

# **State of Alabama**

## **HIV Surveillance**

### **2014 Annual Report**

**Prepared by:**  
**Division of STD Prevention and Control**  
**HIV Surveillance Branch**

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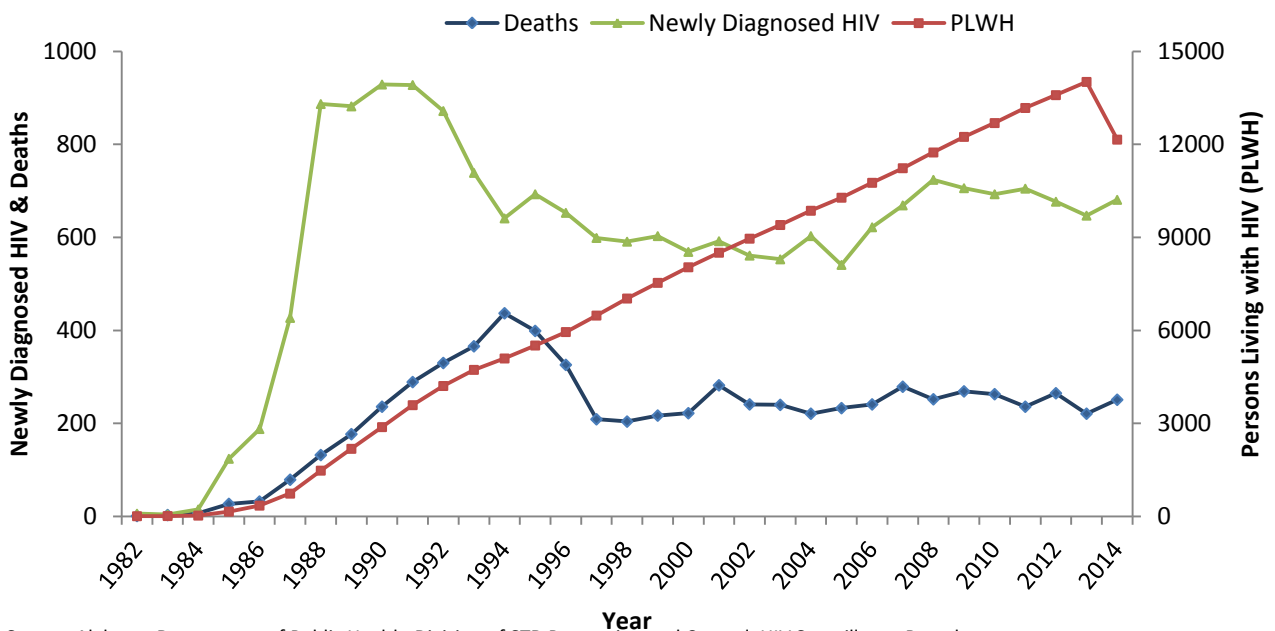
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**A. BACKGROUND**

In 1982, the Alabama Department of Public Health (ADPH) initiated AIDS case surveillance. Confidential, name-based HIV reporting began in 1987 when Alabama’s Public Health Laws were amended requiring all facilities (private and public), including laboratories and hospitals, to report all cases of HIV infection. In 2011, all tests indicative of HIV infection, including CD4 results and viral loads (detectable and undetectable), became reportable under Alabama’s Notifiable Disease Rules. Alabama’s Notifiable Disease Rules were again amended to require mandatory reporting of all perinatal HIV exposures occurring among infants less than 18 months of age, effective December 31, 2014. Between 1982 and 2014, a total of 19,324 cases of HIV infection in Alabama residents have been reported to ADPH.

The number and longevity of persons living with HIV continues to increase. 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 1). Since 2005, the number of deaths has averaged 251 per year (range 221-279). Newly diagnosed HIV infections have dropped slightly over the past six years. At the end of 2014, 12,158 persons were known to be living with HIV infection in Alabama. This reflects a 13% decrease in PLWH from 2013 due to an update in surveillance (eHARS database) data with current patient addresses that accounts for PLWH who have moved from Alabama.

**Figure 1. Persons Living with HIV, Newly Diagnosed HIV, and Deaths, Alabama 1982-2014**



Source: Alabama Department of Public Health, Division of STD Prevention and Control, HIV Surveillance Branch.  
 Note: PLWH include persons living with HIV infection (non-AIDS) and Stage 3 (AIDS) as of December 31st for the year reported.

An estimated 1 in 6 people living with HIV in Alabama are unaware of their infection and, subsequently, are not receiving regular medical care to manage the disease. Taking the prevalence estimate into consideration, an additional 1,945 Alabama residents may be infected and unaware of their positive HIV status.

The HIV epidemic affects persons in all gender, age, racial, ethnic, 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 homosexual men. Disparities remain with gay, bisexual, and other men who have sex with men (MSM), young adults, and racial and ethnic minorities bearing a disproportionate burden of HIV. As the number of persons living with HIV increases and the number of deaths continuing to decline, the importance of identifying populations most affected and at risk for HIV infection is paramount. Alabama must be diligent in planning effective HIV treatment and prevention efforts with the allocation of limited resources. This report provides demographics, risk characteristics, and trends of HIV infections diagnosed among Alabama residents through 2014.

## **B. HIGHLIGHTS**

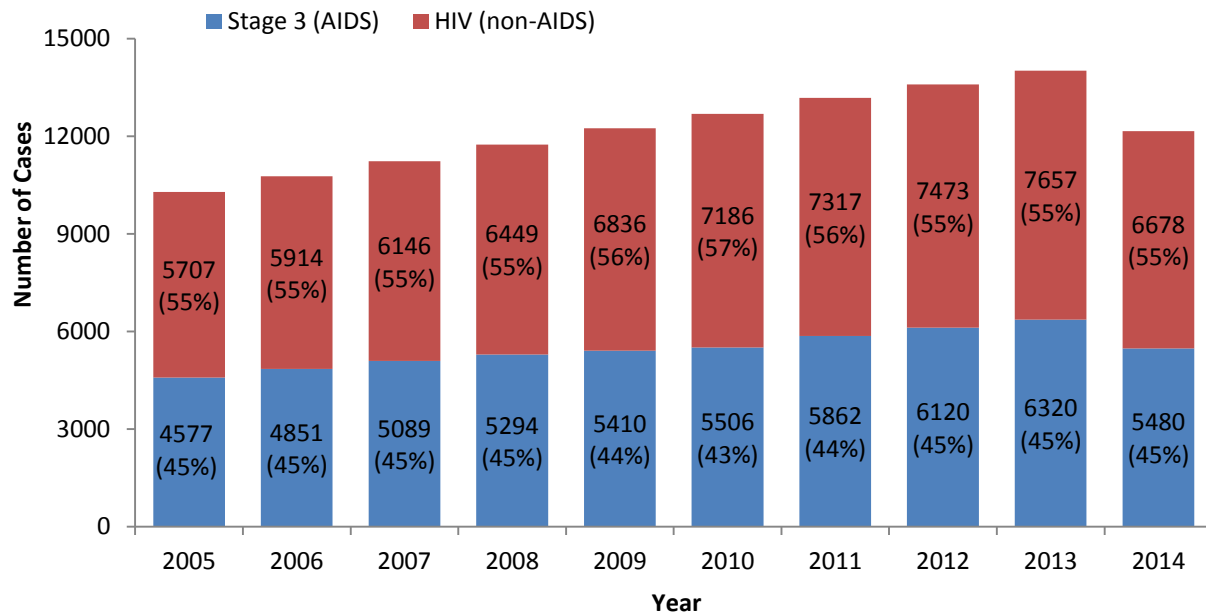
- At the end of 2014, 12,158 Alabama residents were known to be living with HIV and 5,480 (45%) of these had progressed to Stage 3 (AIDS) infection. An estimated 1 in 6 people living with HIV in Alabama are unaware of their infection, suggesting 14,474 Alabama residents may be infected with HIV.
- 681 newly diagnosed HIV infections were reported among Alabama residents in 2014. This number is an underestimate as it does not account for individuals unaware of their status.
- There are persons living with HIV in every county in Alabama and the number continues to increase. In 2014, more HIV cases were diagnosed in Jefferson County than any other county while the highest rate of HIV per 100,000 residents was greatest in rural Bullock County.
- Alabama is experiencing a downward shift in the age distribution of newly diagnosed HIV infections, as adolescents and young adults (13-29 years) have emerged as the most affected age group.
- While male-to-male sexual activity continues to be the predominant mode of exposure for HIV infection, heterosexual contact is the second most common mode of exposure.
- Black males reporting sex with another male represent the majority of newly diagnosed HIV infections occurring among adolescents and young adults aged 15 to 29 years.
- More than three quarters (78%) of newly diagnosed HIV infections during 2014 were linked to care within 90 days of diagnosis. However, Alabama's estimated unmet need is 41%, as 5,775 of the 14,019 persons living with HIV as of December 31, 2013 did not access care during 2013.

**C. OVERALL TRENDS**

The state of Alabama continues to experience an HIV epidemic of moderate magnitude when compared to other states. A cumulative total of 19,677 HIV infections have been diagnosed among Alabama residents since reporting began in 1982, with 12,158 HIV positive individuals currently living in Alabama, as of December 31, 2014. During 2014, 681 newly diagnosed HIV infections were reported among Alabama residents.

The proportion of persons living with HIV (non-AIDS) compared to Stage 3 (AIDS) infection has remained relatively stable over the past ten years (Figure 2) noting that 2014 was adjusted for current address. This trend is largely due to the introduction of effective drug treatments and therapies, which are able to delay the progression to Stage 3 (AIDS) diagnoses and death. At the end of 2014, 5,480 (45%) of known HIV positive individuals were reported be living with Stage 3 (AIDS) diagnoses.

**Figure 2. Persons Living with HIV (non-AIDS) and AIDS, Alabama 2005-2014**



Source: Alabama Department of Public Health, Division of STD Prevention and Control, HIV Surveillance Branch. Persons living with HIV (non-AIDS) and AIDS include persons living as of December 31st for the year reported.

