

State of Alabama

HIV Surveillance

2017 Annual Report

Prepared by:

**Division of STD Prevention and Control
HIV Surveillance Branch**

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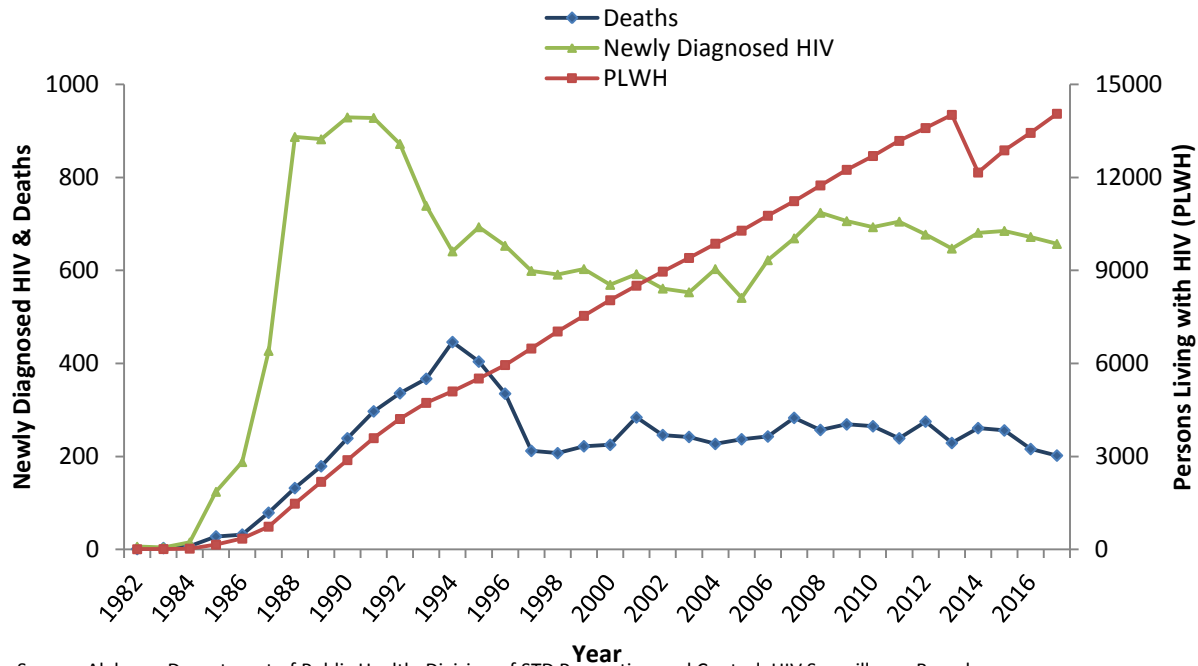
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A. BACKGROUND

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 2017, a total of 21,302 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). At the end of 2017, 14,054 persons were known to be living with HIV infection in Alabama. An update in surveillance (eHARS database) data with current address information accounting for Persons Living with HIV or AIDS (PLWHA) patients, who have moved from Alabama, reflects a correction in the graphic representation of Figure 1.

Figure 1. Persons Living with HIV, Newly Diagnosed HIV, and Deaths, Alabama 1982-2017



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 7 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 2,777 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 continues 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 2017.

