18.3	27.5	9.2
Chambers	17.5	11.7	23.4	26.3	32.1
Dale	21.9	29.9	29.9	17.9	2.0
Dallas	22.8	36.5	18.3	11.4	25.1
Greene	-	22.1	44.2	-	11.1
Hale	19.0	19.0	25.4	44.4	44.4
Henry	-	11.6	34.7	5.8	17.3
Jefferson	23.4	28.6	29.3	29.5	31.7
Lowndes	70.8	17.7	26.6	53.1	53.1
Macon	28.0	32.6	32.6	32.6	18.6
Mobile	30.3	24.2	26.6	22.3	23.0
Montgomery	37.1	40.1	36.6	33.1	32.1
Russell	26.4	30.2	18.9	30.2	9.4

Source: Alabama Department of Public Health, Division of HIV/AIDS Prevention and Control.

Note: Percentages may not sum 100% due to rounding. Rates per 100,000 county residents, calculated using 2010 United States Census report. Shaded rates indicate top five incidence rankings each year.

HIV by Race, Ethnicity and Gender

The HIV epidemic continues to disproportionately affect African Americans. In 2011, the rate of HIV diagnosis among African American males was seven times that of White males (Table 14). The difference was even more pronounced among African American females, who are 12 times as likely to become infected with HIV as White females and twice as likely to become infected as White males.

Table 14. Newly Diagnosed HIV Cases by Race, Ethnicity and Sex, Alabama 2011

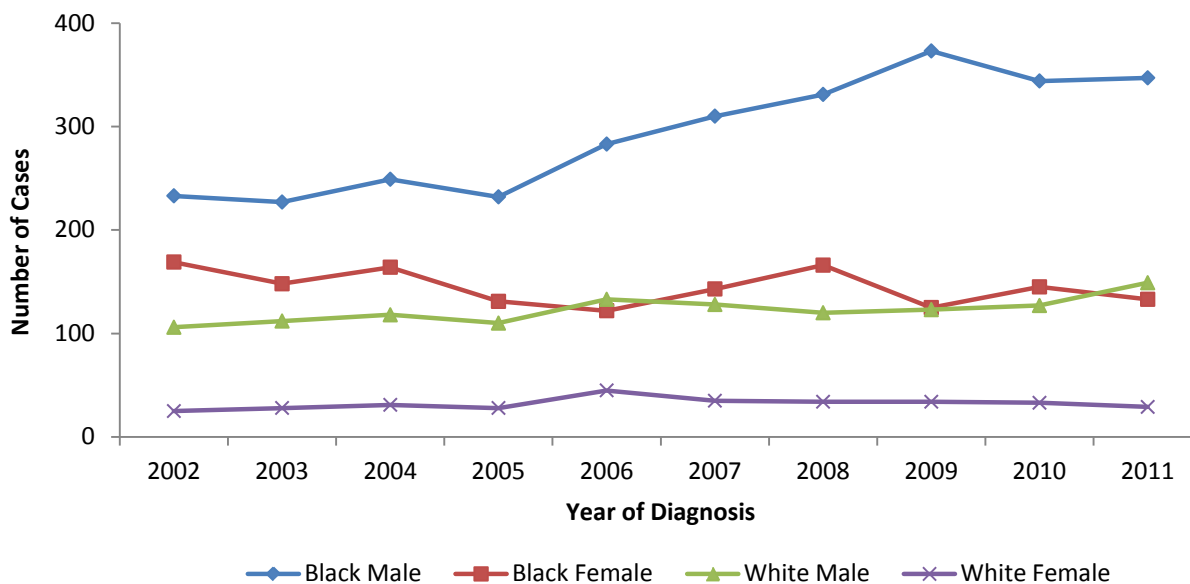
Race/Ethnicity	Males		Females		Total	
	Number (%)	Rate	Number (%)	Rate	Number (%)	Rate
African American, Not Hispanic	347 (65.0)	59.0	133 (76.9)	19.7	480 (67.9)	38.0
White, Not Hispanic	149 (27.9)	9.0	29 (16.8)	1.7	178 (25.2)	5.3
Hispanic	14 (2.6)	40.3	2 (1.2)	5.7	16 (2.3)	22.9
Other/Unknown	24 (4.5)	55.5	9 (5.2)	25.5	33 (4.7)	37.3
Total	534 (100)	23.0	173 (100)	7.0	707 (100)	14.8

Source: Alabama Department of Public Health, Division of HIV/AIDS Prevention and Control.

Note: Percentages may not sum 100% due to rounding. Rates per 100,000 persons in racial/ethnic group, calculated using 2010 United States Census report.

African American males continue to have the highest number of new HIV cases reported each year (Figure 3). The number of new HIV cases reported in African American females has averaged 22% over the past 10 years. During seven of the past 10 years, African American females surpassed White males in the annual number of new HIV cases. The number of new HIV cases has remained steady among White females.

Figure 3. Trends in Newly Diagnosed HIV Cases by Race and Sex, 2002-2011



Source: Alabama Department of Public Health, Division of HIV/AIDS Prevention and Control.

HIV by Age Group

In 2011, adults aged 25-34 years accounted for 29% of newly diagnosed HIV cases while teenagers and young adults aged 13 to 24 years accounted for another 30% of cases (Table 15).

Table 15. Newly Diagnosed HIV Cases by Age Group and Sex, Alabama 2011

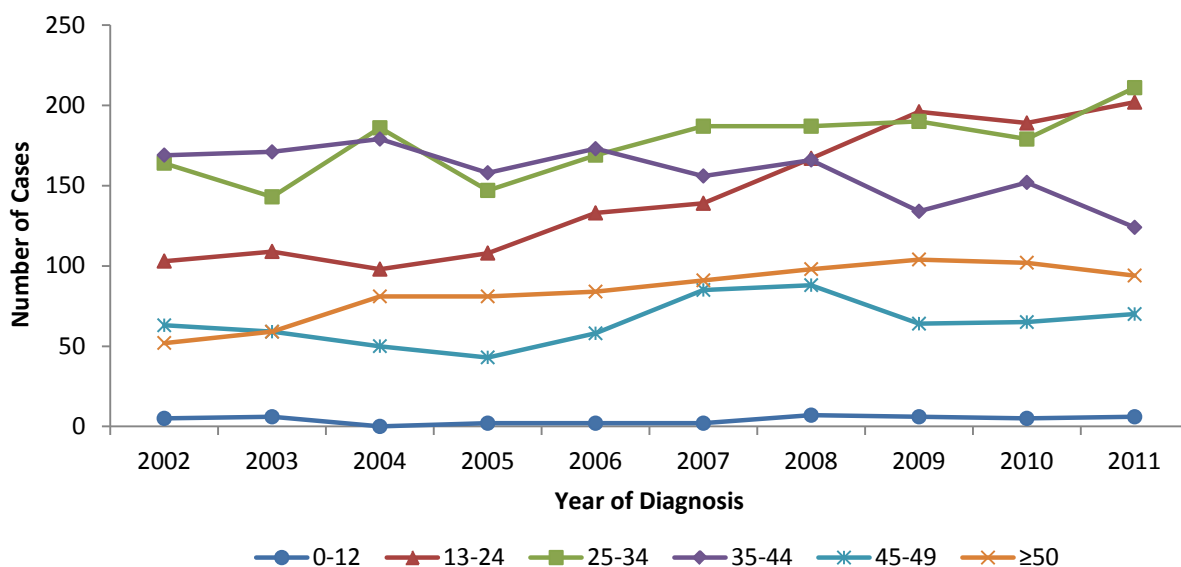
Age Group (years)	Males (N=534), Number (%)	Females (N=173), Number (%)	Total (N=707), Number (%)
0-12	2 (0.4)	4 (2.3)	6 (0.9)
13-24	169 (31.7)	33 (19.1)	202 (28.6)
25-34	161 (30.2)	50 (28.9)	211 (29.8)
35-44	84 (15.7)	40 (23.12)	124 (17.5)
45-49	51 (9.6)	19 (11.0)	70 (9.9)
≥50	67 (12.6)	27 (15.6)	94 (13.3)

Source: Alabama Department of Public Health, Division of HIV/AIDS Prevention and Control.

Note: Percentages may not sum 100% due to rounding.

In 2008, a downward shift in the age distribution of Alabama’s HIV epidemic occurred as the number of newly diagnosed cases increased among teenagers and young adults aged 13 to 24 years (Figure 4). Prior to 2008, the majority of new HIV cases were reported among adults aged 25 to 44 years. Since 2008, the majority of new HIV cases have been reported among 13 to 34 year olds. During 2011, 13 to 34 year olds accounted for 59% of newly diagnosed cases (Table 14). While new infections increased 7% among 13 to 25 year olds in 2011, infections among 35 to 44 year olds decreased 23%. This downward shift in Alabama’s newly diagnosed HIV population calls for increased prevention efforts targeting a younger population.

