

CONNECTICUT

Epidemiologic Profile of HIV

Connecticut Department of Public Health

TB, HIV, STD & Viral Hepatitis Section

HIV Surveillance Program

2021



Connecticut Department of Public Health

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The data presented in this report represent diagnoses of HIV infection identified through 2019 and reported to DPH through December 2020.

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Abbreviations

AAMR	Age adjusted mortality rate
AIDS	Acquired immunodeficiency syndrome
CDC	Centers for Disease Control and Prevention
CI	Confidence interval
DPH	Department of Public Health
EMA	Eligible metropolitan area
HCV	Hepatitis C virus
HIV	Human immunodeficiency virus
IDU	Injection drug user
MSM	Men who have sex with men
PWH	People living with HIV or AIDS
PWID	Person who injects drugs
STD	Sexually transmitted diseases
TGA	Transitional grant area

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Executive Summary

The Department of Public Health (DPH) monitors HIV disease through laboratory reporting of HIV-related test results and submission of HIV Case Report Forms by medical providers and HIV Surveillance Program epidemiologists. The information collected is used to analyze and disseminate HIV data to local, state and federal public health partners who provide prevention and care services for people living with HIV and people at risk for HIV infection including HIV testing, PrEP, antiretroviral medication, housing support, syringe exchange services, and other harm reduction services.

The goals of the *Connecticut HIV Epidemiologic Profile* are to enhance understanding of HIV epidemiology for Prevention and Care planning groups, grantees, care providers, and health educators by providing comprehensive descriptive epidemiology of HIV among overall and subpopulations residing in Connecticut or specified service areas in terms of sociodemographic, geographic, behavioral, and clinical characteristics.

The data in this profile may be applied for several purposes, including planning, designing and implementing HIV prevention activities and evaluation programs, informing policy decisions, and determining care needs for underserved groups. Researchers, consumers, legislators, and the media also use surveillance data.

HIV surveillance data provided in this report can also be found on the Connecticut Department of Public Health website at ct.gov/dph/HIVsurveillance.

HIV in Connecticut, At a Glance

- Since 1981, over 22,000 people have been reported with HIV and more than half have died.
- As of December 2019, 10,705 people were living with HIV (300 per 100,000 population).
- HIV cases are found disproportionately among Black/African American and Hispanic/Latinx populations who make up 27% of Connecticut's population and comprise 68% of people living with HIV.
- In the last 5 years, 1,303 HIV infections were newly diagnosed and reported to DPH. Twenty-three percent of newly diagnosed cases met the criteria for AIDS at diagnosis.
- In the last 10 years, there has been a 71% decrease in injection drug use (IDU) reported as the mode of transmission for HIV.
- Data from the HIV and STD surveillance systems continue to indicate ongoing co-infection in MSM. Of 352 syphilis cases diagnosed the past 5 years, 71% were among MSM and 21% were co-infected with HIV.
- Eighty percent of people diagnosed with HIV were engaged in care in 2019.
- Eighty-seven percent of adolescents and adults diagnosed with HIV were linked to care within 1 month of their diagnosis.
- People are living longer with HIV due to retention in care and medication adherence. In 2019, 63% of the people living with HIV in Connecticut were aged 50 or older.

Section I About Connecticut

According to the 2019 census, the total population of Connecticut was 3,565,287 persons. Connecticut is made up of 169 towns and 8 counties. The state does not have county-level government. There are 64 local health departments and health districts that serve 97.5% of the population.

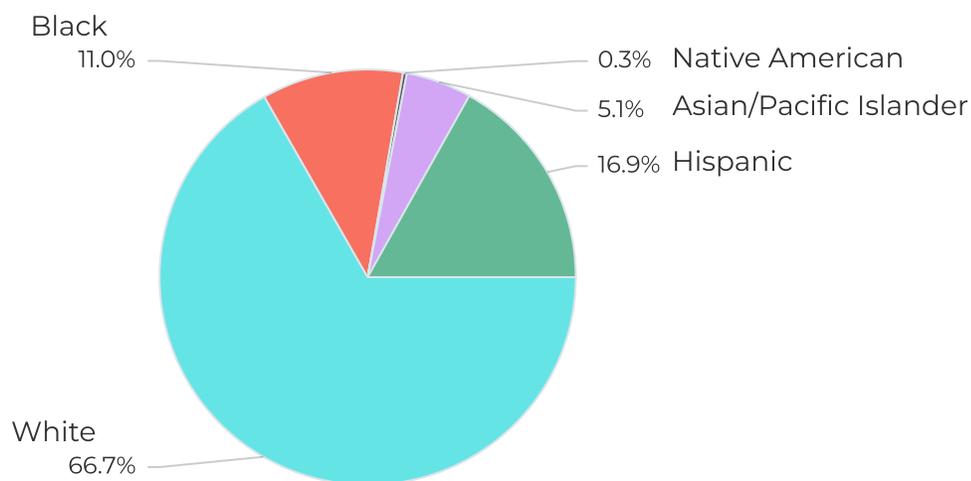
Table 1: Local Health Departments

Type of Department	Towns Covered	Percent of Population
Full Time	159	97.5%
• Municipal	34	49.5%
• Districts	125	48%
Part Time	10	2.5%
Total	169	100%

Demographic Composition

According to the 2019 estimated census data, the racial and ethnic composition of the state was estimated to be 66.7% White, 11.0% Black, 16.9% Hispanic, 5.1% Asian/Pacific Islander, and <1% Native American.

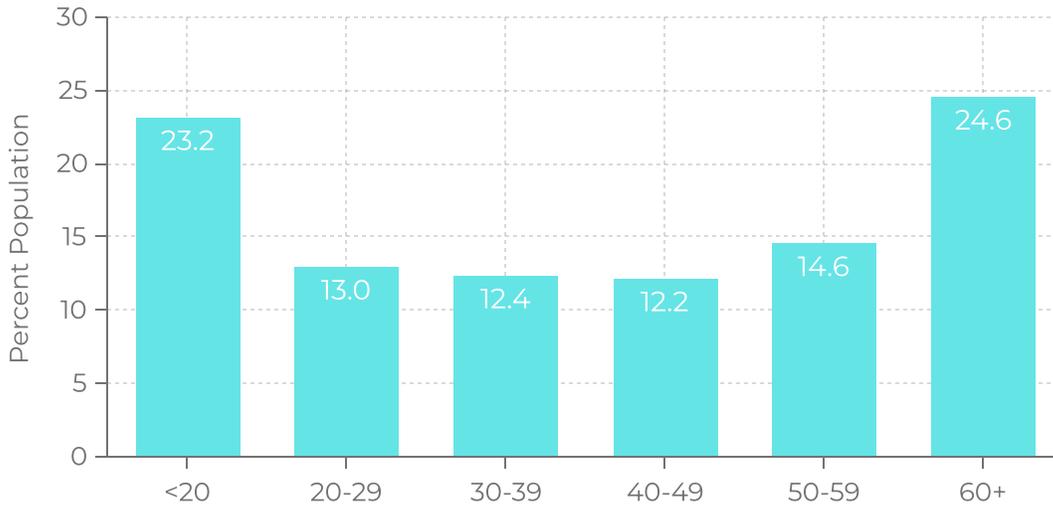
Figure 1: Connecticut Residents by Race, 2019



Age and Gender

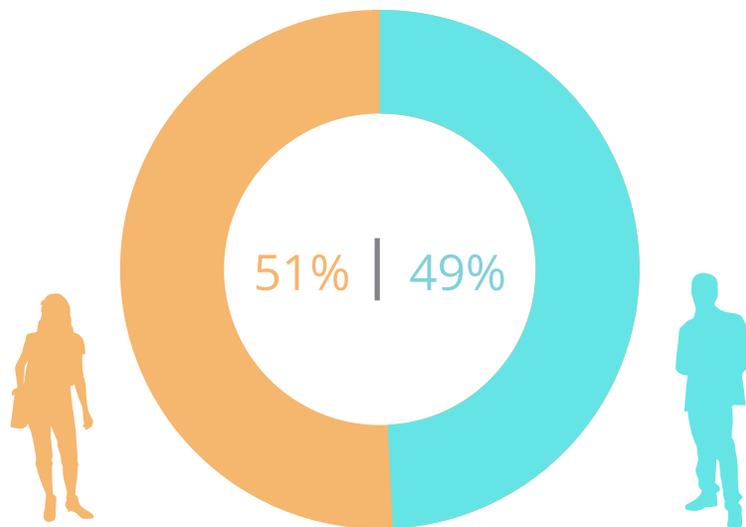
The 2019 census estimates that persons under the age of 20 accounted for 23.2% of the population and persons age 60 and older, 24.6%. The median age in Connecticut is 41 years.

Figure 2: Connecticut Residents by Age-Group, 2019



The 2019 census estimated the proportion of females slightly higher than males (51% vs. 49%).

Figure 3: Connecticut Residents by Sex at Birth, 2019



Poverty, Income, and Education

Between 2015 and 2019, the average household size in Connecticut was 2.5 persons. Of all Connecticut households, 66.1% are owner-occupied. An estimated 90.6% of Connecticut residents aged 25 years and older had attained a high school degree or higher, and 39.3% had a bachelor's degree or higher. The estimated median household income in Connecticut was \$78,444. Approximately 20% of the population had income <200% federal poverty level.

The unemployment rate in December 2019 in Connecticut was 3.6%.

Incarceration and Crime

In 2019, Connecticut's crime rate (16.1 per 1000) was lower than the national average (24.9 per 1000). Property crimes accounted for 88% of the crime rate and violent crimes accounted for 11% of the crime rate. Connecticut's incarceration rate was 245 per 100,000 adult population. In December 2019, the Connecticut Department of Corrections custody population was 12,274 persons incarcerated.

Table 2: Connecticut Crime Rates, 2019

	Violent	Property	Total
Number of Crimes	6,546	50,862	57,408
Crime Rate (per 1,000 residents)	1.84	14.27	16.10

Health Indicators

The 2019 United Health Foundation's America's Health Rankings Report, Connecticut ranked 4th out of 50 in overall health. This annual health report scores states based on 35 measures across 5 categories of health including behavioral, community and environment, policy, clinical care and health outcomes. Connecticut's strengths were low prevalence of smoking, high rate of primary care physicians, and low cardiovascular death rate. Notable challenges included high prevalence of excessive alcohol consumption, high rate of deaths attributed to drug injury, and high income inequality.

Public Aid

Between 2015 and 2019, an estimated 7% of Connecticut residents were without health insurance. In 2019, Medicaid covered 20% and Medicare covered 11% of all persons living in Connecticut. Medicaid expenditures in Connecticut totaled \$8 billion in the 2019 fiscal year. In 2019, 1 in 3 children were insured through Medicaid.

Table 3: Town and County Populations, Connecticut, 2019

County	Est. Pop.	County	Est. Pop.				
Fairfield	943,332	New Haven	854,757	State Total = 3,565,287			
Hartford	891,720	New London	265,206				
Litchfield	180,333	Tolland	150,721				
Middlesex	162,436	Windham	116,782				

Town	Est. Pop.	Town	Est. Pop.	Town	Est. Pop.	Town	Est. Pop.
Andover	3,236	East Hartford	49,872	Monroe	19,434	Sherman	3,630
Ansonia	18,654	East Haven	28,569	Montville	18,508	Simsbury	25,395
Ashford	4,255	East Lyme	18,462	Morris	2,254	Somers	10,784
Avon	18,276	Easton	7,521	Naugatuck	31,108	Southbury	19,571
Barkhamsted	3,606	East Windsor	11,668	New Britain	72,495	Southington	43,834
Beacon Falls	6,222	Ellington	16,467	New Canaan	20,233	South Windsor	26,162
Berlin	20,436	Enfield	43,659	New Fairfield	13,878	Sprague	2,859
Bethany	5,548	Essex	6,668	New Hartford	6,656	Stafford	11,893
Bethel	19,800	Fairfield	62,045	New Haven	130,250	Stamford	129,638
Bethlehem	3,402	Farmington	25,497	Newington	30,014	Sterling	3,782
Bloomfield	21,211	Franklin	1,920	New London	26,858	Stonington	18,559
Bolton	4,884	Glastonbury	34,482	New Milford	26,805	Stratford	51,849
Bozrah	2,726	Goshen	2,863	Newtown	27,891	Suffield	15,814
Branford	27,900	Granby	11,507	Norfolk	1,630	Thomaston	7,535
Bridgeport	144,399	Greenwich	62,840	North Branford	14,146	Thompson	9,379
Bridgewater	1,635	Griswold	11,534	North Canaan	3,251	Tolland	14,618
Bristol	59,947	Groton	38,436	North Haven	23,683	Torrington	34,044
Brookfield	16,973	Guilford	22,133	North Stonington	5,196	Trumbull	35,673
Brooklyn	8,272	Haddam	8,193	Norwalk	88,816	Union	839
Burlington	9,704	Hamden	60,556	Norwich	38,768	Vernon	29,359
Canaan	1,053	Hampton	1,842	Old Lyme	7,306	Voluntown	2,510
Canterbury	5,079	Hartford	122,105	Old Saybrook	10,061	Wallingford	44,326
Canton	10,254	Hartland	2,120	Orange	13,926	Warren	1,395
Chaplin	2,239	Harwinton	5,420	Oxford	13,255	Washington	3,428
Cheshire	28,937	Hebron	9,504	Plainfield	15,125	Waterbury	107,568
Chester	4,213	Kent	2,777	Plainville	17,534	Waterford	18,746
Clinton	12,925	Killingly	17,336	Plymouth	11,598	Watertown	21,578
Colchester	15,809	Killingworth	6,364	Pomfret	4,203	Westbrook	6,869
Colebrook	1,400	Lebanon	7,144	Portland	9,267	West Hartford	62,965
Columbia	5,379	Ledyard	14,621	Preston	4,625	West Haven	54,620
Cornwall	1,362	Lisbon	4,220	Prospect	9,702	Weston	10,252
Coventry	12,407	Litchfield	8,094	Putnam	9,389	Westport	28,491
Cromwell	13,839	Lyme	2,316	Redding	9,116	Wethersfield	26,008
Danbury	84,694	Madison	18,030	Ridgefield	24,959	Willington	5,864
Darien	21,728	Manchester	57,584	Rocky Hill	20,115	Wilton	18,343
Deep River	4,443	Mansfield	25,487	Roxbury	2,152	Winchester	10,604
Derby	12,339	Marlborough	6,335	Salem	4,083	Windham	24,561
Durham	7,165	Meriden	59,395	Salisbury	3,600	Windsor	28,733
Eastford	1,790	Middlebury	7,798	Scotland	1,672	Windsor Locks	12,854
East Granby	5,140	Middlefield	4,374	Seymour	16,437	Wolcott	16,587
East Haddam	8,997	Middletown	46,258	Sharon	2,689	Woodbridge	8,750
East Hampton	12,800	Milford	54,747	Shelton	41,129	Woodbury	9,502
						Woodstock	7,858

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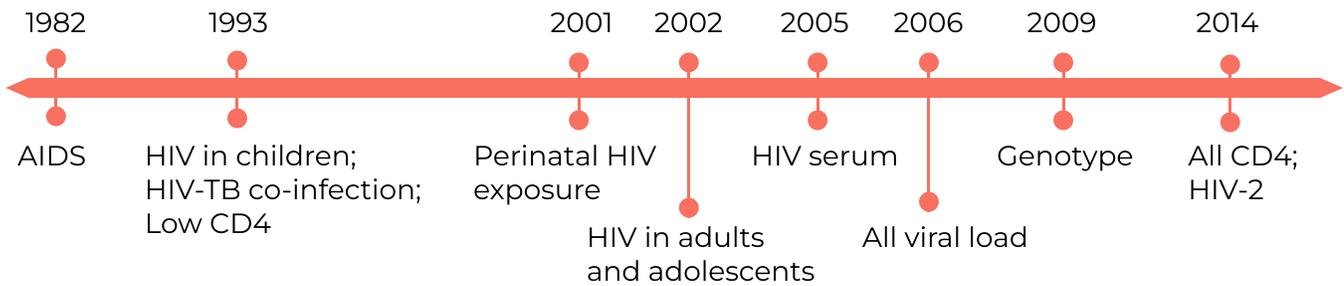
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The Sentencing Project, Connecticut Corrections Population, 2019

Section II History of HIV in Connecticut

The Connecticut Department of Health (DPH) began confidential name-based reporting for AIDS in 1982. Over time, reporting requirements expanded to meet CDC case definitions and improve understanding of the HIV epidemic using surveillance data analysis. The timeline below illustrates surveillance reporting changes since the start of the epidemic.

Figure 4: HIV-related Laboratory Reporting Timeline, Connecticut, 1982-2019



Surveillance data is routinely analyzed to provide de-identified, descriptive, summary and trend data to public health partners within DPH, community-based organizations, research, and other public health data consumers. HIV surveillance data is disseminated at least annually on the DPH HIV Surveillance webpages, in presentations, reports, and custom data requests.

Figure 5: Total HIV and AIDS Reported, Newly Diagnosed, and Deaths Connecticut 1981-2019



In the first 20 years of the HIV epidemic (1981 to 2001), 14,848 people were reported to the DPH with HIV or AIDS and 6,898 (46%) have died.

Overall, there have been 22,019 people reported with HIV or AIDS diagnoses and over 11,000 people with HIV have died.

Note: Reported living with HIV/AIDS is based on address at diagnosis.
Source: HIV surveillance registry for cases reported through December 2020.

Section III Social Determinants of Health

Figure 6: Households Living Below Federal Poverty Level | 5-Year Estimates (2015-2019)

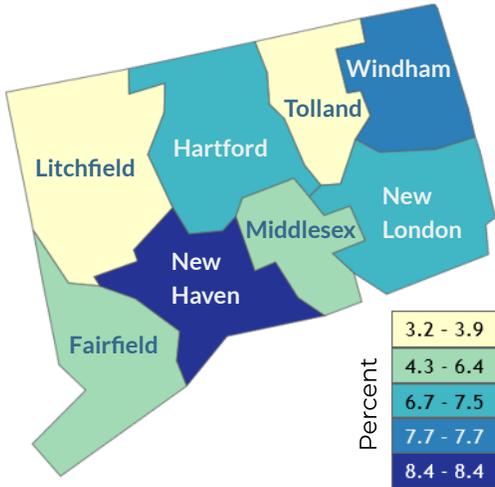


Figure 7: Uninsured | 5-Year Estimates (2015-2019)

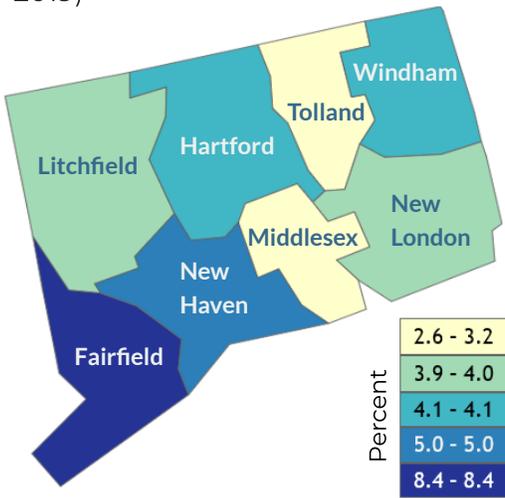
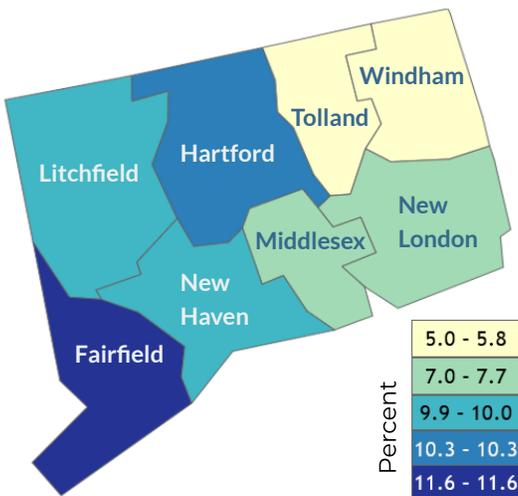


Figure 8: Population 25 Years and Older Without a HS Diploma | 5-Year Estimates (2015-2019)



Source: Centers for Disease Control and Prevention (CDC) NCHHSTP [AtlasPlus](#). ACS 5 year estimates (2015-2019) county level social determinates of health by quartile.

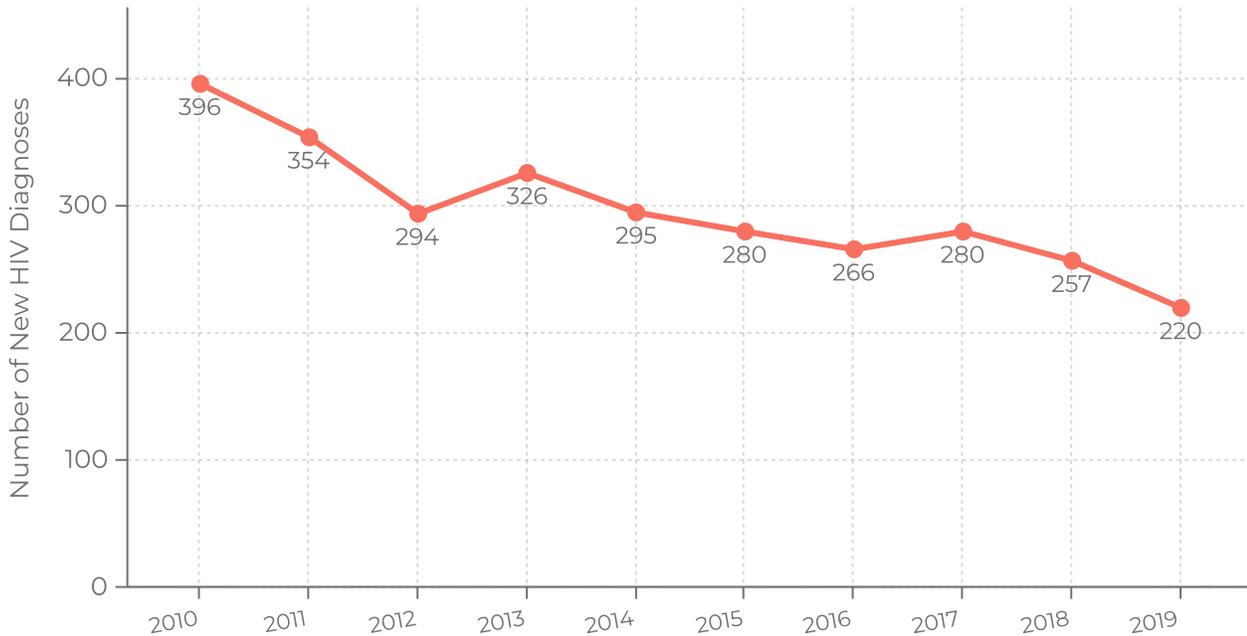
Table 4: Number and Rate of PLWH by County, Connecticut, 2019

County	Prevalence (n)	Rate
Fairfield	2,701	286
Hartford	3,176	356
Litchfield	243	135
Middlesex	302	135
New Haven	3,380	395
New London	564	213
Tolland	140	93
Windham	199	170
Connecticut	10,705	300

Rate of HIV prevalence per 100,000 population based on [2019 census estimates](#) and HIV surveillance registry for cases reported through December 2020.

