

## Vermont Department of Health

# 2015 Vermont HIV Annual Report

## Introduction

The 2015 Vermont HIV Annual Report presents HIV surveillance data through the end of 2015. The report provides information on Vermont's community of people living with diagnosed HIV infection (PLWDHI) including an update on HIV surveillance in the state, a brief history of Vermont HIV surveillance, information on newly reported cases of HIV, prevalence, and HIV care outcomes. Reporting this information annually allows the Vermont Department of Health to update community partners, policy makers, and service providers on 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: HIV Surveillance in Vermont

In 2012, the Centers for Disease Control and Prevention (CDC) announced a revision to the public health surveillance case definitions<sup>1</sup> for HIV infection, with the changes implemented in 2014. The revisions were made to account for an update to the testing algorithm that emphasizes differentiating between HIV-1 and HIV-2, recognizing early HIV infection, and disease progression. The stages of HIV infection for adults and adolescents (age ≥6) are:

**Stage 0:** Early HIV infection, recognized by a negative HIV test within six months prior to HIV diagnosis. The criteria for stage 0 diagnosis supersede the criteria used for other stages.

**Stage 1:** No AIDS-defining condition and either CD4 count of ≥500 cells per microliter (µl) or CD4 percentage of total lymphocytes of ≥26.

**Stage 2:** No AIDS-defining condition and either CD4 count of 200-499 cells per µl or CD4 percentage of total

lymphocytes of 14- 25.

**Stage 3 (AIDS):** Documentation of an AIDS-defining condition or either a CD4 count of <200 cells per µl or a CD4 percentage of total lymphocytes of <14. Documentation of an AIDS-defining condition supersedes a CD4 count or percentage that would not be considered a stage 3 (AIDS) classification.

**Stage unknown:** No reported information on AIDS-defining conditions and no information available on CD4 count or percentage.

These changes are primarily for public health surveillance purposes. The Vermont Department of Health implemented AIDS case surveillance in 1982 and reporting of HIV infection was mandated by the Legislature in 1999, taking effect in the year 2000. In accordance with the Vermont Communicable Disease Regulations<sup>2</sup>, certain HIV-related lab

## 2015 Annual Report Points of Interest



634

People living with HIV



11

Newly reported cases of HIV



81%

Viral suppression among PLWDHI



53.2%

Cases of HIV that were MSM

results must be reported to the Health Department. In addition, medical providers are required to report cases of both adult and pediatric HIV infection when they begin providing care or make a diagnosis.

The Health Department uses multiple methods to improve the quality and accuracy of HIV case surveillance.

The Routine Interstate Duplicate Review (RIDR) is a biannual process of comparing possible duplicates of cases with other states to establish correct dates and locations of diagnoses. The Department also uses quarterly vital records reports and the biannual Social Security Death Master File for death ascertainment.

The information provided to, and gathered by, the Health Department is confidential and is securely maintained using the Enhanced HIV/AIDS Reporting System (eHARS).

1. Centers for Disease Control and Prevention. *Morbidity and Mortality Weekly Reports (MMWR)*, April 11, 2014 / 63(RR03);1-10. <https://www.cdc.gov/mmwr/preview/mmwrhtml/r6303a1.htm>. Accessed November 2016.

2. Vermont Department of Health. Communicable Disease Reporting in Vermont. [http://healthvermont.gov/prevent/reporting/disease\\_report.aspx](http://healthvermont.gov/prevent/reporting/disease_report.aspx). Accessed November 2016.

## Section 1: HIV Surveillance in Vermont continued

While the Health Department transmits aggregate data to the CDC for national surveillance purposes, no identifying information, such as an individual's name, is shared.

This report is based on data from the eHARS system reported to the Health

Department through December 22, 2015.

It is important to note that Vermont is one of the states with the lowest rates of HIV infection in the United States<sup>1</sup>.