Figure 4. Trends in Newly Diagnosed HIV Cases by Age Group, Alabama 2002-2011



Source: Alabama Department of Public Health, Division of HIV/AIDS Prevention and Control.

HIV by Mode of Exposure

Throughout the HIV epidemic, the majority of infections have occurred among men who have sex with men (MSM). However, heterosexual contact represents the second leading risk factor for HIV infection. During 2011, MSM represented 47% of newly diagnosed cases and 41% of prevalent infections while heterosexual contact accounted for 13% of new cases and 22% of prevalent infections (Table 16).

Table 16. Mode of Exposure of Newly Diagnosed and Prevalent HIV Cases, Alabama 2011

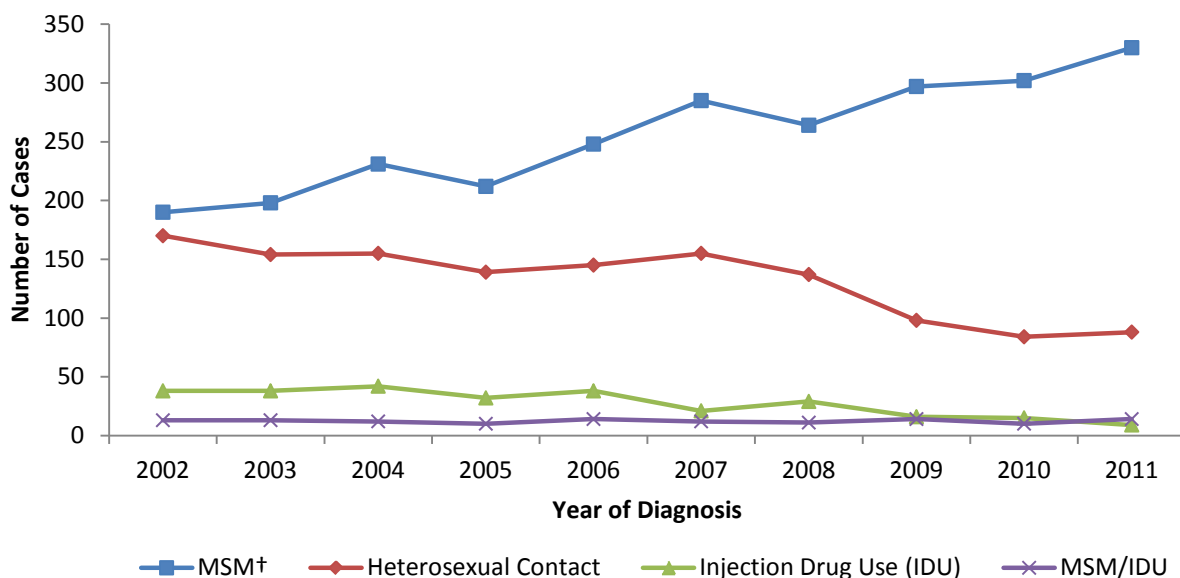
Mode of Exposure	Newly Diagnosed Cases (N=707),		Prevalent Cases† (N=11,403),	
	Number	(%)	Number	(%)
MSM‡	330	(46.7)	4671	(41.0)
Heterosexual Contact	88	(12.5)	2491	(21.9)
Injection Drug Use (IDU)	9	(1.3)	854	(7.5)
MSM/IDU	14	(2.0)	463	(4.1)
Perinatal Exposure	4	(0.6)	80	(0.7)
Transfusion/Hemophilia	-		31	(0.3)
Undetermined	262	(37.1)	2813	(24.7)

Source: Alabama Department of Public Health, Division of HIV/AIDS Prevention and Control.

Note: Percentages may not sum 100% due to rounding. †Prevalent cases living as of December 31, 2011. ‡MSM - Men who have sex with men.

The number of newly diagnosed HIV cases reported in MSM continues to rise each year with the proportion new HIV case reports in MSM increasing 42% over the past 10 years (Figure 5). In contrast, there has been a decrease in the number of newly diagnosed HIV cases reported among heterosexuals and injection drug users over the past 10 year. These trends indicate prevention efforts should focus on the MSM population while maintaining current efforts to decrease the spread of HIV among heterosexuals.

Figure 5. Trends in Newly Diagnosed HIV Cases by Mode of Exposure, Alabama 2002-2011



Source: Alabama Department of Public Health, Division of HIV/AIDS Prevention and Control.

Among African Americans, 43% of newly diagnosed HIV infections reported in 2011 occurred in MSM while another 15% were attributed to heterosexual contact (Table 17). MSM and heterosexual contact accounted for 60% and 7% of newly diagnosed HIV infections among Whites, respectively. In the Hispanic population, 38% of newly diagnosed HIV infections were attributed to MSM while another 19% was attributed to heterosexual contact.

Table 17. Newly Diagnosed HIV Cases by Mode of Exposure and Race/Ethnicity, Alabama 2011

Mode of Exposure	Black, Not Hispanic Number (%)	White, Not Hispanic Number (%)	Hispanic, Number (%)	Total, Number (%)
MSM†	207 (43.1)	106 (59.6)	6 (37.5)	330 (46.7)
Heterosexual Contact	71 (14.8)	12 (6.7)	3 (18.8)	88 (12.5)
Injection Drug Use (IDU)	5 (1.0)	3 (1.7)	-	9 (1.3)
MSM/IDU	6 (1.3)	7 (3.9)	1 (6.3)	14 (2.0)
Perinatal Exposure	2 (0.4)	2 (1.1)	-	4 (0.6)
Undetermined	189 (39.4)	48 (27.0)	6 (37.5)	262 (37.1)
Total	480 (100)	178 (100)	16 (100)	707 (100)

Source: Alabama Department of Public Health, Division of HIV/AIDS Prevention and Control.

Note: Percentages may not sum 100% due to rounding. † MSM - Men who have sex with men.

In 2011, 38% of White females with newly diagnosed HIV infections reported heterosexual contact as the primary mode of exposure, 10% reported injection drug use, and 48% reported no risk factor (Table 18). African American females attributed 41% of newly diagnosed HIV infections to heterosexual contact while only 3% reported injection drug use; the majority (55%) reported no risk factor. Among African American males, 62% of new cases occurred in MSM (including combined MSM and injection drug users) compared to 76% in White males. Only 5% of African American males and 1% of White males reported heterosexual contact as the primary mode of exposure for HIV infection during 2011.

Table 18. Newly Diagnosed HIV Cases by Mode of Exposure, Sex and Race, Alabama 2011

Mode of Exposure	Black Males, Number (%)	White Males, Number (%)	Black Females, Number (%)	White Females, Number (%)	Total, Number (%)
MSM†	207 (59.7)	106 (71.1)	-	-	330 (46.7)
Heterosexual Contact	17 (4.9)	1 (0.7)	54 (40.6)	11 (37.9)	88 (12.5)
Injection Drug Use (IDU)	1 (0.3)	-	4 (3.0)	3 (10.3)	9 (1.3)
MSM/IDU	6 (1.7)	7 (4.7)	-	-	14 (2.0)
Perinatal Exposure	-	1 (0.7)	2 (1.5)	1 (3.4)	4 (0.6)
Undetermined	116 (33.4)	34 (22.8)	73 (54.9)	14 (48.3)	262 (37.1)
Total	347 (100)	149 (100)	133 (100)	29 (100)	707 (100)

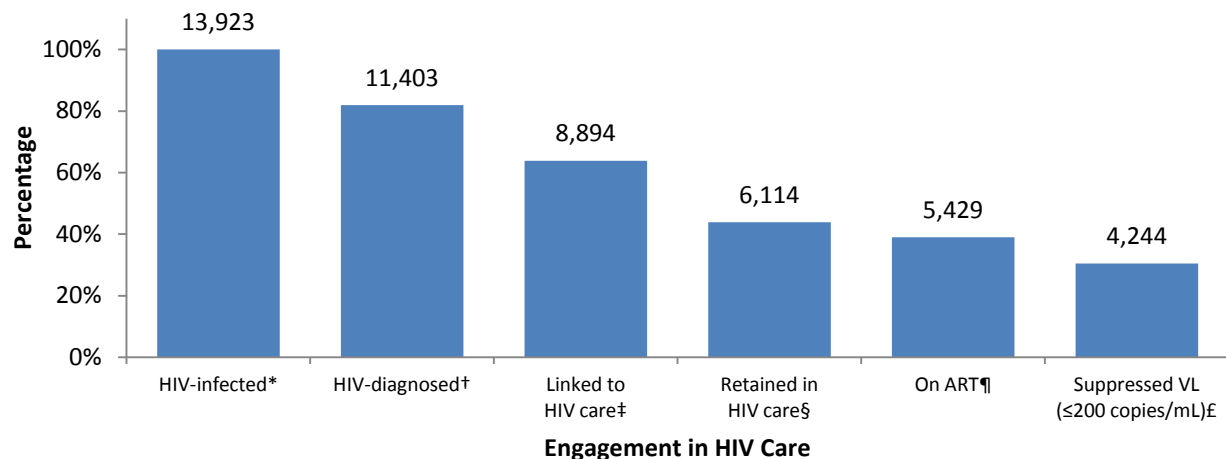
Source: Alabama Department of Public Health, Division of HIV/AIDS Prevention and Control.

