

Integrated Epidemiologic
Profile for HIV/AIDS
Prevention and Care Planning in
Vermont

2005



DEPARTMENT OF HEALTH

Division of Health Surveillance

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TABLE OF CONTENTS

List of Tables.....	iii
List of Figures.....	iv
Executive Summary.....	vi
INTRODUCTION.....	1
Background.....	1
Data Sources.....	1
Profile Strengths and Limitations.....	7
Profile Preparation.....	8
Organization of the Profile.....	8
SECTION 1: CORE EPIDEMIOLOGIC QUESTIONS.....	10
What are the Sociodemographic Characteristics of the General Population of Vermont?.....	11
What is the Scope of the HIV/AIDS Epidemic in Vermont?.....	19
What are the Indicators of HIV/AIDS Infection Risk in Vermont?.....	31
SECTION 2: RYAN WHITE CARE ACT QUESTIONS.....	48
What are the HIV Service Utilization Patterns of Individuals in Vermont?.....	49
What are the Number and Characteristics of Individuals Who Know they are HIV Positive but Who are not in Care?.....	54
APPENDICES	
Appendix A: Profile Data Sources.....	58
Appendix B: Glossary of Terms.....	73
Appendix C: Acronym List.....	77

List of Tables and Figures

Tables

1	Percentage distribution of the general population by age group and sex, Vermont, 2003.....	13
2	Population distribution by insurance status for Vermont and the U.S., 2002-2003.....	16
3	The number of persons in Vermont living with HIV per year 2002-2004.....	21
4	The number of persons in Vermont living with AIDS per year 1999-2004.....	22
5	Number of HIV and AIDS diagnoses made in 2003 for adults and adolescents: Comparison of U.S. and Vermont.....	26
6	Deaths with HIV/AIDS as underlying or contributing cause, Vermont, 1997 – 2003.....	29
7	Ranking of eight leading underlying causes of death of persons ages 25-44 years, Vermont, 1997 – 2003.....	29
8	Characteristics of Vermont residents who died of AIDS during 1997 - 2003 and persons living with AIDS at the end of 2003.....	30
9	Percent of persons 12 or older in Vermont and in the U.S. reporting drug use, 2002-2003...37	
10	Percent of 8 th through 12 th graders reporting condom use, multiple partners, or drug use at last sex, Vermont YRBS, 1997, 1999, 2001 and 2003.....	40
11	Reasons for HIV testing, Vermont BRFSS, 2002 – 2003.....	43
12	Location of most recent HIV test, Vermont BRFSS, 2002 – 2003.....	44
13	Types of organizations funded by Title II in Vermont in 2003 and the target populations these organizations focus on serving.....	50
14	Types of services provided by organizations funded by Title II including the number of people accessing these services in Vermont in 2003.....	51
15	Comparison of characteristics of CARE Act clients (reported separately for CCC clients and CBO/PLWHA coalition clients) and people living with AIDS, Vermont, 2003.....	53
16	Participation in HIV/AIDS treatment, Vermont, 2004.....	55

Figures

1	Employed civilian population 16 years of age and older by occupation, Vermont, 2004.....	14
2	Percent of families living in poverty by type of family, Vermont, 2004.....	14
3	Educational attainment of Vermont residents 25 years old or older, Vermont, 2004.....	15
4	Five leading causes of death for Vermont and for the U.S. white population, 2002.....	16
5	HIV/AIDS prevalence rates per 100,000 persons by county and location of CCCs, Vermont, 2004.....	18
6	Number of persons diagnosed with HIV and number of persons diagnosed with AIDS in two year intervals, Vermont, 1999-2004.....	20
7	Number of new HIV diagnoses by race/ethnicity, Vermont, 1999-2004.....	24
8	Cumulative cases of HIV for males and females with heterosexual contact reported as the mode of exposure, Vermont, 2001-2004.....	25
9	Number of new HIV and AIDS cases by age of diagnosis, Vermont, 1999-2004.....	25
10	Percent of cumulative cases in each transmission category for women with HIV or AIDS in Vermont through 2004.....	27
11	Percent of cumulative cases in each transmission category for men with HIV or AIDS in Vermont through 2004.....	27
12	Percent of young MSM reporting the number of sexual partners they've had during their lifetime, Vermont YRBS, 1999, 2001, 2003.....	33
13	Percent of young MSM who used a condom at last sexual encounter, Vermont YRBS, 1999, 2001, 2003.....	33
14	Percent of young MSM within each age group who drank and/or used drugs at last sexual experience, Vermont YRBS for the years 1999, 2001, 2003 combined.....	34
15	Percent of young MSM who used alcohol, marijuana or cocaine in the past 30 days, Vermont YRBS, 1999, 2001, 2003.....	34
16	Number of drug treatment admissions to state funded facilities for Methamphetamine, Vermont, 2000-2004.....	37
17	Number of drug possession charges filed in Vermont District Court 1995-2003 by type of drug.....	38

18	Percent of total treatment admissions per substance, Vermont ADAP, 2000-2004.....	38
19	Percent of sexually active people in each age group who reported having two or more sex partners in the past year, BRFSS Vermont, 2001-2004.....	39
20	Teen pregnancy rate per 1,000 females ages 15-17 in Vermont and the U.S., 1990-2003....	41
21	Number of Chlamydia cases reported for men and women in Vermont, 1996-2004.....	41
22	Gonorrhea incidence for males and females in Vermont, 1996-2004.....	42
23	Percent of males and females in each group who were ever tested for HIV (other than for a blood donation), Vermont BRFSS, 2001-2004.....	43
24	HIV/AIDS prevalence rates per 100,000 persons by county and location and type of HIV testing sites Vermont, 2004.....	45
25	Number of HIV tests per year by type of test, Vermont CTR, 1998-2204.....	46
26	Percent of total HIV tests per year in each age group, Vermont CTR, 1998-2004.....	46
27	Percent of total HIV tests by exposure category, Vermont CTR, 1998-2004.....	47
28	Percent of active CCC patients for each clinic location who reported not having permanent housing (data for years 2001-2004 combined).....	56

EXECUTIVE SUMMARY

Populations affected by HIV/AIDS

At the end of 2004 there were 231 Vermonters known to be living with AIDS and an additional 199 people living with HIV. It is estimated that another 103 to 116 people in Vermont are living with the virus but are not aware that they have contracted HIV. Chittenden County is the most populous county in Vermont, and 24% of the state's population resides here. Chittenden County is the only Vermont county with more than 100 people with HIV/AIDS per 100,000 residents. Forty-three percent of all Vermonters with HIV/AIDS reside in Chittenden County.

At the end of 2004 there were more cases of HIV/AIDS among men than women in Vermont; men made up 84% of all AIDS cases and 79% of all HIV cases. Although more than eighty percent of all HIV and AIDS cases in Vermont are among whites, the virus disproportionately affects the non-white populations of Vermont. Only 3% of Vermont's population is non-white, but 15% of all HIV/AIDS cases ever reported in the state are among non-whites, and 23% of all HIV/AIDS diagnoses made in 2003-2004 were among non-whites. Nationally, over half of new HIV diagnoses are among individuals younger than 25, but in Vermont it is the 40 to 49 year old age group that has the largest number of new HIV cases.

Exposure, Risk, and Population Trends

Among men in Vermont, MSM is the most commonly listed mode of exposure for contracting HIV (68% of all cases through 2004). Among women, the most commonly listed risk factors are heterosexual contact (44% of all cases through 2004) and IDU (31%). The number of women in Vermont reporting heterosexual contact as the mode of exposure has been rising since 2001.

The number of new HIV diagnoses among whites has decreased since 1999, but has increased for non-whites during this same time. The HIV-related death rate is also higher among non-whites than whites.

Ryan White Funding

All clients who received Title II services in Vermont in 2003 had incomes equal to, or below, the Federal Poverty Line. Four types of organizations provided Title II funded services in Vermont, and more than 328 Vermonters received Title II funded services via these organizations in 2003. The characteristics of the group of people in Vermont receiving Title II funded services from the hospital/university based clinics in 2003 was similar to the group of people living with AIDS in 2003. The majority of people in both groups were men, white, and the primary mode of exposure was MSM. People served under Title II funding were slightly more likely to be black or African American and more likely to report heterosexual transmission as the mode of HIV exposure. The Title II funded program that provides medication assistance (AMAP) has increased from just over one hundred participants in 2000 to 201 participants in 2004. Similarly, the use of the dental care assistance program (DCAP) has been increasing since 2000.

Who Is Not Receiving Medical Care for HIV/AIDS in VT?

During 2004 an estimated 40% of Vermonters living with HIV/AIDS did not receive HIV-related medical care. A greater percentage of men than women experienced this unmet need with young men ages 18-34 experiencing the greatest percentage of unmet need. Information from clients of Vermont's hospital/university based HIV care centers indicates a need for permanent housing among the HIV positive population.

INTRODUCTION

The data presented in this report serve to guide prevention and service efforts, to justify and obtain funding for the implementation of prevention and service programs, and to evaluate programs and policies throughout Vermont. Multiple data sources were used to create a thorough and comprehensive document, which addresses 5 key questions:

1. What are the socio-demographic characteristics of the general population in Vermont?
2. What is the scope of the HIV/AIDS epidemic in Vermont?
3. What are the indicators of risk for HIV/AIDS infection in Vermont?
4. What are the patterns of utilization of HIV services in persons in Vermont?
5. What are the number and characteristics of persons who know they are HIV-positive, but who are not receiving primary medical care?

Each of the questions represents a section of the report, which includes relevant data and interpretation.

BACKGROUND

This year we incorporated input from the end-users of the Profile via the Epidemiological Profile Advisory Committee and explored additional sources of aggregate data. In addition, we received technical assistance from the CDC on preparing a profile for a rural, low-incidence state. We anticipate that additional data sources will help create a comprehensive and multi-perspective profile useful for both HIV prevention and care planning. The 2005 Profile is being developed in conjunction with the *CDC's Integrated Guidelines for Developing Epidemiologic Profiles* as was done for the 2004 Profile.

PROFILE DATA SOURCES

Data were compiled from a variety of sources to provide the most complete picture possible. When reading this document, please keep in mind that each of the data sources has strengths and limitations, and these should be considered when interpreting the data. Below is a brief description of each of the data sources used in the profile. It should be noted that not all data sources available to other states are available for Vermont. (For a more detailed description of these sources, please refer to Appendix A.)

Core HIV/AIDS Surveillance Data

In 1982 the Vermont Department of Health implemented AIDS case surveillance under its Communicable Disease Regulations. The Vermont legislature added HIV infection reporting by unique identifier code to the Communicable Disease Regulations in 1999, and HIV reporting was implemented in March of 2000. Standardized case report forms are used to collect sociodemographic information, mode of exposure, laboratory and clinical information, vital

status (i.e., living or dead), and referrals for treatment or services. In addition, death certificate data are used for active case finding and to update vital status on a quarterly basis. According to an evaluation conducted by the CDC in September of 2001, AIDS reporting was estimated to be more than 85% complete. HIV surveillance data may underestimate the number of recently infected persons because some infected persons either do not know they are infected or have not sought testing. Persons who tested positive at an anonymous test site and have not sought medical care (where they would be confidentially tested) are not included in HIV surveillance statistics. Therefore, HIV infection data can provide only minimum estimates of the number of persons known to be HIV infected. In addition, newly diagnosed cases may be reported to the health department at any point along the clinical spectrum of disease. Consequently, HIV infection data do not necessarily represent characteristics of persons who have been recently infected with HIV. Consistent with national standards for the conduct of HIV/AIDS surveillance, HIV and AIDS cases are counted only in the state in which they resided at the time of their HIV or AIDS diagnosis. Therefore, Vermont surveillance data include some individuals who no longer reside in Vermont, and do not include individuals who now live in Vermont but were diagnosed while living in other states.

Supplemental HIV/AIDS Surveillance Projects

HIV Testing Survey (HITS)

HITS assesses HIV testing patterns, reasons for seeking or avoiding testing, knowledge of state policies for HIV surveillance, and risk behaviors among a sample of persons at high risk for HIV. HITS is an anonymous, venue-based survey that focuses on persons who are at least 18 years of age and at high risk for HIV infection. The data can be used to evaluate HIV surveillance data by determining the characteristics of persons who delay testing, who test anonymously, or who avoid testing. Information collected is self-reported and may be subject to recall and/or reporting biases. In 2001, HITS was conducted among men who have sex with men (MSM) and injection drug users (IDU) in Vermont. Interviewees were recruited at gay bars (MSM) and street locations (IDU). Because HITS data are not population-based, they may not represent the entire high-risk population in Vermont. Participants who reported testing positive for HIV were excluded from analyses.

Behavioral Surveys

Behavioral Risk Factor Surveillance System (BRFSS)

In 1984, the CDC established the BRFSS to collect state-level data on personal health behaviors using a standard core questionnaire so that data could be compared across states. The BRFSS is a population-based random-digit-dialed telephone survey of adults that monitors state-level prevalence of the major behavioral risks associated with premature morbidity and mortality. Respondents are asked about their personal health behaviors and health experiences. The survey is population-based meaning that the information gathered can be generalized to the adult population of the state, not just to those people at highest risk for contracting HIV. Questions about sexual behavior and attitudes/knowledge of HIV were asked each year 2000 through 2004.

National Survey on Drug Use and Health (NSDUH); formerly called the NHSDA

The NSDUH is an annual nationwide survey designed to collect data on substance abuse patterns and behaviors in the United States civilian population aged 12 or older. Youth are over-sampled to ensure precise estimates of substance abuse among younger persons. The information collected includes: use of cocaine, receipt of treatment for illicit drugs, and need of treatment for illicit drugs during the past year; use of alcohol, tobacco, or marijuana during the past month; and perceived risk for binge drinking, marijuana use, or smoking during the past month. To increase the level of valid reporting computer-assisted interviewing methods have been used since 1999 to provide respondents with highly private and confidential means of responding to questions about substance use and other sensitive behaviors. Because the NSDUH estimates represent behaviors in the general population, the survey may underestimate the level of substance use in the population at highest risk for contracting HIV. Further, data from the NSDUH are self-reported and subject to recall bias; therefore, the level of a sensitive behavior may be underreported.

Youth Risk Behavior Survey (YRBS)

The Vermont YRBS is part of the CDC's Youth Risk Behavior Surveillance System which collects information on health-risk behaviors among youth and young adults in each of the following categories: behaviors that contribute to unintentional injuries and violence; tobacco use; alcohol and other drug use; sexual behaviors that contribute to unintended pregnancy and sexually transmitted diseases, including HIV infection; unhealthy dietary behaviors; and physical inactivity. Since 1985, the Vermont Office of Alcohol and Drug Abuse Programs (ADAP) has administered the YRBS surveys every two years to a representative sample of Vermont students in grades eight through twelve. Because the YRBS relies upon self-reported information, sensitive behavioral information may be underreported or over reported. Also, because the YRBS questionnaire is administered in school, the data are representative only of adolescents who are enrolled in school and cannot be generalized to all adolescents. For example, students at highest risk, who may be more likely to be absent from school or to drop out of school, may be underrepresented in this survey, especially those in upper grades.

Person Environment Zone Project

This is an NIMH-funded study that began in 2004. This project tests a theoretical model of how the stigma associated with HIV affects the risk behaviors of people with HIV/AIDS in rural settings. Principal investigators on this project are three faculty members in the Psychology Department and the University of Vermont: Sondra Solomon, Carol Miller, and Rex Forehand. This study provides information on the experiences of being HIV positive in Vermont. This is the only project focusing on the stigma and behavior of HIV positive individuals in Vermont, and one of the few projects in the U.S. addressing HIV/AIDS in rural areas.

STD Surveillance

STD Case Reporting

Chlamydia trachomatis infection, gonorrhea, and syphilis are reportable under Vermont's Communicable Disease Regulations. Laboratories, hospitals, physicians, insurance companies, and other health care providers are required to report all cases to the Vermont Department of

Health. Demographic and risk history information is entered into the National Electronic Telecommunications System for Surveillance (NETSS) and transmitted to the CDC (without identifiers) on a weekly basis. Partner counseling and medical referrals are provided. STD surveillance data can serve as a surrogate marker for unsafe sexual practices and demonstrate the prevalence of changes in a specific behavior. Because of shorter incubation periods between exposure and infection, STDs can serve as a marker of recent unsafe sexual behavior. In addition, certain STDs (e.g., ulcerative STDs) can facilitate the transmission or acquisition of HIV infection. Finally, changes in trends of STDs may indicate changes in community sexual norms, such as unprotected sex. Although STD risk behaviors result from unsafe sexual behavior, they do not necessarily correlate with HIV risk.

HIV Counseling and Testing Data

Counseling and Testing System (CTS)

The HIV Counseling and Testing System (CTS) was originally developed in 1988 as a means to assist CDC-funded HIV prevention project areas (such as Vermont) in collecting data on the population receiving counseling and testing services. The data are used to guide the development of HIV prevention programs and to estimate the need for early intervention service for persons with HIV infection. Funding from the CDC supports the Vermont Counseling, Testing, and Referral (CTR) system, which consists of anonymous and confidential voluntary HIV counseling, testing, and referral services with emphasis on a client-centered risk-reduction counseling model. In Vermont there are 44 testing sites throughout the state that offer anonymous and/or confidential HIV testing. Demographic and behavioral data as well as HIV test results are reported to the Vermont Department of Health by each testing site. Data are entered into CTS software provided by the CDC and are transmitted to the CDC on a monthly basis. CTS collects information only from persons who seek counseling and testing services or agree to be tested after consultation at one of the publicly funded sites. Data cannot distinguish multiple tests on the same individual. Because clients self-select for testing and because the data cannot be unduplicated, CTS data cannot be used to estimate statewide HIV seroprevalence.

Substance Abuse Data

Alcohol and Drug Abuse Program (ADAP)

ADAP is located within the Vermont Department of Health. ADAP collects substance abuse treatment admissions data from facilities that receive state funding. All facilities receiving state funds are mandated to report sociodemographic information on all substance abuse treatment admissions, including the substance being abused. These data offer a way to indirectly measure the prevalence of drug use in Vermont. However, the admissions data may not represent unduplicated individuals, but rather they may represent multiple admissions within a calendar year for an individual.

Vermont Center for Justice Research (VCJR)

VCJR provides information on the number of drug charges filed in Vermont district court. Ideally, this data provides a snapshot of the number of charges filed for certain drugs. Data is

limited to the number of arrests for specific substances in each area, and the sex and age of the person charged. This data is charge-based, not person-based, meaning that one person may be represented more than once because s/he received multiple drug charges.

Vital Statistics Data

Birth and Death Data

Statewide vital registration began in Vermont in 1857. The current vital statistics system in Vermont includes seven types of vital events: births, deaths, marriages, civil unions, divorces, fetal deaths, and abortions. All states use standard forms to collect birth and death data. The birth certificate form includes demographic information on the newborn and the parents. Death certificates include demographics, underlying cause of death, and contributions of selected factors to the death (i.e., smoking, accident, or injury) of all deceased persons. Birth and death certificates must be filed with the town clerk and a certified copy is sent to the Department of Health. Physicians must complete the cause of death information on a death certificate and sign the certificate. Deaths resulting from, or whose underlying cause was, HIV infection may be underreported on a death certificate because the physician completing the form may be unaware of the individual's HIV status. Vital records data are coded and entered into a database, and data are sent to the National Center for Health Statistics.

Population Data

US Bureau of the Census (Census Bureau)

The Census Bureau collects data on demographic characteristics of the U.S. population, family structure, educational attainment, income level, housing status, and the percentage of persons who live at or below the federal poverty level. The Census Bureau's web site (www.census.gov) has information on demographic characteristics (e.g., age, race, Hispanic ethnicity, sex) of the population, family structure, educational attainment, income level, housing status, and the proportion of persons who live at or below the poverty level. Summaries of the most requested information for states and counties are provided, as well as analytical reports on population changes, age, race, family structure, and apportionment. State- and county-specific data are easily accessible, and links to other Web sites with census information are included. The most recent decennial census was completed in 2000. The American Community Survey (ACS) is a mandatory survey of 3 million households per year (as of 2005) that is designed to replace the decennial survey.

Vermont Department of Health Population Estimates

For the most recent years (2003 and 2004) the Vermont Department of Health has used estimates that are a modification of the estimates produced by the Bureau of the Census for the National Center for Health Statistics (NCHS). The Census/NCHS data provides us with town total population estimates and population by age/race/sex for Vermont Counties. These data however, do not accurately estimate the numbers of very young Vermonters (age < 5) when compared to the numbers of VT resident births. So VDH produces our own estimates for the under 5 population by county, then makes adjustments to Census/NCHS data so that the state and county

totals match those sources. Some minor adjustments are made to the town estimates to account for round off error in the production of the county age/race/sex estimates, and to account for instances where the Census Bureau has estimated populations for what are believed to be uninhabited places (Lewis, Avery's Gore and Warner's Grant).

Robert Wood Johnson and Kaiser Family Foundations

The Robert Wood Johnson Foundation and the Kaiser Family Foundation are both private, non-profit organizations focusing on issues of health and health care. Both organizations provide independent analyses of health and healthcare issues. These data provide information about access to care for various populations and can be used to compare access across geographic areas.

Geographic Information System (GIS) Data

The GIS system provides easy to access, visual depiction of HIV-related information for readers. The Vermont Department of Health utilizes ESRI ArcView/ArcGIS mapping software.

