DISTRICT OF COLUMBIA, DEPARTMENT OF HEALTH
HIV/AIDS, HEPATITIS, STD, AND TB ADMINISTRATION (HAHSTA)

ANNUAL EPIDEMIOLOGY & SURVEILLANCE REPORT

SURVEILLANCE DATA THROUGH **DECEMBER 2012**

ONE CITY
Vincent C Gray, Mayor

GOVERNMENT OF THE DISTRICT OF COLUMBIA
DOH
DEPARTMENT OF HEALTH
Promote. Prevent. Protect.

Acknowledgments

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Vincent C. Gray, Mayor
Allen Lew, Office of the City Administrator
Joxel Garcia, MD, MBA, Department of Health Director
Michael Kharfen, Senior Deputy Director

With special thanks to:
Strategic Information Division
STD/TB Control Division
Hepatitis Coordinator
Milken Institute School of Public Health

The Annual Epidemiology & Surveillance Report is compiled by the Strategic Information Division. To request additional data or aid in interpreting the data herein, contact:

Strategic Information Division
HIV/AIDS, Hepatitis, STD and TB Administration (HAHSTA)
Government of the District of Columbia
Department of Health
899 N. Capitol St. NE
Fourth Floor
Washington, DC 20002

Phone: (202) 671-4900

This report is available online at: www.doh.dc.gov/hahsta

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Executive Summary

The Annual Epidemiology & Surveillance Report for the District of Columbia confirms that the District maintains serious epidemics of HIV, sexually transmitted diseases (STDs), hepatitis, and tuberculosis (TB). The Department of Health (DOH) continues to see multi-year progress in reducing new cases of HIV in the District. The number of newly reported HIV cases has decreased by 42% from 2008 to 2012. This year's report marks another year of success in increasing the proportion of persons linked to HIV care following diagnosis, decreasing the number of new AIDS diagnoses, and lowering the number of deaths among persons with HIV. The report also shows continued progress in the District's effort to achieve TB elimination, as evidenced by a one-third reduction in the number of reported cases of TB from 2008 to 2012.

New in This Report

This year's report contains new data to provide more insight into the District's epidemics:

HIV Incidence: For the first time, the DOH will report estimated HIV incidence data for the District. HIV incidence estimates the number of new HIV infections that occurred during the year. This estimate provides another snapshot into the District's HIV epidemic. This first estimate shows that there is a decline in new infections, that new infections are proportionately impacting younger people, and that new infections are proportionately more heterosexual.

Hepatitis C: With the introduction of new medications with the potential to eradicate hepatitis C, the leading cause of liver disease and transplants in the country, DOH compiled data on the total number of reported chronic hepatitis C cases in the District from 2008 to 2012. With 15,915 cases documented during this timeframe, the magnitude of the HCV epidemic in the District is, at a minimum, comparable to that of HIV.

Key Facts:

The District continues to be affected by severe epidemics. The snapshot of the District epidemics in the year 2012 include:

16,072 residents of the District of Columbia living with HIV in 2012

680 newly reported cases of HIV in 2012

10,036 new cases of STDs in 2012

12,221 new cases of chronic hepatitis reported between 2008 and 2012

Epidemiological Summary

Key points in this surveillance update of the District epidemics in the year 2012 include:

- 16,072 residents of the District of Columbia (2.5% of the population) are living with HIV, which exceeds the World Health Organization definition of 1% as a severe epidemic.
- Blacks, Hispanics, and whites with HIV exceed 1% of their respective populations, with blacks disproportionately affected at 3.9%.
- The DOH received 2 reports of confirmed cases of babies born with HIV in 2012.*
- The number of newly diagnosed HIV cases in the District decreased to 680 cases in 2012, a decline of 42% from 1,180 cases in 2008.
- There was an 81% decrease in the number of newly diagnosed HIV cases where the reported mode of transmission was injection drug use. In 2008, the first year of the scale up of DC's needle exchange program, there were 109 cases, compared with 21 in 2012.
- The number of reports of newly diagnosed AIDS cases decreased 35%, from 567 in 2008 to 370 in 2012.
- The number of deaths among persons with HIV decreased by 36%, from 345 in 2008 to 221 in 2012.
- There were reports of 7,258 new cases of chlamydia, 2,605 new cases of gonorrhea and 173 new cases of primary and secondary syphilis reported in 2012.
- There were new reports of 2,402 cases of chronic hepatitis B between 2008 and 2012.
- There were new reports of 9,819 cases of chronic hepatitis C between 2008 and 2012.
- The rate of new TB cases decreased 35%, from 9.1 per 100,000 in 2008 to 5.9 per 100,000 persons in 2012.

* Updated on 9/1/2014

HIV Care Continuum

In addition to the annual report, DOH prepares a supplemental report on HIV Clinical and Care Dynamics. This supplement tracks the District's efforts to improve the care continuum for persons living with HIV to sustain their health from diagnosis to linkage and retention in care. The goals of the care continuum are for all persons with HIV to be diagnosed, connected into medical care and achieve viral load suppression. Viral suppression ensures a strong immune system and healthier outcomes for persons living with HIV. Here are several highlights demonstrating the District's progress in the care continuum:

- Increased linkage to care within 3 months from 57.3% in 2008 to 85.7% in 2012.
- Increased viral load suppression from 57.4% in 2008 to 61.0% in 2012.
- Increased average CD4 count at time of diagnosis from 330 in 2008 to 435 in 2012.
- Decreased late testing from 56% in 2008 to 44% in 2012.

Scaling Up Success: National HIV/AIDS Strategy

The DC Department of Health and its community partners continue to scale up programs to reduce the impact of HIV, STDs, hepatitis and TB on District residents and achieve the objectives outlined in the National HIV/AIDS Strategy (NHAS). The most recent achievements by the District include:

- A new record of 177,000 publicly supported HIV tests in 2013, up from 138,000 in 2012 and more than four times the 43,000 tests in 2007.
- More than 6.9 million male and female condoms distributed in 2013, a nearly 14-fold increase from 2007.
- 647,000 needles removed from the street in 2013 through the DC needle exchange programs, an increase from 550,000 in 2012.
- "Treatment on Demand" program maintained, serving 8,449 persons in 2013 with universal access to HIV medical care with no waiting lists for treatment and medications; 64% were retained in care during 2013.

The following chart summarizes the nine NHAS objectives, their targets, and the District's estimated metrics:

National HIV/AIDS Strategy Objectives and Key Performance Indicators

Objective	National Target 2015	DC 2009*	DC 2012	DC 2015	Data Source/ Comments
Reducing New HIV Infections					
Objective 1	Reduce the number of new infections by 25%	853 new HIV cases	680 new HIV cases	640 new cases	Name-based HIV surveillance data/The incidence estimate for 2012 will not be available until the next report. During the interim, newly diagnosed HIV cases used to approximate incident or new infections.
Objective 2	Reduce the HIV transmission rate, which is a measure of annual transmissions in relation to the number of people living with HIV, by 30%	5.1 per 100 persons living with HIV	4.2 per 100 persons living with HIV	3.6 per 100 persons living with HIV	Name-based HIV surveillance data/ Estimate based on newly diagnosed HIV cases.
Objective 3	Increase the percentage of people living with HIV who know their serostatus from 79% to 90%.	HET-1 (2007):53% MSM-2 (2008):59% IDU-2 (2009):70%	HET-2 (2010):79% MSM-3 (2011)-77% IDU-3 (2012) 78%	90%	National HIV Behavioral Surveillance Data†
Increasing Access to Care and Improving Health Outcomes for People Living With HIV					
Objective 4	Increase the proportion of newly diagnosed patients linked to clinical care within 3 months of their HIV diagnosis from 65% to 85%	70%	86%	85%	Name-based HIV surveillance and laboratory data
Objective 5	Increase the proportion of Ryan White HIV Program clients who are in continuous care (at least 2 visits for routine HIV medical care in 12 months at 3 months apart) from 73% to 80%	‡	64%	80%	Ryan White Service Data/ Data include all HIV-infected persons receiving care at a Ryan White funded program in the District, regardless of residence.
Objective 6	Increase the number of Ryan White clients with permanent housing from 82% to 86%	70%	74%	86%	Ryan White Service Data/ Excludes those with missing housing status
Reducing HIV-Related Health Disparities					
Objective 7	Increase the proportion of HIV-diagnosed gay and bisexual men with undetectable viral load by 20%	29%	49%	35%	Name-based HIV surveillance and laboratory data. This includes HIV transmission modes male-to-male sexual contact (MSM) and MSM/injection drug use (IDU)
Objective 8	Increase the proportion of HIV-diagnosed blacks with undetectable viral load by 20%	25%	45%	30%	Name-based HIV surveillance and laboratory data
Objective 9	Increase the proportion of HIV-diagnosed Latinos with undetectable viral load by 20%	32%	52%	38%	Name-based HIV surveillance and laboratory data. Latino is defined as self-reported Hispanic ethnicity

*DC 2009 information was calculated based upon data frozen in 2010; current surveillance numbers for 2009 may differ based upon updated information reported to HAHSTA and continued record review.
†National HIV Behavioral Surveillance (NHBS) Data: Abbreviations indicate the population and cycle of data collection. For example, HET 1 indicates Heterosexual Cycle 1 Data Collection, MSM 2 indicates Men who have Sex with Men Cycle 2 Data Collection, and IDU 2 represents Injection Drug Users Cycle 2 Data Collection. Each NHBS population-based cycle involves cross-sectional data collection with specimen testing and self-reported responses to questionnaire data. MSM and IDU recruitment methodologies were similar for the 2 cycles but the HET recruitment methodology significantly changed. Interpretation and direct comparison of these cycles should be thoughtful and should take these factors into account. The same question was used in all cycles to generate the data for this metric: "What was the result of your most recent HIV test?". The denominator is all persons with a positive HIV test result obtained from specimens collected during the NHBS screening, and the numerator is participants with a self-reported history of a positive HIV test; this metric provides an approximation of the percent of persons who know their HIV serostatus. These data are a proxy for a metric that cannot directly be measured.
‡This information was not available in the 2009 Ryan White Service dataset.

Section 1. Diagnosed and Living HIV Cases

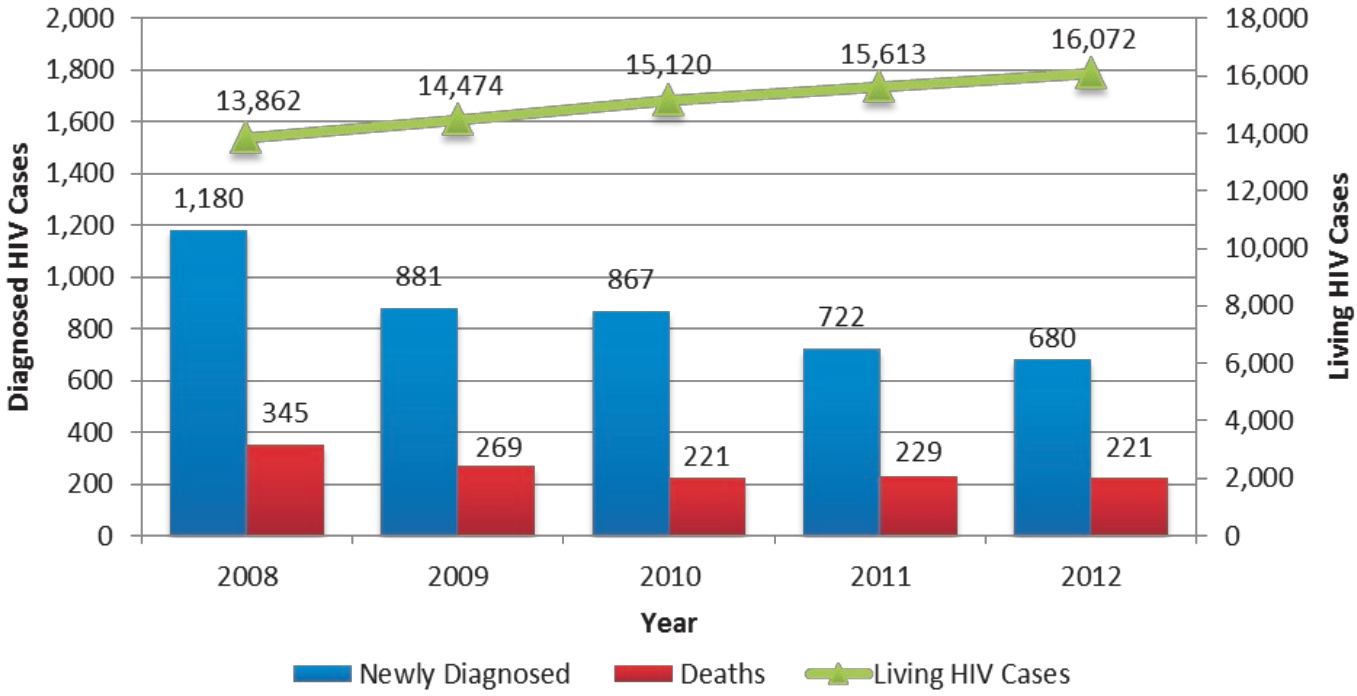
This section includes all persons reported as diagnosed with HIV in the District of Columbia and alive as of Dec. 31, 2012, regardless of their age at diagnosis. In previous years, pediatric cases, or persons less than 13 years of age at HIV diagnosis, were excluded and presented solely in a separate section. Persons diagnosed as pediatric cases are living longer lives due to advances in HIV care and treatment; the median age among pediatric cases living as of Dec. 31, 2012 was 19 years of age. It is important to include persons who were diagnosed as pediatric cases in the overview to more fully describe the HIV epidemic in the District of Columbia.

Summary

The World Health Organization defines generalized HIV epidemics as those in which the prevalence of HIV is greater than 1% in the overall population. As of Dec. 31, 2012, there were 16,072 residents of the District of Columbia living with HIV; this number accounts for approximately 2.5% of the population and is indicative of a continued generalized epidemic. Overall, however, there has been a 42% decrease in the number of reported cases diagnosed in 2012 compared with 2008.

District residents aged 40 years and over continue to be disproportionately affected by HIV infection. At the end of 2012, approximately 6.4% of residents ages 40 to 59 years old were living with HIV. Blacks still account for the majority of people living with HIV in the District, with 3.9% of black residents living with HIV. The highest burden of disease is among black men (5.7%). Approximately 1.6% of Hispanic residents and 1.2% of white residents were living with HIV. In general, there was minimal change from last year's report. Please refer to appendix tables B1 and B2 for additional information regarding HIV cases diagnosed in the District and alive as of Dec. 31, 2012.

Figure 1. Newly Diagnosed HIV Cases, Deaths, and Living HIV Cases by Year
District of Columbia, 2008-2012



- At the end of 2012, 16,072 residents were living with HIV in the District, accounting for 2.5% of District residents.

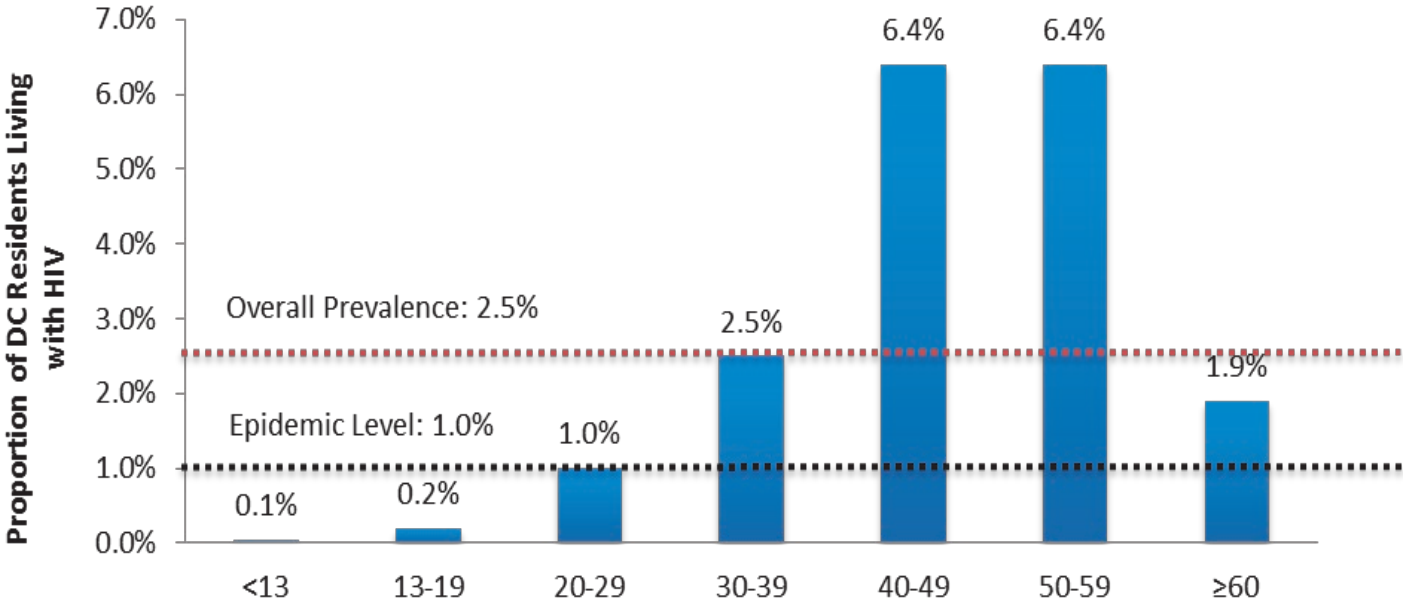
Table 1. HIV Cases Diagnosed in the District and Alive as of December 2012: Rates per 100,000 by Sex, Race/Ethnicity, and Current Age

	Total Living HIV Cases, 2012		Estimated DC Population†, 2012		Rate per 100,000
Sex	N	%	N	%	
Male	11,679	72.7	299,041	47.3	3,905.5
Female	4,393	27.3	333,282	52.7	1,318.1
Total	16,072	100.0	632,323	100.0	2,541.7
Race/Ethnicity					
White	2,669	16.6	224,327	35.5	1,189.8
Black	12,062	75.0	307,150	48.6	3,927.1
Hispanic	990	6.2	62,726	9.9	1,578.3
Other*	351	2.2	38,120	6.0	920.8
Total	16,072	100.0	632,323	100.0	2,541.7
Male					
White	2,554	21.9	111,213	37.2	2,296.5
Black	7,995	68.5	139,197	46.5	5,743.7
Hispanic	842	7.2	32,293	10.8	2,607.4
Other*	288	2.4	16,339	5.5	1,762.7
Total	11,679	100.0	299,041	100.0	3,905.5
Female					
White	115	2.6	113,114	33.9	101.7
Black	4,067	92.6	167,953	50.4	2,421.5
Hispanic	148	3.4	30,434	9.1	486.3
Other*	63	1.4	21,781	6.5	289.2
Total	4,393	100.0	333,282	100.0	1,318.1
Current Age					
<13	41	0.3	83,159	13.2	49.3
13-19	112	0.7	49,050	7.8	228.3
20-29	1,423	8.9	135,760	21.5	1,048.2
30-39	2,754	17.1	109,006	17.2	2,526.5
40-49	4,997	31.1	78,409	12.4	6,373.0
50-59	4,734	29.4	73,456	11.6	6,444.7
≥60	2,011	12.5	103,483	16.4	1,943.3
Total	16,072	100.0	632,323	100.0	2,541.7

†Source: 2012 US Census estimates
*Other race includes mixed-race individuals, Asians, Alaska Natives, American Indians, Native Hawaiian, Pacific Islanders, and unknown

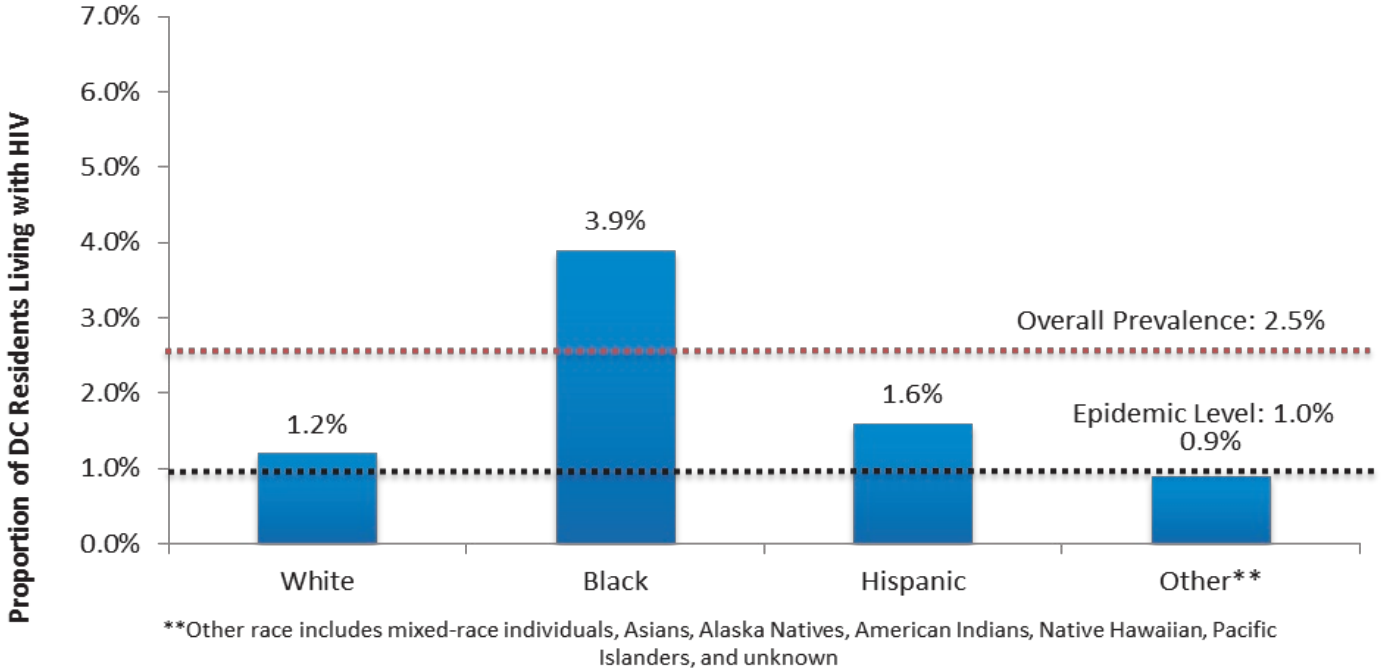
- District residents between 40 and 49 years of age and 50 and 59 years of age have the highest rates of HIV, at 6,373.0 and 6,444.7 cases per 100,000 persons, respectively.
- Men accounted for fewer than half (47.3%) of District residents, but almost three-quarters (72.7%) of living cases.
- Although blacks accounted for just under half (48.6%) of District residents, they account for three-quarters (75.0%) of all cases living with HIV.
- Among women, black women accounted for the majority (92.6%) of living HIV cases.

Figure 2. Proportion of Residents Diagnosed and Living with HIV by Current Age
District of Columbia, 2012



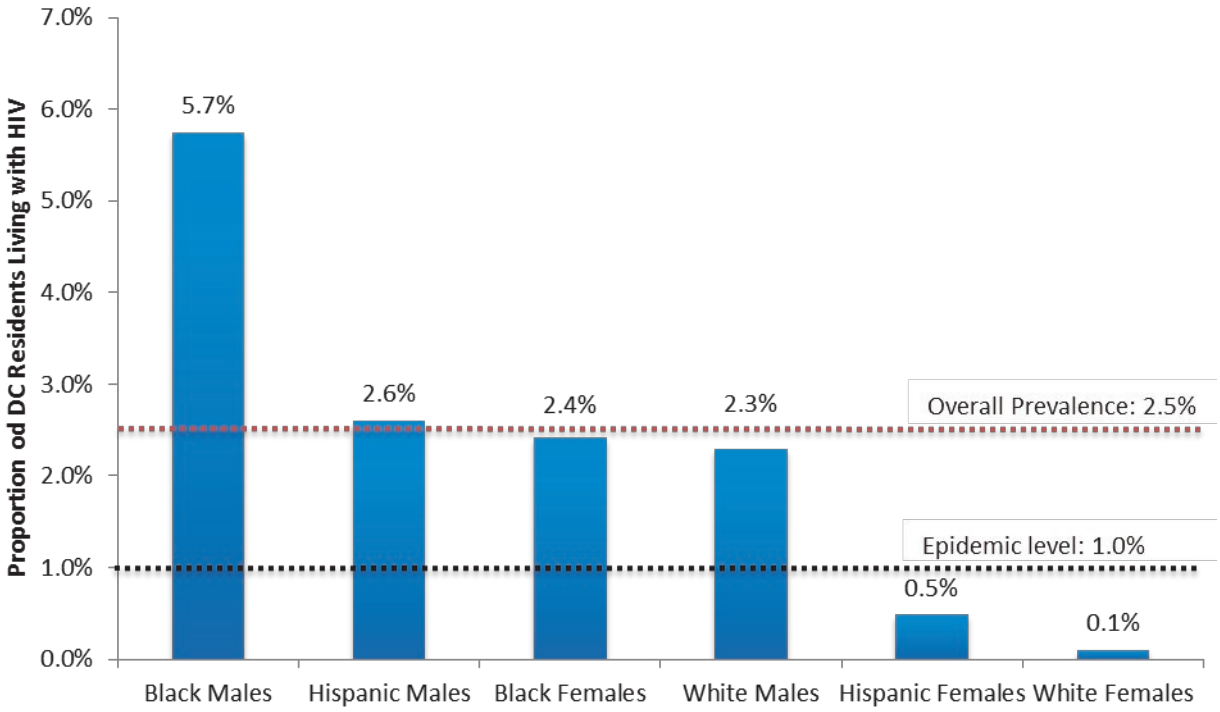
- Residents 40 to 59 years of age had the highest prevalence of HIV in the District at 6.4%.
- DC residents under the age of 13 had the lowest HIV prevalence at the end of 2012.

Figure 3. Proportion of Residents Diagnosed and Living with HIV by Race/Ethnicity,
District of Columbia, 2012



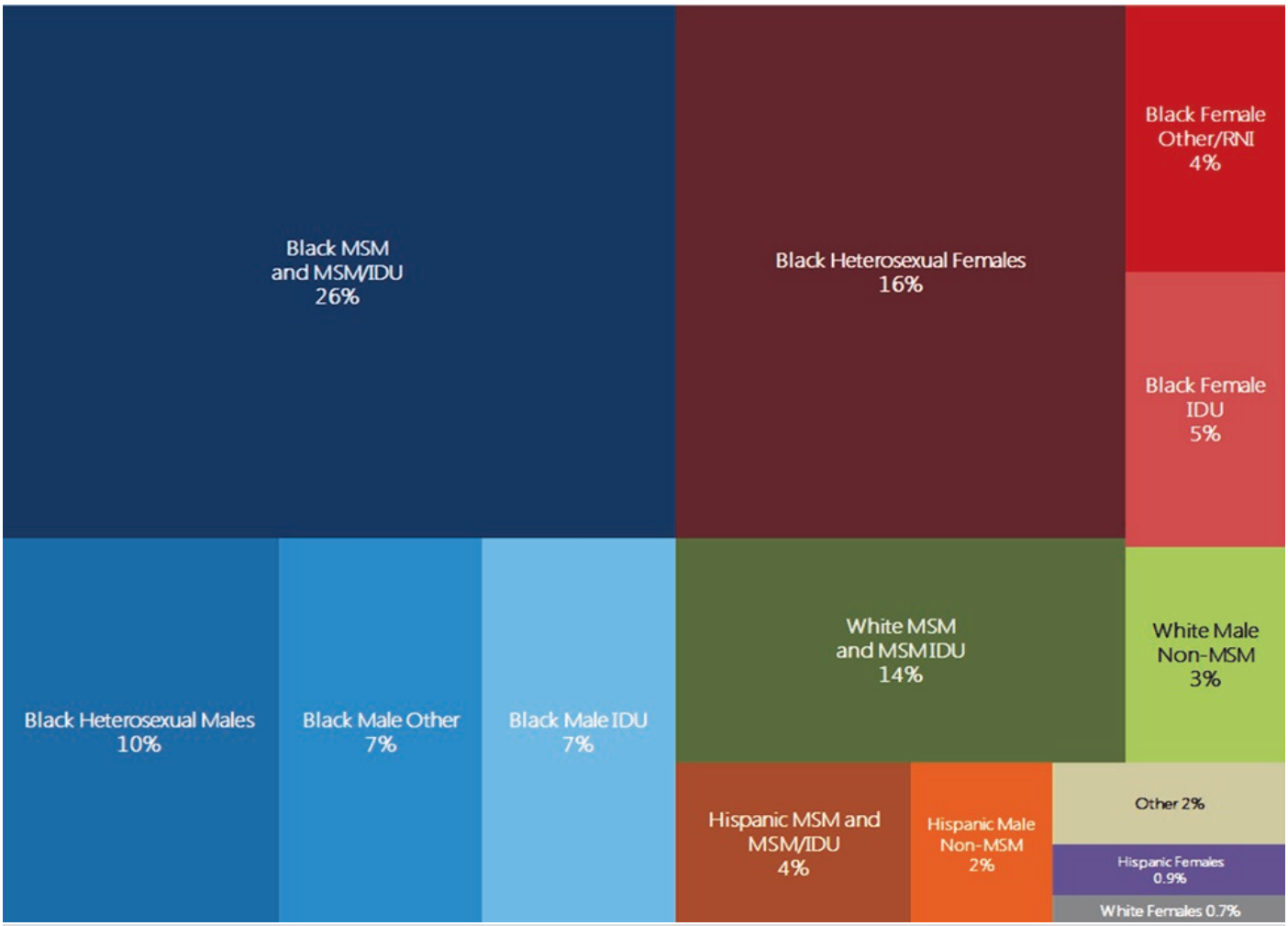
- Blacks continue to have the highest prevalence of HIV, approximately 4 times higher than among whites.

Figure 4. Proportion of Residents Diagnosed and Living with HIV by Race/Ethnicity and Sex, District of Columbia, 2012



- At the end of 2012, black and Hispanic men had the highest HIV prevalence in the District; the HIV prevalence among black men was more than twice that of Hispanic men.
- The lowest prevalence of HIV is among white women (0.1%) and Hispanic women (0.5%); these rates are below the generalized epidemic rate of 1%.
- The highest rate of HIV among women was among black women, among whom the HIV prevalence was nearly 5 times greater than that of Hispanic women and nearly 25 times greater than that of white women.

Figure 5. Proportion of Living Cases of HIV Diagnosed in DC, by Race/Ethnicity, Sex and Mode of Transmission, District of Columbia, 2012 (N=16,072)

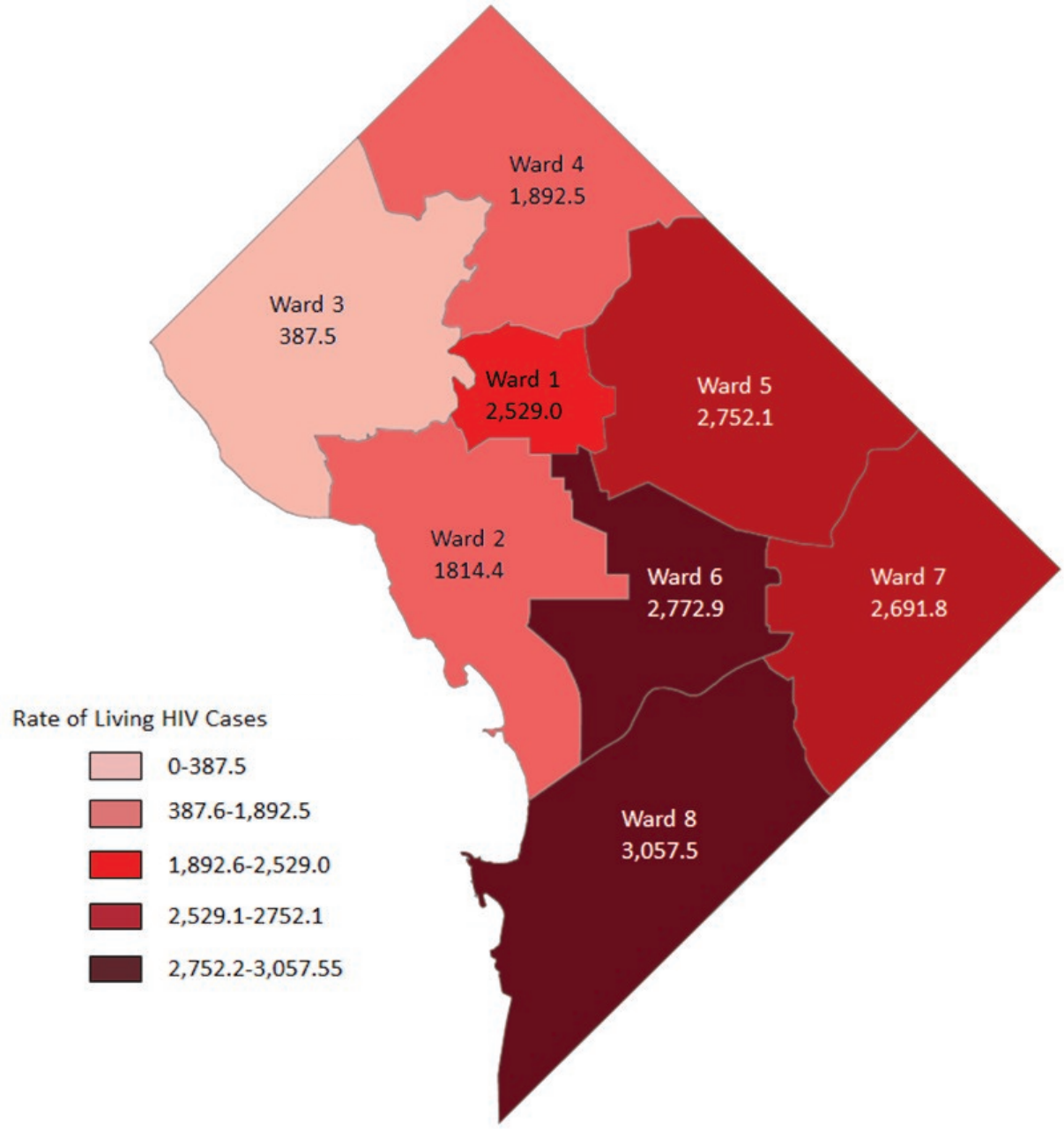


*MSM: men who have sex with men; IDU: injection drug use; RNI: risk not identified; Other: perinatal transmission, hemophilia, blood transfusion, and occupational exposure (health care workers); Non-MSM: All modes of transmission excluding MSM and MSM/IDU.
Hispanic Male non-MSM: Heterosexual, IDU, RNI and other modes of transmission
Black Female Other: RNI and other modes of transmission
Black Male Other: RNI and other modes of transmission
Hispanic Female: All modes of transmission
White Female: All modes of transmission
Other: All persons of other race with all modes of transmission

Figure 5 represents all persons diagnosed with HIV in the District and alive as of December 2012 (n=16,072) by sex, race/ethnicity, and mode of transmission. Mode of transmission represents the reported risk factor that most likely resulted in HIV transmission. Persons may report multiple risk factors; the transmission mode with the greatest transmission probability is reported. The figure (tree map) presents a broad overview of the population; this helps to visualize the various demographic groups and their HIV burden.