Note: Percentages may not sum 100% due to rounding. † MSM - Men who have sex with men.

HIV Treatment Cascade

The CDC estimates 18% of persons infected with HIV are unaware of their status. Applying this estimate predicts 13,923 Alabama residents were living with HIV infection as of December 31, 2011 (Figure 6). Alabama’s Enhanced Referral Tracking System (ETRS) linked 78% of newly diagnosed HIV infections into care in 2011, suggesting up to 64% of persons living with HIV may have been linked to care. Another 44% were retained in care, as evidenced by one or more CD4 or viral load results reported during 2011, and 30% reported suppressed viral loads (≤ 200 copies/mL). As viral load is considered a measure of infectivity, maintaining a suppressed viral load may decrease the likelihood of infecting others.

Figure 6. Number and Percentage of HIV-infected Persons Engaged in Continuum of HIV Care, Alabama 2011



Abbreviations: HIV=human immunodeficiency virus; ART=antiretroviral therapy; VL=viral load.

*Estimated using number of persons diagnosed with HIV infection in Alabama and living through December 31, 2011 (11,403) and the national HIV prevalence estimate (18.1%); n=13,923. This estimate should be interpreted with caution as the HIV-prevalence estimate is intended for use with national data and loses accuracy when applied to smaller population subsets, such as state-level data. Sources: Alabama Department of Public Health (ADPH); CDC. HIV Surveillance Supplemental Report, 2012;17(No. 3, part A).

†Number of persons diagnosed with HIV infection in Alabama and living through December 31, 2011; n=11,403. Source: ADPH

‡Estimated using the number of persons diagnosed with HIV infection in Alabama and living through December 31, 2011 (11,403) x the percentage of newly diagnosed infections linked to care during 2011 (78%) via the Enhanced Referral Tracking System (ETRS); n=8,894. Source:ADPH.

§Number of persons diagnosed with HIV infection in Alabama and living through December 31, 2011 that accessed care during 2011, evidenced by ≥ 1 CD4 or VL laboratory result during 2011; n=6,114. Source: ADPH.

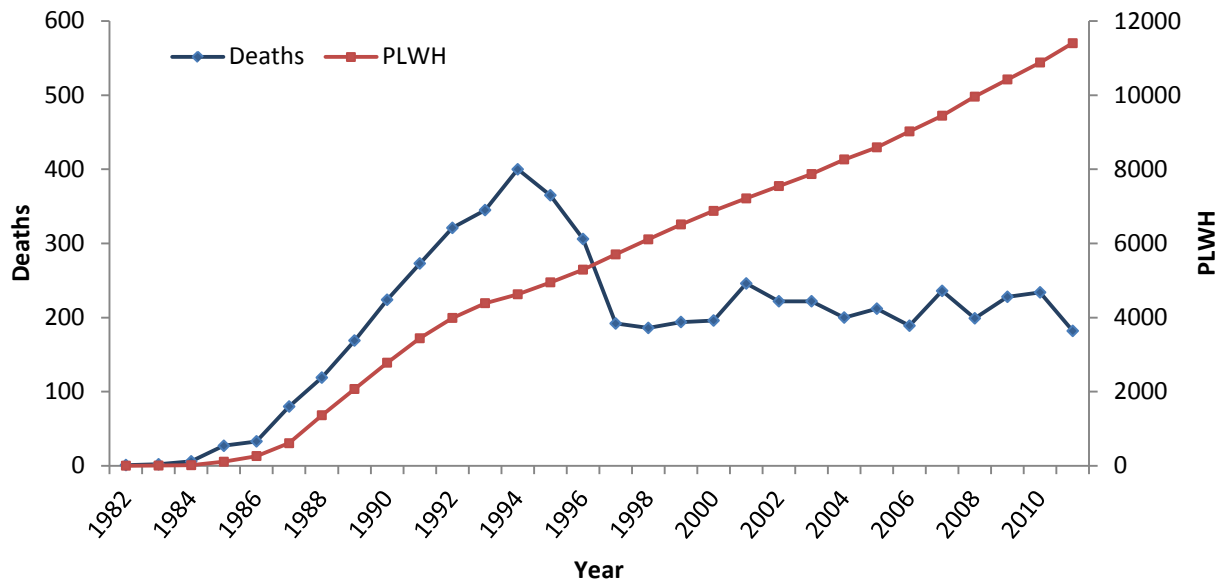
¶Estimated using the number retained in HIV care (6,114) x the percentage prescribed ART in MMP (88.8%); n=5,429. This estimate should be interpreted with caution as the MMP was limited to 26 project areas in 16 states and Puerto Rico, of which Alabama was not included. Source: Data from the Medical Monitoring Project (MMP).

£Number of persons diagnosed with HIV infection in Alabama and living through December 31, 2011 that had a VL result ≤ 200 copies/mL during 2011; n=4,244. Source: ADPH.

HIV/AIDS Mortality

Following the introduction and widespread utilization of highly active antiretroviral therapy (HAART) in 1995, the number of deaths among people diagnosed with HIV significantly declined (Figure 7). Since 1997, the number of deaths has fluctuated around 200 per year (range 182-236). However, the number of persons living with HIV continues to increase with 11,403 persons reported at the end of 2011. The longevity of persons living with HIV infection in Alabama has a significant impact on the State’s resources for providing care and social services to the HIV positive population.

Figure 7. Persons Living with HIV (PLWH) and Deaths, Alabama 1982-2011



Source: Alabama Department of Public Health, Division of HIV/AIDS Prevention and Control.
 Note: PLWH include persons living as of December 31 each year.

III. INDICATORS OF RISK FOR HIV INFECTION

A. HEALTH INDICATORS

America’s Health Rankings reports Alabama ranked 46th nationally in overall health in 2011. Alabama ranked 43rd in public health efforts to manage and control sexually transmitted diseases and 43rd for health care coverage. The percentage of mothers receiving prenatal care within the first trimester is 84%, ranking Alabama 28th nationally. However, Alabama ranked 10th in funding from the CDC, which is indicative of proactive implementation of preventive and educational programs targeted at improving the health of at-risk populations within the state.

The Alabama Youth Risk Behavior Survey indicates over one-half (57%) of high school students (grades 9-12) have had sexual intercourse as of 2009 (Table 19). However, 42% of sexually active high school students did not use a condom during their last sexual intercourse and 15% of all high school students reported they were never taught about HIV infection or AIDS in school. The Alabama School Health Profile states 68% of high schools have policies for HIV-positive students and staff addressing attendance, confidentiality, and procedures to protect against discrimination and 21% high schools have a gay/straight alliance or similar club.

Table 19. High School Youth Risk Behavior Surveillance Survey, Alabama 2009

Sexual Behavior Question	Male Number (%)	Female Number (%)	Total Number (%)
Ever had sexual intercourse?	577 (61.8)	715 (51.4)	1296 (56.6)
Had sexual intercourse for the first time before age 13 years?	583 (16.2)	719 (4.1)	1306 (10.1)
Had sexual intercourse with four or more persons (during their life)?	577 (25.7)	716 (14.4)	1297 (19.9)
Had sexual intercourse with at least one person (during the 3 months before the survey)?	579 (40.9)	713 (42.0)	1296 (41.5)
Drank alcohol or used drugs before last sexual intercourse (in sexually active students)?	240 (27.9)	304 (14.7)	547 (21.2)
Did not use a condom during last sexual intercourse (in sexually active students)?	234 (37.5)	298 (45.3)	535 (41.5)
Did not use birth control pills before last sexual intercourse to prevent pregnancy (in sexually active students)?	232 (83.5)	303 (75.3)	538 (79.3)
Were never taught in school about AIDS or HIV infection?	635 (17.7)	759 (12.6)	1404 (15.4)
Did not use Depo-Provera before last sexual intercourse (to prevent pregnancy, in sexually active students)?	232 (96.1)	303 (92.8)	538 (94.3)
Did not use birth control pills or Depo-Provera before last sexual intercourse (to prevent pregnancy, in sexually active students)?	232 (79.6)	303 (68.1)	538 (73.6)
Did not use both a condom during last sexual intercourse and birth control pills or Depo-Provera before last sexual intercourse (to prevent pregnancy, in sexually active students)?	228 (91.2)	297 (85.7)	528 (88.4)

Source: Youth Risk Behavior Surveillance Survey (YRBSS), Alabama 2009.