Section IV Trends in New HIV Diagnoses

Figure 9: Number of New HIV Diagnoses, Connecticut, 2010-2019

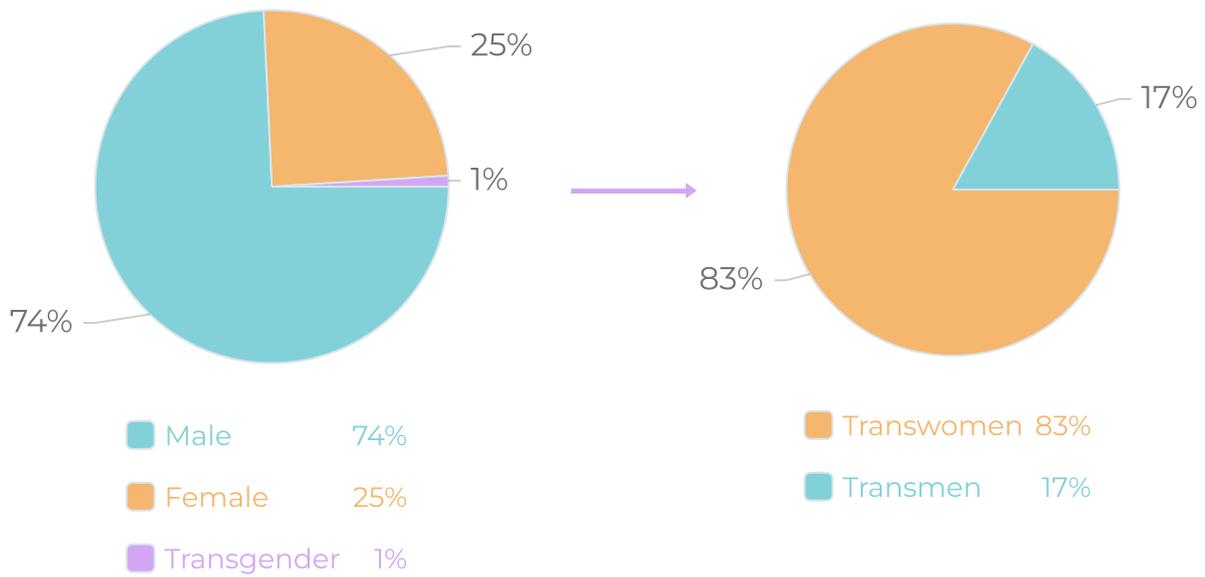


Over the past 10 years, there has been a steady decline in new HIV diagnoses. New diagnoses are sometimes interpreted as new infections however, an HIV diagnosis does not indicate when a person was infected with HIV. Medical providers test people for HIV both routinely and when patients have symptoms indicative of acute HIV or AIDS, which are classified as Stage 0 (early HIV) and Stage 3 (AIDS), respectively. These data are representative of HIV prevalence, the number of cases observed within a population in a specified timeframe.

- In 2019, 220 people were newly diagnosed with HIV in Connecticut.
- In the past 5 years, (2015 - 2019), an average of 261 persons were newly diagnosed.
- In the past 10 years (2010 - 2019), the rate of new HIV diagnoses ranged from a high of 11.0 per 100,000 population in 2010 to a low of 6 per 100,000 population in 2019.
- In the past 10 years (2010 - 2019), there has been a 44% decrease in the number of new HIV diagnoses identified.

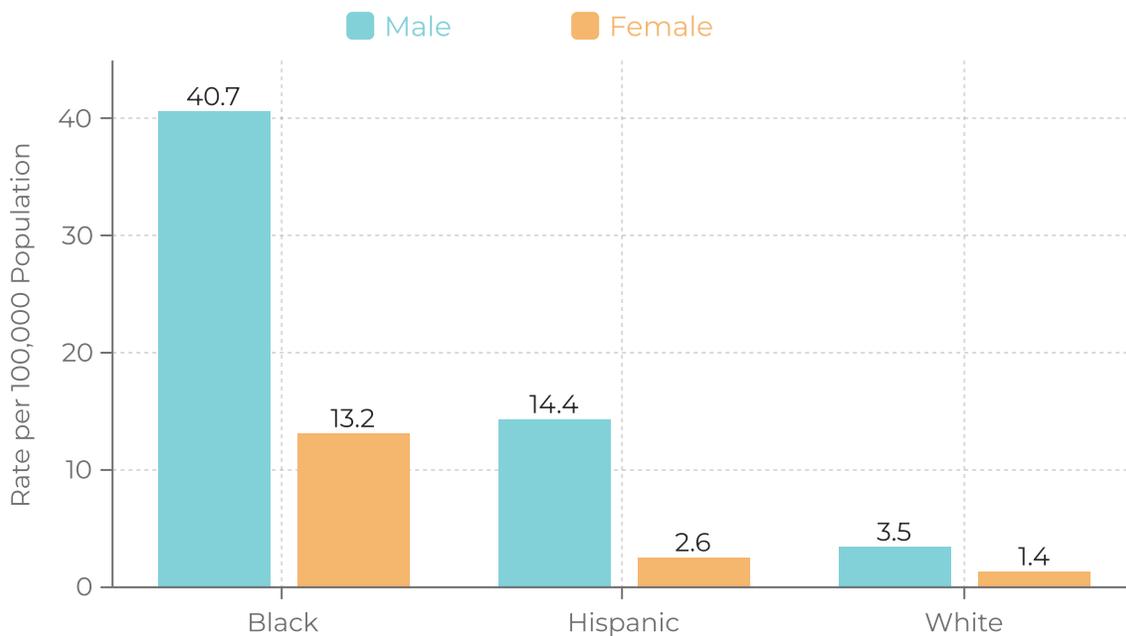
While the steady decline in new diagnoses is encouraging, disparities continue to exist among new HIV diagnoses occurring within specific sub-populations.

Figure 10: Number of New HIV Diagnoses by Gender, Connecticut, 2015-2019



Note: Data includes people identified as transgender, at any time, by self-report, medical provider, chart review, or ongoing data collection.

Figure 11: Rate of New HIV Diagnoses by Race/Ethnicity and Sex at Birth, Connecticut, 2019



The rate of new HIV diagnoses among black males was approximately 10 times higher than white males. Hispanic males were diagnosed at a rate approximately 3.5 higher than white males. Among females, 54% of new diagnoses occurred in Black/African American women.

Of the 220 HIV cases diagnosed in 2019, 168 were male.

In the past 5 years, 1,018 males were newly diagnosed with HIV. When stratified by age group, males 20-29 years of age emerge as disproportionately affected.

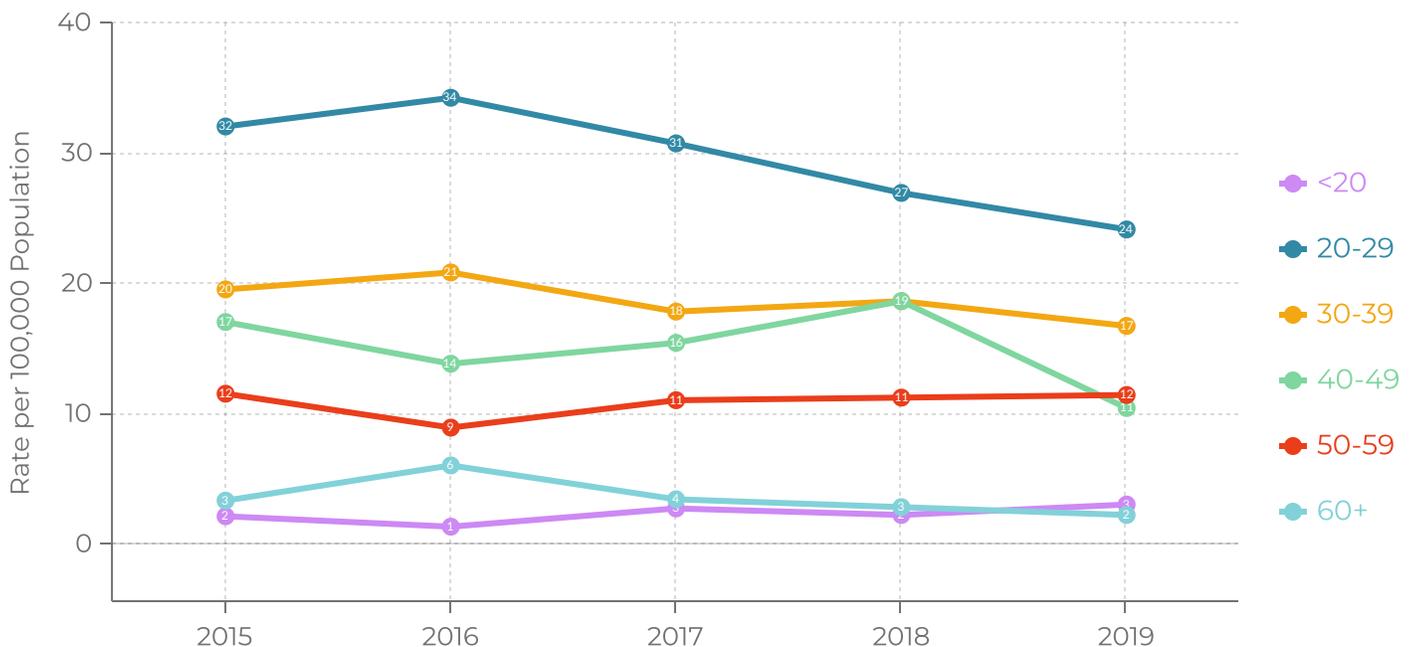
Over the 5-year timeframe, the highest average rate of new HIV diagnoses consistently occurred among males 20-29 years of age (29.7 per 100,000) followed by 30–39 years of age (18.8 per 100,000) and 40–49 years of age (15.1 per 100,000).

Table 5: New HIV Diagnoses in Males by Age-group, Annual Rates, Connecticut, 2015–2019

	2015	2016	2017	2018	2019	5-Yr Average
<20	2.2	1.4	2.8	2.3	3.1	2.4
20-29	32.1	34.3	30.8	27.0	24.2	29.7
30-39	19.6	20.9	17.9	18.7	16.8	18.8
40-49	17.1	13.9	15.5	18.7	10.5	15.1
50-59	11.6	9.0	11.1	11.3	11.5	10.9
60+	3.4	6.1	3.5	2.9	2.3	3.6

Bold text indicates reported number of cases < 12. When relative standard error is >30%, data is considered unreliable and must be interpreted with caution.

Figure 12: Rates of New HIV Diagnoses in Males by Age-group, 5-Year Trends, Connecticut, 2015–2019



Of the 220 HIV cases diagnosed in 2019, 52 were female.

In the past 5 years, 341 females were newly diagnosed with HIV.

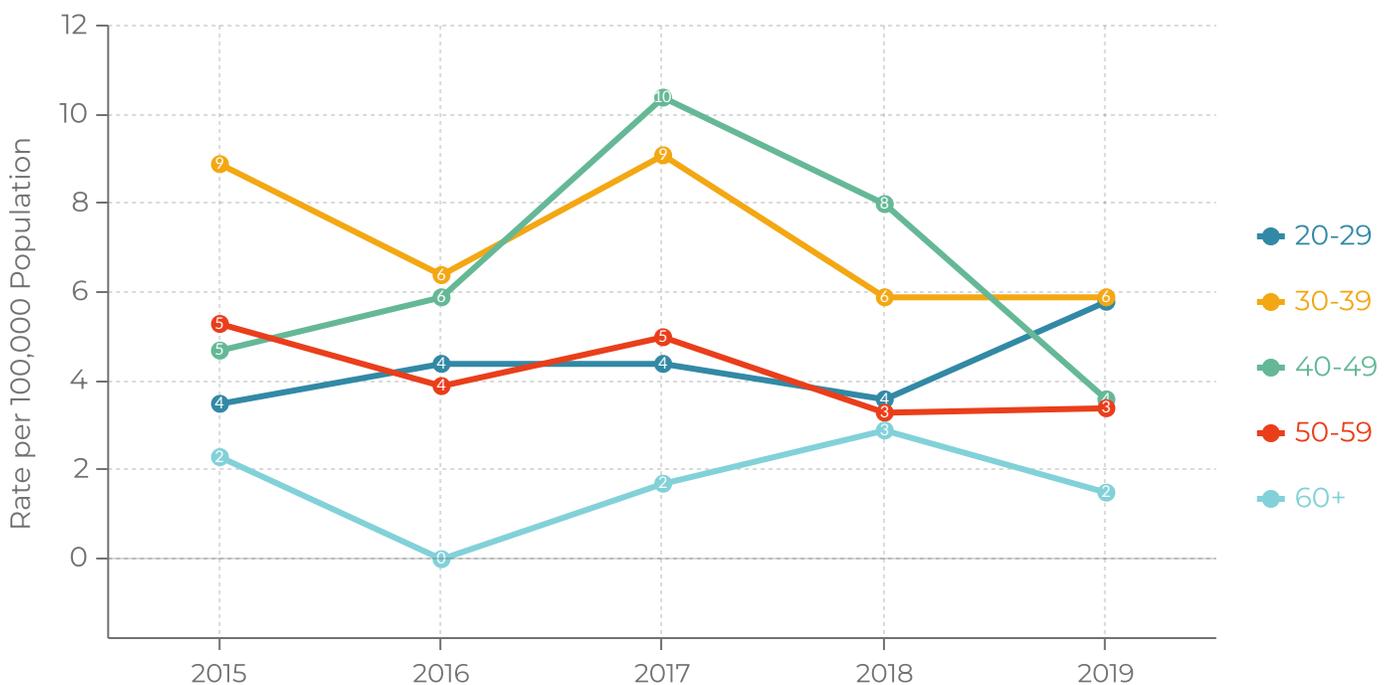
When stratified by age-group, females in the 30-39 year age-group had a higher average 5-year rate (7.24 per 100,000) than females in the 40-49 year age-group (6.6 per 100,000). Notably, diagnoses occurring among females 40-49 years of age declined from a peak of 10.8 in 2017 to 3.6 in 2019.

Table 6: New HIV Diagnoses in Females by Age-group, Annual Rates, Connecticut, 2015–2019

	2015	2016	2017	2018	2019	5-Yr Average
<20	**	**	**	**	**	--
20-29	3.5	4.4	4.4	3.6	5.8	4.3
30-39	8.9	6.4	9.1	5.9	5.9	7.2
40-49	4.7	5.9	10.8	8.0	3.6	6.6
50-49	5.3	3.9	4.7	3.3	3.4	4.1
60+	2.3	**	1.7	2.1	1.5	1.9

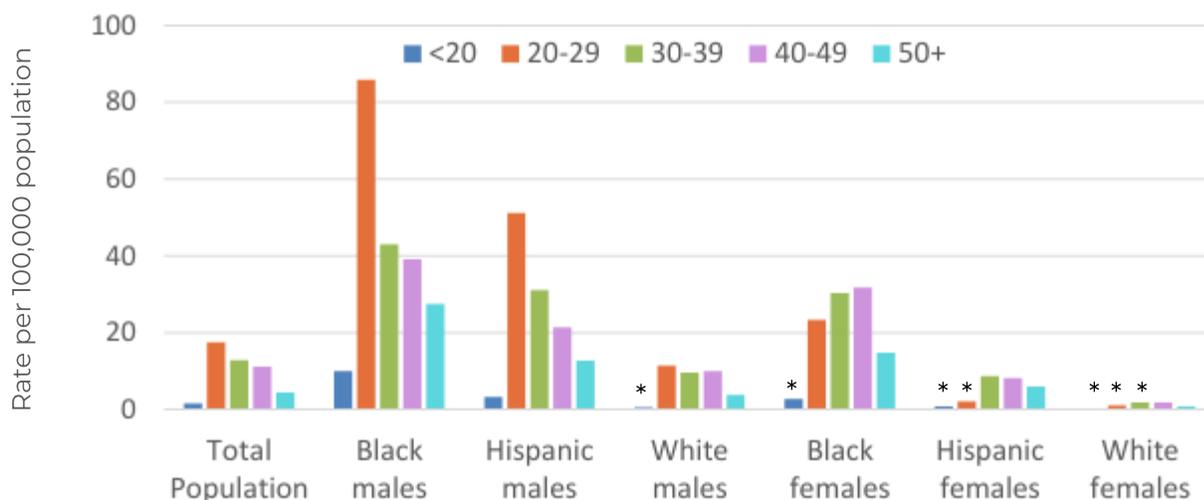
Bold text indicates reported number of cases < 12. When relative standard error is >30%, data is considered unreliable and must be interpreted with caution. ** indicates suppressed due to small cell size.

Figure 13: Rates of New HIV Diagnoses HIV in Females by Age-group, 5-Year Trends, Connecticut, 2015–2019



Source: HIV surveillance registry for cases reported through 2019 and corresponding census or census estimates.

Figure 14: Rate of New HIV Diagnoses by Race, Sex at Birth, and Age-group, Connecticut, 2015–2019

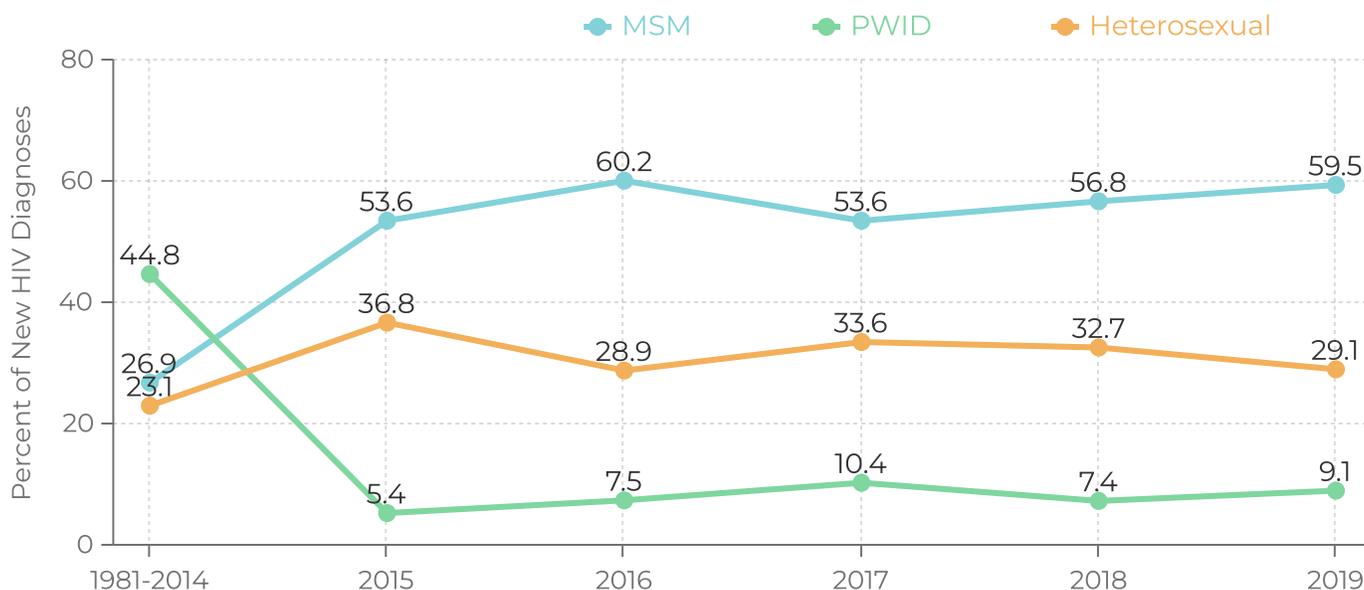


*Interpret with caution: Sub-groups with <12 reported cases, relative standard error >30%.

In the past 5 years, HIV diagnoses were highest among young men of color in the 20-29 year age-group. The rate of HIV diagnoses among black males in the 20-29 year age-group was 86 per 100,000 population and 51 per 100,000 population for Hispanic males.

These data also demonstrate racial disparities among women. The HIV diagnosis rate in black females was approximately 20 times greater than the rate for white females. The HIV diagnosis rate for Hispanic females was 4 times greater than the rate for white females.

Figure 15: Trend in New HIV Diagnoses by Transmission Category (N=21,724), Connecticut, 1981–2019



Note: These data are point estimates of new HIV diagnoses that have been adjusted for cases initially reported without a reported risk using multiple imputation (MI).

Consistent with national HIV surveillance data, gay and bisexual men were the most affected HIV risk group between 2015 and 2019. Trends among people who inject drugs (PWID) remain stable (range 5.4-10.4, average 8.0, based on multiple imputation or adjusted risk analysis methods). While stability among PWIDs is encouraging, harm reduction activities must remain intact to maintain or continue downward trends in new HIV diagnoses among this population.

During 2015 - 2019...