- Blacks continue to be a disproportionally affected population, representing nearly 75% of new infections but only 47% of District residents.
- Approximately one-quarter (26%) of persons diagnosed with HIV in the District and alive as of December 2012 were black men who reported MSM or MSM/IDU as the mode of transmission for HIV.
- Black women who reported heterosexual contact as the primary mode of transmission represent the second -largest group (16%), while white MSM and MSM/IDU represent the third-largest group (14%).

Map 1. HIV Cases Diagnosed in the District and Alive as of December 2012 by Ward: Rates per 100,000 persons
District of Columbia, 2012

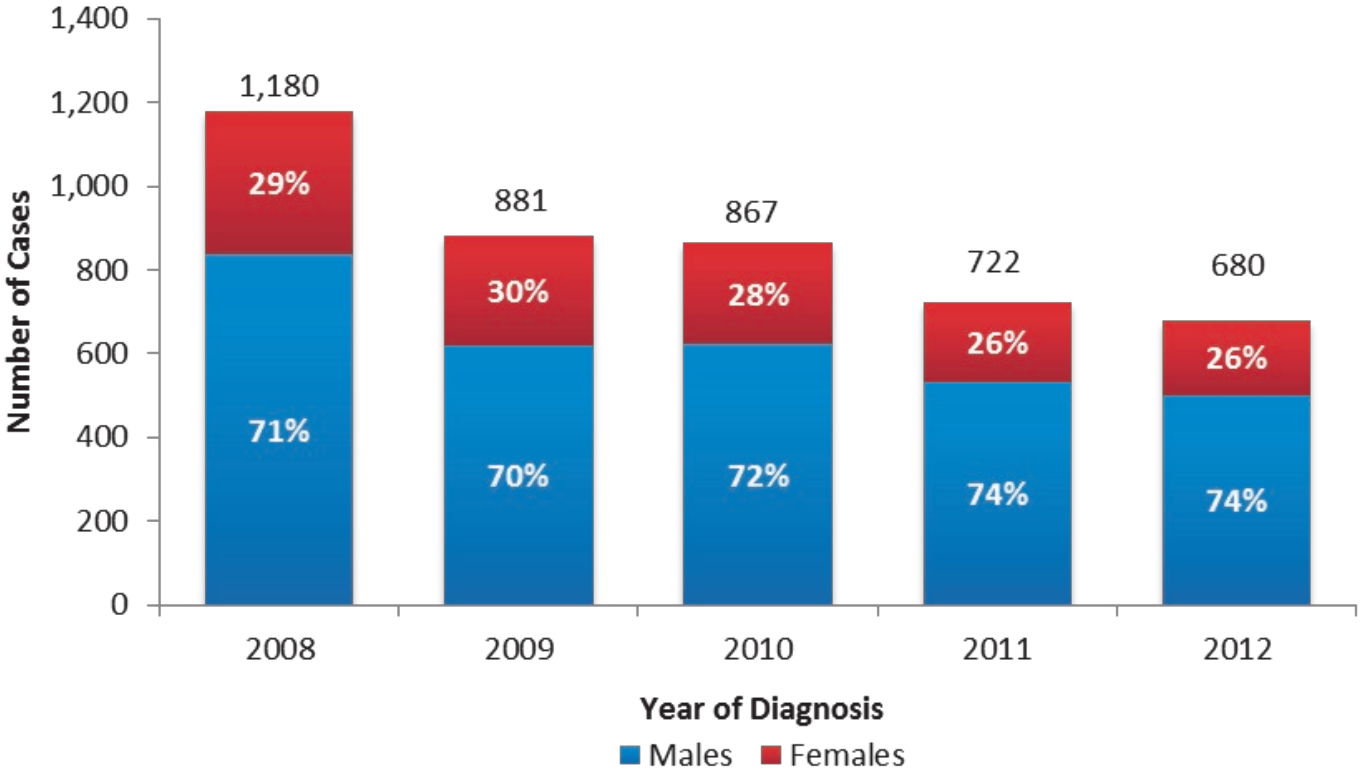


- Ward information was available for 87.7% of living HIV cases at the end of 2012.
- The rate of HIV in nearly all wards was greater than 1%; this indicates that the HIV epidemic is severe in seven of the city's eight wards.
- At the end of 2012, the highest rates of persons living with HIV by ward were in Wards 6 and 8 (2.8% and 3.1%, respectively) and the lowest rate of persons living with HIV was in Ward 3 (0.4%).
- Though not included in ward rates, at the end of 2012 there were a total of 517 cases diagnosed in jail and 225 cases who were homeless at the time of diagnosis.

Section 2. Newly Diagnosed HIV Cases

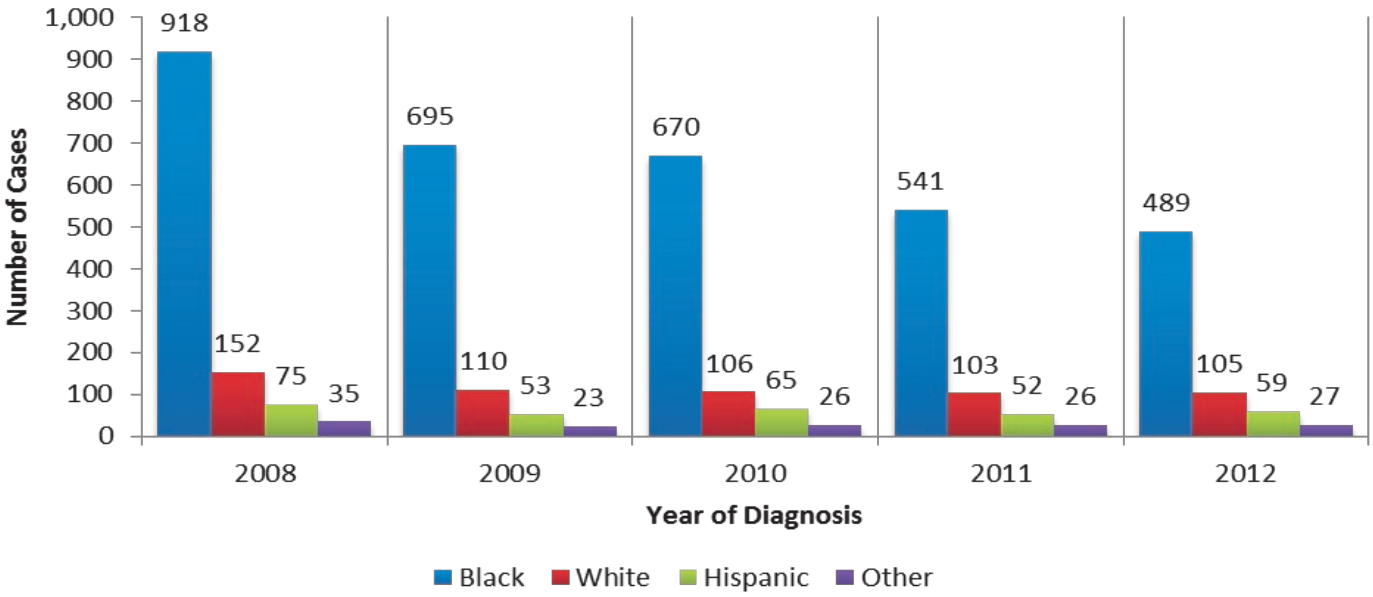
There were 4,330 HIV cases diagnosed and reported among residents of the District between 2008 and 2012. The number of newly diagnosed HIV cases declined each year, from 1,180 cases in 2008 to 680 cases in 2012; this represents a 42% decline in the number of diagnosed cases. More than two-thirds of these cases (73.8%) were men, approximately three-quarters (76.5%) were black, and about one-half (49.4%) were between 20 and 39 years of age. The leading mode of transmission among newly diagnosed cases was men who had sex with men (MSM) sexual contact (38.8%), followed by heterosexual contact (31.6%). Mode of transmission was not identified in 20.7% of newly diagnosed HIV cases. Please refer to appendix table B3 for additional data regarding newly diagnosed HIV cases.

Figure 6. Newly Diagnosed HIV Cases by Year of Diagnosis and Sex
District of Columbia, 2008-2012



- Although the number of newly diagnosed cases has declined from 2008 to 2012, the proportion of cases by sex has remained relatively constant.
- Men in the District continue to be disproportionately affected by HIV; men represent 47% of the District's population, but over 70% of new HIV diagnoses.

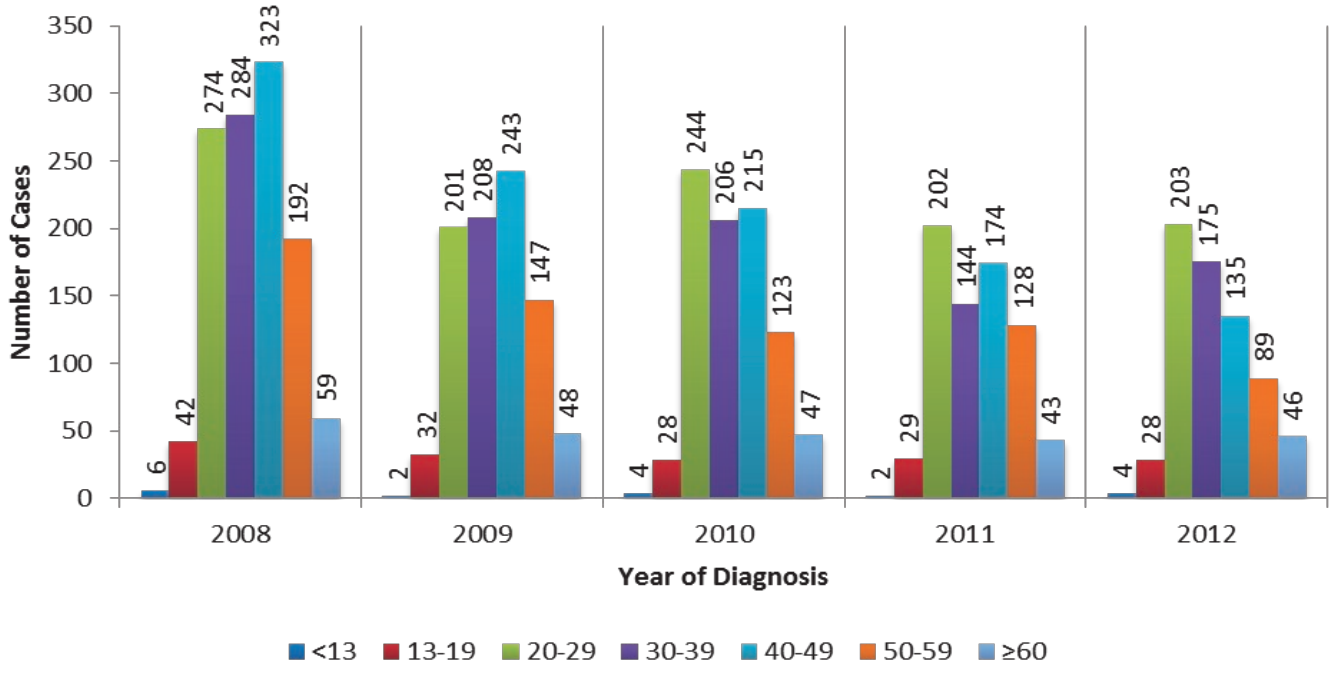
Figure 7. Newly Diagnosed HIV Cases by Year of Diagnosis and Race/Ethnicity
District of Columbia, 2008-2012



*Other race includes mixed-race individuals, Asians, Alaska Natives, American Indians, Native Hawaiian, Pacific Islanders, and unknown

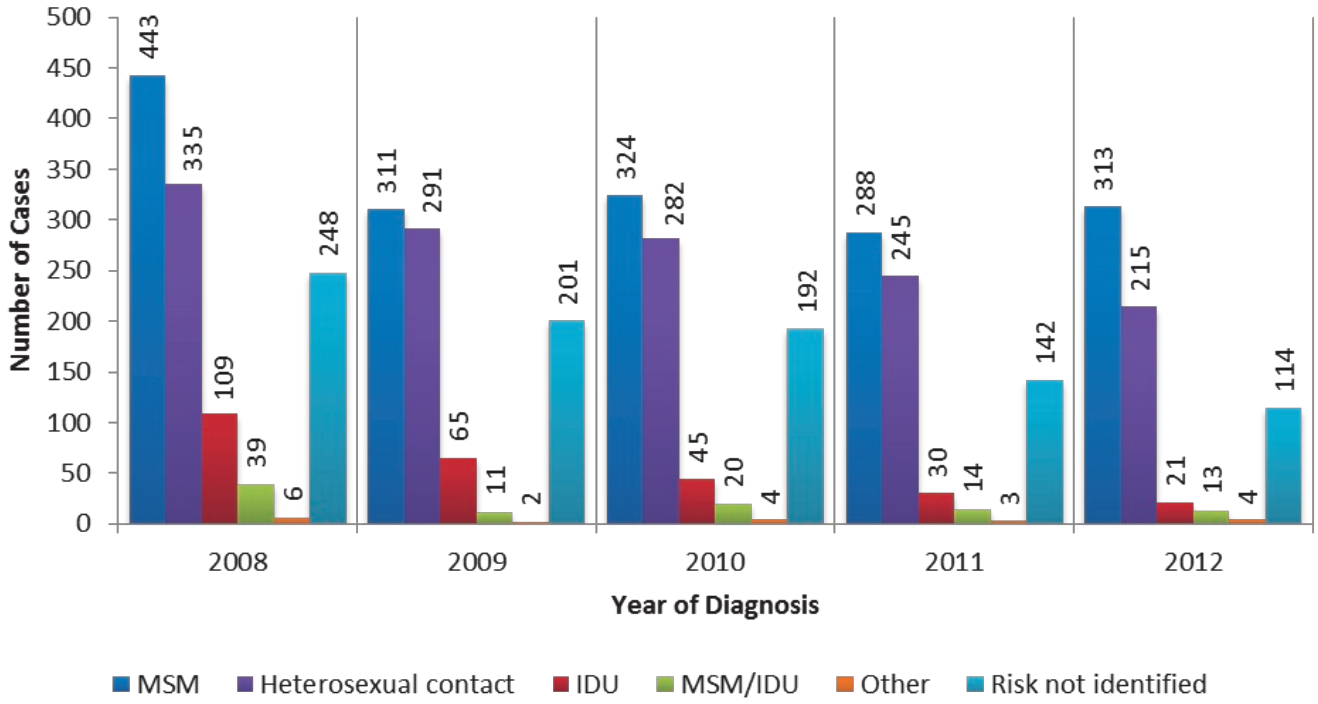
- The number of newly diagnosed HIV cases among blacks decreased 48% between 2008 and 2012; among whites it decreased 47%. Blacks still represent the majority (77%) of new HIV cases diagnosed in the District (78% in 2008 and 72% in 2012), while whites represent 13% of all new cases diagnosed (13% in 2008 and 15% in 2012).
- Although the overall number of newly diagnosed HIV cases decreased, the racial distribution has remained relatively stable over the 5-year period.

Figure 8. Newly Diagnosed HIV Cases by Year of Diagnosis and Age at Diagnosis
District of Columbia, 2008-2012



- Between 2008 and 2012, the largest proportion of new HIV cases were diagnosed among persons aged 20 to 29 years (26.0%), with the next highest percentage among persons aged 40 to 49 (25.2%) and aged 30 to 39 (23.5%).
- Although the number of newly diagnosed HIV cases among 20- to 29-year-olds declined 26% between 2008 and 2012, this has become the age group with the highest number of newly reported diagnoses.
- The number of newly diagnosed HIV cases among 30- to 49-year-olds declined 49% between 2008 and 2012.

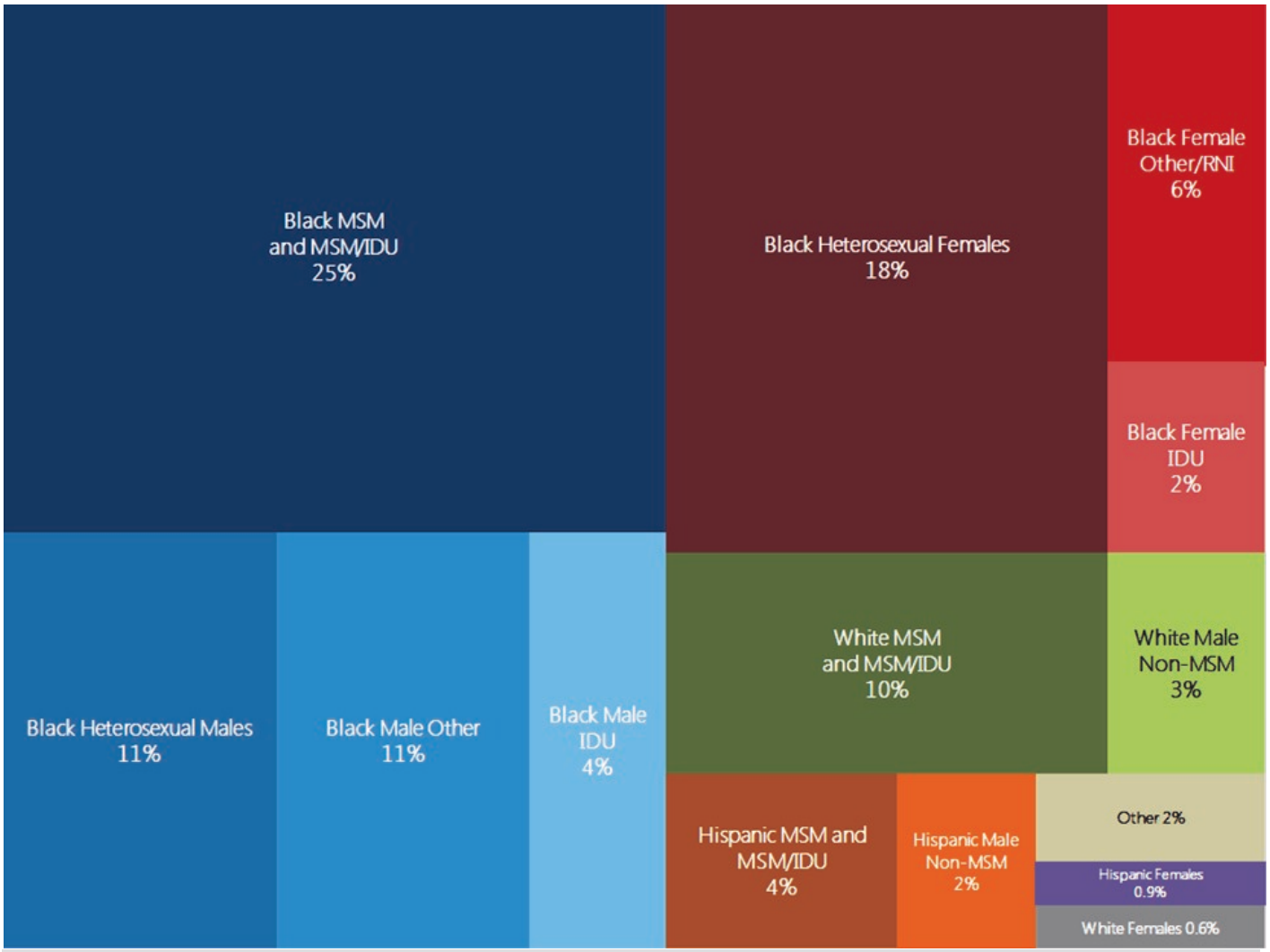
Figure 9. Newly Diagnosed HIV Cases by Year of Diagnosis and Mode of Transmission
District of Columbia, 2008-2012



*Other mode of transmission includes perinatal transmission, hemophilia, blood transfusion, and occupational exposure (health care workers).

- MSM was the mode of transmission most likely to be reported among newly diagnosed HIV cases from 2008 to 2012 (38.8%); heterosexual contact (31.6%) was the next highest.
- A decline of 29% was seen in the number of HIV cases diagnosed among MSM between 2008 (443 cases) and 2012 (313 cases).
- There was a similar decline (36%) in the overall number of HIV cases diagnosed among persons with heterosexual contact as mode of transmission between 2008 (335 cases) and 2012 (215 cases).
- Newly diagnosed HIV cases among persons reporting injection drug use declined 81% between 2008 and 2012. The District's needle exchange services were expanded during this time period.
- The proportion of cases among whom the mode of transmission is unknown, or not reported due to incomplete case reports from health care providers, remains large (20.7%).

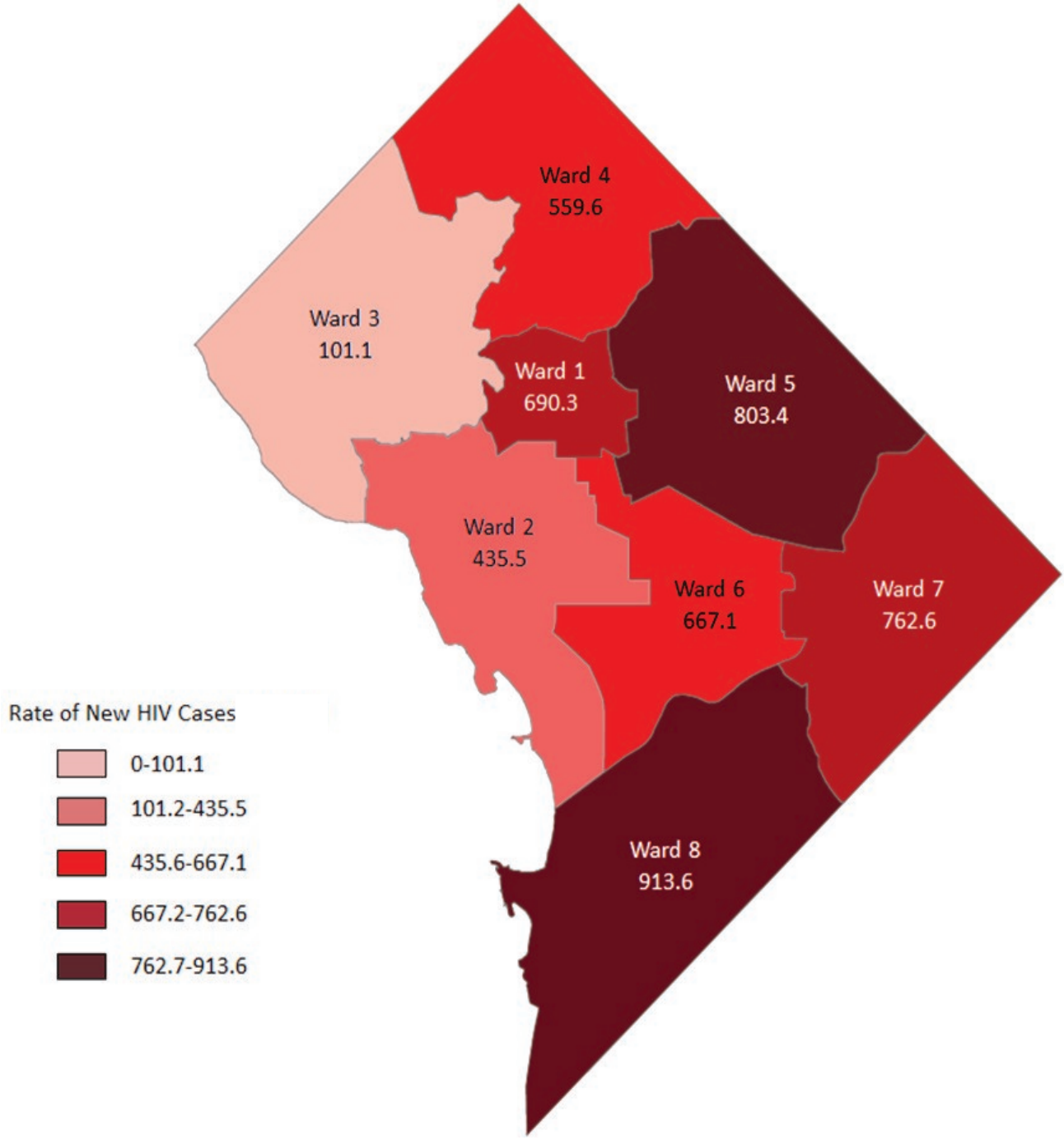
Figure 10. Proportion of Newly Diagnosed HIV Cases by Race/Ethnicity, Sex and Mode of Transmission
District of Columbia, 2008-2012 (N=4,330)



*MSM: includes men who have sex with men; IDU: injection drug use; RNI: risk not identified; Other: perinatal transmission, hemophilia, blood transfusion, and occupational exposure (healthcare workers); Non-MSM: All modes of transmission excluding MSM and MSM/IDU.
Hispanic Male non-MSM: Heterosexual, IDU, RNI and other modes of transmission
Black Female Other: RNI and other modes of transmission
Black Male Other: RNI and other modes of transmission
Hispanic Female: All modes of transmission
White Female: All modes of transmission
Other: All persons of other race with all modes of transmission

- Figure 10 represents newly diagnosed HIV cases in the District of Columbia (n=4,330) by sex, race/ethnicity, and mode of transmission.
- The largest burden of HIV was among black MSM and MSM/IDU (25%).
- Black women with heterosexual contact as mode of transmission represent the second-largest group (18%) of persons newly diagnosed with HIV in the District.
- Black men with heterosexual contact and all other modes of transmission represent the third-largest group (11%).

Map 2. Newly Diagnosed HIV Cases Diagnosed in the District and Alive as of December 2012 by Ward: Rates per 100,000 persons
District of Columbia, 2008-2012



- Ward information was available for 84.8% of newly diagnosed and reported HIV cases between 2008 and 2012.
- The highest rates of newly diagnosed cases were found in wards 8, 5 and 7, where nearly 1 in every 100 persons were diagnosed with HIV in the past 5 years.
- Though not included in ward rates, between 2008 and 2012 there were a total of 134 cases newly diagnosed in jail and 53 cases who were homeless at the time of diagnosis.

Section 3. Perinatal HIV Cases*

Perinatal HIV cases are defined as those in which transmission occurs during pregnancy, labor and delivery, or breastfeeding. Since the introduction of recommendations to provide anti-retrovirals to women during pregnancy, during labor and delivery, and to the infant in the neonatal period, there has been a 95% reduction in mother to child transmission of HIV nationally. Transmission rates among those who receive recommended treatment during pregnancy, at labor and delivery, and during the newborn period are as low as 1%.

There were 151 perinatal HIV cases diagnosed in the District of Columbia and alive as of December 2012. Over half (55.6%) of these cases were female, the majority (96.7%) were black, and nearly half (46.4%) were diagnosed at less than 1 year of age. As of December 2012, the majority (86.1%) had a current age of 10 years or older.

Table 2. Perinatal HIV Cases Diagnosed in the District and Alive as of December, 2012

Perinatal HIV Cases		
Sex	N	%
Male	67	44.4
Female	84	55.6
Total	151	100
Race/Ethnicity		
White	0	0
Black	146	96.7
Hispanic	4	2.6
Other*	1	0.7
Total	151	100
Age at Diagnosis		
< 1 year	70	46.4
1 to 2 years	43	28.5
3 to 4 years	11	7.3
5 to 15 years	27	17.9
Total	151	100
Current Age		
< 1	2	1.3
1 to 2	2	1.3
3 to 4	3	2.0
5 to 9	14	9.3
10 to 19	66	43.7
20 to 29	64	42.4
Total	151	100

*Other race includes mixed-race individuals, Asians, Alaska Natives, American Indians, Native Hawaiian, Pacific Islanders, and unknown

* Section updated on 9/1/2014

Table 3. Perinatal HIV cases by Year of Birth
District of Columbia, 2008-2012

	Year of Birth				
	2008	2009	2010	2011	2012
Number of perinatal cases born	2	1	2	0	2

Table 3 depicts the number of perinatal cases with a date of birth between 2008 and 2012. Not all HIV diagnoses are confirmed at the time of birth, as noted in the tables below. Currently, there are 2 confirmed cases among children born in 2012.

Table 4. Newly Diagnosed Perinatal HIV Cases by Year of Diagnosis
District of Columbia, 2008-2012

	Year of HIV Diagnosis				
	2008	2009	2010	2011	2012
Number of perinatal cases diagnosed	4	2	3	3	2

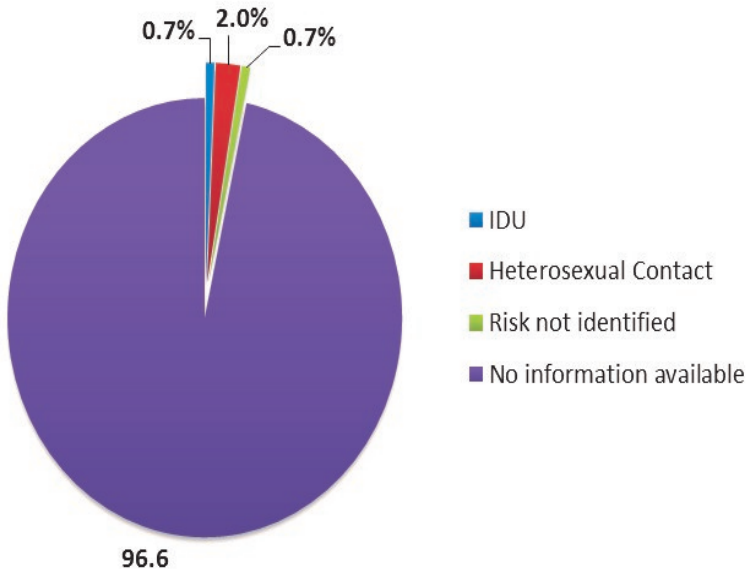
There were 14 perinatal HIV cases diagnosed in the District between 2008 and 2012 (Table 4). Confirming HIV perinatal cases can take up to 18 months, so case totals should be interpreted with caution. These numbers have been updated from previous reports and may change in subsequent reports.

Table 5. Newly Diagnosed Perinatal HIV Cases by Age at Diagnosis
District of Columbia, 2008-2012

Age at HIV diagnosis	N	%
<1 year	8	57.1
1 to 2 years	0	0
3 to 4 years	2	14.3
5 to 15 years	4	28.6
Total	14	100

Table 5 shows the age at which perinatal cases were diagnosed with HIV. Six of the 14 perinatal HIV cases were diagnosed when older than 1 year of age. As stated above, confirming a perinatal case can take 18 months; therefore HAHSTA may not close an investigation until a child is almost 2 years of age. For children born in another country, HAHSTA must use the date of diagnosis by medical providers for surveillance purposes.

Figure 11. Maternal Mode of HIV Transmission Among Living Perinatal HIV Cases
District of Columbia, 2012



There is limited information available on maternal mode of HIV transmission for perinatal cases. In 2012, 2% of all living perinatal HIV cases were attributed to heterosexual contact and 0.7% to injection drug use. Nearly all perinatal cases (96.6%) had an unknown or unreported mother's mode of transmission. Additional efforts to collect maternal mode at the time of the child's diagnosis will assist in classifying unknown risk transmission. Classification of these risk not identified (RNI) cases could greatly change the counts and proportions of heterosexual and IDU modes of transmission and allow for better data on at-risk maternal demographics

Section 4. Newly Diagnosed AIDS Cases

This section summarizes newly diagnosed and reported AIDS cases between 2008 and 2012. An AIDS case refers to a person who had a diagnosis of HIV infection and later had a diagnosis of AIDS or a person with a concurrent diagnosis of HIV infection and AIDS. This is illustrated in Figure 12, which looks at the time from an HIV to an AIDS diagnosis among cases diagnosed and reported in this time period.

Confidential name-based AIDS case surveillance has been conducted in the District since 1985. An AIDS diagnosis is made when a person infected with HIV has a CD4+ T-cell count less than 200 cells/μL and/or the person is diagnosed with an opportunistic infection. CD4+ T-cells measure the immune system's ability to fight infections; when they are low (<200 cells/μL), it is an indication that the immune system may be weakening. Please note that this section includes all newly diagnosed AIDS cases and includes all age groups.