Note: Percentages may not sum 100% due to rounding.

B. SEXUALLY TRANSMITTED DISEASES

Sexually Transmitted Disease (STD) surveillance data provides a surrogate indicator of high-risk sexual behavior. While an increase in STD occurrences does not directly indicate HIV infections are increasing, these surrogate markers point toward an increase in unprotected sex, a known risk factor for HIV infection. Table 20 compares the STD cases in males and females during 2010 and 2011 and Table 21 depicts STD cases by public health area.

Table 20. Sexually Transmitted Disease Morbidity Comparison by Sex, Alabama 2010 & 2011

Sex	Chlamydia		Gonorrhea		Syphilis	
	2010	2011	2010	2011	2010	2011
Female	19360	21132	4292	5074	286	240
Male	6685	7610	3329	3803	497	507
Unknown	647	594	204	158	0	0
Total	26692	29356	7825	9042	783	747

Source: Alabama Department of Public Health, Sexually Transmitted Disease (STD) Division, updated STD Morbidity Calendar Year 2011.

Table 21. Sexually Transmitted Disease Cases by Public Health Area (PHA), Alabama 2011

PHA†	Chlamydia (N=29356), Number (%)	Gonorrhea (N=9042), Number (%)	Syphilis (N=748), Number (%)	STD Total (N=39146), Number (%)
PHA 1	1232 (4.2)	118 (1.3)	24 (3.2)	1374 (3.5)
PHA 2	3333 (11.4)	877 (9.0)	56 (7.5)	4266 (10.9)
PHA 3	1903 (6.5)	601 (6.6)	38 (5.1)	2542 (6.5)
PHA 4	5591 (19.0)	2367 (26.2)	238 (31.8)	8196 (20.9)
PHA 5	1612 (5.5)	282 (3.1)	37 (4.9)	1931 (4.9)
PHA 6	2032 (6.9)	503 (5.6)	29 (3.9)	2564 (6.5)
PHA 7	1455 (5.0)	350 (3.9)	34 (4.5)	1839 (4.7)
PHA 8	5209 (17.7)	1765 (19.5)	99 (13.2)	7073 (18.1)
PHA 9	1593 (5.4)	409 (4.5)	73 (9.8)	2075 (5.3)
PHA 10	2223 (7.6)	546 (6.0)	65 (8.7)	2834 (7.2)
PHA 11	3173 (10.8)	1224 (13.5)	55 (7.4)	4452 (11.4)

Source: Alabama Department of Public Health, Sexually Transmitted Disease (STD) Division, updated STD Morbidity Calendar Year 2011.

Chlamydia

The incidence of Chlamydia is 2.8 times higher in women than men and 3.4 times higher in African Americans than Whites (Table 22). Reported cases of Chlamydia have increased each year since 2008 (Figure 8). In 2011, 29,356 cases of Chlamydia were reported in Alabama residents, an increase of 9% from 2010 (Table 20).

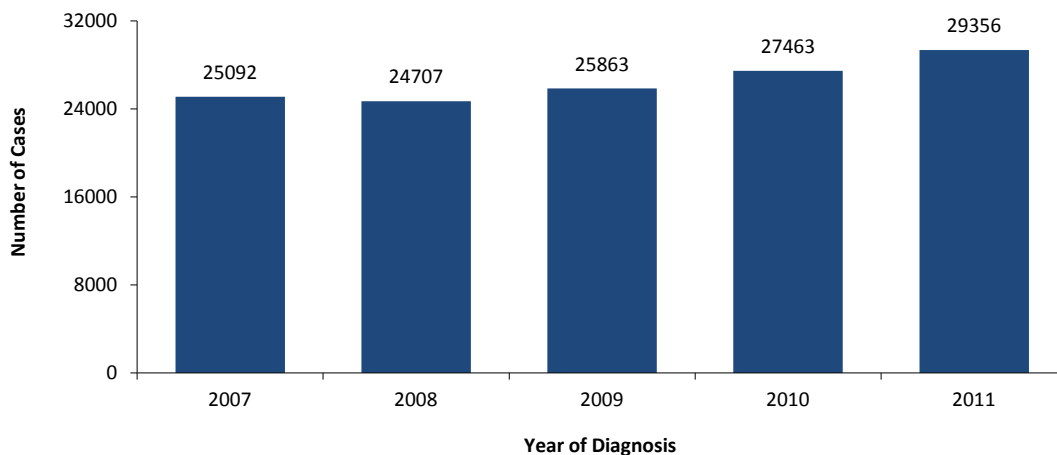
Table 22. Chlamydia Diagnosis† by Race, Ethnicity and Sex, Alabama 2011

Race	Male (N=7664), Number (%)	Female (N=21242), Number (%)	Total (N=28906), Number (%)
White, not Hispanic	1182 (15.4)	3265 (15.4)	4447 (15.4)
Black, not Hispanic	4668 (60.9)	10241 (48.2)	14909 (51.8)
Hispanic	48 (0.6)	107 (0.5)	155 (0.5)
Other	32 (0.4)	79 (0.4)	111 (0.4)
Unknown	1734 (22.6)	7550 (35.5)	9284 (32.1)

Source: Alabama Department of Public Health, Sexually Transmitted Disease (STD) Division, updated STD Morbidity Calendar Year 2011.

Note: Percentages may not sum 100% due to rounding. † Chlamydia diagnosis data estimates final 2011 Chlamydia case count (N=29356).

Figure 8. Chlamydia Cases by Year of Diagnosis, Alabama 2007-2011



Source: Alabama Department of Public Health, Sexually Transmitted Disease (STD) Division, updated STD Morbidity Calendar Year 2011.

Gonorrhea

The incidence of gonorrhea is 1.3 times higher in women than men, and 8.0 times higher in African Americans than Whites (Table 23). Overall, reported cases of gonorrhea have decreased from 2007 to 2011; however, cases increased each year since 2009 (Figure 9). In 2011, 9,042 cases of gonorrhea were reported in Alabama residents, an increase of 13% from 2010 (Table 20).

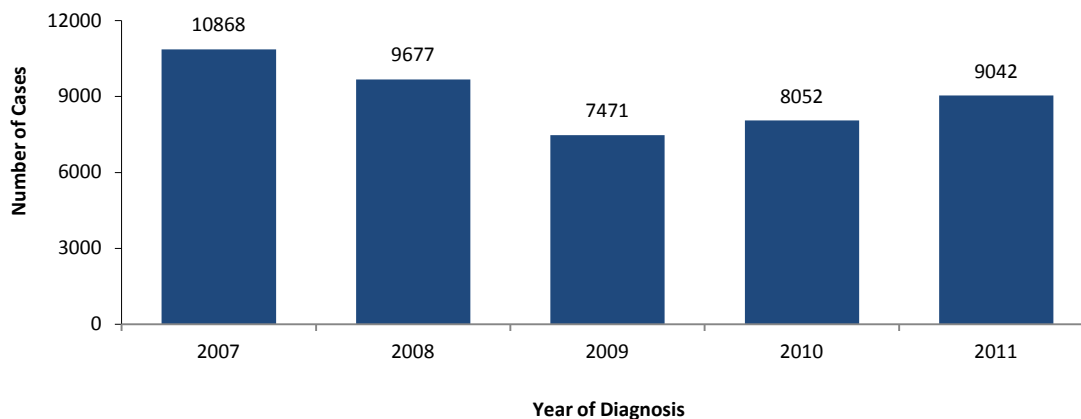
Table 23. Gonorrhea Diagnosis[†] by Race/Ethnicity and Sex, Alabama 2011

Race	Male (N=3828), Number (%)	Female (N=5106), Number (%)	Total (N=8934), Number (%)
White, not Hispanic	223 (5.8)	500 (9.8)	723 (8.1)
Black, not Hispanic	2711 (70.8)	3067 (60.0)	5778 (64.7)
Hispanic	9 (0.2)	8 (0.2)	17 (0.2)
Other	13 (0.3)	23 (0.5)	36 (0.4)
Unknown	872 (22.8)	1508 (29.5)	2380 (26.6)

Source: Alabama Department of Public Health, Sexually Transmitted Disease (STD) Division, updated STD Morbidity Calendar Year 2011.