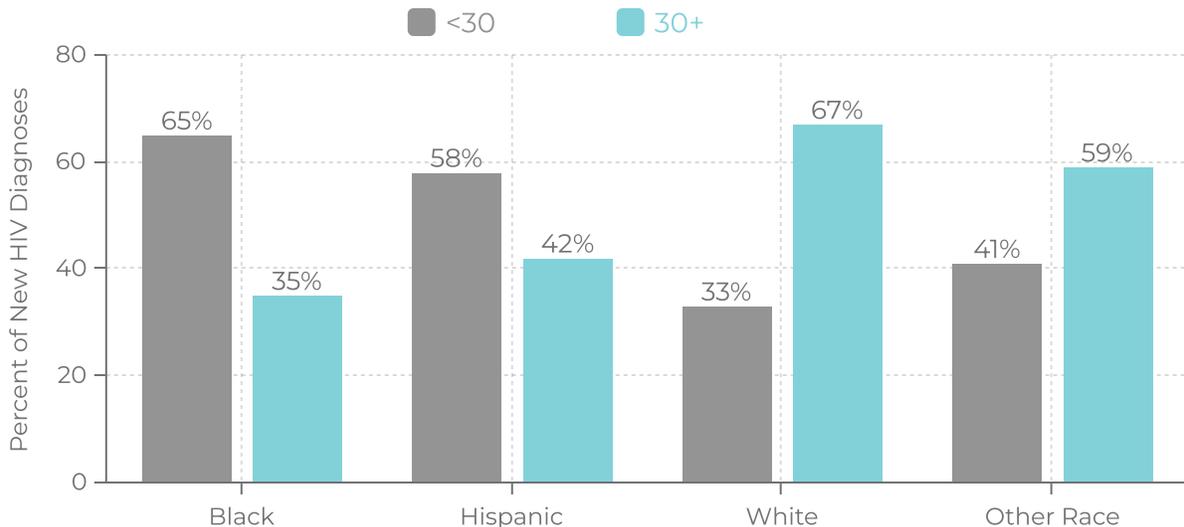
Newly diagnosed HIV-positive women (n=314) reported heterosexual sex as risk for HIV



Newly diagnosed HIV-positive men (n=989) reported sex with men as risk for HIV

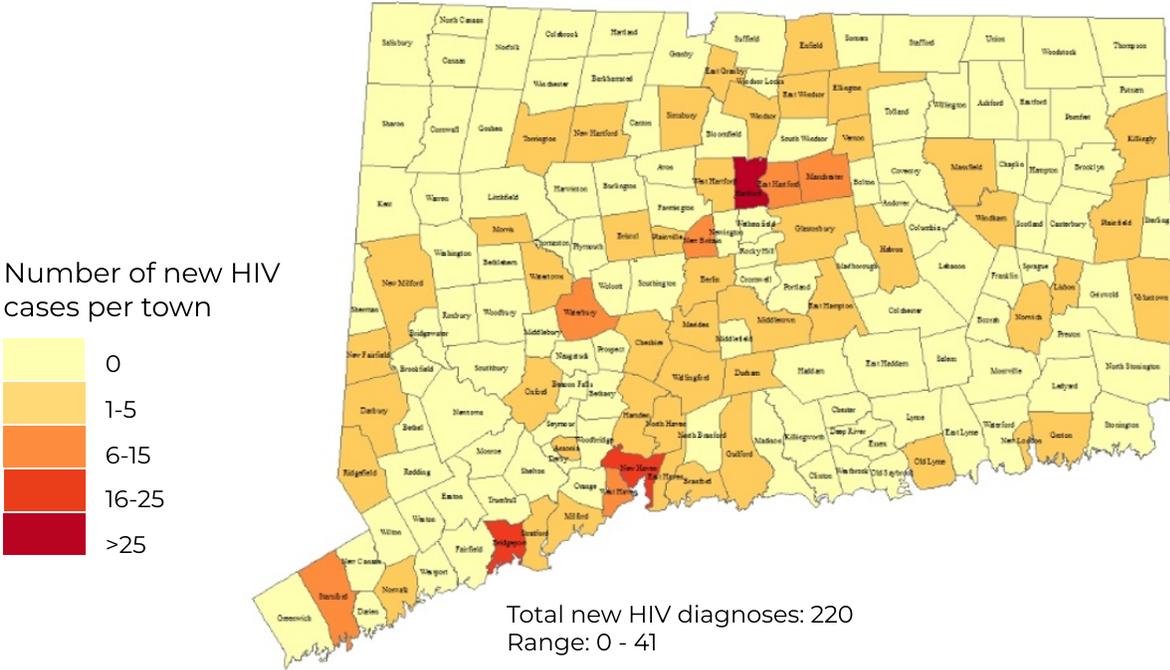
During 2015–2019, 66% of gay or bisexual black men and 58% of gay or bisexual Hispanic men diagnosed with HIV were under 30 years of age. By contrast, the majority (67%) of gay or bisexual white males were 30 years of age or older.

Figure 16: New HIV diagnoses in MSM by Race and Age-group, Connecticut, 2015–2019



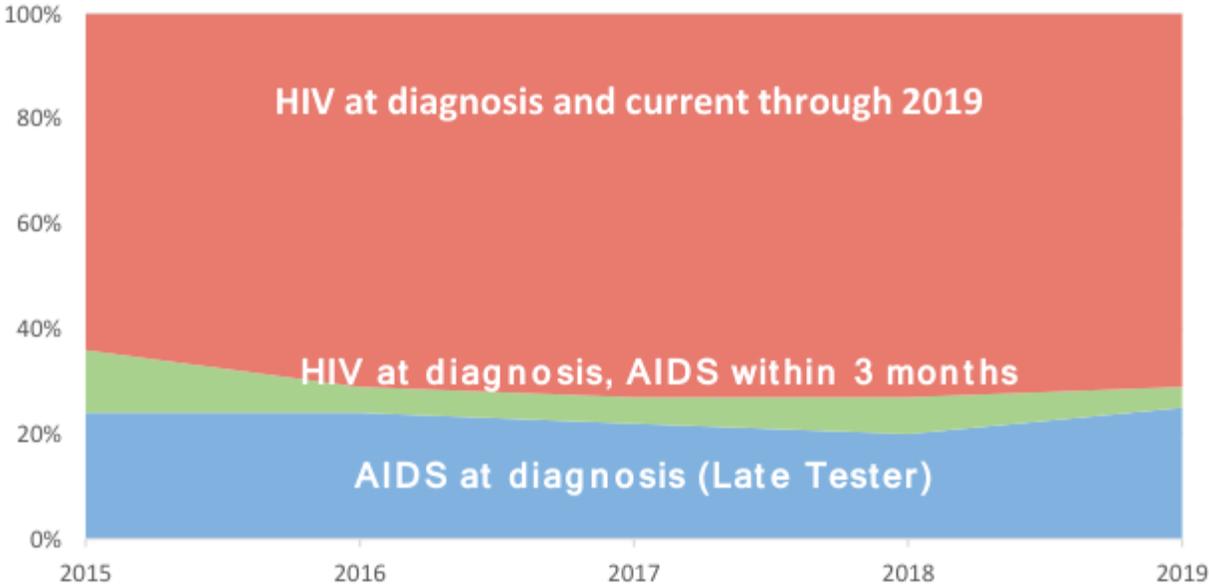
Source: HIV surveillance registry for cases reported through 2020

Figure 17: New HIV diagnoses by Town of Residence, Connecticut, 2019



The highest numbers of new HIV diagnoses were diagnosed in Connecticut’s largest cities. Cumulatively during 2015–2019, greater than 50 cases of HIV were diagnosed among residents of Bridgeport, Hartford, New Haven, Stamford, Waterbury, and West Haven.

Figure 18: AIDS at Diagnosis, Transitioned to AIDS, or Continued HIV, Connecticut, 2015-2019



On average, 26% of people diagnosed with HIV presented with AIDS or transitioned to AIDS within 3 months of diagnosis during 2015–2019 (range 23–28%). Over the five-year period, the percentage of “Late-testers” has trended downward. There was a statistically significant difference in mean age at diagnosis between the “Late testers” and others diagnosed, 45 years vs 35 years, respectively. In addition, “Late testers” tended to be heterosexual males ($p < 0.001$).

Source: HIV surveillance registry for cases reported through 2020

Section V Linkage to Care

Figure 19: Linked to Care Within 1 Month, New Diagnoses, Connecticut, 2015–2019¹

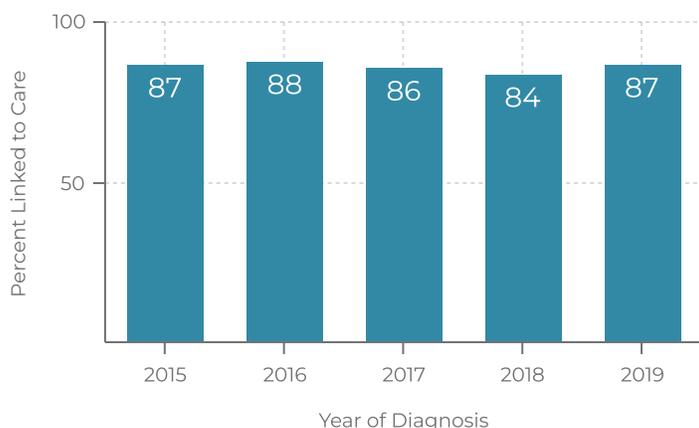
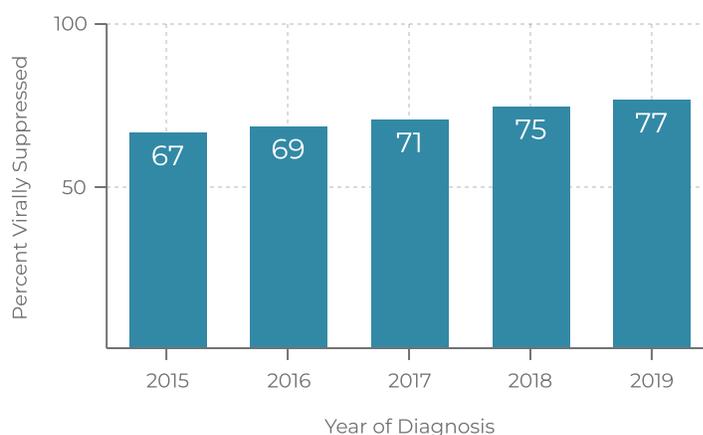


Figure 20: Viral Suppression Within 3 Months, Newly Diagnosed, Connecticut, 2015–2019²

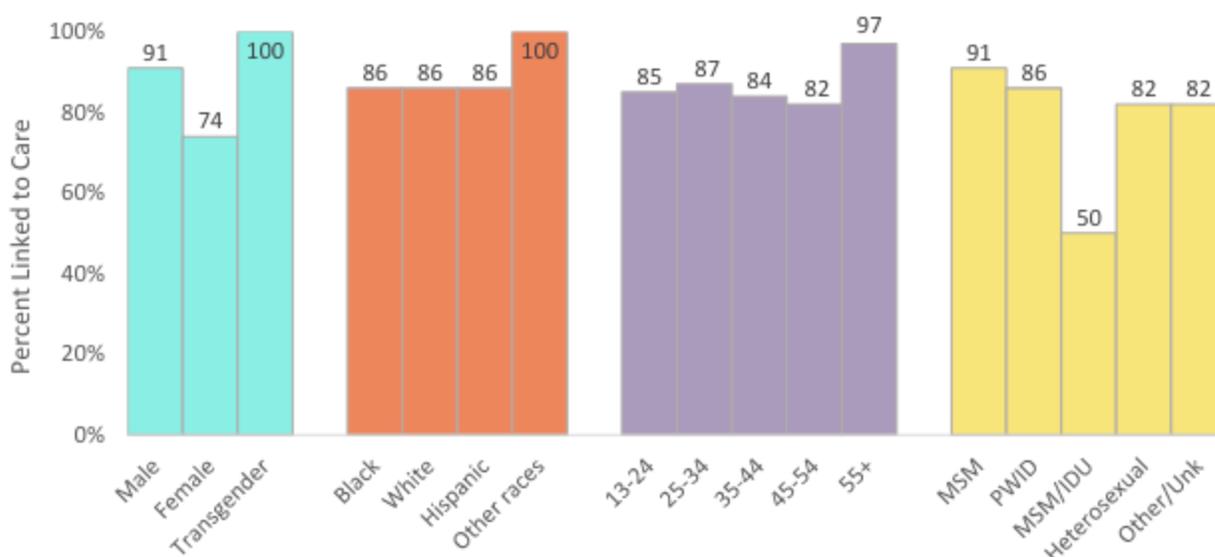


1 Includes persons newly diagnosed, ≥ 13 years of age with at least one CD4, viral load, or HIV-1 genotype test within 1 month of the HIV-positive test date.

2 Includes persons newly diagnosed, ≥ 13 years of age with at least one viral load result < 200 copies/mL within 90 days of HIV diagnosis.

During 2015-2019, $> 80\%$ of adults and adolescents newly diagnosed with HIV were linked to medical care within 1 month of diagnosis. Persons with unknown risk factor(s) had lower than average linkage rates with results ranging from 63% to 82%. Viral suppression rates for newly diagnosed adolescent and adults improved each year of the timeframe.

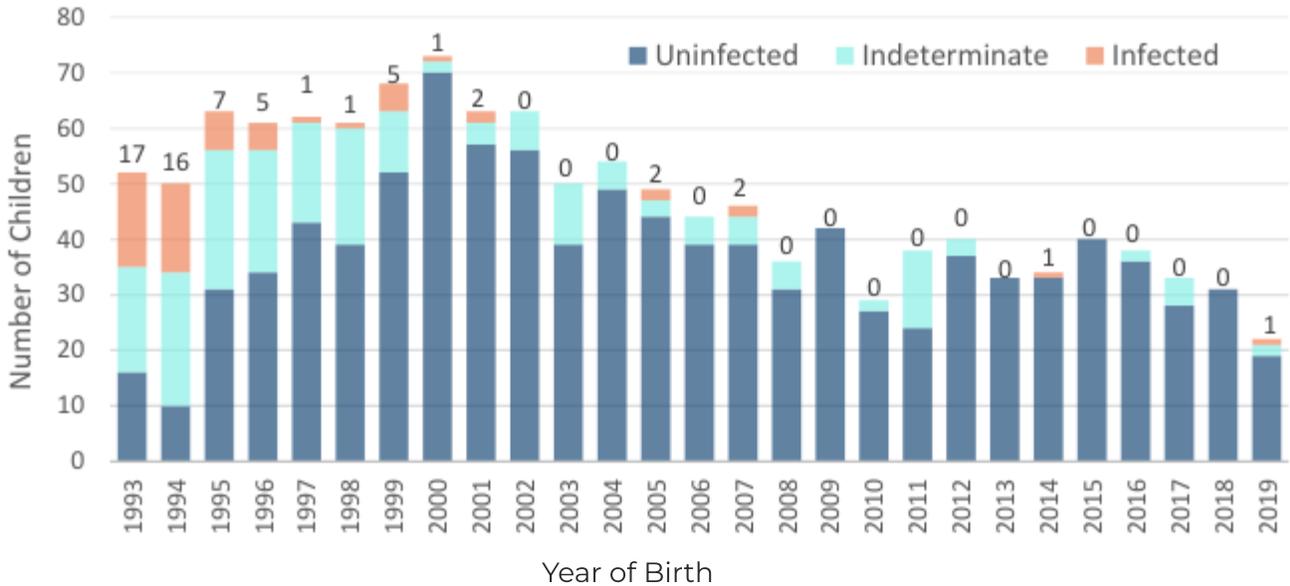
Figure 21: Linked to Care Within 1 Month, New Diagnoses, Connecticut, 2019



Note: Includes persons newly diagnosed, ≥ 13 years of age with at least one CD4, viral load, or HIV-1 genotype test within 1 month of the HIV-positive test date.

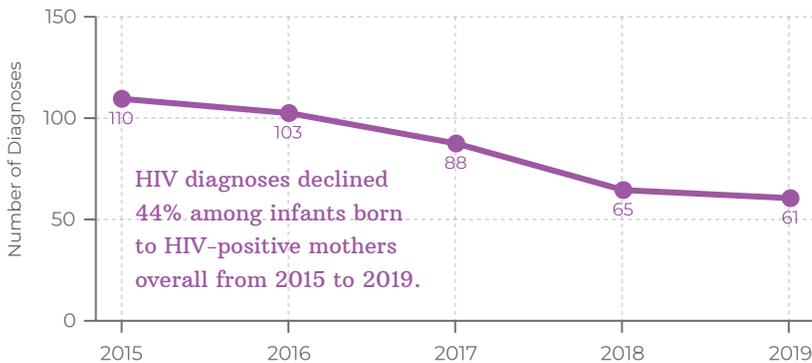
Section VI Perinatal HIV Exposure

Figure 22: Trends in Perinatal HIV Exposure and Transmission by Year of Birth, Connecticut, 1993-2019



Note: "Indeterminate" status includes infants born in Connecticut to HIV-positive mothers, assumed to be HIV negative however, subsequent laboratory tests were not performed/reported.

Figure 23: Diagnoses of Perinatal HIV Infections in the US and Dependent Areas, 2015-2019



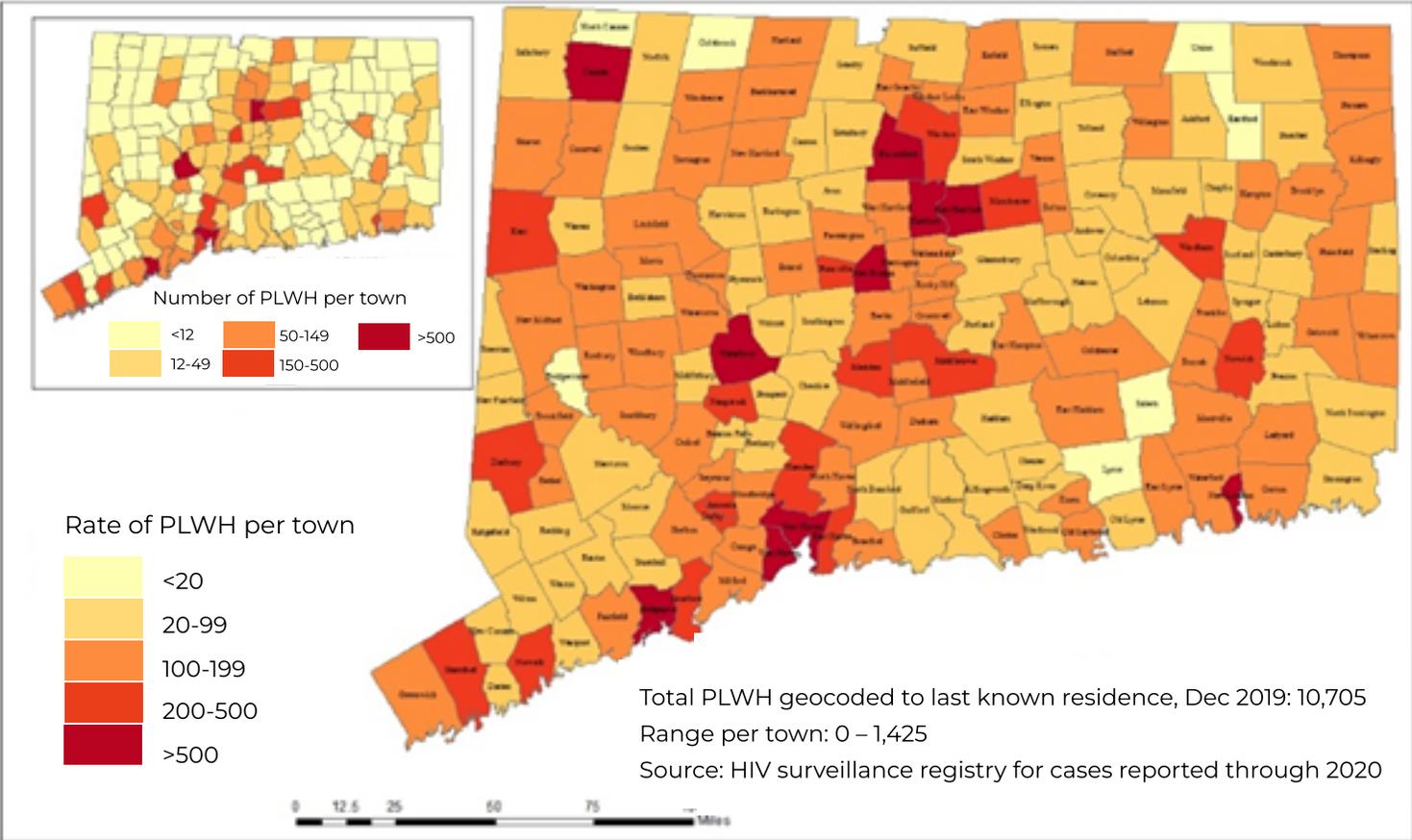
Since the introduction of zidovudine prophylaxis for pregnant women living with HIV and their infants, perinatal HIV transmission has been a public health success story.¹⁻² In 1993, the US recorded 1,630 perinatally-acquired HIV infections. Since the late 90's, there has been a continuous downward trend. In 2019, the number of mother-to-child HIV infections reported was 61 and trending down.^{3,4}

Connecticut was the first state to enact mandatory opt-out prenatal HIV testing in 1999 and today, all pregnant women are tested for HIV during prenatal care. If an expectant mother elects to opt-out, their infant is tested upon delivery. Initially, HIV testing occurred within 30 days of the first prenatal visit and between 26 and 28 weeks gestation. The regulation succeeded in reducing perinatal transmission. In response to a perinatal infection in 2014 and improved testing technology, the regulation was changed in 2017. The second prenatal HIV test now occurs between 32 and 36 weeks gestation and, for mothers who present for labor and delivery prior to the second HIV test, the second test is performed during the hospital admission for delivery.

1. Zidovudine for the Prevention of HIV Transmission from Mother to Infant. *MMWR Morb Mortal Wkly Rep* April 29, 1994 / 43(16);285-287.
2. Lindegren ML, Byers RH, Thomas P, et al. Trends in Perinatal Transmission of HIV/AIDS in the United States. *JAMA: The Journal of the American Medical Association*. 1999;282(6):531-538.
3. Little KM, Taylor A, Borkowf CB, Mendoza MC, Lampe MA, Weidle PJ, Nesheim SR. Perinatal antiretroviral exposure and prevented mother-to-child HIV infections in the era of antiretroviral prophylaxis in the United States, 1994–2010. *Pediatr Infect Dis J* 2017; 36:66–71.
4. Recommendations for assisting in the prevention of perinatal transmission of human T-lymphotropic virus type III/lymphadenopathy-associated virus and acquired immunodeficiency syndrome. *MMWR Morb Mortal Wkly Rep* 1985; 34:721-726. 731-722.

Section VII People Living with HIV (PLWH)

Figure 24: Prevalent HIV Infection by Residence at Diagnosis, Connecticut, 2019



There are 10,705 people living with HIV in Connecticut (299 per 100,000 people).

