

Maryland Current Residence Supplemental HIV Epidemiological Profile



Center for HIV Surveillance, Epidemiology and Evaluation
Infectious Disease Epidemiology and Outbreak Response Bureau
Prevention and Health Promotion Administration
Maryland Department of Health and Mental Hygiene
<http://phpa.dhmh.maryland.gov/OIDEOR/CHSE>
1-800-358-9001

Data reported through June 30, 2016
Released December 2016

Table of Contents

Section I – Background Information	2
Current Residence	2
Limitations in the HIV/AIDS Data	2
Sources of Data	3
Tabulation of Column Totals	3
Additional Information.....	4
Section II – Trends in Adult/Adolescent Living HIV/AIDS Cases	5
Figure 1 – Adult/Adolescent HIV Cases Alive on 12/31/2015, by Jurisdiction, Reported through 6/30/2016	5
Table 1 – Jurisdictional Migration among Adult/Adolescent HIV Cases Alive on 12/31/2015, by Jurisdiction, Reported through 6/30/2016.....	6
Figure 2 – Migration Patterns by Region, among Living Adult/Adolescent HIV Cases, Reported through 6/30/2016	7
Figure 3 – Migration Patterns by Jurisdiction, among Living Adult/Adolescent HIV Cases, Reported through 6/30/2016.....	9
Figure 4 – Trends in Living HIV/AIDS Cases, Reported through 6/30/2016.....	10
Section III – Adult/Adolescent Cases by Jurisdiction	11
Table 2 – Adult/Adolescent HIV Cases Alive on 12/31/2015, by Jurisdiction, Reported through 6/30/2016.....	11
Figure 5 – Prevalence-Based Estimated Adult/Adolescent 2015 HIV Continuum of Care Cascades, by Current Residence, Reported through 6/30/2016.....	12
Figure 6 – Diagnosis-Based Estimated Adult/Adolescent 2015 HIV Continuum of Care Cascades, by Current Residence, Reported through 6/30/2016.....	13
Section IV – Cases by Age	14
Table 3 – HIV Cases Alive on 12/31/2015, by Age on 12/31/2015, Reported through 6/30/2016	14
Table 4 – CD4 Test Results for Adult/Adolescent HIV Cases Alive on 12/31/2015, by Age on 12/31/2015, Reported through 6/30/2016.....	15
Table 5 – Viral Load Test Results for Adult/Adolescent HIV Cases Alive on 12/31/2015, by Age on 12/31/2015, Reported through 6/30/2016.....	15
Section V – Adult/Adolescent Cases by Demographics	16
Table 6 – Adult/Adolescent Living HIV Cases with and without AIDS by Sex at Birth, Race/Ethnicity, and Country of Birth, Alive on 12/31/2015 and Reported through 6/30/2016	16
Table 7 –Adult/Adolescent Total Living HIV Cases, Recent CD4 Test Results, by Sex at Birth, Race/Ethnicity and Country of Birth, Alive on 12/31/2015 and Reported through 6/30/2016	18
Table 8 – Adult/Adolescent Total Living HIV Cases, Recent Viral Load Test Results, by Sex at Birth, Race/Ethnicity and Country of Birth, Alive on 12/31/2015 and Reported through 6/30/2016	19
Table 9 – Total Living Male HIV Cases by Current Age and Race/Ethnicity, Alive on 12/31/2015 and Reported through 6/30/2016.....	20
Table 10 – Total Living Female HIV Cases by Current Age and Race/Ethnicity, Alive on 12/31/2015 and Reported through 6/30/2016.....	21
Section VII – HIV Exposure Category.....	22
Figure 7 – Proportion of Adult/Adolescent Total Living HIV Cases with Exposure Category, by Exposure Category, Race/Ethnicity, and Sex at Birth, Alive on 12/31/2015 and Reported through 6/30/2016.....	22
Table 11 – Adult/Adolescent Living HIV Cases with and without AIDS by Exposure Category and Sex at Birth, Alive on 12/31/2015 and Reported through 6/30/2016.....	24
Table 12 – Adult/Adolescent Total Living HIV Cases by Exposure Category, Race/Ethnicity, and Sex at Birth, Alive on 12/31/2015 and Reported through 6/30/2016.....	25
Table 13 – Adult/Adolescent Total Living HIV Cases, Recent CD4 Test Results by Exposure Category, Alive on 12/31/2015 and Reported through 6/30/2016.....	26
Table 14 – Adult/Adolescent Total Living HIV Cases, Recent Viral Load Test Results by Exposure Category, Alive on 12/31/2015 and Reported through 6/30/2016.....	26
Glossary of Terms.....	27

Section I - Background Information

Current Residence

The current methodology for estimating the number of HIV/AIDS cases living in Maryland uses residence at diagnosis of HIV and AIDS. Persons that are diagnosed with HIV/AIDS in Maryland are presumed to be Maryland residents until death.

Nationally, the typical American will move 11.3 times in their lifetime.¹ Place of residence is dynamic, and estimating the prevalence of HIV/AIDS in Maryland using only those who were diagnosed in Maryland is not a complete representation of the epidemic. Prevalence estimates based on residence at diagnosis exclude infected Marylanders that were diagnosed elsewhere. Alternatively, prevalence estimates include cases that were diagnosed in Maryland but moved out of state after their diagnosis. It is assumed that the influx of cases into Maryland is proportional to those that have moved out of state. However, this report demonstrates that the percent of cases that migrated into Maryland is over three times greater than the percent that is known to have moved out of state. This vast difference may be due to reporting differences. It is easier to identify cases diagnosed out of state than to determine if cases have moved out of state or if cases remain in state but have fallen out of care.

This report serves as a supplement to the Maryland Annual HIV Epidemiological Profile and seeks to improve estimates by describing cases in Maryland based on current residence, regardless of where initial diagnoses occurred.

Residence at Diagnosis is defined as the jurisdiction of residence at later of time of initial HIV diagnosis or time of initial AIDS diagnosis.

Current residence is defined as an address received from the most recent laboratory test or case report (regardless of residence at diagnosis) or from an HIV/AIDS diagnosis (if no laboratory tests have been reported since diagnosis) during 2009-2016. Restricting address data to recent years presents the most accurate data available and helps to account for cases that may have moved out of state whose data would no longer be reported in Maryland. However, current residence excludes cases that may be residents of Maryland but have fallen out of care during the most recent seven years. Current residence utilizes addresses as recent as 2016 but uses laboratory data from 2015 to allow for delays in laboratory reporting.

In 2015, 14.4% of all Maryland residents moved at least once in the previous year. Of those that relocated, 51.8% relocated within the same jurisdiction, 22.2% within Maryland, 15.5% relocated from a different state and 7.6% relocated from abroad.² This report does not quantify relocation within jurisdictions. At this point, HIV/AIDS surveillance data only captures address changes between three time points: address at HIV diagnosis, address at AIDS diagnosis and current address based on reported data. Cases may move several times between HIV and AIDS diagnoses but this would only be quantified as a single relocation.

It is important to note that residence fluctuates and changes may occur at any time point during HIV surveillance. Also, address information may be incomplete or unavailable.

Limitations in the HIV/AIDS Data

This epidemiological supplemental profile only contains data for HIV and AIDS cases that have been diagnosed by a health care provider, reported to the state health department by name, and were residents of Maryland at the time of diagnosis or are current residents of Maryland as of 6/30/2016. The Centers for Disease Control and Prevention

^{1,2} United States Census Bureau / American FactFinder. B07001: Geographical Mobility In The Past Year By Age For Current Residence In The United States." *2015 American Community Survey 1-year estimates*.

estimated that 16.3% of people living with HIV infection in Maryland are undiagnosed.¹ In addition, despite a massive effort after the Maryland HIV reporting law changed on April 24, 2007, during which over 17,000 HIV cases were re-reported, not all HIV cases previously reported by Maryland's code-based identifier were located and re-reported by name. Many of the re-reported HIV cases were identified by a recent diagnosis and not by their earliest diagnosis, resulting in an under-reporting of HIV diagnoses before 2001 and an over-reporting of HIV diagnoses from 2001 to 2008. Caution should be exercised in using the number of living HIV cases without AIDS and in interpreting trends in the number of reported HIV diagnoses. Epidemiological profiles may not be representative of all persons with HIV infection because not all HIV-infected persons have been diagnosed. Laboratory data are only available for cases receiving medical care, usually only at facilities in Maryland, and only include test results that have been reported to the state or local health department. Address data is received from lab reports and case report forms and may not be inclusive of each address change. Furthermore, current residence uses address data through 6/30/2016 and may not reflect where an individual lived on 12/31/2015. Restricting address data to recent years removes cases that may be residents of Maryland but who have fallen out of care for an extended period of time. In addition, for persons diagnosed with HIV or AIDS outside of the U.S., their residence upon entry into HIV care in the U.S. is used for residence at HIV diagnosis.

The Enhanced HIV/AIDS Reporting System (eHARS) is an application provided by the Centers for Disease Control and Prevention to collect, manage, and report HIV/AIDS surveillance data and was implemented in Maryland in 2009. Prior to eHARS, only one address was recorded for HIV/AIDS cases, and resulted in 3,707 cases whose jurisdiction at HIV diagnosis was unavailable. Jurisdiction of residence at AIDS diagnosis was used for these 3,707 cases instead. Using jurisdiction at AIDS diagnosis as a proxy minimizes missing data but assumes that these cases were diagnosed in Maryland and remained residents of Maryland until their AIDS diagnosis.

It is important to note that HIV surveillance is an ongoing systematic collection, analysis, interpretation, and dissemination of HIV disease data. Linkage to care data is based solely on laboratory data reported to the state or local health departments.

Sources of Data

Information on HIV and AIDS diagnoses, including residence at diagnosis, current residence, age, vital status, HIV exposure category, and CD4 and HIV viral load test results, are from the Maryland Department of Health and Mental Hygiene's eHARS as of June 30, 2016.

Population data by sex, age, and race/ethnicity are from the July 1, 2015 U.S. Census Estimates and by country-of-birth from the 2014 American Community Survey (note the difference in total population due to different source). Due to estimation limitations, some population totals may not equal the sum of its components. When needed, age groups were divided by assuming uniform age distribution within the age group. Non-Hispanic multiple race and Non-Hispanic some other race from the Census were combined into one group.

Estimations of those undiagnosed are from Centers for Disease Control and Prevention's 2016 HIV Surveillance Supplemental Report published July 2016. The continuum of care is adapted from a 2011 article in *Clinical Infectious Diseases* in which a continuum of care "cascade" is used illustrate estimates of the number of persons living with HIV who belong to each of the stages of engagement in HIV care.

Tabulation of Column Totals

Figures in tables and text have been rounded. Discrepancies in tables between totals and sums of components are due to rounding.

Data Suppression

In order to protect the confidentiality of reported HIV cases, data are suppressed in the following instances:

- Data describing a demographic group or geographic area (e.g. ZIP code) with a population less than 1,000

¹ Centers for Disease Control and Prevention. Monitoring selected national HIV prevention and care objectives by using HIV surveillance data—United States and 6 dependent areas, 2014. HIV Surveillance Supplemental Report 2016;21(No. 4). <http://www.cdc.gov/hiv/library/reports/surveillance/>. Published July 2016.

- people.
- All clinical/laboratory information if it is describing less than 5 cases.
- All exposure/risk information if it is describing less than 5 cases, except in the case of "other" exposure.
- If any cell is suppressed, additional cells are also suppressed as necessary to prevent back calculation of the suppressed cell(s).

HIV Exposure Categories

The Centers for Disease Control and Prevention (CDC) developed a hierarchy of exposure categories for surveillance purposes. Persons with more than one reported risk factor are classified in the exposure category listed first in the hierarchy and therefore counted only once. Men who have sex with men and report injection drug use constitutes a separate transmission category.

MSM (Men who have Sex with Men): Men who report a history of sexual contact with other men (homosexual contact) including men who report sexual contact with both men and women (bisexual contact).