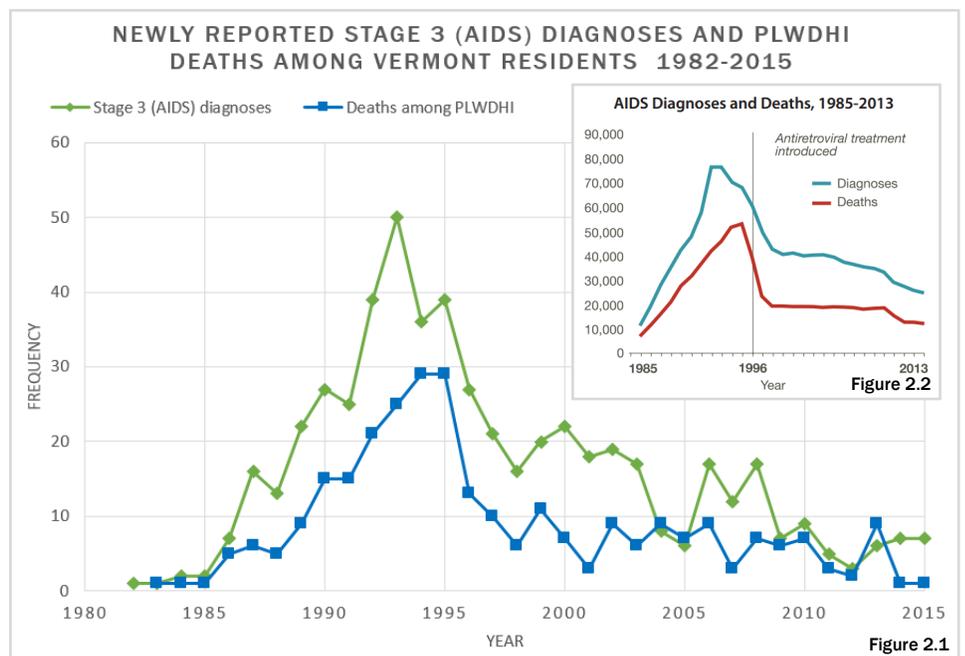
Such low morbidity presents challenges when trying to analyze

data because a single case represents a significant percentage of the total HIV positive population. In light of this, the reader is again encouraged to review all information, titles, tables, and citations carefully.

## 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 2015. 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 antiretrovirals, 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. It is now understood that the better controlled a person's virus, the less potential there is to infect another person, a concept known as "treatment as prevention". For this reason, there is emphasis on monitoring HIV treatment outcomes. This is a major focus of President Obama's National HIV/AIDS Strategy released in 2010 and updated in 2015, discussed further in section five.



## Section 3: Newly Reported HIV in Vermont

In 2015, there were 39,513 people diagnosed with HIV infection in the United States<sup>3</sup>. In that year, there were eleven new diagnoses of HIV among Vermont residents that were reported to the Department of Health; the lowest number of newly reported diagnoses since 1983. Among the eleven reported cases, eight were HIV-only and three were concurrent diagnoses of HIV and stage 3 (AIDS). 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 was unaware of their HIV status for an extended period of time. Without treatment, it can take ten years or more from the time of HIV infection until symptoms of HIV disease develop<sup>4</sup>. The newly reported infections in 2015 may have occurred many years prior and there were likely other

1. Centers for Disease Control and Prevention. *HIV Surveillance Report, 2015*; vol. 27. <http://www.cdc.gov/hiv/library/reports/hiv-surveillance.html>. Published November 2016. Accessed November 2016.

2. Centers for Disease Control and Prevention. *CDC Fact Sheet; Today's HIV/AIDS Epidemic*. <https://www.cdc.gov/nchhstp/newsroom/docs/factsheets/todaysepidemic-508.pdf>. Accessed November 2016

3. Centers for Disease Control and Prevention. *HIV Surveillance Report, 2015*; vol. 27. <http://www.cdc.gov/hiv/library/reports/hiv-surveillance.html>. Published November 2016. Accessed November 2016.

4. US Dept. of Health and Human Services. *Symptoms of HIV*. <https://www.aids.gov/hiv-aids-basics/hiv-aids-101/signs-and-symptoms/>. Accessed November 2016.