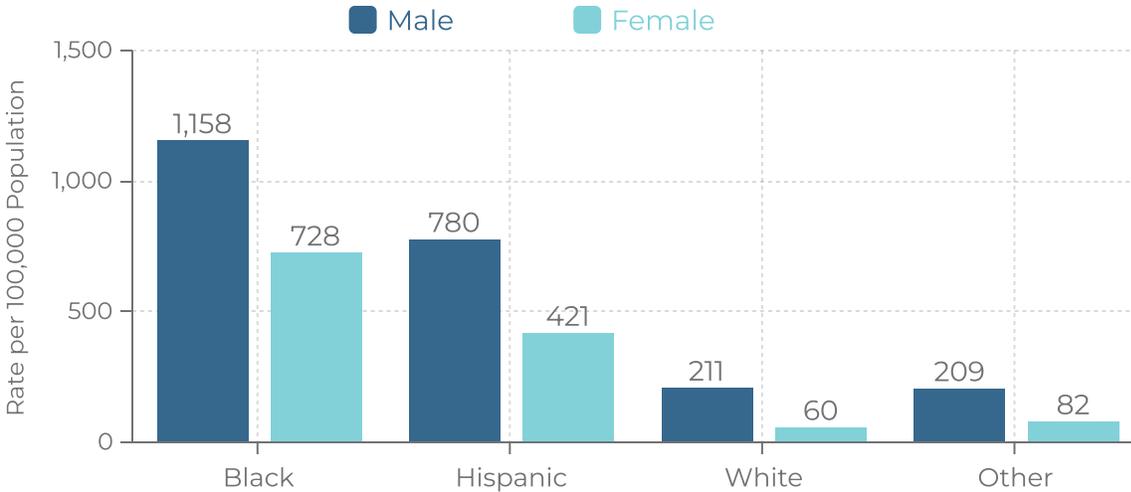
The highest rates of people living with HIV correspond with Connecticut’s three largest cities: Bridgeport, Hartford, and New Haven. Of all people living with HIV, 37% were living in these cities. The rate of people living with HIV was greater than 400 per 100,000 population in the ten towns below.

Table 7: Ten Highest Rates of HIV Prevalence by City, 2019

Town	Population	Prevalence (N)	Rate per 100,000
Hartford	122,105	1,445	1,167
New Haven	130,250	1,326	1,018
Bridgeport	144,399	1,225	848
Waterbury	107,568	697	648
New London	26,858	161	599
New Britain	72,495	405	559
Bloomfield	21,211	115	542
West Haven	54,620	289	529
East Hartford	49,872	263	527
Windham	24,561	100	407

Source: HIV surveillance registry for cases reported through December 2020 based on last known address as of December 2019 and 2020 state-level bridge estimates. Rate per 100,000 population.

Figure 25: Rate of People Living with HIV by Race/Ethnicity and Sex at Birth, Connecticut, 2019



Source: HIV surveillance registry for cases reported through December 2020 based on last known address December 2019. Prevalence rate per 100,000 population based on [2019 census estimate](#).

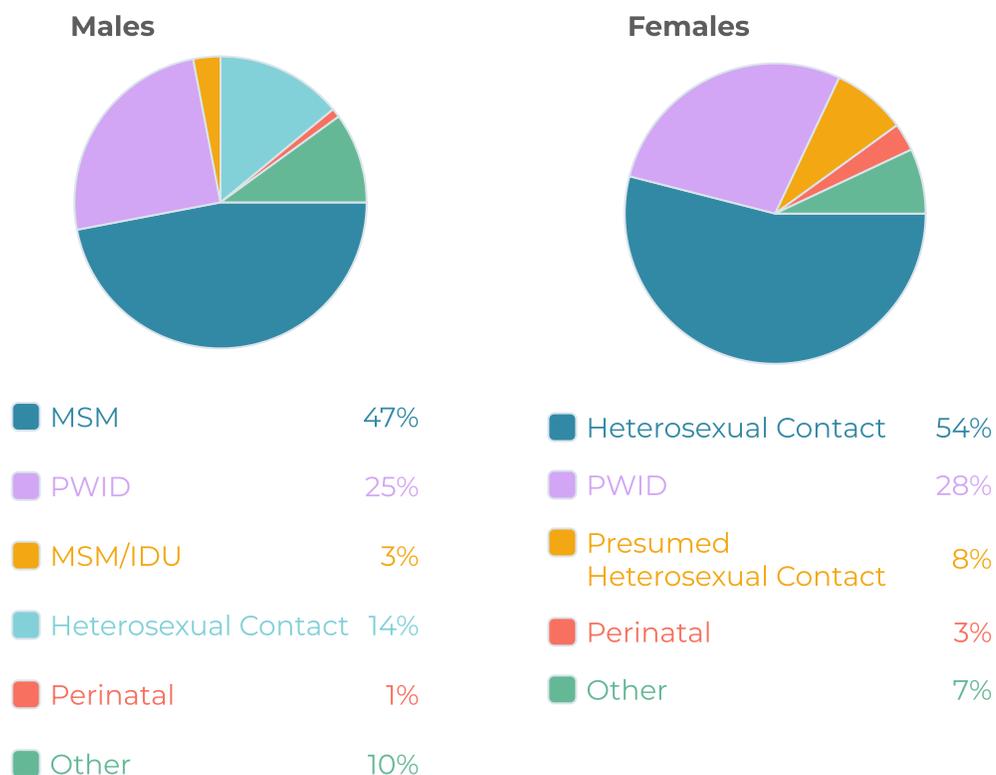
- Black males and Hispanic males are living with HIV at rates approximately 6 and 4 times higher than white males, respectively.
- Black females and Hispanic females are living with HIV at rates approximately 12 and 7 times higher than white females, respectively.

Table 8: People Living with HIV by Sex at Birth and Age-group, Connecticut, 2019

Age-group	Males		Females	
	N	Rate	N	Rate
<20	28	7	19	5
20-29	518	216	134	59
30-39	931	422	347	156
40-49	1,195	568	760	342
50-59	2,310	920	1,292	482
60+	2,149	545	1,002	208
Total	7,131	410	3,554	195

Source HIV surveillance registry for cases reported through December 2020 based on last known address as of December 2019 and 2019 state level bridge estimates. Rate per 100,000 population.

Figure 26: People Living with HIV by Sex at Birth and Transmission Category, Connecticut, 2019



Note: "Presumed heterosexual contact" is defined as a female (based on sex at birth) with history of sexual contact with a male, not classified as a drug user and has no other risk factors.

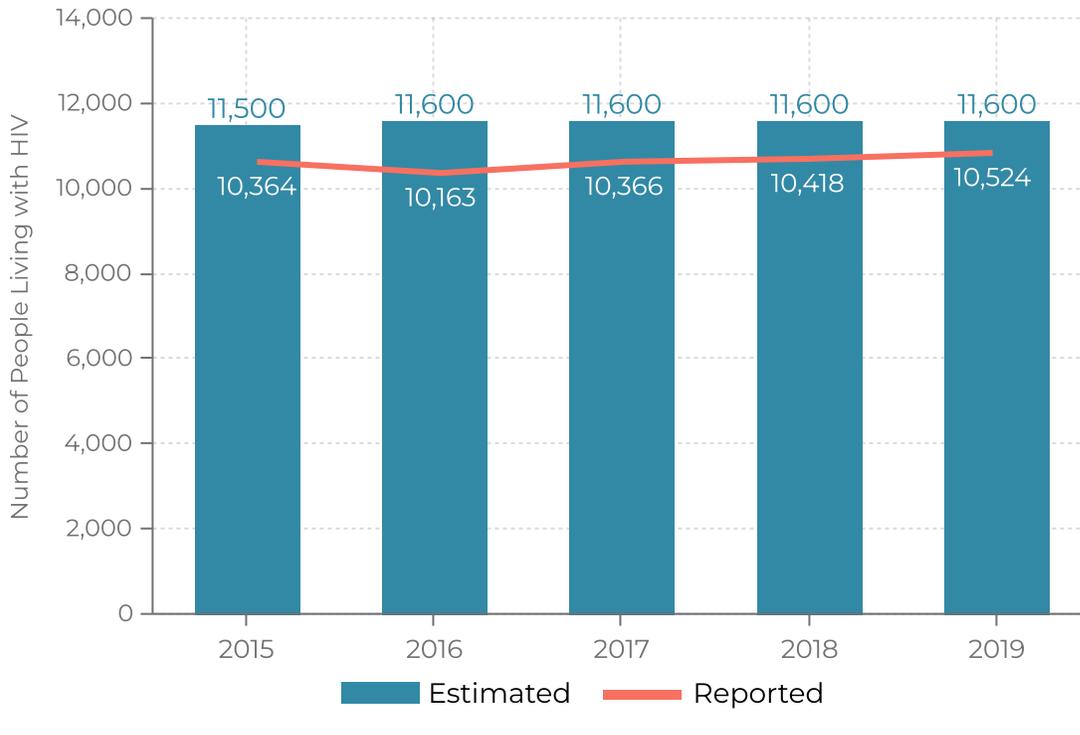
Source: HIV surveillance registry for cases reported through December 2020 based on last known address as of December 2019.

Of all people living with HIV in Connecticut, 31% of had a risk category attributed to men having sex with men, 28% reported heterosexual sex with a high-risk partner, and 26% reported injection drug use.

Gender-specific risk characterization indicates nearly half of HIV-positive males had risk attributed to sex with men and 25% to injection drug use while female risk was predominately attributed to heterosexual sex with a high-risk partner (54%).

While transmission risk attributable to injection drug use represents over a quarter of prevalent HIV cases, new HIV diagnoses occurring among people who inject drugs has steadily declined as the result of well-established, robust harm reduction programs in Connecticut. In 2019, 9% of new diagnoses were attributed to injection drug use.

Figure 27: Estimated Prevalence of HIV Among Persons ≥ 13 Years of Age, Connecticut, 2015-2019



Between 2015 and 2019, statistical estimates showed the number of people living with HIV who were aware of their diagnosis improved annually. By 2019, Connecticut had met the National HIV/AIDS Strategy (NHAS) 2020 goal of 90%. However, among younger ages (13-24 years of age), the proportion estimated to be aware of their HIV status fell between 42 and 54%.

Table 9: Estimate of Diagnosed HIV, Connecticut, 2015-2019

Year	Estimated Percentage of Persons Living with Diagnosed HIV	95% Confidence Interval
2015	89.2	78.6-100
2016	87.4	76.2-100
2017	89.0	76.8-100
2018	89.6	76.5-100
2019	90.9	76.7-100

Source: HIV surveillance registry for cases reported through December 2020 based on last known address as of December 2019.

Section VIII Transgender People Living with HIV

Historically, HIV surveillance data for transgender persons had not been collected uniformly thus national and state-level data were limited. In 2014, the CDC's National HIV Surveillance System expanded sex and gender data collection to improve understanding of HIV epidemiology as related to transgender populations. In May 2020, the first HIV surveillance report dedicated to transgender populations was published by the CDC: [Diagnoses of HIV Infection in the United States and Dependent Areas, 2018: Transgender Persons](#).

In 2019, there were 83 HIV-positive persons living in Connecticut who identified as transgender: 71 transwomen, 9 transmen, and 3 persons with additional gender identity. While these data are likely underreported, the Connecticut surveillance data includes people who identified as transgender at any time by self-report, medical provider, chart review, or ongoing data collection.

- Of the 220 new HIV diagnoses in Connecticut in 2019; 1 person was reported as a transgender female.
- Of the 10,705 persons living with HIV infection, 83 persons were transgender and 3 were reported as "additional gender identity."
- Of the 83 transgender people living with HIV infection in Connecticut, 86% (71) were transwomen.
- 76% of transgender persons living with HIV were persons of color:

Figure 28:

Transgender People of Color

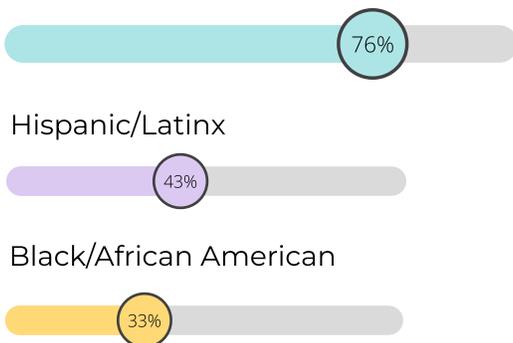
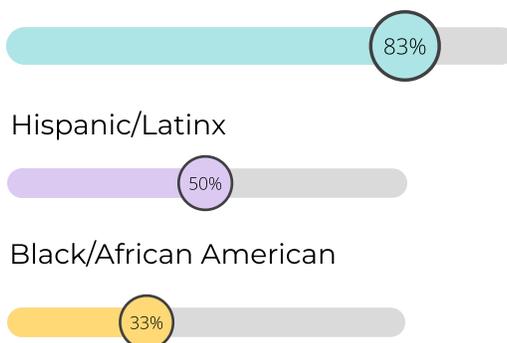


Figure 29:

Transgender People of Color Diagnosed 2015-2019



- During 2015-2019, 56% of the diagnoses among transgender people were among persons age 20-29 years.
- Of the transgender persons living with HIV in Connecticut, 57% were over age 39.
- In 2019, 70% of transgender persons living with HIV reported a sexual transmission risk, 22% reported a sexual transmission risk and injection drug use, and 7% did not report risk.
- Over the past 5 years (2015 to 2019), the majority of HIV diagnoses among transgender people occurred in Hartford (33%) and Fairfield (39%) counties.

Figure 30: Transgender Persons with HIV (N=83), by Race/Ethnicity Connecticut, 2019

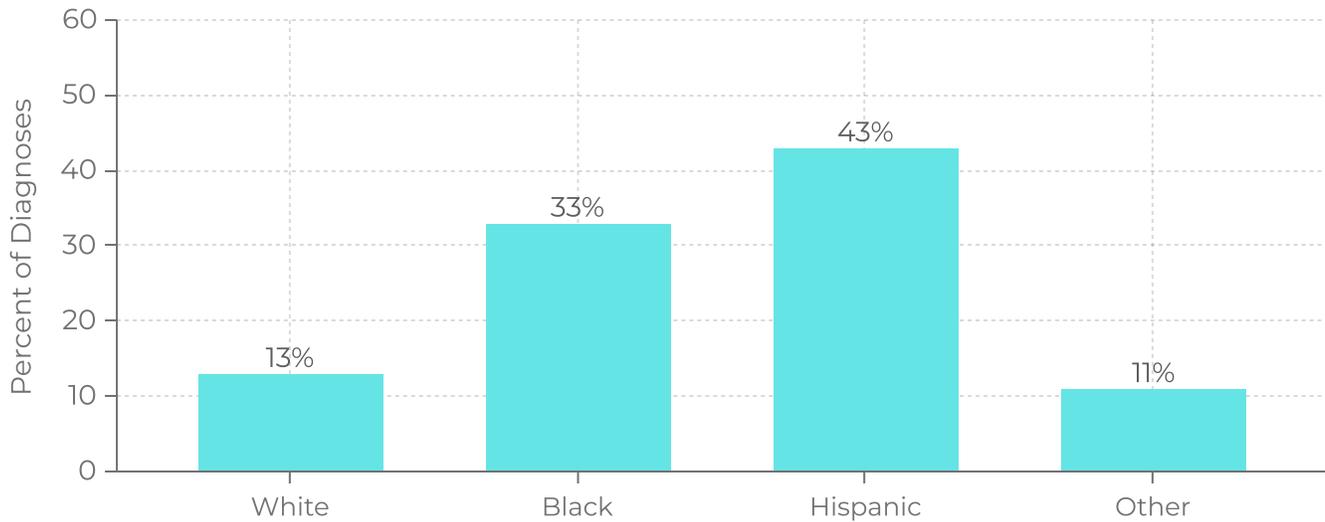
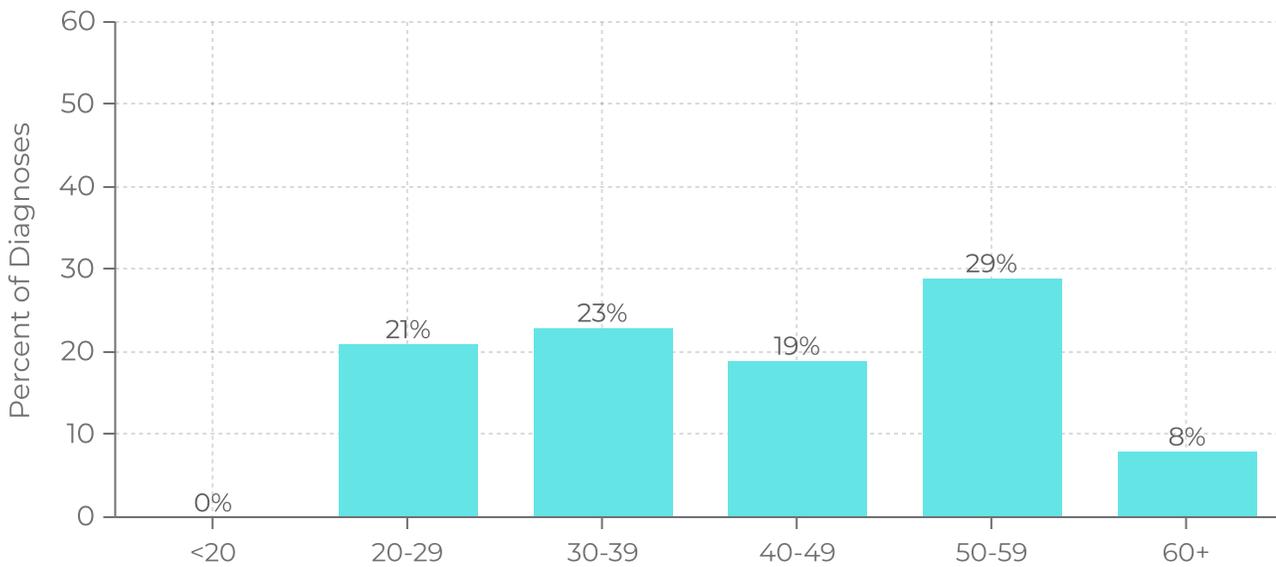


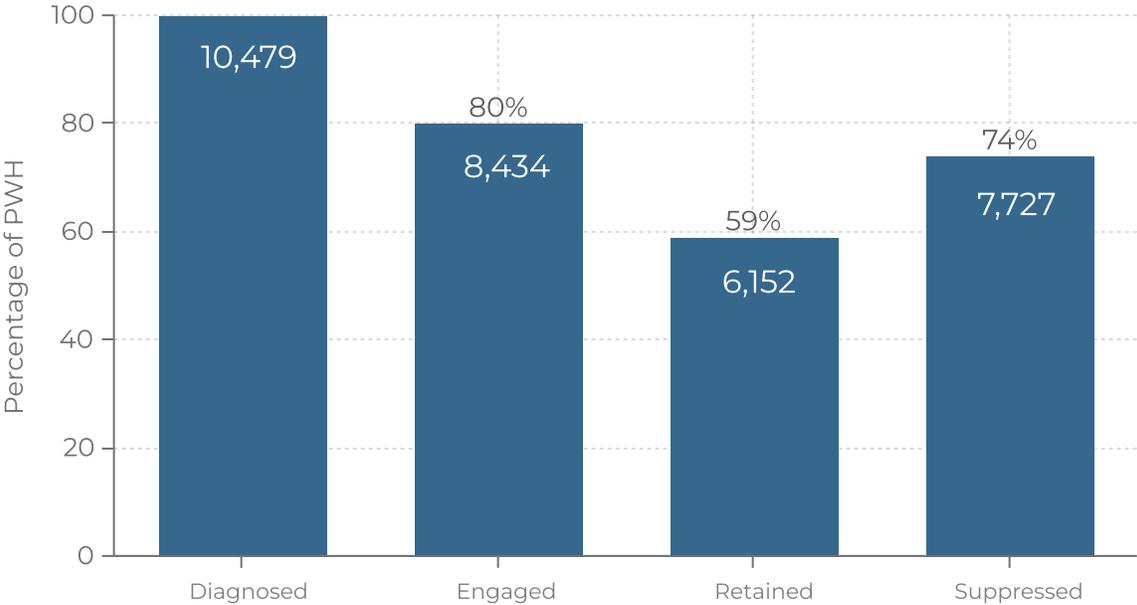
Figure 31: Transgender Persons with HIV (N=83), by Age-group Connecticut, 2019



- Of transgender persons living with HIV in Connecticut, the majority are Hispanic/Latinx (43%).
- Transgender people with HIV tend to be older with 57% over the age of 39 years.

Section IX HIV Continuum of Care

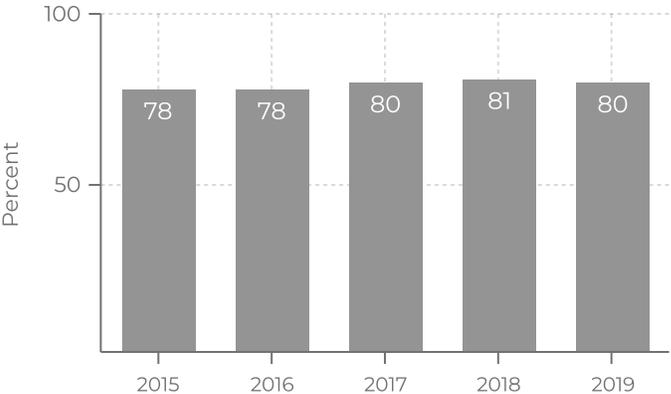
Figure 32: HIV Continuum of Care, 2019



The Continuum of Care is based on people with HIV who received care in 2019, were ≥13 years old at diagnosis, resided in Connecticut (most recent residence), diagnosed with HIV before 2019 and living with HIV as of December 31, 2019.

Laboratory results reported to DPH are used as proxy for a care visit, which is defined as receipt of a CD4, viral load, or genotype test result during the evaluation period. The total PWH may change as HIV surveillance data quality assurance tasks are finalized.

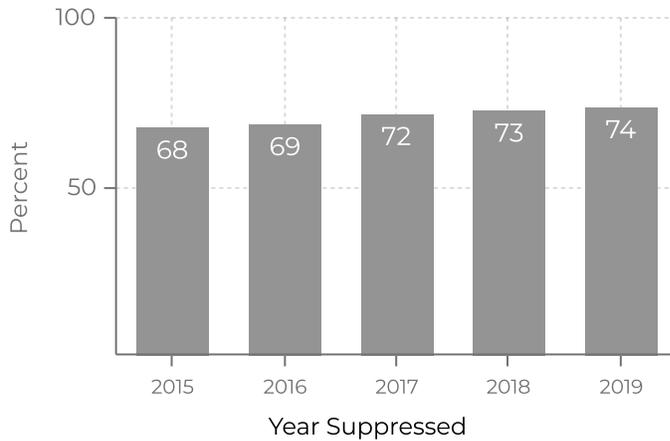
Figure 33: PWH with ≥1 HIV Care Visit, Connecticut, 2015–2019¹



From 2015 through 2019, the percentage of adults and adolescents with HIV linked to care remained stable, from 78% in 2015 to 80% in 2019.

