



# 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 transmission<sup>1</sup>. 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.

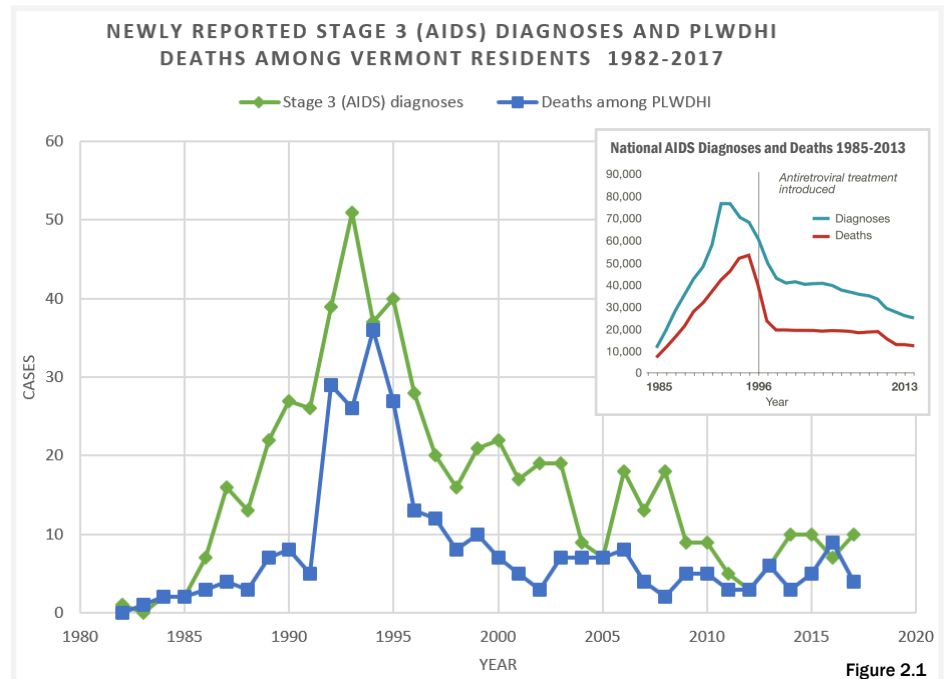
Ultimately, within the network of investigation, ten cases were found to meet the definition of a transmission cluster. Based on the demography and risk of the transmission cluster the Health Department procured rapid home HIV testing kits for distribution through an LGBTQ community based organization. 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 HIV-negative 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 develop<sup>2</sup>, 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

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 Report<sup>1</sup> 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 population<sup>2</sup>. This issue is further discussed in section four of this report, Prevalence and Demography.