B. HIGHLIGHTS

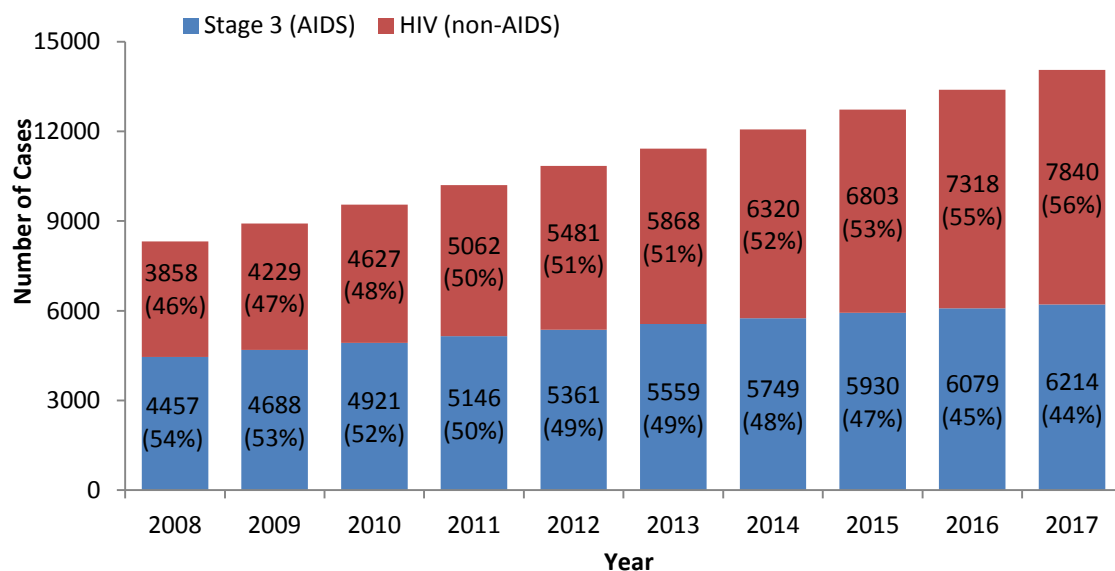
- At the end of 2016, 14,054 Alabama residents were known to be living with HIV and 6,214 (44%) of these had progressed to Stage 3 (AIDS) infection. An estimated 1 in 7 people living with HIV in Alabama are unaware of their infection, suggesting another 2,777 Alabama residents may be infected with HIV.
- 657 newly diagnosed HIV infections were reported among Alabama residents in 2017. 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 2017, more HIV cases were diagnosed in Jefferson County (n=146) than any other county, while the highest rate of HIV per 100,000 residents was greatest in Macon County (32.0).
- Alabama is experiencing a 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 as opposed older age groups that dominated earlier in the epidemic.
- 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 13 to 29 years.
- Eighty-three percent of newly diagnosed HIV infections during 2017 were linked to care.

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 21,302 HIV infections have been diagnosed among Alabama residents since reporting began in 1982, with 14,054 HIV positive individuals currently living in Alabama, as of December 31, 2016. During 2017, 657 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 2016, 5,977 (45%) known HIV positive individuals were reported be living with Stage 3 (AIDS) diagnoses.

Figure 2. Persons Living with HIV (non-AIDS) and AIDS, Alabama 2008-2017



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 is estimated to be Black according to the 2015 United States Census Bureau population estimates, 66.7% of newly diagnosed HIV cases and 64.2% of all persons living with HIV were Black during 2016.

Table 1. Characteristics of Newly Diagnosed and Prevalent HIV Cases, Alabama 2017

Characteristic	Newly Diagnosed Cases		Prevalent Cases	
	Number (%)	Rate	Number (%)	Rate
Gender				
Male	520 (79.1)	22.0	10252 (73.0)	434.4
Female	137 (20.9)	5.4	3793 (27.0)	152.5
Race/Ethnicity				
Black, Not Hispanic	432 (65.8)	33.4	8951(63.7)	692.4
White, Not Hispanic	185 (28.2)	5.8	3936 (28.0)	123.1
Multiple Races	16 (2.4)	21.5	627 (4.5)	853.3
Hispanic	21 (3.2)	9.9	431 (3.1)	204.2
Other/Unknown	3 (0.5)	-	100 (0.7)	-
Age Group (years)				
<13	2 (0.3)	-	33 (0.3)	4.4
13-19	36 (5.5)	8.2	45 (0.3)	10.2
20-29	292 (44.4)	43.7	1728 (12.3)	258.8
30-39	153 (23.3)	25.3	2884 (20.5)	477.3
40-49	82 (12.5)	13.6	3148 (22.4)	521.7
≥50	92 (14.0)	5.2	6207 (44.2)	349.3
Reported Risk Factor				
Men who have Sex with Men (MSM)	349 (53.1)	N/A	6525 (46.5)	N/A
Heterosexual Contact	157 (23.9)	N/A	4215 (30.0)	N/A
Injection Drug Use (IDU)	15 (2.3)	N/A	765 (5.5)	N/A
MSM/IDU	17(2.6)	N/A	471 (3.4)	N/A
Perinatal Exposure	1 (0.2)	-	84 (0.6)	N/A
Transfusion/Hemophilia			4 (<0.1)	N/A
Undetermined	118 (18.0)	N/A	1941 (13.8)	N/A
Imputed Risk among Cases ≥13 years				
MSM	446 (68.0)	N/A	7955 (56.7)	N/A
Heterosexual Contact	162 (24.7)	N/A	4248 (30.3)	N/A
IDU	25 (3.8)	N/A	1106 (7.9)	N/A
MSM/IDU	21 (3.3)	N/A	574 (4.1)	N/A
Other Confirmed Risk	2 (0.3)		154 (1.1)	N/A
Public Health District (PHD)				
Northern	84 (13.3)	8.6	1571 (11.5)	146.9
Northeastern	48 (7.6)	6.5	1075 (7.9)	133.4
Jefferson	146 (23.0)	22.4	3756 (27.5)	569.8
East Central	143 (22.6)	20.3	2794 (20.4)	395.3
West Central	61 (9.6)	21.3	837 (6.1)	192.7
Southwestern	26 (4.1)	6.8	788 (5.8)	193.7
Southeastern	41 (6.5)	10.8	933 (6.8)	246.6
Mobile	84 (13.3)	20.3	1900 (13.9)	459.0
Unknown	23 (3.5)	-	26 (0.2)	-
Total	657 (100)	13.5	14045 (100)	288.1