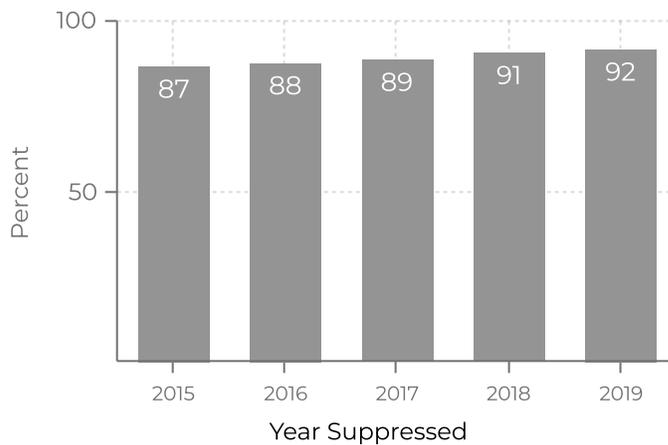
¹ Includes persons living with HIV, ≥13 years of age and was a Connecticut resident at the end of the specified year. Persons whose most recent viral load test result <200 copies/ml during the specified year were considered virally suppressed. A care visit is defined as receipt of a CD4, viral load, or genotype test result during the specified year.

Figure 34: Viral Suppression among PWH, Connecticut, 2015–2019¹



From 2015 through 2019, the percentage of virally suppressed adults and adolescents steadily improved each year from 68% in 2015 to 74% in 2019.

Figure 35: Viral Suppression among PWH, Linked to Care Within the Specified Year, Connecticut, 2015–2019¹



From 2015 through 2019, > 85% of adults and adolescents living with HIV and linked to HIV care were virally suppressed. Rates improved incrementally over each year of the timeframe.

National HIV strategies include increasing viral suppression among people with HIV (PWH) to 80%, with emphasis on youth and people who inject drugs (PWID).

Connecticut has shown consistent improvement in achieving viral suppression among people with HIV, overall, slightly increasing each year from 2015 to 2019.

When applied only to PWH in care, viral suppression surpassed national viral suppression goals however, disparities are evident among certain populations, including youth and people who inject drugs.

- Among youth, viral suppression ranged from 58% in 2015 to 65% in 2019.
- Among PWIDs, viral suppression ranged from 67% in 2015 to 71% in 2019.

Hispanic PWH also had lower levels of viral suppression with 65% in 2015 and 72% suppressed in 2019.

¹ Includes persons living with HIV, ≥13 years of age and was a Connecticut resident at the end of the specified year. Persons whose most recent viral load test result <200 copies/ml during the specified year were considered virally suppressed. A care visit is defined as receipt of a CD4, viral load, or genotype test result during the specified year.

Figure 36: HIV Continuum in Select Populations, Connecticut, 2019

HIV-positive Youth

N=230



Injection Drug Users

N=2,712



HIV-positive Hispanic

N=3,552



Section X Deaths

Table 10: HIV as the Primary Cause of Death, by Race and Sex, Connecticut Residents, 2015-2019

	Both Sexes			Males			Females		
	No. of deaths	Crude rate	AAMR	No. of deaths	Crude rate	AAMR	No. of deaths	Crude rate	AAMR
Black	136	7.1	6.60	89	9.7	9.75	47	4.7	4.26
Hispanic	75	2.6	3.09	52	3.6	4.67	23	1.6	1.74
White	70	0.6	0.41	52	0.9	0.62	18	0.3	0.22
Total	288	1.6	1.30	199	2.3	1.83	89	1.0	0.84

Crude and age-adjusted Connecticut resident deaths. Mortality rate per 100,000 population. Age adjusted using 2000 U.S. standard million.

Source: Backus K, Mueller L. (2020) Five-year Age-Adjusted Mortality Rates by Race/Ethnicity for Connecticut, 2015-2019. Hartford, CT: Connecticut Department of Public Health. <http://www.ct.gov/dph/mortality>

Table 11: Trends in Proportions of Major Causes of Death Among People Diagnosed with HIV, Connecticut, 2009-2019

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Total deaths (N)	217	204	192	171	191	191	197	206	176	170
Cause of Death										
HIV-related (%)	43.3	45.6	41.7	38.0	40.3	39.3	32.0	23.8	32.2	29.4
Non-HIV-related (%)	56.7	54.4	58.3	62.0	59.7	60.7	68.0	76.2	67.8	70.6
Accidental overdose	5.1	5.4	3.7	7.6	4.7	3.7	6.6	12.1	11.9	11.2
Cancer	14.3	12.3	18.8	16.4	17.8	15.7	17.8	18.9	14.8	11.8
Cardiovascular disease	12.4	11.8	15.6	7.6	11.5	14.7	17.3	15.5	13.6	15.9
Chronic liver disease and cirrhosis	0.9	1.0	1.6	3.5	3.7	3.1	1.5	1.0	1.1	1.2
Diabetes mellitus	1.4	1.5	0.5	2.3	2.1	1.6	1.0	4.9	1.7	4.7
External Causes	4.6	3.4	1.6	2.3	5.2	4.2	2.0	2.9	2.8	3.5
Infectious diseases	5.1	5.4	1.0	5.8	4.2	3.7	4.1	3.9	4.0	4.7
Respiratory disease	4.2	2.0	6.3	2.9	4.7	4.2	6.1	5.8	5.1	5.9
Other	8.8	11.7	9.4	13.5	5.8	10.0	11.7	11.2	12.5	11.8

Deaths due to unknown causes are not shown.

Deaths due to HIV-related cancers are included in HIV-related cause of death.

Deaths in the most recent year may not be completely reported.

Section XI HIV Prevention Initiatives

DPH-funded Testing

Since 1986, the DPH has funded HIV counseling and testing sites throughout Connecticut. Initiated in 2018, DPH supports two different types of CDC-funded HIV testing components. The first HIV testing intervention is Outreach, Testing and Linkage (OTL), which targets specific high-risk populations at non-healthcare sites. The second HIV testing component is Routine Testing Sites (RTS) which tests all individuals during their visit to a funded healthcare setting (the individual has the option to opt-out of the HIV test).

Program Goals

- Identify newly HIV diagnosed positives;
- Provide newly HIV diagnosed positives with their test result;
- Identify previously diagnosed HIV positives who are out of care;
- Refer and link all HIV diagnosed positive persons to HIV medical care;
- Assure screening for HCV and STDs;
- Assure screening for PrEP knowledge and PrEP eligibility;
- Refer and link all PrEP eligible clients with PrEP providers;
- Refer and link all HIV diagnosed positive persons to Partner Services (PS);
- Refer and link all HIV diagnosed positive persons to HIV prevention services;
- Refer and link all pregnant HIV diagnosed positive females to prenatal care;
- Provide all HIV diagnosed people with information and tools in order to reduce HIV risk behaviors;
- Refer high-risk HIV-negative persons to prevention services.

HIV Testing Data, 2019

- 70,266 HIV tests were conducted. Of these, 97 (0.14%) were confirmed newly diagnosed positive and 24 (0.03%) were previously diagnosed.
- 39,936 (57%) of all HIV testing clients were female, 17,514 (25%) white, 19,189 (27%) black and 25,485 (36%) Hispanic.
- Most HIV priority population clients tested were those of an unknown priority population (86%) and heterosexuals (9%). Other HIV priority population clients included PWID (2%), Transgender persons (1%), MSM (2%) and MSM/IDU (0.17%).
- Of the 97 newly HIV diagnosed positive persons in 2019, 79 (81%) were male, 14 (14%) white, 55 (57%) black and 25 (26%) Hispanic. The HIV priority population of the newly HIV diagnosed positive persons included: 50 (51%) MSM, 30 (31%) heterosexuals, 2 (2%) MSM, and 2 (2%) MSM/IDU.
- The newly diagnosed seropositivity rate by risk category was: 3% MSM, 1.7% MSM/IDU, 0.85% heterosexual females, 0.35% heterosexual males and 0.15% PWID.
- 44,125 (63%) of all HIV testing clients were age 20–39 years old. The newly diagnosed seropositivity rate by age group was: 0.15% (13–19 years old), 0.15% (20–29 years old), 0.16% (30–39 years old), 0.09% (40–49 years old), 0.15% (50–59 years old) and 0.08% (60 and older).

Connecticut's CDC-funded HIV testing statistics from prior years can be requested from the DPH HIV Prevention Program.

Table 12: HIV Testing at OTL and RTS Sites, Connecticut 2019

Characteristics	Number of OTL client's HIV test	Number of RTS client's HIV test	OTL and ETI Columns total	Number of newly diagnosed positives	Number of previously diagnosed positives	Newly diagnosed seropositivity rate ¹
Sex						
Male	1,769	27,776	29,545	79	13	0.27
Female	919	39,017	39,936	18	11	0.05
Transgender	26	715	741	-	-	-
Unknown Gender	3	41	44	-	-	-
Race						
White	860	16,654	17,514	14	6	0.08
Black	893	18,296	19,189	55	11	0.29
Hispanic	746	24,739	25,485	25	7	0.10
Asian	83	1,418	1,501	-	-	-
AI/AN ²	6	185	191	-	-	-
Native Hawaiian/ PI ³	9	50	59	1	-	1.69
Multi-race	40	134	174	-	-	-
Unknown	80	6,073	6,153	2	-	0.03
Age group (years)						
<13	-	29	29	-	-	-
13-19	174	5,040	5,214	8	-	0.15
20-29	953	24,481	25,434	37	1	0.15
30-39	655	18,036	18,691	30	6	0.16
40-49	401	9,699	10,100	9	5	0.09
50-59	346	6,499	6,845	10	7	0.15
60 and older	175	3,742	3,917	3	5	0.08
Unknown	13	23	36	-	-	-
HIV Priority Population						
MSM/IDU	4	115	119	2	-	1.68
MSM	689	841	1,530	50	3	3.27
Transgender/IDU	2	4	6	-	-	-
Transgender persons	24	711	735	-	-	-
PWID	242	1,055	1,297	2	2	0.15
Heterosexual males	682	4,117	4,799	17	5	0.35
Heterosexual females	634	900	1,534	13	6	0.85
Unknown	403	59,806	60,209	13	8	0.02
Total	2,717	67,549	70,266	97	24	0.14

¹ Number of newly HIV diagnosed positives divided by the number of OTL and ETI columns total.

² American Indian/Alaskan Native

³ Native Hawaiian/Pacific Islanders

Outreach, Testing and Linkage (OTL)

From 2010 to 2019, an annual average of 12,600 HIV testing events were conducted and 34 newly diagnosed HIV cases were identified by Connecticut DPH HIV Prevention Program's funded agencies with the implemented Outreach, Testing and Linkage intervention.

Figure 37: Trend in HIV OTL Testing Events, Connecticut, 2010-2019



Figure 38: Trend in HIV OTL New Positives, Connecticut, 2010-2019



* Note: In 2018, a high-volume HIV testing funded agency was transitioned from OTL to RTS.

Routine Testing Sites (RTS)

From 2010 to 2019, an annual average of 35,592 HIV testing events were conducted and 58 newly diagnosed HIV cases were identified by Connecticut DPH HIV Prevention Program's funded Routine Testing Sites.

Figure 39: Trend in HIV RTS Testing Events, Connecticut, 2010-2019



Figure 40: Trend in HIV RTS New Positives, Connecticut, 2010-2019

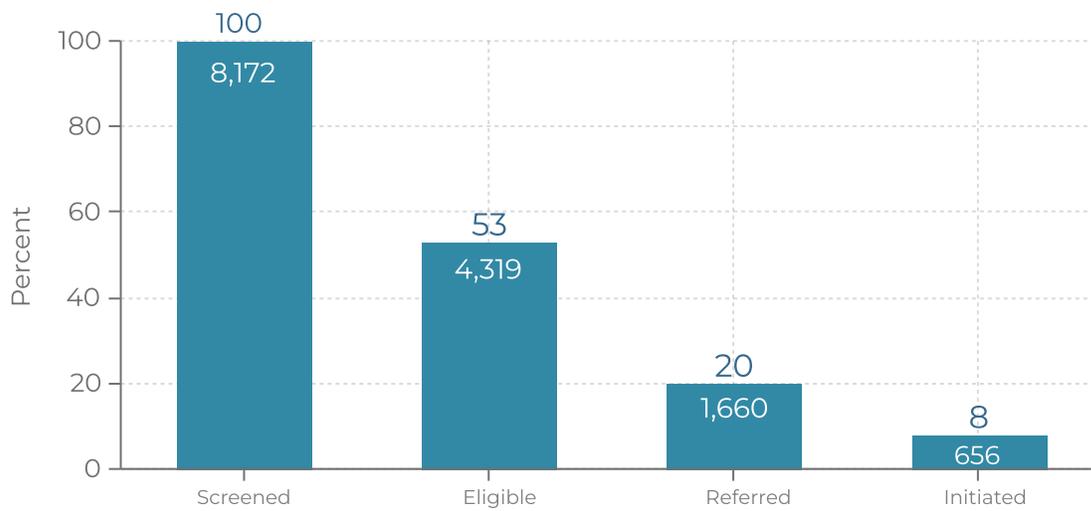


PrEP

Pre-exposure prophylaxis (PrEP) is a daily medicine that can be used to prevent HIV. PrEP is prescribed to people who are HIV negative but at high risk of exposure from sex or injection drug use. Studies have shown that PrEP reduces the risk of acquiring HIV from sex by nearly 99% and, among people who inject drugs (PWID), by at least 74% when taken daily.

PrEP is less effective if it is not taken consistently. The DPH Prevention and Health Care and Support Services Programs have been working with providers to increase the availability and uptake of PrEP to people who need it. As of May 2020, there were 17 DPH funded PrEP navigation services in Connecticut in a mix of healthcare and non-healthcare settings.

Figure 41: PrEP Screening, Eligibility, Referrals and PrEP Initiation Among Clients Served by DPH-funded Organizations, Connecticut, 2019



Source: EvaluationWeb®, as of May 2020

Between January and December 2019, 8,172 clients were screened for PrEP eligibility at DPH-funded organizations. Fifty-three percent (N=4,319) were eligible for PrEP, 20% (N=1,660) were referred to a PrEP provider, and 8% (N=656) used PrEP anytime in the last 12 months. Of the 8% (656) who initiated PrEP, 70% (460) were MSM, 5% (35) were MSM/IDU, 7% (43) were high risk heterosexuals, and 2% (10) were PWID.

Figure 42: PrEP Initiated Clients (N=656) by Race/Ethnicity, DPH-funded Organizations, 2019

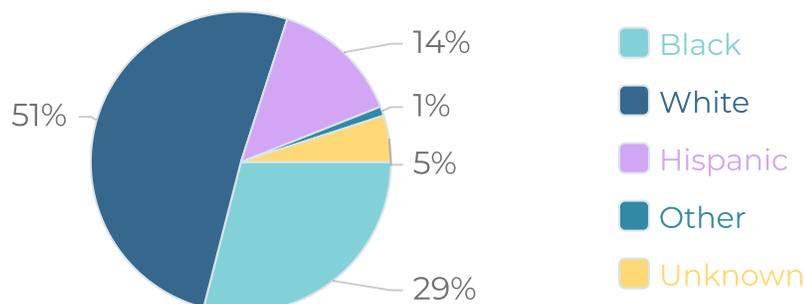


Figure 43: PrEP Initiated Clients (N=656) by Current Gender, DPH-funded Organizations, 2019

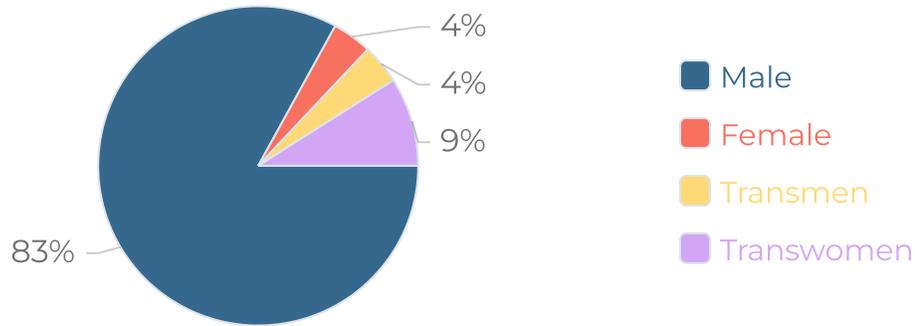
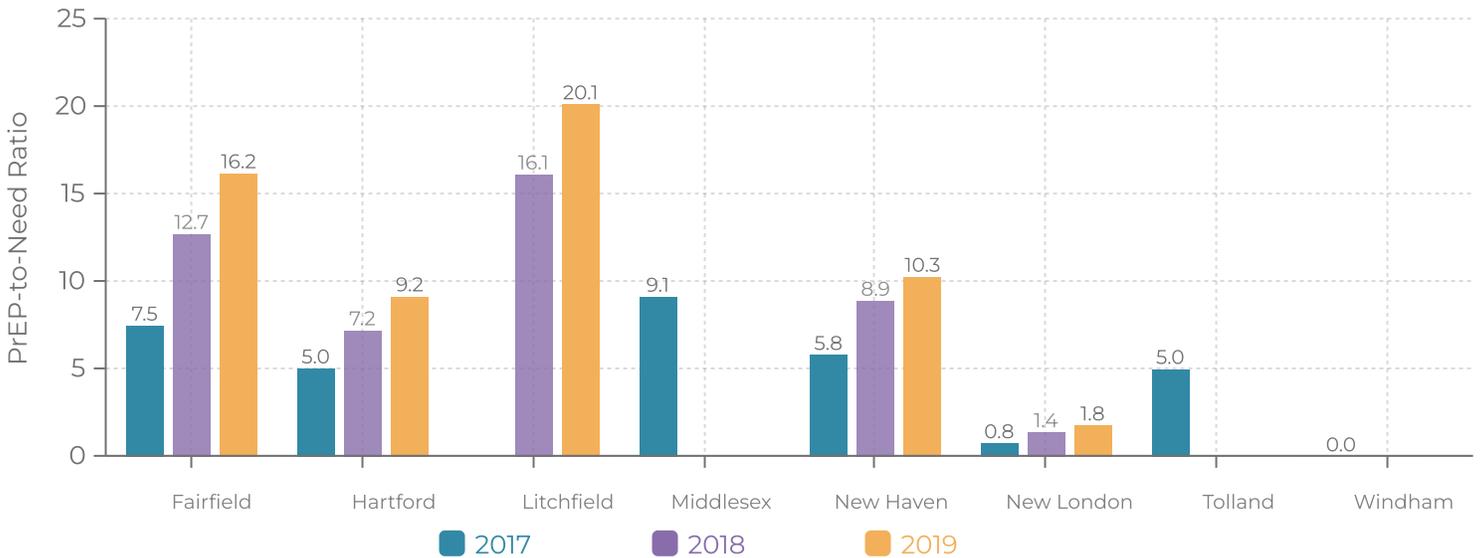


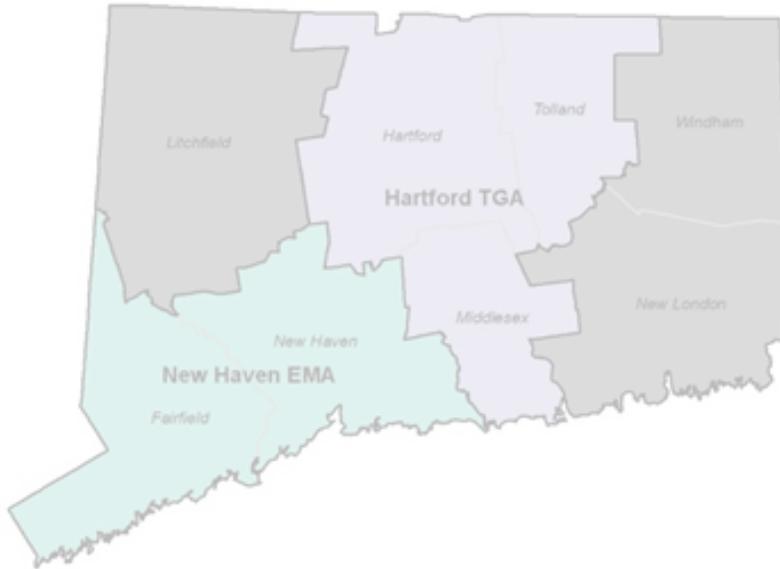
Figure 44: PrEP-to-Need Ratio by County, Connecticut, 2017-2019



Between 2017 and 2019, the PrEP-to-Need (PnR) continuously increased in Connecticut's highest prevalence counties. The ratios shown represent the number of PrEP users by year over the number of people newly diagnosed with HIV in each respective year. The ratio is used to describe the distribution of prescriptions relative to the need based on the epidemic.

Null values are a result of data suppression due to small cell sizes.
 Please see AIDSvU methods at <https://aidsvu.org/data-methods/data-methods-statecounty/>
 Source: AIDSvU accessed May 2021 at <https://map.aidsvu.org/map>

Section XII Ryan White Grant Areas



Connecticut has two Ryan White Part A Programs (Hartford Transitional Grant Area (TGA) and New Haven Eligible Metropolitan Area (EMA)) and a statewide Part B Program.

Of the 22,019 HIV infections reported during 1981–2019, 7,680 were residents of the Hartford TGA and 12,418 were residents of the New Haven EMA, representing 91% of cases ever diagnosed in Connecticut.

There is much programmatic cross-over in the state and analysis included for the epidemiologic overviews of the Hartford TGA and New Haven EMA include people with HIV residing within the counties of the service areas, regardless of care provider.

Hartford TGA

The Hartford Transitional Grant Area (TGA) includes Hartford, Middlesex and Tolland counties.