Injection Drug Use (IDU): Men or women who report receiving an injection, either self-administered or given by another person, of a drug that was not prescribed by a physician.

MSM/IDU: Men who report a history of sexual contact with other men who also have engaged in injection drug use.

Heterosexual Exposure (HET): Men or women who report a history of sexual contact with a person of the opposite sex who is known to have an HIV infection or at high risk for an HIV infection. High risk groups include bisexual men, IDUs and recipients of blood, blood components, transplants of organ or tissue and artificial insemination.

Perinatal Exposure: Any baby born to an HIV positive mother.

Additional Information

For additional information on HIV/AIDS reporting requirements, assistance with HIV/AIDS reporting, the stages of an HIV/AIDS case, definitions of case terminology, and laboratory data, please see the Annual Maryland HIV Epidemiological Profile.

Section II – Trends in Adult/Adolescent Living HIV/AIDS Cases

Figure 1 – Adult/Adolescent HIV Cases Alive on 12/31/2015, by Jurisdiction, Reported through 6/30/2016

As of 6/30/2016, there were 36,758 persons living with HIV that have resided in Maryland at some point. Of these cases, 80.7% were diagnosed in Maryland and their last reported address was in Maryland, while 15.0% moved to Maryland after diagnosis. 4.3% of HIV cases were diagnosed in Maryland, but have since moved out of state.

Within the state, 26.9% of persons living with HIV have moved jurisdictions since their HIV diagnosis. Among AIDS-diagnosed individuals, 59.6% have remained in the same jurisdiction, 29.7% have moved jurisdictions at least once since their HIV diagnosis and 10.8% have moved twice.

Overall, more HIV-positive individuals move into the state than move out of state and a significant portion of Maryland HIV cases move between jurisdictions after diagnosis.

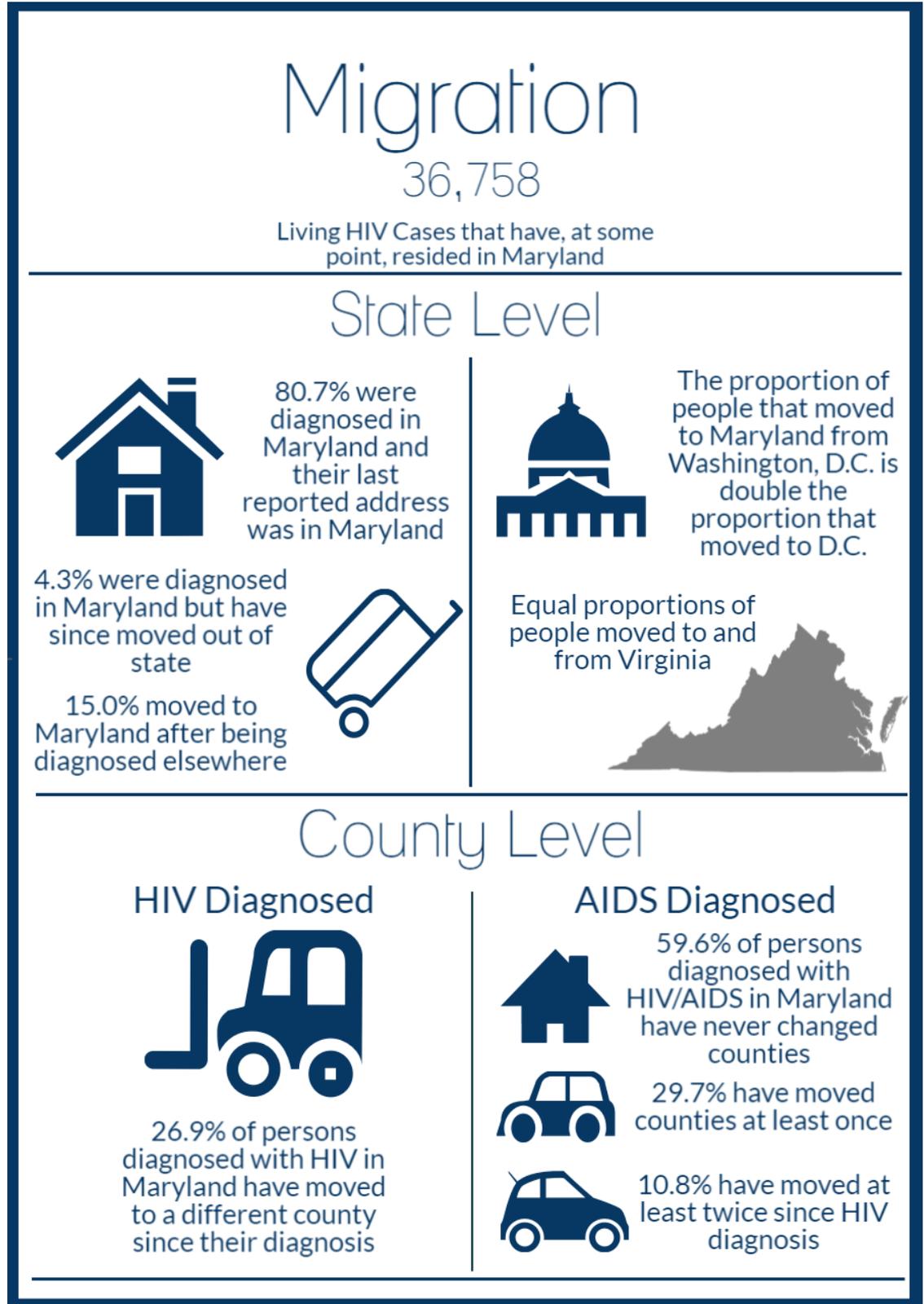


Table 1 – Jurisdictional Migration among Adult/Adolescent HIV Cases Alive on 12/31/2015, by Jurisdiction, Reported through 6/30/2016

JURISDICTION OF RESIDENCE AT DIAGNOSIS*	DIAGNOSED IN MARYLAND				DIAGNOSED OUT OF STATE			TOTAL RESIDENTS AT HIV/AIDS DIAGNOSIS	TOTAL CURRENT RESIDENTS [§]
	PRESUMED CONTINUOUS RESIDENTS**			OUT-MIGRANTS		IN-MIGRANTS			
	No.	% of HIV Diagnoses	% of Current Residents	No.	% of HIV Diagnoses	No.	% of Current Residents		
Allegany	48	67.6%	47.5%	23	32.4%	53	52.5%	71	101
Anne Arundel	706	59.8%	60.1%	474	40.2%	469	39.9%	1,180	1,175
Baltimore City	8,590	68.9%	81.4%	3,883	31.1%	1,968	18.6%	12,473	10,558
Baltimore	1,683	59.8%	53.0%	1,133	40.2%	1,494	47.0%	2,816	3,177
Calvert	71	68.9%	59.2%	32	31.1%	49	40.8%	103	120
Caroline	37	56.9%	64.9%	28	43.1%	20	35.1%	65	57
Carroll	70	53.8%	56.9%	60	46.2%	53	43.1%	130	123
Cecil	61	55.0%	51.7%	50	45.0%	57	48.3%	111	118
Charles	286	69.4%	63.1%	126	30.6%	167	36.9%	412	453
Dorchester	87	70.2%	68.0%	37	29.8%	41	32.0%	124	128
Frederick	205	64.1%	57.9%	115	35.9%	149	42.1%	320	354
Garrett	7	70.0%	53.8%	3	30.0%	6	46.2%	10	13
Harford	269	62.9%	62.4%	159	37.1%	162	37.6%	428	431
Howard	310	56.1%	54.7%	243	43.9%	257	45.3%	553	567
Kent	20	58.8%	52.6%	14	41.2%	18	47.4%	34	38
Montgomery	2,264	60.6%	73.5%	1,472	39.4%	818	26.5%	3,736	3,082
Prince George's	5,102	72.3%	70.6%	1,958	27.7%	2,124	29.4%	7,060	7,226
Queen Anne's	26	53.1%	54.2%	23	46.9%	22	45.8%	49	48
Saint Mary's	98	73.1%	62.0%	36	26.9%	60	38.0%	134	158
Somerset	31	59.6%	50.8%	21	40.4%	30	49.2%	52	61
Talbot	36	61.0%	53.7%	23	39.0%	31	46.3%	59	67
Washington	180	59.8%	54.5%	121	40.2%	150	45.5%	301	330
Wicomico	133	62.7%	59.1%	79	37.3%	92	40.9%	212	225
Worcester	50	61.7%	58.1%	31	38.3%	36	41.9%	81	86
Corrections	557	40.7%	67.4%	811	59.3%	270	32.6%	1,368	827
Out of State	--	--	--	--	--	--	--	4,869	1,367
TOTAL	20,927	100.0%	67.7%	10,955	100.0%	8,596	100.0%	36,751	30,890

* Jurisdiction at AIDS diagnosis was used for 3,707 HARS legacy AIDS cases in which jurisdiction of residence at HIV diagnosis was not available.

** Adults/adolescents diagnosed with HIV may have moved away from and subsequently back to their jurisdiction of HIV diagnosis.

§ Current residents includes only cases in which a jurisdiction of residence was reported on a recent care report form or laboratory test between 1/1/2009-6/30/2016.

Jurisdiction of Residence at Diagnosis: Jurisdiction of residence at the latter of HIV or AIDS diagnosis.

Presumed Continuous Residents: Adults/adolescents diagnosed with HIV whose jurisdiction of residence at HIV diagnosis is the same as their current jurisdiction of residence.

Out-Migrants: Adults/adolescents diagnosed with HIV who have moved away from the specified jurisdiction since HIV diagnosis.

In-Migrants: Adults/adolescents diagnosed with HIV who moved to the specified jurisdiction after their HIV diagnosis.

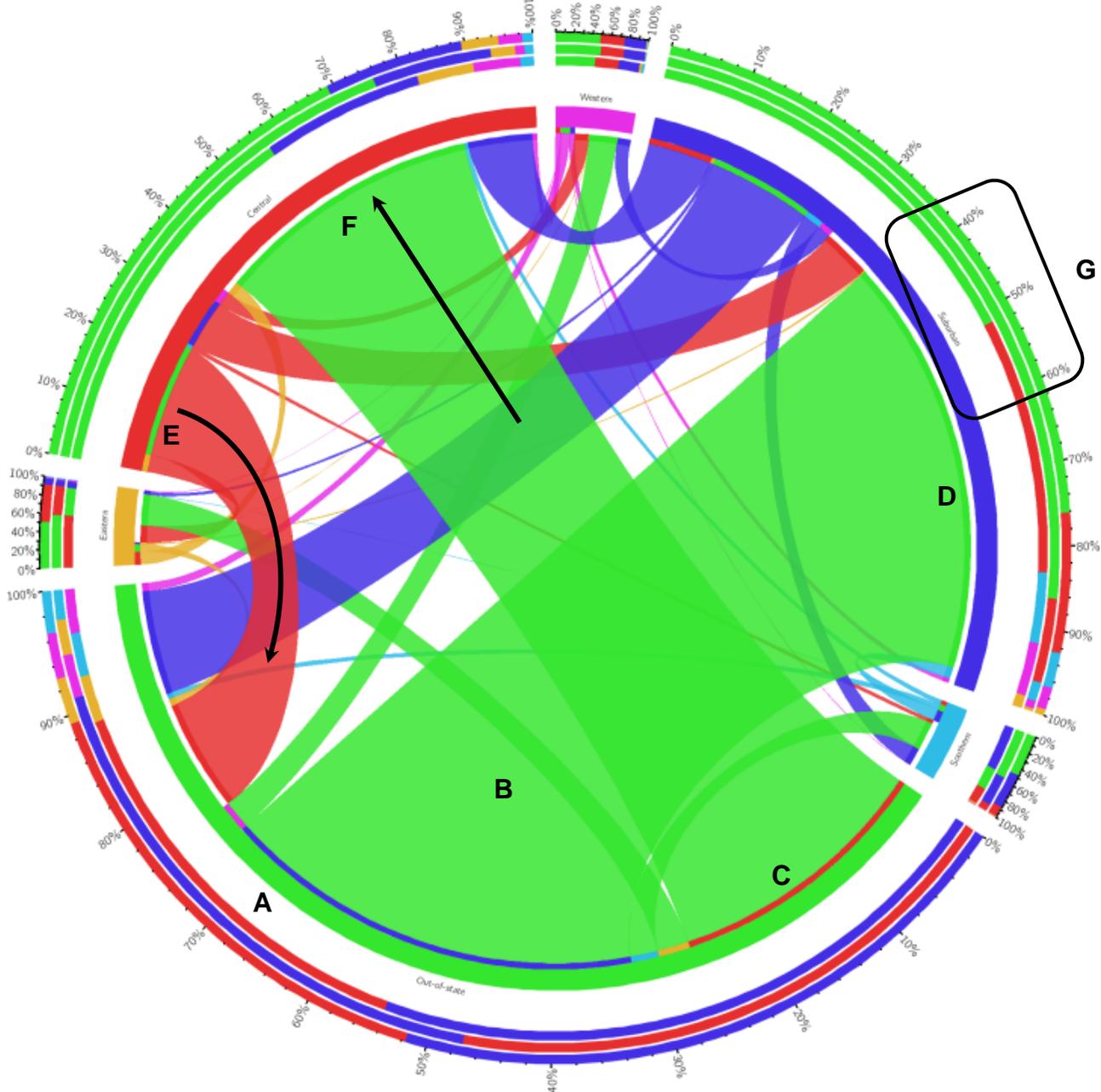
Total Residents at HIV/AIDS Diagnosis: The total number of adults/adolescents diagnosed with HIV in each jurisdiction.