Note: Percentages may not sum 100% due to rounding. [†] Gonorrhea diagnosis data estimates final 2011 Gonorrhea case count (N=9042).

Figure 9. Gonorrhea Cases by Year of Diagnosis, Alabama 2007-2011



Source: Alabama Department of Public Health, Sexually Transmitted Disease (STD) Division, updated STD Morbidity Calendar Year 2011.

Syphilis

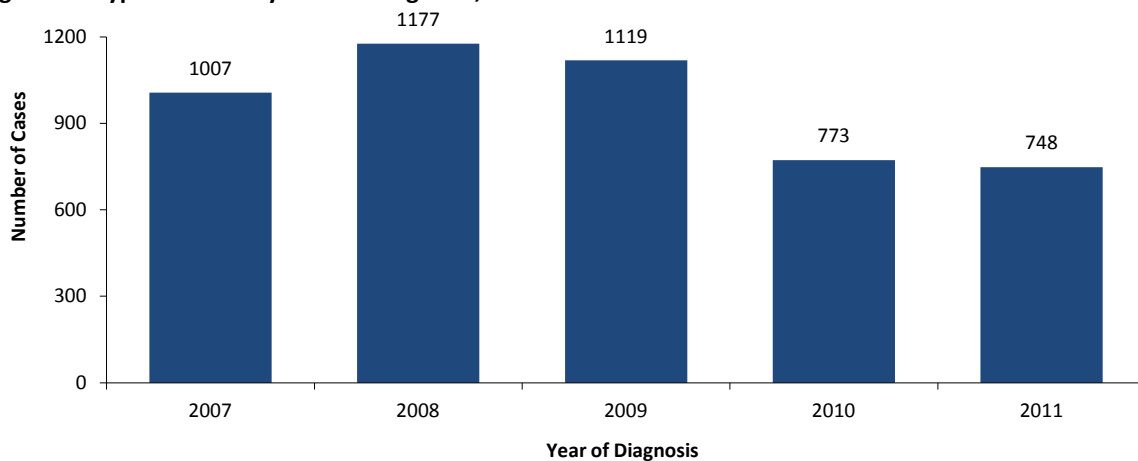
The incidence of syphilis is 2.1 times higher in men than women and 3.6 times higher in African Americans than Whites (Table 24). Overall, reported cases of syphilis have decreased from 2007 to 2011; however, a spike in cases did occur during 2008 and 2009 (Figure 10). In 2011, 747 cases of syphilis were reported in Alabama residents, a decrease of 5% from 2010 (Table 20).

Table 24. Syphilis Diagnosis† by Race/Ethnicity and Sex, Alabama 2011

Race	Male (N=517), Number (%)	Female (N=242), Number (%)	Total (N=759), Number (%)
White, not Hispanic	92 (17.8)	49 (20.2)	141 (18.6)
Black, not Hispanic	352 (68.0)	157 (64.9)	509 (67.1)
Hispanic	13 (2.5)	6 (2.5)	19 (2.5)
Other	1 (0.2)	1 (0.4)	2 (0.3)
Unknown	59 (11.4)	29 (12.0)	88 (11.6)

Source: Alabama Department of Public Health, Sexually Transmitted Disease (STD) Division, updated STD Morbidity Calendar Year 2011.
 Note: Percentages may not sum 100% due to rounding. † Syphilis diagnosis data estimates final 2011 Syphilis case count (N=748).

Figure 10. Syphilis Cases by Year of Diagnosis, Alabama 2007-2011



Source: Alabama Department of Public Health, Sexually Transmitted Disease (STD) Division, updated STD Morbidity Calendar Year 2011.

IV. PATTERNS OF UTILIZATION OF HIV SERVICES

In 1990, Congress enacted the Ryan White Comprehensive AIDS Resources Emergency (CARE) Act to provide funding for states, territories, and eligible metropolitan areas (EMAs) to offer primary care and support services to uninsured HIV-positive individuals lacking financial resources for their care. In Alabama, HIV-positive individuals can receive care through Alabama's AIDS Drug Assistance Program (ADAP) and the Medicare D cost assistance plan (MEDCAP). The Alabama Department of Public Health oversees Alabama's Ryan White Part B program which funds medical and social services including Case Management and ADAP.

A. ALABAMA'S AIDS DRUG ASSISTANCE PROGRAM (ADAP)

ADAP Enrollment and Eligibility

Enrollment requirements for ADAP include an HIV diagnosis by Western Blot, a documented permanent Alabama residence, a total gross income at or below 250% of the current federal poverty level (FPL), and no third party payer sources to cover medication costs. Over 97% (1641) of active enrollees reported an annual household income less than 200% of the FPL in 2011. Males represented 71% (1209) of enrollees compared to females (487), making males 2.5 times more likely to utilize ADAP services. Over 64% (1091) of active and new enrollees were from Alabama's African American population, with Hispanics and other minorities constituting less than 5%. Recipients aged 25 to 44 years constitute 55% (928) of enrollees followed by recipients aged 45 to 64 years at 38% (639).

ADAP is highly utilized by Alabama's HIV-positive population. Enrollment caps have been instituted multiple times and a recipient waiting list exists. In 2003, enrollment was capped with slightly more than 1500 clients and remained in effect until January 2006. ADAP raised the enrollment cap to 1700 clients in December 2010. Enrollment was again capped in October 2011, with the 1700 enrollment cap in effect through the end of the year.

B. MEDICARE D COST ASSISTANCE PLAN (MEDCAP)

ADAP sponsors MEDCAP to assist enrollees eligible for Medicare, but who do not qualify for Low Income Subsidy (LIS) assistance. Co-pays and premiums associated with the MEDCAP are covered for approved enrollees. Alabama MEDCAP doubled enrollment in 2008 with 63 enrollees. Enrollment continues to increase annually with 74 recipients receiving services in 2011. Medicare Part D continues to impact Alabama's ADAP enrollment through the transitioning of ADAP clients on to Medicare Part D plans for medication services.

C. ENHANCED REFERRAL TRACKING SYSTEM (ERTS)

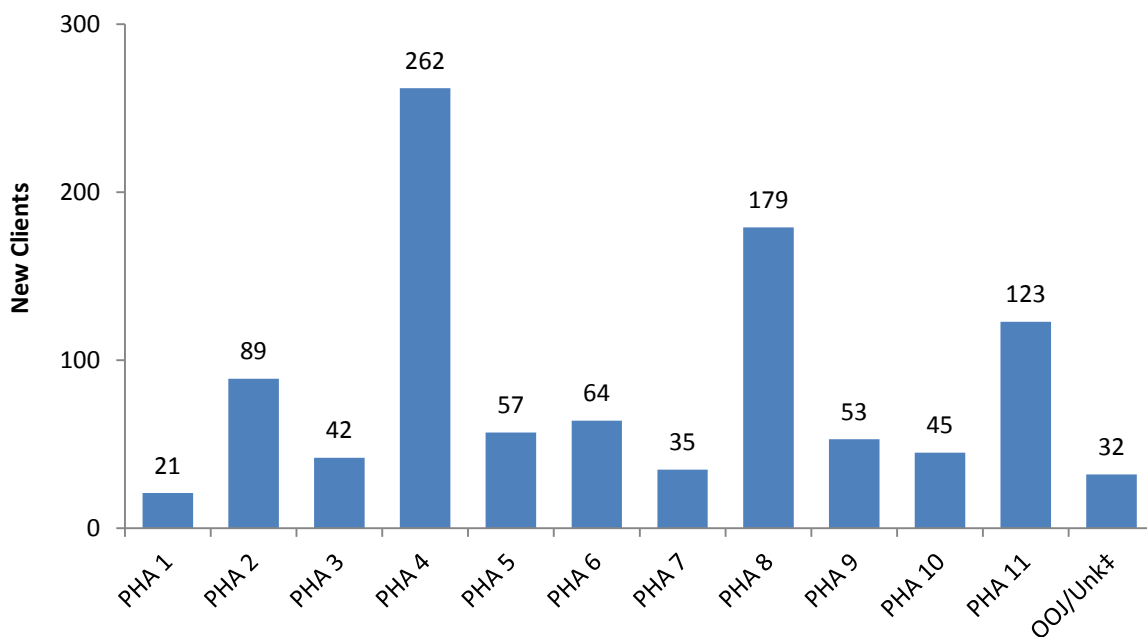
Alabama's Enhanced Referral tracking System (ERTS) monitors HIV test results to detect newly diagnosed HIV infections and has been in effect for over six years. HIV-positive test results are analyzed to create an ERTS list of previously unknown HIV-positive cases whose home address is within Alabama's

jurisdiction. HIV Area Coordinators and Peer Mentors located throughout the state investigate HIV-positive individuals captured on ERTS lists to ensure they are in care. A client is documented as “in care” when at least one visit with 2 separate medical providers (a doctor, nurse, or social worker) is attended within 12 months of HIV diagnosis. The success of the ERTS program is monitored from the central office where ERTS lists are reviewed to assess how investigations were closed (e.g., coordinator-linked into care, in care).