Figures 45-48: People Living with HIV, 2019

Fig. 45: By Sex at Birth

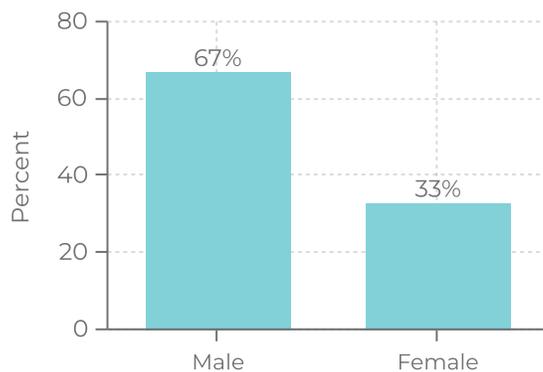
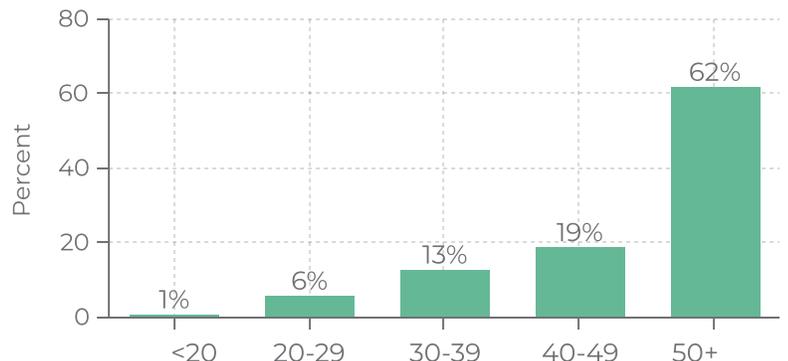
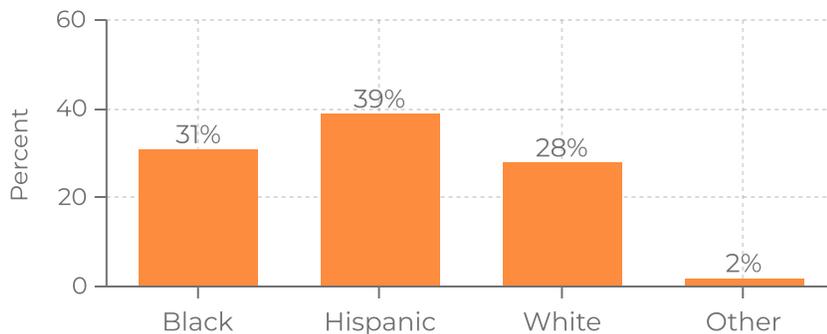


Fig. 46: By Age-group



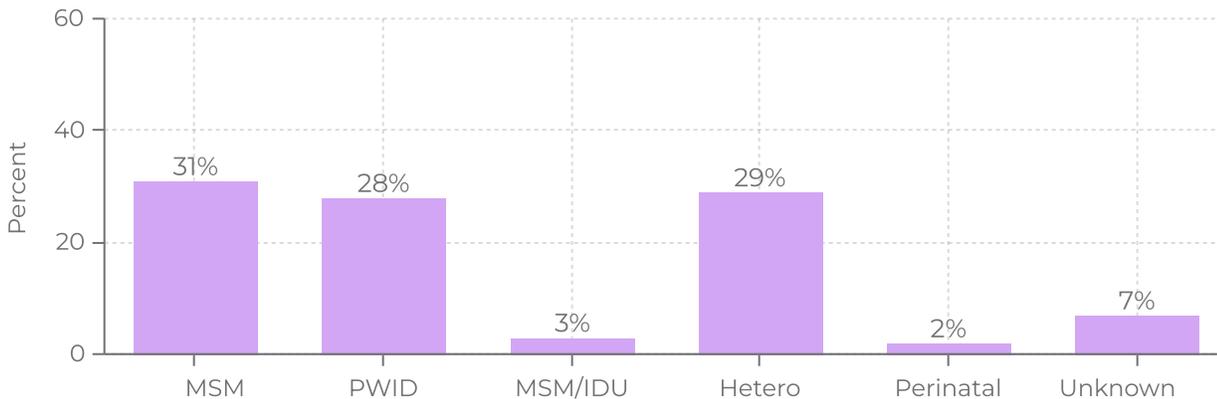
Hartford TGA

Fig. 47: By Race/Ethnicity



Note: "Other" race includes Asian, American Indian, Alaskan Native, Pacific Islander and mutli-racial.

Fig 48: By Risk Factor



Note: "Hetero" includes 3% whose risk was categorized as "presumed heterosexual contact," which is defined as a female with history of sexual contact with a male, and does not have history of injection drug use or any other risk factor.

In 2019:

- 3,617 people living with HIV in the Hartford TGA
- 70% people of color | 28% white
- 62% 50 years of age or older
- 31% MSM | 28% of IDU

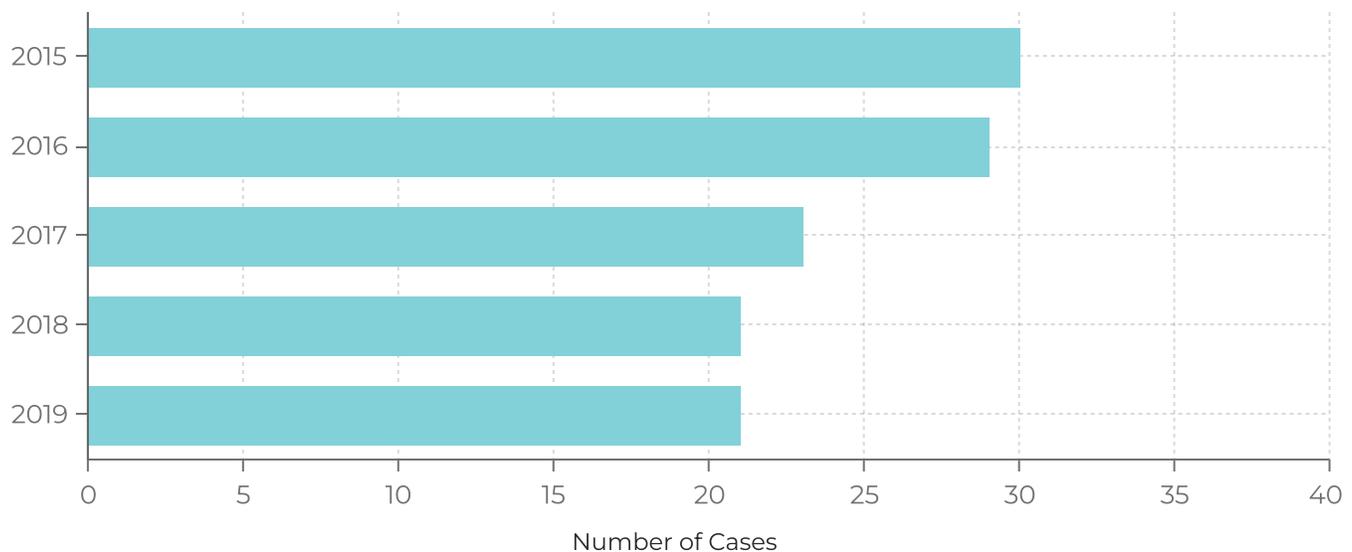
People diagnosed with HIV as residents of the TGA between 2015 and 2019 were younger (58% under 40) and had risk factors of MSM (50%) and heterosexual contact (29%), but were disproportionately people of color (70%).

Hartford TGA

Table 13: Newly Diagnosed HIV by Age-group, Sex at Birth, Race/Ethnicity, and Risk Factor, Hartford TGA, 2015-2019

	<20		20-29		30-39		40-49		50+		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Total	30	6.5	138	29.9	101	21.9	83	18.0	109	23.6	461	100
Sex at birth												
Male	21	6.1	120	34.9	73	21.2	57	16.6	73	21.2	344	74.6
Female	9	7.7	18	15.4	28	23.9	26	22.2	36	30.8	117	25.4
Race												
Black	12	6.8	62	35.2	30	17.0	28	15.9	44	25.0	176	38.2
Hispanic	12	8.1	46	30.9	36	24.2	28	18.8	27	18.1	149	32.3
White	5	4.0	27	21.4	32	25.4	26	20.6	36	28.6	126	27.3
Other	1	10.0	3	30.0	3	30.0	1	10.0	2	20.0	10	2.2
Risk												
PWID	0	0	3	7.7	12	30.8	10	25.6	14	35.9	39	8.5
MSM	15	6.5	99	43.0	50	21.7	33	14.3	33	14.3	230	49.9
MSM/IDU	0	0	1	11.1	6	66.7	1	11.1	1	11.1	9	2.0
Heterosexual	7	5.3	26	19.5	23	17.3	28	21.1	49	36.8	133	28.9
Perinatal	4	80.0	0	0	0	0	1	20.0	0	0	5	1.1
Other/Unkn	4	8.9	9	20.0	10	22.2	10	22.2	12	26.7	45	9.8

Figure 49: Transitioning to AIDS Within 3 months of HIV Diagnosis, Hartford TGA, 2015–2019



Source: HIV surveillance registry for cases reported through December 2020

New Haven EMA

The New Haven Eligible Metropolitan Area includes New Haven and Fairfield counties.

Figures 50-53: People Living with HIV, 2019

Fig 50: By Sex at Birth

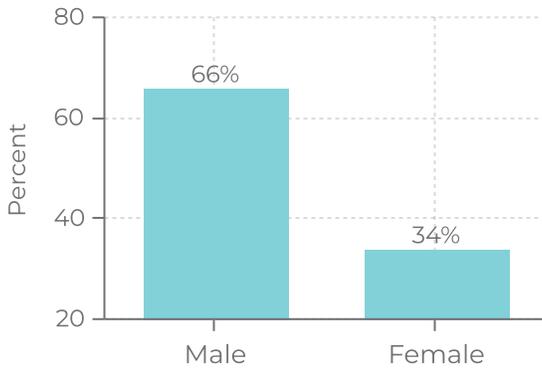


Fig 51: By Age-group

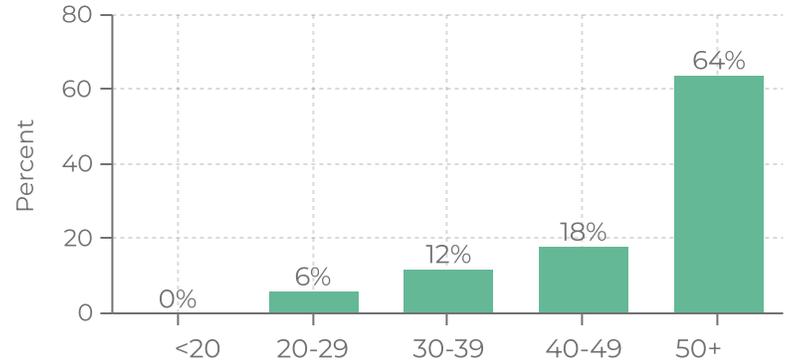
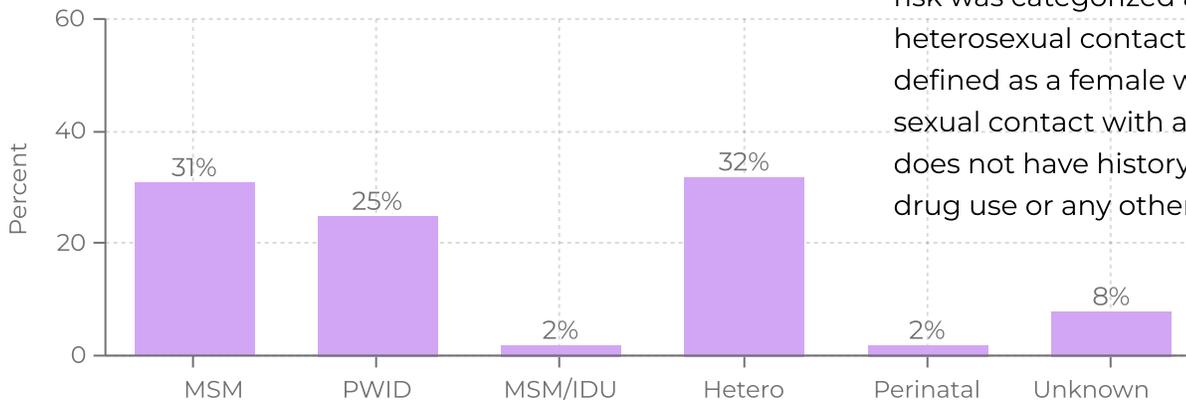
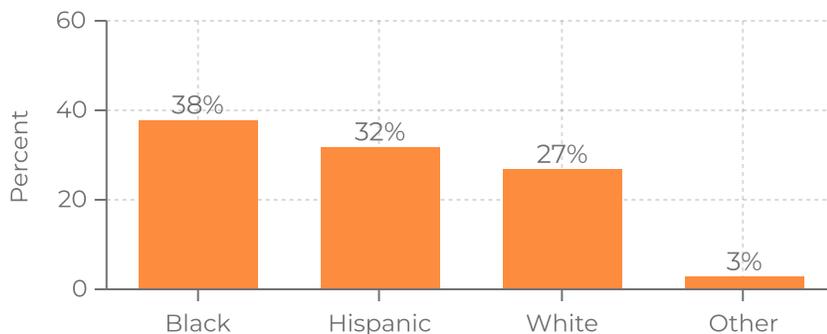


Fig 52: By Risk Factor



Note: "Hetero" includes 3% whose risk was categorized as "presumed heterosexual contact," which is defined as a female with history of sexual contact with a male, and does not have history of injection drug use or any other risk factor.

Fig. 53: By Race/Ethnicity



Note: "Other" race includes Asian, American Indian, Alaskan Native, Pacific Islander and mutli-racial.

New Haven EMA

In 2019:

- 6,082 people living with HIV in the New Haven EMA
- 71% people of color | 27% white
- 64% 50 years of age or older
- 31% MSM | 29% Heterosexual contact

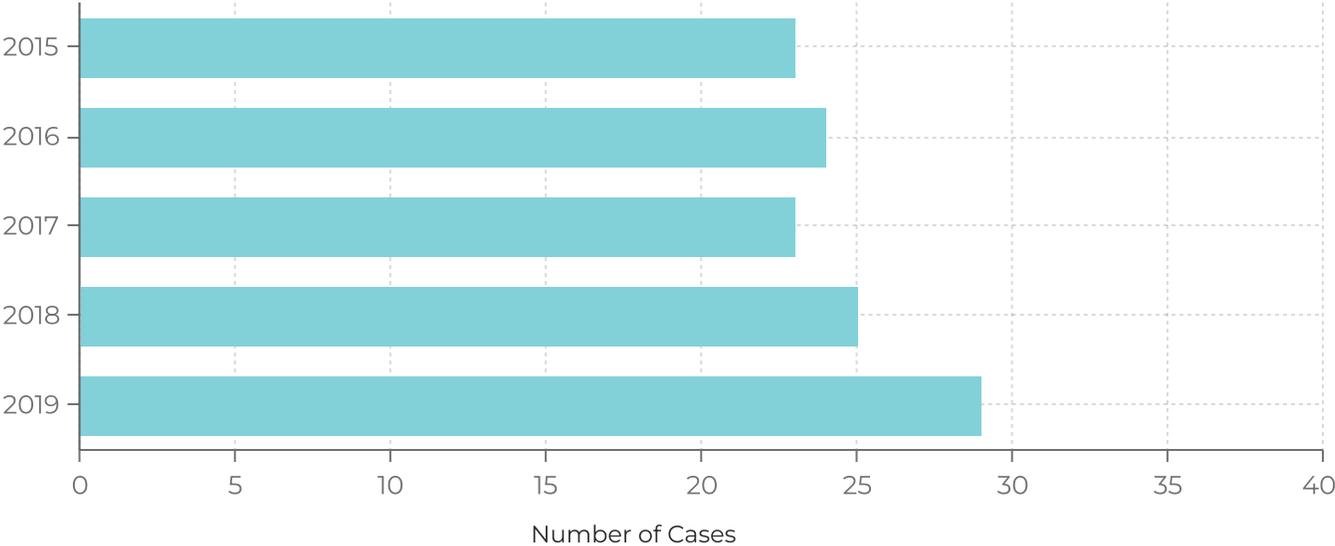
People diagnosed with HIV as residents of the EMA between 2015 and 2019 were younger (59% under 40) and had risk factors of MSM (53%) and heterosexual contact (27%) and were disproportionately people of color (74%).

Table 14: Newly Diagnosed HIV by Age-group, Sex at Birth, Race/Ethnicity, and Risk Factor, New Haven EMA, 2015-2019

	<20		20-29		30-39		40-49		50+		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Total	31	4.3	237	33.1	156	21.8	135	18.9	156	21.8	715	100
Sex at birth												
Male	27	5.0	209	38.8	109	20.3	89	16.5	104	19.3	344	75.2
Female	4	2.3	28	15.8	47	26.6	46	26.0	52	29.4	177	24.8
Race												
Black	21	6.4	108	32.8	70	21.3	64	19.5	66	20.1	329	46.0
Hispanic	8	4.1	80	40.6	52	26.4	29	14.7	28	14.2	197	27.6
White	2	1.2	43	26.4	27	16.6	37	22.7	54	33.1	163	22.8
Other	0	0	6	23.1	7	26.9	5	19.2	8	30.8	26	3.6
Risk												
PWID	0	0	7	23.3	5	16.7	7	23.3	11	36.7	30	4.2
MSM	26	6.8	174	45.7	82	21.5	47	12.3	52	13.6	381	53.3
MSM/IDU	0	0	5	33.3	3	20.0	6	40.0	1	6.7	15	2.1
Heterosexual	1	0.5	38	19.4	46	23.5	49	25.0	62	31.6	196	27.4
Perinatal	3	75.0	0	0	0	0	0	0	1	25.0	4	0.6
Other/Unkn	1	1.1	13	14.6	22.5	22.5	26	29.2	29	32.6	89	12.4

New Haven EMA

Figure 54: Transitioning to AIDS Within 3 months of HIV diagnosis, New Haven EMA, 2015–2019



Source: HIV surveillance registry for cases reported through December 2020

Section XIII

Getting to Zero (G2Z)

GETTING TO ZERO CT

ZERO HIV INFECTIONS, DEATHS, AND STIGMA

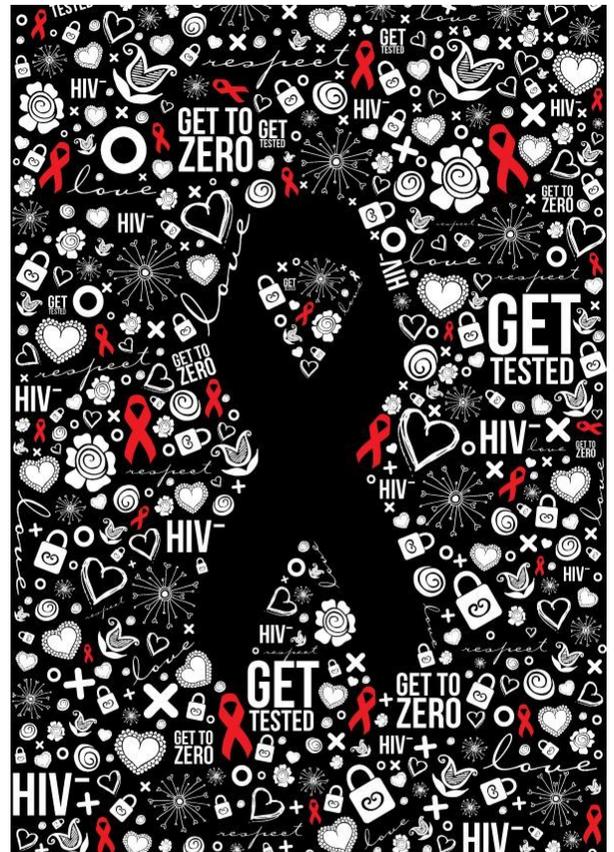


The Connecticut Getting to Zero (G2Z) initiative strives to attain several goals. First and foremost, to identify people with HIV (PWH) in order to start early care and treatment and achieve viral suppression.

The G2Z initiative also addresses several priority sub-populations of people with HIV including MSM (men having sex with men) of color, Black women, and transgender women in urban centers where the epidemic is most concentrated: Bridgeport, Hartford, New Haven, Stamford, and Waterbury.

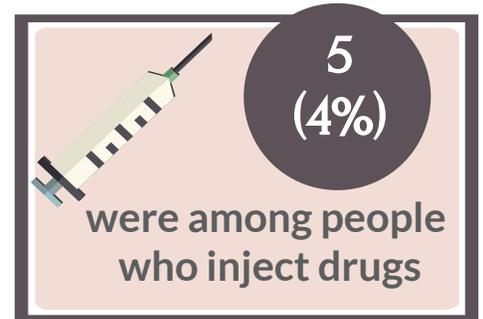
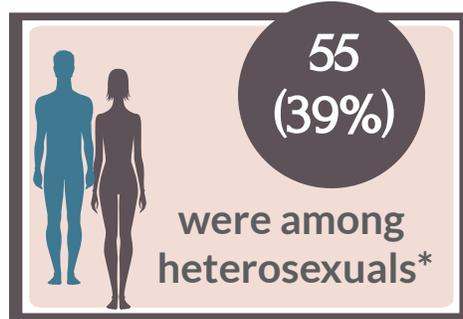
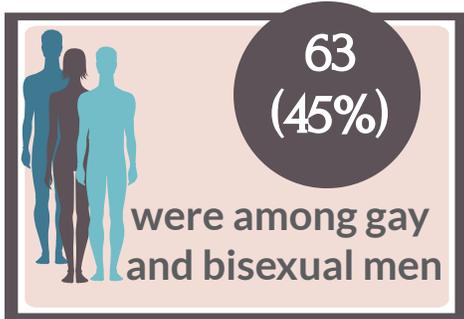
G2Z CT VISION

A Connecticut where new HIV infections are rare and People with HIV (PWH) have access to high-quality care and live free from stigma and discrimination.



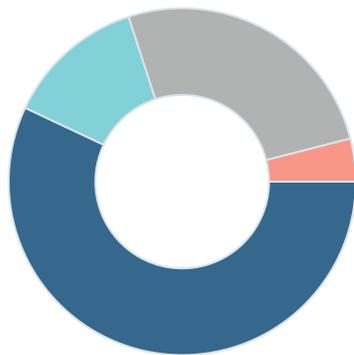
G2Z - Bridgeport, 2015-2019

From 2015 through 2019, 141 new HIV infections were reported to DPH.



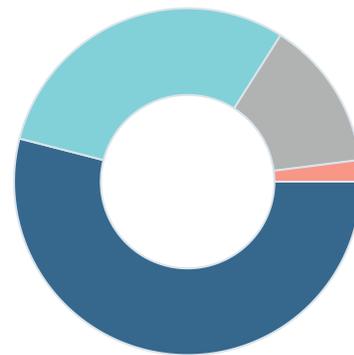
* includes presumed heterosexual contact

Newly Diagnosed Females, N=46



- Black females 57%
- Hispanic Females 13%
- White females 26%
- Other race females 4%

Newly Diagnosed MSM, N=63



- Black MSM 54%
- Hispanic MSM 30%
- White MSM 14%
- Other race MSM 2%

PEOPLE
LIVING WITH HIV

1,203

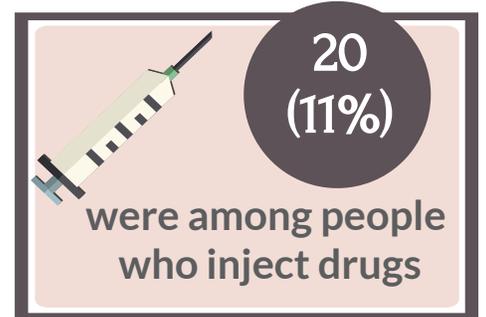
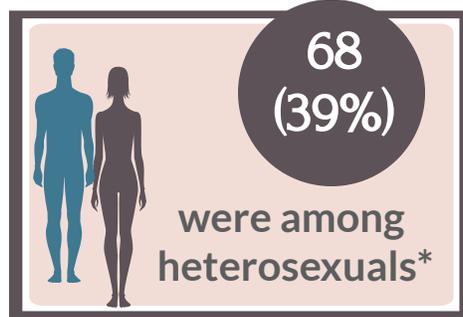
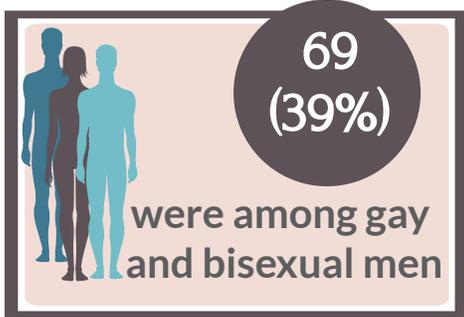
11 transgender women living with HIV



People living with HIV diagnosed through 2018, aged ≥13 at the end of the 2018 and living through 2019 whose last known address as of 2019 was in Bridgeport.