Blacks continue to be disproportionately affected by the HIV epidemic compared to other racial and ethnic groups (Table 1). Although 27% of Alabama’s population identified Black during 2014 according to United States Census Bureau population estimates, 71% of newly diagnosed HIV cases and 70% of all persons living with HIV were Black during 2014.

**Table 1. Characteristics of Newly Diagnosed and Prevalent HIV Cases, Alabama 2014**

Characteristic	Newly Diagnosed Cases		Prevalent Cases	
	Number (%)	Rate	Number (%)	Rate
<b>Gender</b>				
Male	552 (81.1)	23.5	8759 (72.6)	372.7
Female	129 (18.9)	5.2	3399 (27.5)	135.6
<b>Race/Ethnicity</b>				
Black, Not Hispanic	481 (70.6)	37.6	7885(69.9)	616.7
White, Not Hispanic	160 (23.5)	5.0	3441 (28.3)	107.2
Multiple Races	18 (2.6)	26.4	413 (3.5)	605.0
Hispanic	20 (2.9)	10.0	313 (2.6)	156.0
Other/Unknown	2 (0.3)	-	99 (0.9)	107.3
<b>Age Group (years)</b>				
<13	1(0.1)	-	37 (0.3)	4.7
13-19	40( 5.9)	9.0	86 (0.6)	19.4
20-29	321 (47.1)	47.9	1797 (12.8)	268.2
30-39	130 (19.1)	21.5	2781 (19.8)	460.9
40-49	97 (14.2)	15.5	4228 (30.2)	677.8
≥50	92 (13.5)	5.4	5090 (36.3)	296.2
<b>Reported Risk Factor</b>				
Men who have Sex with Men (MSM)	369 (54.2)	N/A	6079 (43.4)	N/A
Heterosexual Contact	68 (10.0)	N/A	2831 (20.2)	N/A
Injection Drug Use (IDU)	10 (1.5)	N/A	974 (7.0)	N/A
MSM/IDU	7 (1.0)	N/A	563 (4.0)	N/A
Perinatal Exposure	1 (0.1)	-	106 (0.8)	N/A
Transfusion/Hemophilia	-	-	35 (0.3)	N/A
Undetermined	226 (26.0)	N/A	3431 (24.5)	N/A
<b>Imputed Risk among Cases ≥13 years</b>				
MSM	487 (71.5)	N/A	7600 (54.4)	N/A
Heterosexual Contact	151 (22.2)	N/A	4284 (30.6)	N/A
IDU	30 (4.4)	N/A	1372 (9.8)	N/A
MSM/IDU	13 (1.9)	N/A	677 (4.8)	N/A
Other Confirmed Risk	-	-	49 (0.3)	N/A
<b>Public Health Area (PHA)</b>				
PHA 1	13 (1.9)	4.3	270 (1.9)	90.3
PHA 2	61 (8.9)	7.4	1420 (10.3)	172.6
PHA 3	44 (6.5)	15.5	606 (4.3)	212.9
PHA 4	164 (24.1)	24.8	3812 (27.2)	576.9
PHA 5	33 (4.9)	6.0	685 (4.9)	124.2
PHA 6	32 (4.7)	9.6	689 (4.9)	206.0
PHA 7	19 (2.8)	14.1	432 (3.1)	320.0
PHA 8	143 (21.0)	22.0	2478 (17.7)	380.9
PHA 9	30 (4.4)	8.1	668 (4.8)	179.4
PHA 10	39 (5.7)	12.1	899 (6.4)	278.6
PHA 11	103 (15.1)	24.8	2014 (14.4)	485.2
Unknown	-	-	46 (0.3)	1.0
<b>Total</b>	<b>681 (100)</b>	<b>14.0</b>	<b>12158 (100)</b>	<b>250.7</b>

Source: Alabama Department of Public Health, Division of STD Prevention and Control, HIV Surveillance Branch.

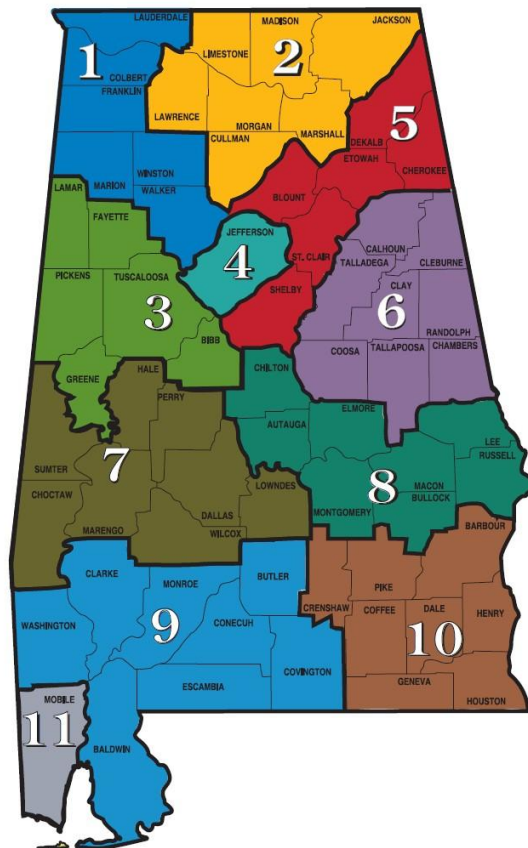
Note: Imputed risk estimated utilizing multiple imputation methodology among cases ≥13 years. Newly diagnosed age group represents age at diagnosis. Prevalent age group represents current age. Percentages may not sum 100% due to rounding. Rates per 100,000 persons calculated using US Census Bureau 2014 population estimates. Rates only calculated for variables with ≥ 5 cases. Case counts less than 12 (and accompanying rates and trends) are considered statistically unreliable and should be interpreted with extreme caution.

Over half (66%) of newly diagnosed HIV infections in 2014 occurred among adults in their twenties and thirties - 47% and 19%, respectively (Table 1). However, the majority of persons living with HIV infection (i.e., prevalent cases) were 40 years or older (67%).

In 2014, over half of the newly diagnosed cases (54%) and 43% of the prevalent cases reported male-to-male sexual activity as the primary risk factor for infection. Imputed risk estimates 72% of newly diagnosed cases and 54% of prevalent cases occurring in adults and adolescents  $\geq 13$  years may have been due to male-to-male sexual activity. Heterosexual contact was the second leading risk factor for HIV infection, representing 10% of newly diagnosed cases and 20% of prevalent cases. Imputed risk estimates 22% of newly diagnosed cases and 31% of prevalent cases occurring in adults and adolescents  $\geq 13$  years may have been due to heterosexual contact.

Sixty-two percent of all 2014 newly diagnosed and prevalent HIV cases resided in Public Health Areas (PHAs) 4, 8, and 11, where the larger cities of Birmingham, Montgomery, and Mobile are located (Table 1 and Figure 3).

**Figure 3. Alabama Public Health Area Map**



Source: Alabama Department of Public Health.

Five of Alabama’s 6 most populous counties (Jefferson, Mobile, Montgomery, Madison, and Tuscaloosa) consistently report the highest number of new HIV cases each year (Table 2). Each of these counties are considered major urban counties with > 200,000 residents and combined, they account for over 60% of newly diagnosed infections annually. Jefferson County, with a population > 650,000, averages 27% of newly diagnosed HIV infections each year.

**Table 2. Top Five Counties with the Highest Frequency of Newly Diagnosed HIV Cases, Alabama 2010 – 2014**

County	2010		2011		2012		2013		2014	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Jefferson	194	29.5	207	31.5	193	29.3	171	25.9	164	24.8
Madison	36	10.7	46	13.5	44	12.8	41	11.8	41	11.7
Mobile	91	22.0	96	23.2	89	21.5	95	22.9	103	24.8
Montgomery	77	33.5	79	34.1	71	31.0	72	31.8	97	42.9
Tuscaloosa	31	15.9	26	13.2	32	16.1	47	23.4	31	15.3
Statewide	693	14.5	705	14.7	677	14.1	647	13.4	681	14.0

Source: Alabama Department of Public Health, Division of STD Prevention and Control, HIV Surveillance Branch.

Note: All rates are per 100,000 county populations, calculated from the 2010 United States Census report (i.e., 2010 estimate for 2009-2010, 2011 estimate for 2011, 2012 estimate for 2012, 2013 estimate for 2013, and 2014 estimate for 2014.)

However, the rate of new HIV infections per 100,000 residents is often highest in Alabama’s rural counties (Table 3). Rates are only calculated for counties with ≥ 5 cases, and all but one of the rural counties (Russell County) ranked among the top five between 2010 and 2014 are considered extremely rural, with populations below 50,000 residents. In fact, Jefferson and Montgomery Counties are the only non-rural counties ranked among the top 5, with Montgomery consistently ranking each of the past five years. The high rates seen in Alabama’s rural counties indicate a need for increased HIV prevention efforts in focused rural areas.

**Table 3. Annual Top Five County Highest Rates of Newly Diagnosed HIV Cases, Alabama 2010-2014**

County	2010		2011		2012		2013		2014	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Bullock	0	-	1	-	0	-	3	28.2	12	111.5
Chambers	9	26.4	11	32.4	5	14.7	5	17.6	12	35.2
Conecuh	2	-	4	-	1	-	5	38.8	3	-
Dale	9	17.9	1	-	2	-	9	18.0	22	44.5
Dallas	5	11.4	10	23.2	13	30.5	14	33.3	8	19.2
Greene	0	-	1	11.2	2	22.6	1	-	6	70.2
Hale	7	44.5	7	45.5	1	-	4	-	7	46.1
Jefferson	194	29.5	207	31.5	193	29.3	171	25.9	164	24.8
Lowndes	5	44.3	6	54.0	0	-	5	46.7	2	-
<b>Montgomery</b>	77	<b>33.5</b>	79	<b>34.1</b>	71	<b>31.0</b>	72	<b>31.8</b>	97	<b>42.9</b>
Pickens	3	-	2	-	6	31.0	1	-	4	-
Russell	18	33.8	6	10.9	7	12.1	8	13.4	12	20.1
Statewide	693	14.5	705	14.7	677	14.1	647	13.4	681	14.0

Source: Alabama Department of Public Health, Division of STD Prevention and Control, HIV Surveillance Branch.

