HIV/AIDS in New England

(updated January 2023)



HIV/AIDS in New England

This educational packet is a curated compilation of resources on HIV in New England.

The contents of this packet are listed below:

- HIV in Connecticut: Data Reported Through 2021
- Maine HIV Surveillance Report: 2019
- Massachusetts HIV/AIDS Epidemiologic Profile Statewide Report Extracts
- New Hampshire STD/HIV Surveillance Program: 5-Year Data Summary Report 2017-2021 – Extracts
- Rhode Island HIV, Sexually Transmitted Diseases, Viral Hepatitis, and Tuberculosis Surveillance Report: 2020 – Extracts
- 2017 Vermont HIV Annual Report

You may wish to customize this packet to meet the needs or interests of particular groups, such as event participants, providers, patients, clients, or the general public. So please feel free to distribute all or part of this document as either a printout or PDF.

HIV in Connecticut

Data reported through 2021



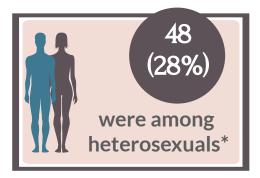


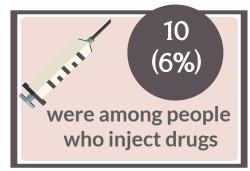
In 2020, 174 new HIV infections were reported to DPH.

January 2022

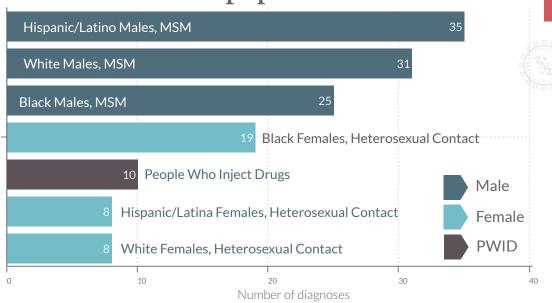
Of the 174 newly identified HIV diagnoses in 2020:







2020 HIV Diagnoses in Connecticut, Most Affected Subpopulations



REPORTED TOTALS 1981 - 2020

ALL HIV-INFECTED PEOPLE
LIVING OR DECEASED

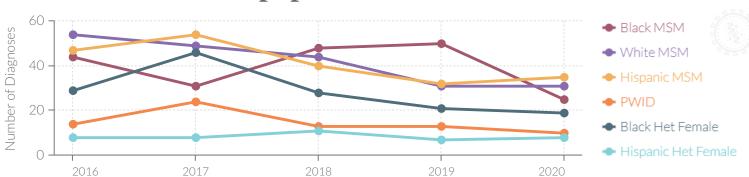
8,741

PEOPLE WHO INJECT DRUGS

5,959GAY OR BISEXUAL MEN

5,010 HETEROSEXUAL

5-Year Trends in Subpopulations, 2016-2020:



^{*} Heterosexual transmission categories include presumed heterosexual risk

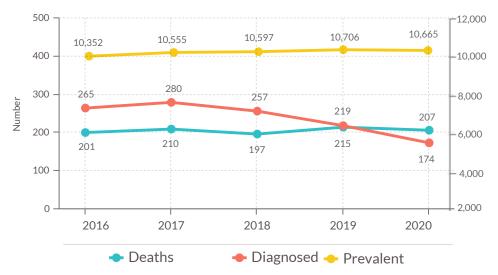
^{**} PWID: People who inject drugs

Black/African Americans account for **12%** of the CT population and **33%** of new HIV diagnoses

Hispanic/Latinx account for 17% of the CT population and 35% of new HIV diagnoses

10,665
People in CT are

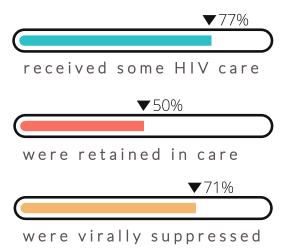
5-Year Trends in New Diagnoses, Prevalence and Deaths, 2016-2020:



FOR PEOPLE

LIVING WITH HIV...

LIVING WITH HIV





People diagnosed with HIV in CT who died in 2020

,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

(preliminary data)

Please note...

COVID-19 Impact

The HIV Surveillance Program has maintained usual operations and activities since the start of the pandemic. With implementation of "Stay Safe-Stay Home," tele-health, and home testing, there was a reduction in HIV-related laboratory reporting.

2020 HIV Surveillance Data

It is recommended that 2020 data be interpreted with caution. New HIV cases may be under-reported. People with HIV who are identified as "not-in-care," may have had a tele-health visit that would not reflect in HIV surveillance data.



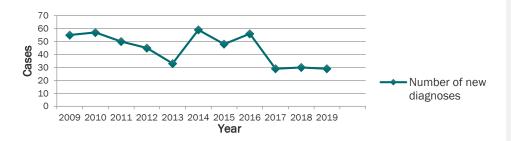


Case Information:

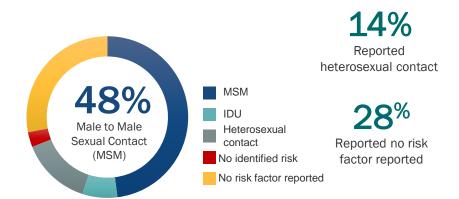
29
Patients diagnosed with HIV

Cases per 100,000 people

Number of New HIV Cases, Maine



Transmission Category:



Prevention:





- Proper condom use
- PrEP for those at risk
- Treatment for those who are HIV positive/maintaining viral suppression
- Regular HIV testing by providers
- Clean injecting equipment

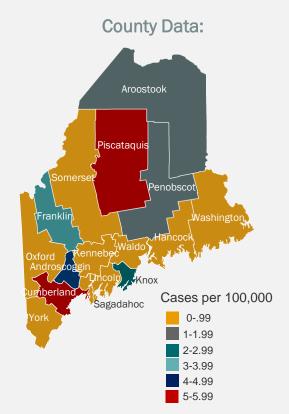
HIV

Maine Surveillance Report | 2019

Demographics:



69% of new cases were male Median age: 38 59% Non Hispanic, White



For more information visit:

http://www.maine.gov/dhhs/mecdc/infectious-disease/hiv-std/data/hiv.shtml

https://www.cdc.gov/hiv/default.html

https://www.cdc.gov/hiv/basics/prep.html

https://www.maine.gov/dhhs/mecdc/infectious-disease/hiv-std/services/hiv-testing-sites.shtml



Massachusetts Department of Public Health Bureau of Infectious Disease and Laboratory Sciences

Massachusetts HIV Epidemiologic Profile Statewide Report – Data as of 1/1/2022

Suggested citation:

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Questions about this report

Tel: (617) 983-6560

To reach the Reporting and Partner Services Line

Tel: (617) 983-6999

To speak to the on-call epidemiologist

Tel: (617) 983-6800

Questions about infectious disease reporting

Tel: (617) 983-6801

Requests for additional data

https://www.mass.gov/lists/infectious-disease-data-reports-and-requests

Slide sets for HIV Epidemiologic Profile Reports

https://www.mass.gov/lists/hivaids-epidemiologic-profiles

EXECUTIVE SUMMARY

Impact of COVID-19 on HIV Surveillance Data

The coronavirus disease 2019 (COVID-19) pandemic had a large impact on the screening, treatment, and surveillance of other infectious diseases in 2020. Nationally, the Centers for Disease Control and Prevention (CDC) observed significant declines in HIV testing (and diagnoses) during the COVID-19 pandemic that are likely attributed to interruptions in the availability of clinical services, patient hesitancy in accessing face-to-face clinical services, and shortages in HIV testing reagents/materials. At time of publication, the full effect of the COVID-19 pandemic on case detection and reporting and efforts to control the spread of infectious disease in the Commonwealth has yet to be determined. As such, please interpret 2020 HIV surveillance data presented in this report with caution.