Table 6. Newly Diagnosed AIDS Cases by Year of Diagnosis
District of Columbia, 2008-2012

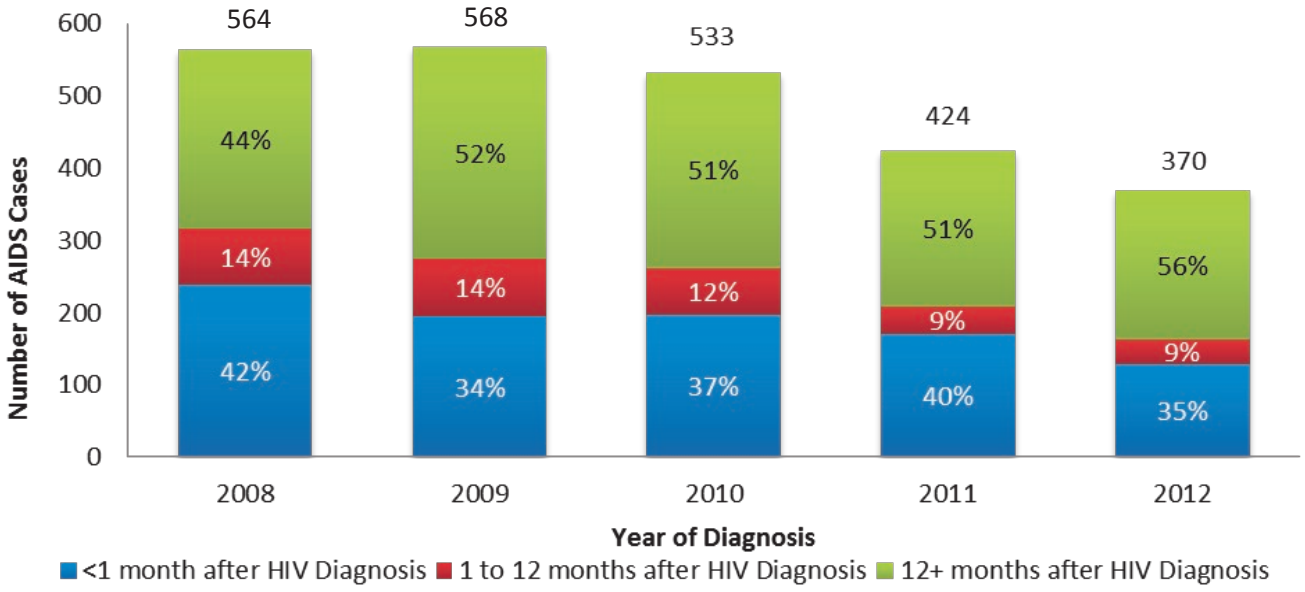
	Year of HIV Diagnosis				
	2008	2009	2010	2011	2012
Number of AIDS cases	564	568	533	424	370

There has been a steady decline in newly diagnosed AIDS cases during this five-year period. The decline indicates that persons with HIV are maintaining their treatment, remaining healthy with strong immune systems and not progressing to an AIDS condition. This is significant as an important measure of the District's response to HIV.

Summary

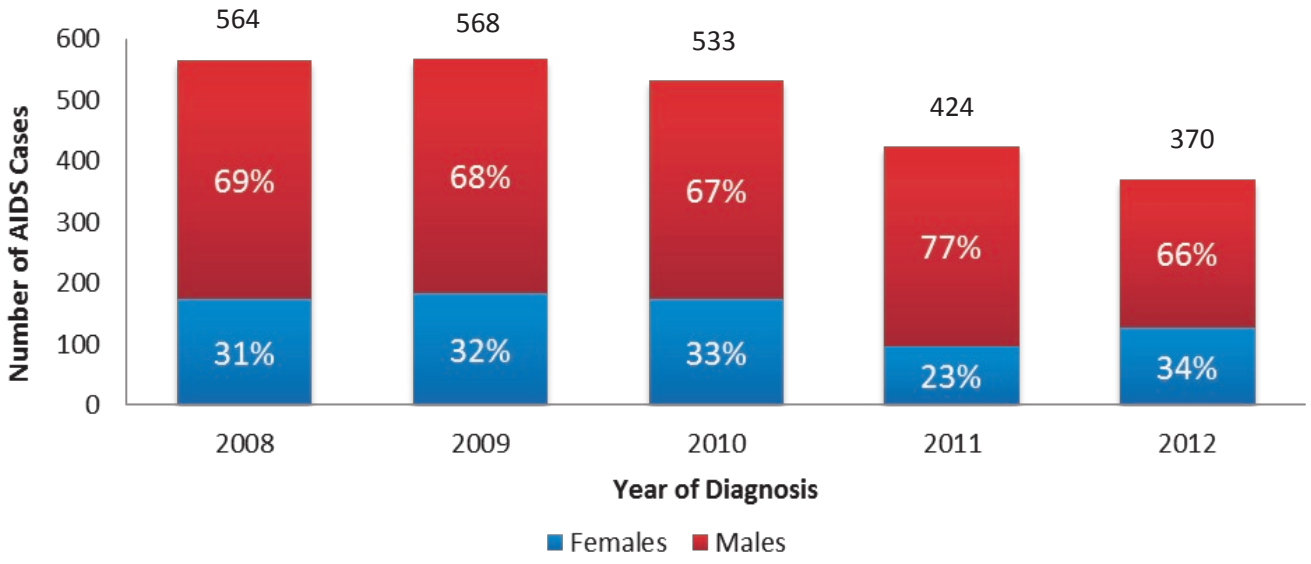
There were 2,458 AIDS cases diagnosed among residents of the District between 2008 and 2012. The number of newly diagnosed AIDS cases declined each year, from 564 cases in 2008 to 370 cases in 2012; this represents a 34% decline in the number of diagnosed cases. More than two-thirds of these cases (69.4%) were among men; the majority (81.2%) were black, and over one-half (53.5%) were between 30 and 49 years of age at AIDS diagnosis. The leading modes of transmission reported among newly diagnosed AIDS cases were heterosexual contact (33.0%) and men who had sex with men (MSM) (32.3%). In 21.8% of cases, the mode of transmission was not identified. Please refer to appendix tables B4 and B5 for additional data regarding newly diagnosed AIDS cases.

Figure 12. Newly Diagnosed AIDS Cases by Year of Diagnosis and Time to AIDS Diagnosis
District of Columbia, 2008-2012



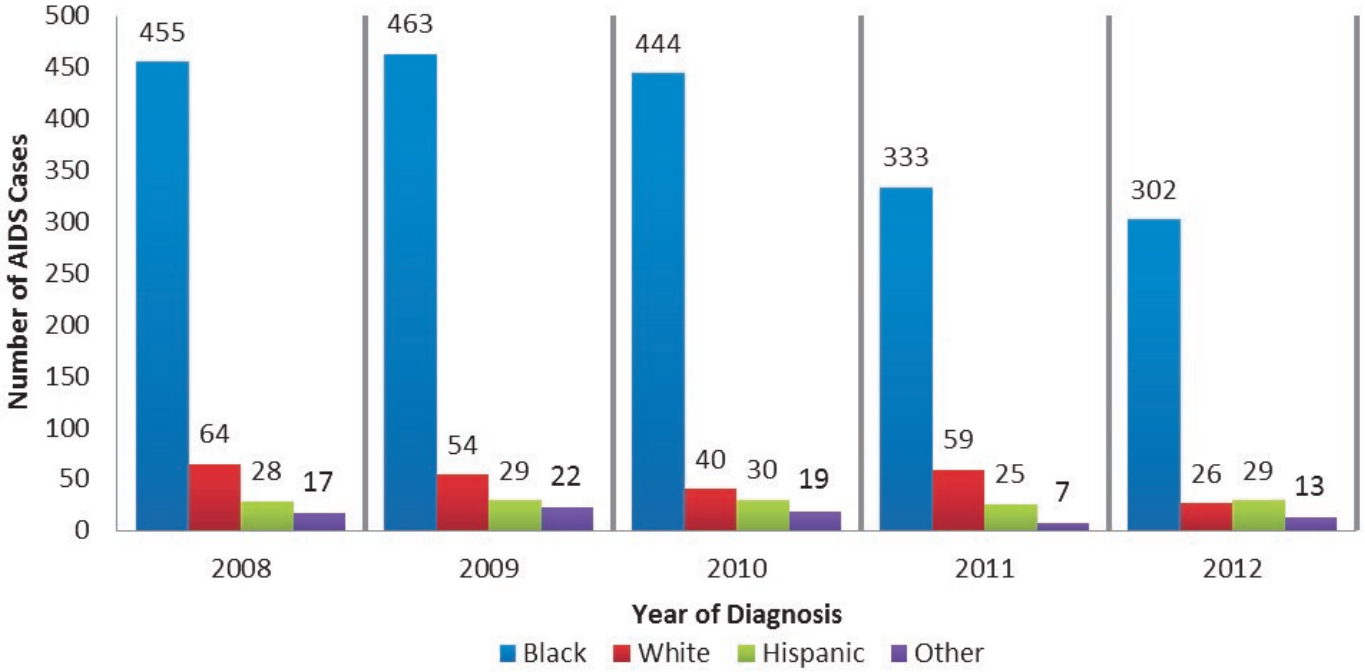
- Being diagnosed with AIDS within a month of an HIV diagnosis generally indicates a delay in testing or accessing health care, as well as a delay in surveillance to identify the case closer to the time of transmission.
- Among persons diagnosed with AIDS in 2008, 42% were diagnosed within one month of receiving a positive HIV test result and 14% were diagnosed between one and 12 months after a positive HIV test result.
- Among 44% of the newly diagnosed AIDS cases, at least one year had passed since they were diagnosed with HIV; in some cases, many years may have passed since their initial HIV diagnosis.
- The proportion of newly diagnosed AIDS cases that occurred within one month of an HIV diagnosis declined slightly from 42% in 2008 to 35% in 2012.

Figure 13. Newly Diagnosed AIDS Cases by Year of Diagnosis and Sex
District of Columbia, 2008-2012



- Overall, 69.4% of AIDS cases diagnosed between 2008 and 2012 in the District were among men; this is similar to the proportion of men newly diagnosed with HIV in the District (71.2%).
- Between 2008 and 2010, the proportion of newly diagnosed AIDS cases among men was relatively stable (67% to 69%). In 2011 it increased to 77%, but declined to 66% in 2012.

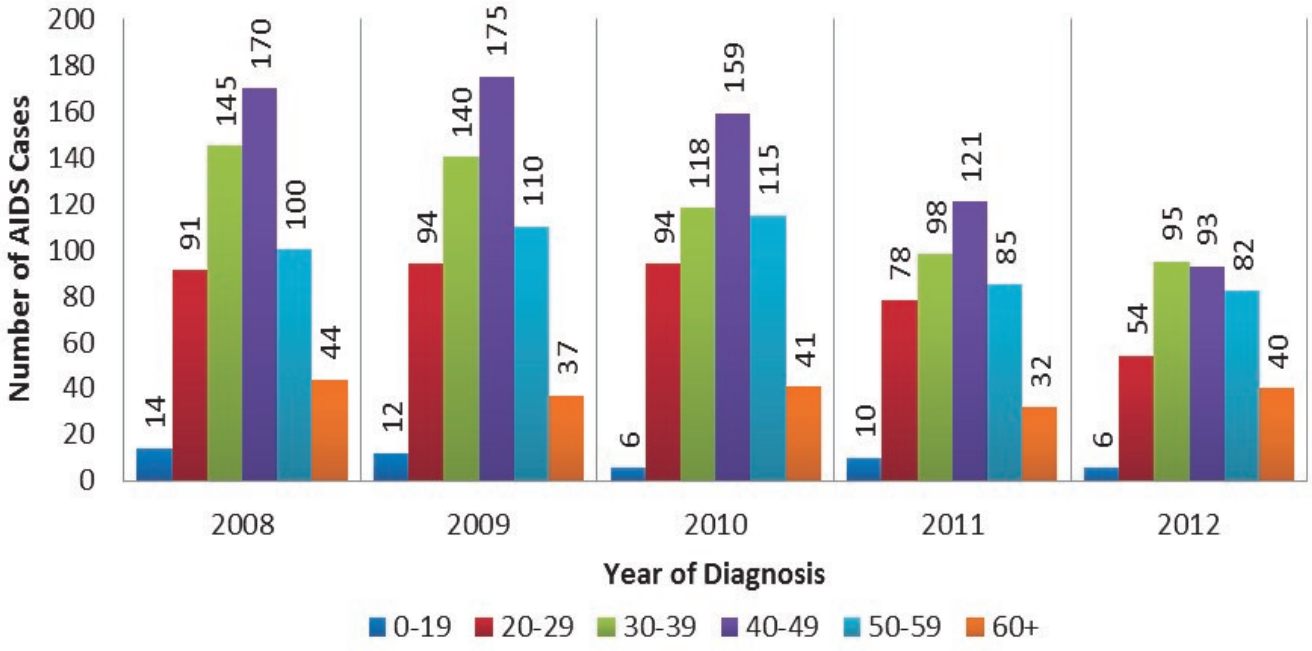
Figure 14. Newly Diagnosed AIDS Cases by Year of Diagnosis and Race/Ethnicity
District of Columbia, 2008-2012



*Other race includes mixed-race individuals, Asians, Alaska Natives, American Indians, Native Hawaiian, Pacific Islanders, and unknown

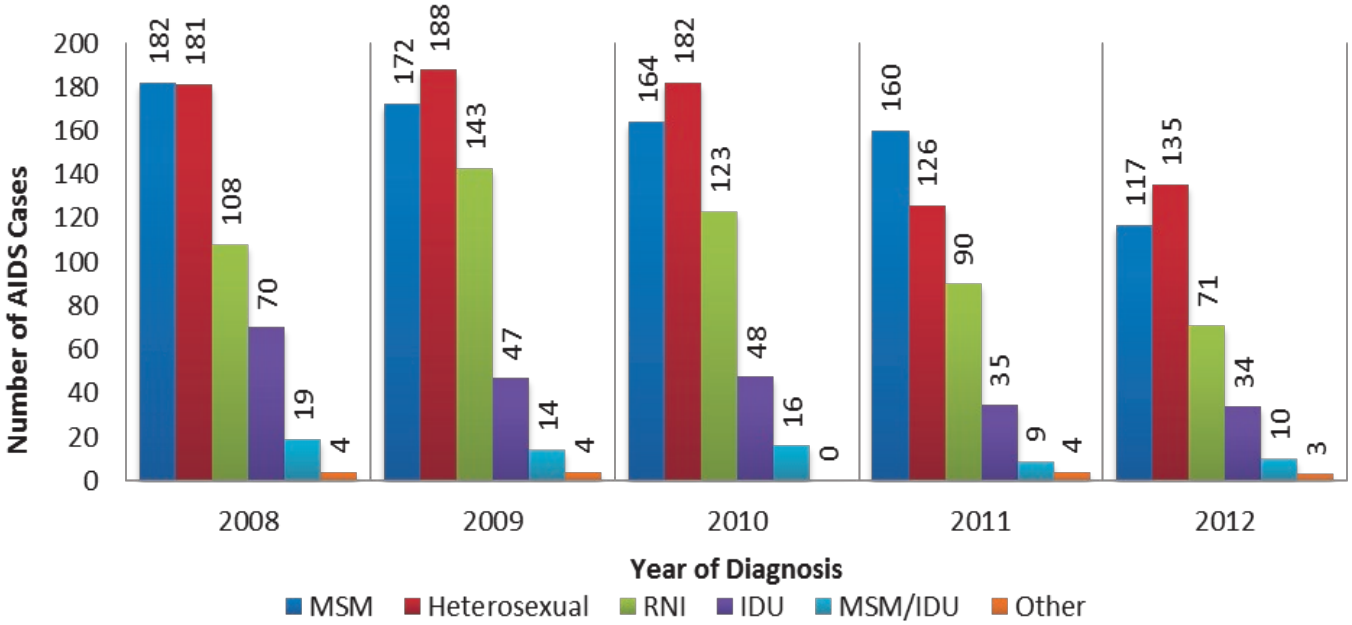
- There was a 34% decrease in the number of newly diagnosed AIDS cases among blacks between 2008 and 2012.
- The proportion of AIDS cases among blacks in 2008 was 81%; in 2012 it was 82%.
- There was a 60% decrease in the number of newly diagnosed cases among whites from 2008 to 2012.

Figure 15. Newly Diagnosed AIDS Cases by Year of Diagnosis and Age at Diagnosis
District of Columbia, 2008-2012



- Persons aged 40 to 49 years had the highest proportion of newly diagnosed AIDS cases between 2008 and 2012 (29.2%), followed by cases aged 30 to 39 years (24.2%) and aged 50 to 59 years (20.0%).
- The number of AIDS cases diagnosed between 2008 and 2012 declined 34% among those 20 years of age and older (2008: 550 cases; 2012: 364 cases).
- Among children and adolescents (0 to 19 years old), the number of newly diagnosed AIDS cases is consistently low, but is still of public health concern.

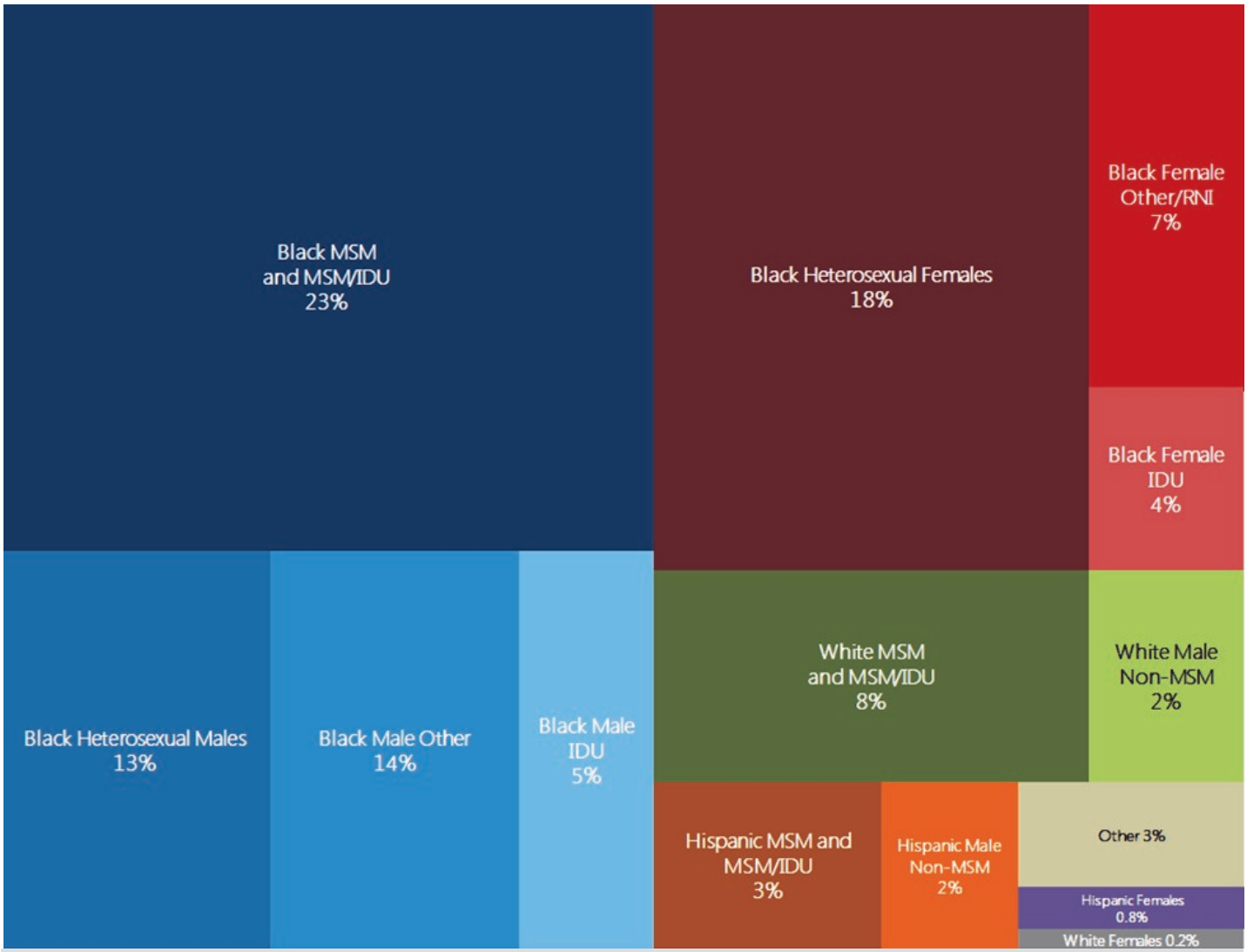
Figure 16. Newly Diagnosed AIDS Cases by Year of Diagnosis and Mode of Transmission
District of Columbia, 2008-2012



*Other mode of transmission includes perinatal transmission, hemophilia, blood transfusion, and occupational exposure (health care workers).

- Unlike newly diagnosed HIV cases in the District, heterosexual contact is the leading mode of reported transmission among newly diagnosed AIDS cases between 2008 and 2012 (33%).
- The number of newly diagnosed AIDS cases in which mode of transmission is not known (risk not identified or RNI) remains high due to incomplete reports, which makes it difficult to fully assess the burden of AIDS among specific population groups.
- The number of cases diagnosed among injection drug users has decreased significantly, a 51% decline, compared with other transmissions categories.

Figure 17. Proportion of Newly Diagnosed AIDS Cases by Race/Ethnicity, Sex and Mode of Transmission
District of Columbia, 2008-2012 (N=2,458)



*MSM: includes men who have sex with men; IDU: injection drug use; RNI: risk not identified; Other: perinatal transmission, hemophilia, blood transfusion, and occupational exposure (health care workers); Non-MSM: All modes of transmission excluding MSM and MSM/IDU.
Hispanic Male non-MSM: Heterosexual, IDU, RNI and other modes of transmission
Black Female Other: RNI and other modes of transmission
Black Male Other: RNI and other modes of transmission
Hispanic Female: All modes of transmission
White Female: All modes of transmission
Other: All persons of other race with all modes of transmission

- Figure 17 represents newly diagnosed AIDS cases in the District of Columbia (n=2,458) by sex, race/ethnicity, and mode of transmission.
- Black women and black men with heterosexual contact reported as the mode of transmission represent the largest group (31%) of persons newly diagnosed with AIDS in the District.
- Nearly one-quarter (23%) of persons newly diagnosed with AIDS in the District were black MSM and MSM/IDU.

Section 5. HIV Mortality

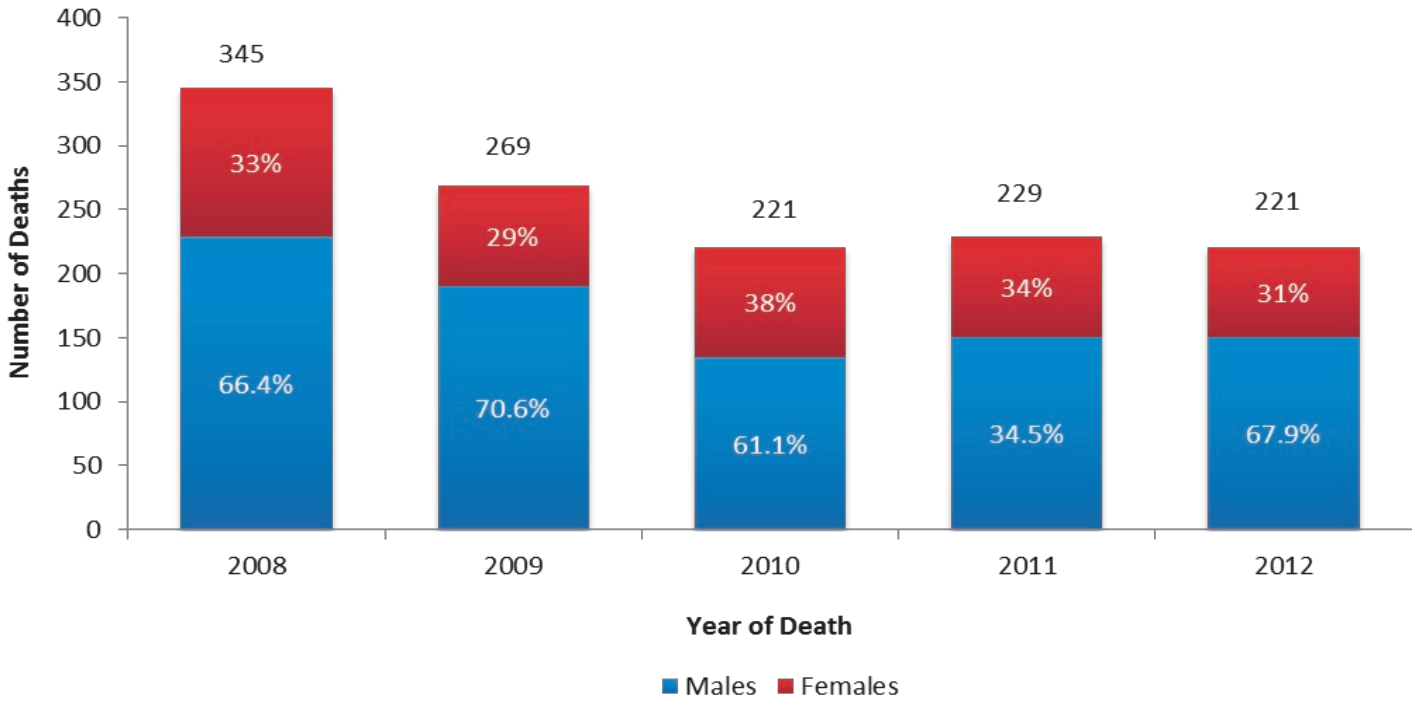
Between 2008 and 2012, there were 1,285 deaths among persons with HIV in the District of Columbia. Two-thirds (66.5%) of deaths occurred among men, and 85.5% of deaths were among blacks. Over two-thirds (36.6%) of deaths occurred in people 50 to 59 years old, and almost one-third (28.5%) were among people 40 to 49 years of age. By mode of transmission, the largest proportion of deaths was among those with transmission attributed to IDU (30.2%), followed by heterosexual contact (24.9 %), and MSM (22.4%), although all declined over the 5-year period. Among total deaths, 41% of the deaths were HIV-related.

Table 7. Number of Deaths among HIV cases by Year of Death
District of Columbia, 2008-2012

	Year of Death				
	2008	2009	2010	2011	2012
Number of deaths	345	269	221	229	221

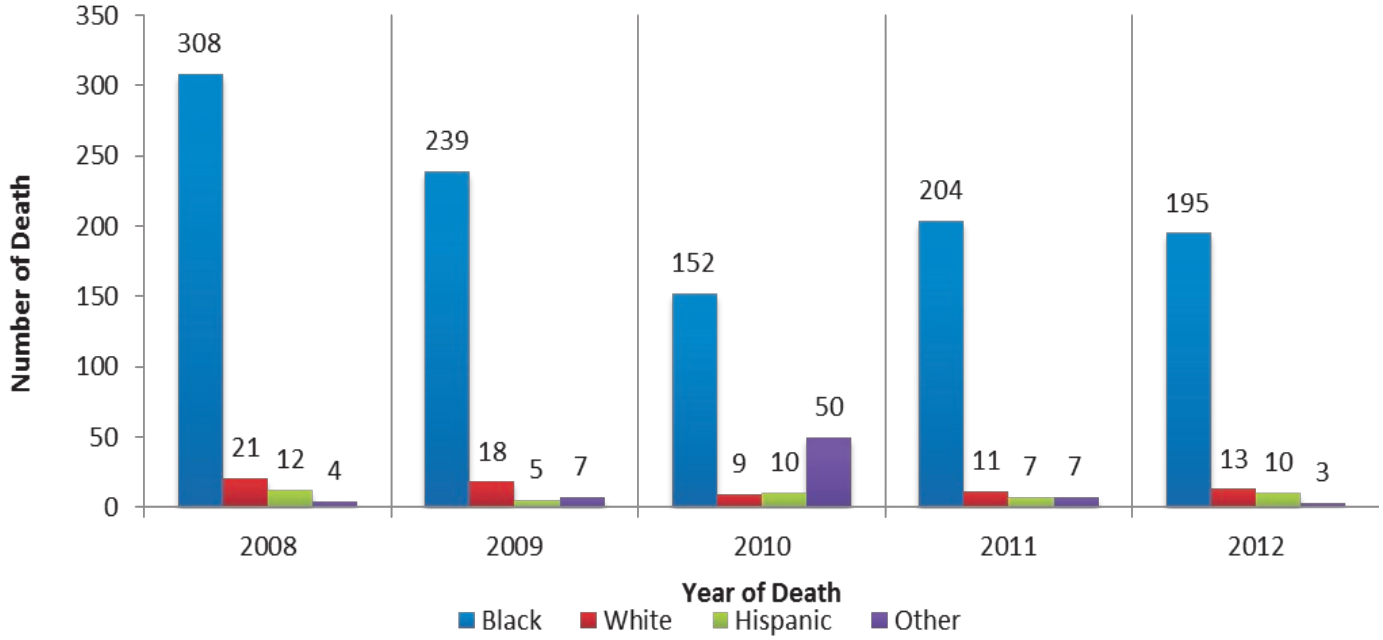
There was a steady decline in the number of deaths among HIV cases, with an overall decline of 36% between 2008 and 2012.

Figure 18. Deaths Among HIV Cases by Year of Death and Sex
District of Columbia, 2008-2012



Two-thirds (66.5%) of deaths during this 5-year time period were among men, while the proportion of new HIV diagnoses among men was 71.2% during the same time period. The ratio of deaths comparing men and women has not changed between 2008 and 2012.

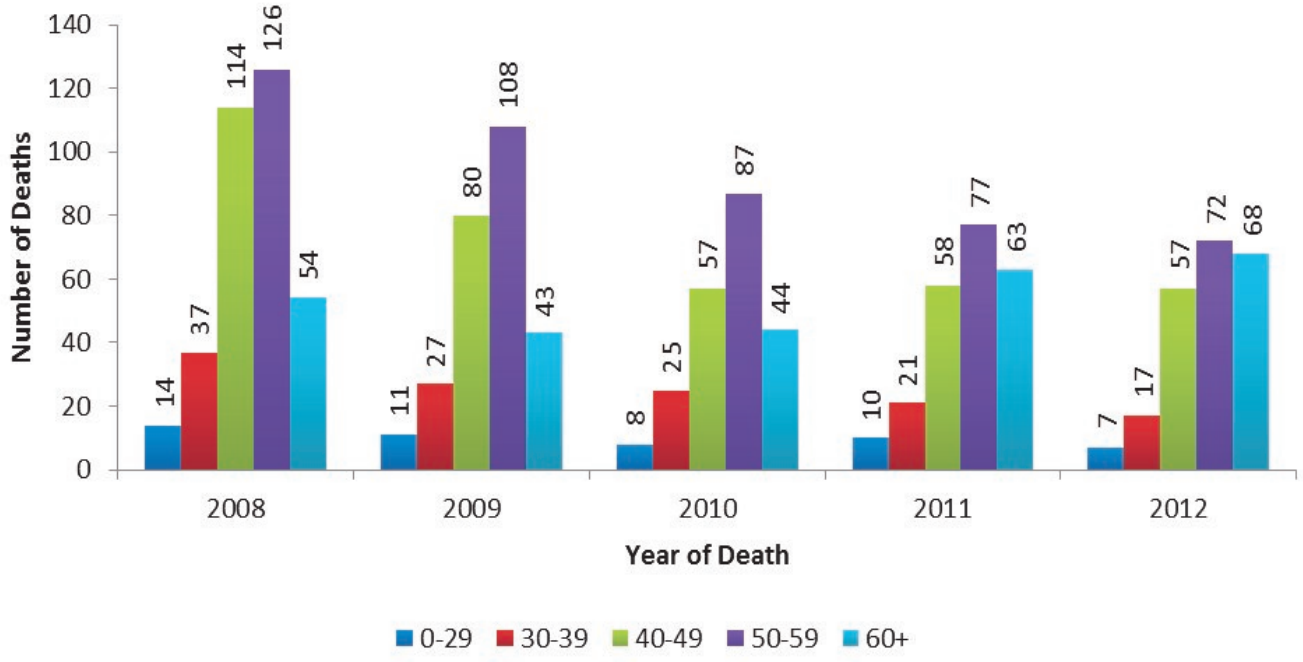
Figure 19. Deaths among HIV Cases by Year of Death and Race/Ethnicity
District of Columbia, 2008-2012



*Other race includes mixed race individuals, Asians, Alaska Natives, American Indians, Native Hawaiian, Pacific Islanders, and unknown

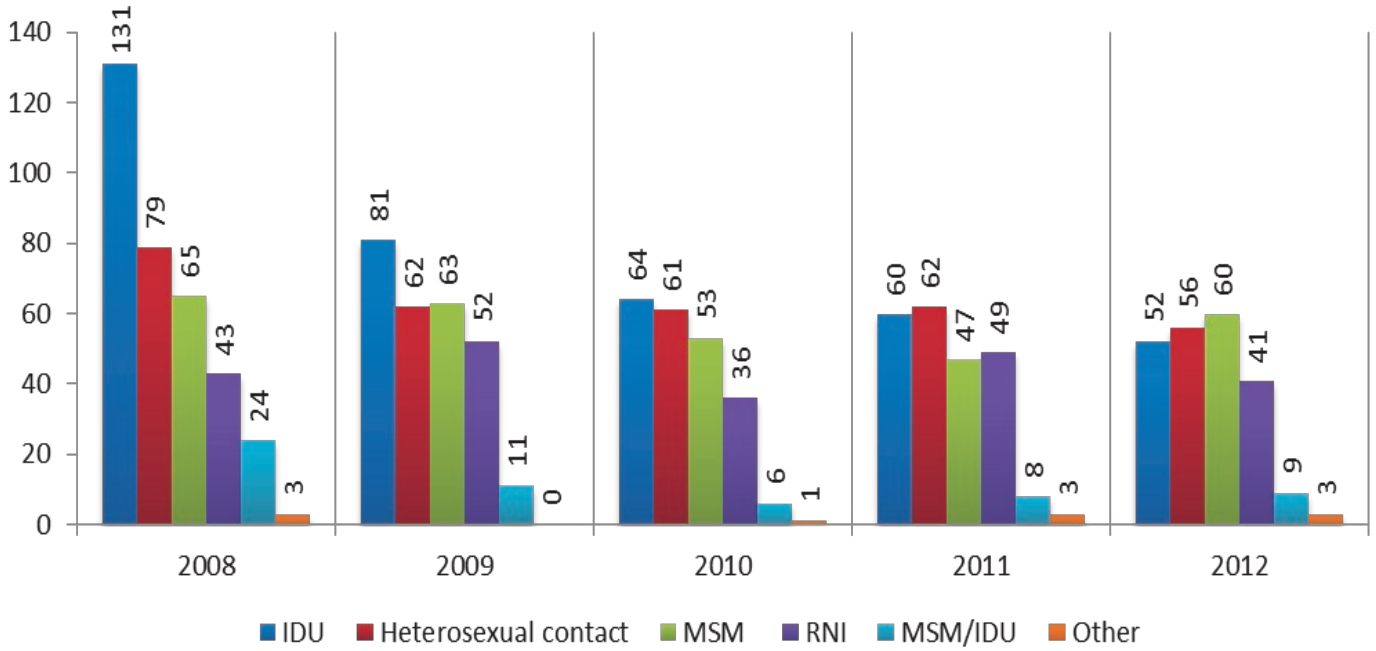
Overall, the number of deaths among HIV cases in all race groups declined between 2008 and 2012.