## Section 3: Newly Reported HIV in Vermont continued

cases in the state not yet diagnosed. Further, the number of newly reported cases of HIV is subject to change due to subsequent de-duplication efforts such as the aforementioned RIDR process. Since HIV/AIDS surveillance started in Vermont, there have been 781 diagnoses reported to the Health Department among people that were residing in the state at the time of the diagnosis. The Health Department makes every effort, such as the RIDR process, to identify cases that were previously diagnosed elsewhere to ensure accurate reporting of new diagnoses made in Vermont. In the last ten years, there have been 161 diagnoses of HIV that have been reported among Vermont residents. Figure 3.1 summarizes these newly reported infections, showing both HIV-only and concurrent HIV and stage 3 (AIDS) diagnoses. The number of new diagnoses has fluctuated from a high of 21 cases in 2008 to a low of 11 cases in 2015. Figures 3.2 and 3.3 show the percentage of the newly reported diagnoses according to age at diagnosis and reported race, respectively. Nearly half of new diagnoses (n=80) occurred among people aged 20-39, with the highest percentage, 14.9%, of newly reported infections among 30-34 year-olds. According to the 2015 HIV Surveillance Report<sup>1</sup> released by the CDC in November of 2016, the highest percentage of newly reported infections nationally was among people aged 20-24 which accounted for 17.3%. The information regarding race among newly diagnosed cases in the last ten years presented in figure 3.3 is similar to the demography for the entire PLWDHI community presented in figure 4.2. While White, Not-Hispanic people