Epidemic at a Glance

- The number of persons living with HIV infection (PLWH) in Massachusetts increased by 16% from 20,094 in 2011 to 23,368 in 2020.
- After remaining relatively stable at approximately 700 diagnoses per year from 2011 to 2013 (three-year average = 695), then approximately 640 diagnoses per year from 2014 to 2018 (five-year average = 640), the number of new HIV infection diagnoses declined to a ten-year low of 539 in 2019. In 2020, the number of new HIV infection diagnoses declined to 437, although caution should be used in the interpretation of this decline due to the impact of COVID-19 on access to HIV testing and care services, and case surveillance activities.
- The number of deaths due to any cause among individuals reported with HIV infection increased by 18% from 266 in 2011 to 314 in 2020.
- Although there have been reductions in new cases, vulnerable populations remain disproportionately impacted:
 - Men who have sex with men (MSM) continued to represent the largest proportion of new HIV infection diagnoses (39% overall and 54% among individuals assigned male at birth [AMAB] in 2018–2020, as of 1/1/2022).
 - Individuals with IDU exposure mode accounted for 32% of deaths among individuals with HIV in 2020 but only 16% of all PLWH in 2020.

Trends in HIV Infection Diagnoses Over Time

- The number of individuals diagnosed with HIV infection has decreased over the past decade in Massachusetts, but disparities persist by exposure mode, race/ethnicity, place of birth, and age.
- Male-to-male sex (MSM) remained the predominant exposure mode from 2011 to 2020.
- After declining by 48% from 2011 (N=60) to 2014 (N=31), the number of reported cases with injection drug use (IDU) as the primary exposure mode peaked at 116 in 2017, then decreased to 59 in 2019. The increase was primarily due to an outbreak among persons who inject drugs (PWID) in the northeast part of the state between 2016 and 2018. Following an intensive and targeted public health response, the number of HIV infection diagnoses attributed to IDU in the northeast has decreased. However, in early 2019, a new cluster of HIV infection was identified in Boston among PWID who were experiencing or had experienced recent homelessness, and the total statewide number of reported cases with IDU as the primary exposure increased to 76 in 2020.

Source: Centers for Disease Control and Prevention and Health Resources and Services Administration. *Integrated Guidance for Developing Epidemiologic Profiles: HIV Prevention and Ryan White HIV/AIDS Program Planning.* Atlanta, Georgia: Centers for Disease Control and Prevention; 2022.

^{II} Please consider the impact of the COVID-19 pandemic on infectious disease screening, treatment, and surveillance in the interpretation of 2020 data

For more information, see: Charles Alpren et al. "Opioid Use Fueling HIV Transmission in an Urban Setting: An Outbreak of HIV Infection Among People Who Inject Drugs—Massachusetts, 2015–2018", American Journal of Public Health 110, no. 1 (January 1, 2020): pp. 37-44. https://doi.org/10.2105/AJPH.2019.305366

As of December 31, 2021, a total of 164 cases diagnosed since November 2018 have been investigated and identified as part of the Boston cluster. As it is an active cluster of concern, additional cases will continue to be investigated and added. Emerging trends among those newly diagnosed in the Boston cluster (N=66 cases diagnosed in 2020)ⁱ include an increase in polysubstance and methamphetamine use.ⁱⁱ

- The distributions of individuals diagnosed with HIV infection by sex assigned at birth, place of birth, and race/ethnicity remained relatively stable from 2011 to 2020.
- From 2011 to 2020, the proportion of individuals diagnosed with HIV infection at age 30–39 years increased from 25% to 35%, while the proportion of individuals diagnosed at age 40–49 years decreased from 29% to 14%.

Recent HIV Infection Diagnoses

- Those with no identified risk (NIR), as defined by the CDC, comprised the second largest exposure mode group reported to the MDPH, accounting for 28% of recent HIV infection diagnoses and consisting predominantly of individuals AMAB (65%), individuals born outside the US (55%), and individuals of black (non-Hispanic) (50%) race and Hispanic/Latino (24%) ethnicity. Beginning in 2019, all new diagnoses of HIV infection were assigned to field epidemiologists for partner services, education, and linkage to HIV care. Please note that although field epidemiologists offer additional support in the collection of risk information as part of this process, some of the information doesn't meet the CDC-defined exposure mode categories. For example, risks occurring outside the US, such as occupational exposure, are not assigned as a primary exposure mode because it is not possible to verify the information internationally. The Massachusetts Department of Public Health will collect and maintain expanded risk information for local analyses and future use in case the CDC-defined exposure mode categories are updated.
- One in five (20%) individuals AFAB and diagnosed with HIV infection from 2018 to 2020 reported IDU as their primary exposure mode, compared to one in eight (12%) individuals AMAB.
- Black (non-Hispanic) and Hispanic/Latino individuals were diagnosed with HIV infection during 2018–2020 at rates eight and four times that of white (non-Hispanic) individuals, respectively.
- During 2018 to 2020, 38% (N=620) of all individuals diagnosed with HIV infection were born
 outside the US. This proportion varied by race/ethnicity: 73% of Asian/Pacific Islander individuals
 diagnosed with HIV infection were born outside the US, compared to 55% of black (non-Hispanic)
 and 46% of Hispanic/Latino individuals. An additional 12% of Hispanic/Latino individuals
 diagnosed with HIV infection during this time period were born in Puerto Rico. Thirteen percent of
 white (non-Hispanic) individuals were born outside the US or in Puerto Rico.

Persons Living with HIV Infection (PLWH)

- Challenges to achieving health equity in the prevention and care of HIV infection remain:
 - Racial/ethnic disparities persist among PLWH, and marked differences exist by exposure mode, current gender, place of birth, and geographic region of residence in the state.
 - MSM was the most frequently reported exposure mode, accounting for 40% of PLWH overall and 56% of individuals AMAB living with HIV infection.
 - While 12% of all Massachusetts residents live in the Boston HSR, it is the current residence of 27% of PLWH.

Please consider the impact of the COVID-19 pandemic on infectious disease screening, treatment, and surveillance in the interpretation of 2020 data

For more information, see: Joint MDPH and BPHC Clinical Advisory: Increase in newly diagnosed HIV infections among persons who inject drugs in Boston, March 15, 2021, available at: https://www.mass.gov/doc/joint-mdph-and-bphc-clinical-advisory-hiv-transmission-through-injection-drug-use-in-boston-march-15-2021/download

Mortality Among Individuals Reported with HIV

- Disparities in mortality among individuals reported with HIV paralleled those in diagnosis rates by sex assigned at birth, race/ethnicity, and place of birth, but not exposure mode. Individuals with IDU exposure mode were over-represented among HIV-positive individuals who died.
- The average age at death among individuals reported with HIV increased by 6.5 years, from 52.3 years in 2011 to 58.8 years in 2020. For comparison, the average age at death of the general Massachusetts population remained between 75.5 and 76.8 from 2011 to 2020.
- Survival of individuals diagnosed with AIDS has increased over time. In the earliest cohort of AIDS diagnoses (1986–1990), estimated survival at five years after AIDS diagnosis was 16%, compared to 87% in the most recent cohort (2016–2020).

Trends in Deaths Among Individuals Reported with HIV

• The proportion of deaths among individuals reported with HIV infection attributed to HIV-related causes decreased from 34% (N=91/266) in 2011 to 16% (N=51/314) in 2020.