Figure 20. Deaths among HIV Cases by Year of Diagnosis and Age at Death
District of Columbia, 2008-2012



- The age at death has increased; median age at death in 2008 was 50 years while the median age at death in 2012 was 54 years.
- Between 2008 and 2012, the greatest number of deaths occurred among those 50 to 59 years of age.
- Between 2010 and 2011 there was an increase of 43% in the number of deaths among 60 to 69 year olds.

Figure 21. Deaths Among HIV Cases by Year of Diagnosis and Mode of Transmission
District of Columbia, 2008-2012



*Other mode of transmission includes perinatal transmission, hemophilia, blood transfusion, and occupational exposure (health care workers).

- The largest decrease in number of deaths by mode of transmission was among cases reported as MSM/IDU and IDU. Deaths among these group decreased by 63% and 60%, respectively between 2008 and 2012.
- The number of deaths among HIV cases with heterosexual contact and MSM/IDU reported as the mode of transmission decreased 29% during this 5-year period.

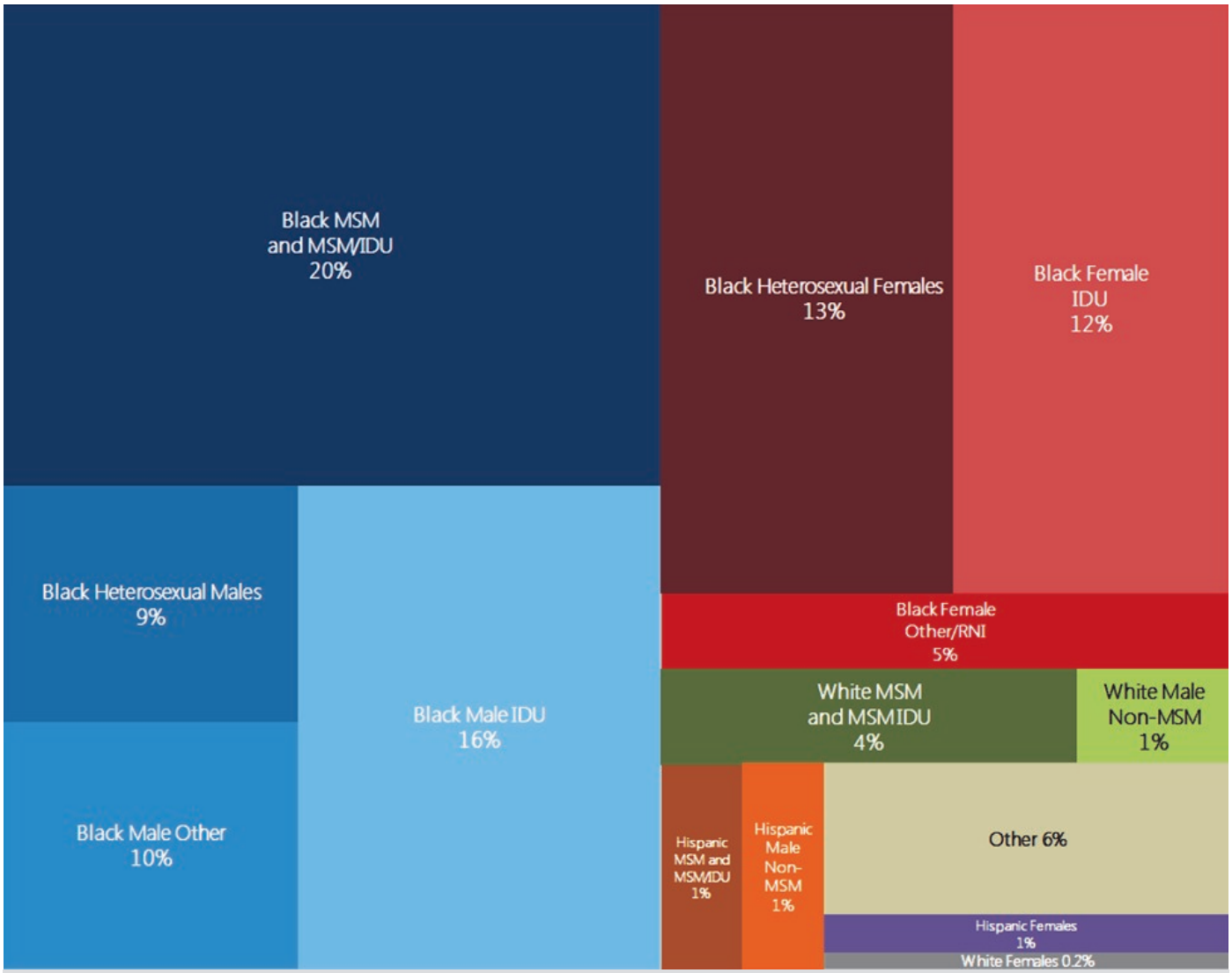
Table 8. Cause of Death Among Persons with HIV by Year of Death
District of Columbia, 2008-2012

	2008		2009		2010		2011		2012		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Cause of Death												
HIV-related causes*	190	55.1	97	36.1	96	43.4	77	33.6	72	32.6	532	41.1
Non-AIDS-defining malignancies	38	11.0	18	6.7	21	9.5	46	20.1	39	17.6	162	12.6
Cardiovascular	35	10.1	15	5.6	24	10.9	28	12.2	40	18.1	142	11.1
Substance Use	0	0	2	0.7	0	0	4	1.8	4	1.8	10	0.8
Accidental death	7	2.0	5	1.9	18	8.1	10	4.4	13	5.9	53	4.1
Other**	43	12.5	16	6.0	28	12.7	33	14.4	44	19.9	164	12.8
Unknown	32	9.3	116	43.1	34	15.4	31	13.5	9	4.1	222	17.3
Total	345	100.0	269	100.0	221	100.0	229	100.0	221	100.0	1,285	100.0

*HIV-related causes include opportunistic infections and AIDS-defining cancers.
**Other causes of death include suicide, pneumonia, COPD, and diabetes, etc.

- Over 40% of deaths between 2008 and 2012 among persons diagnosed with HIV in the District were due to HIV -related causes, such as opportunistic infections and AIDS-defining cancers.
- The underlying cause of death was unknown for 17.3% of deaths in this 5-year period. Those who died in 2009 had the highest proportion of unknown cause of death (43.1%).

Figure 22. Proportion of All Deaths Among HIV Cases in DC by Race/Ethnicity, Sex and Mode of Transmission
District of Columbia, 2008-2012 (N=1,285)



*MSM: includes men who have sex with men; IDU: injection drug use; RNI: risk not identified; Other: perinatal transmission, hemophilia, blood transfusion, and occupational exposure (health care workers); Non-MSM: All modes of transmission excluding MSM and MSM/IDU.
Hispanic Male non-MSM: Heterosexual, IDU, RNI and other modes of transmission
Black Female Other: RNI and other modes of transmission
Black Male Other: RNI and other modes of transmission
Hispanic Female: All modes of transmission
White Female: All modes of transmission
Other: All persons of other race with all modes of transmission

- Figure 22 represents deaths that occurred among persons diagnosed with HIV in the District of Columbia between 2008 and 2012 (n=1,285) by sex, race/ethnicity, and mode of transmission.
- Nearly one-fifth of deaths among persons with HIV were among black men with injection drug use reported as their mode of transmission; another 20% were black men with MSM and MSM/IDU reported as their mode of transmission.

Section 6. HIV Incidence Estimate

HIV Incidence

There has been continuing interest in the District of Columbia in reporting the number of new HIV infections. Measuring new infections is called incidence. This is different from the number of new diagnoses or cases that the Department of Health reports on every year. New cases are when medical providers and laboratories notify the Department of a new diagnosis. The diagnosis is not necessarily when the person was actually infected with HIV. While science has not yet captured the exact time when a person is infected with HIV, there is a model developed by the U.S. Centers for Disease Control and Prevention (CDC) that provides an estimate by taking a sample of new cases and applying a mathematical formula to arrive at a population-level number.

Incidence data gives another window into the HIV epidemic by examining the number and characteristics of those infections during a year. This initial report on HIV incidence in the District provides an important snapshot of what the epidemic looks like in a more current timeframe. The data show:

Decline in new infections: There was a decrease of 29% in new infections, from 922 in 2008 to 651 in 2011.

New infections trend younger: People ages 13-29 are being infected at a slightly higher proportion than people ages 30-49 (44.9% vs. 41.0%).

Increase in proportion of heterosexual infections: The percentage of new infections among heterosexuals nearly doubled from 16.9% in 2008 to 33.0% in 2011. The percentage of new infections attributed to men who have sex with men decreased by one-fifth, from 56.8% in 2008 to 45.2% in 2011.

It is important to note that the incidence numbers **are not** a subset of the new cases reported during that year because the calculation takes into consideration all people who are at risk and may include people who are not yet diagnosed. However, there are some similar characteristics between the two sets of data: men are more likely to have HIV than women; African-Americans are disproportionately affected by HIV; and the modes of transmission show that about half are the cases among men who have sex with men and one-third are among heterosexuals.

The Department of Health will continue to compile and analyze incidence data to contribute to the pool of information on the DC epidemic and inform programmatic and policy responses.

Understanding the HIV Incidence Estimate

The HIV incidence estimate presented provides a projected number of newly acquired infections occurring each year among DC residents during the 4-year span from 2008 to 2011. The calculation of the estimate takes into consideration the likelihood of newly acquired infections among the entire population at risk; thus it includes cases that have not yet been diagnosed. For this reason, ***the incidence estimate cannot be considered as the same data as the annual number of new cases reported in the Annual Epidemiology and Surveillance Report, as new cases reflect the date of diagnosis and are not indicative of when a person was infected with HIV.*** The estimate provides greater insight in determining among whom new infections are occurring. This data can inform prevention strategies and allow for more effective resource allocation to reduce HIV transmission in DC.

Methodology of the HIV Incidence Estimate

This is the first time the DC Department of Health is reporting on HIV incidence. The CDC supports a select number of jurisdictions, including the District of Columbia, to conduct incidence surveillance activities. The Department used the Serologic Testing Algorithm for Recent HIV Seroconversion (STARHS) method to estimate HIV incidence. STARHS is a two-test methodology that uses the enzyme-linked immunoassay (EIA) to determine whether an individual is HIV-positive and then utilizes the BED HIV-1 capture enzyme immunoassay to classify newly diagnosed individuals as either recent (less than 5 months from time of infection) or long-standing infections. The BED test is meant for surveillance purposes only and is not intended for clinical use. Eligible blood samples for STARHS must be collected within 90 days of diagnosis of HIV and are transported to the New York State STARHS Lab for testing. The incidence estimate is calculated using statistical imputation (a method of using available data and similar substitutes for missing information) to estimate the number of newly infected individuals in DC based on the known STARHS results. This statistical algorithm also relies on the testing and antiretroviral use history information collected from new diagnoses through the Adult Case Report Form. A stratified extrapolation approach was used for assessing the probability of the three different elements of the estimate: the probability of getting an HIV test within one year of becoming infected, the probability of being tested using STARHS after a new diagnosis, and the probability of being classified as a recent infection. The final result of the analysis is an estimate of the number of newly infected individuals in DC. Given that the incidence values presented are statistical estimates, 95% confidence intervals are also presented in order to facilitate an understanding of the reliability of such estimates, with wider confidence intervals indicative of less reliable estimates.

Limitations and Assumptions of the Incidence Estimate

Computing the HIV incidence estimate uses data collected from STARHS results as well as the testing and antiretroviral use history collected through the Adult Case Report Form. Due to the calculated nature of the HIV incidence estimate, there are several limitations and assumptions to consider:

Repeat Testing:

People who test more than once a year can lead to an overestimate of HIV incidence because if they seroconvert, their likelihood of testing BED recent is greater than among persons who test less frequently. However, this limitation is unavoidable because the District recommends that persons in high-prevalence groups, such as men who have sex with men, test more than once a year.

Delayed Reporting:

Incidence estimates are subject to variation and fluctuations since they are based on reported surveillance data. The statistical imputation used to complete the missing data adjusts for reporting delays using historic data to estimate current timeliness.

Changes in Surveillance Procedures Over Time:

Although instituted in 2007, systematic collection of laboratory data began in 2009; data collected prior to 2009 are not as complete or reliable as data collected starting in 2009.

Missing Data:

Incidence testing uses both laboratory data and testing and antiretroviral use history data. For some cases this data may be unavailable; however, they are included in the report. For these cases it is assumed that the information is missing at random. Statistical imputation (i.e. replacing missing data with substituted values) was used to estimate the missing information.

Insufficient Quantities:

For some sub-groups there was not sufficient data/numbers, thus reducing the reliability of the estimate for those particular sub-groups. Due to this limitation, sub-groups with insufficient data/numbers are deemed unreliable and will not have values reported.

Overview of Incidence Estimate

Between 2008 and 2011, an estimated 616 (lowest: 2009) to 922 (highest: 2008) new HIV infections occurred in the District. In 2010, the latest available national data, the estimated rate of new infections in the District was at 125.5 estimated cases per 100,000 persons, compared with the national rate of 27.5 estimated cases per 100,000 persons. By the end of 2011, it is estimated that more than two-thirds of new infections were among men (69.3%), close to three-fourths were among blacks (71.7%), and almost half were among individuals ages 13-29 (44.9%) and men who had sex with men (45.2%).

Figure 23. Estimated Number of Newly Infected HIV Cases by Year
District of Columbia, 2008-2011

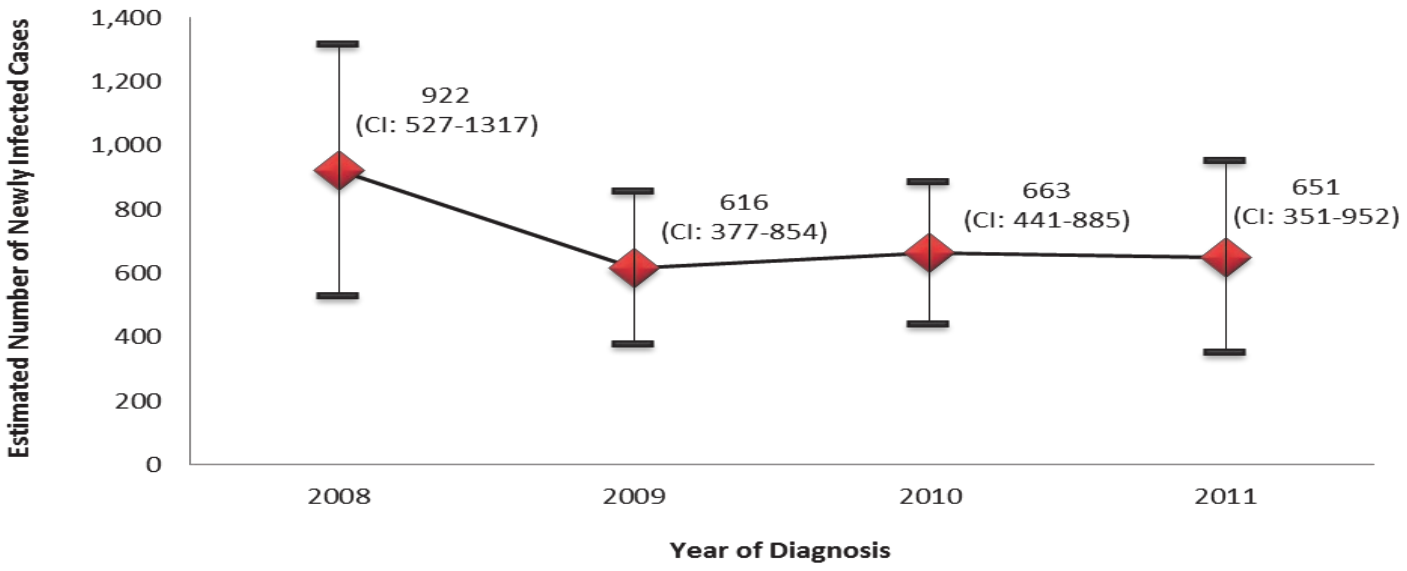


Figure 23 represents the overall estimated number of new HIV infections in DC during the 4-year period from 2008 to 2011. Since the number of new infections of HIV is an estimate, the 95% confidence interval (i.e., the range of values most likely to contain the true estimate) is shown after adjusting for variability in sampling and timing of testing. During the 4-year period, the estimated number of new infections declined by 29%, from 922 cases in 2008 to 651 cases in 2011. The estimated number of new infections in DC remained relatively stable from 2009 to 2011.

Table 9. Estimated Number of New HIV Infections by Sex, Race/Ethnicity, Age at Diagnosis, and Mode of Transmission District of Columbia, 2008-2011†

	2008 Estimate (CI)	%	2009 Estimate (CI)	%	2010 Estimate (CI)	%	2011 Estimate (CI)	%
Sex								
Men	820 (442-1,199)	88.9%	407 (224-590)	66.1%	413 (252-574)	62.3%	451 (220-682)	69.3%
Women	--	--	209 (45-373)	33.9%	250 (73-428)	37.7%	200 (5-396)	30.7%
Total	922 (527-1,317)	100.0%	616 (377-854)	100.0%	663 (441-885)	100.0%	651 (351-952)	100.0%
Race/Ethnicity								
White	--		--		--		--	
Black	714 (390-1,038)	77.4%	425 (226-625)	69.0%	482 (290-673)	72.7%	467 (218-717)	71.7%
Other	--		--		--		--	
Total	922 (527-1,317)	100.0%	616 (377-854)	100.0%	663 (441-885)	100.0%	651 (351-952)	100.0%
Age								
13-29	459 (221-698)	49.8%	191 (64-318)	31.0%	283 (152-414)	42.7%	292 (108-475)	44.9%
30-49	389 (146-632)	42.2%	332 (174-489)	53.9%	280 (153-407)	42.2%	267 (100-434)	41.0%
50-59	--	--	--	--	--	--	--	--
>=60	--	--	--	--	--	--	--	--
Total	922 (527-1,317)	100.0%	616 (377-854)	100.0%	663 (441-885)	100.0%	651 (351-952)	100.0%
Mode of Transmission								
MSM	524 (234-815)	56.8%	296 (146-446)	48.1%	269 (151-388)	40.6%	294 (122-467)	45.2%
IDU	--	--	--	--	--	--	--	--
MSM/IDU	--	--	--	--	--	--	--	--
Heterosexual Contact	156 (27-285)	16.9%	196 (70-322)	31.8%	232 (91-373)	35.0%	215 (40-390)	33.0%
Other**	--	--	--	--	--	--	--	--
Risk Not Identified	--	--	--		113 (26-199)	17.0%	--	--
Total	922 (527-1,317)	100.0%	616 (377-854)	100.0%	663 (441-885)	100.0%	651 (351-952)	100.0%

†Strata with insufficient quantities will not have values reported
*Other includes mixed-race individuals, Asians, Alaska Natives, American Indians, Native Hawaiians, Pacific Islanders, and unknown
**Other mode of transmission includes hemophilia, blood transfusion, and occupational exposure (healthcare workers)

- Men consistently represented the largest proportion of estimated new infections with the ratio of men to women about 3-to-1 in 2011.
- Between 2009 and 2011 the greatest proportion of estimated new infections shifted from cases aged 30-49 to those aged 13-29.
- Among ages 30-49, there was a 20% decline in estimated new infections between 2009 and 2011. During the same period, there was a 53% increase in estimated new infections among cases aged 13-29.

Table 10. Estimated Rate of New HIV Infections per 100,000 Persons by Sex, Race/Ethnicity, and Age at Diagnosis District of Columbia, 2008-2011†

	2008 Estimated Rate per 100,000 (95% CI)	2009 Estimated Rate per 100,000 (95% CI)	2010 Estimated Rate per 100,000 (95% CI)	2011 Estimated Rate per 100,000 (95% CI)
Sex				
Men	344.2 (185.5-503.3)	169.6 (93.3-245.8)	167.3 (102.1-232.5)	178.8 (87.2-270.4)
Women	--	75.7 (16.3-135.2)	88.9 (26.0-152.2)	69.7 (1.7-138.0)
Total	180.6 (103.2-257.9)	119.4 (73.1-165.5)	125.5 (83.5-167.6)	120.7 (65.1-176.6)
Race/Ethnicity				
White	--	--	--	--
Black	267.9 (146.3-389.5)	158.5 (84.3-233.0)	188.5 (113.4-263.1)	180.6 (84.3-277.3)
Other*	--	--	--	--
Total	180.6 (103.2-257.9)	119.4 (73.1-165.5)	125.5 (83.5-167.6)	120.7 (65.1-176.6)
Age				
13-29	275.0 (132.4-418.1)	116.9 (39.2-194.7)	153.9 (82.7-225.2)	158.4 (58.6-257.7)
30-49	225.5 (84.6-366.4)	186.6 (97.8-274.8)	160.6 (87.8-233.5)	147.9 (55.4-240.4)
50-59	--	--	--	--
>=60	--	--	--	--
Total	180.6 (103.2-257.9)	119.4 (73.1-165.5)	125.5 (83.5-167.6)	120.7 (65.1-176.6)

†Strata with insufficient quantities will not have values reported
*Other race includes mixed race individuals, Asians, Alaska Natives, American Indians, Native Hawaiians, Pacific Islanders, and unknown
‡ The estimated rate of new infection is unavailable for mode of transmission because population estimates are not available.

- From 2009 to 2011, the estimated rate of new infections among men was approximately twice that among women.
- Among blacks, the rate of new HIV infections decreased by 41% from 2008 to 2009, but remained relatively stable from 2009 to 2011.
- Between 2009 and 2011, the estimated new HIV infection rate increased 36% among ages 13-29 and decreased 21% among ages 30-49. Thus the highest estimated rate of new infections by age in 2011 was among persons ages 13-29.

Section 7. Sexually Transmitted Diseases

Summary

This section provides an overview of the incidence and trends of sexually transmitted diseases – chlamydia, gonorrhea, and primary and secondary syphilis – in the District of Columbia. Sexually transmitted diseases (STDs) continue to have a major impact on the health of District residents, particularly adolescents and MSM.

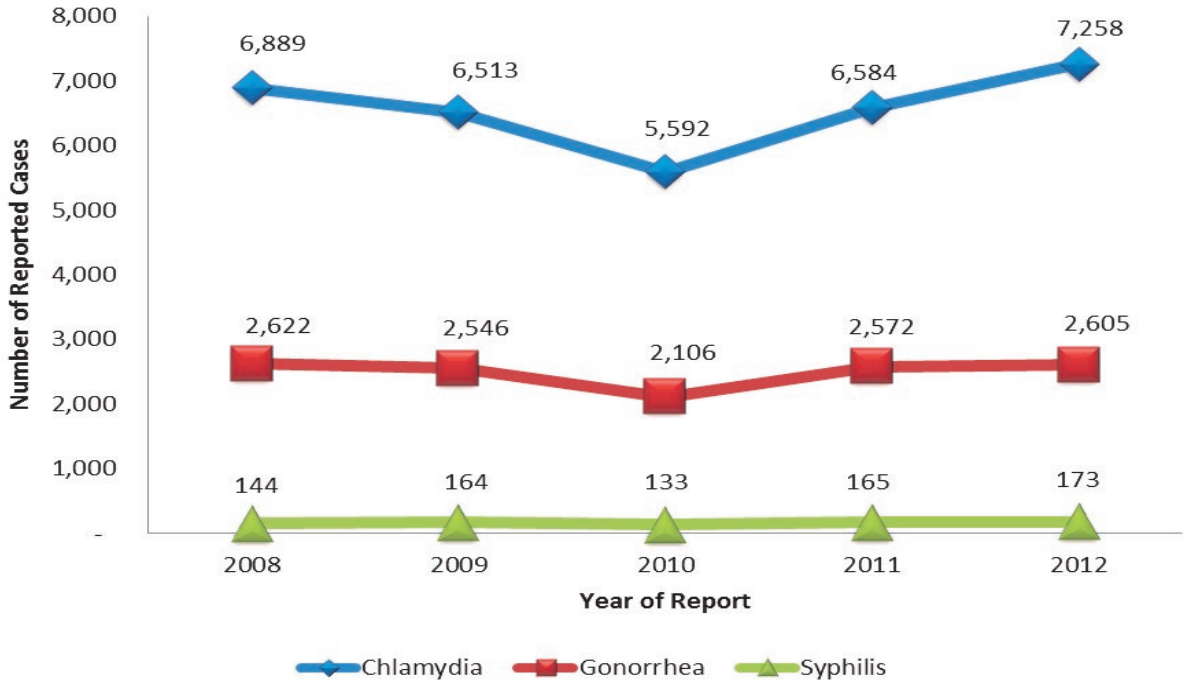
Between 2008 and 2012, the District received 32,836 reports of chlamydia infection, a 4% increase in the number of cases reported between 2007 and 2011 (31,590 cases). Approximately two-thirds of reported cases were among women (65.1%) and were within the black population (64.3%), and more than two-thirds (69.7%) were between 15 and 24 years of age. Geographically, the greatest number of chlamydia cases was reported among persons living in Wards 7 and 8 (39.9%). Please refer to Appendix Table B8 for more information on chlamydia infections reported between 2008 and 2012 in the District.

Between 2008 and 2012, the District received 12,451 reports of gonorrhea infection, a 2% increase in the number of cases reported between 2007 and 2011 (12,216 cases). Unlike chlamydia, the sex of reported cases was divided almost equally between men and women (52.8% and 47.1%, respectively). Over two-thirds of reported cases were among blacks (68.6%) and more than half (61.2%) were between 15 and 24 years of age. The greatest number of gonorrhea cases was also reported among persons living in Wards 7 and 8 (41.6%). Please refer to Appendix Table B9 for more information on gonorrhea infections reported between 2008 and 2012 in the District.

Between 2008 and 2012, the District received 779 reports of primary and secondary syphilis infection, also known as infectious syphilis, a 0.4% decrease in the number of cases reported between 2007 and 2011 (782 cases). Unlike chlamydia and gonorrhea, which predominately affected youth and young adults less than 25 years of age, almost two-thirds (62.2%) of primary and secondary syphilis cases were 30 years of age or older. Slightly more than half (58.4%) of reported primary and secondary syphilis cases were among blacks, and almost all cases (96.1%) were reported among men. In contrast to chlamydia and gonorrhea, the greatest number of primary and secondary syphilis cases were reported among persons living in Wards 1 and 2 (36.8%). Please refer to Appendix Table B10 for more information on primary and secondary syphilis infections reported between 2008 and 2012 in the District.

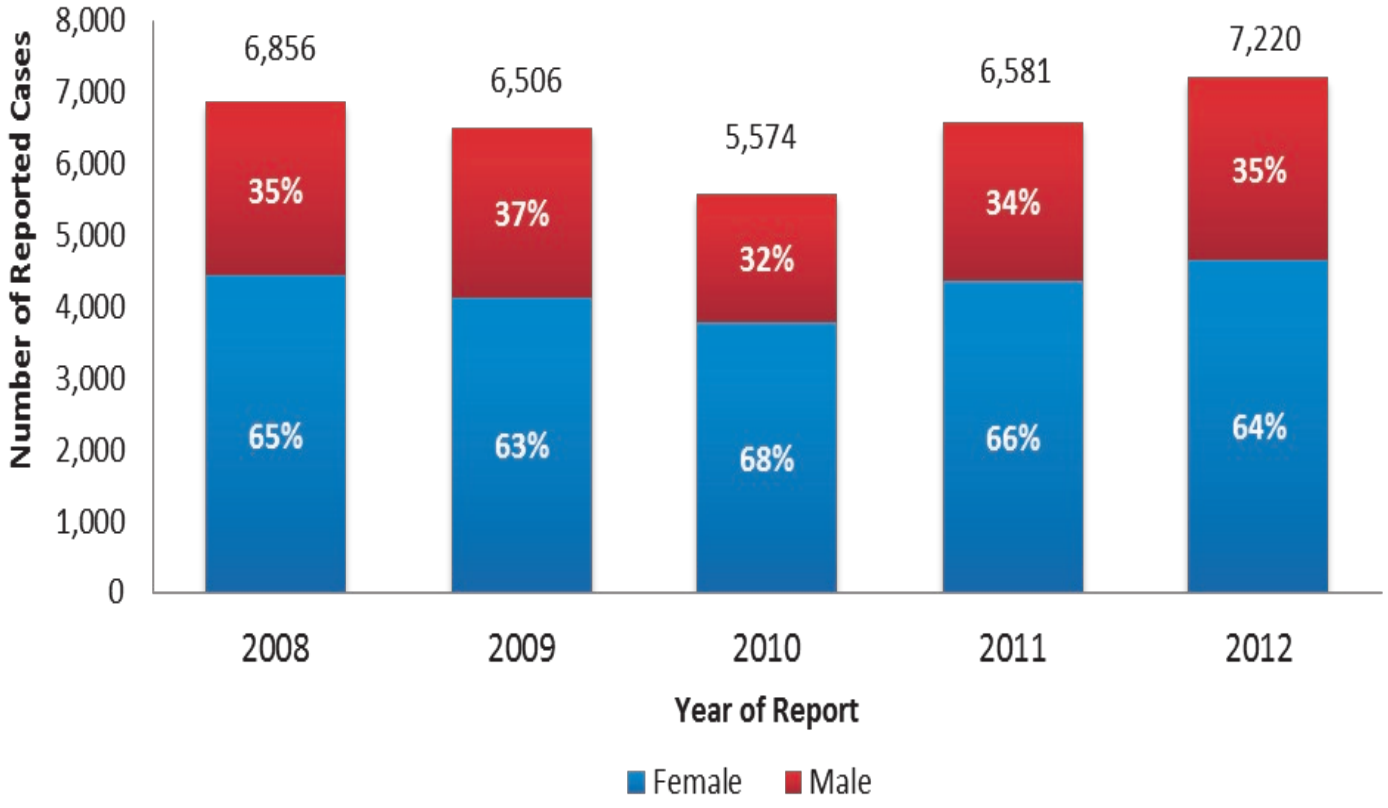
Chlamydia, Gonorrhea and Syphilis in the District of Columbia

Figure 24. Chlamydia, Gonorrhea and Syphilis (Primary & Secondary) Cases by Year of Report
District of Columbia, 2008-2012



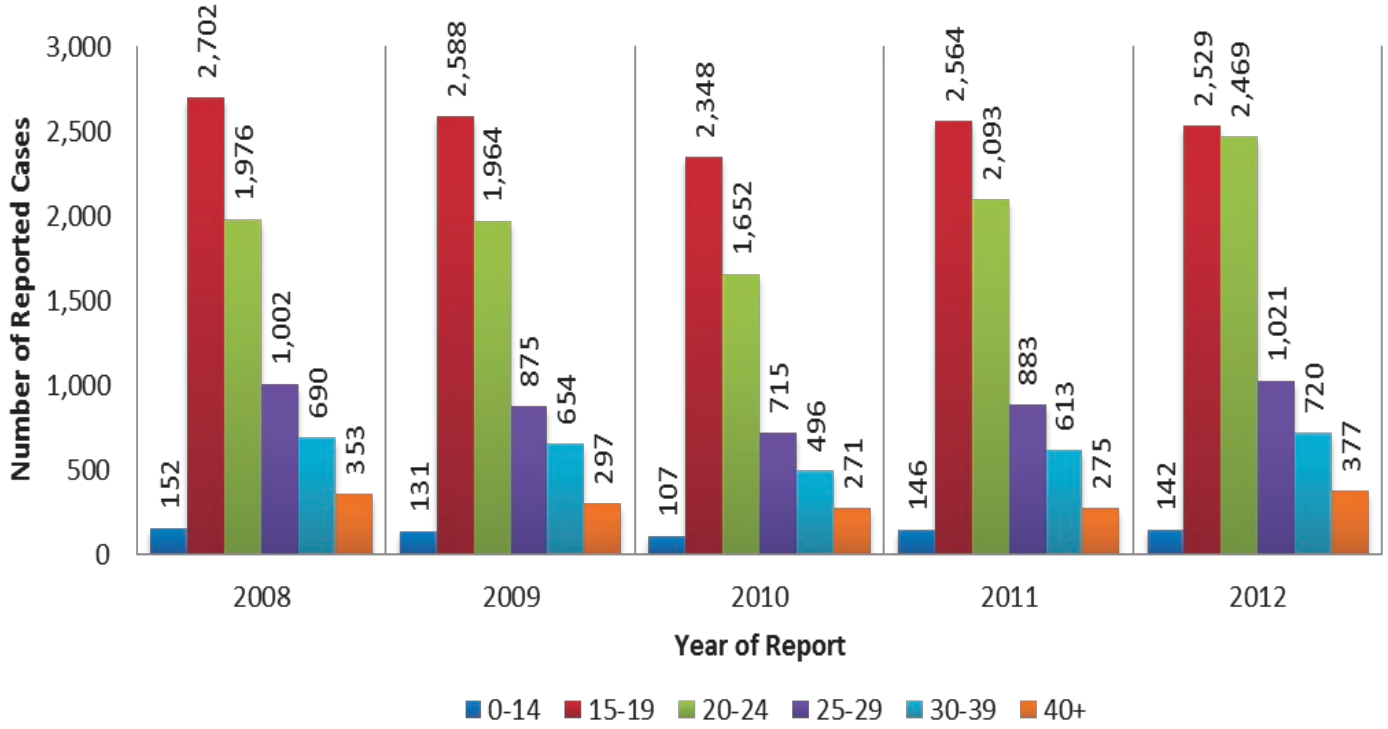
- Due to the availability of more sensitive testing technologies, an increase in youth-focused screening programs, and an increase in the non-genital (throat and rectum) screening of men who have sex with men, the number of reported chlamydia and gonorrhea cases gradually increased between 2008 and 2012.
- Chlamydia is often considered the "silent disease," meaning infections may not have any symptoms and are usually detected during screening. That is, the "more you look for it" (i.e., screen for it) the "more you will find it."
- Reported primary and secondary syphilis has remained steady in the 5-year period.