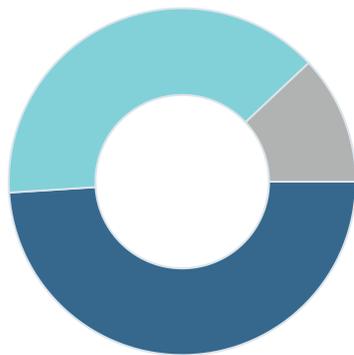
G2Z - Hartford, 2015-2019

From 2015 through 2019, 175 new HIV infections were reported to DPH.



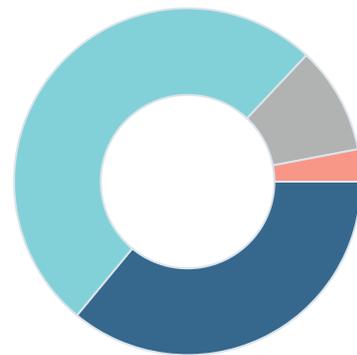
* includes presumed heterosexual contact

Newly Diagnosed Females, N=59



- Black females 49%
- Hispanic Females 39%
- White females 12%
- Other race females 0%

Newly Diagnosed MSM, N=69



- Black MSM 36%
- Hispanic MSM 51%
- White MSM 10%
- Other race MSM 3%

PEOPLE
LIVING WITH HIV

6 transgender women
living with HIV

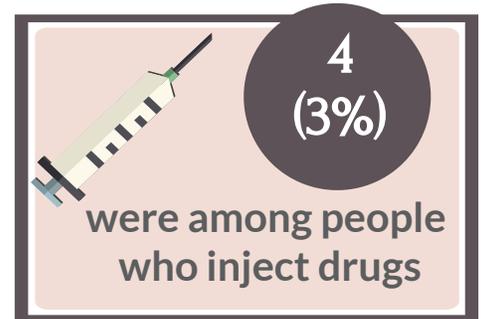
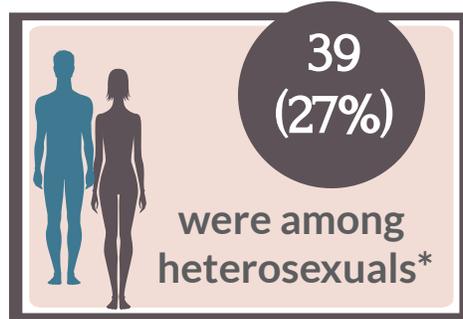
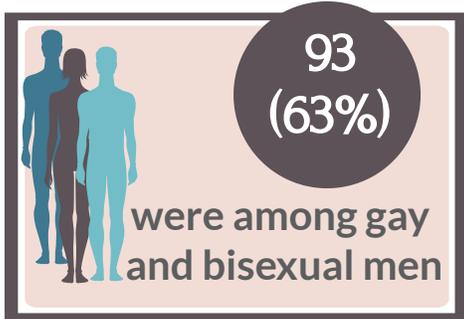
1,387



People living with HIV diagnosed through 2018, aged ≥13 at the end of the 2018 and living through 2019 whose last known address as of 2019 was in Hartford.

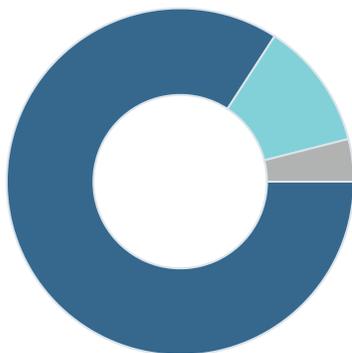
G2Z - New Haven, 2015-2019

From 2015 through 2019, 147 new HIV infections were reported to DPH.



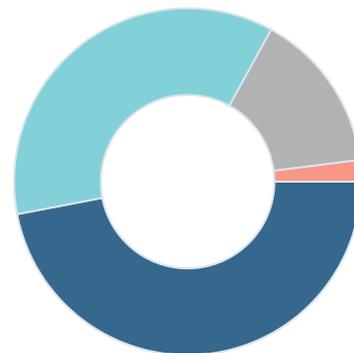
* includes presumed heterosexual contact

Newly Diagnosed Females, N=26



- Black females 84%
- Hispanic Females 12%
- White females 4%
- Other race females 0%

Newly Diagnosed MSM, N=93



- Black MSM 47%
- Hispanic MSM 36%
- White MSM 15%
- Other race MSM 2%

PEOPLE
LIVING WITH HIV

14 transgender women
living with HIV

1,300

Received HIV care

▼ 83%



Virally suppressed

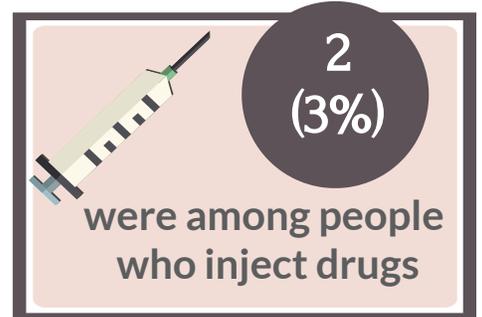
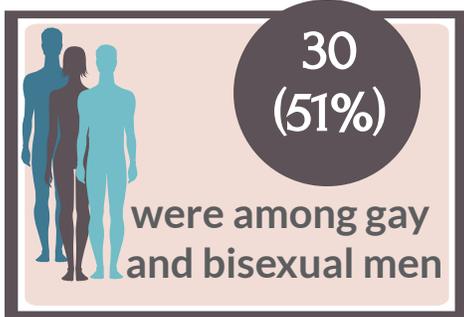
▼ 75%



People living with HIV diagnosed through 2018, aged ≥13 at the end of the 2018 and living through 2019 whose last known address as of 2019 was in New Haven.

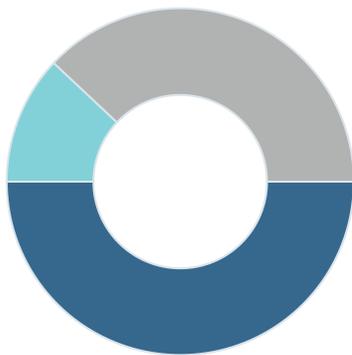
G2Z - Stamford, 2015-2019

From 2015 through 2019, 59 new HIV infections were reported to DPH.



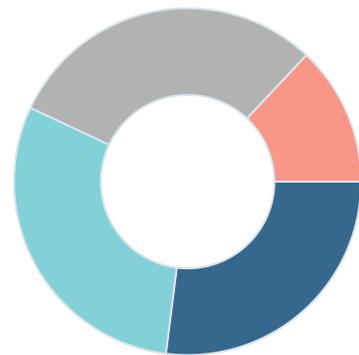
* includes presumed heterosexual contact

Newly Diagnosed Females, N=8



- Black females 50%
- Hispanic Females 12%
- White females 38%
- Other race females 0%

Newly Diagnosed MSM, N=30



- Black MSM 27%
- Hispanic MSM 30%
- White MSM 30%
- Other race MSM 13%

PEOPLE
LIVING WITH HIV

4 transgender women
living with HIV

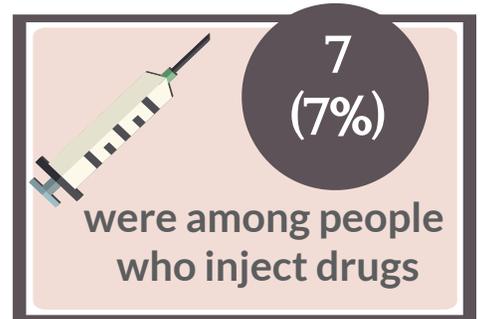
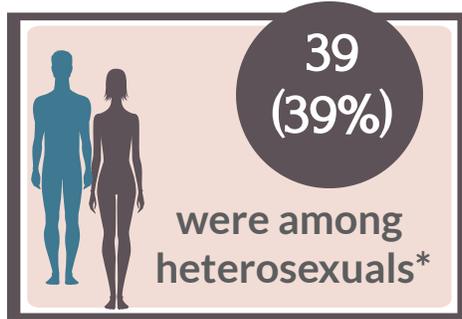
458



People living with HIV diagnosed through 2018, aged ≥13 at the end of the 2018 and living through 2019 whose last known address as of 2019 was in New Haven.

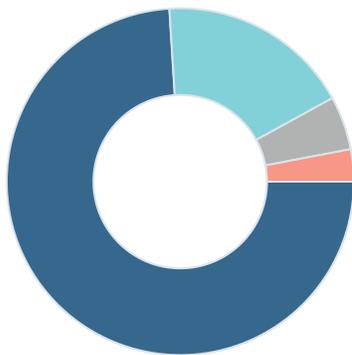
G2Z - Waterbury, 2015-2019

From 2015 through 2019, 100 new HIV infections were reported to DPH.



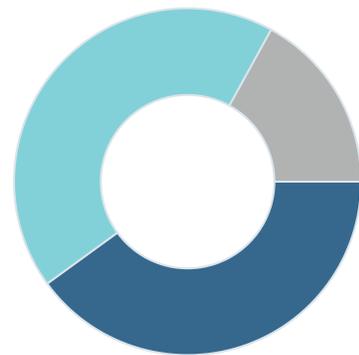
* includes presumed heterosexual contact

Newly Diagnosed Females, N=38



- Black females 74%
- Hispanic Females 18%
- White females 5%
- Other race females 3%

Newly Diagnosed MSM, N=40



- Black MSM 40%
- Hispanic MSM 43%
- White MSM 17%
- Other race MSM 0%

PEOPLE
LIVING WITH HIV

5 transgender women
living with HIV

681

Received HIV care



Virally suppressed



People living with HIV diagnosed through 2018, aged ≥13 at the end of the 2018 and living through 2019 whose last known address as of 2019 was in Waterbury.

Source: HIV surveillance registry for cases reported through December 2020

Section XIV

Behavioral Risk Factor Surveillance



The **Behavioral Risk Factor Surveillance System** (BRFSS) is a CDC-designed phone survey that interviews between 8,000 - 10,000 adults across Connecticut. The questionnaire is updated annually to address changing needs and state-specific priorities.

HIV-related highlights from 2018 CT BRFSS Survey:

- 39.1% of CT adults reported ever being tested for HIV
- 10.3% of CT adults reported an HIV test within the past year
- 12.7% of CT adults had heard of PrEP and know what it is used
- 5.7% of CT adults considered PrEP as a way of reducing risk for HIV

The prevalence of ever being tested for HIV was significantly greater for:

- Adults age ≤ 54 years
- Females
- Blacks and Hispanics
- Adults from households earning <\$35,000
- Adults without health insurance
- Adults with more than a high school education

Gay or Lesbian	1.7%	Something else	1.3%
Straight	90.3%	Don't know	1.5%
Bisexual	2.8%	Refused	2.3%

The **Connecticut School Health Survey**, (nationally known as the Youth Risk Behavior Survey) is conducted among Connecticut youth in consenting schools with high school students, grades 9–12. Questions about sexual and drug use are included in the questionnaire. A complete report of findings for the CT 2009-2019 Trend Report is available on the DPH website (www.ct.gov/dph/cshs).

Highlights from the 2019 School Health Survey:

- 1.8% of CT youth injected any illegal drug (used a needle to inject any illegal drug into their body, one or more times during their life)
- 34.3% of CT youth had sexual intercourse
- 55.0% of CT youth used a condom during last sexual intercourse (among students who were currently sexually active)
- 9.6% of CT youth had tested for HIV (not counting tests done if they donated blood)
- 12.8% of CT youth describe themselves as gay or lesbian or bisexual
- 3.6% of CT youth have had sexual contact with the same sex only
- 4.7% of CT youth have had sexual contact with both sexes
- 41.3% of CT youth have had sexual contact with the opposite sex only

Section XV Sexually Transmitted Infections

Figure 55: Chlamydia and Gonorrhea, Connecticut, 2015-2019

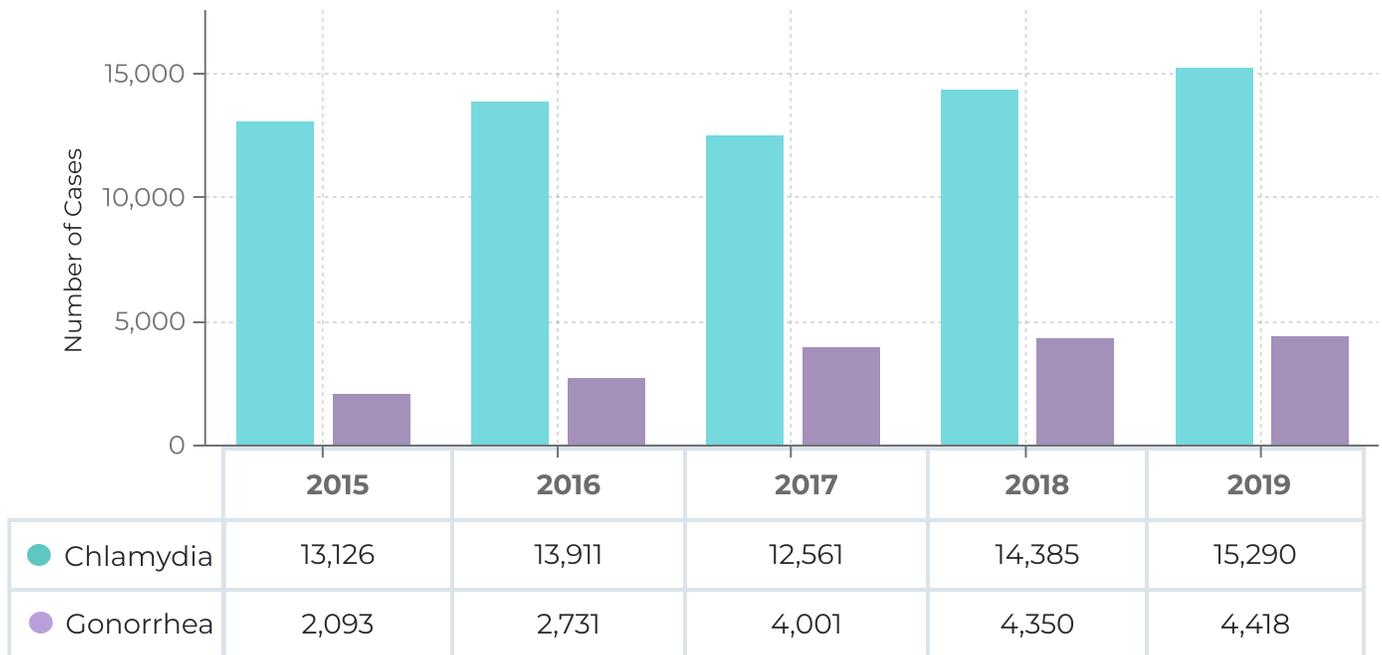


Figure 56: Primary and Secondary Syphilis, Connecticut, 2015-2019

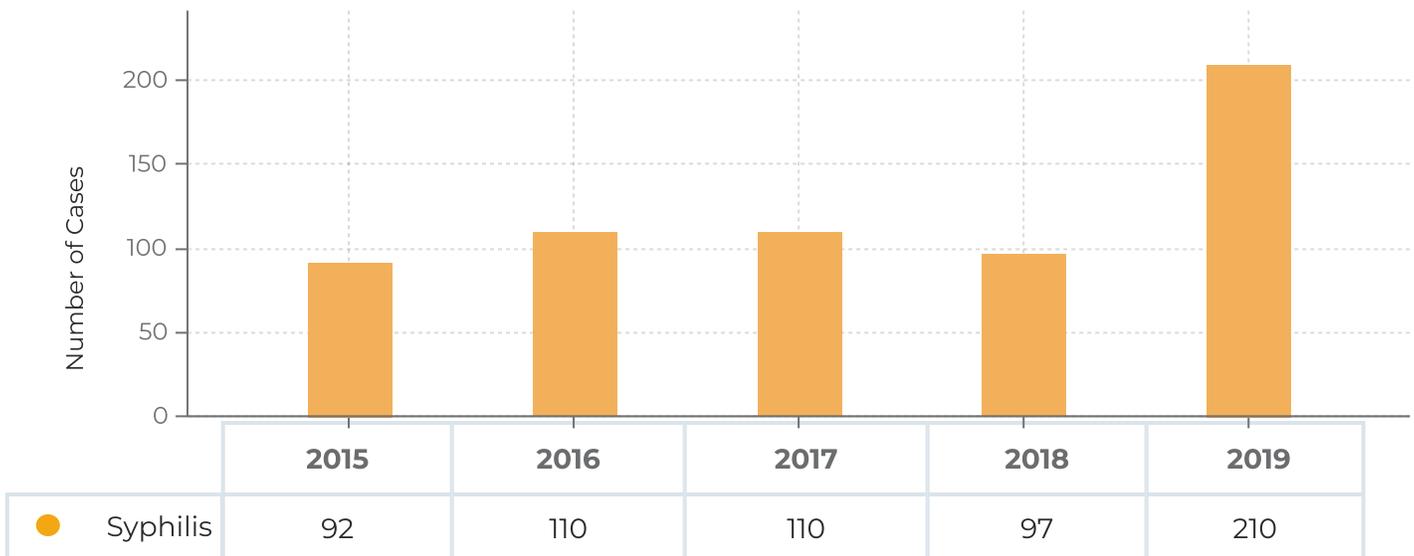


Table 15: Chlamydia, Gonorrhea, Primary and Secondary Syphilis by County, Connecticut, 2019

COUNTY	Chlamydia		Gonorrhea		Syphilis	
	N	RATE	N	RATE	N	RATE
Fairfield	3,625	395	818	89	57	6
Hartford	4,641	519	1,484	166	53	6
Litchfield	337	177	94	49	6	3
Middlesex	475	286	99	60	6	4
New Haven	4,469	518	1,495	173	72	8
New London	975	356	242	88	8	3
Tolland	424	278	74	49	2	1
Windham	340	287	71	60	5	4
Unknown	4	--	41	--	1	--
Total	15,290	428	4,418	124	210	6

While chlamydia, gonorrhea, and syphilis have all risen annually between 2015 and 2019, the number of syphilis cases reported in 2019 was marked with more than double the cases reported in previous years.

In 2019, the rates of chlamydia, gonorrhea, and syphilis (per 100,000 population) were highest in Fairfield, New Haven and Hartford counties.

Source: STD Control Program, CTEDSS for cases reported through December 2019 and 2010 census. Rates per 100,000 population. Rates based on counts <12 are considered unreliable and should be interpreted with caution.

Section XVI HIV-STI Co-Infection

Estimating Co-infection of Chlamydia, Gonorrhea, and Syphilis in People with HIV, Connecticut, 2019

Introduction:

A match of people living with HIV (n = 10,705) and people diagnosed with chlamydia, gonorrhea, and syphilis in 2019 was performed. Matching between surveillance registries was conducted using a CDC developed hierarchical deterministic matching SAS® program.

Methods:

Analytic methods were validated by 6 jurisdictions (*American Journal of Epidemiology*, <https://doi.org/10.1093/aje/kwy161>).

The program automated matches using 14 keys. Manual review was required only when multiple records from one dataset matched to a single record in the other dataset on the same lowest key value.

Results:

Chlamydia

- There were 174 matches on 160 individuals (1.5% of PWH).
- Three individuals had between 5 and 3 chlamydia infections and 6 individuals had 2.
- One hundred and sixty-one of the chlamydia infections were diagnosed after HIV diagnosis, 8 were diagnosed simultaneously, and 5 were diagnosed prior to HIV diagnosis.

Gonorrhea

- There were 223 matches on 207 individuals (2% of PLWH).
- Sixteen individuals had 2 infections diagnosed.
- Two hundred and six gonorrhea infections were diagnosed after HIV diagnosis, 7 were diagnosed simultaneously and 10 were diagnosed prior to HIV diagnosis.

Syphilis

- There were 121 matched cases on 118 individuals (1% of PLWH).
- Three individuals had 2 infections diagnosed.
- One hundred and twelve of the syphilis infections were diagnosed after HIV diagnosis, 8 were diagnosed simultaneously and 1 was diagnosed prior to HIV diagnosis.

Higher-prevalence Cities

In 2019, seven cities had >20 co-infected residents: Bridgeport, Hartford, East Hartford, New Britain, New Haven, Stamford and Waterbury.