Geographic Distribution of HIV Infection

- The cities and towns with the highest average annual rate of HIV infection diagnosis during 2018 to 2020 included Brockton (27.8 per 100,000), Everett (23.3), Lawrence (19.7), Lowell (18.9), and Chelsea (18.9). Boston had the highest number of new HIV infection diagnoses from 2018–2020 (N=364), followed by Worcester (N=93).
- Suffolk County was selected as one of 48 counties nationally that is prioritized for funding in the U.S. Health and Human Services' initiative "Ending the HIV Epidemic (EHE): A Plan for America".
 Suffolk County had the highest average age-adjusted rate of HIV infection diagnosis during 2018 to 2020 among all Massachusetts counties at 15.8 per 100,000.

The Massachusetts HIV Care Continuum

- Among individuals newly diagnosed with HIV infection in 2019, 89% overall were virally suppressed, with 92% of those linked to care, and 94% of those retained in care reaching viral suppression. Viral suppression was lowest among individuals with injection drug use exposure mode (77%, compared to 83% to 95% among other exposure modes).
- Among persons living with HIV infection in 2020, 63% overall were virally suppressed, with 91% of those engaged in care and 94% of those retained in care reaching viral suppression.

¹ Please consider the impact of the COVID-19 pandemic on infectious disease screening, treatment, and surveillance in the interpretation of 2020 data

ii "Virally Suppressed" is defined as having a VL <200 copies/mL for the most recent VL test drawn during the 12-month period after diagnosis.

[&]quot;" "Linked to Care" is defined as having ≥1 viral load (VL) or CD4 test result within 3 months of diagnosis.

iv "Retained in Care" is defined as having ≥2 VL or CD4 test results at least 3 months apart during the 12-month period after diagnosis.

 $^{^{\}rm v}$ "Virally Suppressed" is defined as having a VL <200 copies/mL for the most recent VL test drawn in 2020.

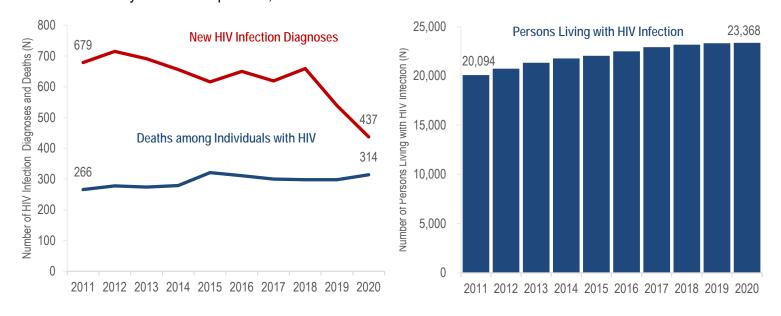
vi "Engaged in Care" is defined as having ≥1 VL or CD4 test result in 2020.

vii "Retained in Care" is defined as having ≥2 VL or CD4 test results at least 3 months apart in 2020.

EPIDEMIC AT A GLANCE

The number of persons living with HIV infection (PLWH) in Massachusetts increased by 16% from 20,094 in 2011 to 23,368 in 2020. After remaining relatively stable at approximately 700 diagnoses per year from 2011 to 2013 (three-year average = 695), then approximately 640 diagnoses per year from 2014 to 2018 (five-year average = 640), the number of new HIV infection diagnoses declined to a ten-year low of 539 in 2019. In 2020, the number of new HIV infection diagnoses declined to 437, although caution should be used in the interpretation of this decline due to the impact of COVID-19 on access to HIV testing and care services, and case surveillance activities. The number of deaths due to any cause among individuals reported with HIV infection increased by 18% from 266 in 2011 to 314 in 2020.

FIGURE 1: History of the HIV epidemic, Massachusetts 2011–2020



N=437 New HIV infection diagnoses in MA in 2020*

N=23,368

Persons living with HIV infection in MA as Not 12/31/2020*

Deaths among individuals reported with HIV in MA in 2020*

*Please consider the impact of the COVID-19 pandemic on infectious disease screening, treatment, and surveillance in the interpretation of 2020 data

Men who have sex with men (MSM) continued to represent the largest proportion of new HIV infection diagnoses: 39% of all new HIV infection diagnoses in 2018–2020, and 54% among individuals AMAB.

During 2018–2020, the HIV infection diagnosis rates among black (non-Hispanic) and Hispanic/Latino individuals were eight and four times that of white (non-Hispanic) individuals, respectively.

Individuals with injection drug use (IDU) exposure mode accounted for 32% of deaths among individuals reported with HIV in 2020 but only 16% of all PLWH.



New Hampshire Infectious Disease Surveillance Section STI/HIV Data Summary Report 2017-2021



Data Notes:

All Data in this report are based upon information provided to the New Hampshire Department of Health and Human Services under specific legislative authority. The numbers may represent an underestimate of the true absolute number and incidence rate of cases in the state. Any release of personal identifying information is conditioned upon such information remaining confidential. The unauthorized disclosure of any confidential medical or scientific data is a misdemeanor under New Hampshire law. The department is not responsible for any duplication or misrepresentation of surveillance data released in accordance with this guideline. Population data used in this report come from the most recently available U.S. Census Bureau population estimates. Data in this report are complete as of October 28th, 2022.

- 1: Case rate per 100,000 persons. Case rates calculated for events <20 are considered statistically unreliable and should be interpreted with caution. The Infectious Disease Surveillance Section restricts the release of calculated rate data to cell sizes ≥5 cases.
- 2. 2021 census data was not available at the time this report was compiled. 2021 rate estimates were thus computed using 2020 census data. This report will be updated once full 2021 census data becomes available.
- 3: Black/African American race category includes Black persons, African American persons, and persons of African descent. Other/Unknown race category includes multi-racial. For HIV/AIDS data, Other/Unknown race category also includes persons of Hispanic ethnicity and those reporting multiple races.
- 4: Hispanic ethnicity may be of any race.
- 5: NC= Not Calculated. As most STI cases have an unknown HIV status, data regarding HIV co-infection is considered incomplete. Rates are not presented due to incomplete data.
- 6: PLWHA= People living with HIV/AIDS.
- 7: County and city data is based upon residence at time of disease diagnosis.
- 8: Infectious syphilis includes cases diagnosed during the primary, secondary, and early non-primary non-secondary stages of syphilis infection in accordance with the CDC case definition. It excludes congenital syphilis and cases of unknown duration or diagnosed during late stage infection.
- 9: MSM= Male-to-male sexual contact. IDU= Injection drug use. Perinatal= Mother with or at risk for HIV. NRR= No reported risk. NIR= No identified risk. Heterosexual Contact= Specific heterosexual contact with a person known either to have or to be at high risk for HIV infection.
- 10: Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis.
- 11: Indicates a new diagnosis of AIDS in the specified year, regardless of when diagnosed with HIV.
- 12: Concurrent diagnosis is defined as diagnosis of AIDS within 12 months of an initial HIV diagnosis.

Data sources: Patient Reporting Investigating Surveillance Manager (PRISM), enhanced HIV AIDS Reporting System (eHARS), and Environmental Systems Research Institute (ESRI) ArcMap.

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Context: COVID-19 Pandemic

- 1. In response to the COVID-19 pandemic, many state and local health resources were reassigned to support COVID-19 containment and mitigation.
- 2. The impact of pandemic-driven changes in patterns of healthcare access and seeking, sexual and other behavior, and disease reporting is not fully understood. Thus, 2020 and 2021 data must be interpreted with caution and may not be comparable to prior years.

Chlamydia

- 1. Chlamydia case counts increased slightly from 2020 to 2021 but remain substantially lower than pre-pandemic counts.
- 2. Persons under age 30, females, and Black or African American persons remain the populations most affected.
- 3. Rates of disease in 2021 were in highest in Hillborough, Strafford, and Cheshire Counties.