Ryan White CARE Act Data

Unmet Needs Project

The unmet needs project identifies gaps in care for Vermonters living with HIV. It is based on analyses of two HIPAA compliant data sets which do not include unique person identifiers; Probabilistic Population Estimation is used to estimate the number of people with HIV who are not currently receiving care. This is one of the only sources of information regarding unmet need for people living with HIV in Vermont.

Ryan White Comprehensive AIDS Resources Emergency (CARE) Act

The federal Ryan White CARE Act provides health care for people with HIV disease. Enacted in 1990, it fills gaps in care faced by those with low-incomes and little or no insurance. Vermont receives federal funding under Titles II and III of the Ryan White CARE Act. Although Vermont does not receive Title IV funds some Vermont residents do access Title IV funds through services provided by the state of New Hampshire. Reports by the HIV/AIDS program's Title II Administrator are made to the federal Health Resources and Services Administration (HRSA) on a yearly basis. These CARE Act Data Reports (CADR) are provider-based reports with aggregate client, provider, and service data for all CARE Act programs. Reports include information on all clients who receive at least one service during the reporting period. CADR data includes information on the demographics of all clients (sex, age, race/ethnicity), exposure category, and the number of clients receiving each type of service. In 2005 Vermont began instituting HRSA's mandate to give priority funding to six core services: primary medical care, substance use treatment, mental health therapy, oral health, HIV medications and case management.

HIV/AIDS Medication Assistance Program (AMAP)/ HIV Dental Care Assistance Program (DCAP)

Both AMAP and DCAP are funded by Ryan White CARE Act Title II funds (described above). The AMAP provides financial assistance for the purchase of prescription medications to Vermonters living with HIV disease who meet certain income guidelines. DCAP provides financial assistance to meet the dental needs of underinsured and uninsured Vermonters living with HIV/AIDS. Data is collected on all people who receive services via AMAP/DCAP. This data represents people who know their HIV serostatus, who are currently seeking care and treatment services through Ryan White Title II- funded providers, and who are financially eligible to receive services.

Assessing Barriers to Prevention and Care Services

This 2004 study focused on three groups of people 1) members of communities of color not already connected to HIV/AIDS service 2) persons incarcerated in Vermont institutions, and 3) providers of HIV/AIDS prevention, support or medical care. The study assessed barriers to HIV/AIDS prevention, support and medical services for Vermont communities of color. Data consisted of focus groups, individual interviews and surveys.

PROFILE STRENGTHS AND LIMITATIONS

When making planning decisions, it is important to consider the overall strengths and limitations of this document. Although the profile is comprehensive and draws from a number of data sources there are many things that the profile cannot explain.

The HIV/AIDS surveillance system in Vermont is based on data on people who have been tested confidentially for HIV. Although this surveillance system has matured since HIV reporting began in 2000, HIV infections are underdetected and underreported. This is due to the fact that individuals who were tested anonymously and have not entered care, and individuals who are HIV positive but are unaware they are positive because they have not been tested for HIV, are not included in surveillance numbers, as is the case nationwide. In addition, individuals are tested at different times along the continuum of their HIV disease, and some are not tested until HIV infection has progressed to AIDS. Thus, it is important to remember that the data in this report do not necessarily represent the characteristics of persons who have been recently infected with HIV, nor do they provide a true measure of HIV incidence. Low incidence states such as Vermont don't currently have the resources to measure true incidence.

Analyses of many different data sets are presented to provide robust representations of particular subpopulations. However, demographic and geographic subpopulations are disproportionately sensitive to differences and changes in access to health care, HIV testing patterns, and specific prevention programs and services. All of these issues must be carefully considered when interpreting HIV data. Therefore, it is important to make comparisons across data sources to get the most complete picture of the impact of HIV/AIDS both nationally and in Vermont.

The most current analysis available is presented for each source of data; however, the most recent data collected varies from one source to another. One must also keep in mind that data

sources are limited in Vermont, particularly with regard to additional/special HIV-related data sets due to a lack of funding for such projects.

PROFILE PREPARATION

This Epidemiologic Profile was prepared by the Vermont Department of Health, Division of Health Surveillance, HIV/AIDS Program and with guidance from the Centers for Disease Control and Prevention and the Epidemiological Profile Advisory Committee. The Advisory Committee was comprised of members of the following organizations:

- **CDC:** Irum Zaida (prevention technical advisor), June Mayfield (prevention project officer), and Allison Freeman, the CDC assigned epidemiologist to assist with HIV/AIDS surveillance technical issues
- **Vermont Department of Health, HIV/AIDS Program and the University of Vermont:** Michelle Force (Epidemiologic Profile Coordinator)
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- **Vermont Department of Health, HIV/AIDS Program (Care):** Justin Bullard, Moretti
- **Vermont Department of Health, HIV/AIDS Program:** Kurt Kleier
- **Vermont Department of Health, Health Surveillance:** Patsy Tassler, Matt Pettengill
- **HRSA Title III and HIV/AIDS Education and Training Center:** Deb Kutzko
- **HRSA Title IV, NH:** Lisa Purvis
- **CPG:** Justin Barton-Caplin, David Morrill and Chris Tebbetts (consultant to the CPG)
- **HASAC:** Paul Dragon, Aiyana Blackhawk

The Vermont STD Program provided guidance on the use and interpretation of STD (non- HIV) data. BRFSS data were provided by the Vermont BRFSS Program. The Internet was also utilized to obtain data. Socio-demographic data, vital statistics, and substance abuse data were obtained from both the Internet and the appropriate programs within Vermont state government.

Several of the internet sources compile their data from other organizations and agencies, such as the Kaiser Family Foundation (for insurance information) and the Health Resources and Services Administration (HRSA) (for the CARE Act Data Report [CADR]).

ORGANIZATION OF THE PROFILE

The epidemiologic profile is organized into two main sections, within which the five key questions are addressed:

Section 1: Core Epidemiologic Questions

This section of the report provides the reader with an understanding of the characteristics of the general population in Vermont, the distribution of HIV disease, and a detailed look at persons at risk for HIV infection. The section is organized around three key questions:

Question 1: What are the Sociodemographic Characteristics of the General Population in Vermont? Orients the reader to the overall demographic and socioeconomic characteristics of the general population of Vermont.

Question 2: What is the Scope of HIV Disease in Vermont? Examines the impact of HIV disease among a number of population groups in Vermont, to help planners target prevention and care services.

Question 3: What are the Indicators of HIV Disease Infection Risk in Vermont? Provides a detailed look at high-risk populations to the extent possible. Both direct measures of risk behaviors associated with HIV transmission and indirect measures that may serve as indicators of high-risk behavior are examined in this segment.

Section 2: Ryan White HIV/AIDS CARE Act Special Questions and Considerations

This section focuses on questions that pertain to HRSA HIV/AIDS care planning groups. Section two describes access to, use of, and standard of care among persons in Vermont who are HIV infected. It is organized around 2 key questions:

Question 1: What are the patterns of HIV service utilization by persons in Vermont? Characterizes patterns in the use of services by a number of populations living with HIV/AIDS in Vermont. Information is provided from HRSA-funded programs.

Question 2: What are the number and characteristics of persons who know they are HIV positive but who are not receiving primary medical care? Describes studies currently underway in Vermont to assist in assessing the unmet needs of persons who know they are HIV positive, but who are not in care.

Section One:

Core Epidemiologic Questions

Question

1

What are the sociodemographic characteristics of the general population in Vermont?

Question

2

What is the Scope of the HIV/AIDS Epidemic in Vermont?

Question

3

What are the indicators of HIV Disease Infection Risk in Vermont?

Question

1

What are the sociodemographic characteristics of the general population in Vermont?

This section provides information on the demographic, social and economic characteristics of Vermont residents. This information is important in understanding the contexts of the HIV epidemic in Vermont. Information on population characteristics, regional differences, employment, education, health and healthcare is included. The Vermont HIV/AIDS service network is also described here.

HIGHLIGHTS

- Vermont's population was estimated to be 621,394 people in 2004
- Racial and ethnic minorities make up 3.2% of Vermont's population
- Vermont's median household income of \$46,543 in 2004 was above the U.S. median income
- Vermont ranks 5th highest in the nation for the percent of residents 16 or older who are currently employed, and in 2004 Vermont had the 6th lowest poverty rate in the nation
- Vermont has been ranked among the healthiest states in the U.S.
- 10% of Vermont residents lacked health insurance in 2002-2003, compared to 16% nationally
- HIV medical care in Vermont is provided primarily through four hospital-based HIV clinics called Comprehensive Care Clinics

Geography and Population

Population: According to the U.S. Census Bureau Vermont's 2004 population was estimated at 621,394 people. Only the state of Wyoming has a smaller population than Vermont. The state is predominantly rural with 62% of the population living in rural areas. Vermont covers an area of 9,614 square miles. The population density per square mile of land area for the entire state is 65.8 (the national average is 79.6 people per square mile). The Green Mountains bisect the state from north to south and the land is divided into 14 counties. Burlington is the state's largest city with a population of 38,885. There is only one Metropolitan Statistical Area (an urbanized area with a high degree of economic and social integration that has a population of at least 50,000 people) and that includes parts of Chittenden, Franklin, and Grand Isle counties and has a population of approximately 170,000. From 2000 to 2003 the highest growth rate occurred in Grand Isle, Lamoille and Franklin counties while Rutland County showed the smallest increase in population.¹ (See Figure 5 for a map of Vermont).

Demographics

Demographic Composition: The majority of Vermont's population (96.8%) identified as white on the 2000 Census. This is in contrast to the U.S. population where 75.1% identified as white. The non-white population in Vermont includes: 1.1% Asian and Pacific Islander, 0.9% Hispanic white, 0.8% Black or African American, and 0.5% American Indian, Eskimo and Aleut.

While racial and ethnic minorities are only 3.2% of Vermont's population these populations are growing at a much faster rate than the white, non-Hispanic population.¹ Between 2000-2003 the non-white population of Vermont grew 11.9% (2,318 people) while the white, non-Hispanic population grew by only 1.2% (7,072 people). This increase was not consistent across racial and ethnic groups. The Asian/Pacific Islander group was the fastest growing population with an 18.1% increase from 2000-2003, followed by a 14.9% increase in the black population, while the American Indian, Eskimo and Aleut populations declined during this same time period. The racial and ethnic minority populations in Vermont are concentrated in Chittenden County where 24.1% of Vermont's total population resides; 42.4% of Vermont's non-white population and 27.2% of the Hispanic population live in Chittenden County. The exception is the American Indian, Alaskan and Aleut individuals, the majority of whom live in Franklin County.

Age and Sex: The median age of Vermont residents has been steadily rising from a median age of 37.7 years in 2000 to a median age of 40.4 years in 2004.² The median age for the entire U.S. population was 36.2 years in 2004. Since 2000 the fastest growing segment of the Vermont population has been the 45-64 year old age group while there has been a slight decline in the number of residents younger than 15 years of age or between 25-39 years old.³ Just over half of Vermont's population (51%) is female; this percentage has remained stable since 2002. Table 1 shows the age and sex distribution of the Vermont population in 2003.

¹ Vermont Department of Health Center for Public Health Statistics

² 2004 American Community Survey accessed October 4, 2005 www.census.gov/acs/www/index.html

³ Vermont Department of Health Center for Public Health Statistics

Table 1. Percentage Distribution of the General Population by Age Group and Sex Vermont, 2003

Age Group, Years	Females, % (N = 315,014)	Males, % (N = 304,102)	Total, % (N = 619,116)
<6	6%	7%	6%
6-15	12%	14%	13%
16-24	13%	14%	13%
25-34	11%	12%	11%
35-44	16%	16%	16%
45-54	16%	16%	16%
55-64	11%	11%	11%
65-74	7%	6%	7%
75-84	5%	4%	5%
85+	2%	1%	2%

Source: Vermont Department of Health Center for Public Health Statistics

Socioeconomic Status

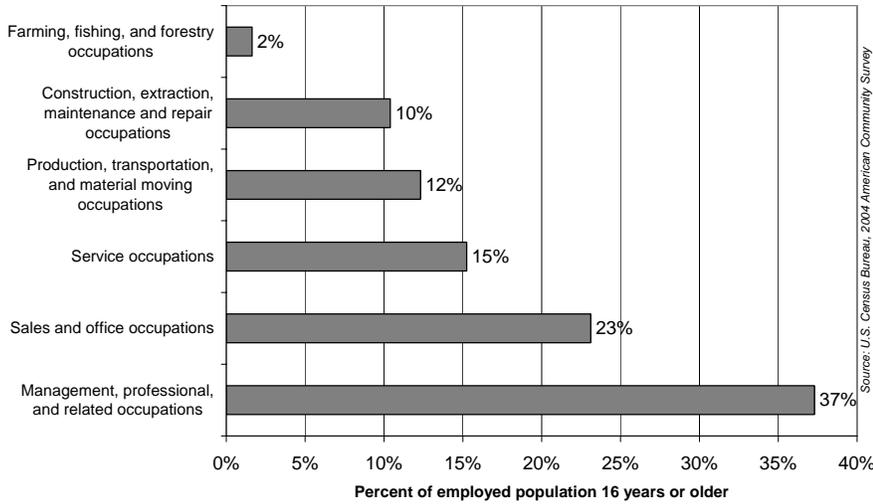
Income and Employment: The median household income in Vermont in 2004 was \$46,543, which was more than the national median household income of \$44,684.¹ In each of the 50 states, full-time, year-round workers who were men had higher median incomes than women (men earned \$41,194 while women earned only 76% of this, or \$31,374). Vermont was one of only three states in the nation where women earned 82% or more of men's median income (men earned \$36,840 while women earned 84% of this, or \$30,864).

Vermont ranks fifth highest in the nation for the percent of residents age 16 or older who are in the labor force. Seventy-one percent of Vermont residents who are 16 years old or older are in the labor force compared with 66% nationally. Management, professional and related occupations employ the greatest percentage of residents (see Figure 1). More than 4,000 jobs were added in Vermont in 2004 resulting in a 1.4% annual growth rate.² Low interest rates aided the addition of 1,300 jobs in construction and an aging population contributed to the addition of 1,100 new jobs in health care services. Smaller gains were seen in the areas of leisure and hospitality and business and professional services. Manufacturing employment has decreased by 20% in Vermont since 2000 (17% of manufacturing jobs were lost nationally). Unemployment has risen in Vermont from 2.9% in 2000 to 4.7% in 2004. These percentages are below the nationwide unemployment rates which have risen from 3.7% in 2000 to 7.2% in 2004.

¹ 2004 American Community Survey accessed October 6, 2005 www.census.gov/prod/2005pubs/acs-01.pdf

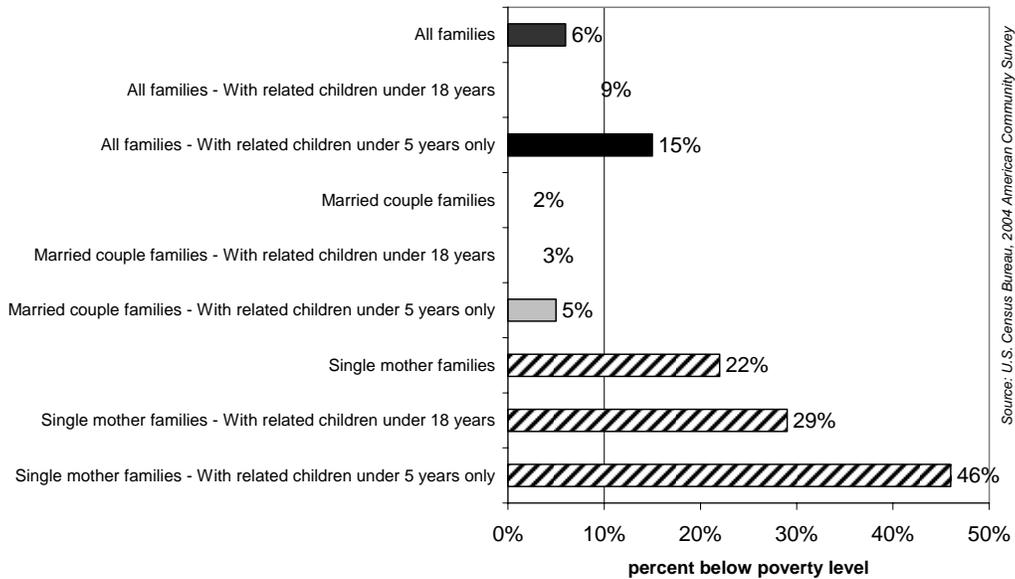
² Vermont Department of Employment and Training

**Figure 1. Employed Civilian Population
16 Years of Age and Older by Occupation Vermont, 2004**



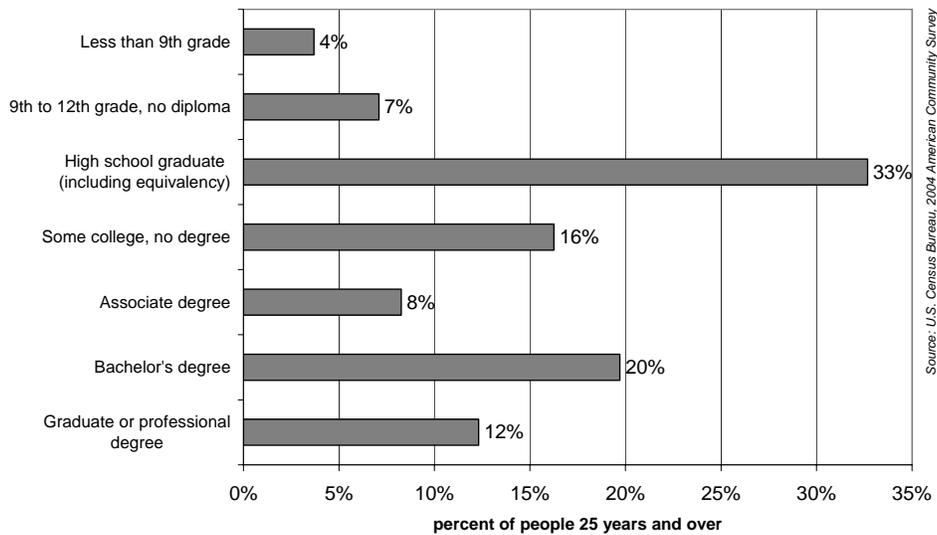
Poverty: As of 2004 only six states had poverty rates that were lower than Vermont's. The national poverty rate was thirteen percent while only nine percent of Vermont residents were living in poverty (approximately 55,000 Vermonters). Despite the relatively low number of residents living in poverty, many children in the state are raised in families whose incomes fall below the federal poverty line. Families headed by a single mother are more than ten times more likely to be in poverty than two parent families are (see Figure 2).

**Figure 2. Percent of Families Living in Poverty by Type of Family
Vermont, 2004**



Education: In 2004 Vermont ranked tenth highest in the nation for the percentage of people 25 or older who had attained a high school degree or college education (see Figure 3). Nationally, 84% of people had earned at least a high school degree, compared to 89% of Vermont residents.

**Figure 3. Educational Attainment of Vermont Residents
25 Years Old or Older, 2004**



Health and Healthcare

Health Indicators: In 2004, the nonprofit United Health Foundation ranked Vermont the third healthiest state in the nation.¹ State health rankings are based on a combination of personal behaviors, community and environmental factors and state health policies. Vermont was third because of the low prevalence of smoking, a low prevalence of obesity, a high rate of high school graduation, a low number of uninsured residents, low incidence of infectious disease, and a low percentage of children in poverty, among other factors. Between 1990 and 2004 Vermont improved substantially in terms of adequate prenatal care (63% in 1990, 86% in 2004) and prevalence of smoking (31% in 1990, 20% in 2004). Vermont does have a high rate of cancer deaths (207.3 deaths per 100,000 residents) and some health disparities among groups do exist, as indicated by rates of prenatal care: only 74% of black women received adequate prenatal care in comparison to 86% of white women. A similar ranking system designated Vermont as the healthiest state in the nation for 2005 based on 21 factors reflecting access to health care providers, affordability of health care, and the general health of a state's population.²

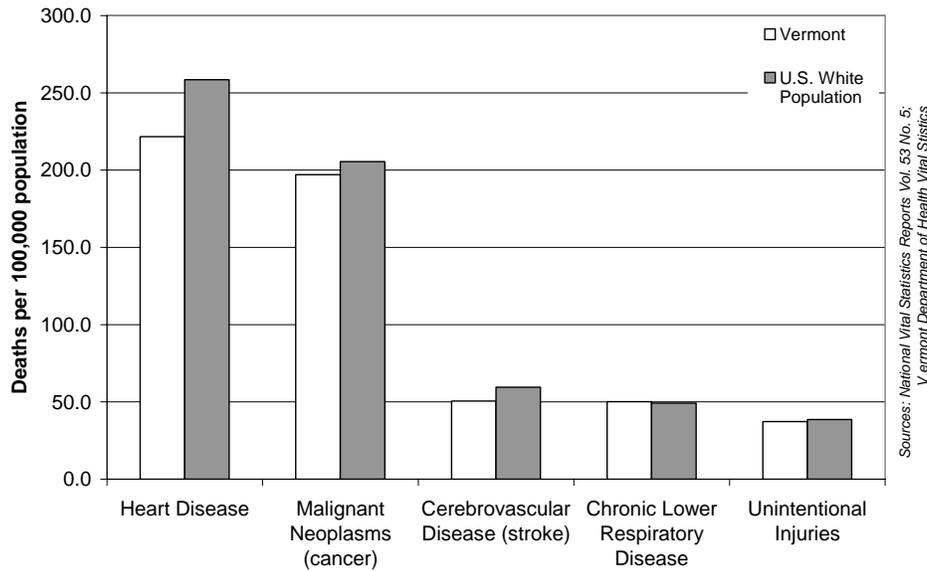
Leading Causes of Death: In 2002, the five leading causes of death were the same for both Vermont and the U.S. (see Figure 4). For the past 40 years, the three leading causes of death in Vermont have been heart disease, cancer and stroke.³ Death rates due to heart disease and stroke peaked in the 1960's in Vermont and have been declining since that time. In contrast, the death rate for cancer has risen steadily over the past few decades.