HIV Area Coordinators are located in each of Alabama’s 11 public health areas (PHAs) and investigate HIV-positive individuals to determine if they are currently in care. If not in care, HIV Area Coordinators assist HIV-positive individuals gain access to adequate medical care for HIV and AIDS treatment by guiding the referral process. Peer Mentors, funded via a federal Health Resources and Services Administration (HRSA) grant, are HIV-positive persons contracted by the ADPH to work in collaboration with HIV care and service agencies and the HIV Coordinators to link HIV positive individuals into care. Peer Mentors review local client lists with clinic case managers to identify and contact HIV-positive patients who have missed clinic appointments. Outreach, education, and referrals are documented for each client served. Peer Mentor data is documented at the client level to facilitate tracking individual clients across programs.

ERTS provides demographic data and the geographical location of HIV-positive individuals aware of their HIV status and not in care. During 2011, 1003 newly reported ERTS cases were investigated (Figure 11).

Figure 11. ERTS† Newly Reported Clients (N=1003) by Public Health Area, Alabama 2011

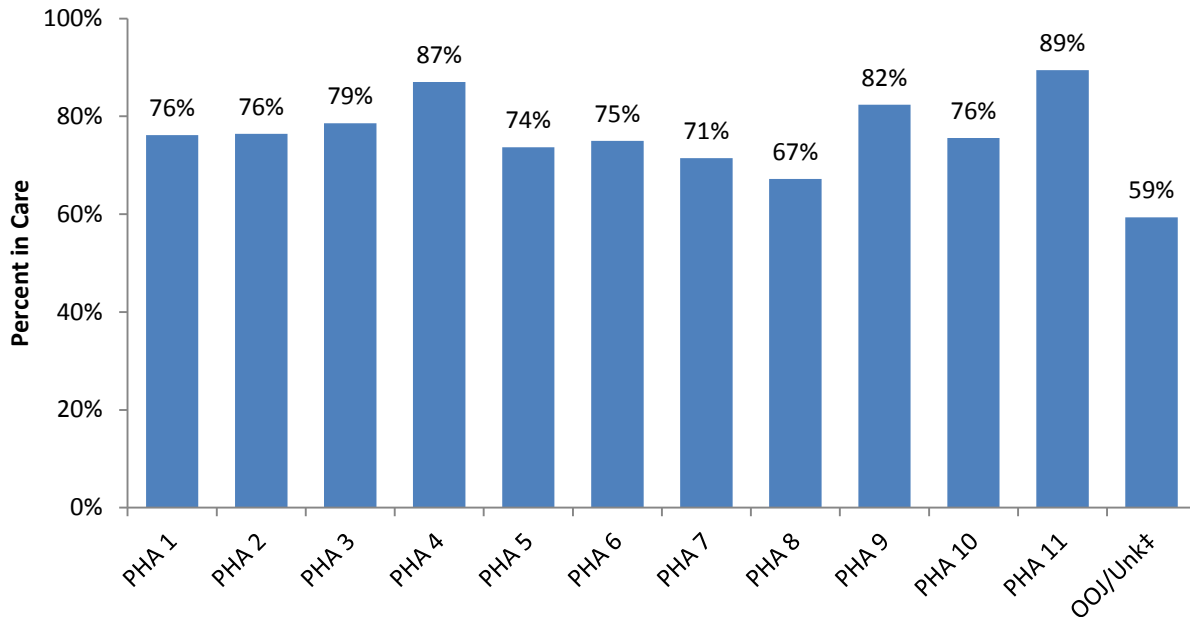


Source: Alabama Department of Public Health, Division of HIV/AIDS Prevention and Control.
†ERTS - Enhanced Referral and Tracking System, ‡OOJ/Unk - Out of Jurisdiction/Unknown

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Seventy-eight percent of newly diagnosed ERTS cases (784/1003) were successfully referred and documented as in care in 2011 (Figure 12). PHA 11 had the highest percentage (89%) of ERTS clients documented in care. PHA 8 had the lowest percentage (67%) of clients in care.

Figure 12. Percentage of Newly Reported ERTS† Clients (N=1003) in Care by Public Health Area, Alabama 2011



Source: Alabama Department of Public Health, Division of HIV/AIDS Prevention and Control

Note: Statewide, 79% (784/1003) of reported ERTS clients are in care. A client is documented as in care when at least 1 visit with 2 separate providers (doctor/nurse/social worker) is attended within 12 months of HIV diagnosis.

†ERTS - Enhanced Referral and Tracking System, ‡OoJ/Unk - Out of Jurisdiction/Unknown

V. CHARACTERISTICS OF HIV POSITIVE PERSONS WHO ARE NOT IN CARE

A. MEASURING UNMET NEED

The Alabama Department of Public Health (ADPH) has been conducting HIV and AIDS case surveillance since the beginning of the HIV epidemic, with confidential, name-based reporting beginning in 1987. June 2011 all positive HIV tests, CD4 results, and viral loads became reportable to ADPH under Alabama Public Health Law. Prior to the rule change, only HIV-positive Western Blots, CD4 cell counts <200 per μ l or <20%, and AIDS defining diseases were reportable, making an accurate estimate of unmet need within Alabama's HIV infected community difficult to obtain. To provide an estimate of unmet need, data acquired through Alabama's Enhanced Referral Tracking System (ERTS) was utilized. Based on ERTS data, and estimated 6,307 HIV-positive individuals have not accessed care in the past 12 months.

Unmet Need Calculation as Determined by HRSA

The Health Resources and Services Administration (HRSA) defines a framework for determining unmet need in its "Practical Guide to Measuring Unmet Need for HIV-Related Primary Medical Care." Unmet need is defined as no evidence of three HIV primary medical care components during a 12-month time period: (1) viral load (VL) testing, (2) CD4 count, or (3) provision of anti-retroviral therapy (ART). However, a second objective is to collect unmet service need to assist in the service planning and funding allocation decision-making process.

ADPH collaborates with Alabama's Ryan White Grantee to provide an annual HIV Epidemiologic Profile to document trends in the HIV epidemic in Alabama. ADPH utilizes the annual Epidemiologic Profile to make projections regarding funding and service needs for HIV-positive residents.

Assessment of Unmet Need

Common challenges to getting HIV-positive individuals into care include denial, fear of discrimination, lack of insurance, inadequate income, transient populations without a permanent residence, lack of transportation to services, and inability to accept responsibilities of care, medicines, and medical visits. To aid in reducing many of these challenges, ADPH established the Enhanced Referral Tracking System (ERTS) in 2005.

ERTS monitors linkages of newly diagnosed HIV-positive individuals and existing HIV cases into care. The goal of the ERTS program is to link 50% of all HIV clients referred to the program into care. Outcome data for 2011 indicate ERTS has surpassed that goal linking 78% (784) of newly reported HIV-positive clients into care. ERTS program objectives require 5% of clients initially refusing care be linked into care as a result of Coordinator Linked into Care (CLIC) activities. ERTS also surpassed this objective with 8% of clients initially refusing services linked into care.

HIV Area Coordinators are located in each of Alabama's 11 public health areas (PHAs) and investigate unreported HIV-positive individuals to determine if they are currently in care. Coordinators assist HIV-

positive individuals in gaining access to care by guiding the referral process. The ERTS Program Manager audits each HIV Coordinator annually to ensure program goals are met. Peer Mentors are HIV-positive persons contracted by the ADPH to work in collaboration with HIV Coordinators. Peer Mentors review local client lists with clinic case managers to identify and contact HIV-positive patients who have missed clinic appointments. Outreach, education, and referrals are documented for each client served.

B. ENHANCED REFERRAL TRACKING SYSTEM (ERTS)

The ERTS program focuses on early treatment of newly identified HIV-positive individuals to ensure access to HIV care and services. The program also identifies existing HIV-positive clients not in care and provides focused follow-up aimed at getting these clients into care. ERTS successfully linked 78% of clients into care in 2011 (Table 25). African Americans represent 65% of ERTS clients while Whites represent 32%; 77% of ERTS clients are men. A similar client distribution is observed when assessing Alabama by PHA (Figures 13 & 14). During 2011, PHA 4 (Jefferson county) had the highest number of ERTS cases investigated (262), while PHA 1 (Colbert, Franklin, Lauderdale, Marion, Walker, and Winston Counties) had the least (21).