Figure 25. Number of Chlamydia Cases by Year of Report and Sex
District of Columbia, 2008-2012



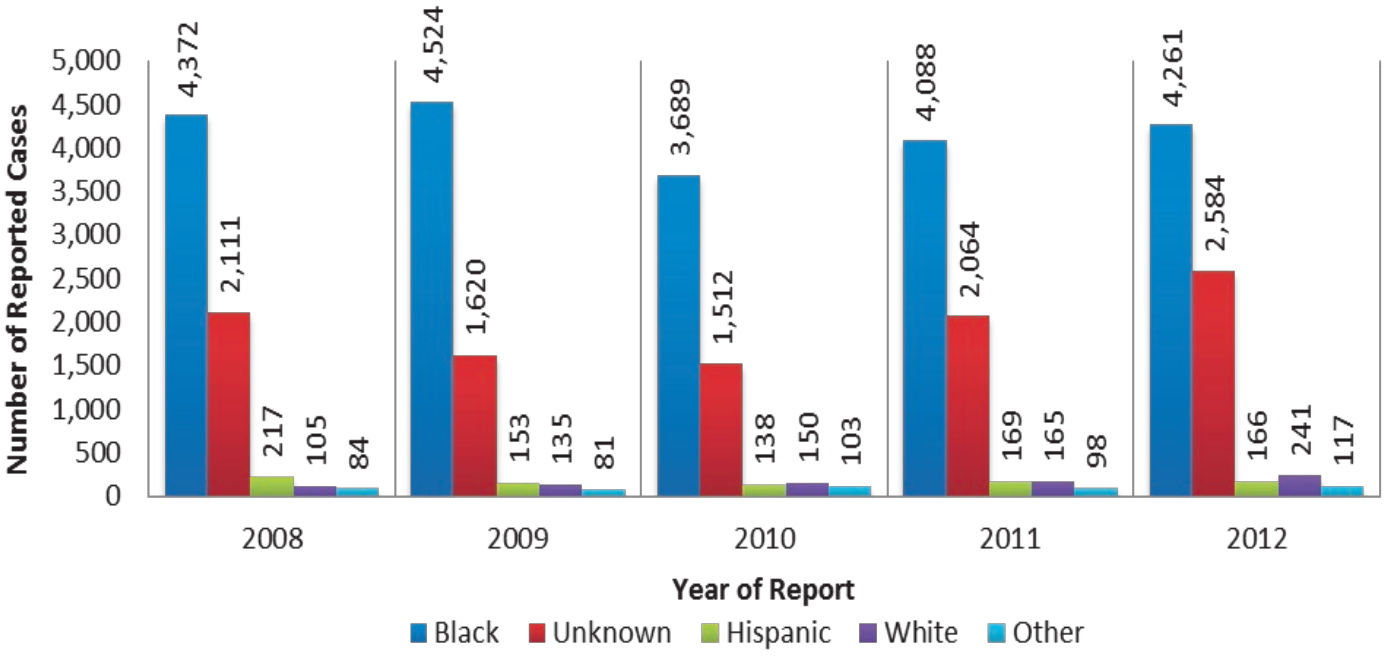
- Undetected and untreated chlamydial infection may lead to infertility and pelvic inflammatory disease. Therefore, national guidelines (U.S. Preventive Services Task Force) and most chlamydia screening programs target women of childbearing age.
- This is in large part why the percentage of chlamydia cases reported among women was higher than among men, ranging from a low of 63% (2009) to a high of 68% (2010).
- From 2010 to 2012, the percentage of cases reported among men gradually increased.

Figure 26. Number of Chlamydia Cases by Year of Report and Age at Diagnosis
District of Columbia, 2008-2012



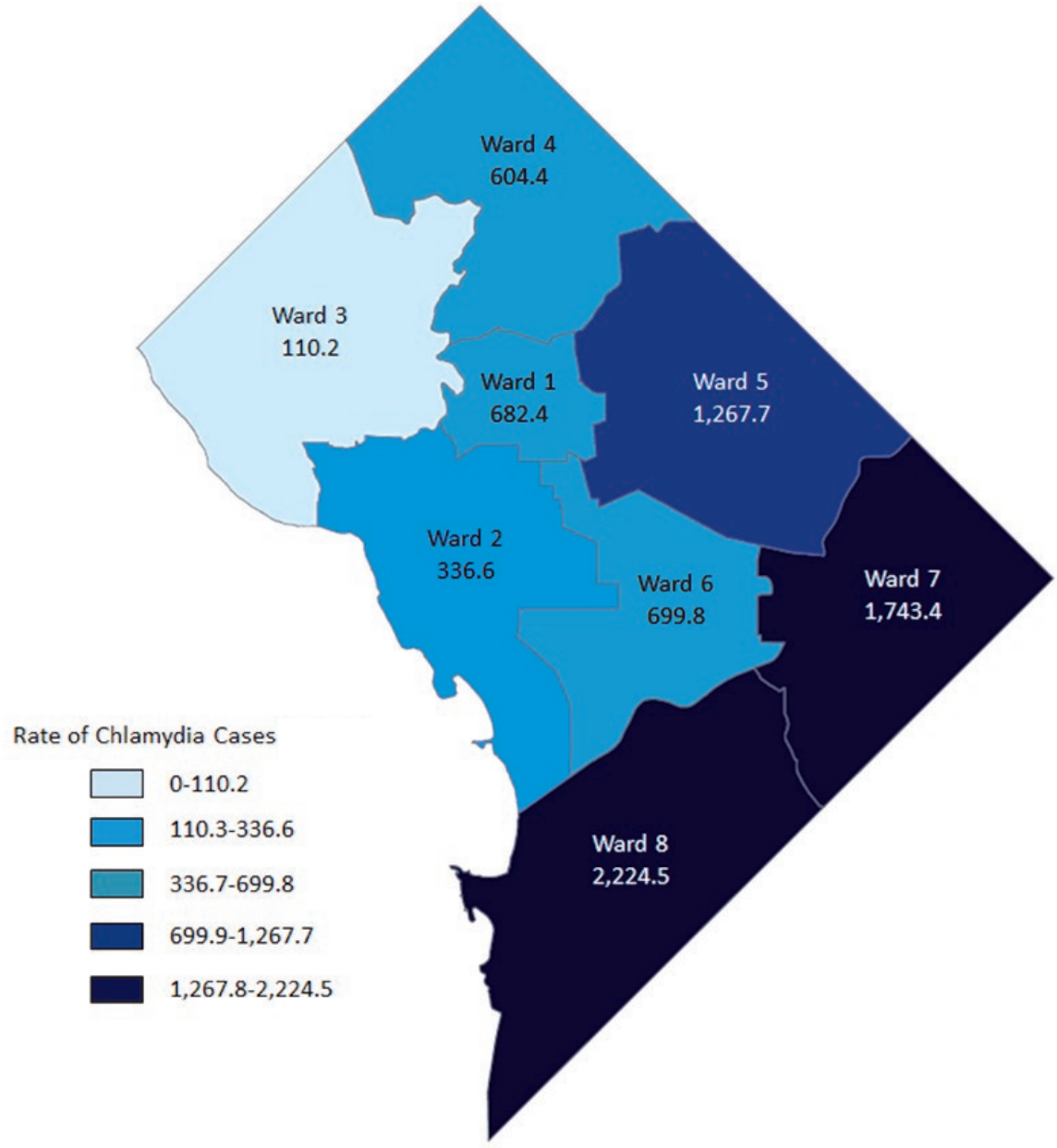
- Between 2008 and 2012, the majority of chlamydia cases were reported among 15- to 19-year-olds.
- In 2012, though youth still had the highest proportion of cases at 34.8%, the proportion of cases among 20- to 24-year-olds increased to 34.0%.

Figure 27. Number of Chlamydia Cases by Year of Report and Race
District of Columbia, 2008-2012



- From 2008 to 2012, information on race was unknown in 30.1% of cases.
- Among chlamydia cases where race was known, the proportion cases among blacks remained consistent at 93.8% in 2008 and 91.3% in 2012.

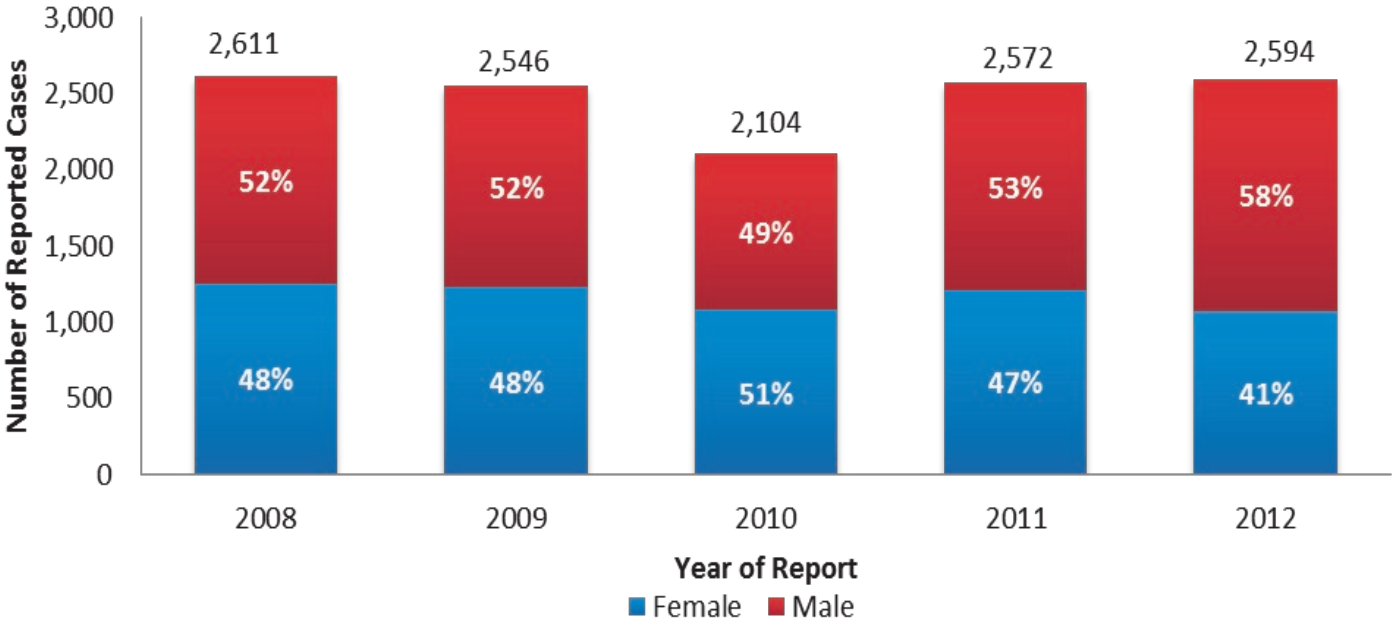
Map 3. Rate of Reported Cases of Chlamydia per 100,000 Persons by Ward
District of Columbia, 2012



- Ward information was available for 77.5% of chlamydia cases reported in 2012.
- In 2012, the highest rates of chlamydia were reported in Ward 8 (2,224.5 cases per 100,000 persons) and Ward 7 (1,743.4 cases per 100,000 persons).
- The lowest rate of chlamydia cases was reported in Ward 3 (110.2 per 100,000 persons)

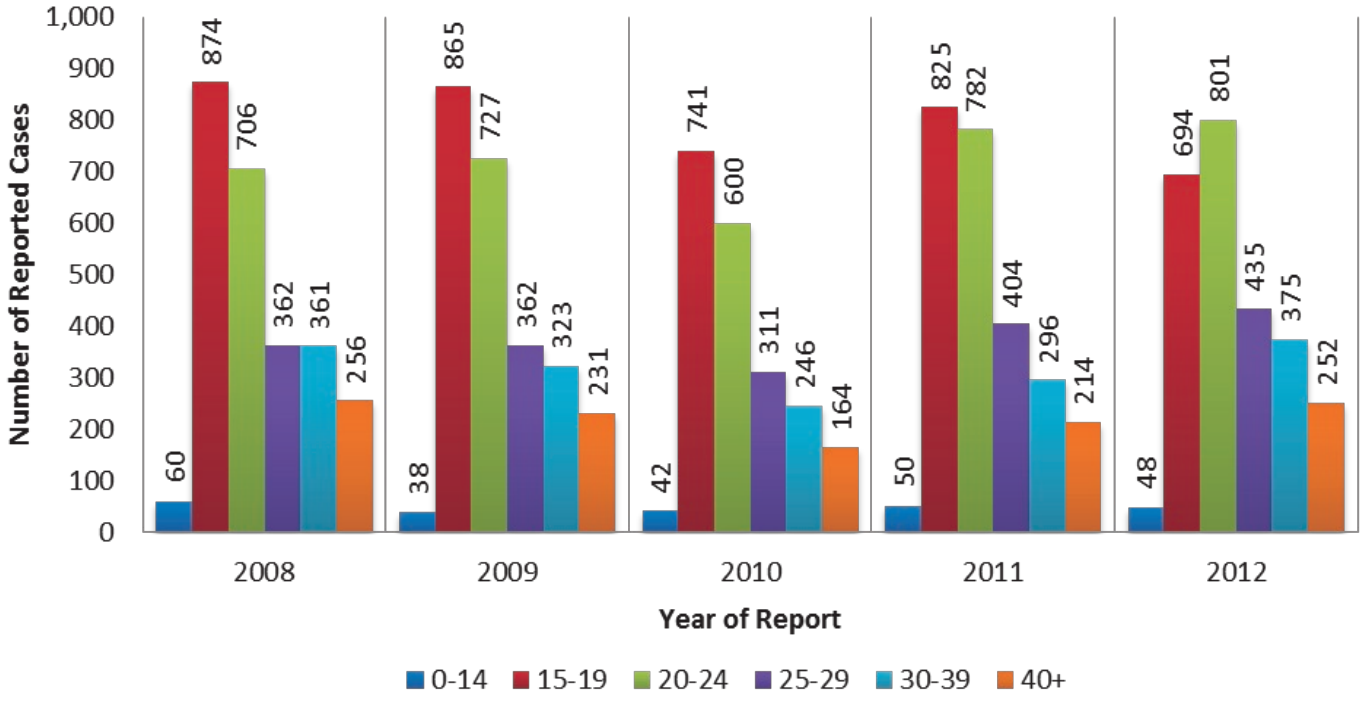
While chlamydia is known as the "silent disease," gonorrhea is usually symptomatic and is identified through diagnostic testing, rather than screening.

Figure 28. Number of Gonorrhea Cases by Year of Report and Sex
District of Columbia, 2008-2012



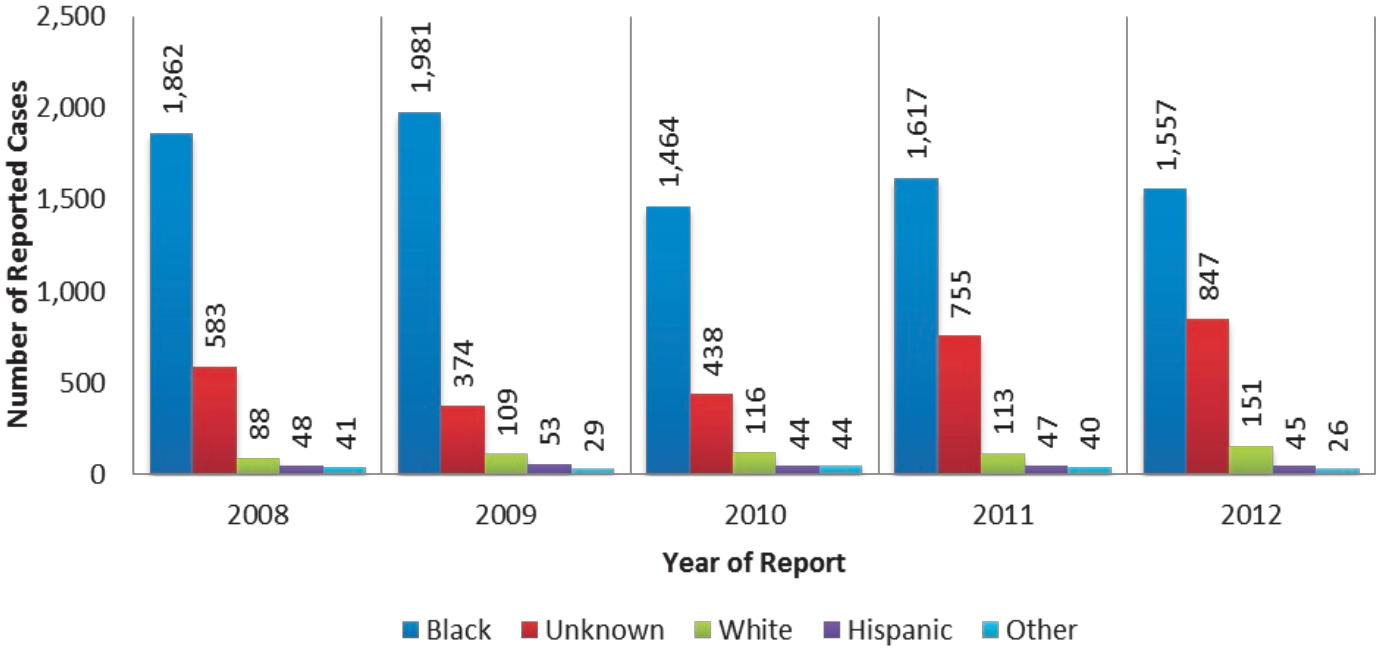
- Unlike chlamydia, almost equal proportions of men and women were reported with gonorrhea.

Figure 29. Number of Gonorrhea Cases by Year of Report and Age at Diagnosis
District of Columbia, 2008-2012



- From 2008 to 2011, the largest proportion of reported gonorrhea cases were among 15- to 19-year-olds, followed by 20- to 24-year-olds .
- In 2012, 20- to 24-year-olds had the largest proportion of gonorrhea cases reported (30.8%).

Figure 30. Number of Gonorrhea Cases by Year of Report and Race
District of Columbia, 2008-2012



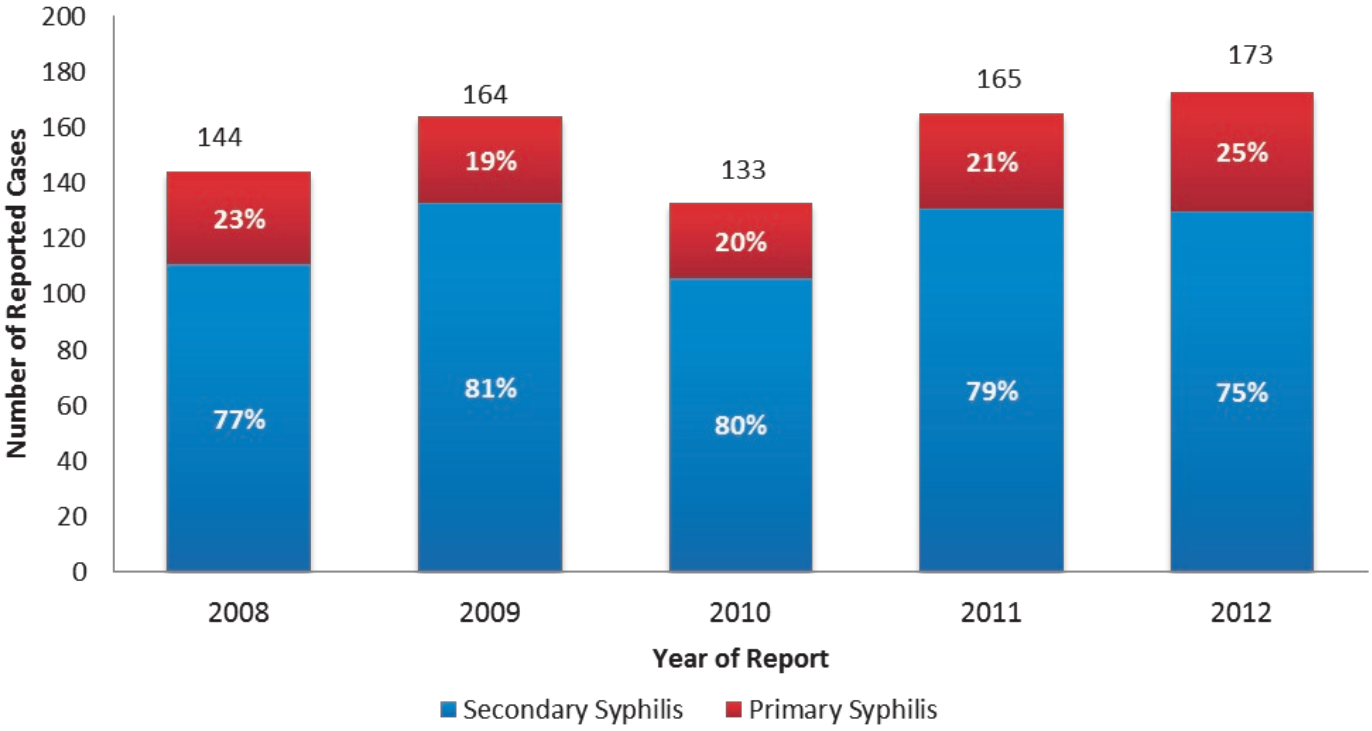
- Between 2008 and 2012, information on race was unknown in 24.1% of cases.
- More than two-thirds of gonorrhea cases reported between 2008 and 2012 were among blacks.
- Among cases with known race, the proportion reported among blacks ranged from 92.5% in 2008 to 88.6% in 2012.

Map 4. Gonorrhea Rate per 100,000 population by Ward
District of Columbia, 2012

- Ward information was available for 77.1% of gonorrhea cases reported in 2012.
- In 2012, the highest rates of gonorrhea were reported in Ward 8 (762.2 cases per 100,000 persons) and Ward 7 (585.4 cases per 100,000 persons).
- The lowest rate of gonorrhea cases was reported in Ward 3 (23.3 per 100,000 persons).

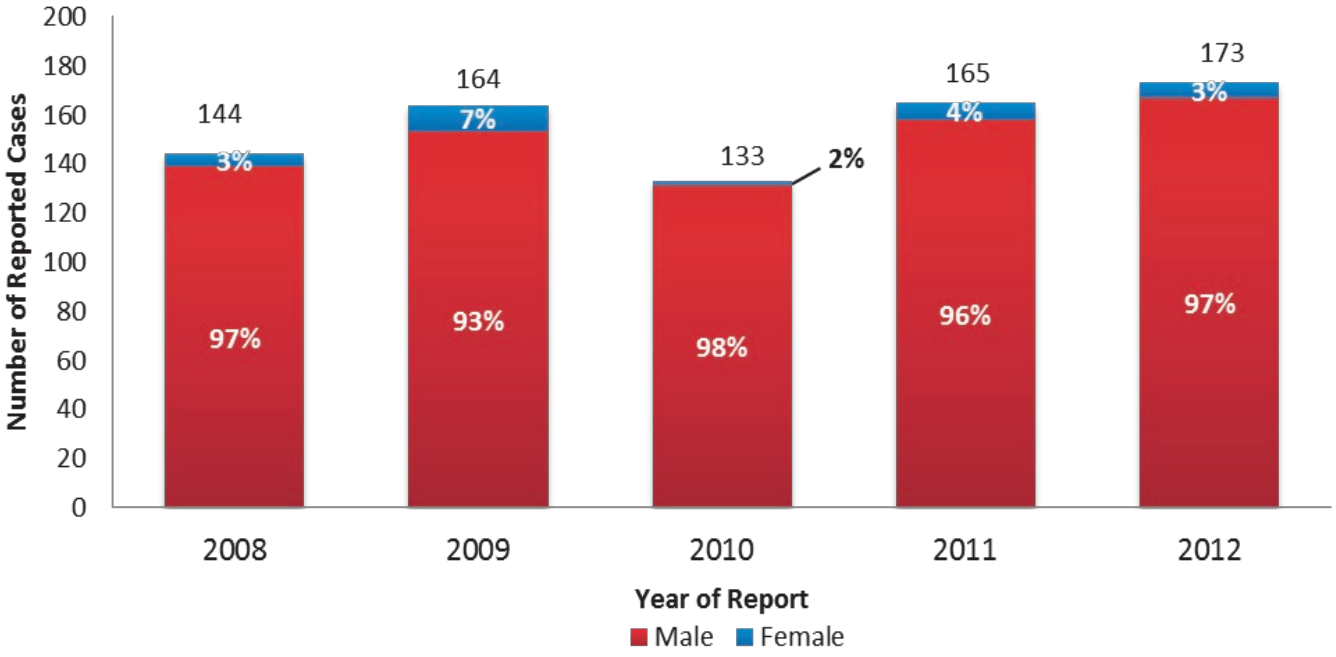
Primary syphilis is defined as the stage of syphilis characterized by a large painless lesion (chancre) where the bacteria entered the body. This lesion can be on or in the mouth, rectum, vagina, or penis. The time from exposure/infection to the onset of symptoms ranges from 10 to 90 days, with an average of 21 days. The chancre tends to be painless and thus often goes unnoticed, which results in people not seeking medical care. Secondary syphilis is characterized by rashes that can appear anywhere on the body, but typically involve the hands (palm) and feet (plantar), prompting people to seek care. Other secondary syphilis symptoms can include fever, swollen lymph glands, sore throat, patchy hair loss, headaches, weight loss, muscle aches, and fatigue. Primary and secondary syphilis surveillance data are used as a measure of incident (new cases) syphilis.

Figure 31. Number of Syphilis Cases by Year of Report
District of Columbia, 2008-2012



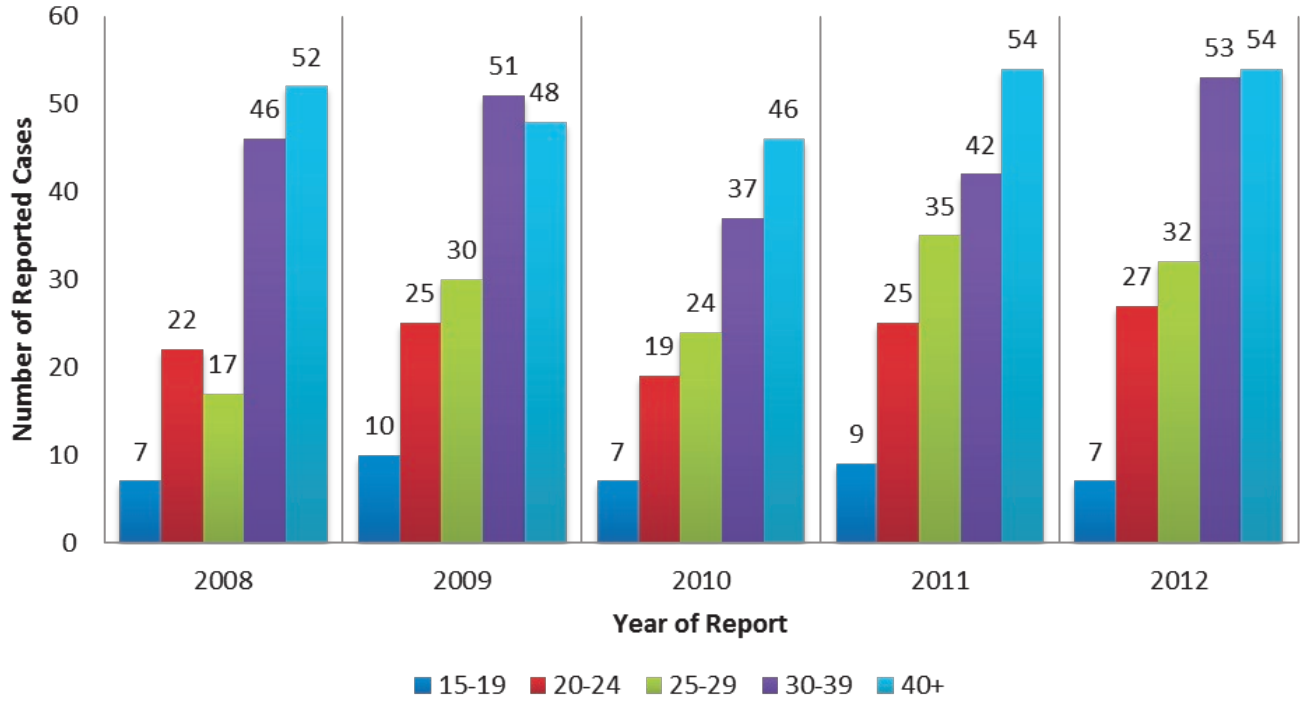
- Consistent with national surveillance data, there has been a reemergence of syphilis in the District of Columbia since 2000.
- In 2000, there were fewer than 40 cases of infectious syphilis reported, while in 2012 there were 173 cases reported.
- Between 2008 and 2012, secondary syphilis represented over 75% of infectious syphilis cases diagnosed each year.

Figure 32. Number of Syphilis Cases by Year of Report and Sex, District of Columbia, 2008-2012



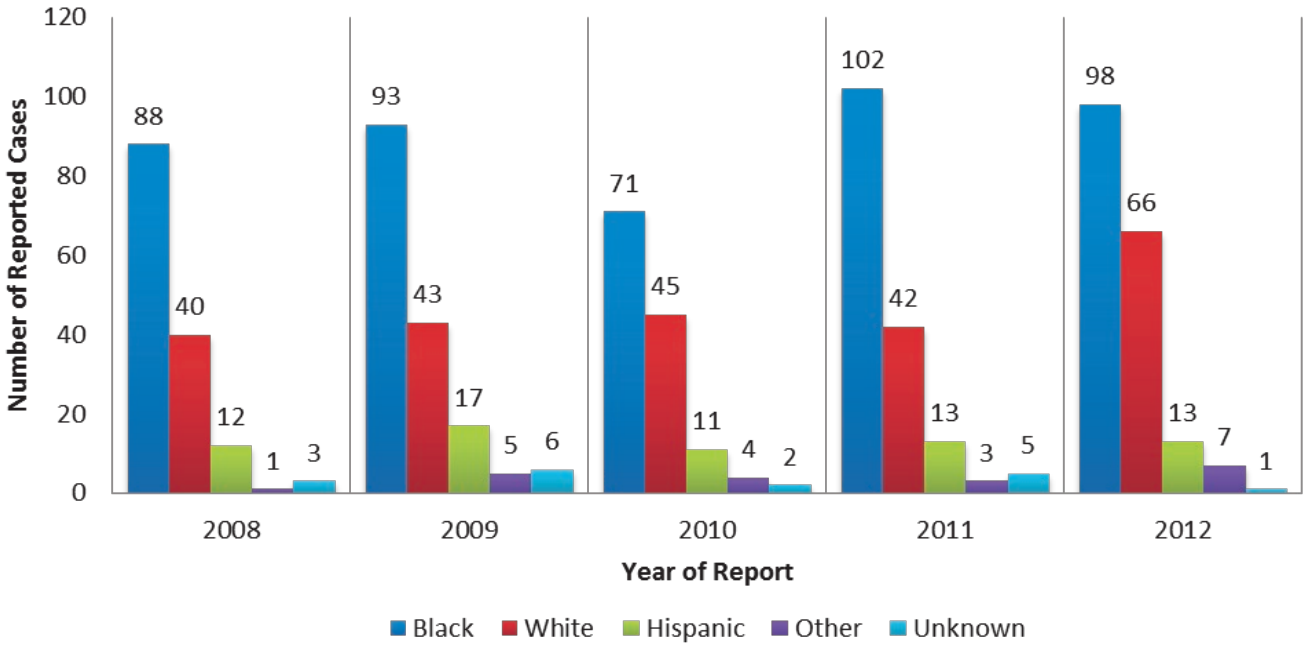
- In 2000, the male-to-female ratio of reported infectious syphilis cases was approximately 2.8-to-1. In 2012, it was 28-to-1.
- This trend is consistent with national surveillance data.
- This trend is indicates predominately male-to-male transmission of syphilis in the District of Columbia.