¹ America's Health State Rankings 2004, accessed October 4, 2005 www.unitedhealthfoundation.org/shr.html

² Health Care State Rankings for 2005, Morgan Quinto Press

³ Vermont Department of Health, Vital Statistics, 2002 Vital Statistics Bulletin, April 2004

Figure 4. Five Leading Causes of Death in 2003 for Vermont and for the U.S. White Population



Access to Health Care: Ten percent of Vermont residents did not have health insurance during the years 2002-2003; 16% of all U.S. residents lacked health insurance during these years (see Table 2).¹ The number of uninsured people in the U.S. increased from 41.2 million in 2001 to 45 million people in 2003.² A significant decline in employer-sponsored health coverage occurred during this time with 8.9 million fewer people insured by their employers. This decline in employer-sponsored coverage was largely offset by increases in publicly sponsored insurance coverage, especially for children. However, both Vermont and the nation are seeing increases in the number of uninsured people. Between 2000 and 2004 Vermont saw a 3% increase in the number of uninsured individuals.

Table 2. Population Distribution by Insurance Status for Vermont and the U.S. 2002-2003

Type of Coverage	All Ages		Children 0-18	
	Vermont	U.S.	Vermont	U.S.
Employer-sponsored	54%	54%	51%	57%
Individual	5%	5%	4%	4%
Medicaid	19%	13%	40%	27%
Medicare	12%	12%	N/A	N/A
Uninsured	10%	16%	5%	12%

Source: Kaiser Family Foundation State Health Facts www.statehealthfacts.org

¹ Kaiser Family Foundation State Health Facts accessed November 2, 2005 www.statehealthfacts.org

² Robert Wood Johnson Foundation Tracking Report No. 9 August 2004

Health insurance coverage is available in Vermont from the following publicly supported sources: Medicare (covers individuals 65 and older and people with certain disabilities), Medicaid (provides coverage for children, the disabled and elderly), Dr. Dynasaur (health insurance for children and youth up to 18 and pregnant women), VHAP/VScript (health care for uninsured adults), and the Mental Health Parity Act of 1997 (requires insurers to provide mental health care coverage).

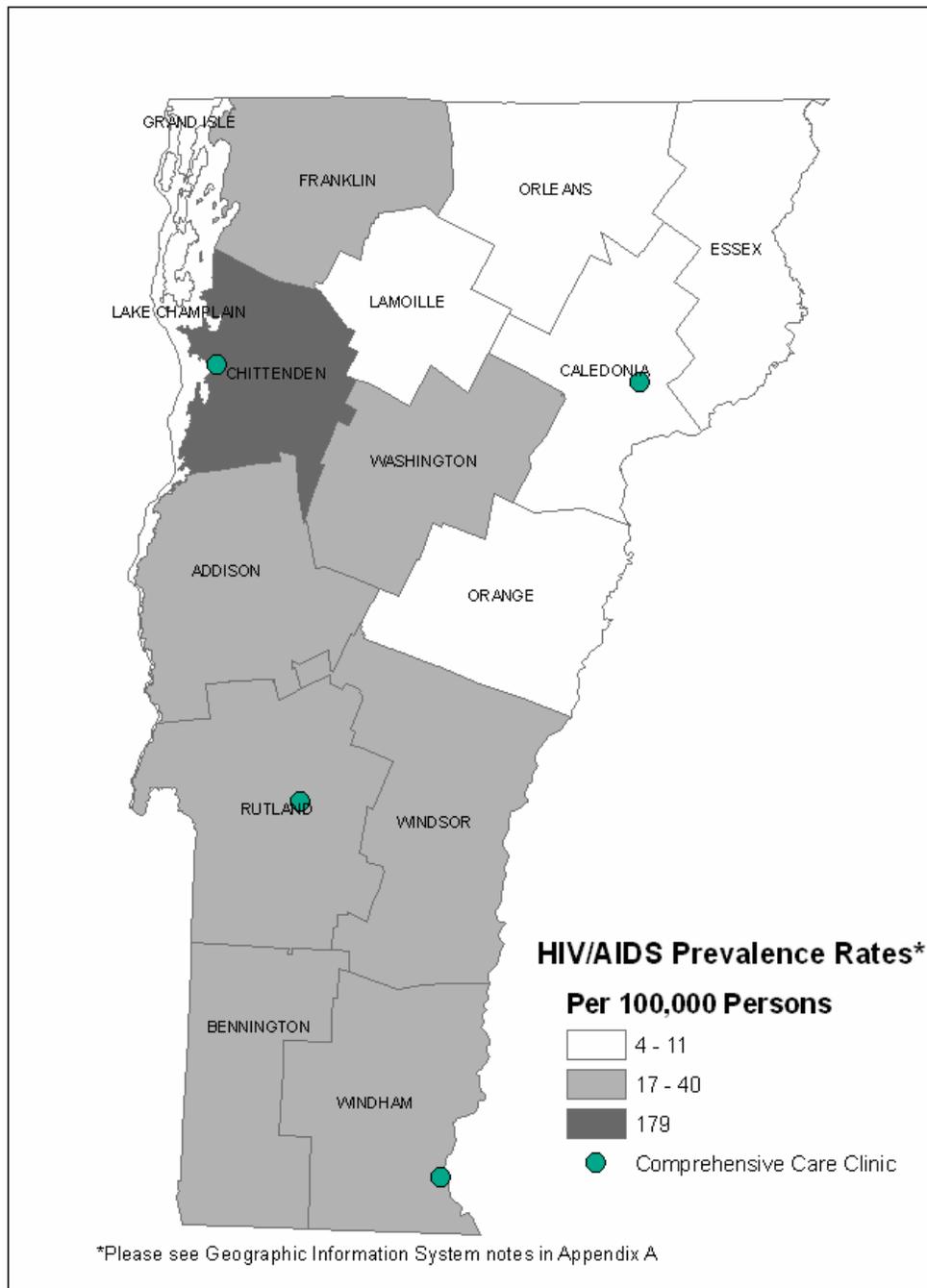
Public Health and Health Care Infrastructure: Vermont has one academic medical center (in Burlington), 13 community hospitals, and one Veterans Administration Medical Center. Vermont residents also access New Hampshire's Dartmouth-Hitchcock Medical Center, which is located near White River Junction Vermont and Albany Medical Center in Albany, NY. The Vermont Department of Health has a central office in Burlington and 12 district offices throughout the state. These offices are a part of the Division of Community Public Health and provide health promotion & disease prevention. Each district office has a Public Health nurse who is funded to do HIV Prevention work 3 hours each week. Infectious Disease Epidemiology and the HIV/AIDS Program are located within the Division of Health Surveillance in the central office in Burlington.

Vermont's HIV and AIDS Service Network: The Ryan White CARE Act provides federal funding for health care and support services for people living with HIV. Government funded services for people living with HIV in Vermont are available through AIDS Service Organizations (ASOs), Comprehensive Care Clinics (CCCs) and Dartmouth-Hitchcock Medical Center (DHMC). ASOs are independently operated and are staffed with both paid employees and volunteers; there are seven ASOs in Vermont receiving federal funds to care for people affected by HIV. These ASOs provide case-management and related services to people who are HIV-positive or are affected by HIV. ASOs also coordinate prevention programs for specific populations.

It can be challenging to provide HIV-related health care to people living in a small, rural state like Vermont. In order to do this Vermont has developed a model of HIV care that is centered on hospital-based HIV specialty clinics called CCCs.¹ The CCCs were designed to overcome many of the barriers to health care delivery encountered by HIV positive individuals in Vermont. These barriers to care include: inexperienced rural physicians, long travel distances to receive expert care, Vermont's limited highway system and minimal public transportation, the lack of psychosocial support systems, concerns about confidentiality, and the complexity of the rapidly changing field of HIV specialty care. There are four CCCs located throughout the state (see Figure 5). Each CCC is staffed by: a HIV trained nurse practitioner, a social worker, a dietitian, and an infectious disease specialist physician.

¹ Grace CJ, Soons KR, Kutzko D, Alston WK, Ramundo M. (1999) Service delivery for patients with HIV in a rural state: the Vermont model. *AIDS Patient Care and STDs*; 13(11):659-666

Figure 5. HIV/AIDS Prevalence Rates per 100,000 Persons by County Vermont, 2004



Source: Vermont Department of Health, HIV/AIDS Program

Question

2

What is the Scope of the HIV/AIDS Epidemic in Vermont?

The HIV/AIDS epidemic has affected persons in all sex, age and racial/ethnic groups in Vermont. This effect, however, has not been the same for all groups. In the beginning of the epidemic, the number of cases of HIV infection increased most sharply among white MSM. Although white MSM are still disproportionately affected by the epidemic, recent trends suggest a shift in the HIV/AIDS epidemic toward women, blacks, and high-risk heterosexual adults. To plan for HIV prevention and care and to allocate limited resources as the epidemic continues to change and the number of persons living with HIV continues to grow, it is extremely important to identify those populations most affected and most at risk for HIV infection.

Vermont is classified as a low-incidence state by the CDC with an AIDS case rate in 2003 of 2.6 per 100,000 people, the 47th lowest in the nation (The District of Columbia ranks 1st in the nation with a case rate of 162.4 per 100,000; New York's rate is 34.8). The CDC estimates that at the end of 2003 there were 405,926 people in the United States living with AIDS. Only a small proportion of these individuals (392 individuals, or 0.10% percent) were diagnosed in Vermont. (Vermont and national HIV/AIDS surveillance data is based on the state of residence at diagnosis; this means that Vermont data include people originally diagnosed in Vermont who may no longer be living in the state, and does not include those currently living in Vermont who were originally diagnosed outside of the state). The relatively small number of people living with HIV/AIDS in Vermont, combined with the fact that Vermont has a small and largely rural population, means that the amount of data available on HIV/AIDS in Vermont is limited, especially when compared to the resources and data available in higher incidence states that have larger populations.

The data in the following sections is relevant to the number one priority population, those diagnosed with HIV.

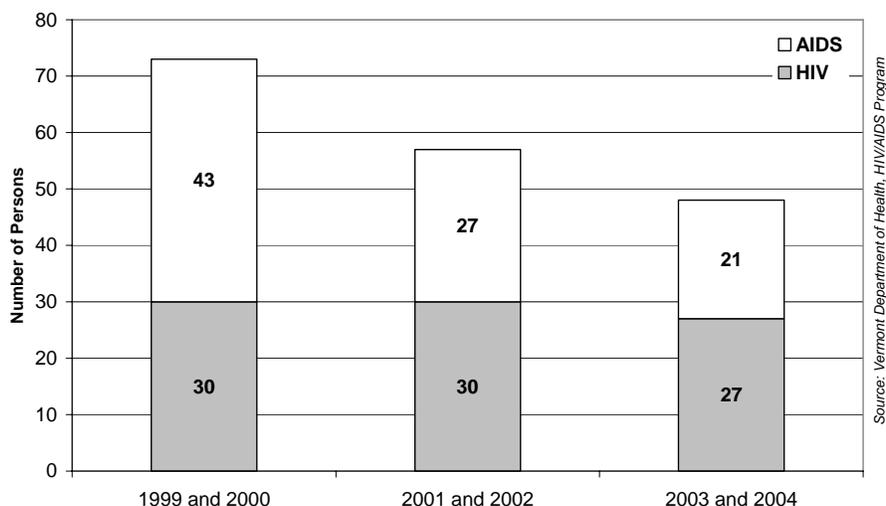
HIGHLIGHTS

- Between 1999 and 2004 the total number of HIV diagnoses in Vermont has remained relatively stable while the number of AIDS diagnoses has decreased
- At the end of 2004 there were 430 known cases of HIV/AIDS in Vermont and an estimated 103 to 116 additional residents who were living with the virus but had not been diagnosed
- 43% of all Vermont residents living with HIV/AIDS reside in Chittenden County
- The non-white population in Vermont is disproportionately affected by HIV
- Since 2001 an increasing number of women have contracted HIV through heterosexual contact
- Between 1999 and 2004 the largest number of HIV cases in Vermont were diagnosed in people 40 through 49 years of age; nationally the largest percentage of HIV diagnoses are in people younger than 25

Overall HIV/AIDS Trends

The number of HIV diagnoses in Vermont has remained relatively stable since 1999 with 30 diagnoses reported in 1999-2000 and 27 in 2003-2004 (see Figure 6). The number of AIDS diagnoses decreased during this same period. In 2003 through 2004 there were 21 AIDS diagnoses reported in Vermont, down from 43 in 1999-2000. Nationally, the number of new HIV cases has remained stable in recent years while the number new AIDS cases decreased until 2001 when it began to increase.

Figure 6. Number of Persons Diagnosed with HIV and Persons Diagnosed with AIDS in Two Year Intervals Vermont 1999-2004



As of December 2004 the total number of Vermont residents known to be living with HIV was 199 (see Table 3). There are three reasons that this can be considered the *minimum* number of persons living in Vermont with HIV that have not developed AIDS: 1) this estimate does not include persons who are infected with HIV but haven't been tested, 2) it does not include those who were tested anonymously and who have not sought medical care, and 3) it does not account for people who first tested positive for HIV outside of Vermont. As of December 2004 there were 231 Vermont residents known to be living with AIDS (see Table 4); bringing the total number of people in Vermont known to be living with HIV/AIDS to 430.

At the end of 2003, an estimated 1 to 1.2 million people in the United States were living with HIV/AIDS, with 24-27% undiagnosed and unaware of their HIV infection.¹ If the 430 known cases of HIV/AIDS in Vermont represent only 73-76% of state residents infected with the virus, then an additional 103 to 116 people may be currently undiagnosed in Vermont. The total number of Vermont residents living with HIV/AIDS may be even higher due to people who resided outside of Vermont at the time of their first positive HIV test and those who had a positive HIV test but were tested anonymously and did not enter care. Conversely, the total number of Vermont residents with HIV may be artificially increased by including people who were Vermont residents at the time of their first positive HIV test but who no longer live in Vermont.

¹ Glynn M, Rhodes P. Estimated HIV prevalence in the United States at the end of 2003. National HIV Prevention Conference; June 2005; Atlanta. Abstract 595.

**Table 3. The Number of Persons in Vermont Living with HIV Per Year
Vermont 2002-2004**

	Persons living with HIV in 2002 ^{1,2}		Persons living with HIV in 2003 ^{1,2}		Persons living with HIV in 2004 ^{1,2}	
	Vermont ³		Vermont ³		Vermont ³	
	number	percent	number	percent	number	percent
Sex						
Male	131	78%	141	78%	158	79%
Female	37	22%	40	22%	41	21%
Total	168	100%	181	100%	199	100%
Age						
<13	≤3 ⁴	<1%	≤3	<1%	≤3	<1%
13-19	5	3%	5	3%	5	3%
20-29	52	31%	53	29%	60	30%
30-39	61	36%	66	36%	70	35%
40-49	44	26%	48	27%	53	27%
50+	5	3%	8	4%	10	5%
Total	168	100%	181	100%	199	100%
Race/Ethnicity						
Hispanic - All Races	4	2%	5	3%	7	4%
Not Hispanic						
White	146	87%	158	87%	171	86%
Black or African American	16	10%	16	9%	18	9%
American Indian/Alaskan Native	≤3	<1%	≤3	<1%	≤3	<1%
Asian	≤3	<1%	≤3	<1%	≤3	<1%
Legacy Asian/Pacific Islander	≤3	<1%	≤3	<1%	≤3	<1%
Native Hawaiian/Pacific Islander	≤3	<1%	≤3	<1%	≤3	<1%
Multi-race	≤3	<1%	≤3	<1%	≤3	<1%
Total	167	100%	181	100%	199	100%
Transmission Category						
Adult/Adolescent						
Men who have sex with men (MSM)	94	56%	104	58%	116	59%
Injection drug use (IDU)	23	14%	21	12%	21	11%
MSM/IDU	7	4%	7	4%	9	5%
Heterosexual	20	12%	22	12%	23	12%
Hemophilia/Coagulation disorder	≤3	<1%	≤3	<1%	≤3	<1%
Receipt of blood transfusion or tissue	≤3	<1%	≤3	<1%	≤3	<1%
Other/risk not reported or identified	19	11%	23	13%	26	13%
Total	167	100%	180	100%	198	100%
Pediatric (<13 years of age)						
Mother with/at risk for HIV infection	≤3		≤3		≤3	
Hemophilia/Coagulation disorder	≤3		≤3		≤3	
Receipt of blood transfusion or tissue	≤3		≤3		≤3	
Other/risk not reported or identified	≤3		≤3		≤3	
Total	1		1		1	

Notes

1. Includes only persons reported with HIV infection who have not developed AIDS.
2. This table includes only those people living with AIDS for each year reported; these counts don't include deceased individuals.
3. Data includes only those people who were residents of Vermont at the time of initial diagnosis.
4. The HIV/AIDS Surveillance Program does not typically release data with values ≤ 3

Source: Vermont Department of Health, HIV/AIDS Program

Table 4. The Number of Persons in Vermont^{1,2} Living with AIDS in Vermont Per Year 1999-2004

	1999		2000		2001		2002		2003		2004	
	n	%	n	%	n	%	n	%	n	%	n	%
Sex												
Male	139	86%	166	85%	182	85%	192	85%	195	84%	193	84%
Female	23	14%	29	15%	33	15%	33	15%	37	16%	38	16%
Total	162	100%	195	100%	215	100%	225	100%	232	100%	231	100%
Age												
<13	≤3 ³	<1%	≤3	<1%	≤3	<1%	≤3	<1%	≤3	<1%	≤3	<1%
13-19	≤3	<1%	≤3	<1%	≤3	<1%	≤3	<1%	4	2%	4	2%
20-29	21	13%	24	12%	27	13%	27	12%	27	12%	25	11%
30-39	82	51%	95	49%	105	49%	107	48%	110	47%	107	46%
40-49	43	27%	54	28%	58	27%	65	29%	67	29%	66	29%
50+	14	9%	18	9%	21	10%	22	10%	23	10%	27	12%
Total	162	100%	195	100%	215	100%	225	100%	232	100%	231	100%
Race/Ethnicity												
Hispanic - All Races	5	3%	7	4%	9	4%	10	8%	11	5%	11	5%
Not Hispanic												
White	138	85%	167	86%	183	85%	190	84%	196	84%	194	84%
Black or African American	17	10%	20	10%	22	10%	24	11%	23	10%	22	10%
American Indian/Alaskan Native	≤3	<1%	≤3	<1%	≤3	<1%	≤3	<1%	≤3	<1%	≤3	<1%
Asian	≤3	<1%	≤3	<1%	≤3	<1%	≤3	<1%	≤3	<1%	≤3	<1%
Legacy Asian/Pacific Islander	≤3	<1%	≤3	<1%	≤3	<1%	≤3	<1%	≤3	<1%	≤3	<1%
Native Hawaiian/Pacific Islander	≤3	<1%	≤3	<1%	≤3	<1%	≤3	<1%	≤3	<1%	≤3	<1%
Multi-race	*	*	*	*	*	*	*	*	≤3	<1%	≤3	<1%
Total	162	100%	195	100%	215	100%	225	100%	232	100%	231	100%
Transmission Category												
Adult/Adolescent												
Men who have sex with men (MSM)	80	50%	97	51%	111	52%	118	53%	123	54%	120	53%
Injection drug use (IDU)	35	22%	38	20%	36	17%	39	18%	39	17%	36	16%
MSM/IDU	11	7%	14	7%	14	7%	14	6%	14	6%	14	6%
Heterosexual	18	11%	22	11%	26	12%	26	12%	28	12%	28	12%
Hemophilia/Coagulation disorder	5	3%	5	3%	6	3%	6	3%	6	3%	6	3%
Receipt of blood transfusion or tissue	≤3	<1%	≤3	<1%	5	2%	5	2%	4	2%	5	2%
Other/risk not reported or identified	10	6%	13	7%	14	7%	14	6%	14	6%	17	8%
Total	161	100%	192	100%	212	100%	222	100%	228	100%	226	100%
Pediatric (<13 years of age)												
Mother with/at risk for HIV infection	≤3		≤3		≤3		≤3		≤3		≤3	
Hemophilia/Coagulation disorder	≤3		≤3		≤3		≤3		≤3		≤3	
Receipt of blood transfusion or tissue	≤3		≤3		≤3		≤3		≤3		≤3	
Other/risk not reported or identified	≤3		≤3		≤3		≤3		≤3		≤3	
Total	1		3		3		3		4		5	

1. This table includes only those people living with AIDS for each year reported; these counts do not include deceased individuals.