Total Current Residents: The total number of adult/adolescent living cases that are current residents of each jurisdiction.

Out of State: Adults/adolescents diagnosed with HIV in jurisdictions not in Maryland.

Figure 2 – Migration Patterns by Region, among Living Adult/Adolescent HIV Cases, Reported through 6/30/2016

The circular migration plots¹ in figures 2 and 3 are visual depictions of tabular data. Migration is often depicted in a matrix with the points of origin represented by rows and the destinations by columns. Intra-cellular values, or values on the diagonal, represent non-movement. The matrix for Maryland has a row and column for each of the 24 jurisdictions and out of state. The matrix for between jurisdiction migrations contains 600 interactions and is too large for traditional data visualization techniques. Circular migration plots illustrate the complexity of HIV/AIDS case movement and portray the trends in migration. Migration displayed in the circular migration plots in figures 3 and 4 represents only the small proportion of HIV/AIDS cases that relocated within or to Maryland after HIV diagnosis.



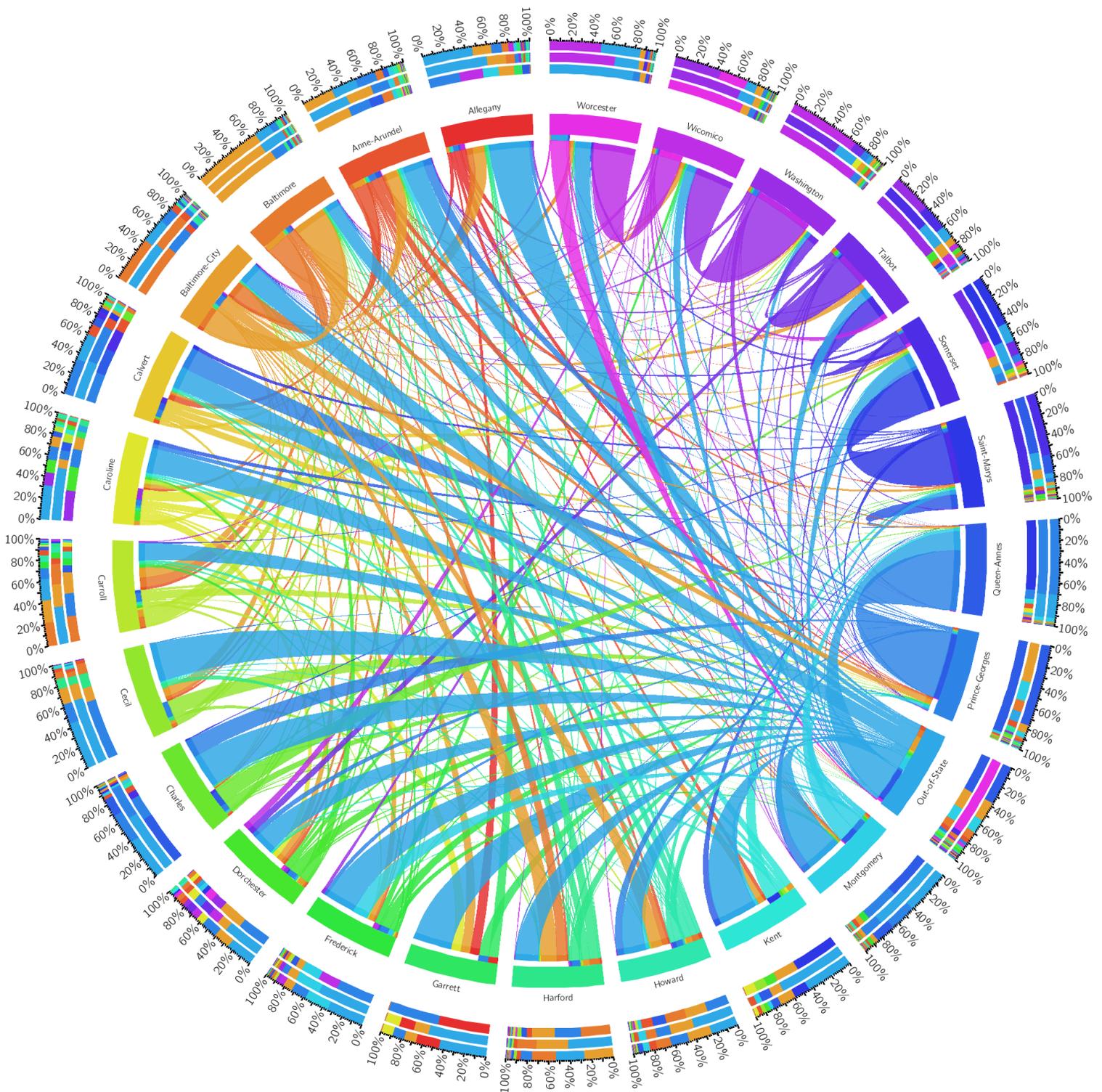
The circular migration plot does not display persons who remain continuous residents of their Region at HIV Diagnosis (75.7%) it only displays migration for persons who no longer live in their Region of Residence at HIV Diagnosis (24.3%).

¹ Martin I Krzywinski, Jacqueline E Schein, Inanc Birol, Joseph Connors, Randy Gascoyne, Doug Horsman, Steven J Jones, and Marco A Marra, Genome Res. Published in Advance June 18, 2009, doi:10.1101/gr.092759.109

Interpreting the chord diagram:

- Region at HIV Diagnosis and Current Region of Residence are represented by the circle segments and color-coded navy, light blue, red, tan, purple, and green (**A**). Circle segments are proportional based on the number of living HIV cases that immigrated to and emigrated from the region.
- Bands between regions represent the movement of HIV cases from their region of residence at time of HIV diagnosis to current region of residence (**B**). Volume of movement is depicted in the width of the band from one region to another.
- Direction of movement is depicted by gaps between bands and circle segments. Bands that are connected with circle segments indicate of a region of origin or the Region at HIV Diagnosis (**C**). Gaps between bands and circle segments are indicative of immigration to that region, as the Current Region of Residence (**D**).
 - For example, the red bands that are connected with the red segment depict persons diagnosed with HIV in the Central Region that have moved out of this region since their diagnosis. Following the largest red band, it appears that a majority of persons diagnosed with HIV in the Central Region that have moved out of state (**E**). Alternatively, bands in the Central Region that are not connected with the red segment depict the initial region of residence at HIV diagnosis for persons currently living in the Central Region but diagnosed elsewhere (**F**).
- The stacked bars on the outside of the circle are contribution tracks, providing detailed information on migration (**G**). The contribution track closest to the circle segment provides the proportion of outward migration, color-coded by the Current Region of Residence. Similarly, the middle contribution track provides the proportion of inward migration, color-coded based on the Region at HIV Diagnosis. The final contribution track is the total migration of a region.
 - For example, the Suburban Region has a large percentage of HIV cases diagnosed in this region that have moved out of state (52%), among living HIV cases that no longer live in their region of HIV diagnosis, as depicted by the proportion of green in the contribution track closed to the circle segment. In contrast, more persons living with HIV moved to the Suburban Region from out of state (76%), as depicted by the larger proportion of green in the second contribution track.

Figure 3 – Migration Patterns by Jurisdiction, among Living Adult/Adolescent HIV Cases, Reported through 6/30/2016

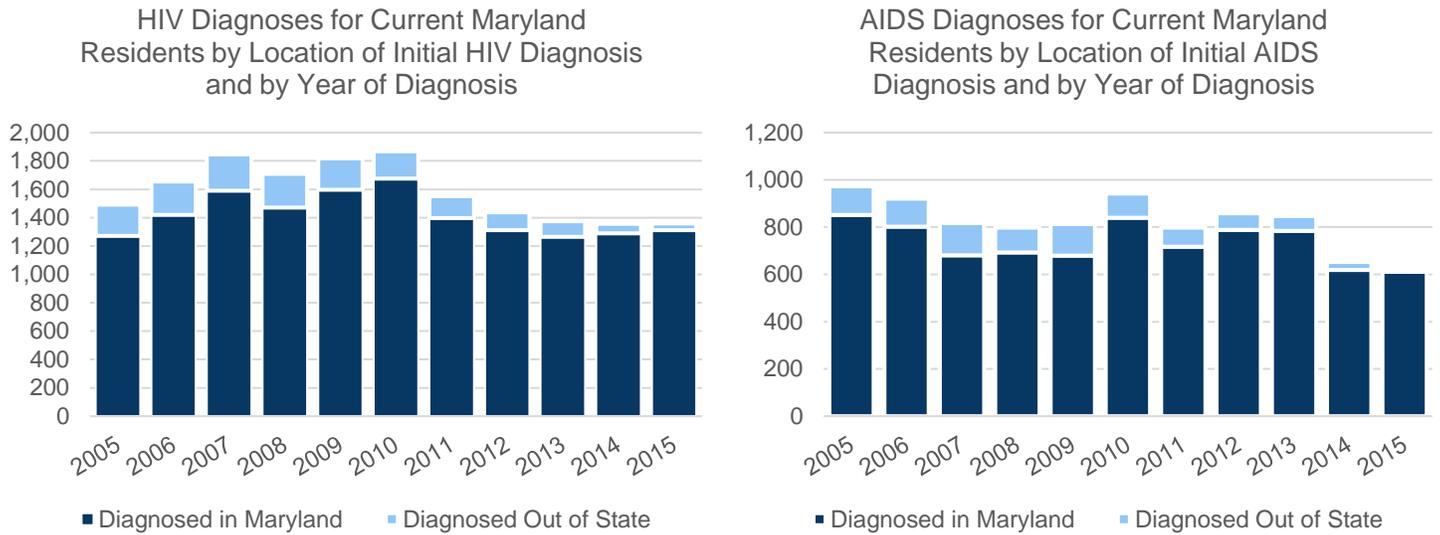


Interpreting the chord diagram: Interpretation is the same as Figure 3. Circle segments were normalized in order to depict migration between all Maryland jurisdictions.

The circular migration plot does not display persons who remain continuous residents of their Jurisdiction at HIV Diagnosis (66.6%), it only displays migration for persons who no longer live in their Jurisdiction at HIV Diagnosis (33.4%).

Figure 4 – Trends in Living HIV/AIDS Cases, Reported through 6/30/2016

Reported HIV cases with and without an AIDS diagnosis and not reported to have died as of December 31st of specified year.