Figure 33. Reported Number of Syphilis Cases by Year of Report and Age at Diagnosis
District of Columbia, 2008-2012



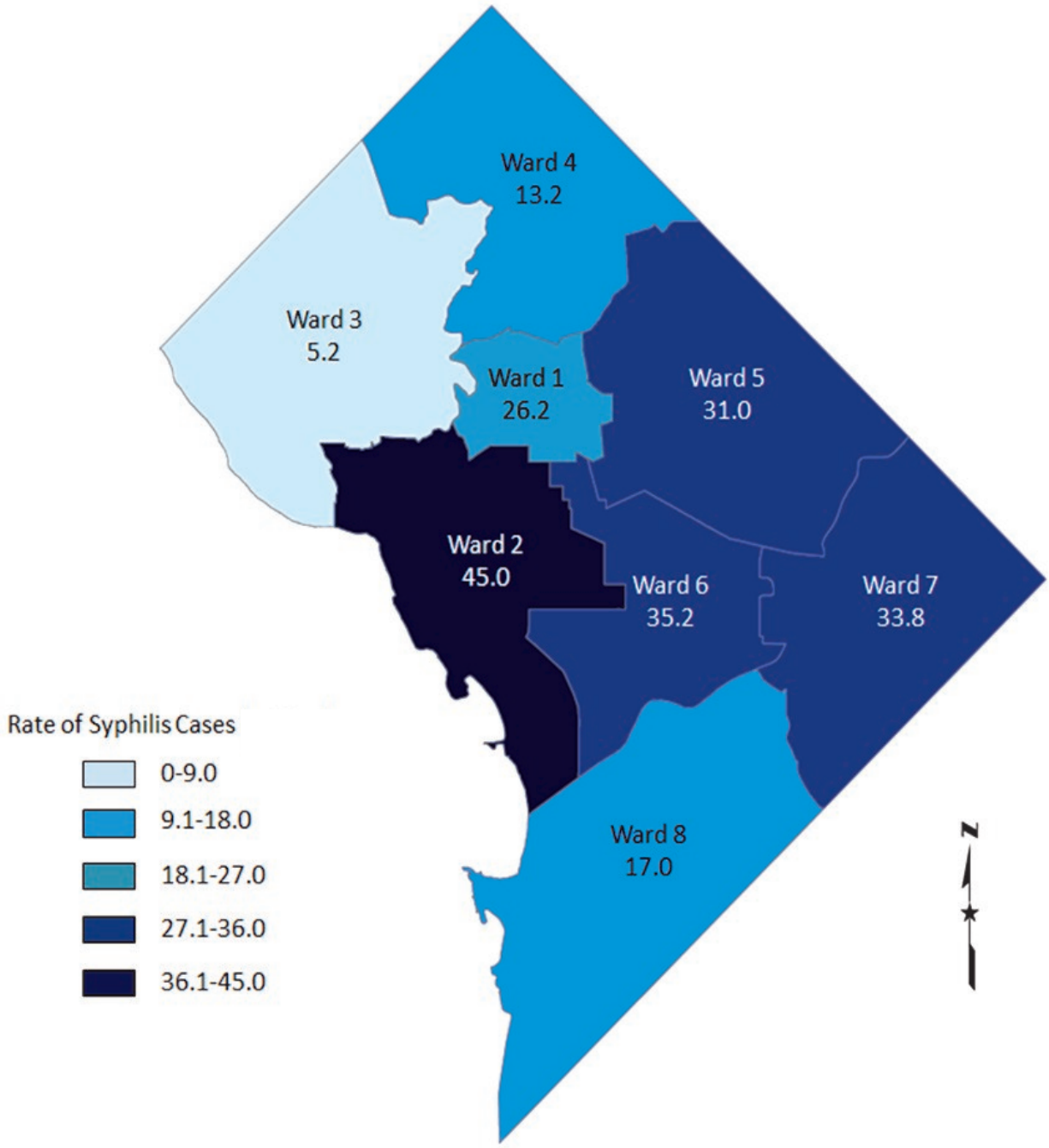
- Regardless of report year, and unlike chlamydia and gonorrhea (in which the majority of cases were reported among people 15 to 24 years of age), the largest number of primary and secondary syphilis cases was reported among those 30 years of age and older.
- In 2012, 61.8% of infectious syphilis cases were reported among people age 30 and older, compared with 68.1% in 2008.

Figure 34. Number of Syphilis Cases by Year of Report and Race
District of Columbia, 2008-2012



- Between 2008 and 2012, information for race was unknown for 2.4% of cases.
- From 2008 through 2012, blacks represented 58.4% of all reported cases of infectious syphilis. This is lower than what is reported for chlamydia (64.4%) and gonorrhea (68.6%).
- Whites accounted for 2.8% of all syphilis cases from 2008 to 2012, with the highest proportion of cases reported in 2012 at 3.3%.

Map 5. Primary and Secondary Syphilis Rates per 100,000 Population by Ward
District of Columbia, 2012



- Ward information was available for 77.1% of syphilis cases reported in 2012.
- In 2012, the highest rate of syphilis was reported in Wards 2 (45.0 cases per 100,000 persons).
- The lowest rate of syphilis was reported in Ward 3 (5.2 per 100,000 persons).

Section 8. Viral Hepatitis

Hepatitis is a medical condition characterized by the inflammation of the liver. Often times initially occurring with few or no symptoms, many individuals remain unaware of their infection status until more chronic sequelae of hepatitis develop, including cirrhosis and liver cancer. Hepatitis A, hepatitis B, and hepatitis C viral infections are the most common causes of hepatitis in the United States.

Under District of Columbia Municipal Regulations (DCMR), laboratories and health care providers are required to report positive hepatitis test results to the Department of Health. These test results are maintained in a registry as a means of monitoring and assessing infection patterns among District residents. Based on reported laboratory and clinical information, hepatitis cases are assigned to one of three case statuses as defined by the Centers for Disease Control and Prevention (CDC): confirmed, probable, or suspect. Locally, confirmed chronic hepatitis B or C cases include a complete series of labs. A probable case of chronic hepatitis B or C is a combination of reported lab results that are an incomplete series and don't include all results necessary to confirm a diagnosis. A suspect case of chronic hepatitis C includes a single positive lab result indicative of possible chronic infection. For this report, unless otherwise noted, "Chronic Hepatitis B" refers to confirmed or probable cases; "Chronic Hepatitis C" refers to a confirmed, probable, or suspect case; and "Acute Hepatitis A" refers to a laboratory confirmed case.

The data presented in the current section are limited to individuals with one or more reported positive hepatitis test results occurring between 2008 and 2012. The majority of the subsequent tables and graphs focus solely on newly reported hepatitis cases (i.e., individuals without laboratory evidence of hepatitis diagnosis prior to 2008); however, some information is presented concerning both newly reported and previously diagnosed chronic hepatitis C cases tested between 2008 and 2012 in order to better characterize the magnitude of the epidemic. When interpreting the information presented, consideration should be given to the fact that individuals infected with hepatitis who have not been tested are not represented in the current analysis. Additionally, individual diagnosis dates are based on the earliest date for which a positive laboratory test result was reported and are not necessarily indicative of the date on which an individual became infected.

Chronic Hepatitis B

Hepatitis B virus is transmitted through contact with bodily fluids from an infected person; fluids include blood, semen, and vaginal fluid. Chronic hepatitis B begins as an acute infection, but in some people the immune system fails to clear the infection and it becomes chronic.

According to the CDC, among persons exposed to hepatitis B virus, the risk for chronic infection varies according to age at infection and is greatest among young children. Approximately 90% of infants and 25% to 50% of children less than 5 years of age remain chronically infected with hepatitis B. By contrast, approximately 95% of adults recover completely from acute infection and do not develop chronic disease.

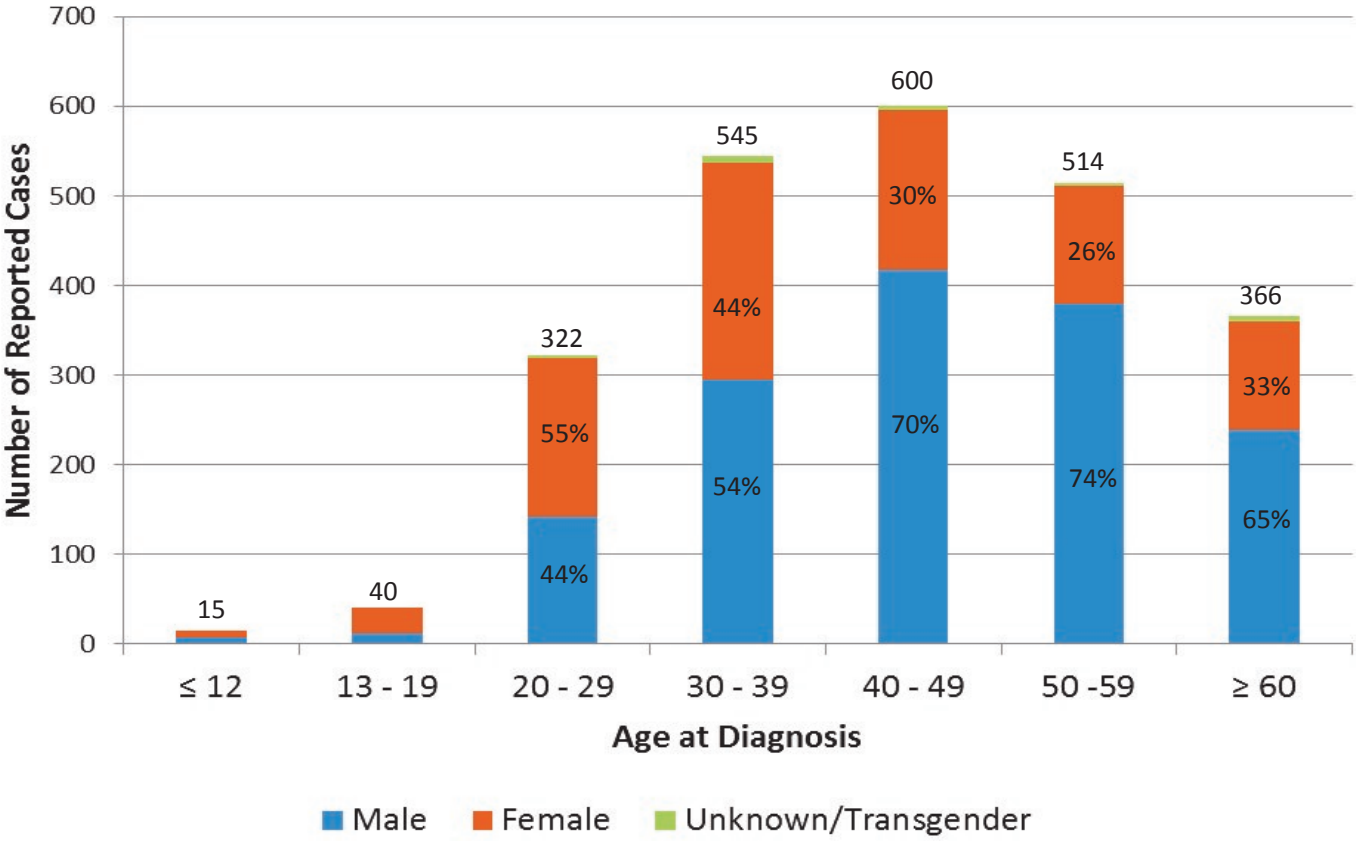
Pediatric cases of hepatitis B are reported to HAHSTA and case investigation falls under the jurisdiction of the DOH Division of Immunizations. Pediatric cases of chronic hepatitis B reported from 2008 to 2012 are incorporated into the data presented here.

Table 11. Newly Reported Chronic Hepatitis B Cases by Sex, Race/Ethnicity, Age at Diagnosis, and Year of Diagnosis [1, 2, 3]
District of Columbia, 2008-2012

Chronic Hepatitis B Cases	N	%
Gender		
Male	1,490	62.0
Female	888	37.0
Unknown/Transgender	24	1.0
Total	2,402	100.0
Race/Ethnicity		
Black	526	21.9
White	81	3.4
Hispanic	25	1.0
Asian/Pacific Islander	75	3.1
American Indian	3	0.1
Unknown	1,692	70.4
Total	2,402	100.0
Age at Diagnosis		
0 - 12	15	0.6
13 - 19	40	1.7
20 - 29	322	13.4
30 - 39	545	22.7
40 - 49	600	25.0
50 - 59	514	21.4
≥60	366	15.3
Total	2,402	100.0
Year of Diagnosis [2]		
2008	509	21.2
2009	521	21.7
2010	562	23.4
2011	464	19.3
2012	346	14.4
Total	2,402	100.0

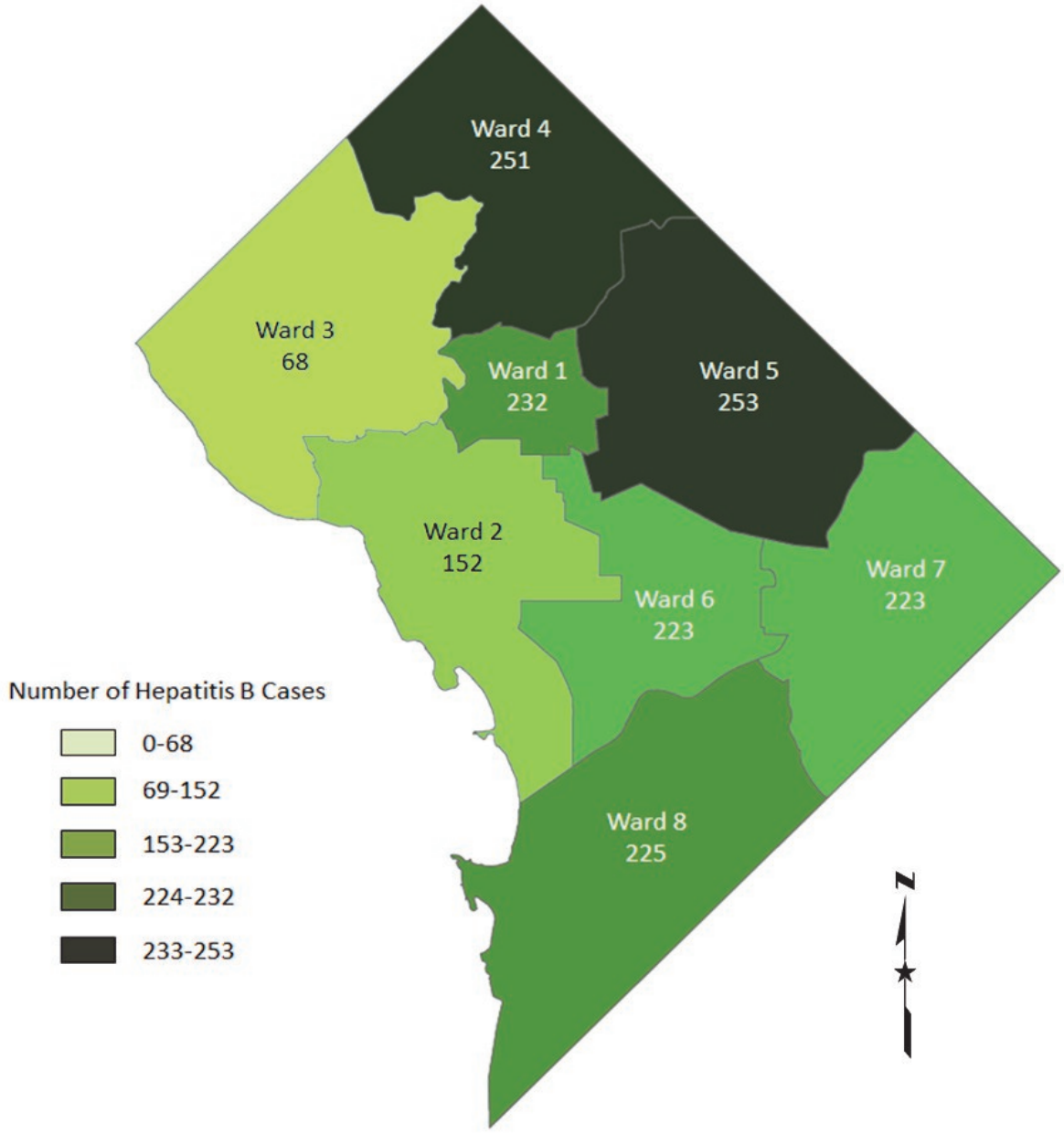
[1] Cases with a reported residential address outside of the District of Columbia at the time of diagnosis are excluded from analysis.
[2] Diagnosis year based on date of first reported positive hepatitis B laboratory result indicative of a confirmed or probable chronic case as defined by CDC guidelines.
[3] Numbers may differ from previous publications due to additional record matching and/or data cleaning efforts.

Figure 35. Newly Reported Chronic Hepatitis B Cases by Age at Diagnosis & Sex, District of Columbia 2008-2012



- Between 2008 and 2012, 2,402 individuals in the District were newly reported with chronic hepatitis B infections.
- A decline in the number of newly reported chronic hepatitis B cases among District residents has been observed in recent years, ranging from 562 confirmed or probable cases in 2010 to 346 in 2012.
- Despite the fact that the majority (74%) of reported chronic hepatitis B cases with a known race/ethnicity are black, the high overall percentage of chronic hepatitis B cases with an unknown (70%) race/ethnicity prevents a valid assessment of racial/ethnic differences in the occurrence of chronic hepatitis B infections within the District .
- Overall, males accounted for approximately 62% of newly reported chronic hepatitis B cases from 2008 through 2012; however, females comprise the majority (57%) of cases reported among those under 30 years of age.
- Individuals 40 to 49 years of age (25%) represent the largest age group among those newly reported with chronic hepatitis B from 2008 through 2012, followed by individuals 30 to 39 years of age (23%) and those 50 to 59 years of age (21%).

Map 6. Number of Newly Reported Chronic Hepatitis B Cases by Ward
District of Columbia, 2008-2012



- Address and ward information was available for 68% of newly reported chronic hepatitis B cases.
- The largest number of newly reported chronic hepatitis B cases from 2008 to 2012 was observed in Wards 5 (n=253) and 4 (n=251).
- Ward 3 had the lowest number of chronic hepatitis B cases reported between 2008 and 2012 (n=68).
- Approximately 110 newly reported chronic hepatitis B cases between 2008 and 2012 were among individuals reportedly incarcerated at the time of diagnosis, and 42 cases were among individuals identified as homeless.

Chronic Hepatitis C

Hepatitis C is transmitted through blood; the most common mode of transmission is sharing contaminated injection drug equipment, needles, or syringes. Hepatitis C is also transmitted through sexual contact with an infected person, through needle sticks, and from pregnant women to their children, although these modes occur less frequently than through contaminated injection drug equipment.

Table 12. All Positive Chronic Hepatitis C Cases by Sex, Race/ Ethnicity, Age at Diagnosis, Case Classification, and Diagnosis Type [1,2]
District of Columbia, 2008-2012

Chronic Hepatitis C Cases		
	N	%
Gender		
Male	10,495	65.9
Female	5,330	33.5
Unknown/Transgender	90	0.6
Total	15,915	100.0
Race/Ethnicity		
Black	5,358	33.7
White	311	2.0
Hispanic	71	0.4
Asian/Pacific Islander	77	0.5
American Indian	2	<0.1
Unknown	10,096	63.4
Total	15,915	100.0
Age at Diagnosis		
0 - 12	34	0.2
13 - 19	45	0.3
20 - 29	416	2.6
30 - 39	667	4.2
40 - 49	2,999	18.8
50 - 59	8,172	51.3
60-69	2,911	18.3
≥ 70	659	4.1
Unknown	12	0.1
Total	15,915	100.0
Case Classification [3]		
Confirmed	12,885	81.0
Probable	120	0.8
Suspect	2,910	18.3
Total	15,915	100.0
Diagnosis Type [2]		
Newly Reported	9,819	61.7
Previously Reported	6096	38.3
Total	15,915	100.0

[1] Cases with a reported residential address outside of the District of Columbia at the time of testing are excluded from analysis.
[2] "All chronic hepatitis C cases " is inclusive of newly reported cases testing positive for the first time between 2008 and 2012, as well as previously reported cases with both a positive test result between 2008 and 2012 and ≥ 1 positive laboratory report for chronic hepatitis C prior to 2008. Counts represent the number of unduplicated individuals testing positive for chronic hepatitis C between 2008 and 2012 regardless of previous diagnosis history.
[3] Case classification based on CDC guidance.

- As indicated in the previous table, 15,915 residents had a positive laboratory report for chronic hepatitis C in the District between 2008 and 2012, 81% of whom met the criteria outlined by the CDC for being a confirmed case. While this number provides some insight concerning the magnitude of chronic hepatitis C within the District, it should not be interpreted as a prevalence estimate given the exclusion of previously diagnosed individuals without subsequent testing during the specified timeframe, as well as the exclusion of infected individuals who remain undiagnosed.

Table 13. Newly Reported Chronic Hepatitis C Cases by Sex, Race/Ethnicity, Age at Diagnosis, and Year of Diagnosis [1, 2, 3]
District of Columbia, 2008-2012

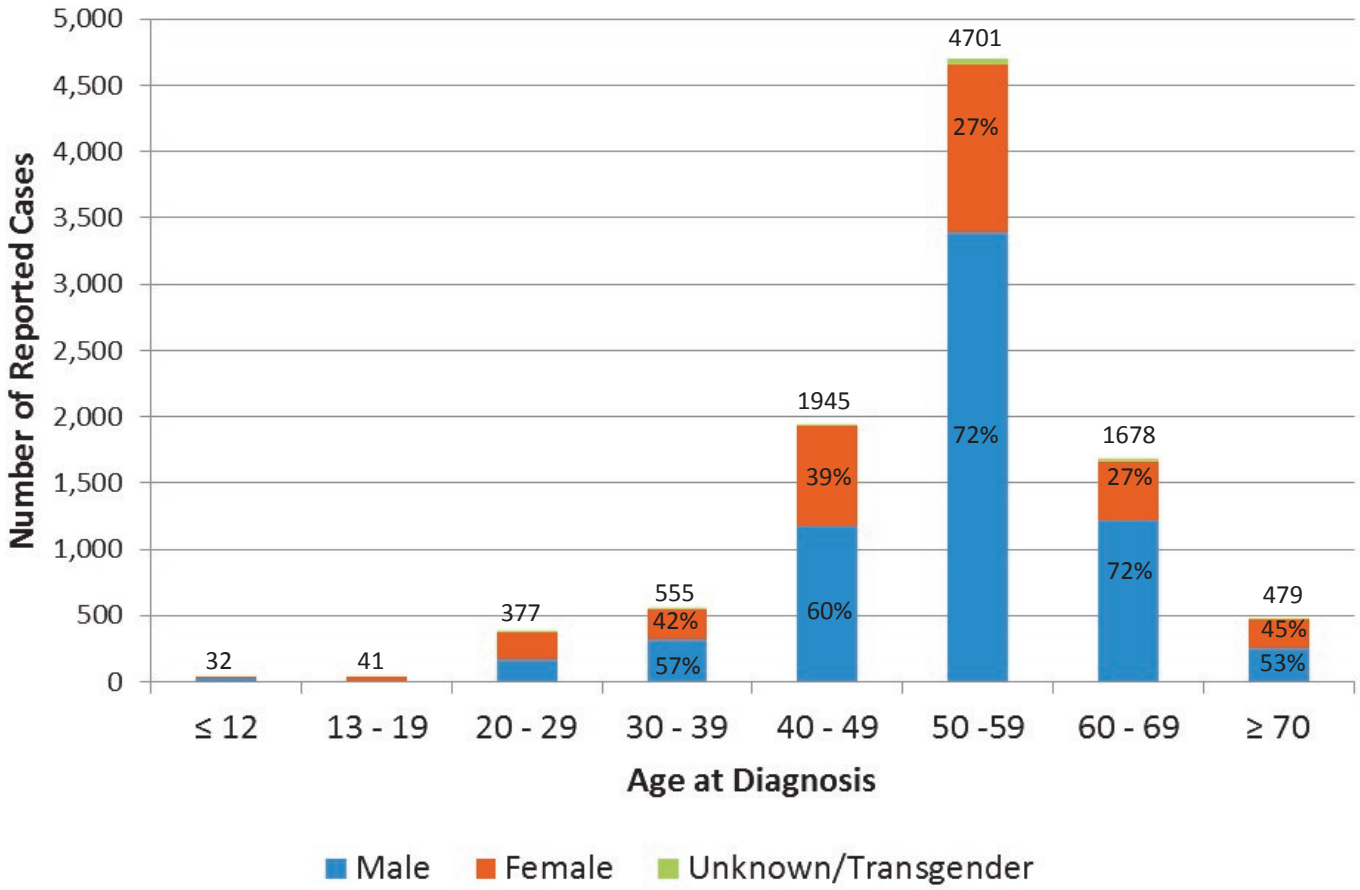
Chronic Hepatitis C Cases		
	N	%
Gender		
Male	6,558	66.8
Female	3,173	32.3
Unknown/Transgender	88	0.9
Total	9,819	100.0
Race/Ethnicity		
Black	2,244	22.9
White	217	2.2
Hispanic	44	0.4
Asian/Pacific Islander	39	0.4
American Indian	2	<0.1
Unknown	7,273	74.1
Total	9,819	100.0
Age at Diagnosis		
0 - 12	32	0.3
13 - 19	41	0.4
20 - 29	377	3.8
30 - 39	555	5.7
40 - 49	1,945	19.8
50 - 59	4,701	47.9
60 - 69	1,678	17.1
≥ 70	479	4.9
Unknown	11	0.1
Total	9,819	100.0
Year of Diagnosis [2]		
2008	2,196	22.4
2009	2,035	20.7
2010	2,078	21.2
2011	2,015	20.5
2012	1,495	15.2
Total	9,819	100.0

[1] Cases with a reported residential address outside of the District of Columbia at the time of diagnosis are excluded from analysis.
[2] Diagnosis year based on date of first reported chronic hepatitis C positive laboratory report meeting the CDC confirmed, probable, or suspect case definition.
[3] Numbers may differ from previous publications due to additional record matching and/or data cleaning efforts.

- There were 9,819 newly reported confirmed, probable, or suspect cases of chronic hepatitis C among DC residents between 2008 and 2012, with a decline in the annual number of newly reported cases observed only in the latter part of the specified timeframe.

- While the majority (88%) of newly reported chronic hepatitis C cases with a known race/ethnicity are Black, the high overall percentage of chronic hepatitis C cases with an unknown (74%) race/ethnicity prevents a valid assessment of racial/ethnic differences in the occurrence of chronic hepatitis C infections within the District .

Figure 36. Newly Reported Chronic Hepatitis C Cases by Age at Diagnosis & Sex, District of Columbia 2008-2012

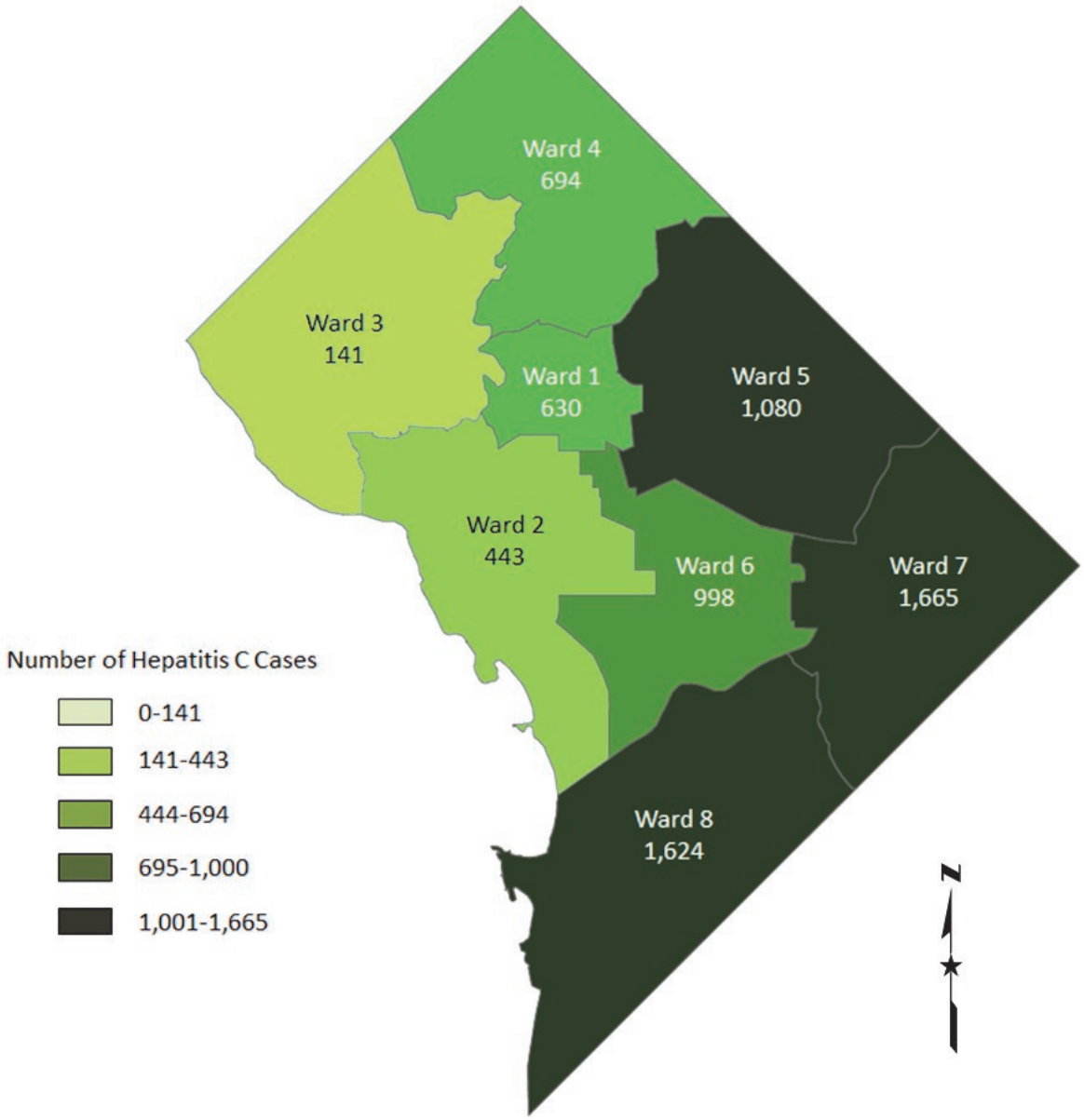


- Nearly all (90%) newly reported chronic hepatitis C cases were diagnosed among persons 40 years of age or older between 2008 and 2012, with the largest percentage (48%) of newly reported diagnoses among persons 50 to 59 years of age.

- The total number of newly reported cases of chronic hepatitis C from 2008 to 2012 among those 50 to 59 years of age (n=4,701) was more than twice that observed in any other age group.

- Males accounted for the overall majority (67%) of newly reported chronic hepatitis C cases between 2008 and 2012. While this trend remains consistent across older age categories, women (56%) comprised the majority of cases documented among those under 30 years of age during the same timeframe.

Map 7. Number of Newly Reported Chronic Hepatitis C Cases by Ward
District of Columbia, 2008-2012



- Address and ward information was available for 74% of newly reported chronic hepatitis C cases.
- Wards 7 had the highest number of newly reported chronic hepatitis C cases between 2008 and 2012 (n=1,665) followed by Wards 8 and 5.
- Ward 3 had the lowest number of newly reported chronic hepatitis C cases between 2008 and 2012 (n=141).
- There were 718 newly reported chronic hepatitis C cases between 2008 and 2012 among individuals reportedly incarcerated at the time of diagnosis, and 219 cases among individuals identified as homeless.

Acute Hepatitis A

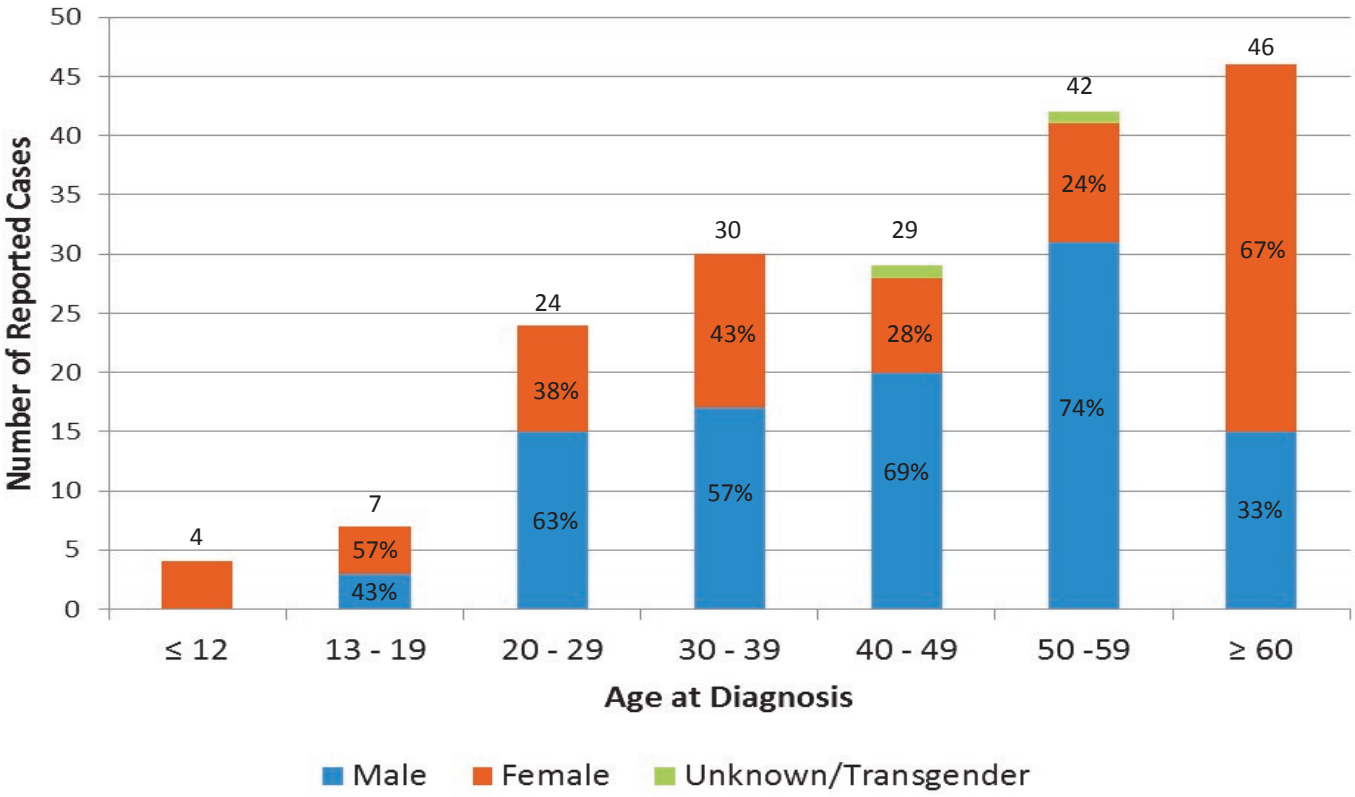
Hepatitis A infection is an acute or newly occurring liver disease that can last from a few weeks to several months. The majority of people with hepatitis A are able to clear the infection from their bodies, and their symptoms improve without treatment. Once exposed to hepatitis A either by vaccination or natural infection, a person develops lifelong antibodies that will protect against the virus if exposed again. Hepatitis A is spread by ingesting fecal matter contaminated by the hepatitis A virus. Common modes of transmission include direct contact with objects, foods, or drinks that have been handled by an infected individual, engaging in oral-anal sexual activity (rimming) with an infected person, eating contaminated produce, or eating raw or undercooked mollusks from contaminated waters.