2. Data includes only those people who were residents of Vermont at the time of initial diagnosis.

3. The HIV/AIDS Surveillance Program does not typically release data with values ≤3.

* Prior to 2003 "multi-race" was not a category, therefore there is no data in this category prior to 2003

Source: Vermont Department of Health, HIV/AIDS Program

Regional Differences in HIV/AIDS: At the end of 2004 only Chittenden County had more than 100 people with HIV/AIDS per 100,000 residents (see Figure 5). Chittenden County also has 24% of the state's total population, 27% of the Hispanic population, 42% of the non-white population, and 43% of the people known to be living with HIV/AIDS. Nationally, the majority of AIDS cases (82%) have been concentrated in large metropolitan areas.¹

The closest metropolitan area to Chittenden County (where nearly half of Vermont's HIV positive individuals live) is Montreal Canada. Health Canada reports that in the past five years Canada has seen a 20% rise in positive HIV reports, due in part to increased testing of immigrants.² It is estimated that 30% of HIV infections in Canada are currently undiagnosed. Trends in Canadian HIV and AIDS diagnoses show that an increasing number of women are being diagnosed with both HIV and AIDS, especially young women between the ages of 15-29. There have also been changes in the mode of transmission of HIV. Prior to 1994 MSM in Canada represented more than 75% of AIDS diagnoses but in 2004 they accounted for 36%; prior to 1994 just over 10% of all AIDS diagnoses were accounted for by heterosexual sex, but this number rose to 38% in 2004. There has been an increase in recent years in AIDS diagnoses among Black Canadians and Aboriginal persons.

HIV/AIDS by Race/Ethnicity and Sex

An estimated 40,000 people nationwide become infected with HIV each year.³ On average, 30 HIV or AIDS diagnoses occur in Vermont each year (based on incidence data for 1999-2004). Nationally, African Americans and women are disproportionately affected by HIV/AIDS.

Race/Ethnicity: The HIV/AIDS epidemic has been called a health crisis for African Americans because only 13% of the total U.S. population is African American, but African Americans make up 50% of all new HIV diagnoses and 49% of all AIDS diagnoses.⁴ The leading cause of HIV infection among African American men was sexual contact with other men (the second most common cause was heterosexual contact); the leading cause of infection among African American women was heterosexual contact (the second most common cause was injection drug use). Studies show that a significant number of African American men who have sex with men identify as heterosexual, and this has been cited as one possible reason that heterosexual transmission is the number one cause of infection among African American women; because they are unaware of their partner's HIV risk due to sexual contact with other men.⁵

Only 3% of Vermont's total population is non-white, but almost one-fourth (23%) of all Vermonters diagnosed with HIV/AIDS in 2003-2004 were non-white. (At the end of 2004, 15% of all HIV/AIDS cases ever reported in Vermont were among non-whites). Thus the virus disproportionately affects the non-white populations in Vermont as it does nationally. Due to the small number of individuals with HIV or AIDS (see Tables 3 and 4) in Vermont it is not possible

¹ www.kff.org/hiv/aids/upload/Fact-Sheet-The-HIV-AIDS-Epidemic-in-the-United-States-2005-Update.pdf accessed November 9, 2005

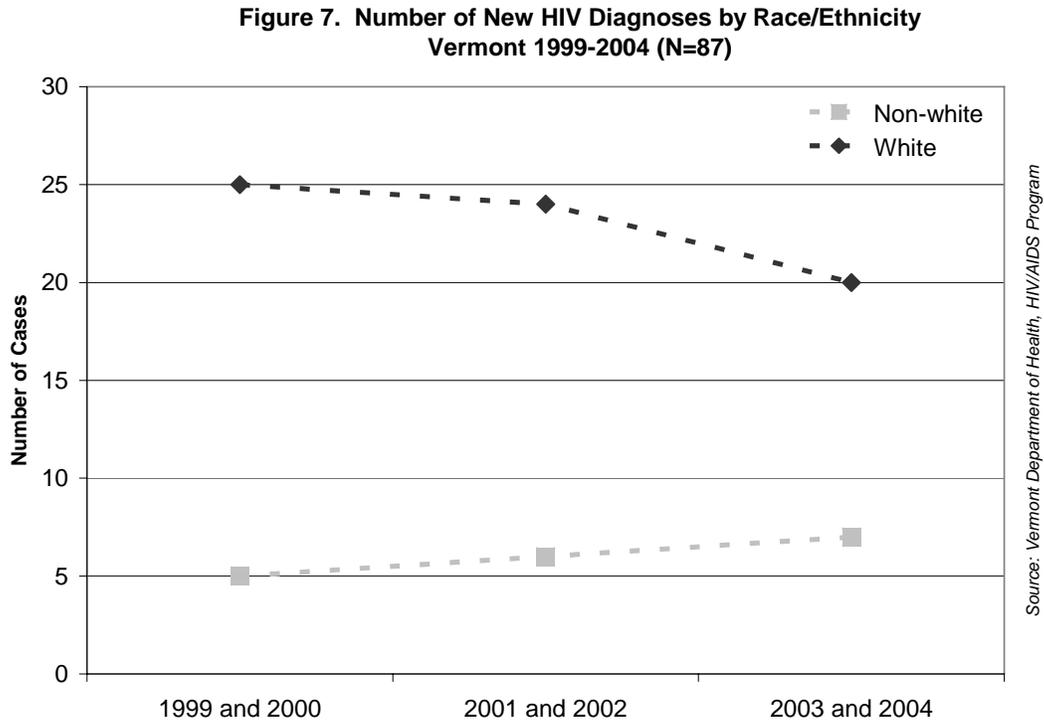
² www.hc-sc.gc.ca/dc-ma/aids-sida/index_e.html Epidemiology Updates and Surveillance reports accessed November 4, 2005; data referenced here is from the Surveillance Report to December 31, 2004

³ Glynn M, Rhodes P. Estimated HIV prevalence in the United States at the end of 2003. National HIV Prevention Conference; June 2005; Atlanta. Abstract 595.

⁴ CDC. *HIV/AIDS Surveillance Report* (2003). Vol. 15. Atlanta: U.S. Department of Health and Human Services p. 1-46.

⁵ www.cdc.gov/hiv/pubs/facts/afam.htm accessed November 9, 2005

to look at trends within specific races or ethnicities. However, the number of new HIV diagnoses in Vermont has declined since 1999 for white residents but has increased among non-whites (see Figure 7).

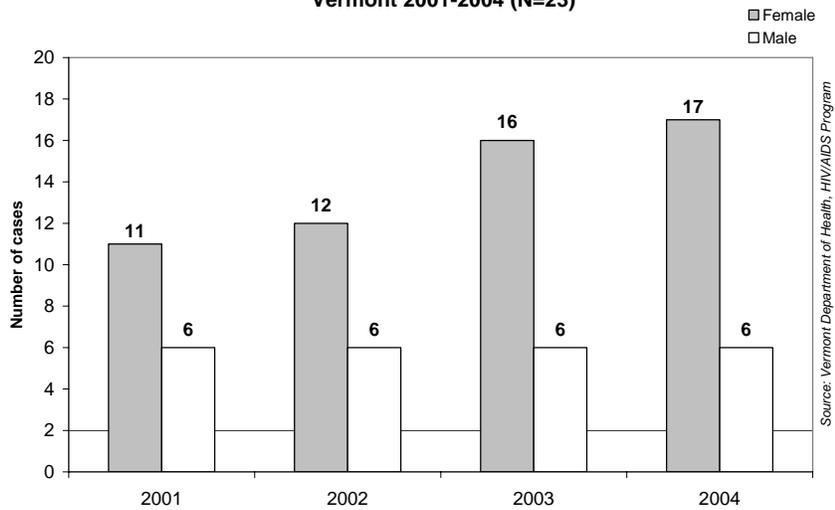


Sex: Early in the epidemic few women were diagnosed with HIV or AIDS, but this is no longer the case. In 2003 the CDC described HIV/AIDS as a growing and persistent health threat to women, especially young women and women of color.¹ Although the number of men diagnosed with HIV/AIDS in the U.S. is greater than the number of women with the virus (73% of those diagnosed with HIV in 2003 were male, 27% were female) the number of women infected has increased considerably over the course of the epidemic. From 1999 through 2003 the annual number of estimated AIDS diagnoses in the U.S. increased 15% among women and only 1% among men. Heterosexual contact accounted for almost 80% of HIV infections among U.S. women in 2003, while MSM accounted for the greatest proportion (51%) of infections among men (only 26% of men were infected via heterosexual contact). A woman is twice as likely as a man to contract HIV during vaginal intercourse.

The number of new HIV cases among men and women in Vermont has remained relatively stable since 1999 with an average of 79% of new cases (n = 11) among men and 21% among women (n = 3). However, an increasing number of HIV infections due to heterosexual contact is being seen among women in Vermont (see Figure 8).

¹ www.cdc.gov/hiv/pubs/facts/women.htm accessed November 9, 2005

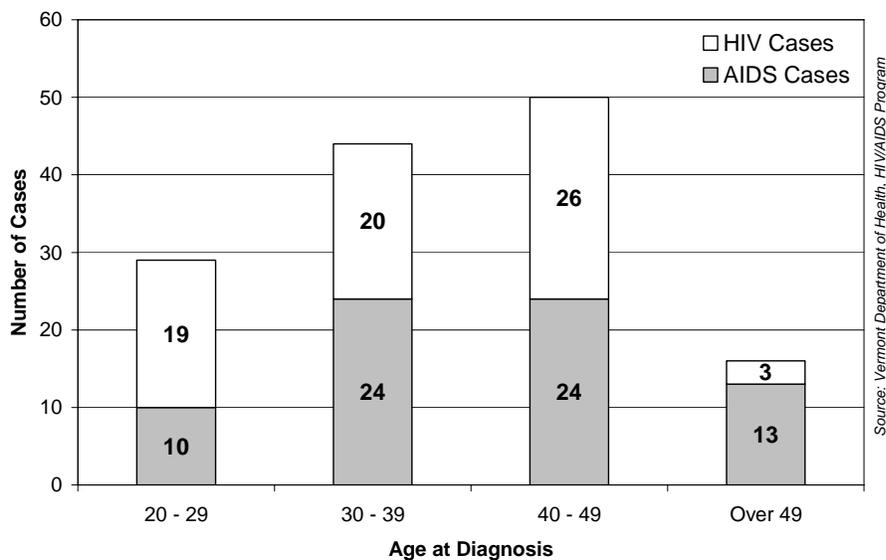
Figure 8. Cumulative HIV Cases for Males and Females with Heterosexual Contact Reported as the Mode of Exposure Vermont 2001-2004 (N=23)



HIV/AIDS by Age Group

Nationally, young adults and teens continue to be at increased risk for contracting HIV. At least half of all new HIV infections are estimated to be among people younger than 25, and most of these young people are infected through sex.¹ Among youth, teen girls and minorities have been particularly affected. In Vermont, the number of new HIV and AIDS cases for the years 1999-2004 show that the largest number of new cases were among those in the 40-49 year old age group (see Figure 9). Only 5% of all new HIV diagnoses in Vermont were among people 19 or younger.

Figure 9. Number of New HIV and AIDS Cases by Age of Diagnosis, Vermont 1999-2004



¹ www.kff.org/hiv/aids/upload/Fact-Sheet-The-HIV-AIDS-Epidemic-in-the-United-States-2005-Update.pdf accessed November 9, 2005

HIV/AIDS by Transmission Category

HIV transmission patterns have shifted over time with heterosexual transmission accounting for a growing proportion of HIV/AIDS cases. As of 2003 MSM continued to account for the largest proportion (63%) of HIV transmission among men nationwide.¹ Heterosexual contact accounted for 17% of the infections among men, IDU accounted for 14% and MSM/IDU accounted for 5%. Among women, heterosexual contact accounted for 79% of HIV infections while IDU accounted for 19%. These national trends in exposure categories for men and women are also seen in Vermont. Table 5 compares the number of new HIV diagnoses in the U.S. and Vermont for the year 2003.

Table 5. Number of HIV and AIDS Diagnoses Made in Calendar Year 2003 for Adults and Adolescents: Comparison of U.S. and Vermont

	<u>United States¹</u>		<u>Vermont</u>	
	<u>Males</u>	<u>Females</u>	<u>Males</u>	<u>Females</u>
Total Diagnosed	N = 23,153	N = 8,733	N = 22	N = 10
	73%	27%	69%	31%
<i>Transmission Category</i>				
MSM	63%	-	86%	-
Heterosexual Contact	17%	79%	0%	40%
IDU	14%	19%	5%	20%
MSM/IDU	5%	-	0%	-
Other/Not Reported	2%	2%	9%	40%
<i>Race/Ethnicity²</i>	<u>Males and Females</u>		<u>Males and Females</u>	
Total Diagnosed	N = 32,048		N = 32	
African American	50%		6%	
White	32%		88%	
Hispanic	15%		9%	
Asian/Pacific Islander	<1%		3%	
American Indian/Alaskan	<1%		0%	
Native				
Unknown	-		3%	

¹ *HIV/AIDS Surveillance Report*. Vol. 15 (2003 CDC publication; based on 33 areas with long-term, confidential name-based reporting)

² 25% of the entire U.S. population is non-white; 3% of Vermont's entire population is non-white

It should be noted that the number of individuals diagnosed with HIV each year in Vermont is relatively small. For example, 32 people were diagnosed in Vermont in 2003, compared with nearly 32,000 nationally (see Table 5). With such low numbers of people diagnosed each year in Vermont, small differences in the number of people in each category may appear as large differences in the percentage of people per category. Despite this limitation, Table 5 shows that the distribution of HIV and AIDS diagnoses made in Vermont in 2003 was similar to that seen nationally in 2003 for males and females. (The differences seen in Table 5 for race/ethnicity when comparing the U.S. and Vermont are more difficult to interpret due to both the low numbers diagnosed with HIV in Vermont and the fact that a greater proportion of Vermont's

¹ www.cdc.gov/hiv/PUBS/Facts/At-A-Glance.htm accessed November 9, 2005

population is white). It may be more accurate to look at the total number of people diagnosed with HIV/AIDS in Vermont between 1999 and 2004. These cumulative numbers show that the largest percentage of men contracted the virus via sexual contact with other men (Figure 10), and women contracted it via heterosexual contact (Figure 11); IDU was the second most prevalent mode of exposure for both men and women.

Figure 10. Percent of Cumulative Cases in Each Transmission Category for Women with HIV or AIDS in Vermont 1999-2004 (N=100)

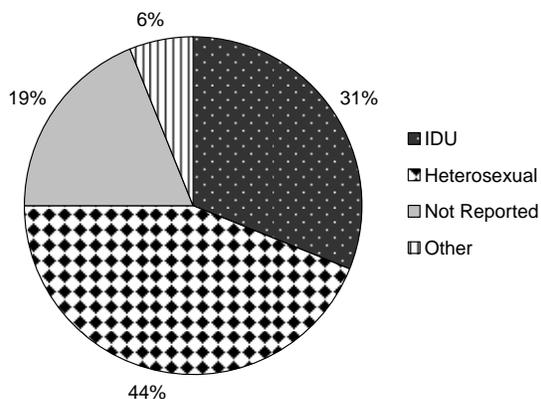
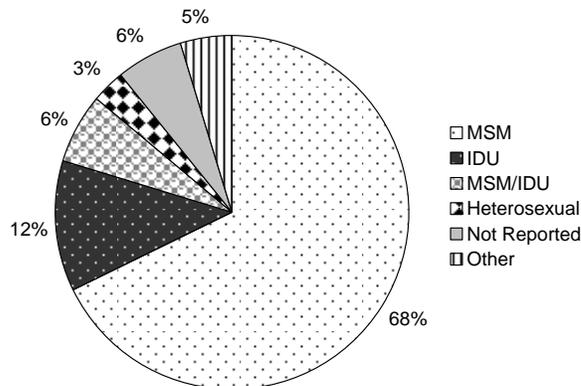


Figure 11. Percent of Cumulative Cases in Each Transmission Category for Men with HIV or AIDS in Vermont 1999-2004 (N=542)



Source: Vermont Department of Health, HIV/AIDS Program

HIV/AIDS Related Stigma in Vermont

In 2004 - 2005 sixty-six HIV positive individuals participated in a Person Environment Zone project based at the University of Vermont.¹ The majority of these participants were Vermont residents and they shared their experiences of being HIV positive. Participants ranged in age from 18-65 years old (mean age was 45 years) and the majority of participants (83%) were white. Forty-seven percent identified as exclusively homosexual, 41% as exclusively heterosexual, and 12% as bisexual. Less than half of the participants (48%) reported being sexually active within the last 90 days.

When asked about their perceptions of stigma associated with having HIV/AIDS the majority of participants (64%) said that they hid their illness to avoid being hurt and 64% said they managed conversations to prevent other people from discovering that they were HIV positive. Most participants (79%) said that telling someone their HIV status was risky and 76% felt they might be judged on the basis of their HIV status. Seventy-seven percent felt that HIV negative individuals have a difficult time treating them as equals. Despite these fears and efforts to avoid disclosure, the majority of participants (67%) said that when they did disclose their HIV status they were not treated unfairly, nor did people avoid them because they were HIV positive (64%), nor were they turned away or uninvited because of their status (74%). The majority of participants (52%) also agreed that stereotypes about people with HIV/AIDS had not affected them personally and 53% were not worried that their behaviors would be viewed as stereotypical

¹ Nair, V. (2005). The Effects of Disease Stage and HIV/AIDS Stigma Perception on Behaviors that Risk the Transmission of HIV. University of Vermont dissertation.

of someone with HIV/AIDS. Overall, participants endorsed moderate levels of HIV/AIDS related stigma.

An association between disease stage and perceived discrimination and stigma was found among these 66 participants. As disease stage became more severe participants endorsed fewer instances of discrimination, experienced less fear of discovery, reported fewer events of HIV stigma and were less conscious of their HIV status on a daily basis. Advanced disease stage was also associated with more condom use and less anal sex.

HIV/AIDS Mortality

Since the introduction of Highly Active Anti-Retroviral Therapy (HAART) in 1996, the progression from HIV to AIDS, and from AIDS to death, has slowed considerably for many persons living with HIV. In addition to the decline in AIDS deaths, the overall (cumulative) number of AIDS cases has also declined, leading to changes in the meaning of surveillance data. In the past, AIDS incidence data could be used to estimate trends in HIV transmission. In contrast, AIDS incidence data now provide an estimate of how many persons living with HIV are not accessing care, receiving treatment, or for whom treatment has not been effective. While advances in HIV/AIDS treatment have substantially reduced AIDS-related illness and death, these treatments are not a cure and do not benefit all people. An estimated 42% to 59% of people in the U.S. that are living with HIV/AIDS do not receive regular HIV care.¹

HIV/AIDS Related Deaths

Through the end of 2004 there were an estimated 529,113 deaths among people with AIDS in the U.S.² The total number of AIDS-related deaths in the U.S. in 2002 was 14,095; eight of these deaths occurred among Vermont residents. (It should be noted, however, that the number of deaths with HIV/AIDS as the underlying or contributing cause may be underreported because the physician completing the certificate may be unaware of the deceased individual's HIV positive status).

Nationally, there was a steep decline in the number of AIDS-related deaths between 1996 and 1998. This decline was due to the introduction of more effective treatments (i.e., HAART) and since that time the number of AIDS-related deaths in the U.S. have remained stable or continued to decline. A slightly different pattern is seen in new AIDS diagnoses nationwide. The total number of new diagnoses peaked around 1992-1993 and then declined until 2001 when the number of new AIDS cases began to increase; between 2003 and 2004 the number of new AIDS cases increased by 2%.

In Vermont, the steep decline in AIDS-related deaths began in 1995, which is a bit earlier than the national decline in AIDS-related deaths. The number of AIDS-related deaths in Vermont peaked at 36 deaths in 1994 and has declined to 9 deaths in 2003. The number of new AIDS cases in Vermont has continuously declined since 1999.

For the 7-year period from 1997 to 2003 in Vermont, the death rate for men who died of a cause related to HIV disease was roughly five times higher than for women (Table 6). The death rate among non-whites was almost three times greater than the rate among whites. The

¹ Kaiser Family Foundation *HIV/AIDS Policy Fact Sheet*, November 2005. www.kff.org/hiv/aids/upload/3029-06.pdf accessed December 1, 2005

² Kaiser Family Foundation *HIV/AIDS Policy Fact Sheet*, November 2005. www.kff.org/hiv/aids/upload/3029-06.pdf accessed December 1, 2005

HIV-related death rate among Vermonters ages 35 to 44 years old was at least double the rate for other age groups. Between 1997 and 2003, HIV was the sixth leading underlying cause of death in the 25 to 44 year age group (Table 7).