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 2017 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.

Nearly two-thirds of newly diagnosed HIV infections in 2017 occurred among adults in their twenties and thirties – 44.4% and 23.3%, respectively (Table 1). However, the majority of persons living with HIV infection (i.e., prevalent cases) were 40 years or older (67%).

In 2017, over one-half of the newly diagnosed cases (53.1%) and 46.5% of the prevalent cases reported male-to-male sexual activity as the primary risk factor for infection. Imputed risk estimates 68.0% of newly diagnosed cases and 56.7% of prevalent cases occurring in adults and adolescents (≥ 13 years) may have been due to male-to-male sexual activity. Heterosexual contact was the second leading risk factor for HIV infection, representing 23.9% of newly diagnosed cases and 30.0% of prevalent cases. Imputed risk calculations reflect 24.7% of newly diagnosed cases and 30.3% of prevalent cases occurring in adults and adolescents (≥ 13 years) may have been due to heterosexual contact.

Seventy percent of all 2017 newly diagnosed and prevalent HIV cases resided in Jefferson, East Central, Northern and Mobile Public Health Districts (PHDs), where the larger cities of Birmingham, Montgomery, Huntsville, and Mobile are located (Table 1 and Figure 3).

Figure 3. Alabama Public Health District 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 is considered a major urban county with $> 200,000$ residents and combined, they account for sixty-two percent of newly diagnosed infections annually. Jefferson County, with a population $> 650,000$, averaged 24% of newly diagnosed HIV infections from 2012-2016.

Table 2. Top Five Counties with the Highest Frequency of Newly Diagnosed HIV Cases, Alabama 2013-2017

County	2013		2014		2015		2016		2017	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Jefferson	167	25.3	157	23.8	135	20.4	139	21.1	146	22.1
Madison	41	11.8	39	11.1	44	12.5	46	12.9	41	11.5
Mobile	91	22.0	102	24.6	81	19.5	92	22.2	84	20.2
Montgomery	69	30.4	100	44.2	98	43.3	92	40.6	72	31.8
Tuscaloosa	46	22.9	33	16.3	38	18.6	43	20.9	47	22.8
Statewide	634	13.1	678	14.0	667	13.7	670	13.8	657	13.5

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 2016 United States Census Population Estimates.

However, the rate of new HIV infections per 100,000 residents is often relatively high in Alabama's rural counties compared to more urban counties (Table 3). Rates are only calculated for counties with ≥ 5 cases. In the last five years, Bullock, Chambers, Dallas, and Hale Counties are extremely rural counties (populations below 50,000) that show a higher rate at least once. Jefferson and Montgomery Counties are the only non-rural counties consistently ranked among the top five and are highlighted in Table 3. The high rates seen in Alabama's rural counties indicate a need for increased HIV prevention efforts in these areas.

Table 3. Annual Top Five County Highest Rates of Newly Diagnosed HIV Cases, Alabama 2013-2017

County	2013		2014		2015		2016		2017	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Bullock	3	-	12	111.5	8	74.8	1	9.7	2	-
Chambers	5	-	12	35.2	11	32.2	2	5.9	6	17.8
Clay	3	-	4	29.5	3	-	1	7.4	2	-
Conecuh	4	-	3	23.7	3	-	5	40.3	2	-
Dallas	14	33.3	8	19.2	5	-	2	5.0	7	17.9
Hale	4	-	8	52.7	0	-	1	6.7	2	-
Jefferson	167	25.3	157	23.8	135	20.4	139	21.1	146	22.1
Lowndes	5	-	2	18.9	1	-	4	38.6	3	-
Mobile	91	22.0	102	24.6	81	19.5	92	22.2	84	20.3
Montgomery	69	30.4	100	44.2	98	43.3	92	40.6	72	31.8
Perry	2	-	0	-	2	-	0	-	1	-
Tuscaloosa	46	22.9	33	16.3	38	18.6	43	20.9	47	22.6
Statewide	634	13.1	678	14.0	667	13.7	670	13.8	657	13.5

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 2017 population estimates. Counties highlighted in gray have been ranked consistently for all five years.