Gonorrhea

- 1. Outbreak status was declared in 2016. Gonorrhea incidence decreased in 2019-2020, but 2021 represents the highest number of cases reported in NH in a single year.
- 2. Persons aged 20-35 years; Black or African American person; and men of any age are most commonly diagnosed. Rates among persons of Hispanic ethnicity have been increasing since 2013.
- 3. Hillsborough County, specifically City of Manchester, bore the highest burden of disease in 2021 as well as historically.

Infectious Syphilis⁸ (Primary, Secondary, and Early Non-Primary Non-Secondary)

- 1. Outbreak status was declared in 2017. Infectious syphilis incidence decreased in 2019-2020, but 2021 represents the highest number of cases reported in NH in a single year.
- 2. Gay and bisexual men and other men who reported male sex partners, as well as men living with HIV, remain the populations most affected.
- 3. NH reported 1 case of congenital syphilis in 2018 and 2 cases in 2019. Any case of congenital syphilis indicates missed opportunities for prevention, testing, and treatment. Zero cases of congential syphilis were reported in NH in 2020 and 2021.

Human Immunodeficiency Virus Infection (HIV)

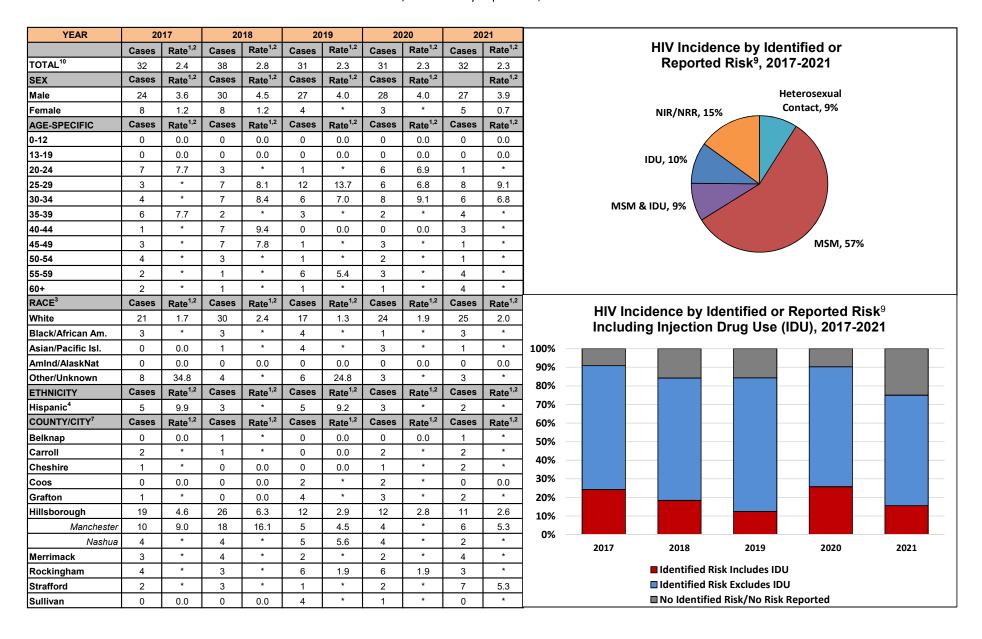
- 1. The number of persons per year newly diagnosed with HIV in NH remains relatively stable.
- 2. Gay and bisexual men and other men who reported male sex partners remain the population most affected.
- 3. Rates of disease remain highest in Hillsborough County. However, in 2021 the rate in Strafford County increased substantially.

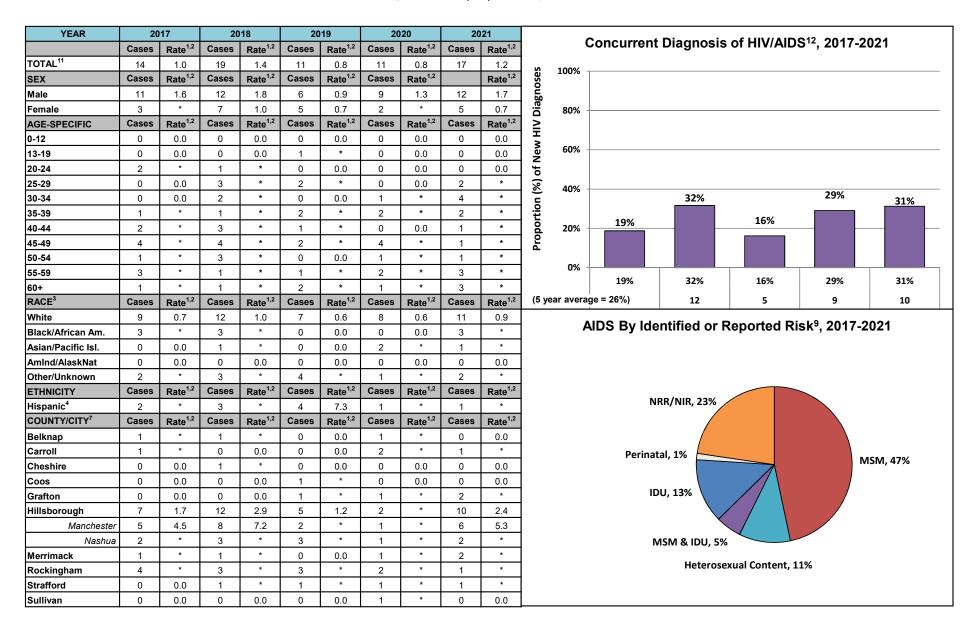
Acquired Immunodeficiency Syndrome (AIDS)

- 1. The number of persons per year newly diagnosed with AIDS in NH decreased in 2019-2020 compared to prior years, but returned to baseline in 2021.
- 2. From 2017-2021, 26% of persons newly diagnosed with HIV received an concurrent diagnosis of AIDS (i.e., AIDS diagnosis within 12 months of initial HIV diagnosis). Concurrent diagnosis indicates missed opportunities for prevention, testing, and treatment.

Resources

- 1. CDC/NCHHSTP Atlas: http://gis.cdc.gov/GRASP/NCHHSTPAtlas/main.html
- 2. CDC HIV Surveillance: http://www.cdc.gov/hiv/default.html
- 3. NH DPHS, STD/HIV Publications: http://www.dhhs.nh.gov/dphs/bchs/std/publications.htm

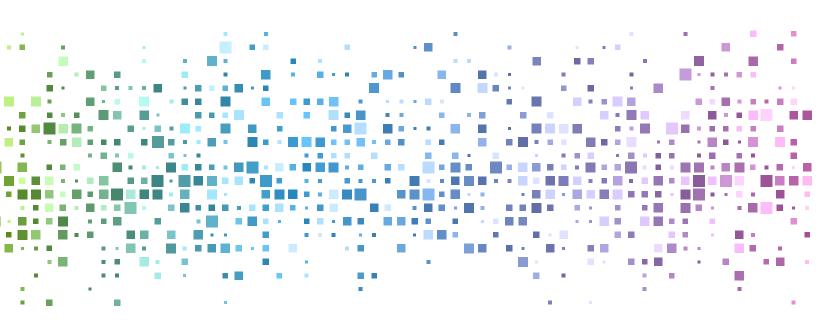






RHODE ISLAND

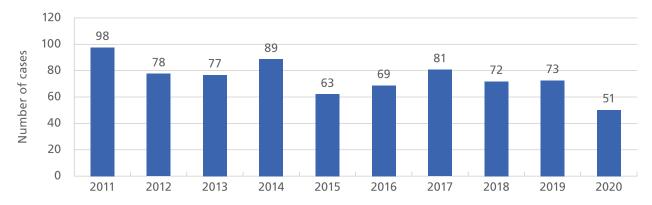
HIV, Sexually Transmitted Diseases, Viral Hepatitis, and Tuberculosis Surveillance Report



01 | **HIV/AIDS**

The human immunodeficiency virus (HIV) is a virus that can be spread through sexual contact, needle-sharing, and from a woman to her child through pregnancy, birth, and breastfeeding. While HIV is not a curable disease, people living with HIV who are in medical care and are taking their medications can achieve an undetectable HIV viral load and have a normal life expectancy. If left untreated, HIV infection can lead to acquired immunodeficiency syndrome, or AIDS. Because the immune system is greatly weakened for people diagnosed with AIDS, those living with AIDS have an increased susceptibility to certain infections and cancers that can potentially result in death.