Table 14. Newly Reported Acute Hepatitis A Cases by Sex, Race/Ethnicity, Age at Diagnosis, and Year of Diagnosis [1, 2, 3]
District of Columbia, 2008-2012

Acute Hepatitis A Cases		
	N	%
Gender		
Male	101	55.5
Female	79	43.4
Unknown/Transgender	2	1.1
Total	182	100.0
Race/Ethnicity		
Black	47	25.8
White	11	6.0
Hispanic	3	1.6
Asian/Pacific Islander	3	1.6
American Indian	1	0.5
Unknown	117	64.3
Total	182	100.0
Age at Diagnosis		
0 - 12	4	2.2
13 - 19	7	3.8
20 - 29	24	13.2
30 - 39	30	16.5
40 - 49	29	15.9
50 - 59	42	23.1
≥60	46	25.3
Total	182	100.0
Year of Diagnosis [2]		
2008	36	19.8
2009	48	26.4
2010	33	18.1
2011	25	13.7
2012	40	22.0
Total	182	100.0

[1] Cases with a reported residential address outside of the District of Columbia at the time of diagnosis are excluded from analysis.
[2] Diagnosis year based on date of first reported positive hepatitis A laboratory result indicative of a confirmed case as defined by CDC guidelines
[3] Numbers may differ from previous publications due to additional record matching and/or data cleaning efforts.

Figure 37. Newly Reported Acute Hepatitis A Cases by Age at Diagnosis & Sex, District of Columbia 2008-2012



- There were 182 cases of acute hepatitis A reported in the District from 2008 to 2012.
- Despite the fact that the majority (72%) of reported acute hepatitis A cases with a known race/ethnicity are within the black population, the high overall percentage of acute hepatitis A cases with an unknown (64%) race/ethnicity prevents a valid assessment of racial/ethnic differences in the occurrence of acute hepatitis A infections within the District .
- While males accounted for the majority (55%) of acute hepatitis A cases reported from 2008 to 2012 overall, females accounted for the majority of cases documented among those under the age of 20 and those 60 years of age and older.

Section 9. Tuberculosis

Tuberculosis (TB) is caused by the bacteria *Mycobacterium tuberculosis*. TB is a disease that is spread from person to person through the air; infection can occur by sharing airspace for an extended period of time in an enclosed setting, such as one's home or in a small office. TB usually affects the lungs. Bacteria are put into the air when a person with active TB of the lungs coughs, sneezes, laughs, or sings.

TB skin or blood tests help identify persons who have been infected. Most people who are infected with the TB bacteria have what is known as latent TB infection (LTBI). Some people with LTBI will progress to active TB disease, but it may take several years after they were initially infected before they become sick. LTBI is a condition in which TB bacteria are alive but inactive in the body. People with LTBI may greatly reduce the chance of progressing to TB disease by taking treatment for their infection. Persons with weakened immune systems (e.g., those with HIV) are at greater risk for progressing from LTBI to active TB disease.

Active TB is defined as an illness in which TB bacteria are multiplying and attacking a part of the body, usually the lungs. Symptoms of TB of the lungs may include a cough that lasts for three weeks or more, coughing up blood or blood-stained mucus, loss of appetite, unexplained weight loss, drenching night sweats, extreme fatigue, sore throat, or hoarseness. A person with active TB disease may be infectious and spread TB bacteria to others. TB can be cured if treated properly.

This section describes TB surveillance data reported in the District from 2008 to 2012. Cases reported in the figures represent cases of active TB disease and not LTBI; LTBI is not a reportable condition in the District.

Summary

After a spike in 2006 in the number of cases reported, the District has experienced considerable success reducing the number of TB cases and consequently the TB case rate among District residents. In 2012, 37 cases of TB were reported (Table 15). Please refer to appendix table B11 for more information on TB cases reported between 2008 and 2012 in the District.

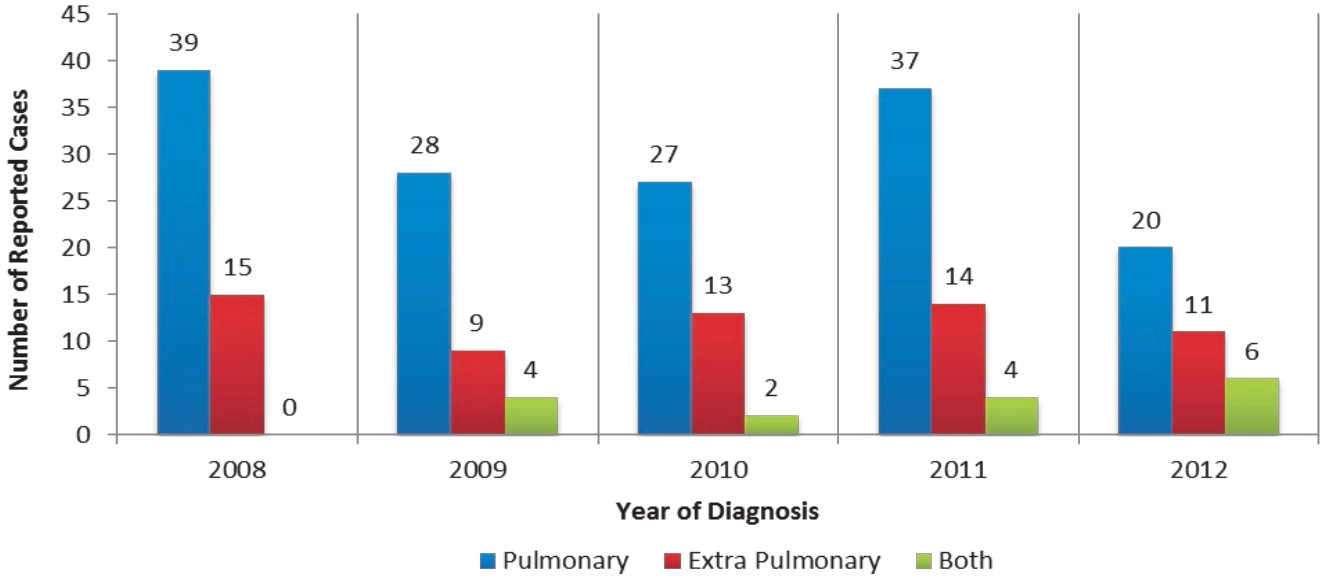
All positive TB cultures are tested for susceptibility to the medications used in treatment. Multi-drug resistant TB (MDR-TB), or TB that is resistant to two of the first-line treatment agents (isoniazid and rifampin), has been infrequent in the District. Two cases of MDR-TB were reported in 2006 and one case of MDR-TB was reported in 2010. No cases of MDR-TB were reported in 2012.

HAHSTA attributes the reduction in TB cases and the low number of drug-resistant cases to using Directly Observed Therapy (DOT) as the standard of care for all active TB cases, the provision of case management services for all active TB cases, and rapid contact investigation which includes education and evaluation.

Table 15. Reported Tuberculosis Rate per 100,000 persons
District of Columbia 2008-2012

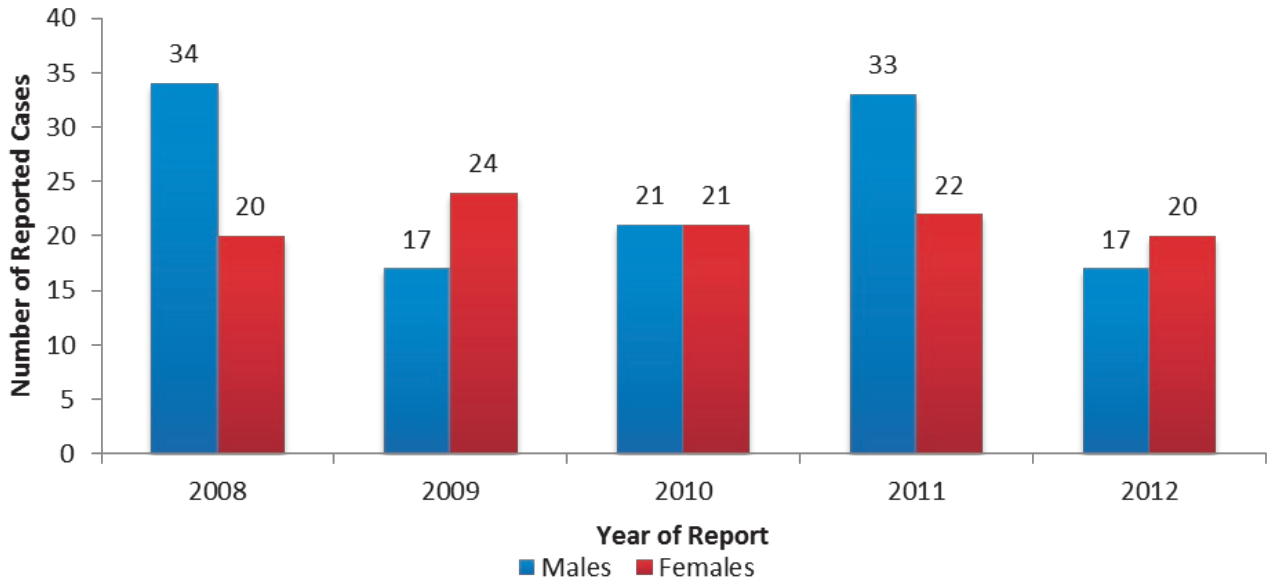
	2008		2009		2010		2011		2012	
	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate
District Total	54	9.1	41	6.8	42	7.2	55	8.9	37	5.9

Figure 38. Reported Cases of Tuberculosis by Year of Report and Disease State
District of Columbia, 2008-2012



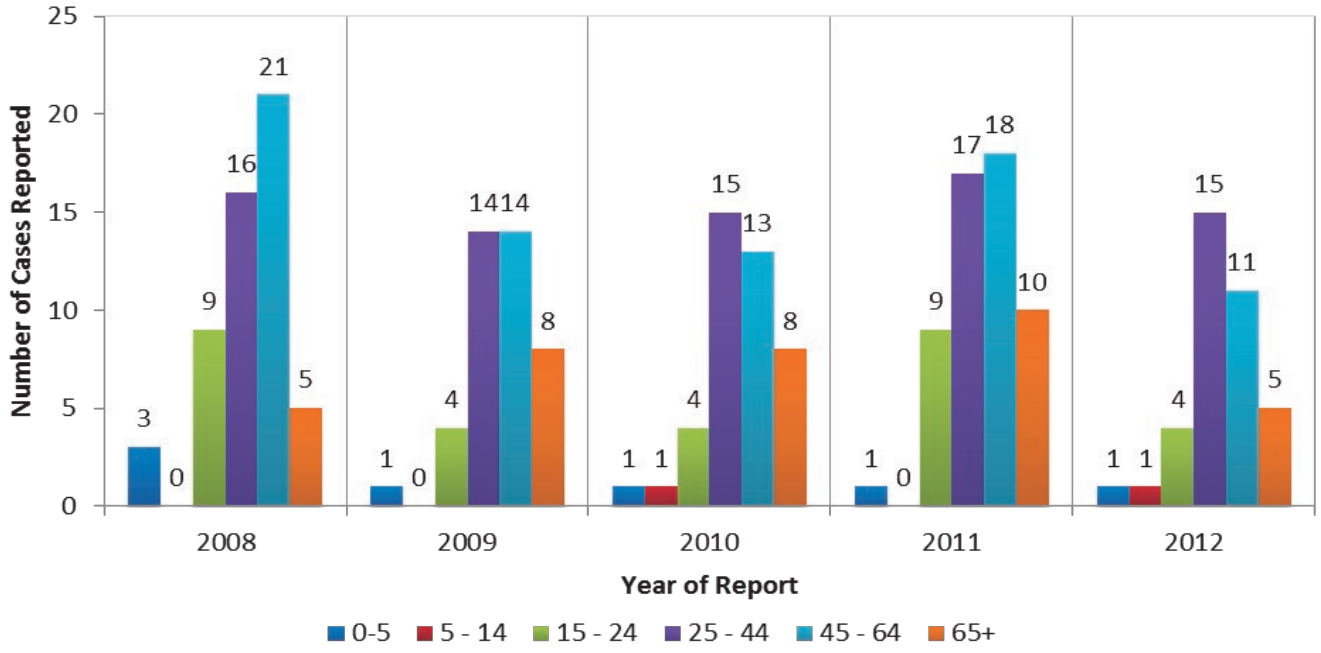
- There was a decline in the proportion of pulmonary TB cases between 2008 and 2012.
- Overall, the proportion of extrapulmonary cases has increased in the 5-year period from 27.8% in 2008 to 29.7% in 2012. Extrapulmonary TB, by definition, occurs in parts of the body other than the lungs or respiratory system and is not considered infectious.
- Occasionally, persons may be infected with TB in multiple parts of the body. During the reporting period, a total of 16 people were infected with both pulmonary and extrapulmonary TB.

Figure 39. Reported Cases of Tuberculosis by Year of Report and Sex
District of Columbia, 2008-2012



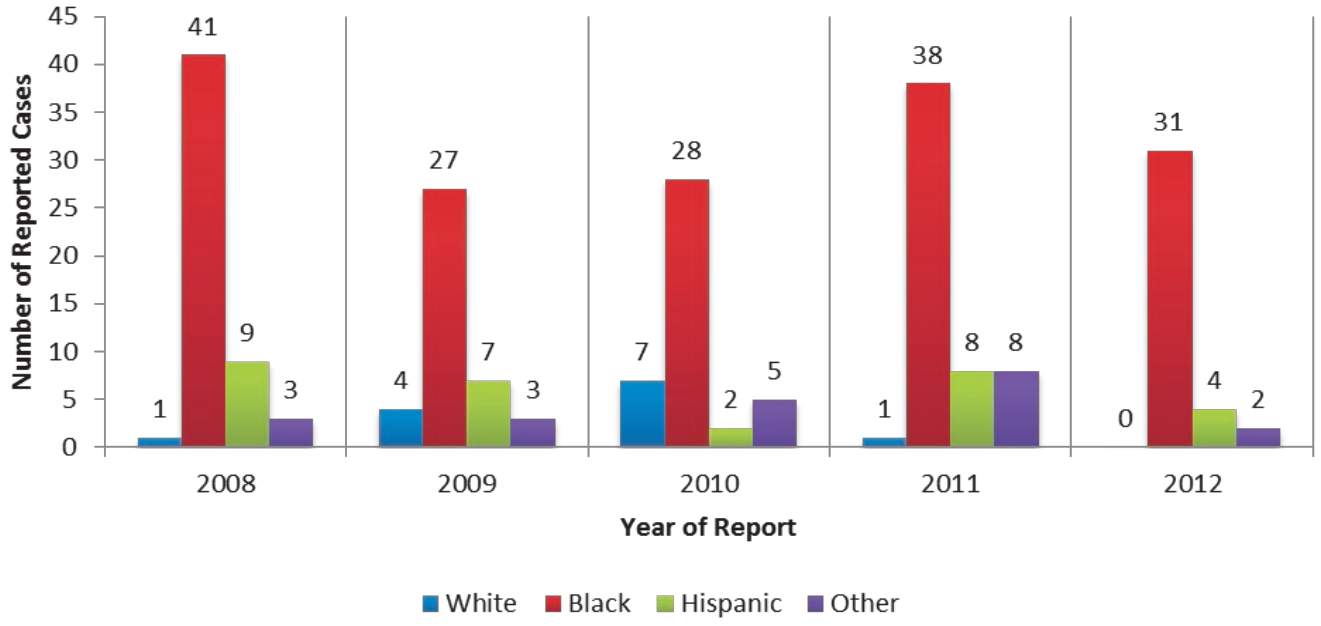
- Overall, 53.3% of reported TB cases were among men. Historically, TB is more prevalent among men; however, the male-to-female ratio has shifted in recent years.

Figure 40. Reported Cases of Tuberculosis by Year of Report and Age at Diagnosis
District of Columbia, 2008-2012



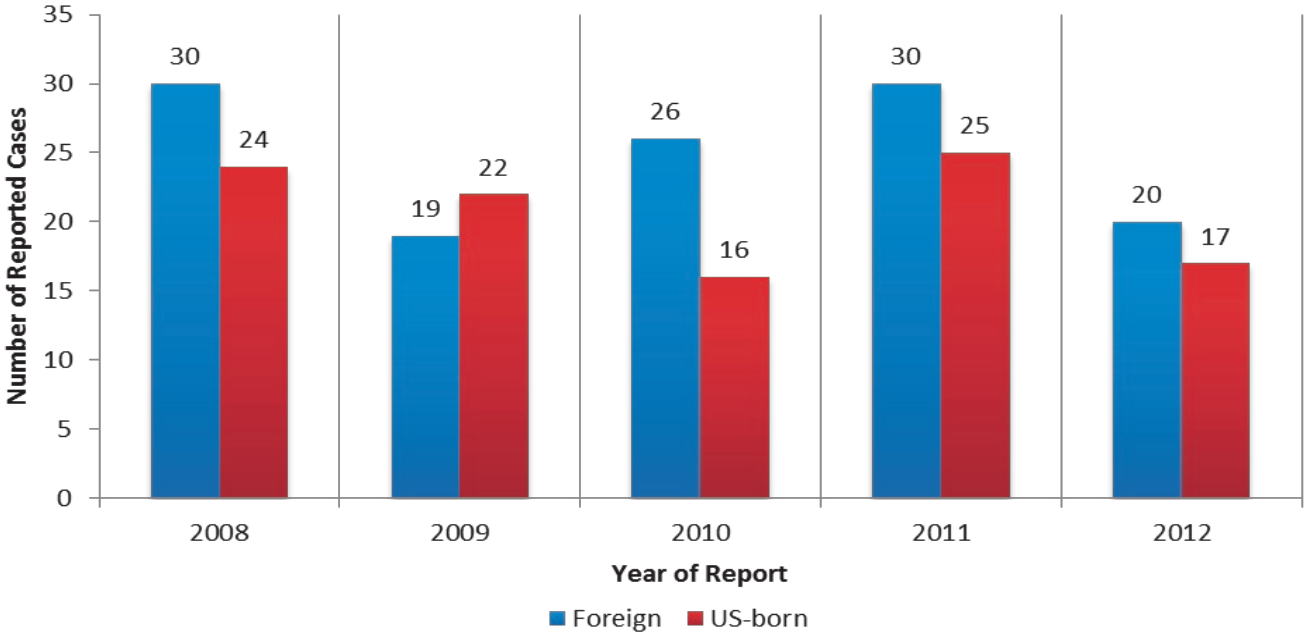
- Approximately 67% of cases reported between 2008 and 2012 were between the ages of 24 and 64.

Figure 41. Reported Cases of Tuberculosis by Year of Report and Race/Ethnicity
District of Columbia, 2008-2012



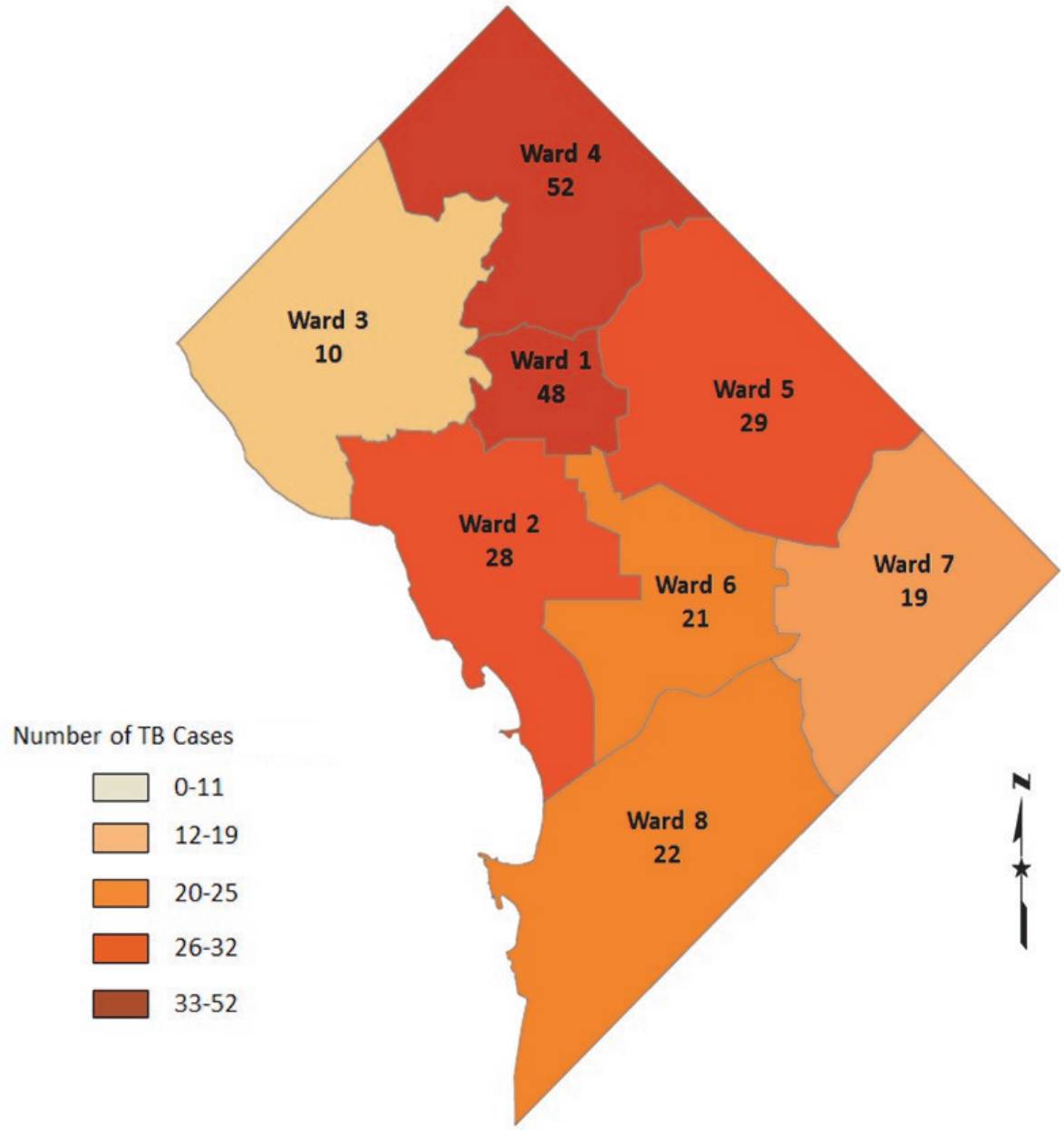
- More than two-thirds of all TB cases reported each year were within the black population.

Figure 42. Reported Cases of Tuberculosis by Year of Report and Place of Birth, District of Columbia, 2008-2012



- The proportion of cases reported among foreign-born persons remains high in the District. Foreign-born cases represented 55.6% of cases in 2008 and 54.1% of cases in 2012. This is similar to national data.

Map 8. Number of Reported Cases of Tuberculosis by Ward
District of Columbia, 2008-2012



- Between 2008 and 2012, the majority of TB cases were reported from Ward 4 and Ward 1.
- Ward 3 had the lowest number of reported cases (10), followed by Ward 7 (19).

Appendix A. Understanding Surveillance Data

In order to understand surveillance data, it is important to be familiar with some key terms. Newly diagnosed, or new diagnoses, are persons diagnosed with a disease in a given time period; a diagnosis could be a positive test result or could be determined by a clinician. A diagnosis does not always occur at exactly the same time as someone is infected or gets sick; sometimes it is months or years before someone is diagnosed. Incidence is the number of *new infections* of a disease in a defined population during a specific period of time. It is important to understand the difference between incidence and "newly diagnosed". Incident cases, or new infections, are not always diagnosed right away. Thus, the number of new diagnoses does not necessarily reflect trends in incidence (that is, new infections). At the time of diagnosis, some individuals will have been infected recently, while others will have been infected sometime in the past.

Prevalence is the total number of people in a population with a particular disease or condition at a given time point. Prevalence can be thought of as a snapshot of all existing cases of a disease or condition at a specified time; for instance, the percentage of persons living with HIV among all persons living in the District as of Dec. 31, 2012.

Understanding HIV Surveillance

The District of Columbia Municipal Code (22 DCMR 206) mandates reporting of all HIV and AIDS diagnoses to the DC DOH. An HIV diagnosis or case refers to a person who has tested positive for HIV infection. An AIDS case refers to a person who had a diagnosis of HIV infection and later had a diagnosis of AIDS, or a person diagnosed with HIV and AIDS at the same time. AIDS is defined by a CD4+ T-cell count less than 200 cells/μL or an AIDS-defining opportunistic infection; both of these are signs of immune system failure. Only confirmed reports of HIV and AIDS cases are accepted; anonymous test results are not reported. Reports are received from a variety of sources, including hospitals, private physicians' offices, community-based organizations, clinics, and laboratories. Data on HIV and AIDS cases are entered into the federally issued enhanced HIV/AIDS Reporting System (eHARS) and de-identified case information is shared with CDC monthly. CDC uses these data to prepare national surveillance reports.

Please note that the term "HIV" encompasses all persons living with HIV infection regardless of their stage of disease (including persons diagnosed with HIV infection who have not progressed to AIDS, persons who were diagnosed with HIV infection and AIDS at the same time, and persons who were diagnosed with HIV infection and later received an AIDS diagnosis. This is consistent with the Centers for Disease Control and Prevention HIV surveillance categorization and reports.

Understanding the District of Columbia HIV Prevalence Estimate

There were 680 newly diagnosed HIV cases reported in 2012. However, the total number of persons living with HIV in the District increased by 1,016 cases compared with last year's report. In addition, the prevalence of HIV increased from 2.4% in the 2011 Annual Report to 2.5% in this year's report. Reasons for the changes in these data include the following:

1. Completeness of vital status data continues to improve. HAHSTA matched HIV cases with Social Security Death files, as well as the National Death Index, to determine the vital status of persons diagnosed with HIV in the District. While HAHSTA routinely receives information regarding District of Columbia residents who have died, national death matches provide information about persons diagnosed in the District who moved outside the District. Executing matches reduces case counts, resulting in a more accurate prevalence estimate of persons living with HIV in the District.

Year of HIV Diagnosis	Potential Duplicate Cases Identified	Cases Assigned to Another State/Jurisdiction	
		(N)	(%)
2008	1,056	241	22.8
2009	844	180	21.3
2010	673	158	23.5
2011	570	162	28.4
2012	394	91	23.1

2. CDC routinely notifies HAHSTA if an HIV case reported in DC appears to be the same person reported in another state or jurisdiction. CDC makes this determination based on the soundex (a phonetic algorithm for indexing names) of a person's name, date of birth, and sex at birth; CDC does not have access to names, so matches must be determined through this process. Each case is investigated to determine if both states/jurisdictions are reporting on the same individual. If such a determination is made, the state with the earliest report date counts the case as diagnosed with HIV in its jurisdiction. The summary table on the previous page shows the number of times newly diagnosed cases were identified as a possible duplicate report and the number and proportion of possible duplicates that were assigned to another state or jurisdiction.

3. In the 2011 Annual Report, and in all previous reports, the prevalence of HIV in the District was calculated by dividing the number of adults and adolescents diagnosed and living with HIV (that is, persons 13 years of age and older at the time of HIV diagnosis) by the population of the District that was 13 years of age and older in the calendar year. Pediatric cases, or persons less than 13 years of age at HIV diagnosis, were not included in the prevalence calculation.

   HAHSTA included pediatric cases in the prevalence calculation in this year's report to fully reflect the HIV epidemic in Washington, DC.

$$\text{Prevalence Calculation: } \frac{\text{16,072 persons living with HIV as of December 2012}}{\text{632,323 persons living in the District, 2011}} = 2.5\%$$

   Persons diagnosed at 13 years of age or younger are living longer lives due to advances in HIV care and treatment; the median age among pediatric cases living as of Dec. 31, 2012 was 19 years. Addition of this age group decreases the calculated prevalence of HIV because the denominator, or total population of the District, increased by including those between 0 and 12 years of age, and the prevalence of disease in this age group is low.

4. The District of Columbia's population is changing as evidenced by the 2010 US Census and 2012 US Census Bureau population estimates. The table below depicts the percent change between the 2010 Census and 2012 population estimates. There was an estimated 4.5% increase in the total number of persons living in the District.

	DC Population† 2010	Estimated DC Population††, 2012	Percent Change
	N	N	%
Sex			
Male	285,786	299,041	4.6
Female	319,126	333,282	4.4
Total	604,912	632,323	4.5
Race/Ethnicity			
White	211,121	224,327	6.3
Black	303,731	307,150	1.1
Hispanic	55,266	62,726	13.5
Other*	34,794	38,120	9.6
Total	604,912	632,323	4.5
Current Age			
<13	73,919	83,159	12.5
13-19	50,090	49,050	-2.1
20-29	134,520	135,760	0.9
30-39	98,546	109,006	10.6
40-49	76,478	78,409	2.5
50-59	72,098	73,456	1.9
≥60	99,261	103,483	4.3
Total	604,912	632,323	4.5

†Source: 2010 US Census
††Source: 2012 US Census Bureau population estimates
*Other race includes mixed-race individuals, Asians, Alaska Natives, American Indians, Native Hawaiian, Pacific Islanders, and unknowns

The composition of District residents also changed by race/ethnicity and age. The number of Hispanics living in the District increased by 13.5% and the number of those classified as other race increased by 9.6%. The percent change among blacks was negligible at 1.1%. In addition, the population between 0 and 12 years of age increased by 12.5%, while the population between 13 and 19 years of age decreased by 2.1%. It is also important to note that the population between 30 and 39 years of age increased by 10.6%.

Understanding Sexually Transmitted Disease (STD) Surveillance

Currently, chlamydia, gonorrhea, and syphilis are the only STDs for which surveillance data are routinely collected and analyzed in the District. Local reporting laws require all clinicians and laboratories to report findings relevant to STDs – including positive test results, patients receiving STD treatment, and suspicious STD related symptoms – to the Department of Health.

STD morbidity reports should include the patient's name, address, and requested demographic information (sex, age, race, ethnicity, etc.); however, demographic information is often missing from these reports. The percentage of cases missing pertinent data varies depending on the disease and the variable of interest. For example, in 2011, only 38 (0.5%) cases of reported chlamydia had "unknown" sex, but 847 (32.5%) cases of reported gonorrhea had "unknown" race.

Data on race and ethnicity are reported separately and are not mutually exclusive variables. Therefore, an individual of Hispanic and black origins could be counted as black non-Hispanic, black Hispanic, black of unknown ethnicity, Hispanic of unknown race, or possibly non-Hispanic of unknown race, depending on the completeness of information reported. For these reasons, reported totals by demographic factors such as race and ethnicity represent estimates and should be interpreted with caution.

In addition, unlike HIV surveillance, STD surveillance is based on incident (new) infections. Some individuals may be diagnosed multiple times with the same STD, or with different types of STDs at the same time. Additionally, primary and secondary syphilis cases are used as a measure of disease incidence, while early latent and late latent syphilis cases are a better indicator of disease prevalence.

Understanding Viral Hepatitis Surveillance for the District of Columbia

Viral hepatitis is a nationally and locally reportable disease. The District of Columbia Municipal Code (22 DCMR Chapter 2 201.5) mandates reporting of "hepatitis, infections and serum" by health care providers, and medical institutions such as hospitals and laboratories. Hepatitis cases are primarily reported to the DOH by laboratory reports; however, they are also identified through reports from health care providers, hospitals, clinics and through reports from other health departments. In some instances, the DOH requires additional information to classify a case, therefore hepatitis program investigators contact providers and patients to obtain more complete information. It should be noted that federal funding is not currently available to support or strengthen case surveillance for viral hepatitis.

The District's hepatitis surveillance program uses a confidential name-based Viral Hepatitis Registry (VHR) which includes basic demographic data, diagnosis, and event/illness onset dates, when available. Supplemental information collected through the case investigation process is documented and often includes clinical features, serologic test results, and risk factors for infection. This information is compiled and used to classify cases according to the CDC/Council of State and Territorial Epidemiologists (CSTE) and DC-specific case definitions. Locally, confirmed chronic hepatitis B or C cases include a complete series of labs. A probable case of chronic hepatitis B or C is a combination of reported lab results that are an incomplete series and don't include all results necessary to confirm a diagnosis. A suspect case of chronic hepatitis C includes a single positive lab result indicative of possible chronic hepatitis C.

Understanding Tuberculosis Surveillance

In the District of Columbia, active tuberculosis (TB) is a reportable condition by both medical providers and laboratories. Medical providers must report anyone who is diagnosed with, or has symptoms suspicious of, TB. Laboratories are required to report preliminary tests indicative of active TB, as well as confirmed tests. In any given year 25% to 30% of initial reports of persons with suspicious clinical or laboratory findings will be verified as TB by laboratory confirmation or clinical case definition. Receiving initial reports allows HAHSTA to begin immediate medical and epidemiological follow-up on suspect cases; this is done to interrupt potential disease transmission while the person waits for final results, which could take as long as eight weeks.

Understanding Geographic Mapping

Availability of ward-level data varies by disease. Where these data were not available, cases were excluded in the maps. For persons who were incarcerated, in temporary housing, or lacking housing at the time of diagnosis, ward is reported separately from the maps as "jail" and "homeless" cases. When calculating rates by ward, the base population used is the District population from the 2010 US Census. Ward of residence is not indicative of where a person was infected, but represents where the person resided at the time of diagnosis.