D. HIV BY RACE, ETHNICITY, AND BIRTH SEX

The HIV epidemic continues to disproportionately affect Blacks in Alabama. In 2017, the rate of HIV diagnosis among both Black males and Black females was nearly six times that of White males and White females (5.5 and 5.7, respectively) (Table 4). The newly diagnosed Black HIV rate for 2017 is two and one-half times that of the total state rate.

Table 4. Newly Diagnosed HIV Cases by Race, Ethnicity, and Birth Sex, Alabama 2017

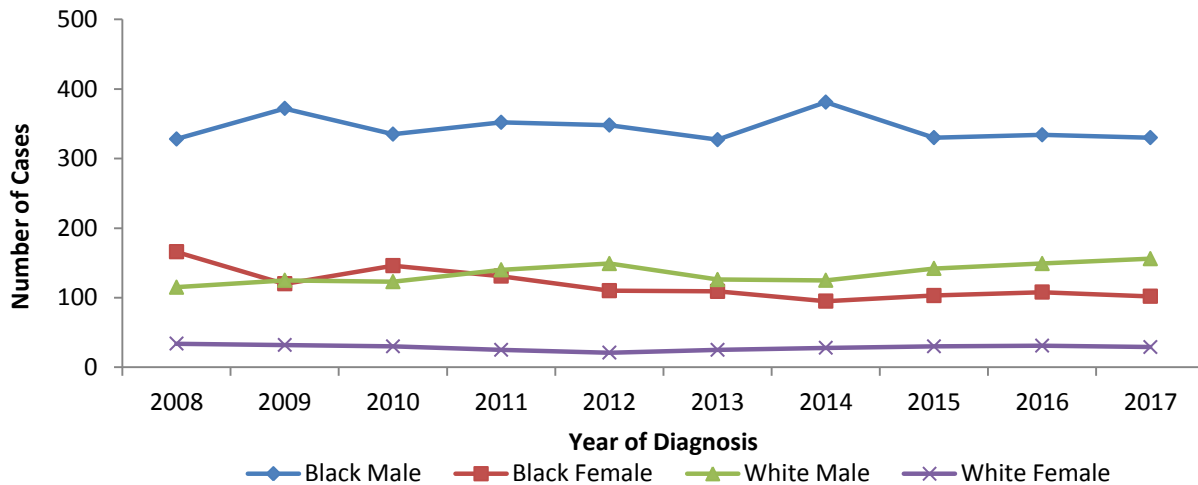
Race/Ethnicity	Males		Females		Total	
	Number (%)	Rate	Number (%)	Rate	Number (%)	Rate
Black, Not Hispanic	330 (63.5)	54.9	102 (74.5)	14.8	432 (65.8)	33.4
White, Not Hispanic	156 (30.0)	10.0	29 (21.2)	1.8	185 (28.2)	5.8
Multiple Races	14 (2.7)	38.6	2 (1.5)	-	16 (2.4)	21.5
Hispanic	17 (3.3)	15.1	4 (2.9)	-	21 (3.2)	9.9
Other/Unknown	3 (0.6)	-	0 (-)	-	3(-)	-
Total	520 (100)	22.0	137 (100)	5.4	657 (100)	13.5

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

Note: All rates are per 100,000 population, 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 five years with White males slightly greater, averaging 140 new cases per year.

Figure 4. Trends in Newly Diagnosed HIV Cases by Race and Sex, 2008-2017



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

E. HIV BY AGE GROUP

In 2017, young adults in their twenties reflected the age group with the highest rate (44.4%) of new HIV infections (Table 5). Adults forty and over accounted for twenty-six percent of all new cases. Forty-eight percent of males were diagnosed during their twenties, compared to twenty-eight percent of females. Forty-one percent of women were 40 or older at diagnosis, comparable to twenty-two percent of men of that age group.