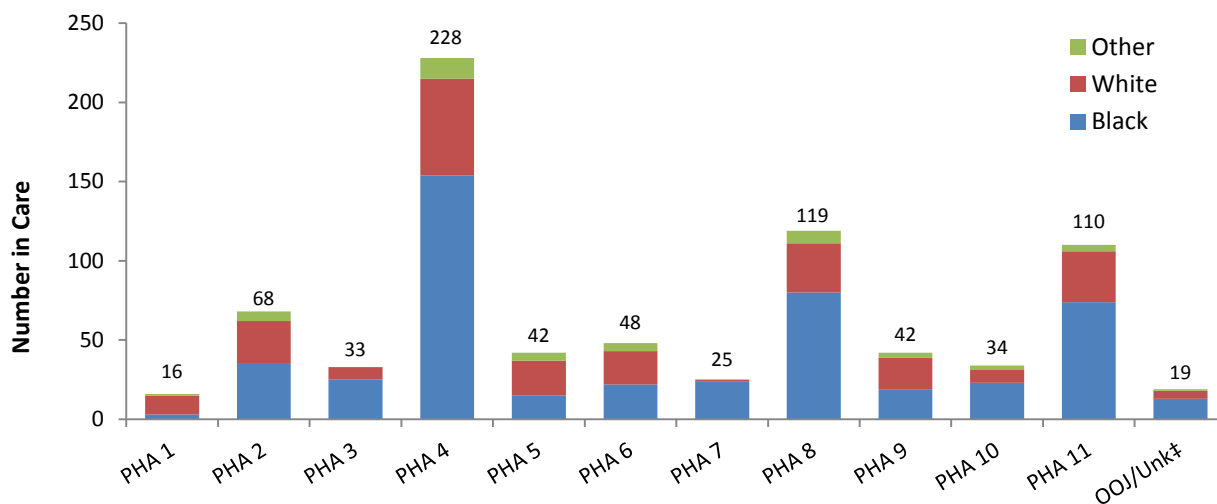
Table 25. Distribution of ERTS† Clients by Sex and Race, Alabama 2011

ERTS† Client Demographics	In Care (N=784), Number (%)	Total (N=1003), Number (%)
Sex		
Male	597 (76.1)	775 (77.3)
Female	187 (23.9)	227 (22.6)
Race		
African American	487 (62.1)	647 (64.5)
White	248 (31.6)	291 (29.0)
Other/Unknown	49 (6.3)	64 (6.4)

Source: Alabama Department of Public Health, Division of HIV/AIDS Prevention and Control

Note: Numbers may not add to total because of missing data. †ERTS - Enhanced Referral and Tracking System.

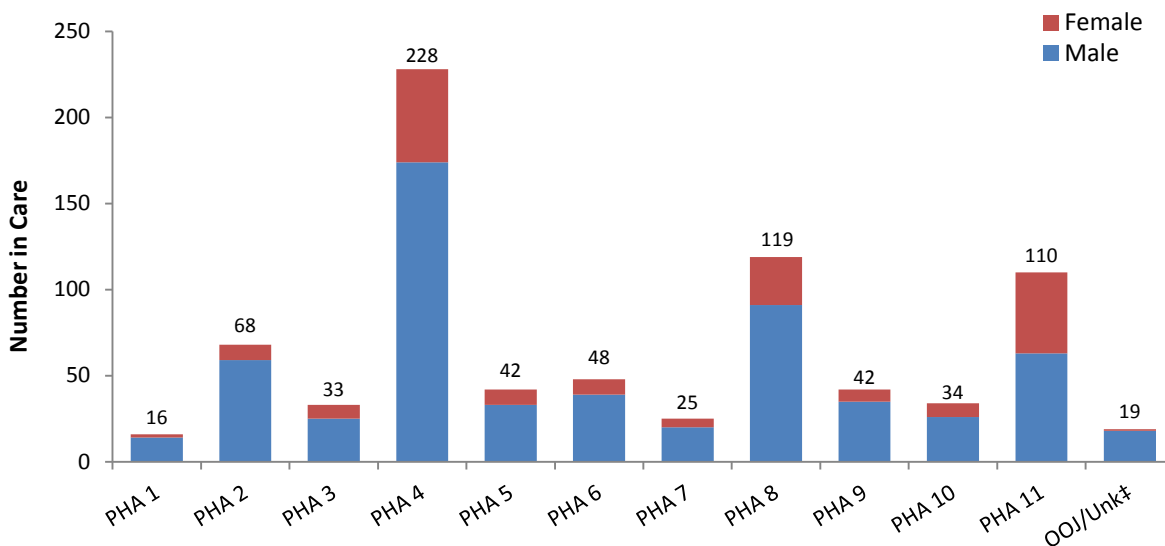
Figure 13. ERTS† Clients in Care (N=784) by Race and Public Health Area, Alabama 2011



Source: Alabama Department of Public Health, Division of HIV/AIDS Prevention and Control

†ERTS - Enhanced Referral and Tracking System, ‡OOI/Unk - Out of Jurisdiction/Unknown

Figure 14. ERTS[†] Clients in Care (N=784) by Sex and Public Health Area, Alabama 2011



Source: Alabama Department of Public Health, Division of HIV/AIDS Prevention and Control

[†]ERTS - Enhanced Referral and Tracking System, [‡]OOI/Unk - Out of Jurisdiction/Unknown

C. EXPANDED HIV TESTING

In October 2010, Alabama received funding from the CDC to implement an expanded HIV testing initiative, Expanded Counseling and Testing Services (CTS). The goal of Expanded CTS is to launch HIV testing in primary care centers, UAB Hospital’s emergency department (UAB ED), and select Historically Black Colleges and Universities (HBCUs). A second goal is to increase HIV testing services offered by community-based organizations. The Expanded CTS initiative aims to identify HIV-positive individuals and refer them for care early in the disease progress. Surveillance data guides the initiative by identifying locations where HIV testing sites would be most beneficial to populations disproportionately affected by HIV, including African Americans, Hispanics, MSM, and injection drug users.

HIV Testing Experience

The Division of HIV/AIDS Prevention and Control partners with the Division of STD Control to accomplish HIV Counseling, Testing, Referral, and Partner Notification (CTRPN) services. HIV Coordinators manage ERTS services and coordinate community activities related to HIV prevention. ERTS is a prevention education, outreach, and referral service focusing on early treatment access for newly identified HIV positive individuals. Health department nurses perform HIV pre-test counseling, obtain clinical specimens, and provide results and post-test counseling to HIV-negative clients. STD Disease Intervention Specialists follow up with HIV-positive clients providing post-test counseling, making referrals for social and medical services, and perform partner notification. Disease Intervention Specialists also follow up with HIV-negative clients considered high-risk.

ADPH also provides technical assistance to HIV screening programs throughout the state. The HIV Counseling and Testing program provides training to sites applying for funded HIV testing services. Staff

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members participate in protocol development, process planning, and pre- and post-test counseling training. Educational materials are provided and state/federal laws and regulations are reviewed. Updated HIV information is provided during routine audits. The ADPH Bureau of Clinical Laboratories (BCL) performs all confirmatory HIV testing.

BCL performed 130,553 HIV tests in 2011 compared to 112,799 tests in 2010, reflecting an increase of 14%. This increase is primarily due to 7480 HIV tests submitted through the Expanded CTS initiative: UAB ED submitted 7132 tests, HBCU submitted 133, and Primary Care Centers submitted 215. Tests submitted through the Expanded CTS initiative account for 6% of all HIV tests performed by BCL in 2011. The majority of positive Western Blots were submitted by STD Clinics (38%), while Hospitals, Private Clinics, and Physicians submitted 32% of positive Western Blots tested at BCL and Community-based Organizations submitted 24% (Table 26).