YEAR OF HIV DIAGNOSIS	LOCATION OF INITIAL HIV DIAGNOSIS				Total HIV Diagnoses	YEAR OF AIDS DIAGNOSIS	LOCATION OF INITIAL AIDS DIAGNOSIS				Total AIDS Diagnoses
	Diagnosed in Maryland		Diagnosed Out of State				Diagnosed in Maryland		Diagnosed Out of State		
	No.	%	No.	%			No.	%	No.	%	
2005	1,272	85.3%	220	14.7%	1,492	2005	852	87.6%	121	12.4%	973
2006	1,420	85.7%	236	14.3%	1,656	2006	802	87.2%	118	12.8%	920
2007	1,589	86.1%	257	13.9%	1,846	2007	681	83.4%	136	16.6%	817
2008	1,471	86.0%	239	14.0%	1,710	2008	693	86.8%	105	13.2%	798
2009	1,596	87.7%	224	12.3%	1,820	2009	679	83.5%	134	16.5%	813
2010	1,676	89.7%	192	10.3%	1,868	2010	839	89.1%	103	10.9%	942
2011	1,398	90.0%	155	10.0%	1,553	2011	717	89.8%	81	10.2%	798
2012	1,312	91.3%	125	8.7%	1,437	2012	789	92.0%	69	8.0%	858
2013	1,264	92.0%	110	8.0%	1,374	2013	785	92.7%	62	7.3%	847
2014	1,289	95.1%	67	4.9%	1,356	2014	619	94.8%	34	5.2%	653
2015	1,311	96.5%	47	3.5%	1,358	2015	611	97.8%	14	2.2%	625

Diagnosed Out of State: HIV or AIDS cases where the initial diagnosis of HIV or AIDS was not made in Maryland.

Diagnosed in Maryland: HIV or AIDS cases where the initial diagnosis of HIV or AIDS was made in Maryland.

Caution should be exercised when interpreting trends in HIV diagnoses due to differences in observation time.

Section III - Adult/Adolescent Cases by Jurisdiction

Table 2 – Adult/Adolescent HIV Cases Alive on 12/31/2015, by Jurisdiction, Reported through 6/30/2016

Number of Living Adult/Adolescent HIV cases by Jurisdiction at Diagnosis, Jurisdiction and Current Residence

Jurisdiction of Residence	Population Age 13+	Adult/Adolescent Living HIV Cases with or without AIDS Diagnosis								% Change
		Residence at HIV Diagnosis				Current Residence [§]				
		No.	% of Total	Rate	Ratio	No.	% of Total	Rate	Ratio	
Allegany	63,523	71	0.2%	111.8	894	101	0.3%	159.0	628	42.3%
Anne Arundel	472,498	1,180	3.7%	249.7	400	1,175	4.0%	248.7	402	-0.4%
Baltimore City	523,202	12,473	39.1%	2,384.0	41	10,558	35.8%	2,018.0	49	-15.4%
Baltimore	701,736	2,816	8.8%	401.3	249	3,177	10.8%	452.7	220	12.8%
Calvert	76,074	103	0.3%	135.4	738	120	0.4%	157.7	633	16.5%
Caroline	27,119	65	0.2%	239.7	417	57	0.2%	210.2	475	-12.3%
Carroll	142,863	130	0.4%	91.0	1,098	123	0.4%	86.1	1,161	-5.4%
Cecil	85,936	111	0.3%	129.2	774	118	0.4%	137.3	728	6.3%
Charles	129,678	412	1.3%	317.7	314	453	1.5%	349.3	286	10.0%
Dorchester	27,278	124	0.4%	454.6	219	128	0.4%	469.2	213	3.2%
Frederick	204,660	320	1.0%	156.4	639	354	1.2%	173.0	578	10.6%
Garrett	25,567	10	0.0%	39.1	2,556	13	0.0%	50.8	1,966	30.0%
Harford	210,992	428	1.3%	202.9	492	431	1.5%	204.3	489	0.7%
Howard	260,100	553	1.7%	212.6	470	567	1.9%	218.0	458	2.5%
Kent	17,436	34	0.1%	195.0	512	38	0.1%	217.9	458	11.8%
Montgomery	864,331	3,736	11.7%	432.2	231	3,082	10.4%	356.6	280	-17.5%
Prince George's	758,979	7,060	22.1%	930.2	107	7,226	24.5%	952.1	105	2.4%
Queen Anne's	41,518	49	0.2%	118.0	847	48	0.2%	115.6	864	-2.0%
Saint Mary's	91,688	134	0.4%	146.1	684	158	0.5%	172.3	580	17.9%
Somerset	22,563	52	0.2%	230.5	433	61	0.2%	270.3	369	17.3%
Talbot	32,559	59	0.2%	181.2	551	67	0.2%	205.8	485	13.6%
Washington	126,168	301	0.9%	238.6	419	330	1.1%	261.6	382	9.6%
Wicomico	86,317	212	0.7%	245.6	407	225	0.8%	260.7	383	6.1%
Worcester	45,221	81	0.3%	179.1	558	86	0.3%	190.2	525	6.2%
Corrections	--	1,368	4.3%	--	--	827	2.8%	--	--	-39.5%
TOTAL	5,038,007	31,882	100.0%	632.8	158	29,523	100.0%	586.0	170	-7.4%

§ Current residence includes only cases in which a jurisdiction of residence was reported on a recent care report form or laboratory test between 1/1/2009-6/30/2016.

Adult/Adolescent Total Living HIV Cases: Reported HIV diagnoses, age 13 years or older at HIV diagnosis, with or without an AIDS diagnosis, and not reported to have died as of December 31st of the specified year.

Jurisdiction of Residence: Jurisdiction of residence at time of initial HIV diagnosis or most recent lab test.

Population Age 13+: Population age 13 years or older, estimate for 7/1/2015.

Residence at HIV Diagnosis: Jurisdiction of residence at time of initial HIV diagnosis.

Current Residence: Jurisdiction of residence from the most recent laboratory test or case report between 1/1/2009-6/30/2016.

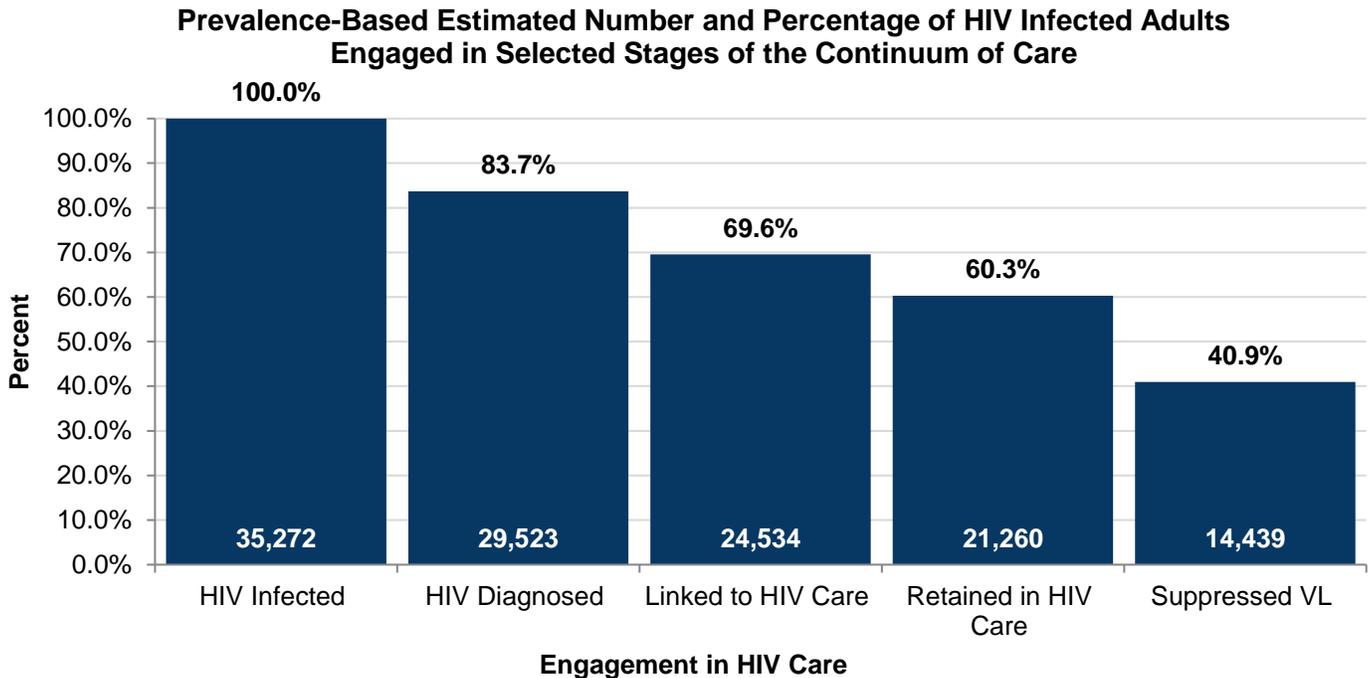
Rate: A proportion used to represent risk for disease within a given population. It is calculated by dividing the number of diagnoses by the number of persons at risk (population estimate).

Ratio (1 in X): Number of people for every 1 living HIV case in the population, or 1 living HIV case in every X number of people.

Percent Change: The extent to which a jurisdiction gained or lost HIV/AIDS cases relative to the number of cases diagnosed in the jurisdiction.

Figure 5 – Prevalence-Based Estimated Adult/Adolescent 2015 HIV Continuum of Care Cascades, by Current Residence, Reported through 6/30/2016

In their 2011 article in *Clinical Infectious Diseases*, Gardner et al.¹ utilize a continuum of care “cascade” to illustrate national estimates of the number of persons living with HIV who fall under each of the stages of engagement in HIV care. The prevalence-based Maryland Engagement in HIV Care Cascade (below) uses a CDC estimate of the percentage of undiagnosed persons in Maryland (16.3%)² to generate an estimated total number of HIV infected persons in Maryland. It then uses local data to describe the number and percentage of persons living with HIV in Maryland who belong to each of the stages of engagement in HIV care.



CONTINUUM OF CARE STAGE	Number	Percentage
HIV Infected	35,272	100.0%
HIV Diagnosed	29,523	83.7%
Linked to HIV Care	24,534	69.6%
Retained in HIV Care	21,260	60.3%
Suppressed VL	14,439	40.9%

HIV Infected: HIV Diagnosed divided by one minus the estimate of undiagnosed HIV infections (16.3%) in Maryland.

HIV Diagnosed: Adult/adolescent total living HIV as of December 31st of the specified year with a recent address in Maryland between 2009 and 2016.

Linked to HIV Care: HIV Diagnosed multiplied by the percent of adult/adolescent reported HIV diagnoses during the specified year with a reported CD4 or viral load test performed less than or equal to 3 months after their initial HIV diagnosis.

Retained in HIV Care: HIV Diagnosed with a CD4 or viral load test result measured in the specified year, reported through 6/30/2016.