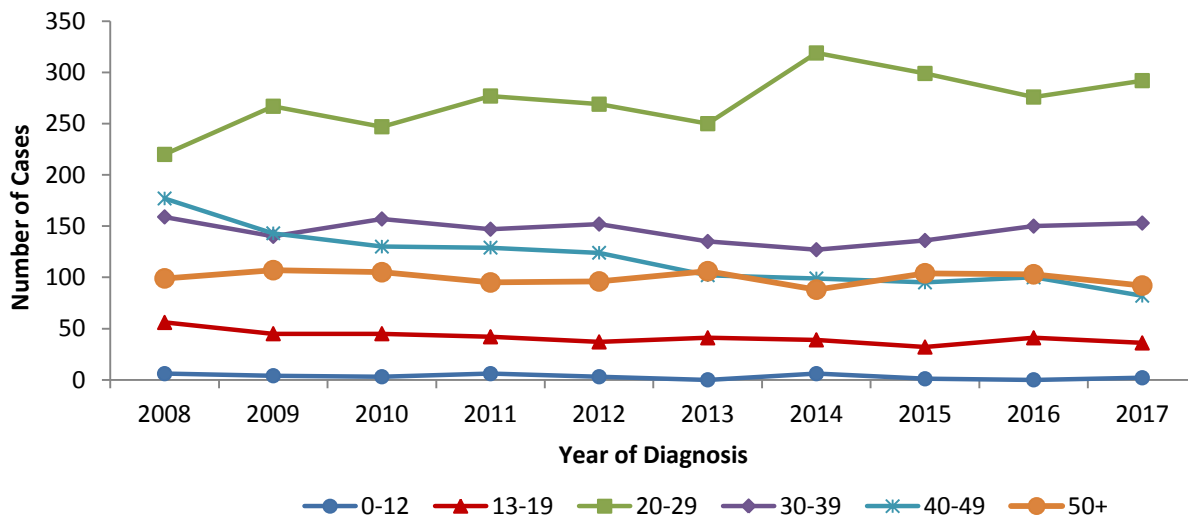
Table 5. Newly Diagnosed HIV Cases by Age Group and Sex, Alabama 2017

Age Group (years)	Males (N=520), Number (%)	Females (N=137), Number (%)	Total (N=657), Number (%)
0-12	2 (0.3)	-	2 (0.3)
13-19	32 (6.2)	4 (2.9)	36 (5.5)
20-29	253 (48.7)	39 (28.5)	292 (44.4)
30-39	115 (22.1)	38 (27.7)	153 (23.3)
40-49	51 (9.8)	31 (22.6)	82 (12.5)
≥50	67 (12.9)	25 (18.3)	92 (14.0)

Source: Alabama Department of Public Health, Division of STD Prevention and Control, HIV Surveillance Branch. Percentages may not sum 100% due to rounding.

By stratifying the 2017 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 shift in Alabama’s newly diagnosed HIV population calls for increased prevention efforts targeting a younger population. A closer look at these findings is discussed in Section G of this document.

Figure 5. Trends in Newly Diagnosed HIV Cases by Age Group, Alabama 2008-2017



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

F. HIV BY MODE OF EXPOSURE

During 2016, the majority (54.5%) 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 by multiple imputation methods. An estimated 1 in 5 MSM living with HIV in Alabama are unaware of their infection and, thus, are not receiving regular medical care to manage the disease. Multiple imputation estimation suggests that as many as 459 HIV infections occurred among MSM and combined MSM/IDU in 2016.

Table 6. Newly Diagnosed HIV Cases by Mode of Exposure and Race/Ethnicity, Alabama 2016

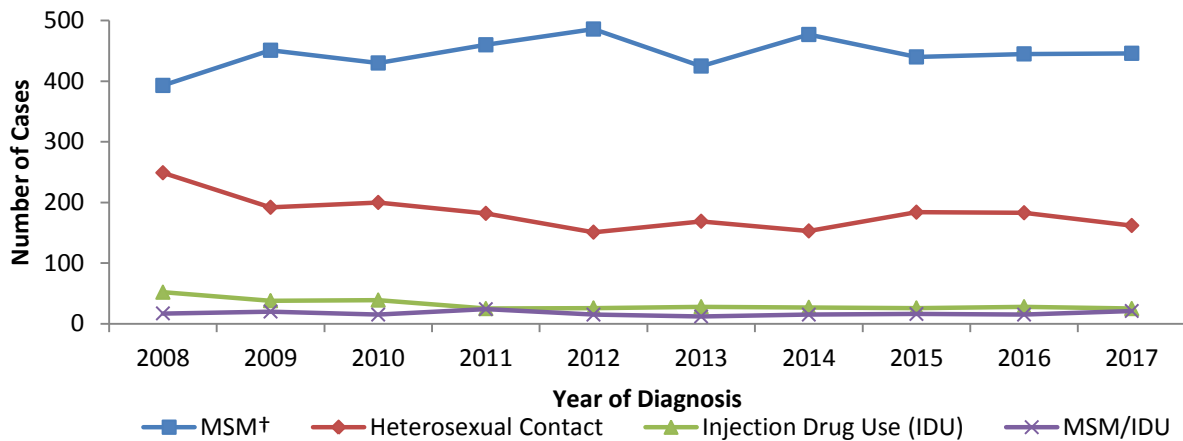
Mode of Exposure	Black Number (%)	White Number (%)	Multiple Races Number (%)	Hispanic Number (%)	Total Number (%)
MSM	285 (66.3.)	131 (71.1)	13 (83.1)	13 (61.4)	446 (68.0)
Heterosexual Sex	130 (30.0)	25 (13.4)	2 (14.4)	5 (25.7)	162 (24.7)
IDU	9 (2.0)	14 (7.7)	-	2 (8.1)	25 (3.8)
MSM/IDU	6 (1.3)	15 (7.9)	-	1 (4.8)	21 (3.3)
Total	432 (100)	185 (100)	16 (100)	21 (100)	657 (100)