FIGURE 1
Number of Newly Diagnosed Cases of HIV, Rhode Island, 2011-2020



Source: Rhode Island Department of Health

Over the last 10 years, there has been an overall reduction in the number of newly diagnosed cases of HIV in Rhode Island. There has been a slight increase from 2015 through 2019, however, the number of cases in 2020 dropped significantly with the number of 2020 new diagnoses being the lowest in the past 10 years. A reduction in cases was observed in 2020, which may be attributed to the impact of COVID-19 on reduced screening by health care providers and changes in individual risk behaviors.

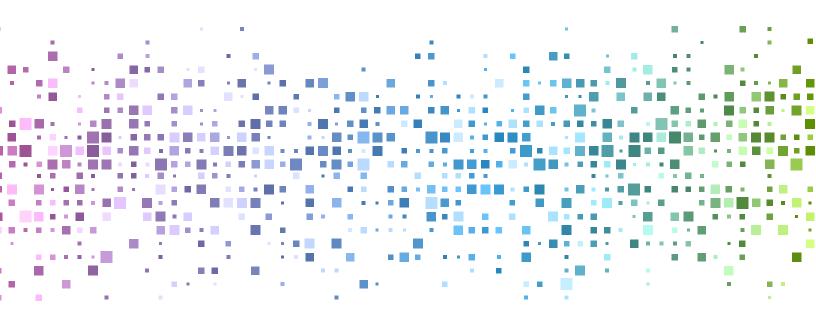
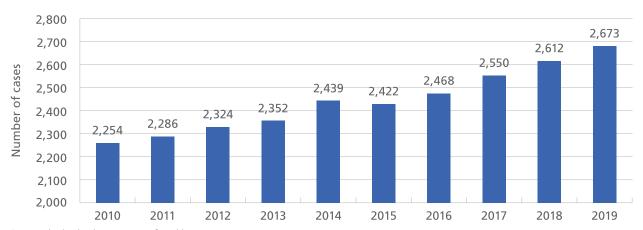


FIGURE 2
Estimated Number of Persons Diagnosed and Living with HIV, Rhode Island, 2010-2019



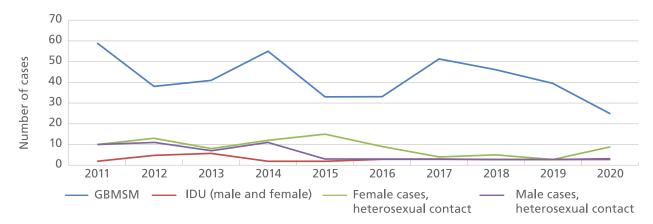
Source: Rhode Island Department of Health

There were 2,673 Rhode Islanders diagnosed with HIV through 2018 and alive through the end of 2019. It is also estimated that about 11% of individuals who are HIV-infected do not know their status, which suggests the numbers above are an underestimate of all Rhode Islanders living with HIV. Due to advances in HIV treatment, people who are HIV-positive are living longer lives and represent a growing segment of Rhode Island's population. The numbers above also reflect the migration of people living with HIV who migrate into and out of the state.

HIV/AIDS Deaths

Between 1983 and 2019, a total of 1,897 deaths have occurred among Rhode Island residents diagnosed with HIV/AIDS. However, only 181 (9.5%) of those deaths occurred from 2015-2019, and deaths decreased annually in this five-year period. Between 2010 and 2019, the national age-adjusted rate of HIV-related deaths fell by nearly half. This reduction in deaths underscores the impact of improved treatment and access to care for people living with HIV.

FIGURE 3
Number of Newly Diagnosed Cases of HIV, by Mode of Exposure, Rhode Island, 2011-2020



Source: Rhode Island Department of Health
People of unknown or unreported sexual orientation are not included in this data. Cases for which mode of exposure could not be determined are not included in this figure.

In the last 10 years, slightly more than half (55.6%) of newly diagnosed cases were among gay, bisexual, or other men who have sex with men (GBMSM). In the last five years, that percentage has remained at 56.2%. Meanwhile, the number of newly diagnosed cases of HIV among heterosexual males and females, as well as persons who inject drugs, has remained low. In 2020, there were almost 3 times as many cases of HIV among GBMSM when compared to females, male heterosexuals, and people who inject drugs, combined.

Intravenous Drug Use

HIV infection associated with intravenous drug use (IDU) has decreased substantially in the last 20 years. In 2020, only 7 newly-diagnosed cases of HIV were attributed to IDU. In the last five years, fewer than 4% of newly-diagnosed cases were attributed to IDU. A significant factor in the success of reducing IDU transmission is the ENCORE (Education, Needle Exchange, Counseling, Outreach and Referral) Program that has been operating in Rhode Island since 1995.

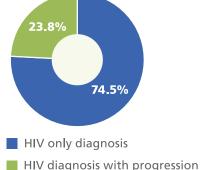
Source: Rhode Island Department of Health

Mother-to-child HIV Transmission

In 2020 a case of perinatal HIV transmission was diagnosed in Rhode Island. The child was born outside of the country and was not exposed/infected in Rhode Island but was first diagnosed in Rhode Island. Apart from this single case, there have been zero reported cases of mother-to-child transmission in the last five years. A Rhode Island public health success has been the virtual elimination of HIV among babies born to mothers who are HIV positive. This success is due in large part to the routine HIV testing of pregnant women and antiretroviral therapy when indicated as part of prenatal care.

Source: Rhode Island Department of Health

Percentage of Newly Diagnosed Cases of HIV, by Disease Progression at Diagnosis, Rhode Island, 2016-2020



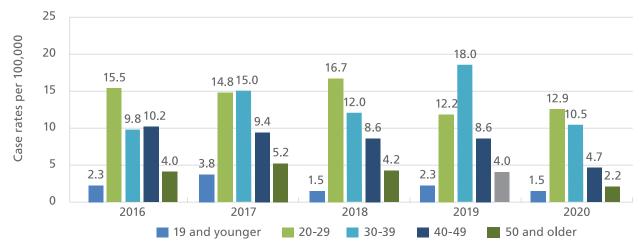
untreated HIV infection to development of stage 3 infection is eight years. During this time, undiagnosed HIV-positive individuals could have benefitted from treatment that would have maintained their immune function and prevented transmission to others. Because many people with HIV do not have any symptoms, undiagnosed HIV-positive individuals may unknowingly transmit HIV to others.

From 2016- 2020, about 24% of individuals newly diagnosed with HIV in Rhode Island also had a concurrent HIV stage 3 (AIDS) diagnosis. The average time from

Source: Rhode Island Department of Health

to AIDS within 30 days

FIGURE 5
Rates of Newly Diagnosed Cases of HIV, by Age, Rhode Island, 2016-2020



Source: Rhode Island Department of Health

In the past five years, the rates of newly diagnosed HIV cases were highest among Rhode Islanders in their 20s, 30s, and 40s. Rates among individuals ages 20-29 and 30-39 have remained consistently high compared to other groups. This is a continuation of a slow but consistent increase in cases in this age group over the last five years.