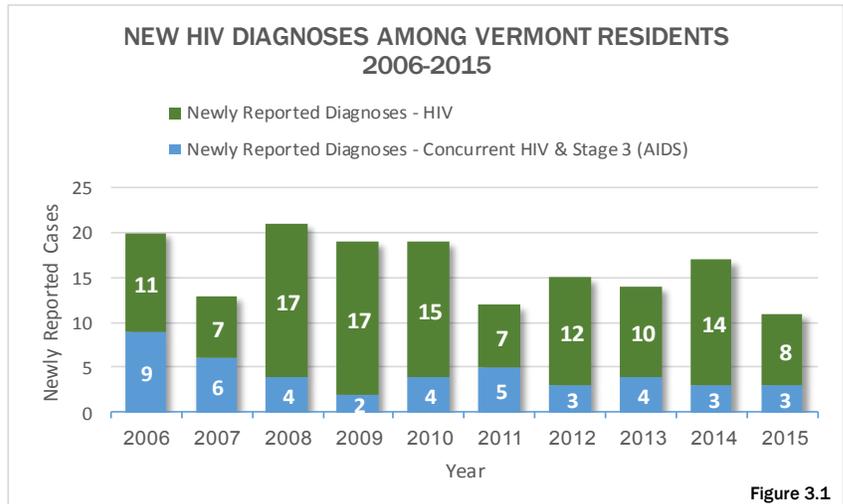


Figure 3.1

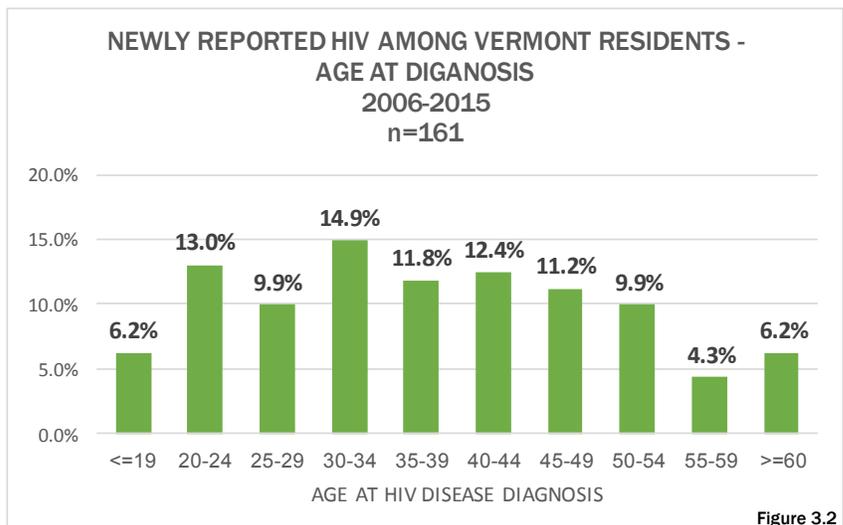


Figure 3.2

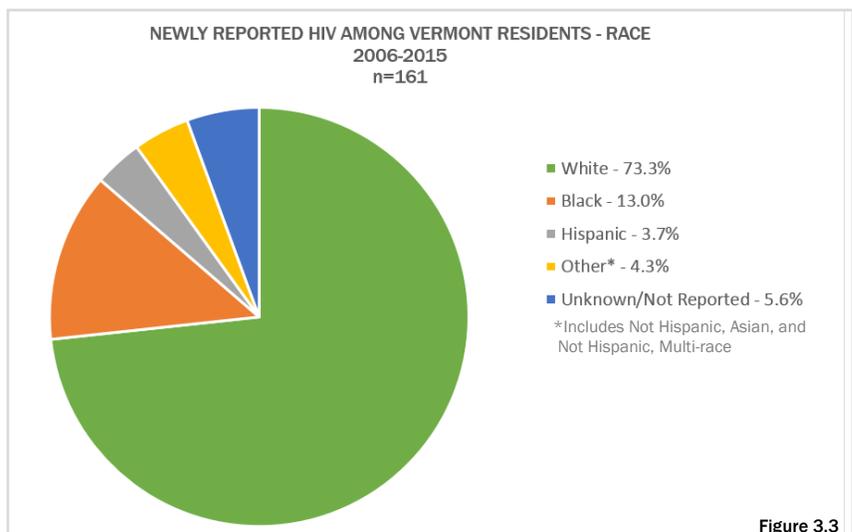


Figure 3.3

## Section 3: Newly Reported HIV in Vermont continued

account for roughly three quarters of newly reported cases and PLWDHI in Vermont, people of color are disproportionately affected by HIV.

Over the last ten years in Vermont, 21% (n=34) 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>1</sup>. This issue is further discussed in section four of this report, prevalence and demography.

## Section 4: Prevalence and Demography

At the end of 2015 an estimated 634 people diagnosed with HIV infection were residing in Vermont. This estimate represents cases reported to the Health Department under the Reportable and Communicable Diseases Rule<sup>2</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 634 cases were residents of Vermont as of the end of 2015, regardless of where they received their HIV diagnosis.

Of the PLWDHI in Vermont in 2015, 295 had received an AIDS diagnosis and 339 were diagnosed with HIV infection only.

Figure 4.1 summarizes sex at birth and race information for the PLWDHI population and general population of Vermont and the United States. The rate of HIV in Vermont at that time was 101.2 cases per 100,000 based on 2015 Census population estimates<sup>1</sup>. The estimated national rate of HIV infection<sup>3</sup> was 459 per 100,000.

### Race

While the rate of HIV infection among males and females in Vermont is comparable to national rates, the disparity of rates among the races is significant. 78.4% of Vermont's PLWDHI population reported as White, Not Hispanic or Latino, compared to just 31% of the national PLWDHI population.

Despite the contrast in the racial demography of Vermont and the nation, People of Color living

PLWDHI: Vermont vs United States				
	VT PLWDHI	Rate of HIV in Vermont <sup>1</sup> per 100,000	US PLWDHI <sup>3</sup>	Rate of HIV in US <sup>4</sup> per 100,000
<b>Total</b>	634	101.2	1,476,083	459.2
<b>Sex at Birth</b>				
Male	515	166.3	1,119,564	707.6
Female	119	37.5	353,734	216.8
Children <13 <sup>†</sup>			2,785	
<b>Race</b>				
Black, Not Hispanic	72	884.6	623,362	1561.3
Hispanic or Latino	32	284.0	312,661	552.5
White, Not Hispanic	497	85.1	459,758	232.2
Other <sup>‡</sup>	19	84.3	80,302	298.2
Unknown	14	N/A	N/A	N/A