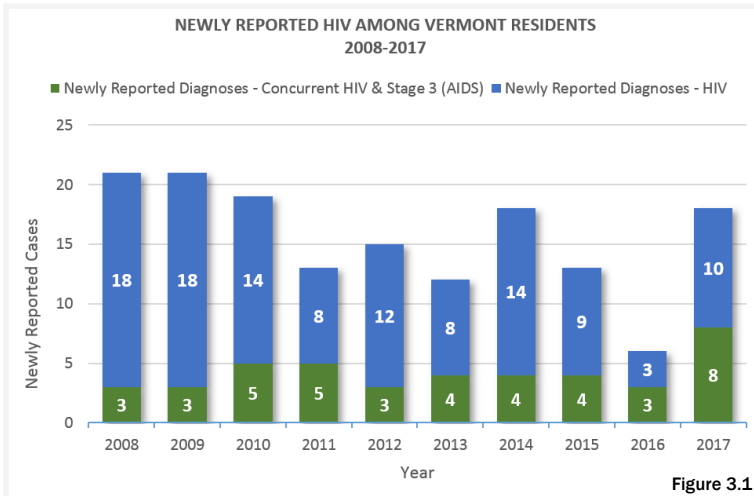


Figure 3.1

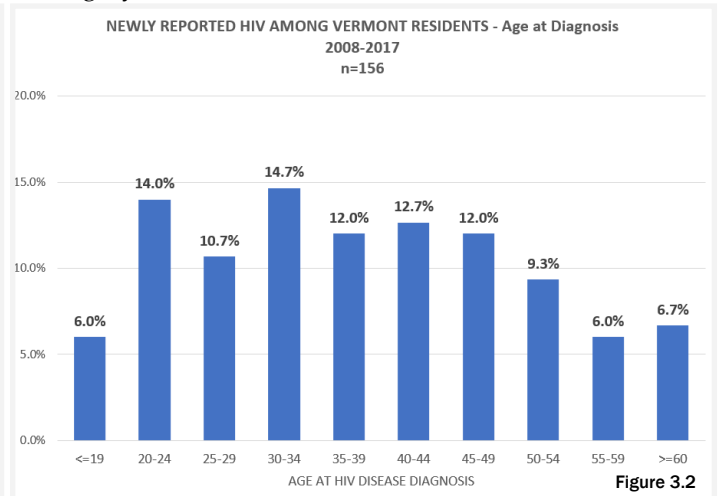


Figure 3.2

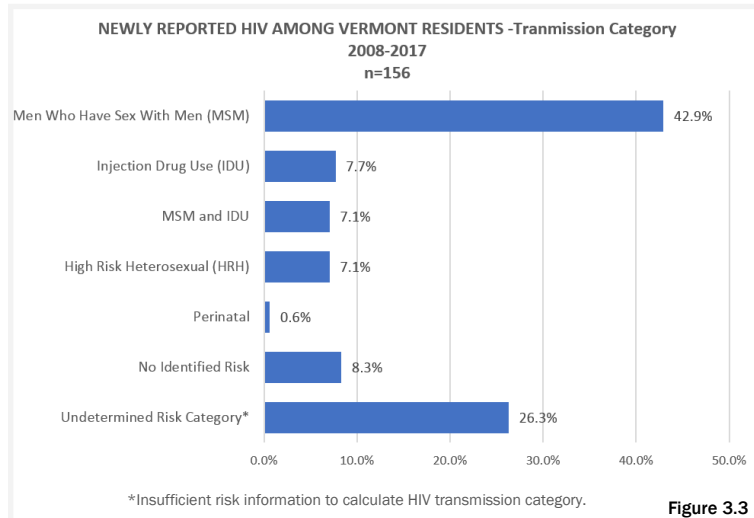


Figure 3.3

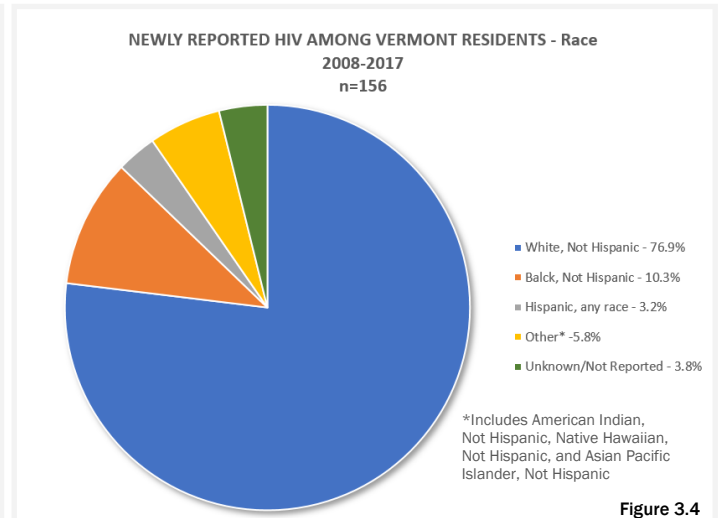


Figure 3.4

## 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 Rule<sup>1</sup> 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 estimates<sup>2</sup>.

### 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,

	VT PLWDHI	Rate of HIV per 100,000
<b>Total</b>	<b>678</b>	<b>108.7</b>
Male	553	179.5
Female	125	39.6
<b>Race</b>		
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