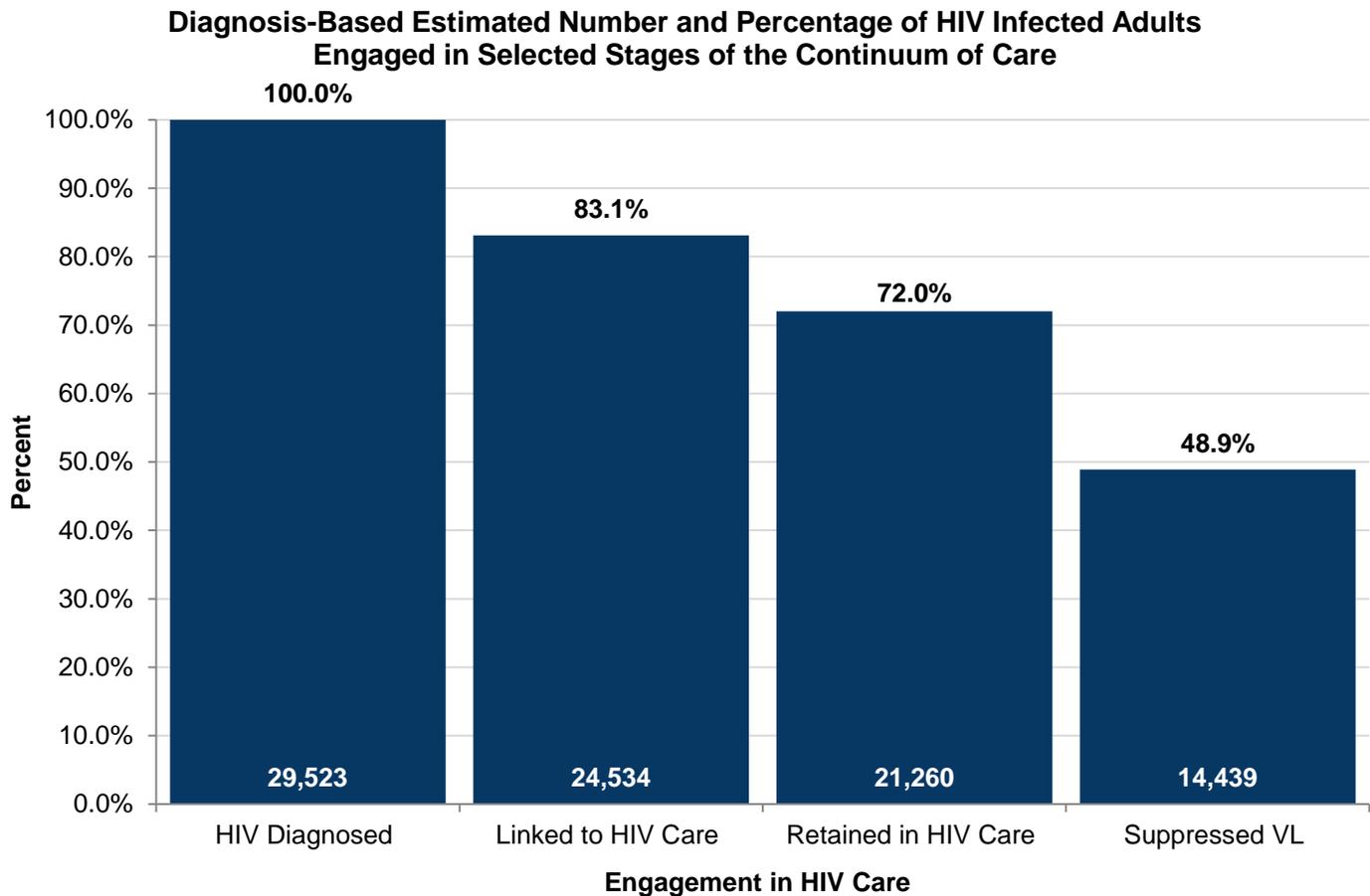
Suppressed Viral Load: HIV Diagnosed with the most recent viral load reported in the 12 months prior to December 31st of the specified year of less than 200 copies per milliliter.

¹ Gardner et al. “The Spectrum of Engagement in HIV Care and its Relevance to Test- and- Treat Strategies for Prevention of HIV Infection.” *Clin Infect Dis.* 2011; 52 (6): 793- 800.

² Centers for Disease Control and Prevention. Monitoring selected national HIV prevention and care objectives by using HIV surveillance data—United States and 6 dependent areas, 2014. *HIV Surveillance Supplemental Report* 2016;21(No. 4). <http://www.cdc.gov/hiv/library/reports/surveillance/>. Published July 2016.

Figure 6 – Diagnosis-Based Estimated Adult/Adolescent 2015 HIV Continuum of Care Cascades, by Current Residence, Reported through 6/30/2016

The diagnosis-based Maryland Engagement in HIV Care Cascade (below) uses local data for current Maryland residents to describe the number and percentage of persons diagnosed with HIV in Maryland who belong to each of the stages of engagement in HIV care.



CONTINUUM OF CARE STAGE	Number	Percentage
HIV Diagnosed	29,523	100.0%
Linked to HIV Care	24,534	83.1%
Retained in HIV Care	21,260	72.0%
Suppressed VL	14,439	48.9%

HIV Diagnosed: Adult/adolescent total living HIV as of December 31st of the specified year with a recent address in Maryland between 2009 and 2016.

Linked to HIV Care: HIV Diagnosed multiplied by the percent of adult/adolescent reported HIV diagnoses during the specified year with a reported CD4 or viral load test performed less than or equal to 3 months after their initial HIV diagnosis.

Retained in HIV Care: HIV Diagnosed with a CD4 or viral load test result measured in the specified year, reported through 6/30/2016.

Suppressed Viral Load: HIV Diagnosed with the most recent viral measured in the specified year of less than 200 copies per milliliter, reported through 6/30/2016.

Section IV - Cases by Age

Table 3 – HIV Cases Alive on 12/31/2015 and Current Residents as of 6/30/2016, by Age on 12/31/2015, Reported through 6/30/2016

AGE ON 12/31/2015	POPULATION	LIVING HIV CASES WITHOUT AIDS			LIVING HIV CASES WITH AIDS			TOTAL LIVING HIV CASES			
		No.	%	Rate	No.	%	Rate	No.	%	Rate	Ratio (1 in X)
<5	369,035	8	0.1%	2.2	1	0.0%	0.3	9	0.0%	2.4	41,003
5-12	599,359	47	0.3%	7.8	8	0.0%	1.3	55	0.2%	9.2	10,897
13-19	535,085	149	1.1%	27.8	46	0.3%	8.6	195	0.7%	36.4	2,744
20-29	821,815	2,385	17.6%	290.2	956	5.8%	116.3	3,340	11.1%	406.4	246
30-39	798,728	3,158	23.3%	395.4	2,310	14.1%	289.2	5,468	18.3%	684.6	146
40-49	799,172	3,128	23.0%	391.4	4,434	27.1%	554.8	7,561	25.2%	946.1	105
50-59	877,441	3,243	23.9%	369.6	5,863	35.8%	668.2	9,106	30.4%	1,037.8	96
60+	1,205,766	1,463	10.8%	121.3	2,763	16.9%	229.1	4,226	14.1%	350.5	285
TOTAL	6,006,401	13,581	100.0%	226.1	16,381	100.0%	272.7	29,960	100.0%	498.8	200

Age on [date]: Age group of living cases on the specified date.

Population: Population estimate for 7/1/2015.

Adult/Adolescent Living HIV Cases without AIDS: Reported HIV diagnoses, age 13 years or older at HIV diagnosis, without an AIDS diagnosis, and not reported to have died as of December 31st of the specified year.

Adult/Adolescent Living HIV Cases with AIDS: Reported HIV diagnoses, age 13 years or older at HIV diagnosis, with an AIDS diagnosis, and not reported to have died as of December 31st of the specified year.

Adult/Adolescent Total Living HIV Cases: Reported HIV diagnoses, age 13 years or older at HIV diagnosis, with or without an AIDS diagnosis, and not reported to have died as of December 31st of the specified year.

Rate: A proportion used to represent risk for disease within a given population. It is calculated by dividing the number of diagnoses by the number of persons at risk (population estimate).

Ratio (1 in X): Number of people for every 1 living HIV case in the population, or 1 living HIV case in every X number of people.

Table 4 – CD4 Test Results for Adult/Adolescent HIV Cases Alive on 12/31/2015 and Current Residents as of 6/30/2016, by Age on 12/31/2015, Reported through 6/30/2016

AGE ON 12/31/2015	ADULT/ADOLESCENT TOTAL LIVING HIV CASES							
	No.	Recent CD4 Test Results						500+
		No. with Test	% with Test	Median Count	<200	200-349	350-499	
13-19	83	55	66.3%	591	3.6%	20.0%	25.5%	50.9%
20-29	3,104	1,950	62.8%	548	9.7%	13.8%	20.5%	56.0%
30-39	5,445	3,319	61.0%	542	12.9%	13.3%	18.5%	55.3%
40-49	7,559	5,021	66.4%	529	13.6%	14.7%	18.1%	53.6%
50-59	9,106	6,473	71.1%	548	12.8%	15.1%	16.6%	55.6%
60+	4,226	3,043	72.0%	548	10.9%	15.2%	17.8%	56.1%
TOTAL	29,523	19,861	67.3%	542	12.4%	14.6%	17.9%	55.1%

Table 5 – Viral Load Test Results for Adult/Adolescent HIV Cases Alive on 12/31/2015 and Current Residents as of 6/30/2016, by Age on 12/31/2015, Reported through 6/30/2016

AGE ON 12/31/2015	ADULT/ADOLESCENT TOTAL LIVING HIV CASES				
	No.	Recent Viral Load Test Result			Median Unsuppressed
		No. with Test	% with Test	% Suppressed	
13-19	83	62	74.7%	46.8%	15,002
20-29	3,104	1,988	64.0%	62.1%	14,977
30-39	5,445	3,274	60.1%	71.7%	13,380
40-49	7,559	4,822	63.8%	76.8%	15,010
50-59	9,106	5,963	65.5%	80.5%	8,199
60+	4,226	2,716	64.3%	85.9%	5,779
TOTAL	29,523	18,825	63.8%	76.7%	12,137

Adult/Adolescent Total Living HIV Cases: Reported HIV diagnoses, age 13 years or older at HIV diagnosis, with or without an AIDS diagnosis, and not reported to have died as of December 31st of the specified year.

Age on [date]: Age group of living cases on the specified date.

Recent CD4 Test Result: The most recent CD4 test result measured in the specified year, reported through 6/30/2016.

Median Count (Recent CD4): Median CD4 count (cells per microliter) of the most recent CD4 test result measured in the specified year, reported through 6/30/2016.

CD4 Result Distribution (<200, 200-349, 350-499, 500+): Percent of cases with a CD4 test distributed by their CD4 count results (cells per microliter).

Recent Viral Load Test Result: The most recent viral load test result measured in the specified year, reported through 6/30/2016.

Percent Suppressed (Viral Load): Percent of adult/adolescent total living HIV cases with a most recent viral load measured in the specified year of less than 200 copies per milliliter, reported through 6/30/2016.

Median Unsuppressed (Viral Load): Median unsuppressed viral load (copies per milliliter) among adult/adolescent living HIV cases with a most recent viral load test result measured in the specified year of 200 copies per milliliter or greater, reported through 6/30/2016.