Figure 4.1

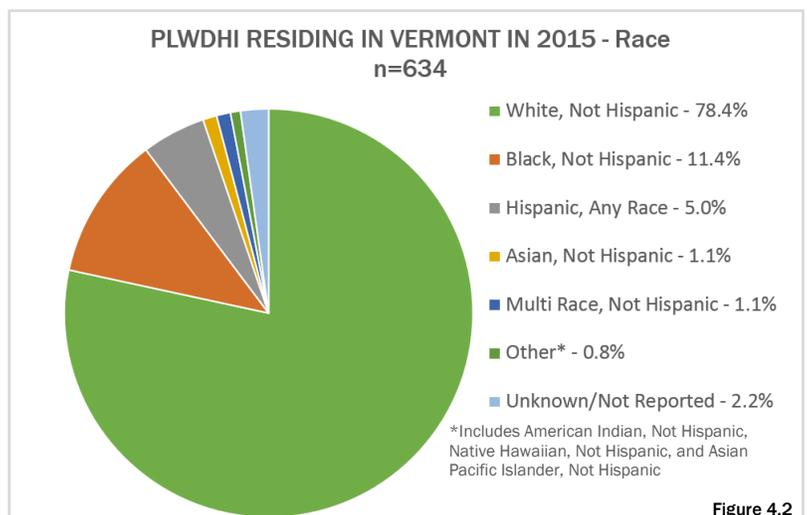


Figure 4.2

1: United States Census Bureau. *Profile of Vermont Population and Housing Characteristics: Estimates for 2015*. <https://www.census.gov/quickfacts/table/PST045215/50>. Accessed November 2016.

2: Vermont Department of Health. *Reportable Communicable Diseases Rule*. [http://healthvermont.gov/sites/default/files/documents/2016/11/hs\\_id\\_reportable\\_communicable\\_diseases\\_rule.pdf](http://healthvermont.gov/sites/default/files/documents/2016/11/hs_id_reportable_communicable_diseases_rule.pdf)

3: Centers for Disease Control and Prevention. *HIV Surveillance Report, 2015*; vol. 27. <http://www.cdc.gov/hiv/library/reports/hiv-surveillance.html>. Published November 2016. Accessed November 2016.

4: United States Census Bureau. *Annual Estimates of the Resident Population by Single Year of Age and Sex for the United States: Estimates 2015*. [https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=PEP\\_2015\\_PEPSYASEXN&prodType=table](https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=PEP_2015_PEPSYASEXN&prodType=table). Accessed December 2016.

† CDC does not report sex at birth for PLWDHI that are <13 years old.

‡ Due to small numbers of other races among PLWDHI in Vermont, all other races have been collapsed into "Other"

## Section 4: HIV Prevalence and Demography continued

VERMONT AND US PLWDHI AND GENERAL POPULATION COMPARISON - Race 2015

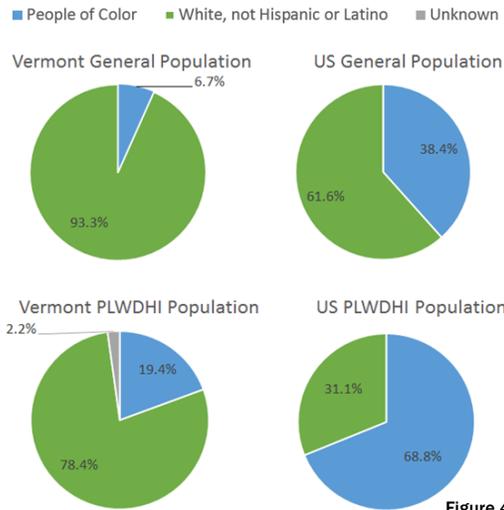


Figure 4.3

with HIV are disproportionately represented in both. Figure 4.3 depicts the information in figure 4.1 and highlights the health disparity of HIV infection among people of color in Vermont. Though People of Color make up under seven percent of Vermont's general population, they account for nearly 20% of our PLWDHI population (n=123).

### Geography

Geographically, PLWDHI in Vermont are spread out across the state as figure 4.4 demonstrates. Of the 634 PLWDHI residing in Vermont in 2015, 34% resided in Chittenden county. The next most populous county for PLWDHI was

Windham, where 10% of PLWDHI lived.

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 strategically located satellite offices around the state in Rutland, Brattleboro, and Saint Johnsbury.