02 | RHODE ISLAND HIV CARE CONTINUUM

Rhode Island has signed on to the International Association of Providers of AIDS Care (IAPAC) Fast-Track Cities Initiative which is a global partnership with local municipalities, IAPAC, the Joint United Nations Programme on HIV/AIDS (UNAIDS), the United Nationals Human Settlements Program (UN-Habitat), and the City of Paris to attain the UNAIDS 90-90-90 targets: 90% of all people living with HIV in RI will know their HIV status, 90% of all people with diagnosed HIV infection will receive sustained antiretroviral therapy (ART), and 90% of all people receiving ART will achieve viral suppression. Initially heavily focused on the 90-90-90 targets, the Paris Declaration was recently updated to establish attainment of the three 90 targets as the starting point on a trajectory towards getting to zero new HIV infections and zero AIDS-related deaths.

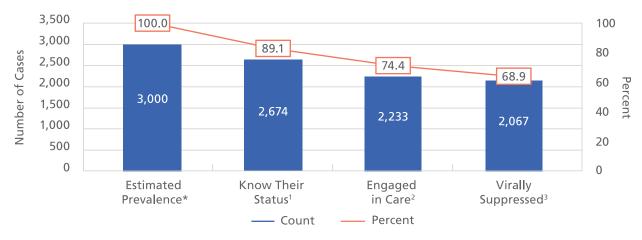
The Rhode Island HIV Care Continuum is a visual representation of the care status of individuals diagnosed with HIV who reside in Rhode Island. Engagement in care is used as a proxy measure for receiving sustained ART. As the Care Continuum below indicates, Rhode Island has made progress on its 90-90-90 goals: 89% of Rhode Islanders who are HIV positive know their status, 74% of Rhode Islanders living with HIV are engaged in care, and 69% of Rhode Islanders living with HIV have achieved viral suppression.

When considering only those who have been diagnosed with HIV, 83% are engaged in care and 77% are virally suppressed.

Nationally, from 2010 to 2018, the number of Americans who knew their HIV status increased from 82% to an all-time high of 86%, and the number of people with diagnosed HIV who had a suppressed viral load increased from 46% to nearly 65%. Rhode Island is currently surpassing these national averages as a result of a multifaceted approach to re-engagement and retention in care for PLWH (people living with HIV).

To help track Rhode Island's efforts and ensure accountability and transparency, RIDOH provides quarterly updates on 90-90-90 progress online at www.health.ri.gov/909090.

FIGURE 6
Rhode Island HIV Care Continuum, 2020



^{*} Prevalence estimates derived by using HIV surveillance and CD4 data for persons aged >=13 years at diagnosis. Estimates rounded to the nearest 100 for estimates of >1,000 to reflect model uncertainty. Reflects estimated number of people living with HIV, both diagnosed and undiagnosed, at the end of 2019.

¹ The number of people diagnosed with HIV ("know their status") reflects persons diagnosed through 2018 and alive through the end of 2019 with most recent residence in Rhode Island.

² Receipt of care any care is defined as at least one care visit during the calendar year (2019).

³ A viral load (VL) test result of < 200 copies per milliliter (c/ml) of blood represents HIV viral suppression. VL test results are from the most recent test during the specified year (2019).



2017 Vermont HIV Annual Report

Introduction

The 2017 Vermont HIV Annual Report presents HIV surveillance data collected through the end of the calendar year 2017. Data collected during the report period are reviewed and interjurisdictional deduplication activities are completed to produce an accurate summary of Vermont's community of people living with diagnosed HIV infection (PLWDHI) as well as cases newly reported to the Health Department. Reporting this information annually allows the Health Department to inform the public, community partners, policy makers, and service providers of trends and changes observed through the Department's HIV disease surveillance. Due to Vermont's relatively small HIV positive population, the analysis herein is strictly descriptive and readers are encouraged to review all citations and footnotes carefully.

Section 1: Transmission Cluster Investigation

In 2017, the Health Department investigated an HIV "transmission cluster". According to the CDC, a transmission cluster is a group of HIV -infected people (with diagnosed or undiagnosed HIV) who are connected by mode of transmission¹. The 2017 transmission cluster investigation was initiated in September of that year when the number of newly reported cases among men who have sex with men (MSM) was uncharacteristically high for that point in a twelve month period in Vermont. Through monitoring of newly reported cases, interviews with newly diagnosed people conducted by the Health Department's Disease Intervention Specialist (DIS), implementation of molecular HIV surveillance, and consultation with the Centers for Disease Control, the transmission cluster was investigated with the goal of diagnosing previously undiagnosed cases of HIV, getting people engaged or re-engaged in HIV care, and preventing new HIV infections.

Of the 18 new cases of HIV infection that were reported to the Health Department during 2017, 16 were warranted further investigation due to their reported risk factors. Two additional cases - one diagnosed out of state and one diagnosed in Vermont in 2016 - were also investigated because of related risk with aforementioned cases. These 18 cases were considered the "network of investigation".

DIS interviews were conducted within the network of investigation with the goal of identifying people who may be at risk for HIV infection and who may benefit from HIV testing. The interviews led to an additional 34 people being added to the network of investigation, expanding the network to 52 people. A total of 44 people (85% of the network) were able to be interviewed by the DIS. Thirty-four of the interviews were conducted with named partners of newly diagnosed people. Two new HIV positive statuses were discovered

2017 Points of Interest 678 People living with HIV 18 Newly reported cases of HIV 83% Viral suppression among PLWDHI 43% MSM cases among newly reported HIV

among people interviewed by the DIS.

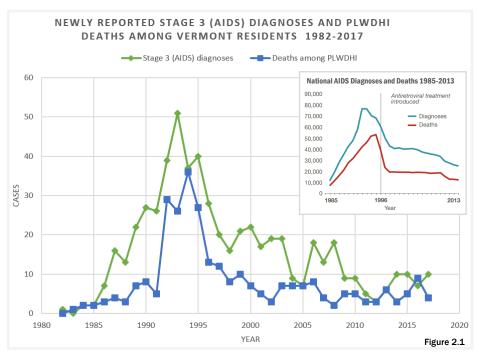
Ultimately, within the network of investigation, ten cases were found to meet the definition of a transmission cluster. Based on the demography and risk of the transmission cluster the Health Department procured rapid home HIV testing kits for distribution through an LGBTQ community based organization. The kits were distributed to high-risk men who have sex with men (MSM) engaging in methamphetamine use via social networks testing care advocates. Nineteen named contacts of the cases included in the investigation network were confirmed HIV negative and, of those, 11 were connected to providers that prescribe preexposure prophylaxis (PrEP).

The 2017 transmission cluster investigation highlighted the importance of case surveillance and public health intervention in HIV care and prevention efforts.

Section 2: History of HIV in Vermont

Figure 2.1 summarizes reported stage 3 (AIDS) diagnoses and deaths among people living with diagnosed HIV infection (PLWDHI) in Vermont from 1982 through 2017, according to reportable disease records. The overall trend in this figure mirrors that of the national stage 3 (AIDS) diagnoses and deaths statistics from 1985 through 2013 represented in figure 2.2. Significant declines in both stage 3 (AIDS) diagnoses and deaths can be observed in the mid-nineties as HIV treatment improved. In 1995 the first antiretroviral therapy (ART) medications that slow the progression of HIV were introduced, greatly reducing the number of new stage 3 (AIDS) diagnoses and deaths among people living with HIV. As treatment has improved over the course of the epidemic, HIV infection has become more manageable.