Table 6. Deaths with HIV as Underlying or Contributing Cause, Vermont, 1997 - 2003

Sex	<u>Number</u>	<u>%</u>	<u>Rate (per 100,000)</u>
Male	52	87%	2.5
Female	8	13%	0.4
Race			
White	55	92%	1.3
Non-White	5	8%	3.6
Age group			
25-34	8	13%	1.5
35-44	33	55%	4.7
45-54	15	25%	2.3
55-64	<3	5%	0.7

Source: Vermont Department of Health, Vital Statistics

Table 7. Ranking of Eight Leading Underlying Causes of Death of Persons Ages 25-44 Years, Vermont, 1997 - 2003

<u>Rank</u>	<u>Cause of Death</u>	<u>No. Deaths</u>	<u>% of all Vermont resident deaths</u>
1	Accidents (unintentional injuries)	358	1.0
2	Malignant neoplasms	312	0.9
3	Suicide	192	0.5
4	Diseases of Heart	178	0.5
5	Cerebrovascular disease	40	0.1
6	HIV disease	35	0.1
6	Chronic liver disease and cirrhosis	24	0.1

Source: Vermont Department of Health, Vital Statistics

Comparing the characteristics of persons living with HIV/AIDS to deaths among persons with HIV/AIDS can provide information about the differences or disparities among population groups. For example, if the proportion of persons dying with HIV/AIDS in a particular group is higher than the proportion living with HIV/AIDS in the same group, then this may indicate a lack of access to health care or lack of effective treatment in that group. Comparing demographics among people with HIV/AIDS who died between 1997 and 2003 to those living with HIV/AIDS at the end of 2003, it does not appear that there are differences among those living and dying with the disease in terms of sex or race/ethnicity (see Table 8). There do appear to be differences in terms of age. For the 20 to 39 year old age group there is a higher percentage

of people living with HIV than dying with HIV, but the opposite is true for those ages 40 or older; approximately 15% more people 40 or older are dying with HIV than are living with it.

Table 8. Characteristics of Vermont Residents with HIV/AIDS who Died During 1997 - 2003 and Persons Living with HIV/AIDS at the End of 2003

	Deaths among persons with HIV/AIDS, 1997 - 2003		Persons living with HIV/AIDS, 2003	
	<u>Number</u>	<u>%</u>	<u>Number</u>	<u>%</u>
Sex				
Male	52	87	310	81
Female	8	13	75	19
Race/Ethnicity				
White, non-Hispanic	53	88	332	86
Non-White, non-Hispanic	5	8	41	11
Hispanic	≤3	3	14	4
Age group				
<13	≤3	<1	≤3	1
13-19	≤3	<1	9	2
20-29	1	2	76	20
30-39	19	32	160	42
40-49	27	45	110	29
50+	13	22	27	7

Source: Vermont Department of Health, Vital Statistics; Vermont Department of Health, Health Surveillance

Question

3

What are the Indicators of HIV/AIDS Infection Risk in Vermont?

The previous section dealt with the highest priority population in Vermont, those individuals already diagnosed with HIV. The following section focuses on the high-risk behaviors that define other priority populations in Vermont by defining three groups most likely to risk the transmission of HIV.

The persons most likely to become infected with HIV are those who engage in high-risk behaviors and who live in communities where HIV prevalence is high. To help community planning groups understand the differing risks for HIV infection in Vermont, this section examines the trends and characteristics of populations that practice high-risk behaviors. The primary focus of this section is 3 high-risk populations: MSM, IDUs, and heterosexual adults identified as high risk.

The preceding section addressed the level of HIV infection in various groups affected by HIV. This section examines direct and indirect measures of risk behavior in the groups most at risk of acquiring HIV infection. Direct measures of risk provide information about risk behavior that is directly associated with HIV transmission. Indirect measures do not directly describe HIV risk behaviors; rather, they are indicators of possible HIV risk that may need further investigation. For example, an increase in STD or teen pregnancy rates does not directly indicate that HIV exposure is increasing but may indicate an increase in unprotected sex.

It should be noted that not all high-risk populations are represented in the following section because Vermont data are not available to address these populations.

HIGHLIGHTS

- National data suggests that risky behavior among MSM is on the rise; data in Vermont suggests that more than half of all young MSM had four or more sexual partners in their lifetime and more than 66% of young MSM did not use a condom during their last sexual experience
- Reported heroin use in Vermont increased between 1999 and 2004; in 2002 more younger people (19 – 24) reported heroin use than older residents (30 to 49 year olds)
- Treatment admissions for methamphetamine have increased every year in Vermont since 2001
- More males than females in the general population in Vermont report having two or more sex partners in the past year
- Vermont's teen birth rate is among the lowest in the nation
- Vermont's rates of Chlamydia, gonorrhea and syphilis are among the lowest in the nation
- Only 3% of the general Vermont population report engaging in behaviors that put them at risk for contracting HIV
- Less than half (40%) of a random sample of Vermonters reported having been tested for HIV
- The total number of HIV tests conducted each year in Vermont is increasing
- Testing has increased among heterosexuals reporting low risk for HIV while the percentage of tests has decreased among people a sex partner at risk of contracting HIV

Men Who Have Sex with Men (MSM)

National Trends for MSM: Nationally, research suggests that some MSM are less concerned now than in the past about becoming infected and may be inclined to take more risks.¹ This trend is evident in reported increases in sexually transmitted diseases among MSM in several large US cities and elsewhere. Data from 39 areas with confidential HIV reporting (this does not include Vermont) indicate that MSM still represent the largest proportion of new HIV cases for which HIV risk is known (32%), compared with IDUs (8%), men who have sex with women (6%), and MSM who inject drugs (3%).

Direct Measures of Risk Behaviors

The following measures of risk behavior are available in Vermont to provide important information on factors that may affect risk for acquiring or transmitting HIV infection among MSM:

- *number of sex partners*
- *frequency of condom use or unprotected*
- *substance use*

Direct measures of risk behavior for MSM are currently available for Vermont from two sources. One is the Youth Risk Behavior Survey (YRBS), which is a self-administered questionnaire given to 8th through 12th grade students statewide every other year (see Appendix A for additional information about this survey). The YRBS provides information on the number of sex partners, frequency of condom use, and substance use for young MSM in Vermont who attended a school where the YRBS surveys were distributed and who chose to fill out the survey. “Young MSM” refers to males in 8th through 12th grade who responded to the YRBS and who reported ever having had sex with males. The second source of information is the HIV Testing Survey (HITS) that was conducted in 2001. A total of 59 MSM recruited from gay bars participated in this survey (see appendix A for more information about HITS).

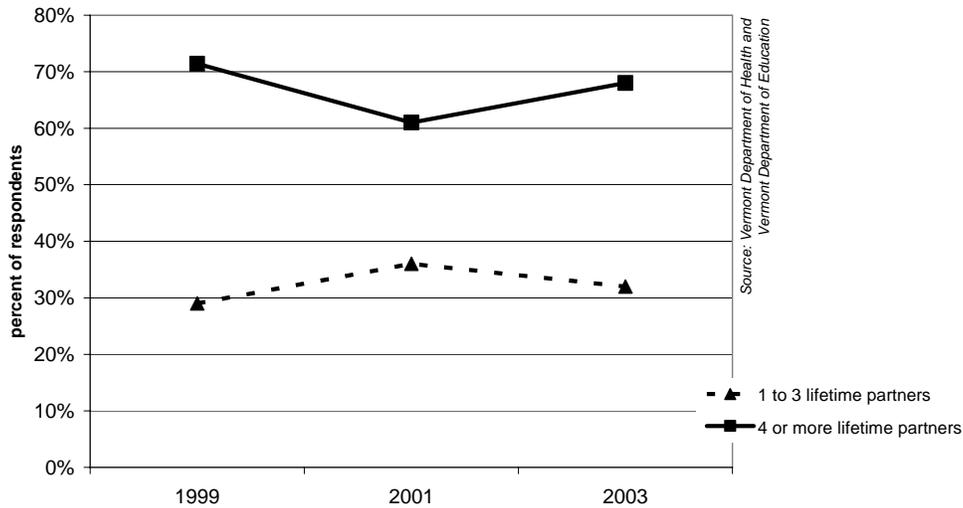
Number of Sex Partners

The HITS survey found that most (62%) men interviewed had four or more sexual partners in the past 12 months. Seventy-eight percent (78%) of men interviewed in gay bars reported having at least one non-primary sexual partner in the past 12 months. Nearly half (46%, data not shown) of the youngest age group of MSM interviewed (18-24 years) had only one same-sex partner. By comparison, two-thirds (67%) of the older populations reported four or more partners. No clear trend was determined with increasing age, and results may be a factor of small sample size in some groups.

Young MSM are also likely to report multiple sex partners. Although there is not a clear trend across time (see Figure 12), between 1999-2003 an average of 32% of young MSM reported having one to three sexual partners, while 68% reported having four or more sex partners during their lifetime.

¹ www.cdc.gov/hiv/HIV_3rdDecade/section4.htm accessed November 16, 2005

**Figure 12. Percent of Young MSM Reporting the Number of Sexual Partners They've had During Their Lifetime (*weighted N = 1034*)
Vermont YRBS 1999, 2001, 2003**

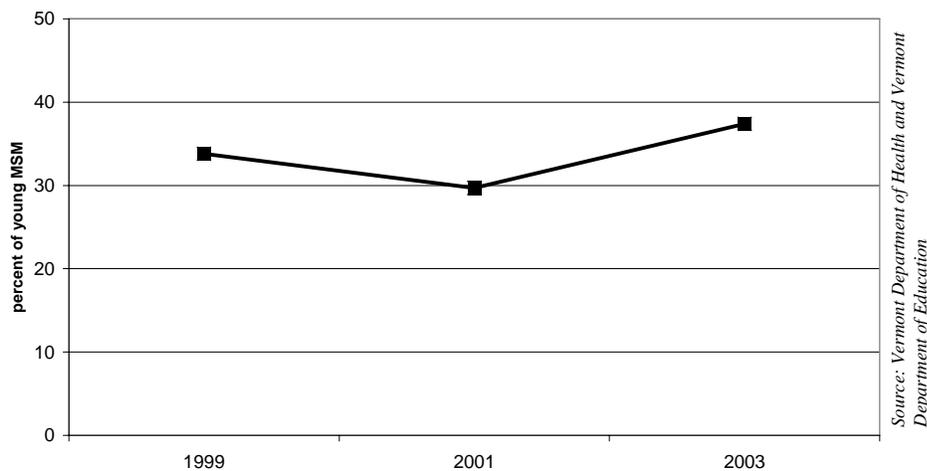


Condom Use or Unprotected Sex

The Vermont HITS study described a high proportion of unprotected sex. HITS found that of MSM who reported having sex with a primary partner 90% reported not always using a condom during receptive anal sex and 76% reported not always using a condom during insertive anal sex. A greater percentage of MSM used condoms with non-primary partners; slightly more than half of men surveyed always used condoms with their non-primary sex partners (60% during receptive anal sex; 54% during insertive anal sex). However, 4% reported never using condoms. This percentage could be an inaccurate representation, however, due to a small sample size.

The percent of young MSM who reported using a condom at their last sexual experience has remained in the 30 to 37% range since 1999 (see Figure 13). This means that on average 66% of young MSM reported not using a condom at their last sexual encounter.

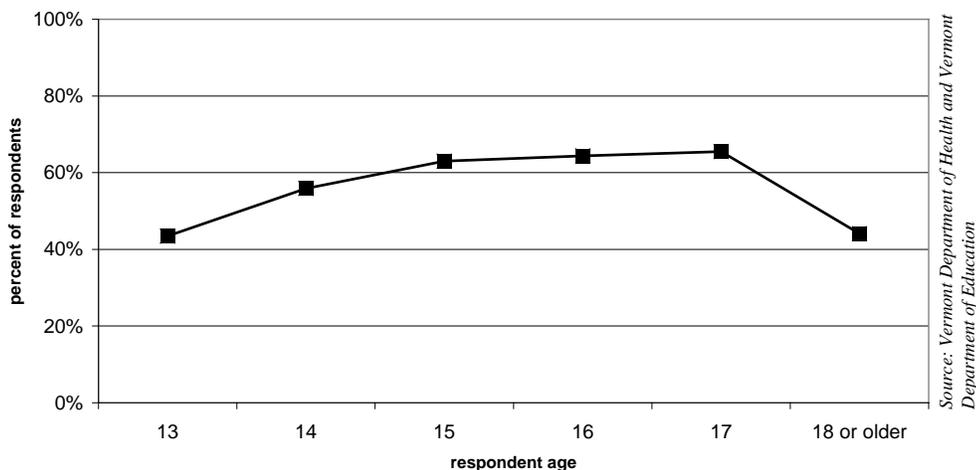
**Figure 13. Percent of Young MSM Who Used a Condom at Last Sexual Experience (*N = 300*)
Vermont YRBS 1999, 2001, 2003**



Substance Use

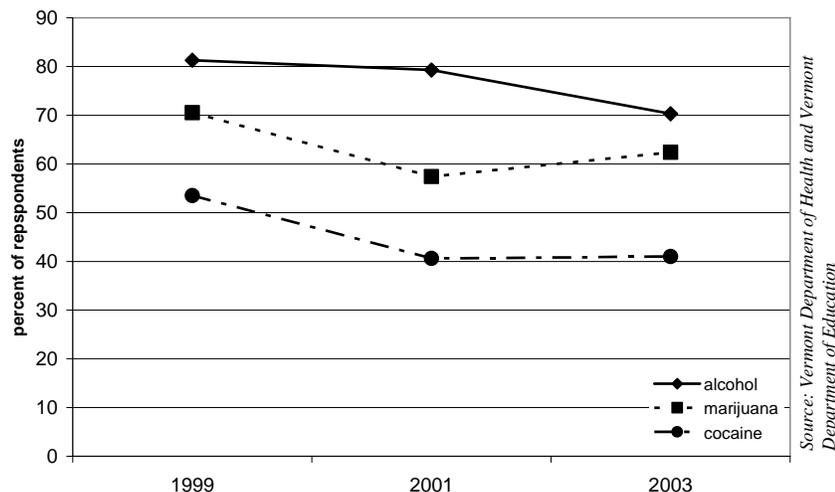
The only substance use information for MSM currently available in Vermont is YRBS data from young MSM. For the years 1999 – 2003 the average percentage of young MSM who drank and/or used drugs at their most recent sexual experience was 56%. Thus 44% of young MSM did not report alcohol or drug use the last time they had sex. The proportion of young MSM using drugs and/or alcohol at their most recent sexual encounter varied according to age (see Figure 14). The percentage of young MSM who used drugs or alcohol at their most recent sexual experience rose from a low of 34% at age 13 to 66% at age 17 and then dropped back to 44% for those 18 and older.

Figure 14. Percent of Young MSM of Within Each Age Group Who Drank and/or Used Drugs at Last Sexual Experience (weighted N = 973) Vermont YRBS for the Years 1999, 2001, 2003 combined



The proportion of young MSM who have ever used heroin is 42%. Heroin use is a direct measure of HIV transmission risk because heroin use can involve injecting the drug, and possibly needle sharing. The percent of young MSM who had used alcohol ($M = 77\%$), marijuana ($M = 63\%$), or cocaine ($M = 45\%$) in the past 30 days declined slightly from 1999 – 2003 (see Figure 15).

Figure 15. Percent of Young MSM Who Used Alcohol, Marijuana or Cocaine in the Past 30 Days Vermont YRBS 1999, 2001, 2003 (N = 300)



Indirect Measures of Risk Behaviors

Sexually Transmitted Disease (STD) surveillance data may help identify the occurrence of high-risk behavior among MSM. One indirect measure that can indicate increasing rates of HIV infections among MSM is the male/female ratio of gonorrhea or syphilis in a particular area; if the ratio is greater than one, this may indicate STD transmission among MSM.

Nationally, the gonorrhea rate has reached a historic low with 113.5 cases per 100,000 U.S. residents; this is a 76% decline since reporting began in 1941.¹ The male/female ratio for gonorrhea in the U.S. for 2004 was 0.91; in Vermont it was 0.62, which is not indicative of STD transmission among MSM. It should be noted that the number of gonorrhea cases in Vermont is relatively low with fewer than 100 cases per year for the entire state, although the number of cases has risen almost continuously since 1996 when 47 people were diagnosed to 2004 when there were 86 cases in Vermont.

The number of cases of syphilis has been increasing nationwide since 2000.² The rate of primary and secondary syphilis among males rose 81 percent between 2000 and 2004 (from 2.6 to 4.7). Increasing cases of syphilis among MSM are believed to be largely responsible for the overall increases in the national syphilis rate observed since 2000. The male-to-female ratio for syphilis has risen steadily between 2000 and 2004 (from 1.5 to 5.9), suggesting increased syphilis transmission among MSM. This increase occurred among all racial and ethnic groups. The CDC estimates that MSM comprised 64% of syphilis cases in 2004, up from 5% in 1999. Large cities have the greatest number of syphilis cases, and this includes Boston, which has the 13th highest syphilis rate in the nation. Since 1996 only 17 cases of syphilis have been reported in Vermont with 65% of these syphilis infections among males and 35% among females. In 2003 and 2004 only two cases of syphilis were reported. The small number of cases makes it difficult to estimate the male/female ratio of syphilis for Vermont.

Injection Drug Users (IDU)

Nationally, HIV diagnoses seem to be declining among IDUs, with a 48% decrease in new HIV diagnoses from 1994 through 2001 in the 25 states with long-standing HIV reporting.³ (The only age group of IDUs in which new HIV diagnoses have not decreased, or leveled off, is age 50 and older). However, injection drug use itself may be on the rise, especially in suburban and rural areas.

Direct Measures of Risk Behaviors

Needle sharing increases the chances of acquiring or transmitting HIV infection. Estimates of heroin use (which is usually, though not always, injected) provide the next best, currently available estimate of injection drug use in the state. The following measures of risk behavior are available in Vermont:

- *heroin use*
- *needle or drug paraphernalia sharing*

¹ Trend in Reportable STDs 2004, CDC, www.cdc.gov/std/stats/trends2004.htm accessed November 16, 2005

² Trend in Reportable STDs 2004, CDC, www.cdc.gov/std/stats/trends2004.htm accessed November 16, 2005

³ www.cdc.gov/hiv/HIV_3rdDecade/section4.htm#IDU accessed November 16, 2005

Data for the following two sections come from five sources: 1) The (2001) HITS surveys provide the only currently available source of information on needle sharing in Vermont. 2) The Alcohol and Drug Abuse Program (ADAP) within the Vermont Department of Health collects substance abuse treatment admissions data from facilities that receive state funding. 3) Data from the Vermont Center for Justice Research (VCJR) also provides information on drug use in Vermont. This data is charge-based. 4) The National Survey of Drug Use and Health (NSDUH) is a survey of non-institutionalized individuals age 12 or older. 5) The YRBS is a survey of 8th – 12th graders in Vermont. For the strengths and limitations of each data set please see Appendix A.

Heroin Use

The percentage of U.S. residents 12 or older reporting heroin use at some point in their lives fell from 1.6% in 2002 to 1.3% in 2004.¹ While the prevalence of heroin use among Vermonters 12 or older is not available, it is known that 3% of Vermont youth in 8th – 12th grades reported heroin use at some point in their lives, and this percentage has remained unchanged since 1999.² In Vermont, as in most areas of the U.S., rates of heroin use are lower than rates of use for other drugs (e.g., cocaine, marijuana, methamphetamine).³ However, certain urban areas report higher rates of heroin use and increases in heroin use in the past three years. Two of these areas, Boston and New York City, are located in the northeast. Injection continues to be the primary route of administration in many areas.

Heroin users are typically older than users of most other drugs. Between 1999 and 2001 in Vermont, heroin use was most prevalent among 30 – 49 year olds, but this changed in 2002 when 19 – 24 year olds became the age group most likely to report heroin use. The number of charges filed in district court for the possession or sale of heroin in Vermont have increased since 1999 (see Figure 17) and the number of treatment admissions at state-funded facilities for heroin and other opiates have increased from 10% of all admissions in 2000 to 20% in 2004 (see Figure 18). Among U.S. youth, males are more likely to have used heroin (2.3 – 8.8%) than females (0.4 – 2.6%), but the opposite trend is seen in Vermont where more than twice as many females 19 or younger (n = 29) than males (n = 10) were admitted for heroin-related treatment admissions in 2004. However, when 8th to 12th graders in Vermont were asked if they had ever injected an illegal drug, more males (2.9%) than females (1.6%) reported that they had.

Needle or Drug Paraphernalia Sharing

Among IDUs surveyed through the 2001 Vermont HITS, 39% reported sharing needles in the past 12 months. Thirty-four percent (34%) reported using the same equipment (e.g., cooker, cotton, rinse water) as other people either sometimes or always while injecting drugs. While 29% reported receiving a bleach-kit in the past 12 months, only 13% reported always using bleach (data not shown). Thirteen percent (13%) also reported using another cleaning product (e.g., water, rubbing alcohol or peroxide) to clean previously used needles.

Needle sharing behavior appears to be lowest among Hispanic IDUs (20%) who responded to the HITS survey while equal proportions of black and white Vermont IDUs (43% of each population) reporting having shared needles in the past 12 months. No relationship between age of respondent and reported needle sharing activity was demonstrated in the Vermont HITS study. However, the younger respondents (aged 18-24 years) were more likely to report that they did

¹ <http://oas.samhsa.gov/nsduh/2k4nsduh/2k4overview/2k4overview.htm> accessed November 18, 2005

² VT ADAP

³ www.drugabuse.gov/PDF/CEWG/Vol1_604.pdf accessed November 18, 2005

not know if they had shared a needle in the past 12 months. No clear association was seen among needle sharing and different levels of education completed and needle sharing, employment status or gender. It should be noted that these results are limited by the small sample sizes for each group.