### Age

Over one third of people living with HIV in Vermont in 2015 were aged 50-59. Further, figure 4.5 shows that over 80% of PLWDHI in Vermont were 40 years of age or older; the same age range accounts for just over forty percent of new diagnoses in the last ten years, as represented in figure 3.2.

### Exposure Category

Figure 4.6 details PLWDHI in 2015 according to reported exposure category. Exposure category describes how a person may have acquired HIV infection and is calculated from known risk factors. The majority of HIV infection in Vermont has

consistently been reported among the Men who have Sex with Men (MSM) exposure category. In 2015, MSM was the calculated exposure category for 53.2% of PLWDHI in Vermont as being the source of infection, with the next most common being heterosexual contact at ten percent. It must be noted that there were significant numbers of cases that did not report an exposure category. No risk was identified for 10.6% of cases (n=67) and no risk factor was reported for 9.3% of cases (n= 59).

HIV Positive Residents by County - Vermont 2015

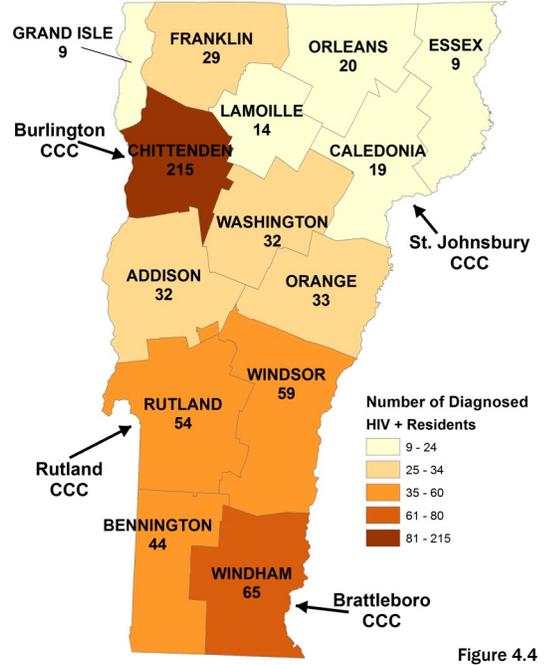


Figure 4.4

PLWDHI RESIDING IN VERMONT IN 2015 - Current Age

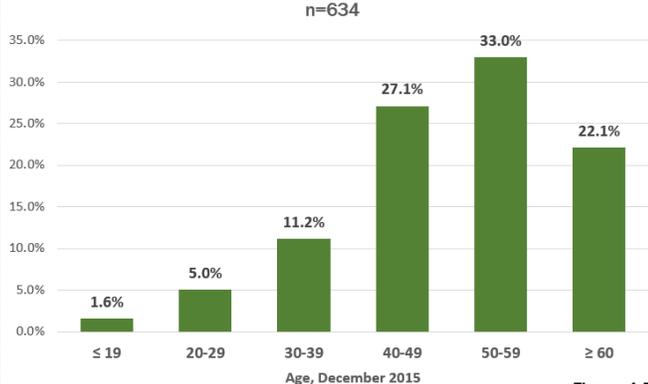


Figure 4.5

PLWDHI IN VERMONT IN 2015 - Exposure Category

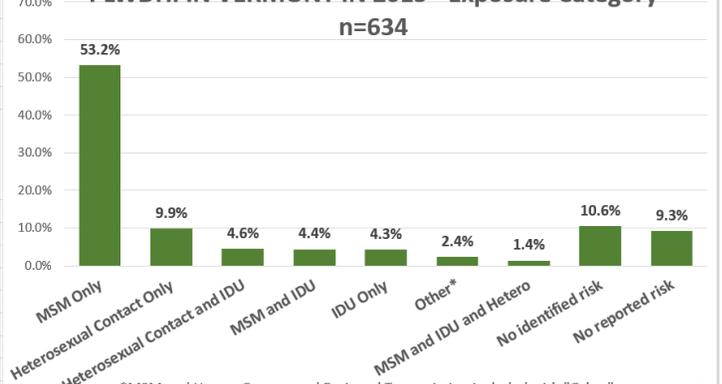


Figure 4.6

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

**Number and percentage of persons linked to care<sup>a</sup> within 30, 91, 182, and 365 days<sup>b</sup> of their HIV infection diagnosis among persons who were  $\geq 13$  years of age at diagnosis, resided in Vermont and diagnosed with HIV infection between 01/01/2015 through 12/31/2015**