While the value of HIV treatment to the person living with the virus has always been understood, it is now known that ART adherence also has powerful implications for HIV prevention. In September of 2017 the CDC released a "Dear Colleague" letter in which it was stated that "...people who take ART daily as prescribed and achieve and maintain an undetectable viral load have effectively no risk of sexually transmitting the virus to an HIVnegative partner." This concept, known as "treatment as prevention," emphasizes the importance of identifying undiagnosed cases of HIV, and getting those people tested and on ART. More information about the treatment and viral suppression among Vermont's HIV population can be found in section five.



Section 3: Newly Reported HIV in Vermont

During 2017 there were 18 reports of HIV made to the Health Department for cases that had not previously been reported and for which no report could be identified in another jurisdiction. Among the 18 reported cases, ten were HIV-only and eight were concurrent diagnoses of HIV and stage 3 (AIDS), the highest number of concurrent diagnoses in the last ten years. Diagnoses are considered concurrent if a stage 3 (AIDS) diagnosis occurs within 31 days of an HIV diagnosis.

Concurrent diagnoses are of concern because they indicate that the person may have been unaware of their HIV status for an extended period of time and their health has declined as a result.

Without treatment, it can take ten years or more from the time of HIV infection until symptoms of HIV disease develop², so regular testing for people at high-risk of HIV infection is an important step in identifying infections as early as possible.

Newly reported cases of HIV are investigated to verify that they were not previously diagnosed in another jurisdiction. De-duplication efforts, such as the Routine Interstate Duplicate Review (RIDR) process, allow the Health Department to identify cases that were diagnosed or lived in other jurisdictions to prevent duplicate reporting to the CDC. When matches are identified through interjurisdictional RIDR communications, diagnosis and other pertinent lab data is shared to improve data quality.

Over the ten year period between 2008-2017 there were 156 new reports of HIV among Vermont

Data through December 2017

residents made to the Health Department. Figure 3.1 summarizes these newly reported infections, showing both HIV-only and concurrent HIV and stage 3 (AIDS) diagnoses. From 2008 to 2017, the number of newly reported diagnoses has fluctuated from a high of 22 in 2008 and 2009 to a low of six in 2016.

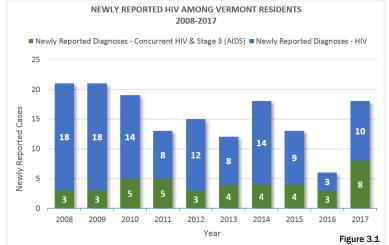
Figures 3.2, 3.3, and 3.4 show the percentage of the newly reported diagnoses for the past ten years according to age at diagnosis, transmission category, and reported race, respectively.

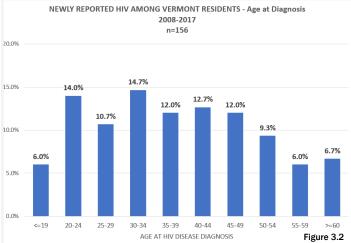
Newly reported cases of HIV have been seen across all age groups (Figure 3.2) with the highest percentage, 14.7%

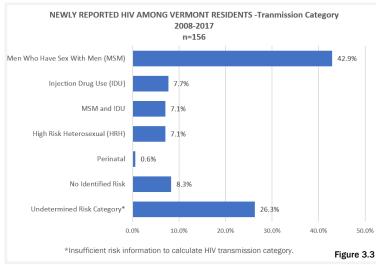
(n=22), among people 30-34 years of age at the time of report. According to the 2017 HIV Surveillance Report¹ released by the CDC in November 2017, the highest percentage of newly reported infections nationally was among people aged 25-29 which accounted for 20% (n=7,691) of all newly diagnosed cases of HIV.

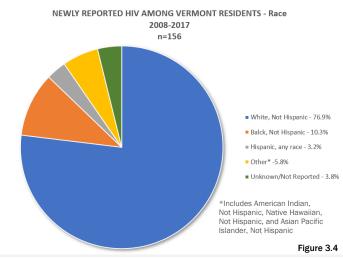
Transmission category (Figure 3.3) is the mode of transmission calculated by the enhanced HIV/AIDS Reporting System (eHARS) based on reported risk information. While the majority of new diagnoses in Vermont in the last ten years were among MSM, a significant portion (26.3%) did not have enough information at the time of report to calculate transmission category.

The information regarding race among newly reported cases in the last ten years (Figure 3.4) is similar to the demography for the entire community of PLWDHI in Vermont (Figure 4.2). While White, not-Hispanic people account for over three quarters of cases in figures 3.4 and 4.2, people of color are disproportionately affected by HIV. Over the last ten years in Vermont, 19.3% (n=30) of new diagnoses have been among people of color, despite people of color accounting for less than six percent of the state's total population². This issue is further discussed in section four of this report, Prevalence and Demography.









Page 3 1: Centers for Disease Control and Prevention. HIV Surveillance Report, 2017. https://www.cdc.gov/hiv/pdf/library/reports/surveillance/cdc-hiv-surveillance-report-2017-vol-29.pdf. Accessed November 2018

^{2.} United States Census Bureau. Profile of Vermont Population and Housing Characteristics: Population estimates, July 1, 2017. https://www.census.gov/quickfacts/fact/table/vt/PST045217. Accessed August 2018.



Section 4: Prevalence and Demography

At the end of December 2017 an estimated 678 people living with diagnosed HIV infection (PLWDHI) were residing in Vermont, 362 of whom were residing in Vermont at the time of HIV diagnosis. The 678 PLWDHI is an estimate that reflects cases reported to the Health Department under the Reportable and Communicable Diseases Rule¹ and that had reported HIV-related lab results (evidence of care) within the last five years. Unlike the figures discussed in section three, the 678 cases were residents of Vermont as of the end of 2017, regardless of where they received their HIV diagnosis.

Of the PLWDHI in Vermont in 2017, 329 had received a stage 3 (AIDS) diagnosis and 349 had been diagnosed with HIV infection only. Figure 4.1 summarizes sex at birth and race information for the PLWDHI population of Vermont. The rate of HIV in Vermont at the end of 2017 was 108.7 cases per 100,000 based on 2017 Census population estimates².

Race

While 78.8% (n=534) of Vermont's PLWDHI population are White, Not Hispanic, people of color have a far higher rate of HIV infection based on 2017 census population estimates. Not Hispanic, Black, Hispanic, and Not Hispanic, Asian Vermont residents all have higher rates of HIV than Not Hispanic, White, as shown in Figure 4.1. Figure 4.3 compares the number of people living with HIV who identify as White, Not Hispanic to those that identify as Black, Not Hispanic, Hispanic, Any Race, Asian, Not Hispanic, Multi Race, Not Hispanic, American Indian, Not Hispanic, Native Hawaiian, Not Hispanic, and Asian Pacific Islander, Not Hispanic (collapsed into "people of color"). Though people of color account for just over seven percent of Vermont's general population, they account for nearly 20.2% of the state's PLWDHI population (n=144).