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. 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, but 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. Imputed Trends in Newly Diagnosed HIV Cases by Mode of Exposure, Alabama 2008-2017



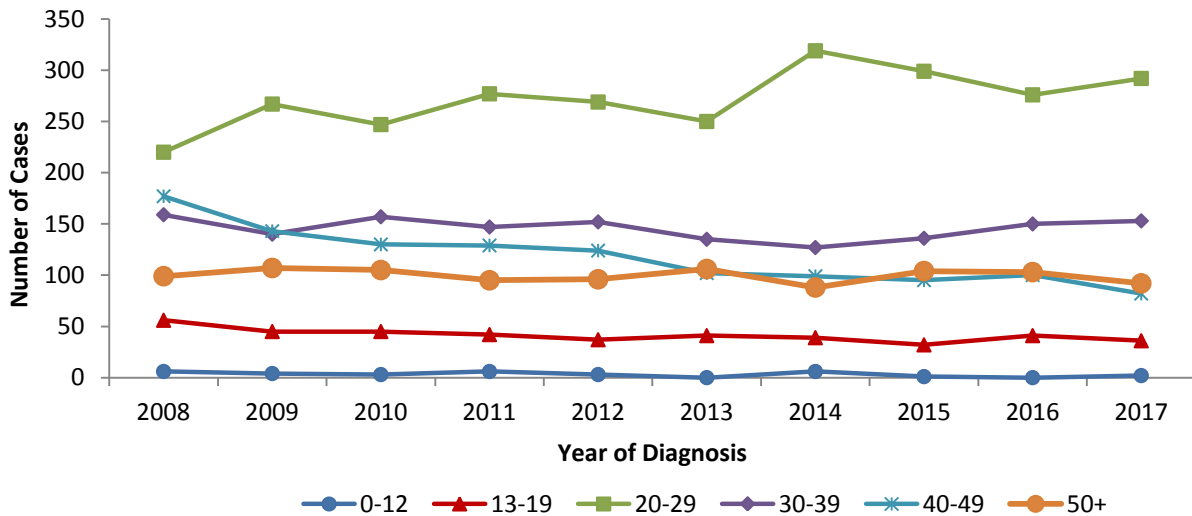
Source: Alabama Department of Public Health, Division of STD Prevention and Control, HIV Surveillance Branch.

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

The Alabama population is experiencing a shift in the age distribution of newly diagnosed HIV infections as young adults age 20-29 years are now the most affected age group (Figure 7) where earlier in the epidemic, older age groups were more affected.

Figure 7. Trends in Newly Diagnosed HIV Cases by Age Group, Alabama 2008-2017



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

Young adults (20-29 years) are twice as likely to be infected with HIV as the average Alabama resident and represent over 44.4% of all newly diagnosed cases (Table 7), although this age group accounts for only 13.7% of Alabama’s population. In contrast, the majority (53%) of persons living with HIV infection in Alabama as of December 31, 2017 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 2017

Age Group (Years)	Newly Diagnosed, 2017		Persons Living with HIV, 2017	
	Number (%)	Rate	Number (%)	Rate
0-12	2 (0.3)	-	33 (0.2)	4.4
13-19	36 (5.5)	8.2	45 (0.3)	10.2
20-29	292 (44.4)	43.7	1728 (12.3)	258.8
30-39	153 (23.3)	25.3	2884 (20.5)	477.3
40-49	82 (12.5)	13.6	3148 (22.4)	521.7
≥50	92 (14.0)	5.2	6207 (44.2)	349.3
Statewide Total	657 (100)	13.5	12156 (100)	288.1

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, 2017 Population Estimates. Percentages may not sum 100% due to rounding.