Indirect Measures of Risk Behaviors

Drug use can augment the risk of HIV transmission by increasing the likelihood that people will engage in risky behaviors (e.g., unprotected sex, needle sharing). Vermont was one of ten states in the U.S. reporting the highest levels of illicit drug use in the past month (10 – 12% of residents) on the 2002 – 2003 NSDUH (see Table 9).

Table 9. Percent of Persons 12 or Older in Vermont and in the U.S. Reporting Drug Use 2002-2003

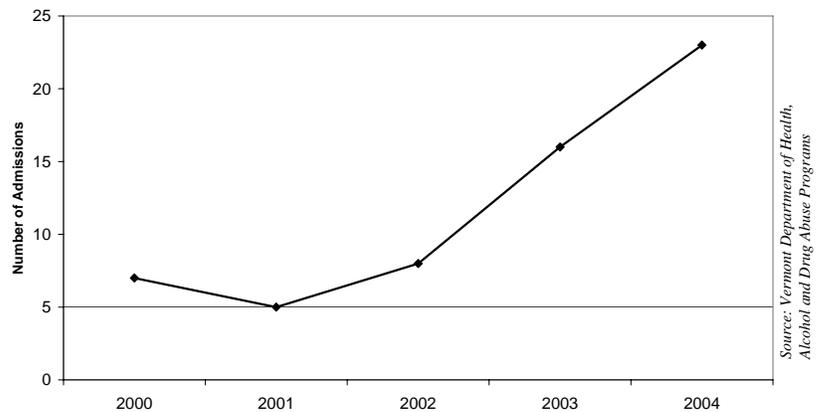
	<u>U.S. %</u>	<u>Vermont %</u>
Used marijuana in the past month	6.2	9.8
Used any illicit substance except marijuana in the past month	3.7	3.9
Used cocaine in the past year	2.5	3.0
Used alcohol in the past month	50.5	58.4

Source: 2002 & 2003 NSDUH

Methamphetamine

Methamphetamine use appears to be increasing nationally and is of particular concern for rural states such as Vermont. Methamphetamine is associated with rural areas where one of the ingredients of the drug (a fertilizer) is readily available as are secluded buildings where the drug can be made. Methamphetamine has been associated with increased risk of HIV transmission because the drug can be injected (and thus needles may be shared) and because it has been associated with increased sexual drive and rougher sex.¹ The number of admissions to state-funded substance abuse treatment programs for methamphetamine use is on the rise in Vermont (see Figure 16). However, the number of 8th – 12th grade students who have used methamphetamine has decreased from 9.4% in 1999 to 6.3% in 2003.

Figure 16. Number of Drug Treatment Admissions to State Funded Facilities for Methamphetamine Vermont 2000-2004 (N=59 admissions)



Source: Vermont Department of Health, Alcohol and Drug Abuse Programs

¹ Halkitis PN, Parsons JT, Stirratt MJ. (2001) A double epidemic: crystal methamphetamine use in relation to HIV transmission among gay men. *Journal of Homosexuality*; 41(2) 17-35; www.raconline.org/info_guides/meth

Use of Other Illicit Substances and Alcohol

In Vermont, there has been a steady rise over the past five years in the total number of charges filed for drug possession (Figure 17) and sale, and an increase in the number of admissions to state-funded substance abuse treatment programs for illicit substances (Figure 18).¹

In the U.S. and in Vermont most illicit drug use occurs among 18-25 year olds.² The largest proportion of drug treatment admissions in Vermont is among a slightly older population, those 30 – 49 years old (most of whom abuse alcohol). There are age differences in terms of treatment for specific substances. In Vermont marijuana use is most prevalent in the 18-25 year old age group but people younger than 19 make up the largest proportion of treatment admissions.³ The largest portion of heroin/opiate admissions are among 19 – 24 year olds. There are also differences in treatment admissions for men and women. The percentage of women in treatment is increasing over time and appears to be driven by a higher usage of heroin/other opiates and cocaine/other stimulants; over 40% of the admissions for these drugs are among women. Approximately 70% of admissions for alcohol and marijuana/hashish are men.

Figure 17. Number of Original Drug Possession Charges Filed in Vermont District Court 1995-2003 by Type of Drug (N=2,088 charges)

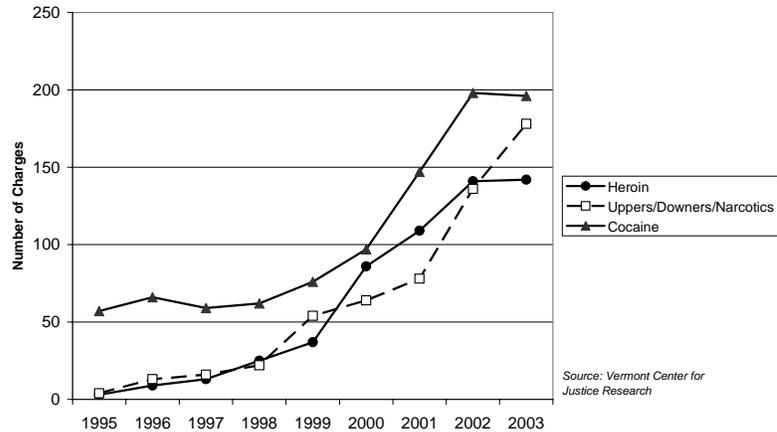
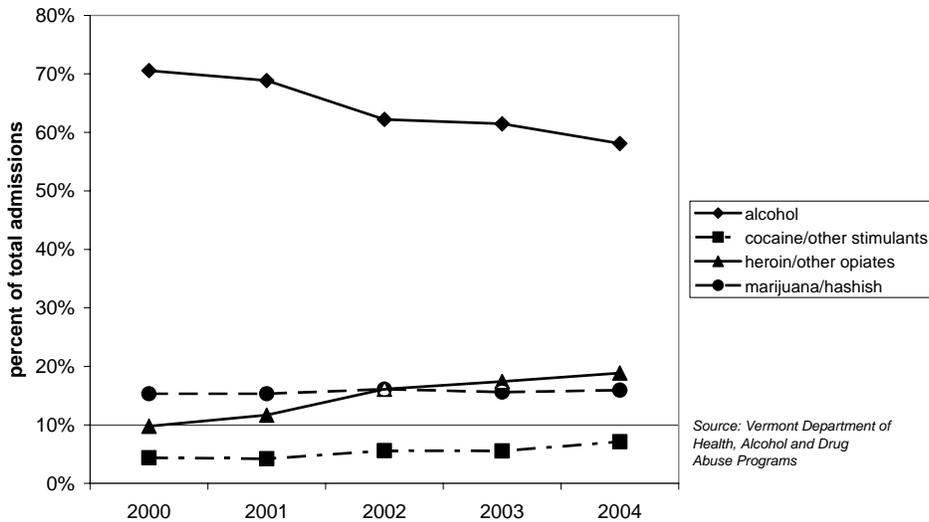


Figure 18. Percent of Total Treatment Admissions per Substance Vermont ADAP 2000-2004



¹ Vermont ADAP; VCJR (see Appendix A for a description of this data)

² www.samhsa.gov/news/newsreleases/050908_youth.htm accessed November 18, 2005

³ Vermont ADAP; 2003 & 2003 NSDUH <http://oas.samhsa.gov/2k3State/ch2.htm#fig2.1>

Heterosexual Populations

Direct Measures of Risk Behaviors

Among heterosexuals, the following measures of risk behavior are available in Vermont to provide important information on factors that may affect risk for acquiring or transmitting HIV infection:

- *number of sex partners and*
- *frequency of condom use or unprotected sex*
- *substance use and sex*

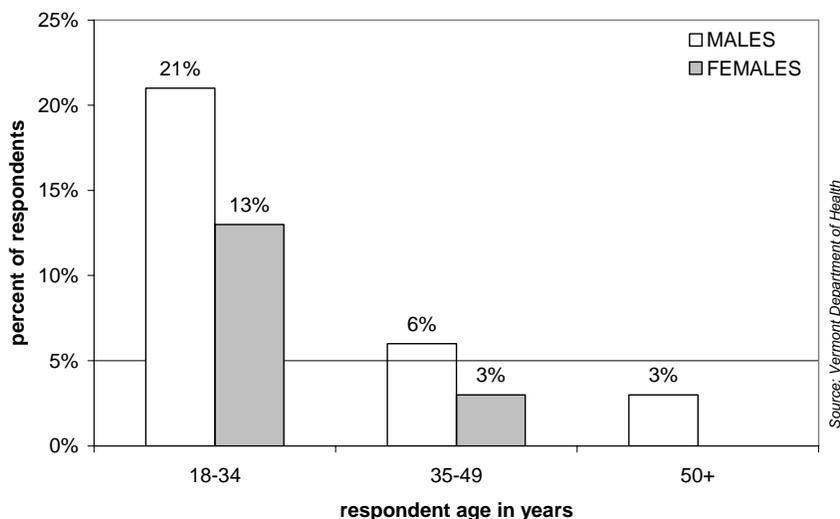
The BRFSS and YRBS surveys, and the sexually transmitted disease (STD) surveillance for Vermont provide information on risk behavior related to sexual activity among heterosexuals (see appendix A for additional information on these data sources).

Number of Sex Partners, Frequency of Condom Use, and Drug/Alcohol Use

Between 1999 and 2002 approximately 35% of all new HIV cases in the U.S. were heterosexually acquired.¹ More than half (64%) of these heterosexually acquired cases occurred in females and 74% occurred in non-Hispanic blacks. In Vermont, the cumulative number of HIV cases with heterosexual contact listed as the mode of exposure increased for women between 2001 (n = 11) and 2004 (n = 17), but remained unchanged for men during this time (n = 6). This may be due, at least in part, to the fact that male-to-female transmission of HIV is approximately eight times more efficient than female-to-male transmission of the virus.²

One out of five Vermont residents age 18 or older that were surveyed via the BRFSS for the years 2000 – 2002 and 2004 reported that they had no sex partners within the last year; this means that four out of five Vermonters were sexually active. Ninety-five percent of sexually active Vermont residents reported that within the last year they had a main sex partner (someone that they “felt committed to above anyone else”). Only 15% of those with a main partner used a condom or barrier the last time they had sex with their main partner. A much smaller percentage of those surveyed (8%) reported

Figure 19. Percent of Sexually Active People in Each Age Group Who Reported Having Two or More Sex Partners in the Past Year
Vermont BRFSS, 2001-2004 (N = 1,036)



¹ CDC MMWR February 20, 2004 53(06):125-129 www.cdc.gov/mmwr/preview/mmwrhtml/mm5306a3.htm

² Padian, NS, Shiboski, SC, Glass, SO, Vittinghoff, E. (1997) Heterosexual transmission of human immunodeficiency virus (HIV) in northern California: Results from a ten-year study. *American Journal of Epidemiology* 1997; 146(4): 350-57.

having a casual partner in the past year, and more than half of those with a casual partner (56%) reported using a condom or barrier at last sex with their casual partner. For the years 2000 – 2004 seven percent of BRFSS respondents reported having two or more sexual partners in the past year (n = 1,036). A larger percentage of men (9%) than women (5%) reported having two or more sexual partners, and younger people were more likely than older people to report two or more partners (see Figure 19). Seventeen percent of respondents between the ages of 18 and 34 reported having two or more sex partners.

Among 8th through 12th graders in Vermont who responded to the 1997, 1999, 2001 and 2003 YRBS more males (5%) than females (2%) reported having three or more sexual partners in the past three months. More advanced grades were associated with a lower percentage of youth using condoms, a higher percentage of youth reporting three or more sex partners in recent months, and a lower percentage of drug or alcohol use at last sex (see Table 10). The number of youth reporting alcohol or drug use at last sex decreased between 1997 (28%) and 2003 (26%), although this change was not statistically significant.

Table 10. Percent of 8th Through 12th Graders Reporting Condom Use, Multiple Partners, or Drug Use at Last Sex Vermont YRBS 1997, 1999, 2001 and 2003

	Percent of youth who used a condom last time <u>they had sex</u>	Percent of youth who used alcohol or drugs <u>at last sex</u>	Percent of youth with 3 or more sex partners in the <u>last 3 months</u>
Females	57	24	2
Males	66	32	5
8 th	66	30	3
9 th	70	29	3
10 th	66	29	4
11 th	61	27	4
12 th	54	27	5

Source: Vermont Department of Health and Vermont Department of Education, Vermont Youth Risk Behavior Survey

Indirect Measures of Risk Behaviors

Sexually Transmitted Disease (STD) surveillance data and vital statistics data on teen pregnancy rates provide information that may help to identify the potential occurrence of high-risk heterosexual behavior. Although increases in STD or teen pregnancy rates do not directly indicate that HIV exposure is increasing, these measures may indicate an increase in unprotected sex.

Teen Pregnancy Rates

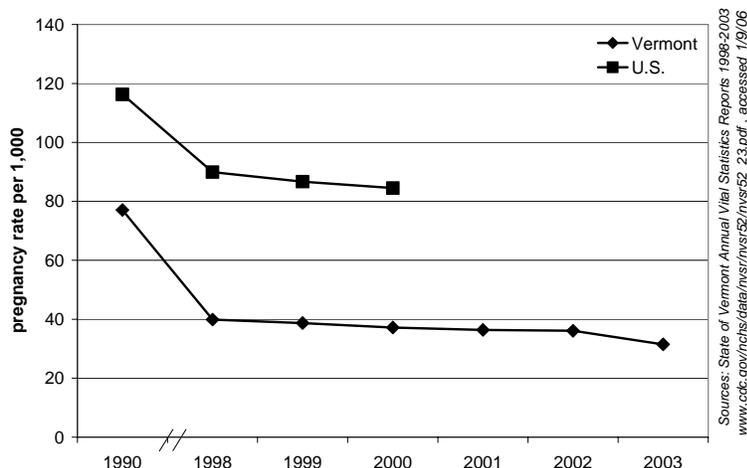
Nationally the teen pregnancy rate for 15 to 19 year olds continued to decline to 84.5 per 1,000 females ages 15 to 19 in 2000 (most recent data available). This is a 27% decrease from 1990.¹ Vermont's teen pregnancy rate has also continued to decline and remains much lower than the US rate.² Vermont's rate was 31.5 in 2003, a decline of 59% from the 1990 rate of 77.1 per 1,000 females ages 15 to 19. The 2003 teen pregnancy rate in Vermont ranged from a low of

¹ www.cdc.gov/nchs/data/nvsr/nvsr52/nvsr52_23.pdf , accessed on 1/9/06

² State of Vermont Annual Vital Statistics Reports, 1998-2003

13.4 in Addison County to a high of 51.2 in Essex County. Figure 20 shows trends in teen pregnancy rates for Vermont and the U.S. for teenagers 15 to 19 years old.

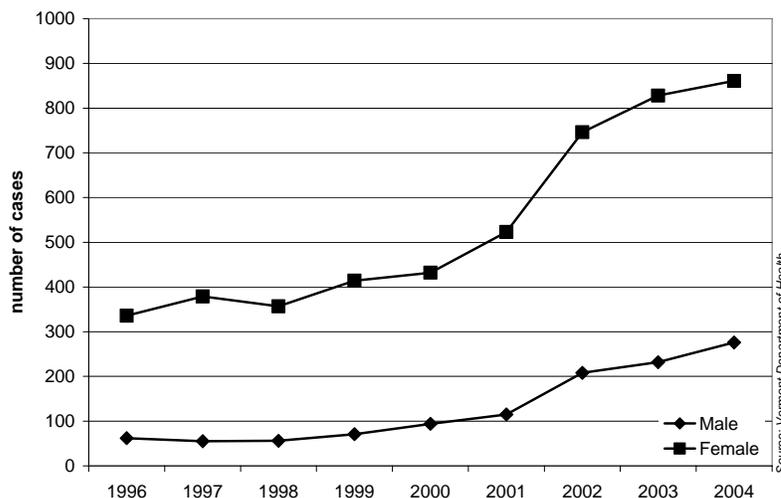
Figure 20. Teen Pregnancy Rate per 1,000 Females Ages 15-19 in Vermont and the United States 1990-2003



Sexually Transmitted Diseases (STDs)

Since 1994 **Chlamydia** infections have comprised the largest proportion of STDs reported to the CDC.¹ Nationally, the number of Chlamydia infections has increased over the past decade due to heightened screening efforts, more sensitive diagnostic tests, and increased reporting of infections. In 2004 the U.S. case rate for Chlamydia was 320 cases per 100,000 population; this is a 6% increase from 2003. The highest rates of Chlamydia are in the Southeastern U.S. and the lowest rates are in the northeast. In 2004 the U.S. rate of Chlamydia for women was more than three times the rate for men. This suggests that many male sex partners of women infected with Chlamydia are not diagnosed or reported. The highest rate of Chlamydia in the U.S. in 2004 was in the 20 to 24 year old age group (2,631 cases per 100,000 people). Vermont's 2004 Chlamydia rate was lower than the national average at 184 cases per 100,000 people. Since 2001 the largest number of Chlamydia cases in Vermont has been in the 20 to 24 year old age group; prior to this time, in 2000, the largest number of cases was in the 15 to 19 year old age group. Similar to national trends the number of women diagnosed with Chlamydia outpaces that of men (see Figure 21). The percent of Chlamydia cases in men has increased from 18% in 2000 to 24% in 2001. The number of Chlamydia cases in whites has increased from 94% in 2000 to 96% in 2004.

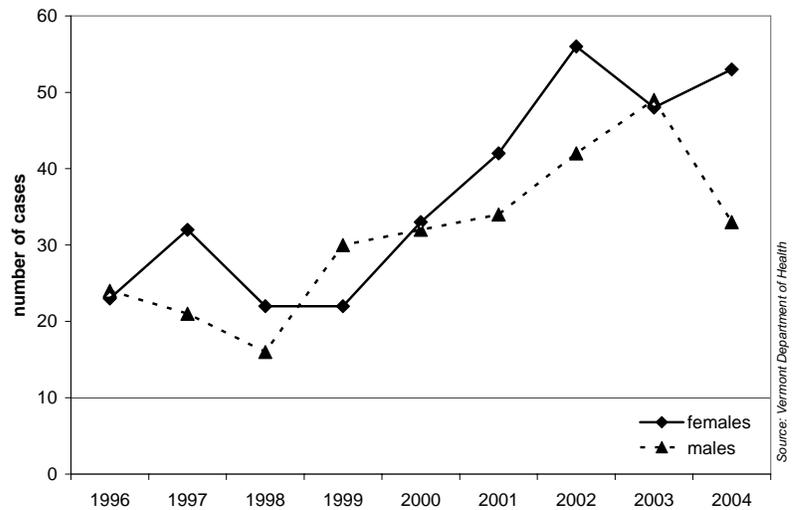
Figure 21. Number of Chlamydia Cases Reported for Men and Women in Vermont 1996 - 2004



¹ CDC STD Surveillance 2004 National Profile www.cdc.gov/std/stats/chlamydia.htm accessed November 23, 2005

Gonorrhea is the second most commonly reported notifiable disease in the U.S.¹ Nationally, the gonorrhea rate decreased 74% between 1975 and 1997 and then leveled off until 2000 when the rate began to decrease once again. In 2004 the national gonorrhea rate was 114 cases per 100,000 people and the highest rates were found in the Southern U.S. The gonorrhea rate in the Northeast has remained unchanged since 2000. Since 1996 the case rate among women in the U.S. has been higher than that of men, and this has largely been the trend in Vermont as well (see Figure 22). There were 330,132 cases of gonorrhea reported in the U.S. in 2004, and 86 of these cases were from Vermont. Nationally, and in Vermont, the largest number of gonorrhea cases is in the 15 to 24 year old age group. Since 2000, more than half of all gonorrhea cases in Vermont have been diagnosed in people 15 to 24 years old. This percentage has decreased slightly over time from 66% in 2000 to 58% in 2004. The percentage of gonorrhea cases among Vermonters 25 to 39 years old has remained steady since 2000, at about one-third of all cases in the state, but the percentage of cases among those 40 years old or older has increased from 3% of all cases in 2000 to 11% in 2004.

Figure 22. Gonorrhea Incidence for Males and Females in Vermont 1996-2004



The number of **Syphilis** cases in the U.S. has been rising since 2000. In 2004 there were 7,980 cases of syphilis reported to the CDC; only one of these cases was from Vermont.² Between 2000 and 2004 eight cases of syphilis were reported in Vermont. Vermont is one of only five states in the country that have met the national Healthy People 2010 target of less than 0.2 syphilis cases per 100,000 population. The lowest rates of syphilis are currently found in the Northeastern part of the U.S. and the highest rates (48% of all cases) are in the South. The national syphilis rate increased 11% among men between 2003 and 2004 but remained unchanged among women. This contributed to the increasing male to female ratio of syphilis cases, which indicates an increase in transmission among MSM.

HIV TESTING

Data on HIV testing patterns provide information that is helpful in focusing HIV counseling and testing programs. The data may also be used to help identify potential gaps in HIV surveillance data, which represent only persons who have confidentially tested positive for HIV. HIV testing data are available from surveys conducted in the general population (BRFSS), and from publicly funded HIV counseling and testing sites.