Appendix B. Supplementary Tables and Figures

Table B1. HIV Cases Diagnosed in the District of Columbia and Living by Race/Ethnicity, Sex, and Mode of Transmission
District of Columbia, 2012

	White		Black		Hispanic		Other*		Total	
	N	%	N	%	N	%	N	%	N	%
Sex										
Male	2,554	95.7	7,995	66.3	842	85.1	288	82.1	11,679	72.7
Female	115	4.3	4,067	33.7	148	14.9	63	17.9	4393	27.3
Total	26,69	100.0	12,062	100.0	990	100.0	350	100.0	16,072	100.0
Mode of Transmission										
MSM	2,146	80.4	3,741	31.0	572	57.8	175	49.9	6,634	41.3
IDU	65	2.4	2,041	16.9	61	6.2	33	9.4	2,200	13.7
MSM/IDU	81	3.0	414	3.4	29	2.9	17	4.8	541	3.4
Heterosexual contact	125	4.7	4,117	34.1	219	22.1	63	17.9	4,524	28.2
Risk not identified	248	9.3	1,563	12.9	102	10.3	61	17.4	1,974	12.3
Other**	4	0.2	186	1.5	7	0.7	2	0.6	199	1.2
Total	2,669	100.0	12,062	100.0	990	100.0	350	100.0	16,072	100.0
Male										
MSM	2,146	84.0	3,741	46.8	572	67.9	175	60.8	6,634	56.8
IDU	37	1.5	1,191	14.9	42	4.9	18	6.3	1,288	11.0
MSM/IDU	81	3.2	414	5.2	29	3.4	17	5.9	541	4.6
Heterosexual contact	59	2.3	1,572	19.7	114	13.5	24	8.3	1,769	15.2
Risk not identified	228	8.9	992	12.4	82	9.7	53	18.4	1,355	11.6
Other**	3	0.1	85	1.1	3	0.4	1	0.4	92	0.8
Subtotal	2,554	100.0	7,995	100.0	842	100.0	288	100.0	11,679	100.0
Female										
IDU	28	24.3	850	20.9	19	12.8	15	23.8	912	20.8
Heterosexual contact	66	57.4	2,545	62.6	105	70.9	39	61.9	2,755	62.7
Risk not identified	20	17.4	571	14.0	20	13.5	8	12.7	619	14.1
Other**	1	0.9	101	2.5	4	2.7	1	1.6	107	2.4
Subtotal	115	100.0	4,067	100.0	148	100.0	63	100.0	4,393	100.0

*Other race includes mixed-race, Asian, Alaska Native, American Indian, Native Hawaiian, Pacific Islander, and unknown
**Other mode of transmission includes hemophilia, blood transfusion, occupational exposure (health care workers) and perinatal transmission

Table B2. HIV Cases Diagnosed in the District of Columbia and Living by Race/Ethnicity, Age at Diagnosis, and Current Age
District of Columbia, 2012

	White		Black		Hispanic		Other*		Total	
	N	%	N	%	N	%	N	%	N	%
Age at Diagnosis										
<13	1	0.0	172	1.4	5	0.5	2	0.6	180	1.1
13-19	23	0.9	479	3.9	27	2.7	14	3.9	543	3.4
20-29	617	23.1	3,001	24.9	325	32.8	68	19.4	4,011	24.9
30-39	1,060	39.7	3,797	31.5	342	34.6	115	32.8	5,314	33.1
40-49	686	25.7	3,096	25.7	194	19.6	97	27.6	4,073	25.3
50-59	239	8.9	1,202	9.9	77	7.8	39	11.1	1,557	9.7
≥60	43	1.6	315	2.6	20	2.0	16	4.6	394	2.5
Total	2,669	100.0	12,062	100.0	990	100.0	350	100.0	16,072	100.0
Current Age										
<13	0	0.0	40	0.3	1	0.1	0	0.0	41	0.3
13-19	0	0.0	108	0.9	1	0.1	3	0.9	112	0.7
20-29	99	3.7	1,193	9.9	102	10.3	29	8.3	1,423	8.9
30-39	428	16.0	2,032	16.9	237	23.9	57	16.2	2,754	17.1
40-49	885	33.2	3,636	30.1	360	36.4	116	33.1	4,997	31.1
50-59	853	31.9	3,592	29.8	188	18.9	101	28.8	4,732	29.5
≥60	404	15.1	1,461	12.1	101	10.2	45	12.8	2011	12.5
Total	2,669	100.0	12,062	100.0	990	100.0	350	100.0	16,072	100.0

*Other race includes mixed-race, Asian, Alaska Native, American Indian, Native Hawaiian, Pacific Islander, and unknown

Table B3. Newly Diagnosed HIV Cases by Year of Diagnosis, Sex, Race/Ethnicity, Mode of Transmission, and Age at Diagnosis
District of Columbia, 2008-2012

	2008		2009		2010		2011		2012		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Sex												
Males	838	71.0	621	70.5	623	71.9	533	73.8	502	73.8	3,117	72.0
Females	342	29.0	260	29.5	244	28.1	189	26.2	178	26.2	1,216	28.0
Total	1,180	100.0	881	100.0	867	100.0	722	100.0	680	100.0	4,330	100.0
Race/Ethnicity												
White	152	12.9	110	12.5	106	12.2	103	14.3	105	15.4	576	13.3
Black	918	77.8	695	78.9	670	77.3	541	74.9	489	71.9	3,313	76.5
Hispanic	75	3.4	53	6.0	65	7.5	52	7.2	59	8.7	304	7.0
Other*	35	2.9	23	2.6	23	3.0	26	3.6	27	3.9	137	3.2
Total	1,180	100.0	881	100.0	867	100.0	722	100.0	680	100.0	4,330	100.0
Mode of Transmission												
MSM	443	37.5	311	35.3	324	37.4	288	39.9	313	46.0	1,679	38.8
IDU	109	9.2	65	7.4	45	5.2	30	4.2	21	3.1	270	6.2
MSM/IDU	39	3.3	11	1.25	20	2.1	14	1.9	13	1.7	97	2.2
Heterosexual contact	335	28.4	291	33.0	282	32.5	245	33.9	215	31.6	1,368	31.6
Risk not identified	248	21.0	201	22.8	192	22.2	142	19.7	114	16.8	897	20.7
Other**	6	0.5	2	0.2	4	0.5	3	0.4	4	0.6	19	0.1
Total	1,180	100.0	881	100.0	867	100.0	722	100.0	680	100.0	4,330	100.0
Age at Diagnosis												
<13	6	0.5	2	0.2	4	0.5	2	0.3	4	0.6	18	0.4
13-19	42	3.6	32	3.6	28	3.2	29	4.0	28	4.1	159	3.7
20-29	274	23.2	201	22.9	244	28.1	202	27.9	203	29.9	1,124	26.9
30-39	284	24.1	208	23.6	206	23.8	144	19.9	175	25.7	1,017	23.5
40-49	323	27.4	243	28.6	215	24.8	174	24.1	135	19.9	1,090	25.2
50-59	192	16.3	148	16.7	123	14.2	128	17.7	89	13.1	679	15.7
≥60	59	2.0	48	5.5	47	5.4	43	5.9	46	6.8	243	5.6
Total	1,180	100.0	881	100.0	867	100.0	722	100.0	680	100.0	4,330	100.0

*Other race includes mixed-race, Asian, Alaska Native, American Indian, Native Hawaiian, Pacific Islander, and unknown
**Other mode of transmission includes hemophilia, blood transfusion, occupational exposure (health care workers) and perinatal transmission

Table B4. Newly Diagnosed AIDS Cases by Year of Diagnosis, Sex, Race/Ethnicity, Age at Diagnosis, and Mode of Transmission
District of Columbia, 2008-2012

	2008		2009		2010		2011		2012		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Sex												
Males	391	69.3	385	67.8	359	67.4	327	77.1	244	65.9	1,706	69.4
Females	173	30.7	183	32.2	174	32.6	97	22.9	126	34.1	753	30.6
Total	564	100	568	100	533	100	424	100	370	100	2,459	100
Race / Ethnicity												
White	64	11.3	54	9.5	40	7.5	59	13.9	26	7	243	9.9
Black	455	80.7	463	81.5	444	83.3	333	78.5	302	81.6	1,997	81.2
Hispanic	28	5.0	29	5.1	30	5.6	25	5.9	29	7.8	141	5.7
Other*	17	3.0	22	3.9	19	3.6	7	1.7	13	3.5	78	3.2
Total	564	100	568	100	533	100	424	100	370	100	2,459	100
Mode of Transmission												
MSM	182	32.3	172	30.3	164	30.8	160	37.7	117	31.6	795	32.3
IDU	70	12.4	47	8.3	48	9	35	8.3	34	9.2	234	9.5
MSM/IDU	19	3.4	14	2.5	16	3	9	2.1	10	2.7	68	2.8
Heterosexual contact	181	32.1	188	33.1	182	34.1	126	29.7	135	36.5	812	33
Risk not identified	108	19.1	143	25.2	123	23.1	90	21.2	71	19.2	535	21.8
Other**	4	0.7	4	0.7	.	.	4	0.9	3	0.8	15	0.6
Total	564	100	568	100	533	100	424	100	370	100	2,459	100
Age at Diagnosis												
<13	2	0.4	1	0.2	0	0	1	0.2	1	0.3	5	0.2
13-19	12	2.1	11	1.9	6	1.1	9	2.1	5	1.4	43	1.7
20-29	91	16.1	94	16.5	94	17.6	78	18.4	54	14.6	411	16.7
30-39	145	25.7	140	24.6	118	22.1	98	23.1	95	25.7	596	24.2
40-49	170	30.1	175	30.8	159	29.8	121	28.5	93	25.1	718	29.2
50-59	100	17.7	110	19.4	115	21.6	85	20	82	22.2	492	20
≥60	44	7.8	37	6.5	41	7.7	32	7.5	40	10.8	194	7.9
Total	564	100	568	100	533	100	424	100	370	100	2,459	100

*Other race includes mixed race, Asian, Alaska Native, American Indian, Native Hawaiian, Pacific Islander, and unknown race
**Other mode of transmission includes hemophilia, blood transfusion, occupational exposure (health care workers) and perinatal transmission.

Table B5. Newly Diagnosed AIDS Cases by Year of Diagnosis, Sex, and Mode of Transmission
District of Columbia, 2008-2012

	2008		2009		2010		2011		2012		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Male												
MSM	182	32.3	172	30.3	164	30.8	160	37.7	117	31.6	795	32.3
IDU	41	7.3	28	4.9	21	3.9	28	6.6	22	5.9	140	5.7
MSM/IDU	19	3.4	14	2.5	16	3	9	2.1	10	2.7	68	2.8
Heterosexual contact	77	13.7	79	13.9	78	14.6	62	14.6	49	13.2	345	14
Risk not identified	71	12.6	90	15.8	80	15	66	15.6	46	12.4	353	14.4
Other*	1	0.2	2	0.4	0	0	2	0.5	0	0	5	0.2
Subtotal	391	69.5	385	67.8	359	67.3	327	77.1	244	65.8	1706	69.4
Female												
IDU	29	5.1	19	3.3	27	5.1	7	1.7	12	3.2	94	3.8
Heterosexual contact	104	18.4	109	19.2	104	19.5	64	15.1	86	23.2	467	19
Risk not identified	37	6.6	53	9.3	43	8.1	24	5.7	25	6.8	182	7.4
Other*	3	0.5	2	0.4	0	0	2	0.5	3	0.8	10	0.4
Subtotal	173	30.6	183	32.2	174	32.7	97	23	126	34	753	30.6

*Other mode of transmission includes hemophilia, blood transfusion, occupational exposure (health care workers) and perinatal transmission

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Table B6. Deaths Among Persons with HIV by Year of Death, Sex, Race/Ethnicity, Mode of Transmission and Age at Death

District of Columbia, 2008-2012

	2008		2009		2010		2011		2012		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Sex												
Males	229	66.4	190	70.6	135	61.1	150	65.5	150	67.9	854	66.5
Females	116	33.6	79	29.4	86	38.9	79	34.5	71	32.1	431	33.5
Total	345	100.0	268	100.0	221	100.0	229	100.0	221	100.0	1,285	100.0
Race/Ethnicity												
White	21	6.1	18	6.7	9	4.1	11	4.8	13	5.9	72	5.6
Black	308	89.3	239	88.9	152	68.8	204	89.1	195	88.2	1,098	85.5
Hispanic	12	3.5	5	1.9	10	4.5	7	3.1	10	4.5	44	3.4
Other*	4	1.2	7	2.6	50	22.6	7	3.1	3	1.4	71	5.5
Total	345	100.0	269	100.0	221	100.0	229	100.0	221	100.0	1,285	100.0
Mode of Transmission												
MSM	65	18.8	63	23.4	53	23.9	47	20.5	60	27.2	288	22.4
IDU	131	37.9	81	30.1	64	28.9*	60	23.2	52	23.5	388	30.2
MSM/IDU	24	6.9	11	4.1	6	2.7	8	3.5	9	4.1	58	4.5
Heterosexual contact	79	22.9	62	23.1	61	27.6	652	27.1	56	25.3	320	24.9
Risk not identified	43	12.5	52	19.3	36	16.3	49	21.4	41	18.6	221	17.2
Other**	3	0.9	0	0.0	1	0.5	3	1.3	3	1.4	10	0.8
Total	345	100.0	269	100.0	221	100.0	229	100.0	221	100.0	1,285	100.0
Age at Death												
<13	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
13-19	2	0.6	0	0.0	1	0.5	0	0.0	1	0.5	4	0.3
20-29	12	3.5	11	4.1	7	3.2	10	4.4	6	2.7	46	3.6
30-39	37	10.7	27	10.0	25	11.3	21	9.2	17	7.7	127	9.9
40-49	114	33.0	80	29.7	57	25.8	58	25.3	57	25.8	366	28.5
50-59	126	36.5	108	40.2	87	39.4	77	33.6	72	32.6	470	36.6
≥60	54	15.7	43	15.9	44	19.9	63	27.5	68	30.8	272	21.7
Total	345	100.0	269	100.0	221	100.0	229	100.0	221	100.0	1,285	100.0

*Other race includes mixed-race, Asian, Alaska Native, American Indian, Native Hawaiian, Pacific Islander, and unknown
**Other mode of transmission includes hemophilia, blood transfusion, occupational exposure (health care workers) and perinatal transmission

Table B7. Deaths Among Persons with HIV by Race/Ethnicity, Sex, Mode of Transmission and Age at Death
District of Columbia, 2008-2012

	White		Black		Hispanic		Other*		Total	
	N	%	N	%	N	%	N	%	N	%
Sex										
Males	70	97.2	712	64.9	30	68.2	41	59.2	854	66.5
Females	2	2.8	386	35.2	14	31.8	29	40.9	431	33.5
Total	72	100.0	1,098	100.0	44	100.0	71	100.0	1,285	100.0
Mode of Transmission										
MSM	56	77.8	201	18.3	12	27.3	19	26.8	288	22.4
IDU	5	6.9	352	32.1	11	25.0	20	28.2	388	30.2
MSM/IDU	0	0.0	56	5.1	0	0.0	2	2.8	58	4.5
Heterosexual contact	2	2.8	288	23.2	13	29.6	17	23.9	320	24.9
Risk not identified	9	12.5	193	17.6	6	13.6	13	18.3	221	17.2
Other**	0	0.0	8	0.8	2	4.6	0	0.0	10	0.8
Total	72	100.0	1,,098	100.0	44	100.0	71	100.0	1,285	100.0
Age at Death										
<13	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
13-19	0	0.0	4	0.4	0	0.0	0	0.0	4	0.3
20-29	0	0.0	43	3.9	3	6.8	0	0.0	46	3.6
30-39	8	11.1	102	9.3	10	22.7	7	9.9	127	9.9
40-49	24	33.3	308	28.1	12	27.3	22	30.9	366	28.5
50-59	22	30.6	407	36.8	13	29.6	31	43.6	470	36.6
≥60	18	25.0	237	21.6	6	13.6	11	15.5	272	21.2
Total	72	100.0	1,098	100.0	44	100.0	71	100.0	1,285	100.0

*Other race includes mixed-race, Asian, Alaska Native, American Indian, Native Hawaiian, Pacific Islander, and unknown
**Other mode of transmission includes hemophilia, blood transfusion, occupational exposure (health care workers) and perinatal transmission

Table B8. Number, Percent, and Rate per 100,000 persons of Chlamydia Cases by Year of Diagnosis, Sex, Race/Ethnicity, Age, and Ward

	2008			2009			2010			2011			2012			Total		
	N	%	Rate per 100,000	N	%	Rate per 100,000	N	%	Rate per 100,000	N	%	Rate per 100,000	N	%	Rate per 100,000	5-Year Total	5-Year %	5-Year Average Rate per 100,000
Sex																		
Female	4,434	64	1,676.8	4,130	63.4	1,549.2	3,784	67.7	1,400.9	4,350	66.1	1,370.1	4,654	64.1	1,396.4	21,352	65.0	1,478.7
Male	2,422	35	1,052.4	2,376	36.5	1,022.4	1,790	32.0	760.2	2,231.0	33.9	784.9	2,566	35.4	858.1	11,385	34.7	895.6
Unknown	33	0	35.4	7	0.1	7.5	18	0.3	19.1	3	0.0	0.0	38	0.5	0.6	99	0.3	12.5
Total	6,889	100	1,171.9	6,513	100	1,105.5	5,592	100	932.5	6,584	100	1094.2	7,258	100	1,147.8	32,836	100	1,089.4
Race/Ethnicity																		
Black	4,372	63.5	1,660.5	4,524	69.5	1,725.3	3,689	66.0	615.2	4,088.0	62.1	1,339.8	4,240	58.4	1,380.4	20,913	63.7	1,344.2
White	105	1.5	51.1	135	2.1	64.3	150	2.7	70.5	165.0	2.5	71.3	241	3.3	107.4	796	2.4	72.9
Hispanic	217	3.1	539.2	153	2.3	375.2	138	2.5	252.1	169.0	2.6	308.7	166	2.3	264.6	843	2.6	3,48.0
Other	84	1.2	1,325.1	81	1.2	1,224.5	103	1.8	1,536.8	98.0	1.5	150.5	20	0.3	52.5	386	1.2	857.9
Unknown	2,111	30.6	2,251.6	1,620	24.9	1,735.9	1,512	27.0	1,599.0	2,064.0	31.3	0.0	2,591	35.7	409.8	9,898	30.1	1,199.3
Total	6,889	100	1,171.9	6,513	100	1,100.5	5,592	100	932.5	6,584	100	1094.2	7,258	100	1,147.8	32,836	100	1,089.4
Age Group																		
0-14	152	2.2	162.9	131	2.0	141.1	107	1.9	258.6	146	2.2	174.2	142	2.0	152.2	678	2.1	178
15-19	2,702	39.2	6,683.8	2,588	39.7	6,338.6	2,348	42.0	5,675.8	2564	38.9	6,423.0	2,529	34.9	6,497.9	12,731	38.8	6,324
20-24	1,976	28.7	3,738.3	1,964	30.2	3,642.8	1,652	29.5	3,024.2	2093	31.8	3,264.7	2,469	34.1	4,131.3	10,154	30.9	3,560
25-29	1,002	14.5	1,706.7	875	13.4	1,445.2	715	12.8	1,165.5	883	13.4	1,267.8	1,021	14.1	1,343.5	4,496	13.7	1,386
30-39	690	10.0	742.5	654	10.0	706.2	496	8.9	528.6	613	9.3	625.4	720	9.9	660.5	3,173	9.7	653
≥40	367	5.3	147.0	301	4.6	119.9	274	4.9	107.7	285	4.3	115.7	377	5.2	147.6	1,604	4.9	128
Total	6,889	100	1,171.9	6,513	100	1,100.5	5,592	100	932.5	6,584	100	1,094.2	7,258	100	1,147.8	32,836	100	1,089.4
By Ward																		
Ward 1	464	6.7	607.1	447	6.9	581.0	420	7.5	538.8	599	9.1	786.1	520	7.2	682.4	2,450	7.5	6,39.1
Ward 2	233	3.4	330.3	252	3.9	354.8	179	3.2	248.8	224	3.4	280.3	269	3.7	336.6	1,157	3.5	3,10.2
Ward 3	74	1.1	96.8	72	1.1	93.6	62	1.1	79.5	75	1.1	97.2	85	1.2	110.2	368	1.1	95.5
Ward 4	359	5.2	469.8	443	6.8	575.8	382	6.8	490.0	454	6.9	599.2	458	6.3	604.4	2,096	6.4	547.8
Ward 5	861	12.5	1,220.5	854	13.1	1,202.5	741	13.3	1,029.8	917	13.9	1,234.1	942	13.0	1,267.7	4,315	13.1	1,190.9
Ward 6	451	6.5	639.3	489	7.5	688.5	402	7.2	558.7	527	8.0	688.0	536	7.4	699.8	2,405	7.3	654.9
Ward 7	1,110	16.1	1,573.5	1,125	17.3	1,584.1	979	17.5	1,360.5	1399	21.2	1,968.5	1,239	17.1	1,743.4	5,852	17.8	1,646.0
Ward 8	1,289	18.7	1,827.2	1,463	22.5	2,060.0	1,281	22.9	1,780.2	1646	25.0	2,327.8	1,573	21.7	2,224.5	7,252	22.1	2,043.9
Detention Center	616	8.9	--	570	8.8	--	179	3.2	--	29	0.4	--	6	0.1	--	1,400	4.3	--
Unknown	1,442	20.9	--	798	12.3	--	967	17.3	--	714	10.8	--	1,630	22.5	--	5,551	16.9	--
Total	6,899	100	1,171.9	6,513	100	1,100.5	5,592	100	932.5	6,584	100	1,094.2	7,258	100	1,147.8	32,836	100	1,089.4

Table B9. Number, Percent, and Rate per 100,000 persons of Gonorrhea Cases by Year of Diagnosis, Sex, Race/Ethnicity, Age, and Ward

District of Columbia, 2008-2012

	2008			2009			2010			2011			2012			Total		
	N	%	Rate per 100,000	N	%	Rate per 100,000	N	%	Rate per 100,000	N	%	Rate per 100,000	N	%	Rate per 100,000	5-Year Total	5-Year %	5-Year Average Rate per 100,000
Gender																		
Female	1,251	47.7	473.1	1,229	48.3	461.0	1,078	51.2	399.1	1,210	47.0	381.10	1,070	41.1	321.0	5,838	46.9	407.1
Male	1,360	51.9	591.0	1,317	51.7	566.7	1,026	48.7	435.7	1,362	53.0	479.20	1,524	58.5	509.6	6,589	52.9	516.4
Unknown	11	0.4	11.8	0	0.0	0.0	2	0.1	2.1	0	0.0	0.00	11	0.4	11.7	24	0.2	5.1
Total	2,622	100	446.0	2,546	100	430.2	2,106	100	351.2	2,572	100	427.4	2605	100	412.0	12,451	100	413.4
Race/Ethnicity																		
Black	1,862	71.0	707.2	1,981	77.8	755.5	1,464	69.5	244.1	1,617	62.9	269.7	1,512	58.0	492.3	8,436	67.8	493.7
White	88	3.4	42.8	109	4.3	51.9	116	5.5	54.5	113	4.4	48.8	151	5.8	67.3	577	4.6	53.1
Hispanic	48	1.8	123.5	53	2.1	131.7	44	2.1	107.9	47	1.8	85.8	45	1.7	71.7	237	1.9	104.1
Other	41	1.6	161.5	29	1.1	110.4	44	2.1	165.4	40	1.6	61.4	50	1.9	118.0	204	1.6	123.3
Unknown	583	22.2	621.8	374	14.7	400.8	438	20.8	463.2	755	29.4	0.0	847	32.5	0.0	2,997	24.1	297.2
Total	2,622	100	446.0	2,546	100	430.2	2,106	100	351.2	2,572	100	427.4	2,605	100	412.0	12,451	100	413.4
Age Group																		
0-14	60	2.3	64.3	38	1.5	40.9	42	2.0	44.6	50	1.9	59.7	48	1.8	51.5	238	1.9	52.2
15-19	874	33.3	2,162.0	865	34.0	2,118.6	741	35.2	1,791.2	825	32.1	2,066.7	694	26.6	1,783.1	3,999	32.1	1984.3
20-24	706	26.9	1,335.7	727	28.6	1348.4	600	28.5	1,098.4	782	30.4	1219.8	801	30.7	1,340.3	3,616	29.0	1268.5
25-29	362	13.8	616.6	362	14.2	597.9	311	14.8	507.0	404	15.7	580.1	435	16.7	572.4	1,874	15.1	574.8
30-39	361	13.8	388.5	323	12.7	348.8	246	11.7	262.2	296	11.5	302.0	375	14.4	344.0	1,601	12.9	329.1
≥40	259	9.9	103.8	231	9.1	92.0	166	7.9	65.2	215	8.4	87.3	252	9.7	98.7	1,123	9.0	89.4
Total	2,622	100	446.0	2,546	100	430.2	2,106	100	351.2	2,572	100	427.4	2,605	100	412.0	12,451	100	413.4
By Ward																		
Ward 1	205	7.8	268.2	181	7.1	235.3	162	7.7	207.8	209	8.1	274.3	220	8.4	288.7	977	7.8	254.9
Ward 2	127	4.8	180.0	142	5.6	199.9	122	5.8	169.5	113	4.4	141.4	150	5.8	187.7	654	5.3	175.7
Ward 3	20	0.8	26.2	22	0.9	28.6	15	0.7	19.2	23	0.9	29.8	18	0.7	23.3	98	0.8	25.4
Ward 4	135	5.1	176.6	161	6.3	209.3	107	5.1	137.3	132	5.1	174.2	130	5.0	171.6	665	5.3	173.8
Ward 5	353	13.5	500.4	336	13.2	473.1	278	13.2	386.3	338	13.1	454.9	326	12.5	438.7	1,631	13.1	450.7
Ward 6	221	8.4	313.3	211	8.3	297.1	195	9.3	271.0	208	8.1	271.5	197	7.6	257.2	1,032	8.3	282.0
Ward 7	418	15.9	592.5	491	19.3	691.4	370	17.6	514.2	537	20.9	755.6	416	16.0	585.4	2,232	17.9	627.8
Ward 8	571	21.8	809.4	646	25.4	909.6	533	25.3	740.7	652	25.3	922.1	539	20.7	762.2	2,941	23.6	828.8
Detention Center	162	6.2	--	142	5.6	--	48	2.3	--	16	0.6	--	12	0.5	--	380	3.1	--
Unknown	410	15.6	--	214	8.4	--	276	13.1	--	344	13.4	--	597	22.9	--	1,841	14.8	--
Total	2,622	100	446.0	2,546	100	430.2	2,106	100	351.2	2,572	100	427.4	2,605	100	412.0	12,451	100	413.4

Table B10. Number, Percent, and Rate per 100,000 persons of Primary and Secondary Syphilis Cases by Year of Diagnosis, Sex, Race/Ethnicity, Age, and Ward
District of Columbia, 2008-2012

	2008			2009			2010			2011			2012			Total		
	N	%	Rate per 100,000	N	%	Rate per 100,000	N	%	Rate per 100,000	N	%	Rate per 100,000	N	%	Rate per 100,000	5-Year Total	5-Years %	5-Year Average Rate per 100,000
Type																		
Primary	33	22.9	5.6	31	18.9	5.2	27	20.3	4.5	34	20.6	4.5	43	24.9	6.8	168	21.6	8.5
Secondary	111	77.1	18.8	133	81.1	22.2	106	79.7	17.6	131	79.4	17.7	130	75.1	20.6	611	78.4	31.7
Total	144	100	24.3	164	100	27.3	133	100	22.1	165	100	22.2	173	100	27.4	779	100	25.7
Gender																		
Female	5	3.5	1.9	11	6.7	4.1	2	1.5	0.6	7	4.2	2.2	6	3.5	1.8	31	4.0	2.1
Male	139	96.5	59.8	153	93.3	65.0	131	98.5	46.1	158	95.8	55.6	167	96.5	55.8	748	96.0	56.5
Total	144	100	24.3	164	100	27.3	133	100	22.1	165	100	27.4	173	100	27.4	779	100	25.7
Race/Ethnicity																		
Black	88	61.1	33.6	93	56.7	15.5	71	53.4	23.3	102	61.8	33.4	91	52.6	29.6	456	58.5	27.1
White	40	27.8	19.0	43	26.2	20.2	45	33.8	19.4	42	25.5	18.1	60	34.7	26.7	258	33.1	20.7
Hispanic	12	8.3	29.8	17	10.4	41.7	11	8.3	20.1	13	7.9	23.7	13	7.5	20.7	9	1.2	27.2
Other	1	0.7	15.1	5	3.0	19.0	4	3.0	9.6	3	1.8	4.6	7	4.0	18.4	36	4.6	13.3
Unknown	3	2.1	3.2	6	3.7	0.0	2	1.5	2.1	5	3.0	0.0	2	1.2	0.0	19	2.4	1.1
Total	144	100	24.3	164	100	27.3	133	100	22.1	165	100	27.4	173	100	27.4	779	100	25.7
Age Group																		
15-19	7	4.9	17.3	10	6.1	24.2	7	5.3	17.5	9	5.5	22.5	7	4.0	18.0	40	5.1	19.9
20-24	22	15.3	41.6	25	15.2	45.8	19	14.3	29.6	25	15.2	39.0	27	15.6	45.2	118	15.1	40.2
25-29	17	11.8	29.0	30	18.3	48.9	24	18.0	34.5	35	21.2	50.3	32	18.5	42.1	138	17.7	40.9
30-39	46	31.9	49.5	51	31.1	54.3	37	27.8	37.7	42	25.5	42.8	53	30.6	48.6	229	29.4	46.6
≥40	52	36.1	20.7	48	29.3	18.9	46	34.6	18.1	54	32.7	21.9	54	31.2	21.1	254	32.6	20.1
Total	144	100	24.3	164	100	27.3	133	100	22.1	165	100	27.4	173	100	27.4	779	100	25.7
By Ward																		
Ward 1	26	18.1	33.8	34	20.7	43.6	29	21.8	38.1	24	14.5	31.5	20	11.6	26.2	133	17.1	34.6
Ward 2	29	20.1	40.8	31	18.9	43.1	28	21.1	35.0	27	16.4	33.8	36	20.8	45.0	151	19.4	39.6
Ward 3	4	2.8	5.2	1	0.6	1.3	2	1.5	2.6	5	3.0	6.5	4	2.3	5.2	16	2.1	4.1
Ward 4	13	9.0	16.9	13	7.9	16.7	8	6.0	10.6	15	9.1	19.8	10	5.8	13.2	59	7.6	15.4
Ward 5	20	13.9	28.2	23	14.0	32.0	15	11.3	20.2	23	13.9	31.0	23	13.3	31.0	104	13.4	28.4
Ward 6	20	13.9	28.2	21	12.8	29.2	14	10.5	18.3	20	12.1	26.1	27	15.6	35.2	102	13.1	27.4
Ward 7	16	11.1	22.5	15	9.1	20.8	20	15.0	28.1	25	15.2	35.2	24	13.9	33.8	100	12.8	28.1
Ward 8	13	9.0	18.3	23	14.0	32.0	14	10.5	19.8	23	13.9	32.5	12	6.9	17.0	85	10.9	23.9
Correctional Facilities	1	0.7	—	0	0.0	—	0	0.0	—	0	0.0	—	0	0.0		1	0.1	—
Unknown	2	1.4	—	3	1.8	—	3	2.3	—	3	1.8	—	17	9.8		28	3.6	—
Total	144	100.0	24.3	164	100	27.3	133	100	22.1	165	100	27.4	173	100	27.4	779	100	25.7

Table B11. Reported Tuberculosis Cases by Selected Characteristics
District of Columbia, 2008-2012

	2008		2009		2010		2011		2012		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Disease Site												
Pulmonary	39	72.2	28	68.3	27	64.3	37	67.2	20	54.1	151	65.9
Extrapulmonary	15	27.8	9	21.9	13	31.0	14	25.5	11	29.7	62	27.1
Both	0	0.0	4	9.8	2	4.8	4	7.3	6	16.2	16	7.0
Total	54	100.0	41	100.0	42	100.0	55	100.0	37	100.0	229	100.0
Sex												
Males	34	63.0	17	41.5	21	50.0	33	60.0	17	45.9	122	53.3
Females	20	37.0	24	58.5	21	50.0	22	40.0	20	54.1	107	46.7
Total	54	100.0	41	100.0	42	100.0	55	100.0	37	100.0	229	100.0
Age												
<5	3	5.6	1	2.4	1	2.4	1	1.8	1	2.7	7	3.1
5 - 14	0	0.0	0	0.0	1	2.4	0	0.0	1	2.7	2	0.9
15 - 24	9	16.7	4	9.8	4	9.5	9	16.4	4	10.8	30	13.1
25 - 44	16	29.6	14	34.1	15	35.7	17	30.9	15	40.6	77	33.6
45 - 64	21	38.9	14	34.1	13	31.0	18	32.7	11	29.7	77	33.6
≥65	5	9.3	8	19.5	8	19.0	10	18.2	5	13.5	36	15.7
Total	54	100.0	41	100.0	42	100.0	55	100.0	37	100.0	229	100.0
Race/Ethnicity												
White	41	75.9	27	65.8	28	66.7	38	69.1	31	83.8	165	72.1
Black	1	1.9	4	9.8	7	16.7	1	1.8	0	0.0	13	5.7
Hispanic	9	16.7	7	17.1	2	4.8	8	14.5	4	10.8	30	13.1
Other	3	5.6	3	7.3	5	11.9	8	14.5	2	5.4	21	9.2
Total	54	100.0	41	100.0	42	100.0	55	100.0	37.0	100.0	229	100.0
US Born vs. Foreign Born												
Foreign Born	30	55.6	19	46.4	26	61.9	30	55.5	20	54.1	125	54.6
US Born-Black	23	42.6	16	39	16	38.1	23	41.8	15	40.5	93	40.6
US Born-All Other Races	1	1.9	6	14.6	0	0	2.0	3.6	2	5.4	11	4.8
Total	54	100.0	41	100.0	42	100.0	55	100.0	37	100.0	229	100.0
Homeless in past year												
Total	5	9.3	2	4.9	4	9.5	3	5.5	2	5.4	16	7.5
Alcohol/Substance Use												
Total	4	7.4	14	34.1	7	16.7	8	14.5	5	13.5	38	16.1

Strategic Information Division
HIV/AIDS, Hepatitis, STD and TB Administration (HAHSTA)
Government of the District of Columbia
Department of Health
899 N. Capitol St. NE
Fourth Floor
Washington, DC 20002
Phone: (202) 671-4900

www.doh.dc.gov/hahsta