Table 26. HIV Counseling and Testing Data by Clinic Type, Alabama 2011

Clinic Type	Reactive (%)	Negative (%)	Total (%)	% Reactive
Community-based Organization †	154 (23.6)	167 (0.1)	321 (0.2)	0.001
Community Health Center	34 (5.4)	5052 (3.9)	5086 (3.9)	0.007
Drug Treatment Center	2 (0.3)	1595 (1.2)	1597 (1.2)	0.001
Family Planning Clinic	21 (3.2)	42597 (32.8)	42618 (32.6)	0.000
Historically Black College University (HBCU)†	0 (0.0)	133 (0.1)	133 (0.1)	0.000
Hospital/Private Clinic/Physician	206 (31.5)	17349 (13.4)	17555 (13.4)	0.012
Other Alternate Test Site	71 (10.9)	18672 (14.4)	18743 (14.4)	0.004
Prenatal/Maternity Clinic	2 (0.3)	1045 (0.8)	1047 (0.8)	0.002
Primary Care Expanded CTS†	0 (0.0)	215 (0.2)	215 (0.2)	0.000
Prison/Jail	7 (0.1)	2776 (2.1)	2783 (2.1)	0.003
Sexually Transmitted Disease Clinic	251 (38.4)	35437 (27.3)	35688 (27.3)	0.007
Tuberculosis Clinic	3 (0.5)	1075 (8.3)	1078 (0.8)	0.003
Unknown	56 (8.6)	3954 (3.0)	4010 (3.1)	0.014
Total	653 (100)	129900 (100)	130553 (100)	0.005

Source: Alabama Department of Public Health, HIV/AIDS Prevention and Control Division, calendar year 2011.

Note: Percentages may not sum 100% due to rounding. † Expanded Counseling and Testing Services (CTS).

Of the 653 individuals with HIV-positive Western Blots, 70% (458/653) were African American and 24% (154/653) were White (Table 27). Of all HIV tests performed by BCL, 55% (71823/130553) were African American and 40% (51622/130553) were White.

Table 27. HIV Counseling and Testing Data by Race, Alabama 2011

HIV Western Blot Result	White (%)	African American	Multi-Racial	Asian	Other	Unknow n	Total
Reactive	154 (0.3)	458 (0.6)	0 (0.0)	3 (0.4)	0 (0.0)	38 (0.7)	653 (0.5)
Negative	51468 (99.7)	71365 (99.4)	68 (100)	793 (99.6)	949 (100)	5257 (99.3)	129900 (99.5)
Total	51622 (100)	71823 (100)	68 (100)	796 (100)	949 (100)	5295 (100)	130553 (100)

Source: Alabama Department of Public Health, HIV/AIDS Prevention and Control Division.

Note: Percentages may not sum 100% due to rounding. Rates per 100,000 persons in racial/ethnic group, calculated using 2010 United States Census report.

Heterosexual contact was the primary risk factor (66%) reported among individuals tested through the Expanded CTS initiative in 2011, followed by non injection drug use (28%) and MSM (4%). Among individuals testing positive for HIV through the initiative, 45% reported MSM as their primary risk factor. However, statistics demonstrate heterosexual contact is also a significant risk factor for HIV infection, demonstrating the need for HIV prevention programs targeting heterosexuals (Figure 5). Based on information provided in the Epidemiologic Profile as well as data presented in the Alabama HIV Prevention Comprehensive Plan (AHPCP), Expanded CTS will be directed toward MSM and heterosexuals. Heterosexual men and women who have sex with men (WSM) will be targeted. Special emphasis will be placed on African Americans in all populations.

CONCLUSION

The Integrated Epidemiologic Profile provides guidance for HIV prevention and control efforts by identifying target populations infected with HIV and at risk of HIV infection. Alabama's HIV-positive population is growing, partially due to awareness via expanded rapid testing and opt-out routine testing and partially due to effective treatment options increasing the longevity of people living with HIV. The African American community bears the brunt of the disease, making up 65% of prevalent HIV cases and 68% of newly diagnosed HIV infections in Alabama. Recent trends suggest a shift in the epidemic from men who have sex with men toward heterosexual contact.

Despite the many challenges facing Alabama in regards to its health status and the increasing trends in new HIV infections, opportunities to improve access to care and services for Alabamians living with HIV infection exist. Expanding access to screening and prevention services may decrease new infection rates throughout Alabama. Improved access to HIV services can be sustained through collaborative partnerships with Community-based Organizations, Primary Care Clinics, and Community Health Centers as well as through state and national policy changes being implemented in preparation for the full health care reform.

HIV/AIDS Integrated Epidemiological Profile

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Alabama Department of Public Health

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DATA SOURCES

Data was compiled from a variety of sources. Anyone citing or interpreting data should acknowledge all data sources have strengths and limitations.

Alabama's Enhanced Referral Tracking System (ERTS)

The ADPH Enhanced Referral Tracking System (ERTS) provides significant data in determining the demographics and geographical location of HIV positive Alabama residents aware of their HIV status and not in care.

America's Health Rankings

The United Health Foundation partners with the American Public Health Association and Partnership for Prevention to publish America's Health Rankings, which provide the longest running state-by-state analysis of the nation's health.

Auburn University at Montgomery (AUM) Center for Demographic Research

The Auburn University at Montgomery (AUM) Center for Demographic Research conducts high quality research on population topics and provides demographic data, research results, and guidance to Alabama's citizens, businesses, non-profit organizations, and public agencies.

Birth and Death Data

The ADPH Center for Health Statistics receives information on all births and deaths occurring in Alabama. Birth certificates include demographic information about the newborn and parents, including insurance status, prenatal care, prenatal risk factors, maternal morbidity, mode of delivery, pregnancy history, and clinical characteristics of the newborn. Death certificates include demographics, underlying cause of death, and contribution of selected factors to death. The data can be used to determine the number of deaths related to HIV across the state or in a specific area. Deaths resulting from AIDS or whose underlying cause was HIV infection may be under reported on a death certificate. Clinical information related to HIV status may be missing.

Direct Care Update Report

The ADPH HIV/AIDS Direct Care and Services Branch oversees Alabama's Ryan White Part B program activities, including medical and social services, medical and non-medical case management, and Alabama's AIDS Drug Assistance Program (ADAP). Alabama's HIV care and service providers apply for Ryan White funding through the ADPH to provide defined core medical and support services to the HIV positive patient population. ADAP's goal is to reduce associated morbidity and mortality among HIV infected persons by delaying the progression of HIV disease through prevention and treatment.

HIV Surveillance Data

The Alabama Department of Public Health (ADPH) has been collecting confidential AIDS and HIV information since 1982 and 1987, respectively. Standardized case report forms are used to collect socio-demographic information, mode of exposure, laboratory and clinical information and vital statistics. HIV

data may underestimate the number of recently infected individuals as many people have not been tested and are unaware of their status. In addition, newly diagnosed cases may be reported to the health department at any point during the clinical spectrum of disease. Therefore, HIV surveillance data provides an estimate of the number of persons known to be infected with HIV.

Kaiser Family Foundation

The Kaiser Family Foundation is a non-profit, private operating foundation focusing on the major health care issues facing the United States, as well as the nation's role in global health policy. The Foundation serves as a non-partisan source of facts, information, and analysis for policymakers, the media, the health care community, and the public. The Foundation provides free, up-to-date, and easy-to-use health data for all 50 states. The Foundation is not associated with Kaiser Permanente or Kaiser Industries.

Sexually Transmitted Disease (STD) Case Reporting

The ADPH Division of STD Control conducts statewide surveillance to determine the number of reported STD cases and monitor trends. Services provided include partner counseling and notification, referral services for examination, treatment, and social services. STD data are widely available at the state and local level and serve as a surrogate marker for unsafe sexual practices and demonstrate the prevalence of changes in specific behaviors because of shorter incubation periods between exposure and infection. Chancroid, Chlamydia, gonorrhea, HIV, and syphilis are reportable STDs in Alabama. Certain STDs (e.g., ulcerative STDs) can facilitate the transmission or acquisition of HIV infection. Changes in STD trends may indicate changes in characteristics of persons who delay testing, or who are not tested at all.

United States Census Bureau

The Census Bureau collects and provides information about the people and economy of the United States. The Census Bureau's website (<http://www.census.gov/>) includes data on demographic characteristics of the population, family structure, educational attainment, income level, housing status, and the proportion of persons who live at or below the federal poverty level. State and county-specific data (e.g. reports on population changes) are easily accessible, and links to other websites with census information are included.

Youth Risk Behavior Surveillance Survey (YRBSS)

The Youth Risk Behavior Surveillance Survey (YRBSS) is a self-administered questionnaire given every two years to a representative sample of high school students (grades 9 to 12) at state and local levels. In Alabama, the survey is administered at the state level and includes questions related to sexual behavior and drug use. The YRBSS is a standardized questionnaire, so comparisons can be made across participating jurisdictions. Jurisdictions have the ability to add questions of local interest. A limitation of the YRBSS project is the potential for under or over reporting as the survey relies upon self-reported information. Another limitation is data are representative only of adolescents enrolled in school and cannot be generalized to all adolescents. A third limitation significant to HIV risk factor assessment is that the survey does not include questions about homosexual or bisexual behavior.