Note: Rates per 100,000 persons calculated using US Census Bureau 2014 population estimates. Rates only calculated for counties with ≥ 5 cases. The highest five rates per year are highlighted in gray. Case counts less than 12 (and accompanying rates and trends) are considered statistically unreliable and should be interpreted with extreme caution. All rates are per 100,000 county populations, calculated from the 2010 United States Census report (i.e., 2010 estimate for 2009-2010, 2011 estimate for 2011, 2012 estimate for 2012, 2013 estimate for 2013, and 2014 estimate for 2014.)



**D. HIV BY RACE, ETHNICITY, AND BIRTH SEX**

The HIV epidemic continues to disproportionately affect Blacks in Alabama. In 2014, the rate of HIV diagnosis among both Black males and Black females was 8 times that of White males and White females (7.6 and 8.6, respectively.) (Table 4).

**Table 4. Newly Diagnosed HIV Cases by Race, Ethnicity, and Birth Sex, Alabama 2014**

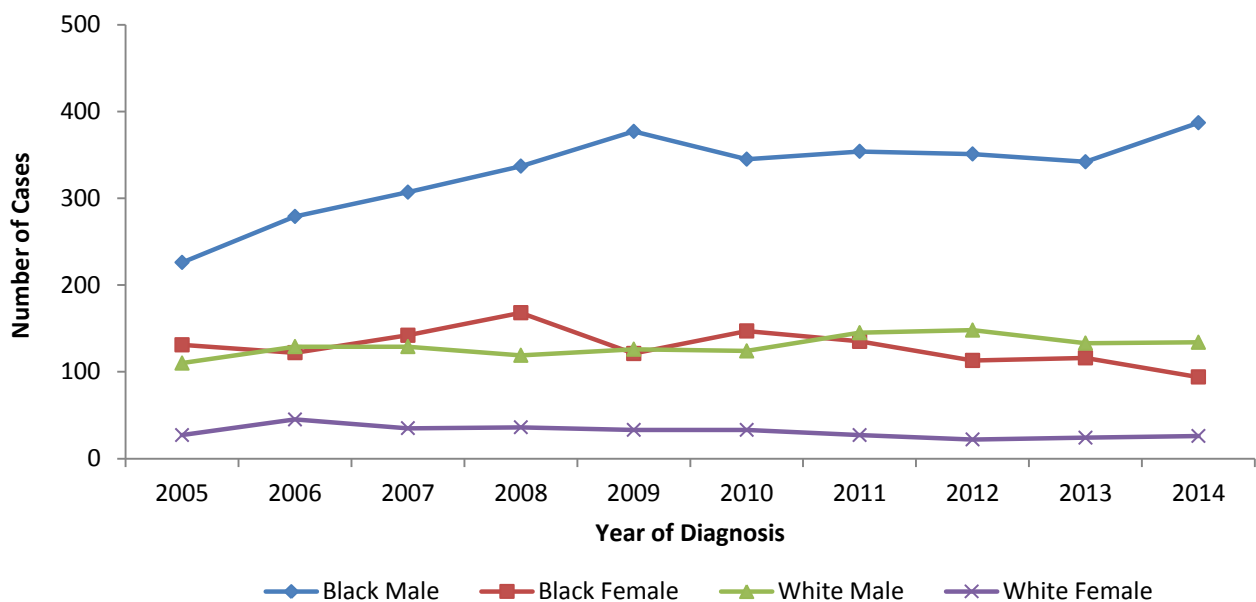
Race/Ethnicity	Males		Females		Total	
	Number (%)	Rate	Number (%)	Rate	Number (%)	Rate
Black, Not Hispanic	387 (70.1)	65.0	94 (72.9)	13.8	481 (70.6)	37.6
White, Not Hispanic	134 (24.3)	8.5	26 (20.2)	1.6	160 (23.5)	5.0
Multiple Races	13 (2.4)	37.1	5 (3.9)	15.1	18 (2.6)	26.4
Hispanic	16 (2.9)	14.8	4 (3.1)	-	20 (2.9)	10.0
Other/Unknown	2 (0.4)	-	0 -	-	2 (0.3)	-
Total	552 (100)	23.5	129 (100)	5.2	681 (100)	14.0

Source: Alabama Department of Public Health, Division of STD Prevention and Control, HIV Surveillance Branch.

Note: All rates are per 100,000 populations, calculated using race/ethnicity reported in the 2010 United States Census Estimates. Rates only calculated for race/ethnicity with ≥ 5 cases. Case counts less than 12 (and accompanying rates and trends) are considered statistically unreliable and should be interpreted with extreme caution. Percentages may not sum 100% due to rounding.

Black males continue to have the highest number of newly diagnosed HIV infections each year, averaging over one-half (52%) of all cases over the past 5 years (Figure 4). The number of newly diagnosed HIV infections among White males and Black females remained closely the same for the past four years with White males slightly greater averaging 140 cases over that time period.

**Figure 4. Trends in Newly Diagnosed HIV Cases by Race and Sex, 2005-2014**



Source: Alabama Department of Public Health, Division of STD Prevention and Control, HIV Surveillance Branch.

**E. HIV BY AGE GROUP**

In 2014, nearly one-half (47%) of all newly diagnosed HIV infections were young adults in their twenties, then declined with subsequent age groups (Table 5). Men experienced a sharper decline than women. Fifty percent of males were diagnosed during their twenties, compared to 34% of females. Twenty-six percent of men were 40 or older at diagnosis, comparable to 34% of women.

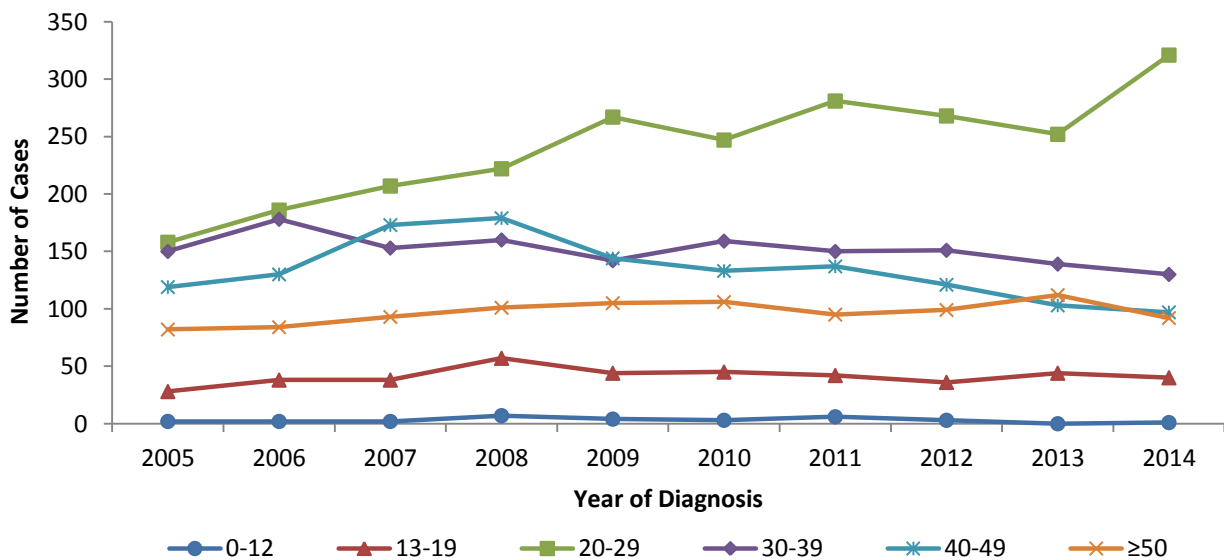
**Table 5. Newly Diagnosed HIV Cases by Age Group and Sex, Alabama 2014**

Age Group (years)	Males (N=552), Number (%)	Females (N=129), Number (%)	Total (N=681), Number (%)
0-12	-	1 (0.7)	-
13-19	33 (6.0)	7 (5.4)	40 (5.9)
20-29	277 (50.2)	44 (34.1)	321 (47.1)
30-39	97 (17.6)	33 (25.6)	130 (19.1)
40-49	79 (14.3)	16 (14.0)	97 (14.2)
≥50	66 (12.0)	26 (20.2)	92 (13.5+)

Source: Alabama Department of Public Health, Division of STD Prevention and Control, HIV Surveillance Branch.

In stratifying the 2014 data by age, young adults in their twenties emerged as the most affected age group (Figure 5). Prior to 2005, the majority of new HIV cases were reported among adults in their thirties. This downward shift in Alabama’s newly diagnosed HIV population calls for increased prevention efforts targeting a younger population. Section G. High Risk Target Groups provides a closer look at these findings.

**Figure 5. Trends in Newly Diagnosed HIV Cases by Age Group, Alabama 2005-2014**



Source: Alabama Department of Public Health, Division of STD Prevention and Control, HIV Surveillance Branch.

### F. HIV BY MODE OF EXPOSURE

During 2014, the majority (76%) of newly diagnosed cases reported MSM (alone or in combination with intravenous drug use [IDU]) as the primary mode of exposure (Table 6). Data were statistically adjusted to account for missing transmission category. An estimated 1 in 5 (20.3%) MSM living with HIV in Alabama are unaware of their infection and, thus, are not receiving regular medical care to manage the disease. Prevalence estimates suggests as many as 500 HIV infections occurred among MSM and combined MSM/IDU during 2014.