Section V - Adult/Adolescent Cases by Demographics

Table 6 – Adult/Adolescent Living HIV Cases with and without AIDS by Sex at Birth, Race/Ethnicity, and Country of Birth, Alive on 12/31/2015, Current Residents as of 6/30/2016 and Reported through 6/30/2016

SEX AT BIRTH	POPULATION AGE 13+	ADULT/ADOLESCENT LIVING HIV CASES WITHOUT AIDS			ADULT/ADOLESCENT LIVING HIV CASES WITH AIDS			ADULT/ADOLESCENT TOTAL LIVING HIV CASES			Ratio (1 in X)
		No.	%	Rate	No.	%	Rate	No.	%	Rate	
Male	2,417,134	8,936	66.8%	369.7	10,562	65.4%	437.0	19,498	66.0%	806.7	123
Female	2,620,873	4,434	33.2%	169.2	5,593	34.6%	213.4	10,025	34.0%	382.5	261
TOTAL	5,038,007	13,370	100.0%	265.4	16,155	100.0%	320.7	29,523	100.0%	586.0	170

RACE/ETHNICITY	POPULATION AGE 13+*	ADULT/ADOLESCENT LIVING HIV CASES WITHOUT AIDS			ADULT/ADOLESCENT LIVING HIV CASES WITH AIDS			ADULT/ADOLESCENT TOTAL LIVING HIV CASES			Ratio (1 in X)
		No.	%	Rate	No.	%	Rate	No.	%	Rate	
Hispanic	427,308	702	5.3%	164.3	917	5.7%	214.6	1,619	5.5%	378.9	263
Non-Hispanic	4,610,699	12,668	94.7%	274.8	15,238	94.3%	330.5	27,904	94.5%	605.2	165
American Indian/Alaska Native, only	12,512	12	0.1%	95.9	7	0.0%	55.9	19	0.1%	151.9	658
Asian, only	324,863	124	0.9%	38.2	71	0.4%	21.9	195	0.7%	60.0	1,665
Black, only	1,469,412	9,958	74.5%	677.7	12,287	76.1%	836.2	22,243	75.3%	1,513.7	66
Native Hawaiian/Other Pacific Islander, only	2,590	2	0.0%	77.2	2	0.0%	77.2	4	0.0%	154.4	647
White only	2,714,422	2,019	15.1%	74.4	2,006	12.4%	73.9	4,025	13.6%	148.3	674
Multiracial/Other	86,900	553	4.1%	636.4	865	5.4%	995.4	1,418	4.8%	1,631.8	61
TOTAL	5,038,007	13,370	100.0%	265.4	16,155	100.0%	320.7	29,523	100.0%	586.0	170

COUNTRY OF BIRTH	POPULATION AGE 13+**	ADULT/ADOLESCENT LIVING HIV CASES WITHOUT AIDS			ADULT/ADOLESCENT LIVING HIV CASES WITH AIDS			ADULT/ADOLESCENT TOTAL LIVING HIV CASES			Ratio (1 in X)
		No.	%	Rate	No.	%	Rate	No.	%	Rate	
United States	4,117,970	11,647	87.1%	282.8	14,422	89.3%	350.2	26,067	88.3%	633.0	157
Foreign-born	798,470	1,027	7.7%	128.6	1,379	8.5%	172.7	2,406	8.1%	301.3	331
Africa	--	637	4.8%	--	845	5.2%	--	1,482	5.0%	--	--
Asia	--	72	0.5%	--	71	0.4%	--	143	0.5%	--	--
Caribbean	--	80	0.6%	--	100	0.6%	--	180	0.6%	--	--
Central America	--	149	1.1%	--	252	1.6%	--	401	1.4%	--	--
Other	--	89	0.7%	--	111	0.7%	--	200	0.7%	--	--
Unknown	--	696	5.2%	--	354	2.2%	--	1,050	3.6%	--	--
TOTAL	4,916,440	13,370	100.0%	271.9	16,155	100.0%	328.6	29,523	100.0%	600.5	166

* Population data by sex at birth, age, and race/ethnicity are from the 2015 U.S. Census population estimates

** Population data by country of birth are from the 2014 American Community Survey

Population Age 13+: Population greater than or equal to 13 years old, estimate for 7/1/2015.

Adult/Adolescent Living HIV Cases without AIDS: Reported HIV diagnoses, age 13 years or older at HIV diagnosis, without an AIDS diagnosis, and not reported to have died as of December 31st of the specified year.

Adult/Adolescent Living HIV Cases with AIDS: Reported HIV diagnoses, age 13 years or older at HIV diagnosis, with an AIDS diagnosis, and not reported to have died as of December 31st of the specified year.

Adult/Adolescent Total Living HIV Cases: Reported HIV diagnoses, age 13 years or older at HIV diagnosis, with or without an AIDS diagnosis, and not reported to have died as of December 31st of the specified year.

Rate: A proportion used to represent risk for disease within a given population. It is calculated by dividing the number of diagnoses by the number of persons at risk (population estimate).

Ratio (1 in X): Number of people for every 1 living HIV case in the population, or 1 living HIV case in every X number of people.

Table 7 –Adult/Adolescent Total Living HIV Cases, Recent CD4 Test Results, by Sex at Birth, Race/Ethnicity and Country of Birth, Alive on 12/31/2015, Current Residents as of 6/30/2016 and Reported through 6/30/2016

SEX AT BIRTH	ADULT/ADOLESCENT TOTAL LIVING HIV CASES							
	No.	Recent CD4 Test Result						
		No. with Test	% with Test	Median Count	<200	200-349	350-499	500+
Male	19,498	12,764	65.5%	523	12.8%	15.6%	18.9%	52.8%
Female	10,025	7,097	70.8%	585	11.7%	12.8%	16.1%	59.4%
TOTAL	29,523	19,861	67.3%	542	12.4%	14.6%	17.9%	55.1%

RACE/ETHNICITY	ADULT/ADOLESCENT TOTAL LIVING HIV CASES							
	No.	Recent CD4 Test Result						
		No. with Test	% with Test	Median Count	<200	200-349	350-499	500+
Hispanic	1,619	1,102	68.1%	514	12.2%	14.3%	22.1%	51.4%
Non-Hispanic	27,904	18,759	67.2%	544	12.4%	14.6%	17.6%	55.4%
American Indian/Alaska Native, only	19	***	***	***	***	***	***	***
Asian, only	195	127	65.1%	516	4.7%	15.7%	25.2%	54.3%
Black, only	22,243	15,000	67.4%	533	12.9%	15.1%	18.0%	54.0%
Native Hawaiian/Other Pacific Islander, only	4	***	***	***	***	***	***	***
White only	4,025	2,598	64.5%	610	9.2%	11.8%	15.2%	63.9%
Multiracial/Other	1,418	1,023	72.1%	533	13.5%	14.8%	17.8%	54.0%
TOTAL	29,523	19,861	67.3%	542	12.4%	14.6%	17.9%	55.1%

COUNTRY OF BIRTH	ADULT/ADOLESCENT TOTAL LIVING HIV CASES							
	No.	Recent CD4 Test Result						
		No. with Test	% with Test	Median Count	<200	200-349	350-499	500+
United States	26,067	17,535	67.3%	543	12.6%	14.5%	17.6%	55.3%
Foreign-born	2,406	1,687	70.1%	530	9.7%	15.1%	21.5%	53.8%
Africa	1,482	1,055	71.2%	530	8.9%	15.5%	21.8%	53.7%
Asia	143	95	66.4%	503	9.5%	16.8%	21.1%	52.6%
Caribbean	180	131	72.8%	598	10.7%	9.9%	19.8%	59.5%
Central America	401	275	68.6%	471	13.8%	17.8%	22.2%	46.2%
Other	200	131	65.5%	602	6.1%	9.2%	19.8%	64.9%
Unknown	1,050	639	60.9%	541	13.9%	15.2%	16.6%	54.3%
TOTAL	29,523	19,861	67.3%	542	12.4%	14.6%	17.9%	55.1%

*** Data withheld due to low population and/or case counts

Adult/Adolescent Total Living HIV Cases: Reported HIV diagnoses, age 13 years or older at HIV diagnosis, with or without an AIDS diagnosis, and not reported to have died as of December 31st of the specified year.

Recent CD4 Test Result: The most recent CD4 test result measured in the specified year, as reported through 6/30/2016.

Median Count (Recent CD4): Median CD4 count (cells per microliter) of the most recent CD4 test result measured in the specified year, as reported through 6/30/2016.

CD4 Result Distribution (<200, 200-349, 350-499, 500+): Percent of cases with a CD4 test distributed by their CD4 count results (cells per microliter).

Table 8 – Adult/Adolescent Total Living HIV Cases, Recent Viral Load Test Results, by Sex at Birth, Race/Ethnicity and Country of Birth, Alive on 12/31/2015, Current Residents as of 6/30/2016 and Reported through 6/30/2016

ADULT/ADOLESCENT TOTAL LIVING HIV CASES					
SEX AT BIRTH	No.	Recent Viral Load Test Result			
		No. with Test	% with Test	% Suppressed	Median Unsuppressed
Male	19,498	12,072	61.9%	77.3%	12,881
Female	10,025	6,753	67.4%	75.8%	10,902
TOTAL	29,523	18,825	63.8%	76.7%	12,137

ADULT/ADOLESCENT TOTAL LIVING HIV CASES					
RACE/ETHNICITY	No.	Recent Viral Load Test Result			
		No. with Test	% with Test	% Suppressed	Median Unsuppressed
Hispanic	1,619	1,081	66.8%	81.3%	13,390
Non-Hispanic	27,904	17,744	63.6%	76.5%	12,023
American Indian/Alaska Native, only	19	***	***	***	***
Asian, only	195	120	61.5%	92.5%	61,330
Black, only	22,243	14,211	63.9%	74.6%	12,120
Native Hawaiian/Other Pacific Islander, only	4	***	***	***	***
White only	4,025	2,457	61.0%	84.8%	9,711
Multiracial/Other	1,418	943	66.5%	80.4%	15,849
TOTAL	29,523	18,825	63.8%	76.7%	12,137

ADULT/ADOLESCENT TOTAL LIVING HIV CASES					
COUNTRY OF BIRTH	No.	Recent Viral Load Test Result			
		No. with Test	% with Test	% Suppressed	Median Unsuppressed
United States	26,067	16,544	63.5%	75.8%	11,792
Foreign-born	2,406	1,644	68.3%	86.6%	13,866
Africa	1,482	1,020	68.8%	87.9%	10,120
Asia	143	90	62.9%	87.8%	15,849
Caribbean	180	126	70.0%	83.3%	25,430
Central America	401	279	69.6%	81.4%	16,740
Other	200	129	64.5%	89.9%	4,101
Unknown	1,050	637	60.7%	74.7%	18,640
TOTAL	29,523	18,825	63.8%	76.7%	12,137

*** Data withheld due to low population and/or case counts

Adult/Adolescent Total Living HIV Cases: Reported HIV diagnoses, age 13 years or older at HIV diagnosis, with or without an AIDS diagnosis, and not reported to have died as of December 31st of the specified year.

Recent Viral Load Test Result: The most recent viral load test result measured in the specified year, reported through 6/30/2016.

Percent Suppressed (Viral Load): Percent of adult/adolescent total living HIV cases with a most recent viral load measured in the specified year of less than 200 copies per milliliter, reported through 6/30/2016.

Median Unsuppressed (Viral Load): Median unsuppressed viral load (copies per milliliter) among adult/adolescent living HIV cases with a most recent viral load test result measured in the specified year, reported through 6/30/2016 of 200 copies per milliliter or greater.

Table 9 – Total Living Male HIV Cases by Current Age and Race/Ethnicity, Alive on 12/31/2015, Current Residents as of 6/30/2016 and Reported through 6/30/2016

MALES						
AGE ON 12/31/2015		RACE/ETHNICITY				TOTAL MALES BY AGE GROUP
		Hispanic	Non-Hispanic Black, only	Non-Hispanic White, only	Non-Hispanic Other Race	
<13 (Pediatric)	Population	74,269	151,303	210,701	57,679	493,951
	Cases	2	15	0	2	19
	Rate	2.7	9.9	0.0	3.5	3.8
	Ratio (1 in X)	37,134	10,086	--	28,839	25,997
13-19	Population	30,511	85,713	128,408	27,718	272,351
	Cases	7	92	3	4	106
	Rate	22.9	107.3	2.3	14.4	38.9
	Ratio (1 in X)	4,358	931	42,802	6,929	2,569
20-29	Population	49,423	129,223	198,509	37,500	414,655
	Cases	152	2,080	187	138	2,557
	Rate	307.5	1,609.6	94.2	368.0	616.7
	Ratio (1 in X)	325	62	1,061	271	162
30-39	Population	58,378	109,946	186,794	37,378	392,496
	Cases	364	2,593	495	219	3,671
	Rate	623.5	2,358.4	265.0	585.9	935.3
	Ratio (1 in X)	160	42	377	170	106
40-49	Population	42,384	112,894	195,236	34,649	385,163
	Cases	357	3,036	790	283	4,466
	Rate	842.3	2,689.2	404.6	816.8	1,159.5
	Ratio (1 in X)	118	37	247	122	86
50-59	Population	25,356	115,409	250,246	28,914	419,925
	Cases	254	4,256	1,174	342	6,026
	Rate	1,001.7	3,687.8	469.1	1,182.8	1,435.0
	Ratio (1 in X)	99	27	213	84	69
60+	Population	17,697	119,175	361,785	33,887	532,544
	Cases	88	1,987	604	164	2,843
	Rate	497.3	1,667.3	166.9	484.0	533.9
	Ratio (1 in X)	201	59	598	206	187
TOTAL MALES BY RACE/ETHNICITY	Population	298,018	823,663	1,531,679	257,725	2,911,085
	Cases	1,224	14,059	3,253	1,152	19,688
	Rate	410.7	1,706.9	212.4	447.0	676.3
	Ratio (1 in X)	243	58	470	223	147

Age on [date]: Age group of living cases on the specified date.