Persons diagnosed with HIV infection	Persons linked to care within 30 days of diagnosis		Persons linked to care within 91 days of diagnosis		Persons linked to care within 182 days of diagnosis		Persons linked to care within 365 days of diagnosis	
	No.	%	No.	%	No.	%	No.	%
11	10	90.9	10	90.9	11	100	11	100

<sup>a</sup>Persons 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 to 2020, established national goals for HIV prevention and care, the progress of which is monitored largely through state-level HIV surveillance efforts. Figure 5.1 was produced using a CDC-developed NHAS indicator report and reflects Vermont's effective progress in linking people newly diagnosed with HIV infection to HIV medical care. Within six months, all eleven newly reported cases of HIV in Vermont were linked to medical care. Figure 5.2 presents the Vermont HIV care continuum. The HIV care continuum demonstrates linkage to care and viral suppression among PLWDHI. A person living with diagnosed HIV infection is considered to be virally suppressed if the number of copies of the virus in their blood is less than 200 per milliliter. Vermont compares favorably with the nation with 81% of people known to be living with HIV being virally suppressed. By comparison, in November of 2014, the CDC estimated that 30% of people known to be living with HIV nationally had attained viral suppression<sup>2</sup>.

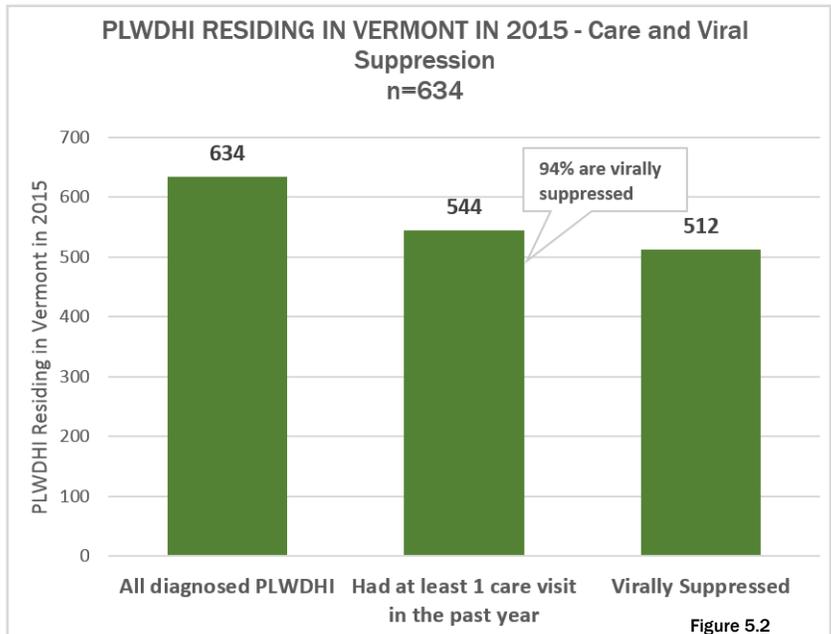


Figure 5.2



## DEPARTMENT OF HEALTH

The statistics in this document are estimates and subject to change. Questions can be directed to:

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**State of Vermont**

**Department of Health**

**HIV/STD/Hepatitis Program**

## Additional Resources

HIV Hotline: 800-882-AIDS or 802-863-7345

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)

General Information: [www.aids.gov](http://www.aids.gov)

1. US Dept. of Health and Human Services. *NHAS Overview*. <https://www.aids.gov/federal-resources/national-hiv-aids-strategy/overview/>. Accessed November 2016.
2. Centers for Disease Control and Prevention. *HIV in the United States: The Stages of Care*. <https://www.cdc.gov/nchhstp/newsroom/docs/HIV-Stages-of-Care-Factsheet-508.pdf>. Published November 2015. Accessed November 2016.