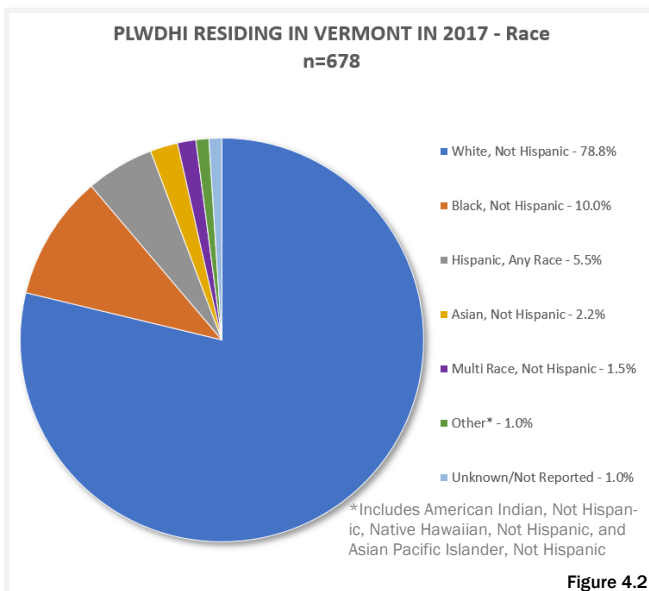


Figure 4.2

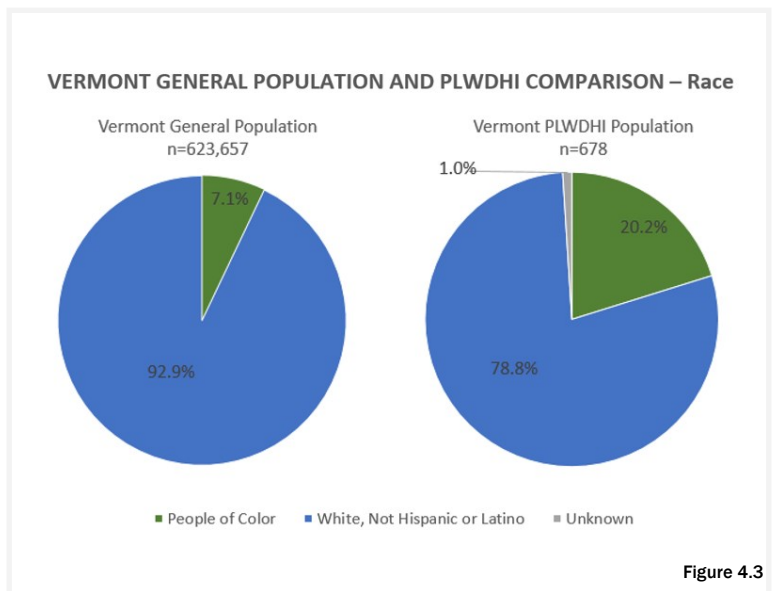


Figure 4.3

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.

**HIV Positive Residents by County, 2017**

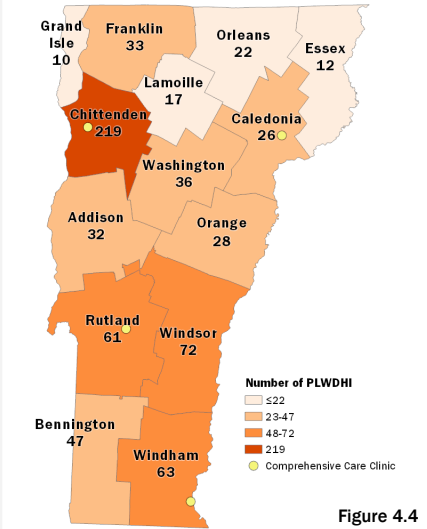


Figure 4.4

**PLWDHI RESIDING IN VERMONT IN 2017 - Age**  
n=678

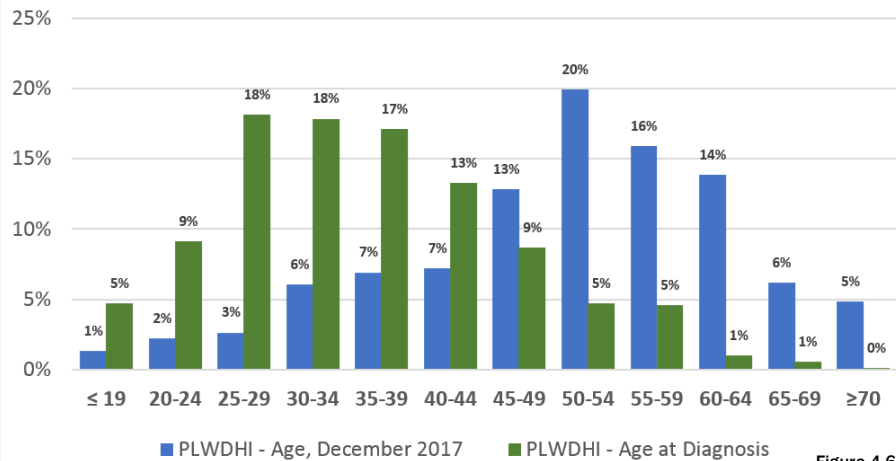


Figure 4.6

**HIV Rate per 10,000 by County, 2017**

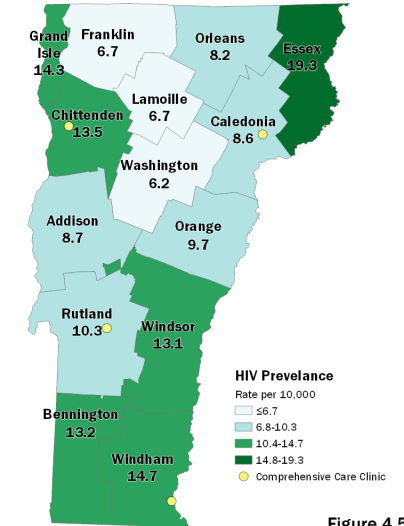
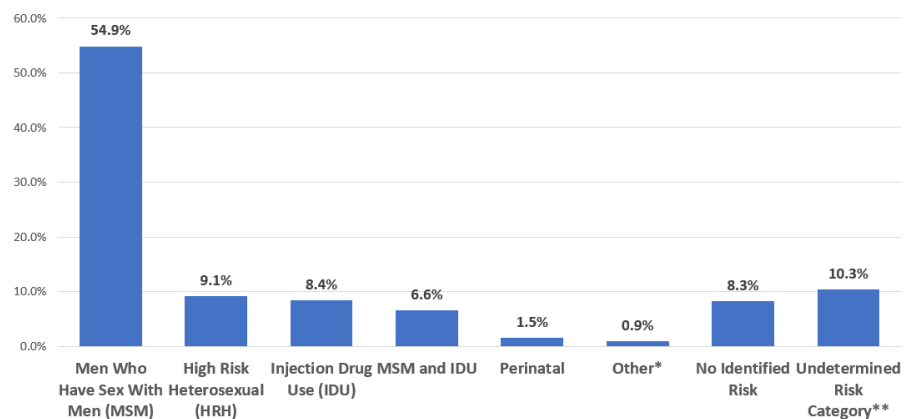