Total Living HIV Cases: Reported HIV diagnoses with or without an AIDS diagnosis and not reported to have died as of December 31st of the specified year.

Population: Population estimate for 7/1/2015.

Rate: A proportion used to represent risk for disease within a given population. It is calculated by dividing the number of diagnoses by the number of persons at risk (population estimate).

Ratio (1 in X): Number of people for every 1 living HIV case in the population, or 1 living HIV case in every X number of people.

Table 10 – Total Living Female HIV Cases by Current Age and Race/Ethnicity, Alive on 12/31/2015, Current Residents as of 6/30/2016 and Reported through 6/30/2016

FEMALES						
AGE ON 12/31/2015		RACE/ETHNICITY				TOTAL FEMALES BY AGE GROUP
		Hispanic	Non-Hispanic Black, only	Non-Hispanic White, only	Non-Hispanic Other Race	
<13 (Pediatric)	Population	70,796	147,204	200,640	55,803	474,443
	Cases	1	38	3	3	45
	Rate	1.4	25.8	1.5	5.4	9.5
	Ratio (1 in X)	70,795	3,873	66,880	18,601	10,543
13-19	Population	28,892	84,316	121,808	27,718	262,734
	Cases	4	80	4	1	89
	Rate	13.8	94.9	3.3	3.6	33.9
	Ratio (1 in X)	7,223	1,053	30,451	27,717	2,952
20-29	Population	42,203	135,150	191,094	38,713	407,160
	Cases	39	647	60	37	783
	Rate	92.4	478.7	31.4	95.6	192.3
	Ratio (1 in X)	1,082	208	3,184	1,046	520
30-39	Population	47,678	128,957	185,576	44,021	406,232
	Cases	104	1,434	158	101	1,797
	Rate	218.1	1,112.0	85.1	229.4	442.4
	Ratio (1 in X)	458	89	1,174	435	226
40-49	Population	36,886	133,604	202,651	40,868	414,009
	Cases	120	2,593	233	149	3,095
	Rate	325.3	1,940.8	115.0	364.6	747.6
	Ratio (1 in X)	307	51	869	274	133
50-59	Population	24,846	139,985	258,774	33,911	457,516
	Cases	101	2,597	233	149	3,080
	Rate	406.5	1,855.2	90.0	439.4	673.2
	Ratio (1 in X)	246	53	1,110	227	148
60+	Population	23,054	175,039	433,541	41,588	673,222
	Cases	42	1,169	106	66	1,383
	Rate	182.2	667.9	24.4	158.7	205.4
	Ratio (1 in X)	548	149	4,090	630	486
TOTAL FEMALES BY RACE/ETHNICITY	Population	274,355	944,255	1,594,084	282,622	3,095,316
	Cases	411	8,558	797	506	10,272
	Rate	149.8	906.3	50.0	179.0	331.9
	Ratio (1 in X)	667	110	2,000	558	301

Age on [date]: Age group of living cases on the specified date.

Total Living HIV Cases: Reported HIV diagnoses with or without an AIDS diagnosis and not reported to have died as of December 31st of the specified year.

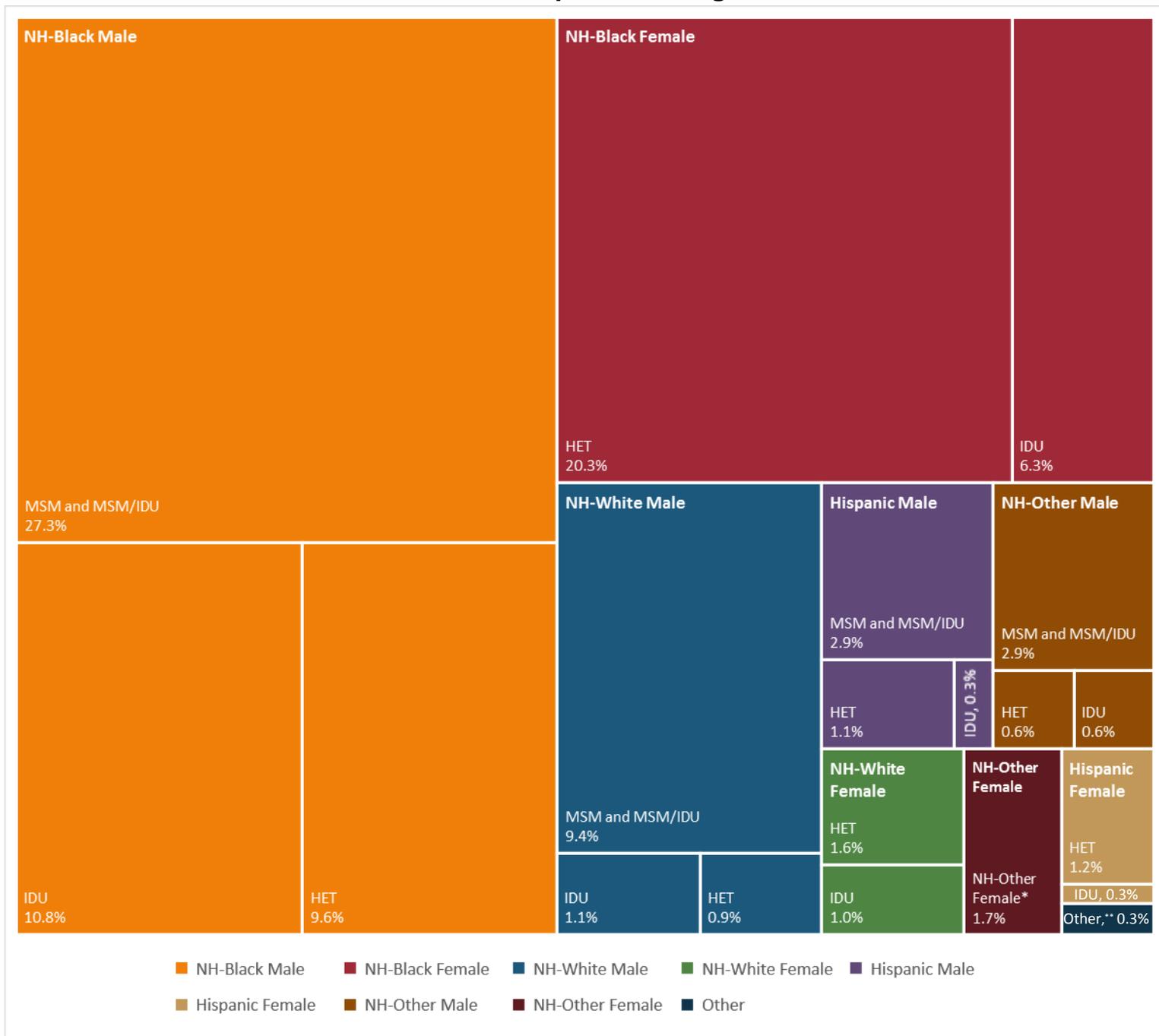
Population: Population estimate for 7/1/2015.

Rate: A proportion used to represent risk for disease within a given population. It is calculated by dividing the number of diagnoses by the number of persons at risk (population estimate).

Ratio (1 in X): Number of people for every 1 living HIV case in the population, or 1 living HIV case in every X number of people.

Section VII - HIV Exposure Category

Figure 7 – Proportion of Adult/Adolescent Total Living HIV Cases with Exposure Category, by Exposure Category, Race/Ethnicity, and Sex at Birth, Alive on 12/31/2015, Current Residents as of 6/30/2016 and Reported through 6/30/2016



* Includes all exposure categories.

** All other exposure categories for all races/ethnicities.

Adult/Adolescent Total Living HIV Cases: Reported HIV diagnoses, age 13 years or older at HIV diagnosis, with or without an AIDS diagnosis, and not reported to have died as of December 31st of the specified year.

MSM (Men who have Sex with Men): Men who report a history of sexual contact with other men (homosexual contact) including men who report sexual contact with both men and women (bisexual contact).

Injection Drug Use (IDU): Men or women who report receiving an injection, either self-administered or given by another person, of a drug that was not prescribed by a physician.

MSM/IDU: Men who report a history of sexual contact with other men who also have engaged in injection drug use.

Heterosexual Exposure (HET): Men or women who report a history of sexual contact with a person of the opposite sex who is known to have an HIV infection or at high risk for an HIV infection. High risk groups include bisexual men, IDUs and recipients of blood, blood components, transplants of organ or tissue and artificial insemination.

Perinatal Exposure: Any baby born to an HIV positive mother.

Table 11 – Adult/Adolescent Living HIV Cases with and without AIDS by Exposure Category and Sex at Birth, Alive on 12/31/2015, Current Residents as of 6/30/2016 and Reported through 6/30/2016

EXPOSURE CATEGORY	ADULT/ADOLESCENT LIVING HIV CASES WITHOUT AIDS		ADULT/ADOLESCENT LIVING HIV CASES WITH AIDS		ADULT/ADOLESCENT TOTAL LIVING HIV CASES	
	No.	% of Total with Exposure	No.	% of Total with Exposure	No.	% of Total with Exposure
With Exposure	10,052	100.0%	14,197	100.0%	24,248	100.0%
Men who have Sex with Men (MSM)	4,770	47.5%	4,583	32.3%	9,353	38.6%
Injection Drug Users (IDU)	1,296	12.9%	3,757	26.5%	5,053	20.8%
Men who have Sex with Men and Inject Drugs (MSM/IDU)	276	2.7%	653	4.6%	929	3.8%
Heterosexual Exposure (HET)	3,687	36.7%	5,153	36.3%	8,839	36.5%
Other Exposures	23	0.2%	51	0.4%	74	0.3%
No Reported Exposure*	3,318	24.8%	1,958	12.1%	5,275	17.9%
TOTAL	13,370	100.0%	16,155	100.0%	29,523	100.0%

MALE EXPOSURE CATEGORY	ADULT/ADOLESCENT LIVING HIV CASES WITHOUT AIDS		ADULT/ADOLESCENT LIVING HIV CASES WITH AIDS		ADULT/ADOLESCENT TOTAL LIVING HIV CASES	
	No.	% of Total with Exposure	No.	% of Total with Exposure	No.	% of Total with Exposure
With Exposure	6,988	100.0%	9,401	100.0%	16,389	100.0%
Men who have Sex with Men (MSM)	4,770	68.3%	4,583	48.8%	9,353	57.1%
Injection Drug Users (IDU)	786	11.2%	2,317	24.6%	3,103	18.9%
Men who have Sex with Men and Inject Drugs (MSM/IDU)	276	3.9%	653	6.9%	929	5.7%
Heterosexual Exposure (HET)	1,145	16.4%	1,822	19.4%	2,967	18.1%
Other Exposures	11	0.2%	26	0.3%	37	0.2%
No Reported Exposure	1,948	21.8%	1,161	11.0%	3,109	15.9%
TOTAL	8,936	100.0%	10,562	100.0%	19,498	100.0%

FEMALE EXPOSURE CATEGORY	ADULT/ADOLESCENT LIVING HIV CASES WITHOUT AIDS		ADULT/ADOLESCENT LIVING HIV CASES WITH AIDS		ADULT/ADOLESCENT TOTAL LIVING HIV CASES	
	No.	% of Total with Exposure	No.	% of Total with Exposure	No.	% of Total with Exposure
With Exposure	3,064	100.0%	4,796	100.0%	7,859	100.0%
Injection Drug Users (IDU)	510	16.6%	1,440	30.0%	1,950	24.8%
Heterosexual Exposure (HET)	2,542	83.0%	3,331	69.5%	5,872	74.7%
Other Exposures	12	0.4%	25	0.5%	37	0.5%
No Reported Exposure*	1,370	30.9%	797	14.2%	2,166	21.6%
TOTAL	4,434	100.0%	5,593	100.0%	10,025	100.0%

* Includes 82 HIV cases without AIDS and 55 HIV cases with AIDS with Presumed Female Heterosexual exposure

Adult/Adolescent Living HIV Cases without AIDS: Reported HIV diagnoses, age 13 years or older at HIV diagnosis, without an AIDS diagnosis, and not reported to have died as of December 31st of the specified year.