**Table 6. Newly Diagnosed HIV Cases by Mode of Exposure and Race/Ethnicity, Alabama 2014**

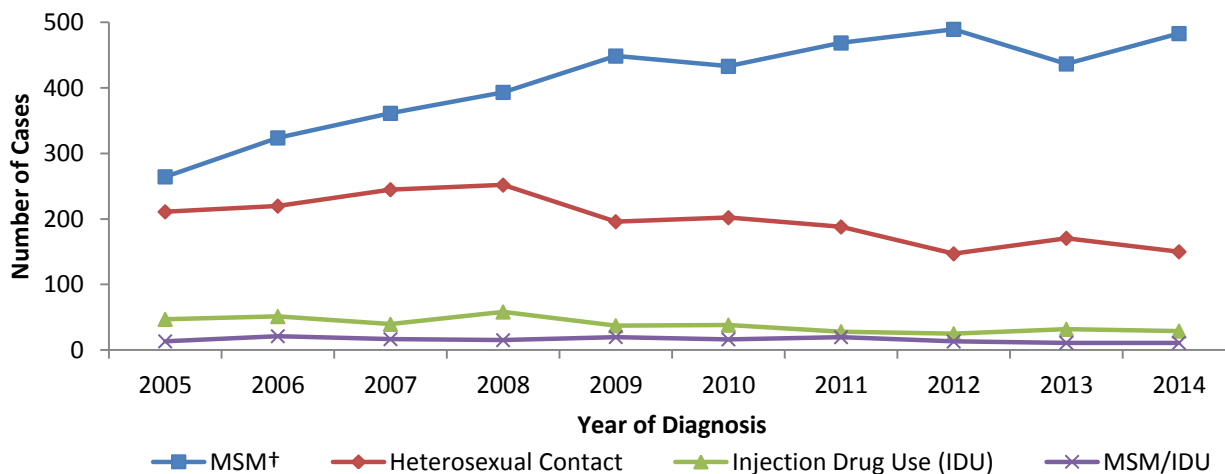
Mode of Exposure	Black, Not Hispanic Number (%)	White, Not Hispanic Number (%)	Multiple Races, Number (%)	Hispanic, Number (%)	Total, Number (%)
MSM	339 (71.4)	120 (75.0)	11 (57.9)	12 (60.0)	482 (71.6)
Heterosexual Sex	116 (24.4)	23 (14.3)	4 (21.0)	7 (35.0)	150 (22.3)
IDU	15 (3.2)	10 (6.3)	3 (15.8)	1 (5.0)	29 (4.3)
MSM/IDU	4 (0.8)	7 (4.4)	1 (5.3)	-	12 (1.8)
<b>Total</b>	<b>474 (100)</b>	<b>160 (100)</b>	<b>19 (100)</b>	<b>20 (100)</b>	<b>673 (100)</b>

Source: Alabama Department of Public Health, Division of STD Prevention and Control, HIV Surveillance Branch.

Note: Imputed risk was estimated utilizing multiple imputation methodology among cases ≥13 years and did not assign risk for 8 cases, therefore, n=673 for Table 6. Percentages may not sum 100% due to rounding.

Over the past 10 years, newly diagnosed HIV infections among MSM have increased while the number of new cases reported among heterosexuals has decreased (Figure 6). However, it is important to note that the steady rise of HIV among MSM is not isolated. Many HIV positive MSM do not identify as being gay or bisexual, and identify as heterosexual. While recent trends indicate an increased need for HIV treatment and prevention efforts among MSM, statewide efforts should continue to target all individuals, regardless of sexual orientation.

**Figure 6. Trends in Newly Diagnosed HIV Cases by Mode of Exposure, Alabama 2005-2014**



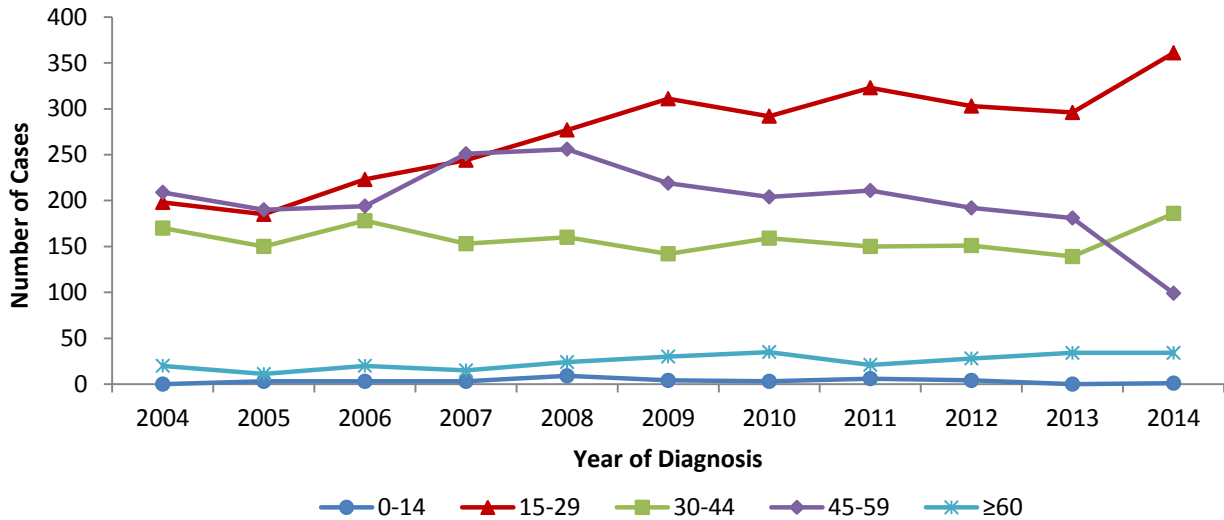
Source: Alabama Department of Public Health, Division of STD Prevention and Control, HIV Surveillance Branch.

Note: Multiple imputation methodology was used to estimate unknown risk among cases ≥13 years. †MSM - Men who have Sex with Men.

**G. HIGH RISK TARGET GROUPS**

Alabama is experiencing a downward shift in the age distribution of newly diagnosed HIV infections as adolescents and young adults age 15-29 years are now the most affected age group (Figure 7).

**Figure 7. Trends in Newly Diagnosed HIV Cases by Age Group, Alabama 2004-2014**



Source: Alabama Department of Public Health, Division of STD Prevention and Control, HIV Surveillance Branch.

Adolescents and young adults (15-29 years) are twice as likely to be infected with HIV as the average Alabama resident and represent over one-half (53%) of all newly diagnosed cases (Table 7), although this age group accounts for only 20% of Alabama’s population. In contrast, the majority (53%) of persons living with HIV infection in Alabama as of December 31, 2014 are age 45 or older, due to the availability of and adherence to effective antiretroviral therapies. Without early, primary prevention education, the alarming rate of new infections among adolescents and young adults can be expected to significantly increase the total number of persons living with HIV infection in Alabama, as HIV positive individuals are becoming infected at a younger age and living longer.

**Table 7. HIV Infection Rates by Age Group, Alabama 2014**

Age Group (Years)	Newly Diagnosed, 2014		Persons Living with HIV, 2014	
	Number (%)	Rate	Number (%)	Rate
0-14	1 (0.1)	0.1	39 (0.3)	4.3
15-29	361 (53.0)	36.5	1793 (14.8)	181.5
30-44	186 (27.3)	20.3	3847 (31.6)	420.3
45-59	99 (14.5)	10.0	5127 (42.2)	516.9
≥60	34 (5.0)	3.3	1350 (11.1)	130.0
Statewide Total	681 (100)	14.0	12156 (100)	250.1

Source: Alabama Department of Public Health, Division of STD Prevention and Control.

Note: Newly diagnosed age groups are age at diagnosis. Prevalent age groups are current age. Rates per 100,000 Alabama residents in each age group reported in United States Census Bureau, 2014 Population Estimates. Percentages may not sum 100% due to rounding.

Black males represent the majority (66%) of newly diagnosed HIV infections among adolescents and young adults age 15-29 years (Table 8). They have over 10 times the risk of becoming infected as the average Alabama resident, and 9 times the risk of infection as their white counterparts (Tables 7 and 8). The infection rate among prevalent Black males aged 15-29 years is 10 times that of their White counterparts.

**Table 8. HIV Infection Rates Among Adolescents and Young Adults (15-29 Years) by Race, Alabama 2014**

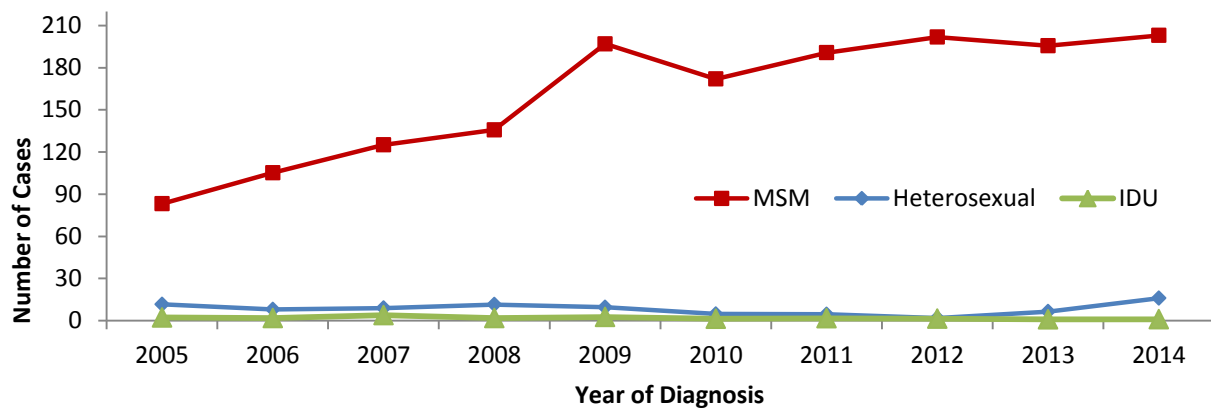
Race and Birth Sex	Newly Diagnosed, 2014		Persons Living with HIV, 2014	
	Number (%)	Rate	Number (%)	Rate
Black, Not Hispanic				
Males	238(85.6)	161.3	1120 (62.9)	759.2
Females	40 (14.4)	25.6	278 (15.1)	177.8
White, Not Hispanic				
Males	56(84.8)	18.5	229 (12.2)	75.7
Females	8 (15.2)	2.7	41 (3.1)	13.9
Total				
Males	310(85.9)	62.6	1349 (80.9)	272.4
Females	51(14.1)	10.4	319 (19.)	64.7

Source: Alabama Department of Public Health, Division of STD Prevention and Control.

Note: Newly diagnosed age groups are age at diagnosis. Prevalent age groups are current age. Rates per 100,000 Alabama residents in each race and sex group reported in United States Census Bureau, 2014 Population Estimates. Percentages may not sum 100% due to rounding.