Black males represent the majority (58%) of newly diagnosed HIV infections in the 20-29 year old age group. The 2017 Newly Diagnosed HIV rate among Black males 20-29 years old is five times that of their White counterparts. Among Persons Living with HIV in 2017, the rate among prevalent Black males aged 20-29 years is eight times that of their White counterparts.

Table 8. HIV Infection Rates Among Adolescents and Young Adults (20-29 Years) by Race, Alabama 2017

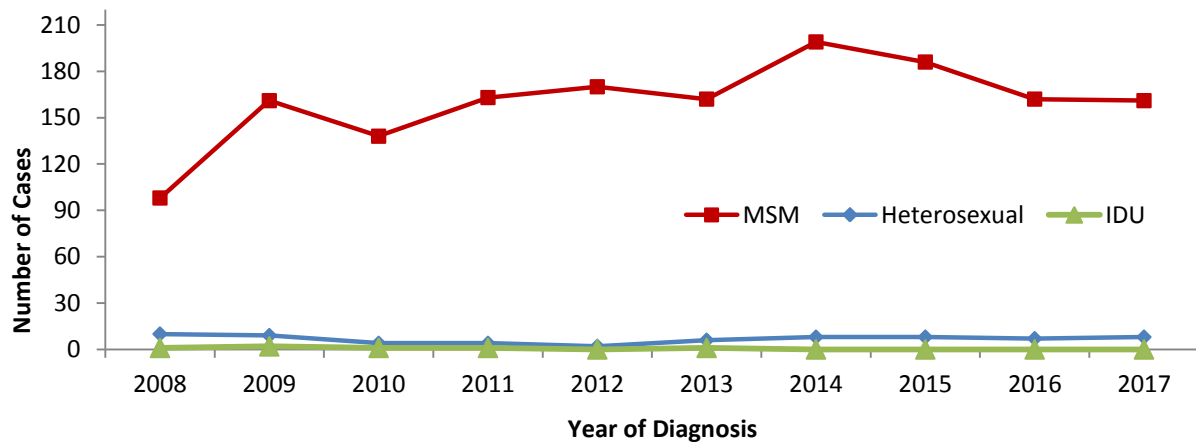
Race and Birth Sex	Newly Diagnosed, 2017		Persons Living with HIV, 2017	
	Number (%)	Rate	Number (%)	Rate
Black, Not Hispanic				
Males	170 (83.3)	168.6	1074 (82.9)	1064.8
Females	34 (16.7)	31.8	222 (17.1)	207.4
White, Not Hispanic				
Males	64 (95.5)	31.5	272 (87.7)	134.1
Females	3 (4.5)	1.5	38 (12.3)	19.1
Total				
Males	253 (86.6)	75.7	1447 (83.7)	433.1
Females	39 (13.4)	11.7	281 (16.3)	84.2

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, 2016 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 young adult Black males (Figure 8). Black MSM tend to not identify as being gay or bisexual and only report as exclusively engaging in heterosexual sex with women. 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 20-29 Years) by Mode of Exposure, Alabama 2008-2017