Adult/Adolescent Living HIV Cases with AIDS: Reported HIV diagnoses, age 13 years or older at HIV diagnosis, with an AIDS diagnosis, and not reported to have died as of December 31st of the specified year.

Adult/Adolescent Total Living HIV Cases: Reported HIV diagnoses, age 13 years or older at HIV diagnosis, with or without an AIDS diagnosis, and not reported to have died as of December 31st of the specified year.

Table 12 – Adult/Adolescent Total Living HIV Cases by Exposure Category, Race/Ethnicity, and Sex at Birth, Alive on 12/31/2015, Current Residents as of 6/30/2016 and Reported through 6/30/2016

Exposure Category	Adult/Adolescent Total Living HIV Cases					
	Race/Ethnicity					
	Hispanic		Non-Hispanic, Black, only		Non-Hispanic, White, only	
	No.	% of Total with Exposure	No.	% of Total with Exposure	No.	% of Total with Exposure
With Exposure	1,391	100.0%	18,032	100.0%	3,409	100.0%
Men who have Sex with Men (MSM)	664	47.7%	5,938	32.9%	2,116	62.1%
Injection Drug Users (IDU)	124	8.9%	4,140	23.0%	501	14.7%
Men who have Sex with Men and Inject Drugs (MSM/IDU)	40	2.9%	668	3.7%	159	4.7%
Heterosexual Exposure (HET)	562	40.4%	7,239	40.1%	611	17.9%
Other Exposures	1	0.1%	47	0.3%	22	0.6%
No Reported Exposure*	228	14.1%	4,211	18.9%	616	15.3%
TOTAL	1,619	100.0%	22,243	100.0%	4,025	100.0%

Male Exposure Category	Adult/Adolescent Total Living HIV Cases					
	Race/Ethnicity					
	Hispanic		Non-Hispanic, Black, only		Non-Hispanic, White, only	
	No.	% of Total with Exposure	No.	% of Total with Exposure	No.	% of Total with Exposure
With Exposure	1,059	100.0%	11,544	100.0%	2,792	100.0%
Men who have Sex with Men (MSM)	664	62.7%	5,938	51.4%	2,116	75.8%
Injection Drug Users (IDU)	81	7.6%	2,606	22.6%	270	9.7%
Men who have Sex with Men and Inject Drugs (MSM/IDU)	40	3.8%	668	5.8%	159	5.7%
Heterosexual Exposure (HET)	273	25.8%	2,315	20.1%	230	8.2%
Other Exposures	1	0.1%	17	0.1%	17	0.6%
No Reported Exposure	158	13.0%	2,356	16.9%	449	13.9%
TOTAL	1,217	100.0%	13,900	100.0%	3,241	100.0%

FEMALE EXPOSURE CATEGORY	ADULT/ADOLESCENT TOTAL LIVING HIV CASES					
	Race/Ethnicity					
	Hispanic		Non-Hispanic, Black, only		Non-Hispanic, White, only	
	No.	% of Total with Exposure	No.	% of Total with Exposure	No.	% of Total with Exposure
With Exposure	332	100.0%	6,488	100.0%	617	100.0%
Injection Drug Users (IDU)	43	13.0%	1,534	23.6%	231	37.4%
Heterosexual Exposure (HET)	289	87.0%	4,924	75.9%	381	61.8%
Other Exposures	0	0.0%	30	0.5%	5	0.8%
No Reported Exposure*	70	17.4%	1,855	22.2%	167	21.3%
TOTAL	402	100.0%	8,343	100.0%	784	100.0%

* Includes 7 Hispanic cases, 125 non-Hispanic black cases, and 2 non-Hispanic white cases with Presumed Female Heterosexual exposure

Adult/Adolescent Total Living HIV Cases: Reported HIV diagnoses, age 13 years or older at HIV diagnosis, with or without an AIDS diagnosis, and not reported to have died as of December 31st of the specified year.

Table 13 – Adult/Adolescent Total Living HIV Cases, Recent CD4 Test Results by Exposure Category, Alive on 12/31/2015, Current Residents as of 6/30/2016 and Reported through 6/30/2016

EXPOSURE CATEGORY	ADULT/ADOLESCENT TOTAL LIVING HIV CASES							
	No.	Recent CD4 Test Results						500+
		No. with Test	% with Test	Median Count	<200	200-349	350-499	
With Exposure	24,248	16,884	69.6%	541	12.4%	14.6%	18.0%	55.1%
Men who have Sex with Men (MSM)	9,353	6,042	64.6%	557	10.1%	13.4%	18.8%	57.7%
Injection Drug Users (IDU)	5,053	3,732	73.9%	489	16.5%	17.3%	17.4%	48.7%
Men who have Sex with Men and Inject Drugs (MSM/IDU)	929	650	70.0%	507	14.5%	18.6%	15.8%	51.1%
Heterosexual Exposure (HET)	8,839	6,408	72.5%	558	11.8%	13.7%	17.7%	56.8%
Other Exposures	74	52	70.3%	456	19.2%	11.5%	28.8%	40.4%
No Reported Exposure*	5,275	2,977	56.4%	544	12.6%	14.8%	17.1%	55.5%
TOTAL	29,523	19,861	67.3%	542	12.4%	14.6%	17.9%	55.1%

* Includes 137 cases with Presumed Female Heterosexual exposure

Table 14 – Adult/Adolescent Total Living HIV Cases, Recent Viral Load Test Results by Exposure Category, Alive on 12/31/2015, Current Residents as of 6/30/2016 and Reported through 6/30/2016

EXPOSURE CATEGORY	ADULT/ADOLESCENT TOTAL LIVING HIV CASES				
	No.	Recent Viral Load Test Results			Median Count
		No. with Test	% with Test	% Suppressed	
With Exposure	24,248	15,894	65.5%	77.0%	11,749
Men who have Sex with Men (MSM)	9,353	5,956	63.7%	78.8%	13,290
Injection Drug Users (IDU)	5,053	3,199	63.3%	71.3%	11,902
Men who have Sex with Men and Inject Drugs (MSM/IDU)	929	585	63.0%	74.7%	8,542
Heterosexual Exposure (HET)	8,839	6,109	69.1%	78.6%	10,000
Other Exposures	74	45	60.8%	68.9%	25,756
No Reported Exposure*	5,275	2,931	55.6%	75.3%	14,168
TOTAL	29,523	18,825	63.8%	76.7%	12,137

* Includes 137 cases with Presumed Female Heterosexual exposure

Adult/Adolescent Total Living HIV Cases: Reported HIV diagnoses, age 13 years or older at HIV diagnosis, with or without an AIDS diagnosis, and not reported to have died as of December 31st of the specified year.

Recent CD4 Test Result: The most recent CD4 test result measured in the specified year, reported through 6/30/2016.

Median Count (Recent CD4): Median CD4 count (cells per microliter) of the most recent CD4 test result measured in the specified year, as reported through 6/30/2016.

CD4 Result Distribution (<200, 200-349, 350-499, 500+): Percent of cases with a CD4 test distributed by their CD4 count results (cells per microliter).

Recent Viral Load Test Result: The most recent viral load test result measured in the specified year, reported through 6/30/2016.

Percent Suppressed (Viral Load): Percent of adult/adolescent total living HIV cases with a most recent viral load measured in the specified year of less than 200 copies per milliliter reported through 6/30/2016.

Median Unsuppressed (Viral Load): Median unsuppressed viral load (copies per milliliter) among adult/adolescent living HIV cases with a most recent viral load test result measured in the specified year of 200 copies per milliliter or greater, reported through 6/30/2016.

Glossary of Terms

Age on [date]: Age group of living cases on the specified date.

Adult/Adolescent Living HIV Cases without AIDS: Reported HIV diagnoses, age 13 years or older at HIV diagnosis, without an AIDS diagnosis, and not reported to have died as of December 31st of the specified year.

Adult/Adolescent Living HIV Cases with AIDS: Reported HIV diagnoses, age 13 years or older at HIV diagnosis, with an AIDS diagnosis, and not reported to have died as of December 31st of the specified year.

Adult/Adolescent Total Living HIV Cases: Reported HIV diagnoses, age 13 years or older at HIV diagnosis, with or without an AIDS diagnosis, and not reported to have died as of December 31st of the specified year.

CD4 Result Distribution (<200, 200-349, 350-499, 500+): Percent of cases with a CD4 test distributed by their CD4 count results (cells per microliter).

Current Residence: Jurisdiction of residence from the most recent laboratory test or case report between 1/1/2009-6/30/2016.

Diagnosed in Maryland: HIV or AIDS cases where the initial diagnosis of HIV or AIDS was in Maryland.

Diagnosed Out of State: HIV or AIDS cases where the initial diagnosis of HIV or AIDS was not in Maryland.

HIV Diagnosed: Adult/Adolescent total living HIV cases as of December 31st of the specified year.

HIV Infected: HIV Diagnosed by one minus the Maryland estimate of undiagnosed HIV infections (18.7%).

In-Migrants: Adults/Adolescents diagnosed with HIV who moved to the specified jurisdiction after their HIV diagnosis.

Jurisdiction of Residence: Jurisdiction of residence at time of initial HIV diagnosis or most recent lab test.

Jurisdiction of Residence at HIV Diagnosis: Jurisdiction of residence at time of initial HIV diagnosis

Linked to HIV Care: HIV Diagnosed multiplied by the percent of adult/adolescent reported HIV diagnoses during the specified year with a reported CD4 or viral load test performed less than or equal to 3 months after their initial diagnosis.

Median Count (Recent CD4): Median CD4 count (cells per microliter) of the most recent CD4 test result measured in the specified year, as reported through 6/30/2016.

Median Unsuppressed (Viral Load): Median unsuppressed viral load (copies per milliliter) among adult/adolescent living HIV cases with a most recent viral load test result measured in the specified year of 200 copies per milliliter or greater, reported through 6/30/2016.

Out-migrants: Adults/Adolescents diagnosed with HIV who have moved away from the specified jurisdiction since HIV diagnosis.

Out of State: Adults/Adolescents diagnosed with HIV in jurisdictions not in Maryland.

Percent Suppressed (Viral Load): Percent of adult/adolescent total living HIV cases with a most recent viral load measured in the specified year of less than 200 copies per milliliter, reported through 6/30/2016.

Percent Change: The extent to which a jurisdiction gained or lost HIV/AIDS cases relative to the number of cases diagnosed in the jurisdiction.

Presumed Continuous Residents: Adults/Adolescents diagnosed with HIV whose jurisdiction of residence at HIV diagnosis is the same as their current jurisdiction of residence.

Population Age 13+: Population age 13 years or older, estimate for 7/1/2015.

Rate: A proportion used to represent risk for disease within a given population. It is calculated by dividing the number of diagnoses by the number of persons at risk (population estimate).

Ratio (1 in X): Number of people for every 1 living HIV case in the population, or 1 living HIV case in every X number of people.

Recent CD4 Test Result: The most recent CD4 test result measured in the specified year, as reported through 6/30/2016.

Recent Viral Load Test Result: The most recent viral load test result measured in the specified year, reported through 6/30/2016.

Retained in HIV Care: HIV Diagnosed with a CD4 test result reported in the 12 months prior to December 31st of the specified year.

Suppressed Viral Load: HIV diagnosed with the most recent viral load reported in the 12 months prior to December 31st of the specified year of less than 200 copies per milliliter.

Total HIV Diagnoses: The total number of Adults/Adolescents diagnosed with HIV in each jurisdiction.

Suggested Citation: Current Residence HIV Epidemiological Supplemental Profile 2015. Center for HIV Surveillance, Epidemiology and Evaluation, Department of Health and Mental Hygiene, Baltimore, MD. 2016.