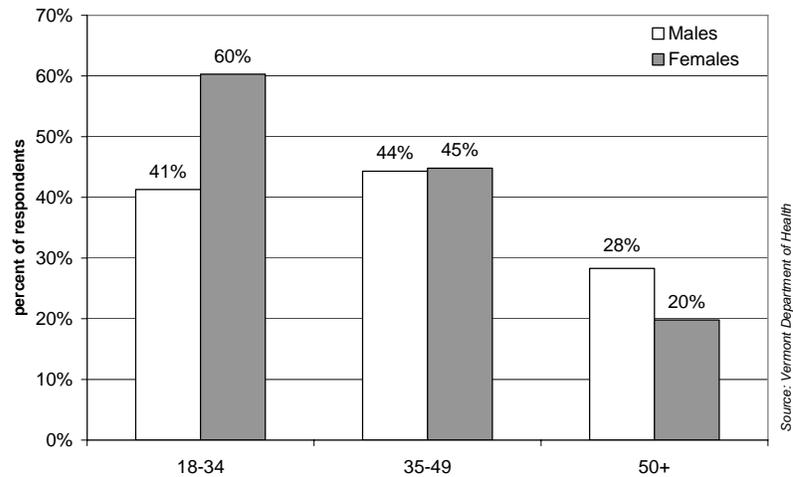
¹ CDC STD Surveillance 2004 National Profile www.cdc.gov/std/stats/gonorrhea.htm accessed November 23, 2005

² Vermont Department of Health; CDC STD Surveillance 2004 National Profile www.cdc.gov/std/stats/syphilis.htm accessed November 23, 2005

Testing in the General Population (BRFSS)

In 2002, 2003 and 2004 only a small percentage (3%) of Vermont residents surveyed via the BRFSS reported being in a situation within the past year that put them at risk for contracting HIV (risky situations included: used intravenous drugs, exchanged drugs or money for sex, treated for an STD, or had anal sex without a condom). Younger respondents were more likely to report risky behavior than older respondents were. Six percent of people 18 to 34 years old reported risky behavior in the past year, but only 2% of those ages 35-49, and only 1% of respondents 50 or older reported risky behavior. Eighteen to 34 year olds were also more likely than older age groups to have been tested for HIV, although this increase in testing in 18 to 34 year olds was due to the large percentage of women in this age group reporting an HIV test (see Figure 23). Between the ages of 18 and 49 more women than men reported having had an HIV test. Overall, in 2004 less than half (40%) of all BRFSS respondents reported ever having an HIV test.

Figure 23. Percent of Males (n=6,273) and Females (n=8,527) in Each Age Group Who Were Ever Tested for HIV (other than for a blood donation) Vermont BRFSS 2001-2004 (N=14,800)



Reasons for having an HIV test varied by age and sex (see Table 11). Women were most likely to be tested because they were pregnant while men were most likely to be tested as part of a routine medical check up. Younger people (ages 18 to 34) were most likely to be tested because they wanted to find out if they had HIV; those 35 to 49 years old were most likely tested because it was required, and people 50 years old or older were most likely tested as part of a routine medical check up.

Table 11. Reasons for HIV Testing, Vermont BRFSS 2002 – 2003 (N=2,631)

	sex		age in years		
	Males, %	Females, %	18–34, %	35–49, %	50+, %
It was done as part of a routine medical check-up	28	18	21	23	32
You just wanted to find out whether you had HIV	22	20	23	19	17
It was required	25	17	13	25	26
You were tested for some other reason	15	17	14	18	17
You were pregnant	n/a	21	21	9	0
You thought you may have gotten HIV through sex or drug use	3	3	4	3	3
Someone suggested you should be tested	4	2	2	2	4
You were worried that you could give HIV to someone	2	1	2	1	1

Source: Vermont Department of Health

Nearly half (41%) of all BRFSS respondents said that they had their most recent HIV test at a private doctor’s office or through an HMO. This was the most common test location for men, women and all age groups (see Table 12). Hospitals were the second most common site of HIV tests for every group except for 18 to 34 year olds who were more likely to be tested in a clinic.

Table 12. Location of Most Recent HIV Test, Vermont BRFSS 2002 – 2003 (N=2,621)

	Total, %	sex		age in years		
		Males, %	Females, %	18–34, %	35–49, %	50+, %
Private doctor	41	36	46	43	40	38
Hospital	22	22	22	20	22	26
Clinic	17	20	17	24	14	12
Home	9	9	7	3	12	11
Somewhere else	8	11	5	6	8	11
Counseling and testing site	3	3	3	3	3	2
Corrections	1	2	1	1	1	1

Source: Vermont Department of Health

Testing in High-Risk Populations (HITS data, 2001)

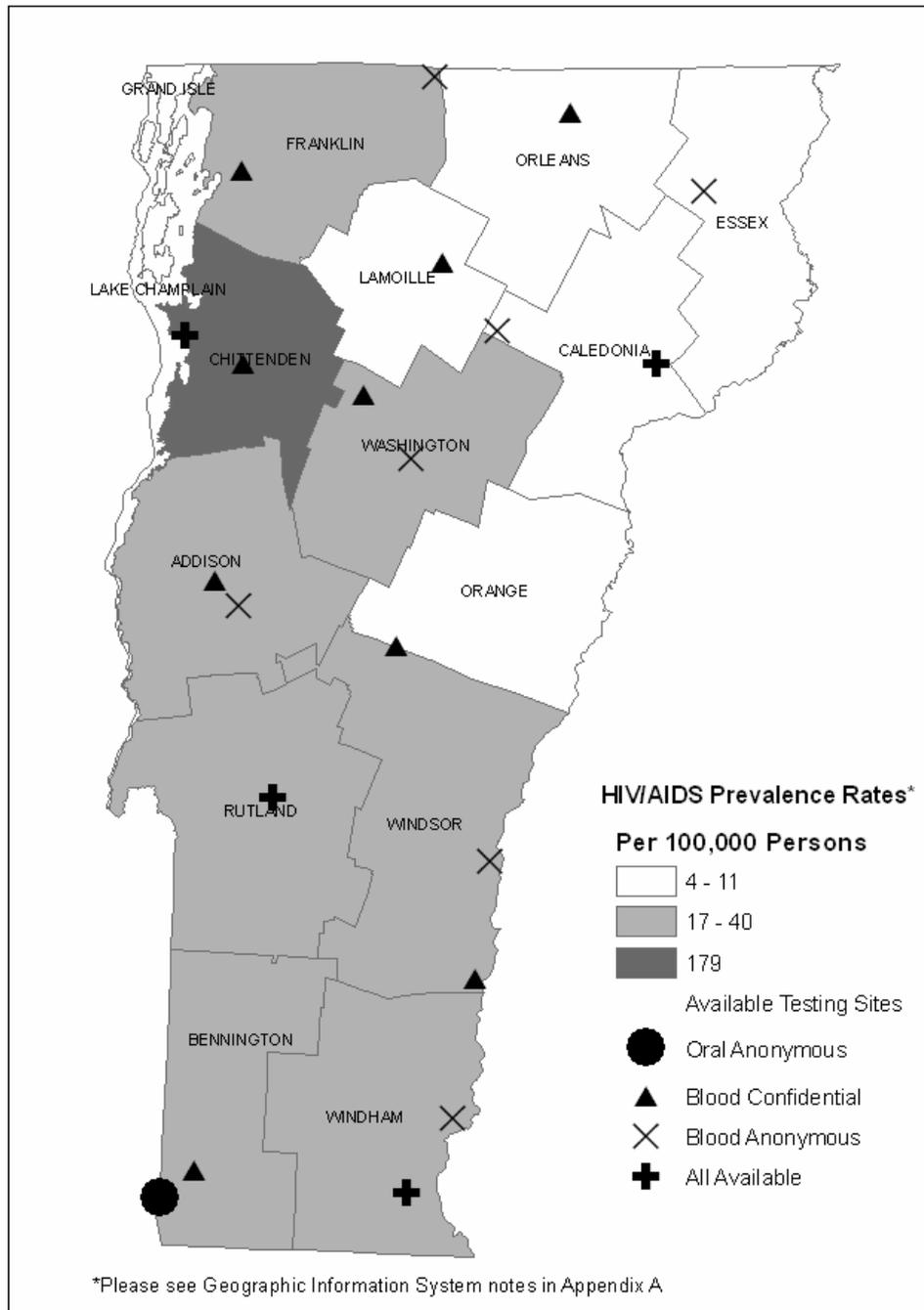
The HIV testing data from the HITS survey is representative only of individuals who tested negative for HIV due to the design of the HITS study. This may limit the interpretations of the following testing information. Ten percent of MSM surveyed by the 2001 Vermont HITS reported having never been tested for HIV, and testing rates were lower in injection drug use populations. Most MSM had their last HIV tests at Public Health Clinics (38%), private doctors offices (16%), or at HIV Counseling, Testing, and Referral sites (16%). Most injection drug users had their last HIV tests at drug treatment programs (29%), hospitals (24%), and private doctors offices (24%).

Testing at Publicly Funded Counseling and Testing Sites (Vermont Counseling, Testing, and Referral System)

The State of Vermont’s HIV Counseling, Testing, and Referral (CTR) system consists of 44 testing sites located throughout the state (see Figure 24). Seventeen of these testing sites are medical centers, 14 are family planning organizations, five are AIDS service organizations, three serve IDU populations, and the remaining sites serve youth, adult MSM or people in corrections. In addition to these sites, many AIDS Service Organizations have the capacity to perform HIV CTR services in the field.

Anonymous and confidential HIV tests are available through the CTR system in Vermont. **Anonymous testing** links test results to a random code number; this means that the name of the person being tested is never linked to the test information. For **confidential testing**, the name of the person being tested remains in a secure location with the test counselor but the lab performing the test and the Health Department are provided with a unique code based on the name and social security number of the person being tested. Oral and blood tests for HIV are available in Vermont. Blood tests and oral tests can be anonymous or confidential. The Health Department collects and processes testing data from all 44 CTR sites.

Figure 24. HIV/AIDS Prevalence Rates per 100,000 Persons by County and Location and Type of HIV Testing Sites Vermont, 2004



Source: Vermont Department of Health, HIV/AIDS Program

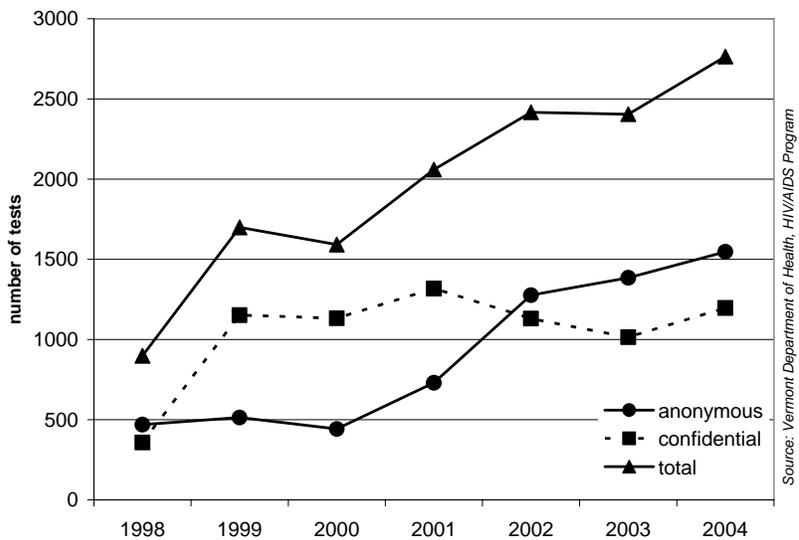
The total number of HIV tests conducted via CTR in Vermont tripled between 1998 and 2004 (see Figure 25). There was an increase in the number of anonymous tests conducted in 2001, and this was due to the introduction of oral testing in July of that year. The rise in oral (and thus anonymous) testing was initially accompanied by a decrease in confidential testing. Family planning organizations conduct the largest percentage of HIV tests (44% of all tests in 2004).

Most people (52%) who were tested in 2004 had previously tested negative for HIV, but 44% had never had an HIV test before. The percentage of tests among people who had previously tested negative for HIV has increased 5% since 1998, indicating an increase in repeat testers.

More women than men are tested each year. In 2004 53% of all tests were for women and 46% were for men. Testing among non-white individuals has increased from 3% of all tests in 1998 to 9% of all tests in 2004.

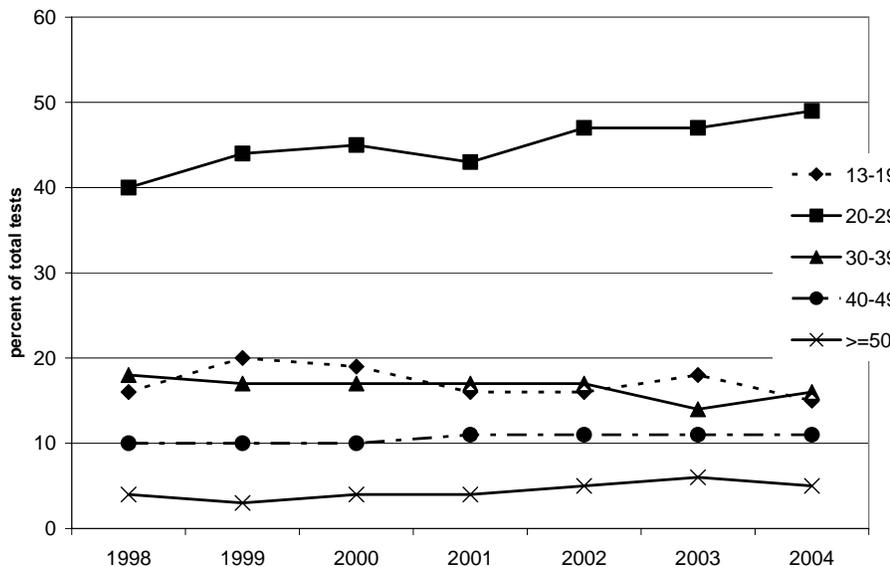
Nearly half of all CTR tests conducted each year are among people 20 to 29 years of age (see Figure 26). Since 2002 the 20 to 39 year old age group has had the largest percentage of positive HIV tests. The percent of positive tests attributable to this age group has been rising since 2001. In 2004, eighty percent of all positive tests were among people 20 to 39 years old.

**Figure 25. Number of HIV Tests Per Year by Type of Test
Vermont CTR 1998-2004**



Source: Vermont Department of Health, HIV/AIDS Program

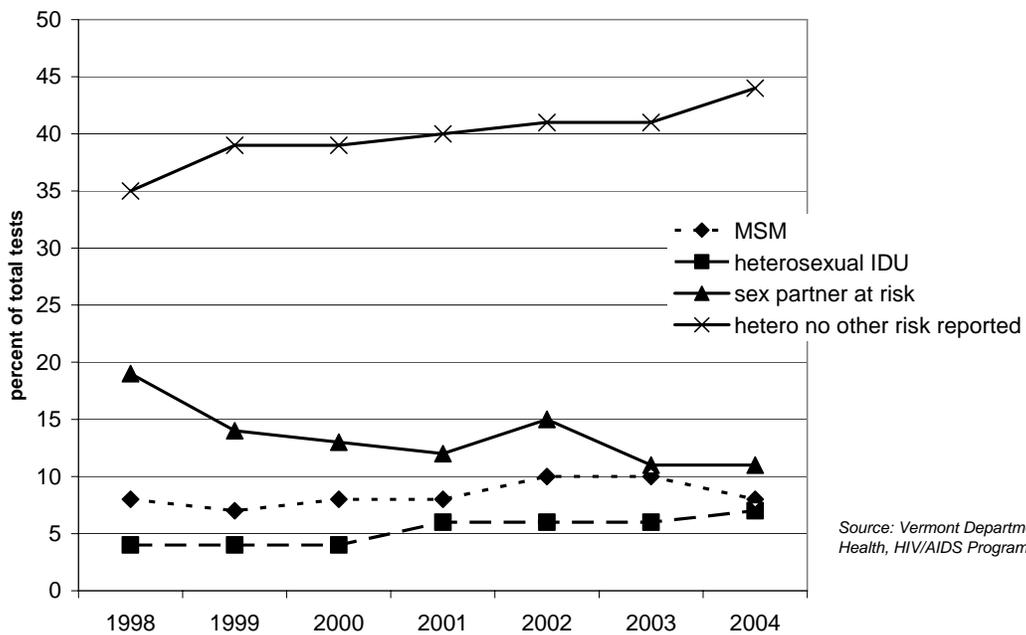
**Figure 26. Percent of Total HIV Tests per Year In Each Age Group
Vermont CTR 1998 - 2004**



Source: Vermont Department of Health, HIV/AIDS Program

‘Heterosexual with no other risk reported’ is the most frequently reported risk factor for people tested for HIV (see Figure 27). The percentage of total tests conducted each year for people who identifying as heterosexual with no other risk factor for HIV has been steadily increasing from 35% in 1998 to 44% of all tests in 2004. The percentage of tests for people with a sex partner at risk of contracting HIV has decreased over time, and there has been little change in the percentage of tests for heterosexual IDUs or MSM. The percent of positive tests in first-time testers (as opposed to those who had previously been tested for HIV) has declined from 100% of all positive tests in 1998 to just 20% in 2004.

**Figure 27. Percent of Total HIV Tests by Risk Factor
Vermont CTR 1998 - 2004**



Source: Vermont Department of Health, HIV/AIDS Program

Section Two:

Ryan White HIV/AIDS Care Act Special Questions and Considerations

Question

1

What are the patterns of utilization of HIV services of persons in Vermont?

Question

2

What are the number and characteristics of persons who know they are HIV-positive, but who are not receiving primary medical care?

Question

1

What are the patterns of utilization of HIV services in persons in Vermont?

In 1990, Congress enacted the Ryan White CARE Act to provide funding for primary care and support services for individuals living with HIV who lack health insurance and financial resources for their care. Congress reauthorized the Ryan White CARE Act in 1996 and in 2000 to support Titles I-IV. Vermont receives Title II and Title III funding. The purpose of Title II funding is to improve the quality, availability, and organization of health care and support services for individuals and families with HIV. Total Title II funding in Vermont for the fiscal year 2003 was \$883,059. This included \$381,740 for Vermont's AIDS Medication Assistance Program and \$1,319 for the Minority AIDS Initiative that supports education and outreach services to disproportionately impacted communities of color in an effort to improve their participation in AMAP. Although the data presented here is for the year 2003, there have been recent changes in the distribution of Title II funding. Prior to 2005 states were given flexibility to use a portion of Title II dollars for financial assistance for food, rent, utilities, transportation, etc. As of 2005 HRSA has mandated giving priority funding to six core services (primary medical care, substance use treatment, mental health therapy, oral health, HIV medications, and case management), or demonstrate that adequate funding for core services are paid for through other sources, before funding other services under Title II. In 2003 Vermont also received \$514,896 in Title III monies for community health providers to fund medical treatment and medical support. Although Vermont does not receive Title IV dollars (which fund care services for women, children and youth affected by HIV) the state of New Hampshire does receive Title IV funding, and \$32,336 of these funds were spent in 2004 on 54 Vermont residents who received care in New Hampshire.

For the purpose of this profile, service utilization patterns and demographic characteristics of persons who receive services funded by the State of Vermont's Ryan White Title II Program, as well as persons who have been reported to the State of Vermont's HIV/AIDS Surveillance Program, are described. It should be noted, however, that there are few resources to help track service utilization. Comprehensive data have been difficult to obtain.

HIGHLIGHTS

- A broad range of services are provided for uninsured or underinsured Vermonters via Title II funding
- Four types of organizations provide Title II services in Vermont
- The number of participants in AMAP continues to rise as do the number of DCAP claims
- In 2003 the characteristics of the group of Vermont residents receiving Title II services was similar to the characteristics of people living with AIDS

Organizations Receiving Title II Funds

In 2003 Ryan White Title II clients received services from four types of organizations: 1) hospital/university based clinics (comprised of the Comprehensive Care Clinics, or CCCs, that are affiliated with Fletcher Allen Health Care), 2) community based AIDS service organizations, 3) People Living with HIV or AIDS (PLWHA) coalition, and 4) the medication assistance program (AMAP) that is located at the Vermont Department of Health. In total there are eight Ryan White Care Act Title II grantees. These eight organizations provide services focused on ten target populations (see Table 13). Since Vermont is a rural state, three organizations focus on rural populations.

Table 13. Types of Organizations Funded by Title II in Vermont in 2003 and the Target Populations These Organizations Focus on Serving.

<u>Type of organization</u>	<u>Number of organizations</u>	<u>Percent of organizations</u>
Other community-based service organization (CBO)	5	63%
Hospital or university-based clinic ¹	1	13%
Health Department	1	13%
PLWHA coalition	1	13%
<u>Target Population</u>		
Rural populations other than migrant or seasonal women	3	21%
children	2	14%
Racial/ethnic minorities/communities of color	1	7%
gay, lesbian and bisexual adults	1	7%
incarcerated persons	1	7%
all adolescents	1	7%
injection drug users	1	7%
parolee	1	7%
other target populations	2	9%

¹ Data for the hospital/university based clinic funded via Title II includes all four Comprehensive Care Clinics that are located throughout Vermont

Source: Vermont Department of Health, HIV/AIDS Program

Services Provided With Title II Funds

A range of services is provided with Title II funds. When reading the following information (including Table 14) concerning who uses which services please keep in mind that *only* the information from the “hospital/university based clinic” (the CCCs) is free from duplicate counts. For example, when you read that 328 individuals received medical care via the CCCs you know that 328 different people accessed medical care with Title II funds in VT in 2003. The data from the “CBOs and PLWHA coalition” has been combined and thus *does not* represent the number of people accessing that particular service, because one individual may have received the same service at multiple agencies (thus these numbers do not accurately represent the number of people accessing that particular service). This also applies to Table 15 which compares the characteristics of people receiving Title II funded services at the “hospital/university based clinics,” the “CBOs/PLWHA coalition,” and people living with AIDS in 2003.