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

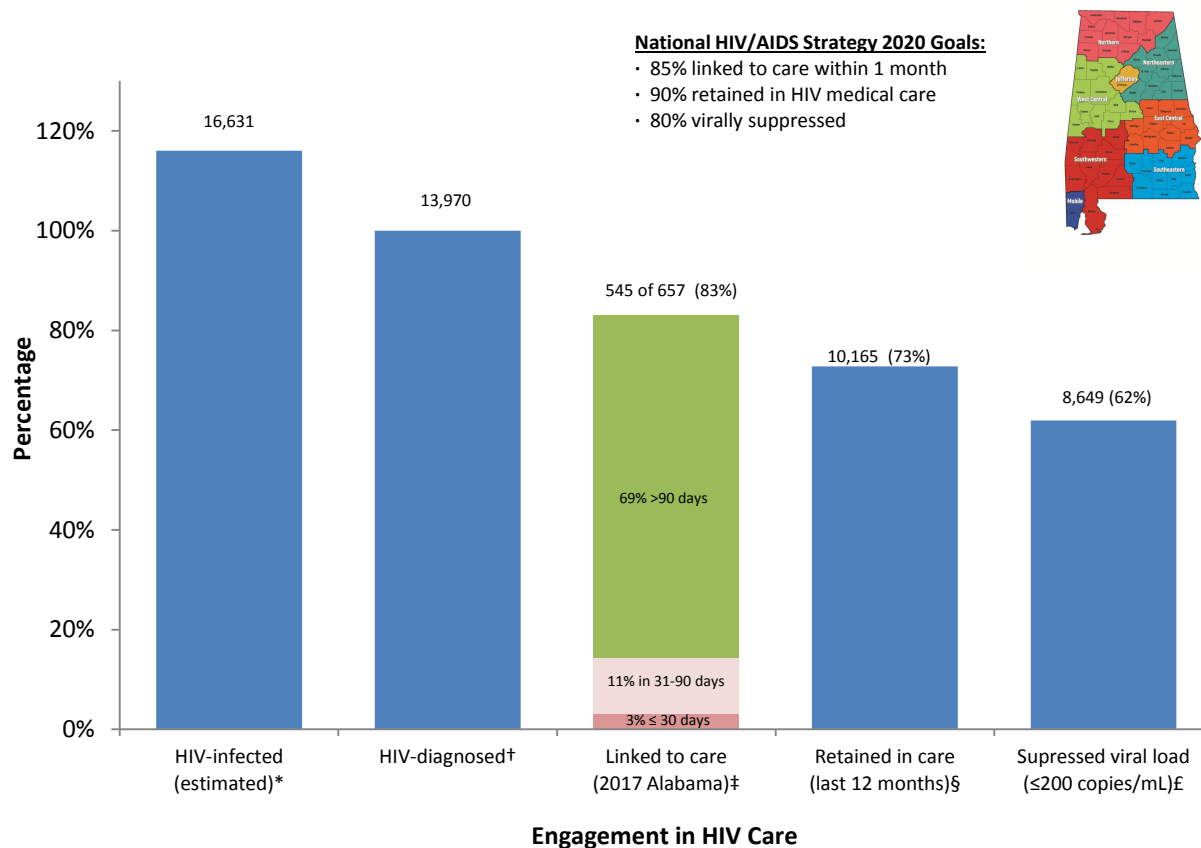
Note: Multiple imputation methodology was used to estimate unknown risk among cases ≥ 13 years. MSM - Men who have Sex with Men, IDU - Intravenous Drug Use. MSM includes any MSM (i.e., MSM alone and in combination with IDU).

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 2016, 85% of the 672 newly diagnosed HIV infections were linked to care within 3 months of diagnosis (Figure 10). Of the 15,188 persons

diagnosed with HIV infection through December 31, 2015 and living as of December 31, 2016, 68% were retained in care and 73% achieved viral suppression (≤ 200 copies/mL) during 2016. 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, 2017



*Estimated by applying Alabama’s HIV-prevalence estimate (84.0%) to the number of persons diagnosed with HIV infection through December 31, 2015 and alive as of December 31, 2017 (i.e., 84% of persons aged ≥ 13 years living with HIV infection in Alabama are aware of their infection and 16%, or 1 in 7 HIV-positive individuals, are unaware of their infection).

†Defined as persons diagnosed with HIV infection through December 31, 2015 and alive as of December 31, 2017.

‡Calculated as the percentage of persons linked to care, evidenced by ≥ 1 CD4 and/or viral load test(s) within 90 days of diagnosis, among those newly diagnosed with HIV infection during 2017.

§Calculated as the percentage of persons accessing care during 2017, evidenced by ≥ 2 CD4 and/or viral load tests collected at least 90 days apart, among those diagnosed with HIV through December 31, 2015 and alive as of December 31, 2017.

£Calculated as the percentage of persons who had suppressed viral load (≤ 200 copies/mL) during 2016, among those diagnosed with HIV through December 31, 2015 and alive as of December 31, 2017.

I. 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 $\geq 20\%$, 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 2017 was 4,089 (Table 13). Of the 14,054 persons diagnosed with HIV in Alabama and living as of December 31, 2017, 29.1% did not access HIV primary medical care during 2017.

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, 2017	eHARS	6,214
B. PLWH as of December 31, 2017	eHARS	7,840
HIV Care Patterns	Data Source	Number (%)
C. Percent PLWA receiving specified services during 2017	CD4/VL reported in eHARS	4,931 (79.4)
D. Percent PLWH receiving specified services during 2017	CD4/VL reported in eHARS	5,037 (64.2)
Unmet Need Calculations		Unmet Need
$\text{Unmet Need} = [A*(1-C)] + [B*(1-D)]$ $= [6,214*(1-0.794)] + [7,840*(1-0.642)]$		4,089 (29.1)

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, 2017 through December 31, 2017: 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.

J. 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 <http://www.alabamapublichealth.gov/hiv/>.