Sex with another male is the predominant risk factor reported among newly diagnosed HIV cases in adolescent and young adult Black males (Figure 8). It is key to note that many young Black MSM do not identify as being gay or bisexual and only report as exclusively engaging in heterosexual sex with women. Therefore, increased HIV infection rates in young women can be expected to follow. Effective HIV prevention efforts must target adolescent and young adult Black men, regardless of sexual orientation.

**Figure 8. Trends in Newly Diagnosed HIV Cases Among Black Males (Age 15-29 Years) by Mode of Exposure, Alabama 2005-2014**



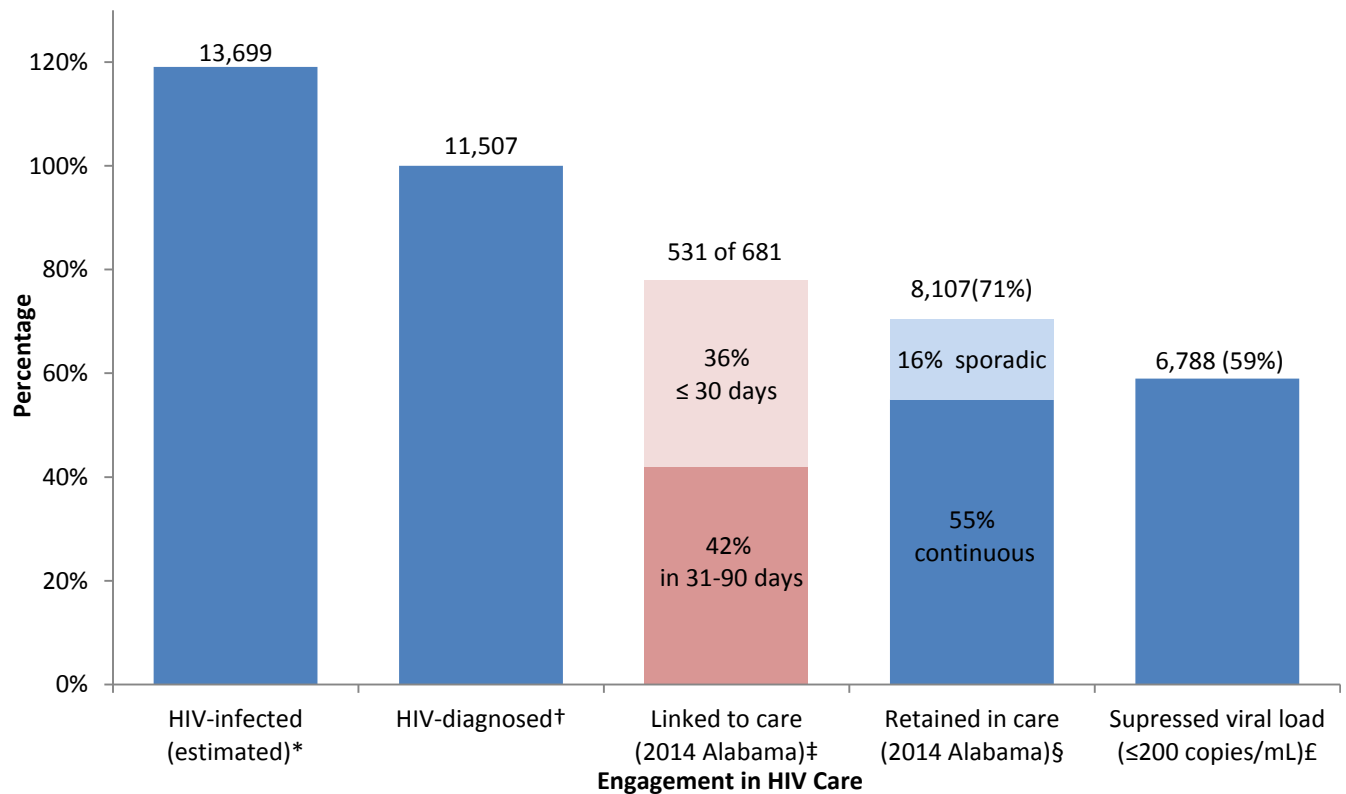
Source: Alabama Department of Public Health, Division of STD Prevention and Control.

Note: Multiple imputation methodology was used to estimate unknown risk among cases  $\geq 13$  years. MSM - Men who have Sex with Men, IDU - Intravenous Drug Use. MSM includes any MSM (i.e., MSM alone and in combination with IDU).

### H. HIV Treatment Cascade

Guidance from the National HIV Surveillance System (NHSS) was used to create Alabama’s HIV Treatment Cascade Graph (Figure 9). During 2014, 78% of the 681 newly diagnosed HIV infections were linked to care within 3 months of diagnosis (Figure 10). Of the 11,507 persons diagnosed with HIV infection through December 31, 2013 and living as of December 31, 2014, 71% were retained in care and 59% achieved viral suppression ( $\leq 200$  copies/mL) during 2014. Being virally suppressed—which means that HIV is under control at a level that keeps people healthy and reduces the risk of transmitting the virus to others—not only improves a person with HIV’s health and enhances their lifespan; it also significantly reduces their risk of transmitting HIV to partners. People living with HIV who adhere to antiretroviral therapy (ART) and have suppressed viral loads can reduce the risk of sexual transmission of HIV by 96%.

**Figure 9 HIV Treatment Cascade -- Persons Living with HIV Infection in Alabama, 2014**



Note: 2014 data is complete and was finalized December 31, 2015. Data accessed March 31, 2016.

\*Estimated by applying Alabama’s HIV-prevalence estimate (84.0%) to the number of persons diagnosed with HIV infection through December 31, 2013 and alive as of December 31, 2014 (i.e., 84% of persons aged  $\geq 13$  years living with HIV infection in Alabama are aware of their infection and 16%, or 1 in 6 HIV-positive individuals, are unaware of their infection).

†Defined as persons diagnosed with HIV infection through December 31, 2013 and alive as of December 31, 2014.

‡Calculated as the percentage of persons linked to care, evidenced by  $\geq 1$  CD4 and/or viral load test(s) within 90 days of diagnosis, among those newly diagnosed with HIV infection during 2014.

§Calculated as the percentage of persons accessing care during 2014, among those diagnosed with HIV through December 31, 2013 and alive as of December 31, 2014. Sporadic care is evidenced by only 1 CD4 or viral load test while continuous care is evidenced by  $\geq 2$  CD4 and/or viral load tests collected at least 90 days apart.

£Calculated as the percentage of persons who had suppressed viral load ( $\leq 200$  copies/mL) during 2014, among those diagnosed with HIV through December 31, 2013 and alive as of December 31, 2014.

## I. HIV INCIDENCE ESTIMATE

HIV Incidence Surveillance is a supplemental National HIV Surveillance System (NHSS) activity funded by the Centers for Disease Control and Prevention (CDC), and conducted in 25 areas across the United States, including Alabama. HIV incidence estimates provide the most representative picture of HIV trends available, identifying at-risk target groups for focused prevention efforts. HIV Incidence Surveillance provides national and local estimates of the number of recent HIV infections in a given period, and is different from the number of newly diagnosed HIV infections reported through case surveillance. Whereas a person newly diagnosed with HIV may have been infected for years before diagnosis, HIV incidence refers to persons recently infected with HIV within the last 5 months. As an HIV Incidence Surveillance site, Alabama is able to provide local incidence estimates to depict the burden of HIV in the state and assess the effectiveness of prevention efforts over time.

The CDC's HIV Incidence Surveillance methodology is based on an approach known as the Serologic Testing Algorithm for Recent HIV Seroconversion (STARHS). STARHS uses a special laboratory test (i.e., BED or AVIDITY assay) to classify newly diagnosed infections as either long-standing (i.e., infected  $\geq 6$  months prior to testing) or recent (i.e., infected within the last five months). The STARHS method is conducted on HIV-1 antibody positive blood samples collected within 90 days of diagnosis from newly diagnosed HIV cases age  $\geq 13$  years without a Stage 3 (AIDS) infection within 6 months of initial diagnosis. STARHS results indicating recent infection, in combination with case-based surveillance data HIV testing and treatment history (TTH) information, are used to estimate HIV incidence. The CDC extrapolates data collected by the 25 HIV Incidence Surveillance sites to estimate HIV incidence at the national level via a Stratified Extrapolation Approach.

The CDC estimates national HIV incidence has remained stable at about 50,000 infections per year since the mid-1990s. Blacks, Latinos, and gay and bisexual men who have sex with men (MSM) continue to be disproportionately affected by HIV in the United States. Similar disparities are seen in Alabama, where Blacks comprise 26% of the state's population (according to United States Census Bureau 2014 population estimates), but account for an estimated 71% of recent HIV infections in 2014 (Table 9). Of all recent estimated HIV infections during 2014, 76% were among gay and bisexual MSM, 19% were attributed to heterosexual contact, and 4% were attributed to injection drug use (IDU). Blacks experienced similar risk factors, with 77% of estimated recent infections occurring among MSM, 21% attributed to heterosexual contact, and 2% attributed to IDU.

Alabama's 2013 HIV incidence estimate is compared to the most recent 2010 national HIV incidence estimate included in the CDC report, [Estimated HIV incidence among adults and adolescents in the United States, 2007-2010](#).