Figure 4.5

**PLWDHI RESIDING IN VERMONT IN 2017 - Transmission Category**  
n=678



\*Other includes transmission by Blood Transfusion and Receipt of Clotting Factor  
\*\*Insufficient risk information to calculate HIV transmission category.

Figure 4.7

## Section 5: HIV Linkage to Care and Viral Suppression

Number and percentage of Vermont residents linked to care <sup>a</sup> within 30, 91, 182, and 365 days <sup>b</sup> of their HIV infection diagnosis 01/01/2017 through 12/31/2017								
People diagnosed with HIV infection	People linked to care within 30 days of diagnosis		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	
	No.	%	No.	%	No.	%	No.	%
18	18	100	18	100	18	100	18	100

<sup>a</sup>People 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.  
<sup>b</sup>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 Strategy<sup>1</sup> (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.

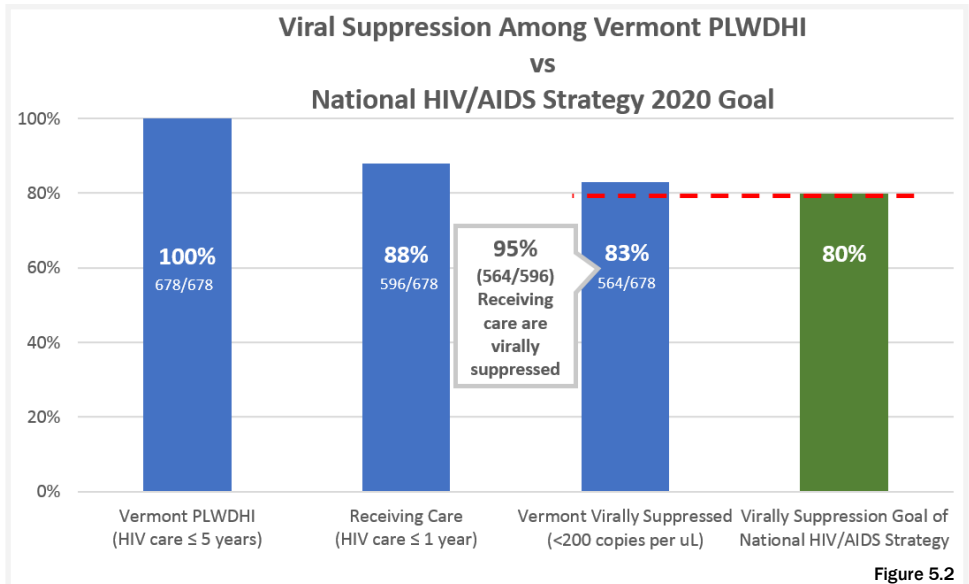


Figure 5.2

### Additional HIV Resources

- HIV Surveillance in Vermont: [www.healthvermont.gov](http://www.healthvermont.gov)
- CDC HIV/AIDS website: [www.cdc.gov/hiv](http://www.cdc.gov/hiv)
- NCHHSTP Atlas: [www.cdc.gov/nchhstp/atlas](http://www.cdc.gov/nchhstp/atlas)
- Vermont Comprehensive Care Clinics: [www.uvmhealth.org](http://www.uvmhealth.org)
- AIDS Project of Southern Vermont: <http://www.aidsprojectsouthernvermont.org>
- HIV/Hepatitis C Resource Center (H2RC): [www.h2rc.org](http://www.h2rc.org)
- Vermont People With AIDS Coalition: [www.vtpwac.org](http://www.vtpwac.org)
- Pride Center of Vermont: [www.pridecentervt.org](http://www.pridecentervt.org)
- Howard Center - Safe Recovery: [www.howardcenter.org](http://www.howardcenter.org)
- Twin States Network: [www.twinstatesnetwork.net](http://www.twinstatesnetwork.net)
- Vermont CARES: [www.vtcars.org](http://www.vtcars.org)



### DEPARTMENT OF HEALTH

The statistics in this document are estimates based on available data.

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