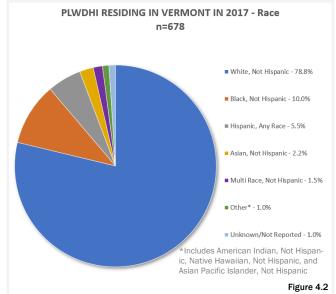
Geography

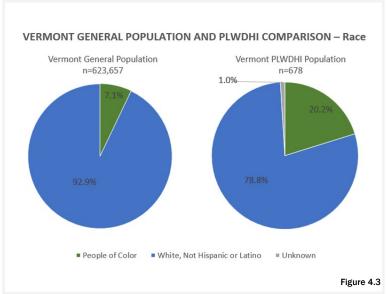
People living with diagnosed HIV infection reside throughout the state of Vermont as figure 4.4 demonstrates,

Vermont Rate of PLWDHI, 2017								
	VT PLWDHI	Rate of HIV per 100,000						
Total	678	108.7						
Male	553	179.5						
Female	125	39.6						
Race								
Not Hispanic, White	534	92.2						
Not Hispanic, Black	68	778.8						
Hispanic, any race	37	312.2						
Not Hispanic, Asian	15	133.6						
Not Hispanic, Multi- race	10	84.4						
Other*	7	N/A						
Unknown	7	N/A						

*Includes Not Hispanic, American Indian/Alaska Native, Not Hispanic, Native Hawaiian or Other Pacific Islander, Not Hispanic, Legacy Asian/Pacific Islander

Figure 4.1





^{1:} Vermont Department of Health. Reportable Communicable Diseases Rule. http://healthvermont.gov/sites/default/files/documents/2016/11/hs_id_reportable_communicable_diseases_rule.pdf. Accessed July 2018.

2: United States Census Bureau. Profile of Vermont Population and Housing Characteristics: Population estimates, July 1, 2017. https://www.census.gov/quickfacts/fact/table/vt/PST045217. Accessed August 2018.

with most PLWDHI, 32.3%(n=219), living in the most populous county of Chittenden. Also noted in figure 4.4 are the locations of the University of Vermont Medical Center's Comprehensive Care Clinics (CCC). The CCC is the primary provider of HIV care in Vermont. The main office of the CCC is located in Burlington with three satellite offices strategically located around the state in Rutland, Brattleboro, and Saint Johnsbury.

Figure 4.5 shows the rate of HIV in Vermont according to county of

residence. Essex County has the highest rate of HIV at 19.3 per 10,000 residents. Chittenden County, despite having the highest percentage of HIV positive residents, has the fourth highest rate at 13.5 per 10,000.

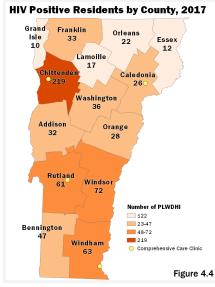
Age

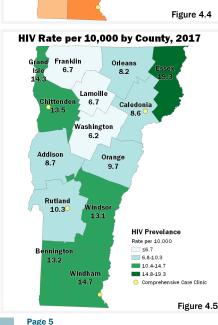
Figure 4.6 reflects the age of PLWDHI in Vermont at the end of 2017 as well as their age at the time of diagnosis. While most people living with the virus in Vermont are over 45, the age at which they were

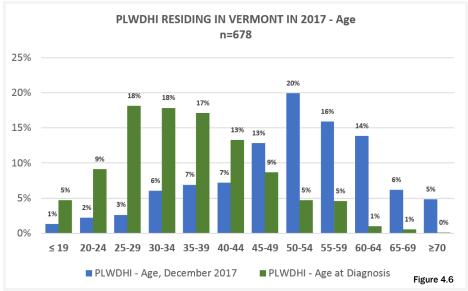
diagnosed skews younger, similar to those diagnosed in the last ten years represented in Figure 3.2.

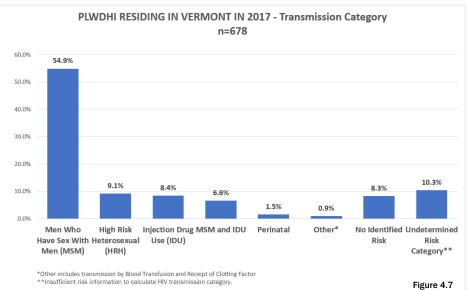
Transmission Category

The majority of HIV infection in Vermont has consistently been among MSM, much like the data on newly reported cases represented in figure 3.3. Figure 4.7 shows that in 2017, MSM was the calculated transmission category for 54.9% of PLWDHI in Vermont, with the next most common being heterosexual contact at 9.1%, followed by injection drug use (IDU), and then people with both MSM and IDU risk.











Section 5: HIV Linkage to Care and Viral Suppression

Number and percentage of Vermont residents linked to care^a within 30, 91, 182, and 365 days^b of their HIV infection diagnosis 01/01/2017 through 12/31/2017

People diagnosed	•		People linked to care within 91 days of diagnosis		People linked to care within 182 days of diagnosis		People linked to care within 365 days of diagnosis	
with HIV infection								
No.	No.	%	No.	%	No.	%	No.	%
18	18	100	18	100	18	100	18	100

^aPeople who have at least one CD4 or viral load or HIV-1 genotype test during a specific time period are considered as linked to care during that time.

The months difference is calculated between diagnosis date of HIV infection and sample collection date, and year, month, and day are used in calculation.

Figure 5.1

The National HIV/AIDS Strategy¹ (NHAS), a five year plan released in 2010 and updated in 2015, established national goals for HIV prevention and care. Twelve indicators are used to monitor progress toward the three goals of the NHAS; reducing new infections, improving health outcomes, and reducing HIV-related disparities. One indicator is to "Increase the percentage of newly diagnosed people linked to HIV medical care within one month of their HIV diagnosis to at least 85 percent." Figure 5.1 demonstrates that all eighteen of the newly reported cases in 2017 were linked to care within 30 days of diagnosis. Timely linkage to HIV medical care after initial diagnosis often improves long-term health outcomes for PLWDHI.

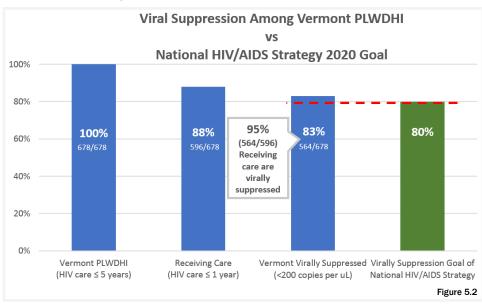
Indicator six aims to "Increase the percentage of people with diagnosed HIV infection who are virally suppressed to at least 80 percent."

The HIV care continuum represented

in figure 5.2 demonstrates linkage to care and viral suppression among the Vermont PLWDHI community. A person living with diagnosed HIV infection is considered to be virally suppressed if the measurement of the copies of the virus in their blood is less than 200 per milliliter. In Vermont, 83% of people known to be living with HIV with evidence of care in the last five years have

achieved viral suppression. When looking at PLWDHI that had care in 2017, that increases to 95% viral suppression.

The Health Department works with community based organizations, healthcare providers and the community at large to prevent new HIV infections and to ensure the best possible care for people living with HIV in Vermont.



Additional HIV Resources

HIV Surveillance in Vermont: www.healthvermont.gov CDC HIV/AIDS website: www.cdc.gov/hiv

CDC HIV/AIDS website: www.cac.gov/niv

NCHHSTP Atlas: www.cdc.gov/nchhstp/atlas

Vermont Comprehensive Care Clinics: www.uvmhealth.org

AIDS Project of Southern Vermont: http://www.aidsprojectsouthernvermont.org

HIV/Hepatitis C Resource Center (H2RC): www.h2rc.org

Vermont People With AIDS Coalition: www.vtpwac.org

Pride Center of Vermont: www.pridecentervt.org

Howard Center - Safe Recovery: www.howardcenter.org

Twin States Network: www.twinstatesnetwork.net

Vermont CARES: www.vtcares.org

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DEPARTMENT OF HEALTH

The statistics in this document are estimates based on available data. Questions can be directed to:

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State of Vermont

Department of Health

HIV/STD/Hepatitis Program