**Table 9. Annualized HIV Incidence Estimation among Adults and Adolescents ≥ 13 Years, by Year of Infection and Selected Characteristics, Alabama 2010-2014**

	2010				2011			
	No.	%	SD	(95% CI)†	No.	%	SD	(95% CI)†
<b>Sex</b>								
Male	566	75.3%	119	(330-802)	680	82.6%	131	(423-937)
Female	186	24.7%	53	(82-289)	144	17.5%	42	(61-226)
<b>Age at infection</b>								
13-24	383	50.9%	86	(214-551)	343	41.7%	85	(176-510)
25-34	194	25.8%	57	(83-305)	250	30.4%	69	(114-385)
35-44	101	13.4%	40	(21-180)	118	14.3%	48	(24-211)
45-54	60	8.0%	30	(2-118)	91	11.1%	40	(12-169)
≥55	15	2.0%	17	(0-49)	22	2.7%	19	(0-65)
<b>Race/Ethnicity</b>								
<b>Male</b>								
Black	424	74.9%	101	(224-623)	465	68.4%	103	(263-667)
White	109	19.3%	47	(16-201)	166	24.4%	62	(44-288)
Hispanic	4	0.7%	9	(0-21)	30	4.4%	24	(0-78)
<b>Female</b>								
Black	140	75.3%	46	(48-231)	110	76.4%	37	(36-183)
White	41	22.0%	22	(0-84)	27	18.8%	17	(0-61)
Hispanic	0	0.0%	0	-	0	0.0%	0	-
<b>All</b>								
Black	563	74.9%	109	(348-778)	575	69.9%	110	(359-790)
White	150	19.9%	51	(51-250)	193	23.5%	65	(66-320)
Hispanic	4	0.5%	9	(0-21)	30	3.6%	24	(0-78)
<b>Risk Factor</b>								
<b>Black</b>								
MSM	371	65.9%	94	(185-556)	422	73.4%	98	(229-614)
IDU	20	3.6%	19	(0-56)	17	3.0%	18	(0-53)
MSM/ IDU	16	2.8%	17	(0-49)	11	1.9%	16	(0-42)
Heterosexual	157	27.9%	52	(56-259)	124	21.6%	43	(40-209)
<b>White</b>								
MSM	100	66.7%	45	(12-189)	157	81.3%	61	(37-276)
IDU	9	6.0%	11	(0-31)	12	6.2%	12	(0-37)
MSM/IDU	6	4.0%	10	(0-26)	7	3.6%	12	(0-32)
Heterosexual	35	23.3%	20	(0-74)	17	8.8%	14	(0-45)
<b>Hispanic</b>								
MSM	4	100%	8	(0-20)	21	70.0%	21	(0-62)
IDU	0	0.0%	0	-	3	10.0%	7	(0-17)
MSM/IDU	0	0.0%	0	-	4	13.3%	9	(0-22)
Heterosexual	0	0.0%	0	-	4	13.3%	9	(0-22)
<b>All</b>								
MSM	504	67.0%	113	(280-728)	616	74.8%	126	(368-864)
IDU	29	3.9%	22	(0-73)	34	4.1%	23	(0-80)
MSM/IDU	22	2.9%	20	(0-60)	23	2.8%	23	(0-68)
Heterosexual	197	26.2%	58	(83-312)	151	18.3%	46	(61-241)
<b>Total‡</b>	<b>752</b>	<b>100</b>	<b>127</b>	<b>(502-1,003)</b>	<b>823</b>	<b>100</b>	<b>138</b>	<b>(553-1,094)</b>



**Table 9. Annualized HIV Incidence Estimation among Adults and Adolescents ≥ 13 Years, by Year of Infection and Selected Characteristics, Alabama 2010-2014 (continued)**

	2012				2013			
	No.	%	SD	(95% CI)†	No.	%	SD	(95% CI)†
<b>Sex</b>								
Male	558	81.8%	88	(384-731)	591	78.3%	111	(372-810)
Female	124	18.2%	49	(28-220)	164	21.7%	55	(56-272)
<b>Age at infection</b>								
13-24	309	45.3%	63	(186-433)	345	45.7%	81	(187-503)
25-34	226	33.1%	55	(119-333)	241	31.9%	67	(111-372)
35-44	87	12.8%	32	(24-150)	79	10.5%	39	(4-155)
45-54	52	7.6%	26	(0-103)	56	7.4%	33	(0-122)
≥55	8	1.2%	11	(0-30)	33	4.4%	25	(0-83)
<b>Race/Ethnicity</b>								
<b>Male</b>								
Black	396	71.0%	73	(253-539)	444	75.1%	96	(256-631)
White	121	21.7%	38	(46-196)	122	20.6%	49	(26-218)
Hispanic	5	0.9%	8	(0-20)	3	0.5%	9	(0-21)
<b>Female</b>								
Black	100	80.6%	43	(14-185)	129	78.7%	52	(28-231)
White	21	16.9%	18	(0-56)	30	18.3%	25	(0-78)
Hispanic	4	3.2%	8	(0-19)	3	1.8%	7	(0-16)
<b>All</b>								
Black	470	68.9%	85	(330-662)	573	75.9%	111	(356-790)
White	144	21.1%	43	(58-226)	152	20.1%	55	(44-259)
Hispanic	9	1.3%	11	(0-31)	6	0.8%	11	(0-28)
<b>Risk Factor</b>								
<b>Black</b>								
MSM	378	80.4%	71	(240-517)	398	69.5%	90	(222-574)
IDU	10	2.1%	14	(0-38)	11	1.9%	16	(0-41)
MSM/ IDU	6	1.3%	9	(0-23)	11	1.9%	14	(0-39)
Heterosexual	101	21.5%	42	(19-183)	153	26.7%	57	(40-266)
<b>White</b>								
MSM	108	75.0%	36	(37-180)	101	66.4%	44	(15-186)
IDU	11	7.6%	13	(0-35)	14	9.2%	16	(0-45)
MSM/IDU	6	4.2%	8	(0-23)	9	5.9%	13	(0-34)
Heterosexual	16	11.1%	17	(0-49)	28	18.4%	23	(0-74)
<b>Hispanic</b>								
MSM	3	33.3%	7	(0-16)	2	33.3%	7	(0-16)
IDU	0	0.0%	0	-	0	0.0%	0	-
MSM/IDU	0	0.0%	0	-	2	33.3%	6	(0-14)
Heterosexual	6	66.7%	9	(0-24)	3	50.0%	8	(0-19)
<b>All</b>								
MSM	524	76.8%	85	(358-690)	522	69.1%	103	(321-724)
IDU	21	3.1%	20	(0-60)	25	3.3%	22	(0-69)
MSM/IDU	13	1.9%	12	(0-37)	20	2.6%	20	(0-59)
Heterosexual	124	18.2%	47	(31-217)	188	24.9%	61	(67-308)
<b>Total‡</b>	<b>682</b>	<b>100</b>	<b>101</b>	<b>(484-880)</b>	<b>755</b>	<b>100</b>	<b>127</b>	<b>(505-1,005)</b>

**Table 9. Annualized HIV Incidence Estimation among Adults and Adolescents ≥ 13 Years, by Year of Infection and Selected Characteristics, Alabama 2010-2014 (continued)**

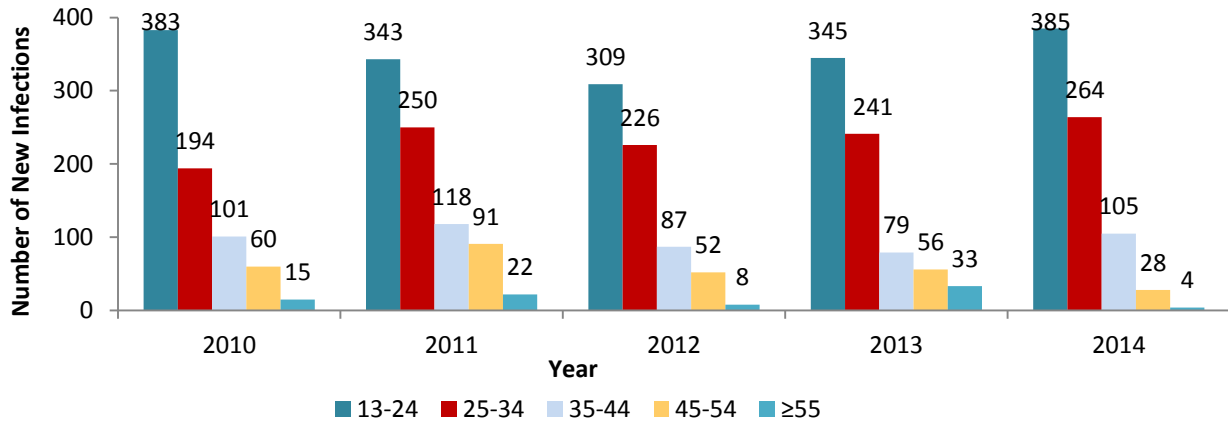
	2014			
	No.	%	SD	(95% CI)†
<b>Sex</b>				
Male	642	81.8%	91	(464-820)
Female	144	18.3%	42	(61-227)
<b>Age at infection</b>				
13-24	385	49.0%	67	(253-517)
25-34	264	33.6%	57	(153-375)
35-44	105	13.4%	35	(37-173)
45-54	28	3.6%	18	(0-62)
≥55	4	0.5%	8	(0-21)
<b>Race/Ethnicity</b>				
<b>Male</b>				
Black	454	70.7%	75	(308-601)
White	176	27.4%	46	(87-266)
Hispanic	1	0.2%	4	(0-8)
<b>Female</b>				
Black	99	68.8%	35	(31-168)
White	33	22.9%	18	(0-69)
Hispanic	1	0.7%	3	(0-7)
<b>All</b>				
Black	554	70.6%	84	(388-719)
White	209	26.6%	50	(111-306)
Hispanic	2	0.3%	5	(0-11)
<b>Risk Factor</b>				
<b>Black</b>				
MSM	425	76.7%	72	(283-566)
IDU	13	2.3%	13	(0-39)
MSM/ IDU	2	0.4%	5	(0-12)
Heterosexual	114	20.6%	38	(39-190)
<b>White</b>				
MSM	158	75.6%	44	(73-243)
IDU	14	6.7%	13	(0-38)
MSM/IDU	12	5.7%	11	(0-34)
Heterosexual	26	12.4%	17	(0-59)
<b>Hispanic</b>				
MSM	1	50.0%	4	(0-8)
IDU	0	0.0%	2	(0-5)
MSM/IDU	0	0.0%	0	-
Heterosexual	1	50.0%	3	(0-6)
<b>All</b>				
MSM	593	75.5%	87	(422-763)
IDU	31	3.9%	19	(0-68)
MSM/IDU	14	1.8%	13	(0-39)
Heterosexual	148	18.9%	43	(64-232)
<b>Total‡</b>	<b>785</b>	<b>100</b>	<b>102</b>	<b>(585-986)</b>

Source: Alabama Department of Public Health, STD Prevention and Control, HIV Surveillance Branch.