Table 16: People with HIV and STI by Gender, Race/Ethnicity, Age, and HIV Transmission Category, Connecticut, 2019

	PWID		MSM		MSM/IDU		Hetero		Other/Unkn ¹		Total
SEX AT BIRTH	N	%	N	%	N	%	N	%	N	%	N
Male	14	3.1	381	82.1	20	4.3	18	3.9	31	6.7	464
Female	9	16.7	--	--	--	--	34	63.0	11	20.4	54
RACE											
Black	9	4.3	136	65.4	--	--	35	16.9	28	13.5	208
Hispanic	8	5.4	109	74.2	12	8.2	10	6.8	8	5.5	147
White	6	4.1	121	82.3	7	4.5	6	4.1	6	4.1	146
Other ²	--	--	15	88.2	1	5.9	1	5.9	--	--	17
AGE											
<20	--	--	23	85.2	--	--	3	11.1	1	3.7	27
20-29	1	0.7	113	76.9	6	4.1	15	10.2	12	8.2	147
30-39	4	2.56	120	76.9	7	4.5	14	9.0	11	7.1	156
40-49	6	7.0	60	69.8	3	3.5	7	8.1	10	11.6	86
50-59	7	9.9	49	69.0	3	4.2	5	7.0	7	9.9	71
60+	5	16.1	16	51.6	1	3.2	8	25.8	1	3.2	31
TOTAL	23	4.4	381	73.6	20	3.9	52	3.9	42	8.1	518

¹ Other/Unknown transmission category includes perinatal

² Other race includes Asians, Asian Pacific Islanders, and multi-racial

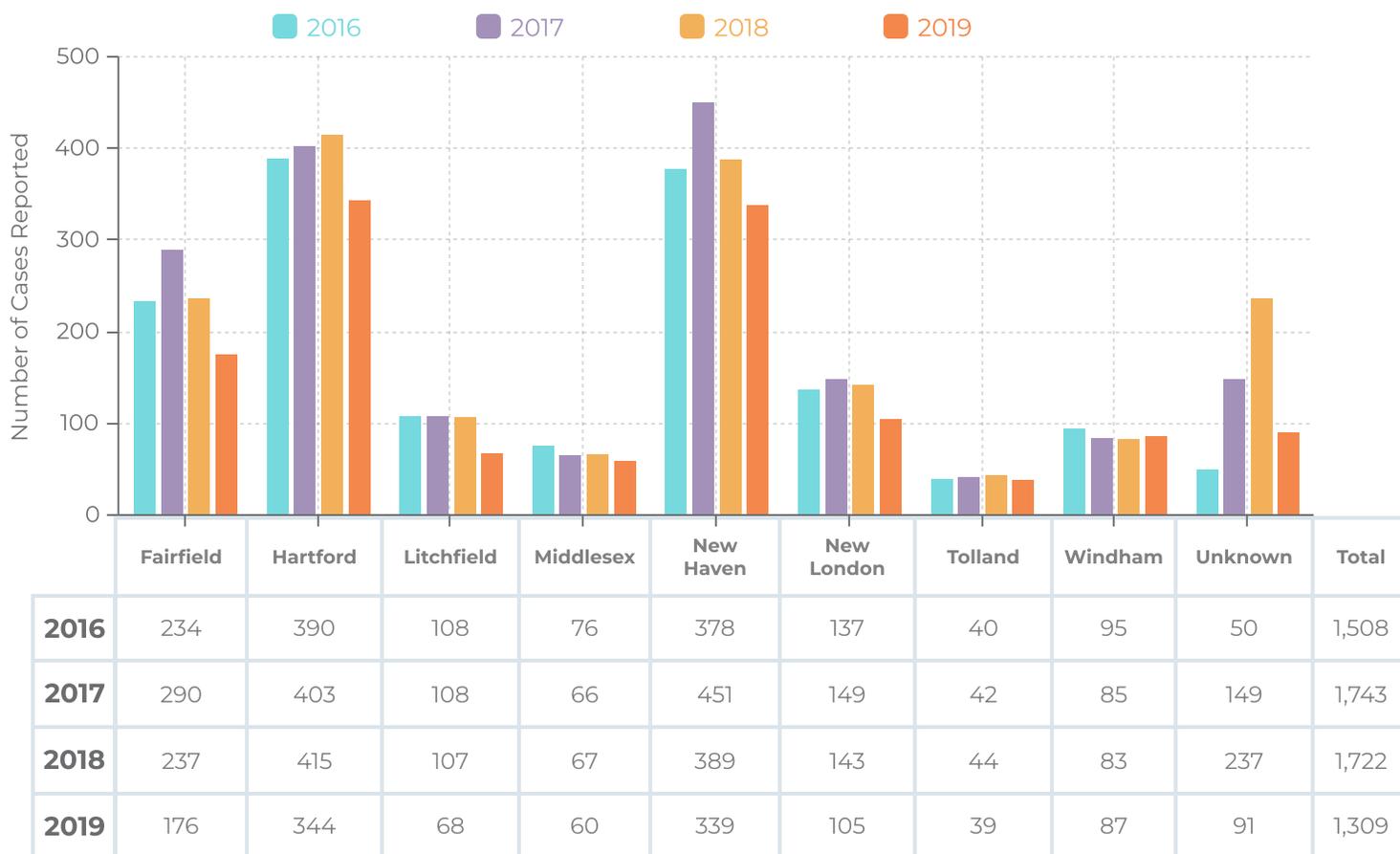
Section XVII Hepatitis C Virus (HCV)

It is estimated that 2.4 million people are currently infected with hepatitis C in the United States. In April 2020, CDC expanded its testing recommendations to include a one-time hepatitis C test for all adults, except in settings where the prevalence of HCV infection is <0.1%, and screening for all pregnant women during each pregnancy, except in settings where the prevalence of HCV infection is <0.1% to assist in early diagnosis and treatment of the virus.

The case definition for chronic hepatitis C changed in 2016 to focus on people with current disease; a person must be reported with a positive RNA result to be considered chronic. Additional HCV data can be found on the DPH website at <http://www.ct.gov/dph/hepatitis>

An estimated **11,559** people are living with HCV
in **Connecticut**

Figure 57: Chronic Hepatitis C by County, Connecticut, 2016-2019



Note: County is based on residence at first report. Unknown county includes people in corrections and inpatient at a facility if their address of residence was unable to be obtained.

Section XVIII HIV-HCV Co-infection

Table 17: Estimated Number and Percentage of People with HIV and Chronic HCV Co-infection by Sex, Race/Ethnicity, Age, and HIV Transmission Category, Connecticut, 2016-2019

	PWID		MSM		MSM/IDU		Hetero		Oth/Unk ¹		Total
	N	%	N	%	N	%	N	%	N	%	N
Sex at birth											
Male	288	75	43	11	19	5	23	6	12	3	288
Female	119	76	0	0	0	0	31	20	6	4	119
Race											
Black	155	77	13	6	5	2	21	10	7	3	201
Hispanic	172	78	11	5	9	4	21	10	6	3	219
White	76	67	18	16	5	4	11	10	4	3	114
Other	4	57	1	14	0	0	1	14	1	14	7
Current Age											
20-29	4	36	3	27	0	0	1	9	3	27	39
30-39	20	57	8	23	5	14	2	6	0	0	230
40-49	62	78	4	5	4	5	7	9	2	3	9
50+	321	77	28	7	10	2	44	11	13	3	133
Total	407	75	43	8	19	4	54	10	23	3	541

¹Other/unknown transmission category includes perinatal.

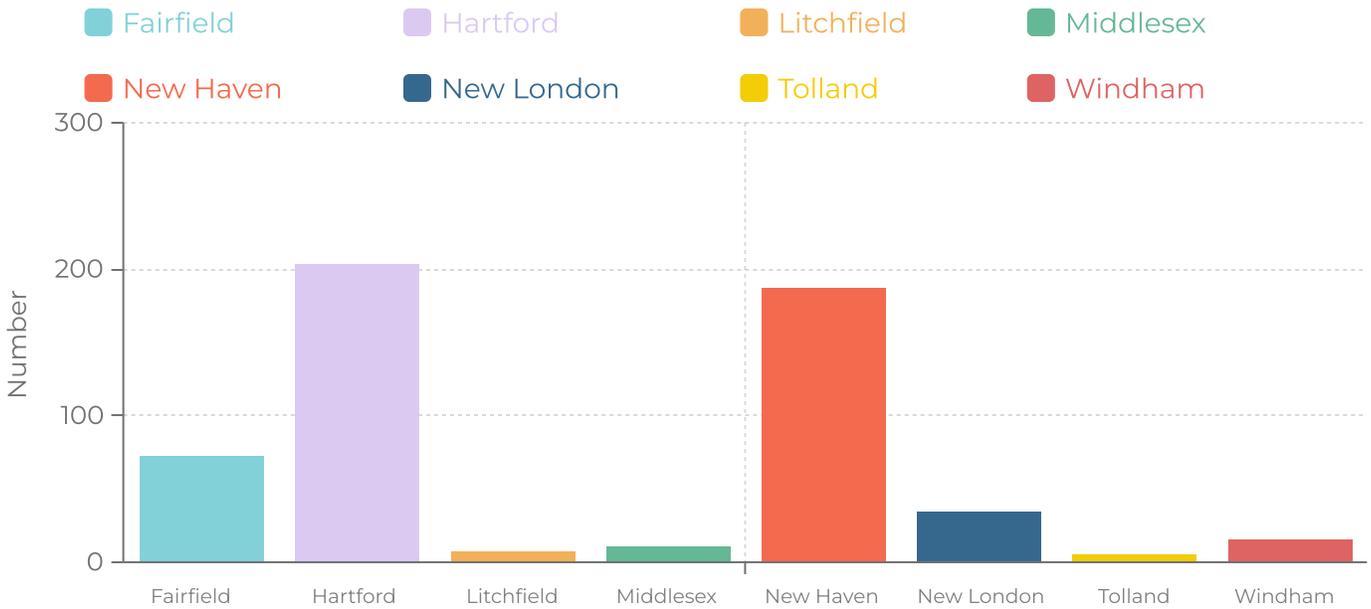
There were no reported cases of HIV-HCV coinfection in persons currently <20 years of age.

A match was performed using the HIV and HCV surveillance registries to estimate co-infection of people living with HIV and chronic HCV. Matching between databases was conducted using a CDC developed hierarchical deterministic matching SAS® program. The programs methods were validated by 6 jurisdictions (*American Journal of Epidemiology*, <https://doi.org/10.1093/aje/kwy161>).

The program automates matches using 14 keys. Manual review was required only when multiple records from one dataset matched to a single record in the other dataset on the same lowest key value.

Once matched, the dataset was further limited to include only people diagnosed through 2019, living through 2019, and with a documented HCV positive viral load between the years 2016 and 2019.

Figure 58: Estimated Number of People Living with HIV-HCV Co-infection by County, Connecticut, 2019



It is estimated that 5% of people living with HIV in Connecticut also have chronic HCV.

Notable Statistics

Diagnosed with HIV prior to HCV



Co-infection among PWIDs



Co-infection among people of color



Co-infection among 30-49 year-olds



There are several limitations to this estimate. Only people reported with a positive HCV viral load between the years 2016 and 2019 and met the 2016 CSTE case definition for confirmed chronic HCV were included.

People reported with positive HCV antibody could be chronically infected but further testing was either not performed or not reported. In addition, negative RNA testing is only reportable to DPH via electronic laboratory reporting (ELR). Although the laboratories with the largest volumes in Connecticut report through ELR, some co-infected cases may have obtained SVR during 2016 and 2019 however the negative viral load may not have been reported to DPH.

Appendix 1 - HIV Surveillance Methods

HIV and AIDS:

Most Connecticut tables and graphs herein combine HIV and AIDS into “HIV disease” or simply, “HIV”. The initial year of diagnosis indicates the year first diagnosed with HIV infection regardless of HIV or AIDS status at the time of the diagnosis.

Uses of surveillance information:

The primary purpose of the DPH HIV Surveillance Program is to systematically collect, analyze, interpret, and disseminate information about HIV epidemiology in Connecticut. This information is used by a variety of state and federal agencies to develop reports, policies, and allocate funding for local prevention and care needs. Surveillance information is also used by media, local health departments, non-governmental organizations and agencies, hospitals, physicians, students, and others. Other important functions of the surveillance system at the state and national level include monitoring national HIV elimination strategic goals, estimating incidence of HIV infection, identifying cases of public health importance, monitoring genetic variants and drug-resistant strains, identifying people with HIV who are not in care, and identifying clusters of HIV.

Reportable diseases:

Connecticut law requires DPH to maintain lists of reportable diseases and reportable laboratory findings. The lists include approximately 60 diseases and conditions of public health importance. Information is collected about each person with a disease or condition on the list. Reports are generated by the provider who diagnoses the disease and the laboratory that performs the test associated with the disease.

HIV-related reporting:

AIDS has been on the list of reportable diseases since the early 1980s. HIV (not AIDS) was added to the reportable disease list in 2002. HIV viral load test results were made reportable in 2006, HIV genotype sequence was made reportable in 2009 and all CD4 results in 2014. HIV is reported when an individual is confirmed to be HIV positive. Subsequent reports are made with additional testing by viral load or CD4. The AIDS case definition consists of either HIV positive with a low CD4-positive cell count (below 200 cells/microliter or less than 14% of total lymphocytes), or HIV positive and a diagnosis with one of several opportunistic infections or conditions (for example, *Pneumocystis jiroveci* pneumonia, wasting, or cervical carcinoma). DPH maintains a registry of HIV cases (eHARS).

Stage of disease:

The current HIV case definition includes criteria for staging at the time of initial diagnosis. HIV cases may be HIV Stage 0 (early HIV infection), Stage 1 (CD4 \geq 500), Stage 2 (CD4 200–499), or Stage 3 (AIDS) (CD4 <200). A case will be classified by the highest stage they attain at any time. Cases are not reclassified at lower stages if their clinical condition improves.

Information collected about HIV cases:

Various demographic and medical information is collected about each HIV case including: laboratory test dates, sex at birth, current gender identity, race, town of residence at HIV diagnosis and current residence, exposure category, AIDS indicator diseases, antiretroviral treatment history, pregnancy status, vital status, country of birth, and provider information. Additional information about some of these data elements is below.

Year of report and diagnosis:

HIV cases may be diagnosed in years prior to the year in which they were reported. The year of report is based on the date that the case was first reported to the DPH. The year of diagnosis is based on the earliest date in eHARS indicative of confirmed HIV infection. Most surveillance reports use the year of diagnosis. Annual surveillance reports are based on cases diagnosed up through December 31 of a specified year, allowing at least an additional 12 months for more complete data and reporting of newly diagnosed cases.

Sex:

For each case of HIV, information is collected about 'Sex at Birth' as well as enhanced information about gender ('Current Gender Identity'). Options include 'Male,' 'Female,' 'Transgender Male-to-Female,' 'Transgender Female-to-Male,' and 'Additional Gender Identity.' Very few cases are reported with other than male or female sex. There are never cases with unknown sex. If a case is reported without sex, follow-up is conducted to obtain it.

Race/ethnicity:

For each HIV case, race and ethnicity information is collected. Race categories include: 'White,' 'Black,' 'Asian,' 'Native Hawaiian or other Pacific Islander,' and 'American Indian/Alaska Native.' Ethnicity is coded as 'Hispanic' or 'Not Hispanic' and entered into a separate variable from race. Cases can be recorded as more than one race. 'Black' is used as shorthand for the more complete description used by the US Census, 'Black or African American' and Hispanic is used as shorthand for 'Hispanic or Latinx.' The majority of HIV cases are reported as white, black, or Hispanic but very small numbers of other race categories are also reported and categorized as 'Other' in HIV tables unless specific analyses are conducted. Also, 'Multi-race' can be reported and is included in 'Other' unless specifically included in analysis. Race and ethnicity are collected in separate fields and can be analyzed separately but most Hispanic cases are Hispanic-white or Hispanic with no race reported. There are never cases with unknown race/ethnicity. If a case is reported without race or ethnicity, follow-up is conducted to obtain it.

Residence:

The city of residence in HIV tables refers to the city where the case resided at the time of their initial diagnosis. With ongoing laboratory reporting of CD4 and viral load, more recent addresses are often reported and the eHARS record is updated. There are never cases with unknown initial city of residence. If a case is reported without city, follow-up is conducted to obtain it.

Age:

Information about age is presented in two ways: age at diagnosis and current age. Current age refers to age at the time the data was extracted for analysis, typically December 31 of the specified year. Cases 0–13 years of age are considered ‘children’ and cases ≥ 13 are considered ‘adults and adolescents.’ Older age groups are added as PLWH age. There are never cases with unknown age. If a case is reported without a date of birth, follow-up is conducted to obtain it.

Country of birth:

Information about country of birth is collected but poorly reported. This information is not always available to providers.

Exposure categories:

For each case of HIV, information is collected about the most likely way in which the person acquired HIV infection. This information may not always be available, especially for recently reported cases. The provider may not have reported the information, or the patient may not have volunteered the information to the provider, may not have returned to the diagnosing provider, may not be in care, may have moved to another state, or may have died.

When the exposure category is unknown, HIV tables and graphs classify these cases in a separate category (Other/Unknown). After additional follow-up with providers, many cases reported without risk are reclassified into a known exposure categories. Most HIV cases fall into a known exposure categories when a complete risk assessment has been conducted by the care provider. In the HIV surveillance system, HIV cases are only counted once in a hierarchy of exposure categories. Persons with more than one exposure category are classified in the exposure category listed first in the hierarchy with the exception for men with both a history of sexual contact with other men and injection drug use.

- **Men who have sex with men (MSM)** – Males who report having sexual contact with males (homosexual contact) and males who report sexual contact with both males and females (bisexual contact).
- **Injection drug use (IDU) or people who inject drugs (PWID)** – Persons who have injected non-prescription drugs.
- **Heterosexual contact** - Persons who have had heterosexual contact with a person with HIV infection or who is at high risk of HIV infection (IDU, bisexual male).
- **Other** – Other exposure categories include received clotting factor or hemophilia/coagulation disorder, transfusion recipient, transplant recipient, and worker in a health care or clinical laboratory setting. Due to low numbers, these cases may be classified together as ‘Other/Unknown’ in HIV tables and graphs.

Opportunistic infections:

There are 26 opportunistic infections or conditions that, together with HIV infection, indicate development of AIDS (or HIV Stage 3). These are also referred to as 'AIDS indicator diseases.' These infections or conditions are indicative of impaired immunity. The HIV surveillance system collects information on the infections or conditions that are reported with the initial diagnosis of AIDS. Indicator diseases that are subsequently diagnosed after initial report are not systematically monitored.

Deaths:

Reported cases of HIV are assumed to be alive unless death information is included with the initial report. Information about death is obtained from several sources. DPH Vital Records provides year-end data and periodic comprehensive data for matching with the HIV registry to update case vital status and import cause of death. Also, the CDC provides data from the Social Security Master Death file as well as the National Death Index to permit the identification of deaths among Connecticut HIV cases that occur in other states. Due to the lag in reporting death information is analyzed at least 12 months after the most recent diagnosis year.

HIV in children:

Information about perinatal exposure to HIV and pediatric cases of HIV (<13 years of age) are also collected. A pediatric case report form is used to collect this information. For each case of perinatal HIV exposure, a medical record extraction is conducted for the mother-child pair. Information collected about the mother includes demographics, risk behavior, HIV testing information, and adequacy of prenatal care. Information collected about the infant includes elements of the mother-to-child HIV prevention cascade and laboratory data including final HIV status.

Appendix 2 - Description of Data Sources

Data source	Description of methods	Strengths and limitations
HIV Surveillance Registry	<p>Provider and laboratory reporting of HIV infection is required. eHARS is the HIV surveillance registry.</p> <p>Additional information about HIV surveillance data can be found at the following website: www.ct.gov/dph/HIVsurveillance</p>	<p>Strengths:</p> <ul style="list-style-type: none"> - Statewide data - Includes information about demographics and risk factors for infection - Can be matched with other databases (STD, death, HCV) <p>Limitations:</p> <p>Information about recent cases tends to be incomplete for a period of time</p>
Hepatitis C Surveillance Registry	<p>Laboratory findings for hepatitis C are laboratory reportable. Acute hepatitis C cases are physician reportable.</p> <p>Additional information about hepatitis C can be found at the following web site: www.ct.gov/dph/hcv</p>	<p>Strengths:</p> <ul style="list-style-type: none"> - Statewide data - Includes information about demographics and risk factors for infection - Can be matched with other databases (STD, death, HCV) <p>Limitations:</p> <ul style="list-style-type: none"> - Information about recent cases tends to be incomplete for a period of time
Sexually Transmitted Diseases Surveillance Registry	<p>Chlamydia, gonorrhea, syphilis, chancroid, and neonatal herpes are required to be reported to DPH by laboratories and providers. DPH staff follow-up on all newly diagnosed syphilis cases to collect additional information about contacts, demographics, and behavioral characteristics.</p> <p>Additional information about STDs can be found at the following web site: www.ct.gov/dph/std</p>	<p>Strengths:</p> <ul style="list-style-type: none"> - Statewide data - Includes information about demographics and risk factors (syphilis) for infection - Interviews in the context of partner services are conducted with all syphilis cases and have established MSM as a primary risk factor <p>Limitations:</p> <ul style="list-style-type: none"> - Information about recent STD cases may be incomplete

Data source	Description of methods	Strengths and limitations
Vital Records	<p><u>Death data</u> - Vital records supplied data about deaths in Connecticut. Included is information about primary and secondary causes of death. Information about deaths is provided through the Death Certificate reporting process.</p> <p>Death data for Connecticut can be found at the following website: www.ct.gov/dph/mortality</p>	<p>Strengths:</p> <ul style="list-style-type: none"> - Statewide data - Includes information about persons with HIV who die. - Matching with eHARS can update vital status of HIV/AIDS cases <p>Limitations:</p> <ul style="list-style-type: none"> - This data can be several years out of date due to time needed to complete reporting.
Behavioral Risk Factor Surveillance System (BRFSS)	<p>The BRFSS is an ongoing telephone survey of adults conducted in all 50 states and coordinated by the CDC in Atlanta, GA. Households are randomly selected. Listed and unlisted residential telephone numbers are included in the sample. The BRFSS collects data on health behaviors related to the leading causes of death, health care access, utilization of preventive health services, and to address emerging issues. At the end of each year, data are compiled and adjusted to be representative of all adults in the state, and returned to states for analysis. Data for all states are available via the CDC BRFSS website.</p> <p>Information about the BRFSS in Connecticut can be found at the following website: http://www.ct.gov/dph/BRFSS</p>	<p>Strengths:</p> <ul style="list-style-type: none"> - Statewide data - Includes information about demographics and risk factors for HIV - Includes information about HIV testing - Data are weighted to population characteristics <p>Weaknesses:</p> <ul style="list-style-type: none"> - Telephone survey. - Difficult to reach populations and groups which represent small percentages of the population will be contacted infrequently

Data source	Description of methods	Strengths and limitations
Connecticut School Health Survey	<p>The Connecticut School Health Survey (CSHS) is comprised of the Youth Tobacco Component (YTC) (PDF) and the Youth Behavior Component (YBC) (PDF). These two school surveys have been co-administered since 2005.</p> <p>The YTC is a school-based survey of students in grades 6 - 12, with randomly chosen classrooms within selected schools, and is anonymous and confidential. The YBC is also a school-based survey of students, but only of high-school grades 9 - 12 and it, too, is anonymous and confidential.</p> <p>Information about the CSHS in Connecticut can be found at the following website: http://www.ct.gov/dph/CSHS</p>	<p>Strengths</p> <ul style="list-style-type: none"> - Conducted biennially - Describes prevalence of health-risk behaviors among youths - Asses trends over time - Nationally comparable data - Statistically significant sample size <p>Limitations</p> <ul style="list-style-type: none"> - Schools need to volunteer to be sampled - Questions can change year to year