Note: Data by transmission category have been statistically adjusted to account for missing risk-factor information via the multiple imputation method prior to HIV incidence estimation. CI- Confidence Interval. IDU – Injection Drug User. MSM – Men who have Sex with Men. SD – Standard Deviation. †Confidence intervals reflect random variability affecting model uncertainty but may not reflect model-assumption uncertainty; thus, they should be interpreted with caution. ‡Because column totals for estimated numbers were calculated independently of subpopulation values, they may not sum to the column total and percentages may not sum 100%.

In 2014, the estimated number of recent HIV infections was highest among individuals aged 13-24 years (49%, 385 [95% CI: 253-517]), followed by individuals aged 25-34 years (34%, 264 [95% CI: 153-375]), and decreased with age (Table 9). Similar trends were seen in previous years (Figure 10). This downward shift in the age distribution of Alabama’s recently infected HIV population indicates a need for increased prevention efforts targeting adolescents and young adults.

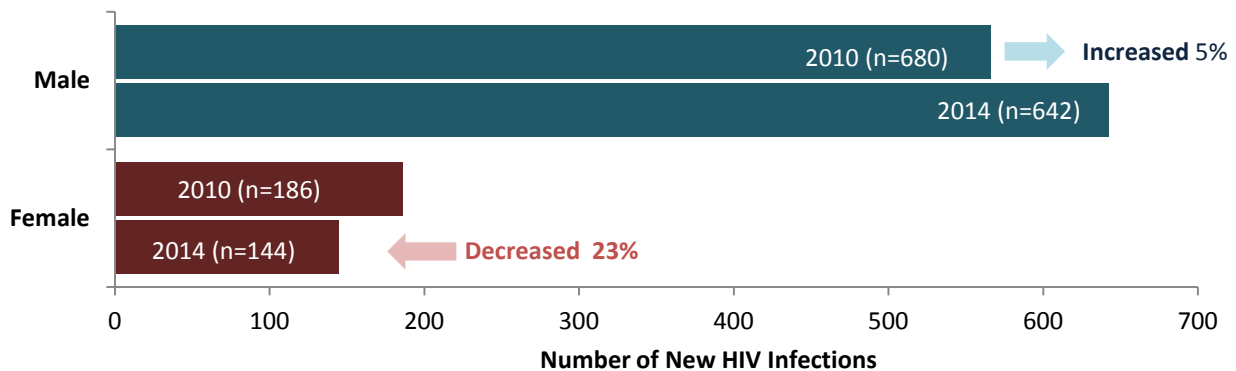
**Figure 10. Estimated Recent HIV infections by Age Group, Alabama 2010-2014**



Source: Alabama Department of Public Health, STD Prevention and Control, HIV Surveillance Branch.

Comparing 2010 to 2014, the overall estimated number of recent HIV infections remained stable (Table 9). However, gender comparison shows the estimated number of recent HIV infections increased slightly among men between 2010 and 2014, while the number decreased in women (Figure 11). In 2014, the estimated rate of recent HIV infections among males (27.3 per 100,000 Alabama males) was 4.5 times that of females (5.8 per 100,000 Alabama females).

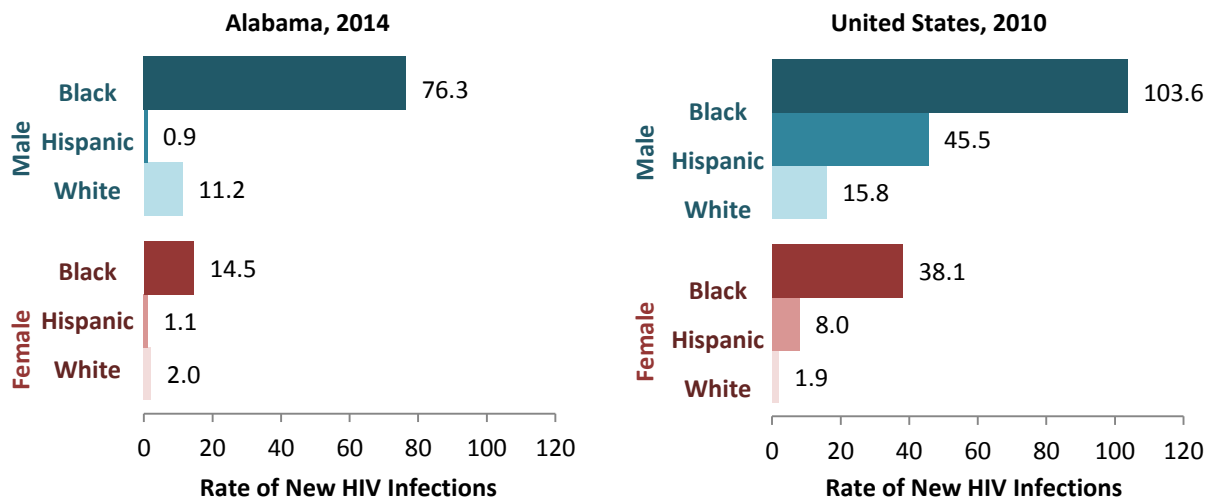
**Figure 11. Estimated Number of Recent HIV Infections by Gender, Alabama 2010 and 2014**



Source: Alabama Department of Public Health, STD Prevention and Control, HIV Surveillance Branch.

Blacks remain disproportionately affected by HIV in Alabama. The estimated rate of recent HIV infections among Blacks (43.2 per 100,000 Blacks) was nearly 7 times (6.6) as high as the rate in Whites (6.5 per 100,000 Whites) in 2014. Racial disparities remained when incidence estimates were stratified by sex, with Alabama rates mirroring national trends (Figure 12). In Alabama, the estimated rate of recent HIV infections in Black males (76.3 per 100,000 Black males) was 6.8 times as high as the rate in White males (11.2 per 100,000 White males) during 2014, compared to estimated rates 6.5 higher throughout the United States during 2010. Racial disparities among females were even more pronounced, with Black females having 7.3 times the estimated risk of HIV infection than White females in Alabama during 2014, compared to 20 times the risk throughout the United States in 2010. Continued HIV testing, treatment, and prevention programs are needed in the Black community.

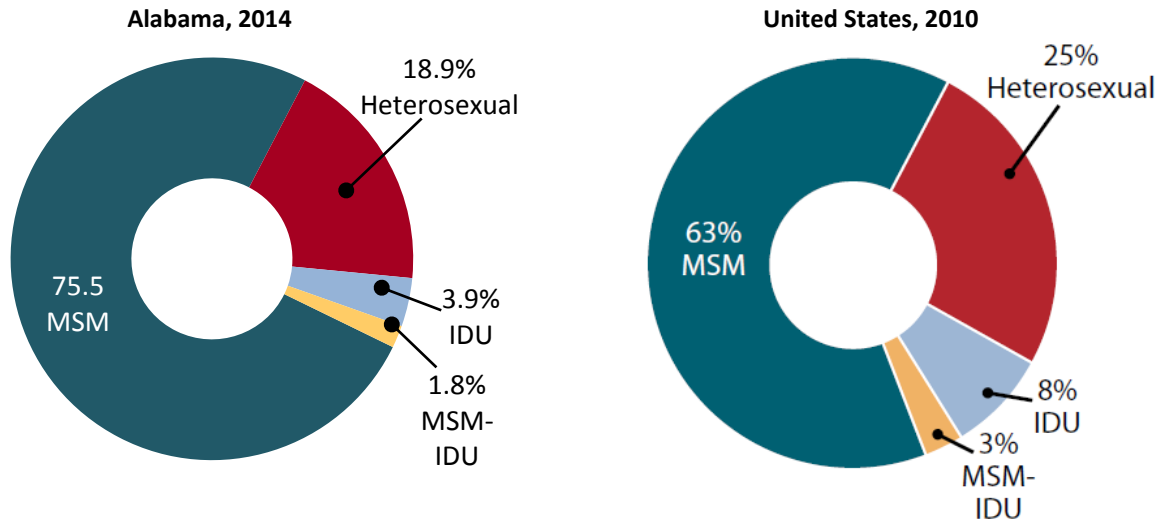
Figure 12. Estimated Rate of Recent HIV Infections, Alabama 2014 and United States 2010



Sources: Alabama Department of Public Health, STD Prevention and Control, HIV Surveillance Branch. Centers for Disease Control and Prevention. Fact Sheet: Estimates of New HIV Infections in the United States, 2007-2010. <http://www.cdc.gov/nchstp/newsroom/docs/2012/HIV-Infections-2007-2010.pdf>. Accessed 3/23/2016. Note: Alabama rates per 100,000 population calculated with U.S. Census Bureau 2014 population estimates for sex, race, and ethnicity.

Gay and bisexual MSM remain the population most heavily affected by HIV infection in Alabama and throughout the United States. In Alabama, MSM accounted for 76% of estimated recent infections during 2014, compared to 63% of estimated recent infections in the United States during 2010 (Figure 13). Comparing 2010 to 2014, the estimated number of recent HIV infections among MSM increased 9% while the number of recent infections among heterosexuals decreased 7% in Alabama (Table 9).

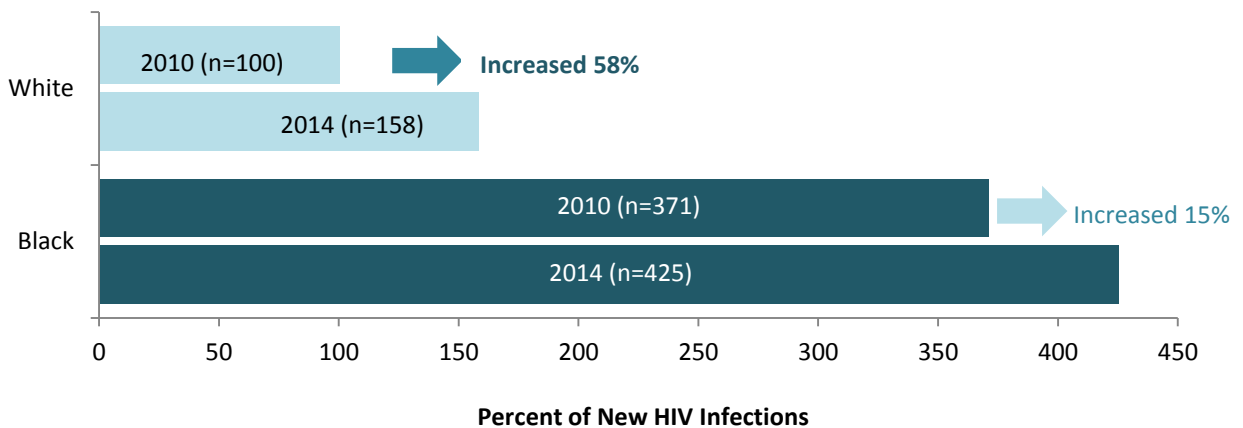
**Figure 13. Estimated Recent HIV Infections by Transmission Category, Alabama 2014 and United States 2010**



Sources: Alabama Department of Public Health, STD Prevention and Control, HIV Surveillance Branch. Centers for Disease Control and Prevention. Fact Sheet: Estimates of New HIV Infections in the United States, 2007-2010. <http://www.cdc.gov/nchstp/newsroom/docs/2012/HIV-Infections-2007-2010.pdf>. Accessed 3/23/2016. Note: Data by transmission category have been statistically adjusted to account for missing risk-factor information via the multiple imputation method prior to HIV incidence estimation.

Stratification by race indicates an increase in the estimated number of recent HIV infections among Black (15%) and a substantial increase (58%) among White gay and bisexual MSM between 2010 and 2014 (Figure 14). HIV testing, treatment, and prevention efforts must reach gay and bisexual men, especially young Black men, to successfully prevent future infections. Since many MSM do not identify as being gay or bisexual, targeting young Black males, regardless of sexual orientation, is advised.

**Figure 14. Estimated Number of Recent HIV Infections Among Men who have Sex with Men by Race, Alabama 2010 and 2014**



Source: Alabama Department of Public Health, STD Prevention and Control, HIV Surveillance Branch.

Alabama’s HIV incidence data estimates 785 cases of recent HIV infections (rate 16.2 per 100,000) occurred among adults and adolescents ≥ 13 years during 2014 (Table 10). Between 2010, and 2014, the estimated number and rate of recent HIV infections remained stable, aside from a slight increase in 2011 to 823 (rate of 17.1 per 100,000) and a significant decrease during 2012 to 682 estimated recent infections (rate of 14.2 per 100,000). Further analysis indicates no significant difference exists between 2010, 2011, 2012, 2013, and 2014 annualized HIV incidence estimates and the increase in 2011 as well as the decrease in 2012 was likely due to chance (Table 11).

**Table 10. Estimated Incidence of HIV Infection among Adults and Adolescents ≥ 13 Years, Alabama 2010-2014**

Year	Estimated No.	(95% CI)†	Population Estimate	Estimated Rate	(95% CI)†
2010	752	(502-1,003)	4,785,570	15.7	(10.5-21.0)
2011	823	(553-1,094)	4,801,627	17.1	(11.5-22.8)
2012	682	(484-880)	4,817,528	14.2	(10.0-18.3)
2013	755	(505-1,005)	4,833,722	15.6	(10.4-20.8)
2014	785	(585-986)	4,849,377	16.2	(12.1-20.3)

Source: Alabama Department of Public Health, STD Prevention and Control, HIV Surveillance Branch. †CI- Confidence Interval. Confidence intervals reflect random variability affecting model uncertainty but may not reflect model-assumption uncertainty; thus, they should be interpreted with caution. Rates per 100,000 population calculated with U.S. Census Bureau 2010, 2011, 2012, 2013, and 2014 population estimates.

**Table 11. Comparison of HIV Incidence Estimates among Adults and Adolescents ≥ 13 Years, Alabama 2010-2014**

Comparison (Year 1 vs Year 2)	Year 1		Year 2		Z-Test Results	
	Incidence Estimate	SD†	Incidence Estimate	SD†	Z Statistic	P Value
2010 vs. 2011	752	127.2	823	137.6	0.400	0.69
2010 vs. 2012	752	127.2	682	100.8	0.457	0.65
2010 vs. 2013	752	127.2	755	127.3	0.015	0.99
2010 vs. 2014	752	127.2	785	102.3	0.217	0.83
2011 vs. 2012	823	137.6	682	100.8	0.877	0.38
2011 vs. 2013	823	137.6	755	127.3	0.385	0.70
2011 vs. 2014	823	137.6	785	102.3	0.236	0.81
2012 vs. 2013	682	100.8	755	127.3	0.474	0.64
2012 vs. 2014	682	100.8	785	102.3	0.777	0.44
2013 vs. 2014	755	127.3	785	102.3	0.200	0.84

Source: Alabama Department of Public Health, STD Prevention and Control, HIV Surveillance Branch. †SD-Standard Deviation.

An estimated 1 in 6 (16.0%) people living with HIV in Alabama are unaware of their infection and 1 in 5 (20.3%) HIV-positive MSM are unaware of their status. Although counseling and testing data indicates repeat testers (i.e., individuals with one or more previously negative HIV test) report more HIV risk factors than first time testers, the estimated number of recent HIV infections in Alabama has been greater among first time testers in three of the previous four years (Table 12). This finding indicates HIV counseling and testing campaigns should eliminate testing barriers so that more individuals will undergo regular HIV testing and become aware of their HIV status. Only by increasing awareness will the true burden of HIV be known.

**Table 12. HIV Incidence Testing History among Adults and Adolescents ≥ 13 Years, Alabama 2010-2014**

Testing History	2010		2011		2012		2013		2014	
	Estimated No.	%	Estimated No.	%	Estimated No.	%	Estimated No.	%	Estimated No.	%
New Testers	375	49.9	425	54.1	260	39.8	465	60.1	263	33.5
Repeat Testers	377	50.1	360	45.9	394	60.2	308	39.9	523	66.6
<b>Total†</b>	<b>752</b>	<b>100</b>	<b>785</b>	<b>100</b>	<b>654</b>	<b>100</b>	<b>774</b>	<b>100</b>	<b>785</b>	<b>100</b>

Source: Alabama Department of Public Health, STD Prevention and Control, HIV Surveillance Branch. †Because column totals for estimated numbers were calculated independently of the values for the subpopulations, the values in each column may not sum to the column total.

## J. HIV UNMET NEED

Alabama’s Notifiable Disease Rules were updated in June 2011 to require reporting of all HIV infections, including asymptomatic infections, AIDS, CD4 counts, and viral loads. The update requires all private and public laboratories to report CD4 counts and viral loads (detectable and undetectable). Before the update, measuring Alabama’s unmet need had limitations as HIV viral loads, CD4 cell counts ≥200 copies per µl or ≥20%, and other tests indicative of HIV infection and HIV management were not reportable. Alabama’s unmet need is now considered an accurate reflection of persons living with HIV who are not receiving adequate care.

According to the Health Resources and Services Administration (HRSA), HIV/AIDS Bureau (HAB), Unmet Need for HIV primary medical care is defined as no evidence of any of the following three components of HIV primary medical care during a specified 12-month time frame: viral load testing, CD4 count, or provision of anti-retroviral therapy (ART).

Using the HRSA/HAB Unmet Need Framework and HIV surveillance data collected in the Enhanced HIV/AIDS Reporting System (eHARS), Alabama’s estimated Unmet Need during 2014 was 4,950 (Table 13). Of the 12,158 persons diagnosed with HIV in Alabama and living as of December 31, 2014, 41% did not access HIV primary medical care during the past 12 months (January 1, 2014 through December 31, 2014).

**Table 13. Framework Utilized to Calculate Unmet Need as Determined by HRSA/HAB**

HIV Population Size	Data Source	Number
A. PLWA as of December 31, 2014	eHARS	5,480
B. PLWH as of December 31, 2014	eHARS	6,678
HIV Care Patterns	Data Source	Number (%)
C. Percent PLWA receiving specified services during 2014	CD4/VL reported in eHARS	3,868 (70.6)
D. Percent PLWH receiving specified services during 2014	CD4/VL reported in eHARS	3,341 (50.0)
Unmet Need Calculations		Unmet Need
$\text{Unmet Need} = [A*(1-C)] + [B*(1-D)]$ $= [5,480*(1-0.706)] + [6,978*(1-0.500)]$		4,950

Source: Alabama Department of Public Health, Division of STD Prevention and Control, HIV Surveillance Branch.

Note: Specified services include any of the following three components of HIV primary medical care during the 12-month time frame from January 1, 2014 through December 31, 2014: VL testing, CD4 count, or provision of anti-retroviral therapy (ART).

Abbreviations: eHARS - Enhanced HIV/AIDS Reporting System; HAB - HIV/AIDS Bureau; HRSA - Health Resources and Services Administration; PLWA - persons living with AIDS; PLWH - persons living with HIV, non-AIDS; VL - viral load.

**K. HIV PREVENTION: KNOW. MANAGE. LIVE.**

While no single strategy exists to effectively control the HIV epidemic, new antiretroviral therapies (ART) are available to increase the longevity of HIV positive persons while simultaneously decreasing the likelihood of infecting others. “Treatment as Prevention”, which refers to using ART to decrease the risk of HIV transmission, has emerged as a highly effective HIV prevention and care strategy. Alabama’s “Know. Manage. Live.” campaign is an HIV awareness, prevention, and care strategy focused on HIV testing, treatment, and prevention that identifies individuals infected with HIV, links these individuals into care, and ensures retention in care by increasing access to HIV care providers and antiretroviral medications to effectively suppress viral load. Being virally suppressed—which means that HIV is under control at a level that keeps people healthy and reduces the risk of transmitting the virus to others—not only improves a person with HIV’s health and enhances their lifespan; it also significantly reduces their risk of transmitting HIV to partners. People living with HIV who adhere to ART and have suppressed viral loads can reduce the risk of sexual transmission of HIV by 96%.

Ongoing and expanded involvement from community leaders representing Blacks, young adults and adolescents, gay and bisexual men, and other at-risk groups is needed to stop the spread of HIV and encourage all individuals to learn the facts about HIV, get tested, and take action to protect themselves and their partners. Additional information about Alabama’s “Know. Manage. Live.” Campaign and locations offering free and confidential HIV testing services are available at <https://adph.org/aids>.