The hospital/university based clinics (the CCCs) and the CBOs/PLWHA coalition provide different types of services (see Table 14). The only service provided by both

organizations is case management. The hospital/university based clinics offer clients medically oriented services such as medical care, health education and risk reduction information, nutritional counseling and treatment adherence. The CBOs/PLWHA coalition provide more general services such as emergency financial services, transportation, advocacy, food services and mental health care.

Table 14. Types of Services Provided by Organizations Funded by Title II Including the Number of People Accessing These Services in Vermont in 2003

<u>Hospital/university based clinic</u> ¹		
<u>Type of service</u>	<u>Number of HIV positive clients</u>	
Medical care	328	
Health education/Risk reduction	328	
Health care/Support services	227	
Case management	194	
Nutritional counseling	194	
Outreach	161	
Treatment adherence	142	
Referral for clinical research	≤3	
<u>Services provided by other types of organizations receiving Title II funding (includes 5 CBOs and 1 PLWHA coalition)</u> ²		
<u>Type of service</u>	<u>Number of organizations providing the service</u>	<u>Total number of HIV positive clients served</u> ²
Emergency financial services	4	175
Transportation	4	124
Client advocacy	2	89 ³
Other services	2	76
Food services	2	58
Health education/Risk reduction	1	42 ⁴
Mental health care	2	12
Psycho-social support services	1	6
Child care	1	5
Substance abuse treatment	1	≤3

¹ Data for the hospital/university based clinic funded via Title II includes all four Comprehensive Care Clinics that are located throughout Vermont

² Unlike the numbers from the hospital/university based clinics, the number of clients receiving services via CBOs/PLWHA coalition may include individuals who received services from multiple organizations (including FAHC). Thus these total numbers may represent the same client multiple times for a given service.

³ An additional 10 people who were not HIV positive but were affected by HIV received client advocacy services

⁴ An additional 21 people who were not HIV positive but were affected by HIV received health education/risk reduction services

Source: Vermont Department of Health, HIV/AIDS Program

Characteristics of the Group of People Receiving Title II Funds

The characteristics of the group of people in Vermont receiving Title II funded services from the hospital/university based clinics (CCCs) in 2003 was similar to the group of people living with AIDS in 2003 (see Table 15). The majority of people in both groups were men, white, and the primary mode of exposure was MSM. People served under Title II funding were slightly more likely to be black or African American (17% compared to 10% of those with AIDS) and more likely to report heterosexual transmission as the mode of HIV exposure (18% compared to 12%).

Due to the lack of unduplicated data for the CBOs/PLWHA coalition it is not clear how accurately their clients can be compared to the group of people living with AIDS in 2003 (see Table 15). However, it appears that the group of people accessing Title II funds via the CBOs/PLWHA coalition is more likely than those diagnosed with AIDS to be female.

All clients who received Title II services had incomes equal to, or below, the Federal poverty line. Despite this, more than 90% of all Title II clients reported having a permanent place to live, and most received some type of insurance coverage. The majority of people receiving Title II funded services had public insurance coverage. Over half (52%) of all CCC clients receiving Title II funded services were insured via Medicaid, Medicare or other public insurance. An additional nine percent of these CCC clients (30 individuals) had no insurance coverage. The remaining 39% were covered by private insurance. In contrast, few (7%) of the CBOs/PLWHA coalition clients had private insurance coverage while 91% received public insurance and 2% had no insurance coverage. (See Table 15 for the number and percentage of people in each category).

AIDS Medication Assistance Program (AMAP)

Since 1987 Congress has appropriated funds to help states provide FDA-approved antiretroviral therapies to AIDS patients. With the passage of the Ryan White CARE Act in 1990, these assistance funds for antiretroviral therapies were incorporated into Title II and became known as AIDS Drug Assistance Programs (ADAP). ADAP provides FDA approved HIV-related prescription drugs to under-insured and uninsured individuals living with HIV/AIDS. In Vermont this program is referred to as the AIDS Medication Assistance Program (AMAP). For many people with HIV, access to AMAP serves as a gateway to a broad array of healthcare and supportive services as well as other sources of coverage including Medicaid, Medicare, and private insurance.

The total number of AMAP participants has increased from 109 unduplicated participants in 2000 to 201 participants in 2004. During this same time period (2000-2004) there was an average of 33 new participants each year. From 2000 through 2004 the majority (88%) of AMAP clients was male and nearly all participants were between the ages of 25 and 64 years of age (51% were between 45-64 years old, and 47% were between 25-44 years). Only two percent of participants were younger than 25 or older than 64. No participants identified as transgender. The percentage of white participants appeared to be decreasing from 2000 (87% white) to 2004 (82% white), but during this same time period the percentage of participants identifying as non-white remained steady at 12%; this was due to the increasing number of participants with unknown or unreported race.

Dental Care Assistance Program (DCAP)

Title II funds also cover dental assessments and preventative dental care, including cleanings and basic restorative treatments such as fillings. Any licensed practitioner in Vermont can access DCAP funds on the behalf of HIV positive individuals who have met eligibility requirements. The following information on the DCAP program is based on the number of claims made each month; thus this data does not represent the total number of participants (because the same participant could file multiple claims for a given month). Use of DCAP has been increasing since 2000 when an average of only eight claims was made each month. In 2002 the number of claims per month doubled to 16, and then the number of dental claims rose slightly but steadily through 2003 to 18 claims per month in 2004.

Table 15. Comparison of Characteristics of CARE Act Clients (reported separately for CCC clients and CBO/PLWHA coalition clients) and People Living with AIDS, Vermont 2003

	HIV positive Title II Clients - 2003				People living with AIDS 2003	
	Hospital/university based clinic	% hospital/university based clinic	5 CBOs/PLWHA coalition	% CBOs/PLWHA	n	%
Sex						
Male	274	84%	242	71%	139	86%
Female	53	16%	98	29%	23	14%
Transgender	≤3	<1%	≤3	<1%		
Race/Ethnicity						
Hispanic - All Races	7	2%	15	4%	11	5%
Not Hispanic						
White	281	78%	291	84%	196	85%
Black or African American	62	17%	31	9%	23	10%
Other	≤3	<1%	8	<1%	≤3	<1%
Multiple races	8	2%	≤3	<1%	≤3	<1%
Transmission Category						
Men who have sex with men (MSM)	197	60%	*	*	123	54%
Injection drug use (IDU)	36	11%	*	*	39	17%
MSM/IDU	12	4%	*	*	14	6%
Heterosexual	60	18%	*	*	28	12%
Hemophilia/Coagulation disorder	5	<1%	*	*	6	3%
Receipt of blood transfusion or tissue	≤3	<1%	*	*	4	2%
Other/risk not reported or identified	17	5%	*	*	14	6%
Mother with/at risk for HIV infection	≤3	<1%	*	*	≤3	<1%
Number of clients						
all HIV positive	328	100%	341	92%	*	*
all HIV negative	0	0%	25	7%	*	*
all unknown/unreported	0	0%	6	2%	*	*
Household income						
Equal to/below the Federal poverty line	121	41%	175	58%	*	*
101–200% of Federal poverty line	66	23%	115	38%	*	*
201–300% of Federal poverty line	38	13%	6	2%	*	*
> 300% of Federal poverty line	67	23%	5	2%	*	*
Housing/living arrangements						
Permanently housed	303	93%	299	94%	*	*
Non-permanently housed	18	6%	13	4%	*	*
Institution	5	2%	5	2%	*	*
Medical Insurance						
Private - HIV positive	125	39%	22	7%	*	*
Medicare - HIV positive	42	13%	82	26%	*	*
Medicaid - HIV positive	125	39%	160	50%	*	*
Other public - HIV positive	≤3	<1%	47	15%	*	*
No insurance - HIV positive	30	9%	7	2%	*	*
Other insurance - HIV positive	≤3	<1%	≤3	<1%	*	*

¹ Data for the hospital/university based clinics funded via Title II includes all four Comprehensive Care Clinics (CCCs) that are located throughout Vermont

² Unlike the numbers from the hospital/university based clinics, the number of clients receiving services via CBOs/PLWHA coalition may include individuals who received services from multiple organizations (including the hospital/university based clinics). Thus these numbers may represent the same client multiple times for a given service.

* Data is unavailable or not collected on these variables

Question

2

What are the number and characteristics of persons who know they are HIV-positive, but who are not receiving primary medical care?

Efforts to measure unmet need among persons with HIV in Vermont are currently under way. First, the Vermont Department of Health has begun estimating the number of HIV positive individuals who did not receive a viral load test, CD4 count, or antiretroviral therapy for a given year. Second, a survey-based needs assessment of people in care was completed in 2003 and although only one-third of the surveys were returned these respondents provided information on barriers to care. Third, a 2004 study attempted to assess barriers to HIV/AIDS prevention, support and medical services for Vermont communities of color. Three specific groups were studied: members of communities of color not already connected to HIV/AIDS services, persons incarcerated in Vermont institutions, and providers of HIV/AIDS prevention, support or medical care. Data were gathered via focus groups, individual interviews and surveys. Fourth, CCC data shows the number of clients who are not permanently housed. Fifth, a research project based at the University of Vermont is providing information on the experiences of HIV positive individuals in the state.

This information should help clarify the needs of Vermonters who are HIV positive but are not accessing medical care.

HIGHLIGHTS

- During 2002 an estimated 36% of Vermonters living with HIV/AIDS did not receive HIV-related medical care
- A greater percentage of men than women experienced this unmet need
- A survey of people in care indicated that 86% of respondents had received some medical care within the preceding three months
- There may be unmet housing needs among HIV positive individuals in Vermont
- A university-based study is currently underway that will provide information about HIV stigma in Vermont

Participation in HIV/AIDS Treatment

In 2004 The Vermont Department of Health estimated the number of HIV positive individuals in the state that were not currently receiving HIV medical care. Estimates were produced using the following anonymous data sources: the Vermont HIV/AIDS Reporting System, called HARS, and HIV/AIDS treatment data obtained from payers and providers of these services including insurance companies and medical centers. (It should be noted that the number of individuals with HIV/AIDS who are receiving treatment may be underreported because data are not available for all relevant payers and providers). Because these data were anonymous, a statistical method called Probabilistic Population Estimation¹ was used to determine the number of people in the HARS database in 2004 who did not receive a viral load test, CD4 count or antiretroviral therapy during that year. Analyses revealed that 40% (n = 169) of those living with HIV/AIDS in Vermont did not receive HIV-related medical care during calendar year 2004. Table 16 shows that a larger percentage of men (42%) than women (30%) experienced an unmet need in 2004, and young men (18-34) had the greatest percentage of unmet need (54%). An estimated 42% to 59% of people in the U.S. that are living with HIV/AIDS do not receive regular HIV care.²

Table 16. Participation in HIV/AIDS Treatment* Vermont, 2004

	Unduplicated number of people with HIV/AIDS	Unduplicated number with HIV/AIDS receiving treatment		Not in treatment
	n	n	%	%
Total	422 ± 5	253 ± 6	60% ± 2%	40%
Age				
0-17	4 ± 0	4 ± 0	100% ± 7%	0%
18-34	54 ± 1	27 ± 1	50% ± 2%	50%
35-49	255 ± 4	155 ± 5	61% ± 2%	39%
50-64	100 ± 2	61 ± 3	61% ± 3%	39%
65+	8 ± 0	6 ± 0	75% ± 6%	25%
Male				
0-17	0 ± 0	0 ± 0	n/a	n/a
18-34	37 ± 1	17 ± 1	46% ± 3%	54%
35-49	207 ± 4	119 ± 5	58% ± 3%	42%
50-64	89 ± 2	54 ± 2	61% ± 3%	39%
65+	8 ± 0	6 ± 0	75% ± 6%	25%
Total	341 ± 5	197 ± 6	58% ± 2%	42%
Female				
0-17	4 ± 0	4 ± 0	100% ± 7%	0%
18-34	17 ± 1	10 ± 1	59% ± 4%	41%
35-49	48 ± 1	35 ± 2	73% ± 4%	27%
50-64	11 ± 0	7 ± 1	63% ± 6%	37%
65+	0 ± 0	0 ± 0	n/a	n/a
Total	81 ± 1	56 ± 2	70% ± 2%	30%

* Treatment is defined as viral load test, CD4 count, and/or antiretroviral therapy during calendar year 2002

¹ Pandiani JA, Banks SM, Bramley J and Moore R. (2002) Mortality of mental health service recipients in Vermont and Oklahoma. *Psychiatric Services*; 53:1025-1027.

² Kaiser Family Foundation *HIV/AIDS Policy Fact Sheet*, November 2005. www.kff.org/hiv/aids/upload/3029-06.pdf accessed December 1, 2005

Survey of HIV Positive Individuals' Service Needs

In the fall of 2003 the Vermont Department of Health distributed surveys intended to assess the service needs (as opposed to the prevention needs) of Vermonters who are HIV positive. Six Title II grantee organizations disseminated a total of 336 surveys statewide. Thirty-one percent (n=105) surveys were returned. (It is important to remember that the information that follows cannot be extended to the 69% of individuals who did not return the survey). A majority of respondents (89%) lived in Vermont, a majority identified as white (86%), and a majority of respondents (71%) was male. The sample was split in terms of reported sexual orientation with 47% identifying as heterosexual and 42% as gay men (others identified as lesbian or bisexual). Nearly all respondents (89%) reported that they had been diagnosed with conditions other than HIV including: emotional problems 66%; neuropathy 42%; memory or thought 31%; problems with her or his liver 29%; high blood pressure 28%; breathing or lung problems 27%; high cholesterol 26%.

More than half (61%) of all respondents indicated that they had been diagnosed with HIV outside of Vermont. Most respondents (86%) had received medical care within the preceding three months and 8% had seen a doctor within the last four to six months. There were 12 people who reported that they had stopped care and had not seen a doctor in more than a year; of these respondents 67% said this was due to problems with their medications and 20% cited lack of health insurance. When asked what would help them to get into medical care respondents indicated that they needed access to transportation, insurance, and/or pharmacy assistance other than AMAP. Multiple barriers to care were identified. Thirty-six percent of respondents described stigma-related barriers to care that focused on fears of disclosure. The second most commonly mentioned barrier to care (28%) identified the prohibitive cost of medical care and limited access to insurance. Additional barriers to care included access to transportation, better trained doctors or nurses, more culturally competent providers and access to childcare services.

Assessing Barriers to Prevention, Support and Medical Services

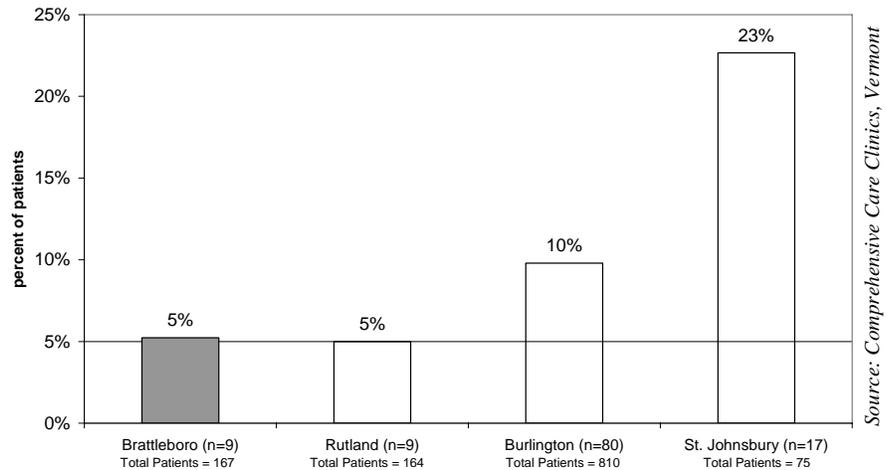
In 2004, focus groups, individual interviews and surveys were used to gather information about the barriers to HIV/AIDS prevention, support and medical services for Vermont communities of color. Three specific groups were studied: members of communities of color not already connected to HIV/AIDS services, persons incarcerated in Vermont institutions, and providers of HIV/AIDS prevention, support or medical care. Results indicated that people in all of these groups needed to know that services exist, that treatment is effective, and identified a need for information on accessing treatment and supports. Service providers, incarcerated individuals, African refugees and Native Americans identified the cost of care as a barrier to seeking or receiving HIV/AIDS related services. African and Asian refugees described language as a significant barrier to receiving services. For many of the participants, and especially for incarcerated respondents and Native Americans, trust that providers would keep their HIV status confidential was identified as a primary barrier to accessing services.

Housing Concerns

Approximately 11% of all CCC clients for each year from 2002 through 2004 reported not having a permanent place to live. This means that between 29 and 33 clients were not permanently housed in each of these years. The percentage of clients who reported not having a permanent place to live varied by CCC location, from a low of 9 clients (5% of clients) visiting the Brattleboro and Rutland CCCs, to a high of 80 clients (10% of clients) visiting the Burlington

CCC (see Figure 28). The St. Johnsbury CCC reported the greatest percentage of clients lacking permanent housing (17 clients, which comprised 23% of the total clients for the St. Johnsbury CCC). It should be noted that in order to protect their confidentiality clients may travel beyond their area of residence to visit a CCC in another area. This means it should not be assumed that all clients visiting a specific CCC live in that area of the state. However, this data does indicate that there is a need for permanent housing among CCC clients.

Figure 28. Percent of Active CCC Patients for Each Clinic Location Who Reported Not Having Permanent Housing (data for years 2001-2004 combined)



Stigma and Geography as Barriers to Care

In 2004 a Person Environment Zone Project¹ focused on the role that stigma and rurality play in perceptions of personal resources as a barrier to care. Seventy-one HIV positive individuals took part in a project that described their perceived level of HIV/AIDS related stigma, fear of disclosure of HIV status, and categorized the participants according to the location that they lived in: either rural, moderately populated, or metropolitan. The participants mildly agreed that they felt personally stigmatized and rarely or sometimes feared disclosing their HIV status to others. Being a member of another stigmatized group (women or people of color) did not increase feelings of HIV/AIDS related stigma.

Where the participants lived did influence their perception of personal resources as a barrier to care. Vermont residents living in rural areas (Addison, Lamoille, Orleans, Caledonia and Windham counties) perceived a greater lack of employment opportunities, and a lack of supportive and understanding work environments than those living in metropolitan areas (defined as Chittenden, Grand Isle, and Franklin Counties). Residents living in rural or moderately populated areas were more concerned about personal finances than those who lived in metropolitan areas.

¹ Varni, S.E., Solomon, S.E., Miller, C.T. & Forehand, R. (2004). Rural ecology and HIV related stigma. Poster presented at the annual meeting of the Society of Behavioral Medicine, Boston, MA.

Appendix A: Data Sources

Core HIV/AIDS Surveillance

AIDS Surveillance

Overview: AIDS is a reportable condition in all states and territories. Since 1993, all states and territories base their reporting practices on the 1993 CDC case definition for AIDS surveillance. The AIDS Surveillance system was established to monitor incidence of the disease and the demographic profile of AIDS cases; describe the modes of HIV exposure among persons with AIDS; guide the development and implementation of public health intervention and prevention programs; and to assist in the evaluation of the efficacy of public health interventions. AIDS surveillance data are also used to allocate resources for Titles I and II of the Ryan White CARE Act. The Vermont HIV/AIDS Reporting System (HARS) provides a data set that includes information on sociodemographic variables (sex, age, race/ethnicity, county of residence), date of diagnosis, mode of exposure, laboratory and clinical findings (including viral load), vital status, and referrals for treatments or services. In Vermont, name-based AIDS case surveillance began in 1982.

Population: All persons in Vermont who meet the 1993 CDC AIDS surveillance case definition.

Strengths: This is the only source of AIDS information that is available in all states. The data reflect the effect of AIDS on communities and trends of the epidemic in communities. AIDS surveillance has been determined to be >85% complete. In addition, at least 85% of the reported cases included risk information.

Limitations: Because of the prolonged and variable period from infection to the development of AIDS, trends in AIDS surveillance do not represent recent HIV infections. Thus AIDS surveillance data is limited by the fact that someone may have been infected with the virus for a quite a while prior to the development of AIDS, therefore AIDS cases do not represent recent HIV infections. Incomplete HIV or CD4+ T-cell testing may interfere with the completeness of AIDS reporting. Further, the widespread use of HAART complicates the interpretation of AIDS case surveillance data and the estimation of the HIV/AIDS epidemic in an area. Newly reported AIDS cases may reflect treatment failures or the failure of the health care system to halt the progression of HIV infection to AIDS. AIDS cases represent late-stage HIV infections. Consistent with national standards for the conduct of AIDS surveillance, AIDS cases are counted only in the state in which they resided at the time of their AIDS diagnosis. Therefore, Vermont surveillance data include some individuals who no longer reside in Vermont, and do not include individuals who now live in Vermont but were diagnosed while living in other states.

HIV Surveillance

Overview: Since the human immunodeficiency virus was identified and a test for HIV was licensed, CDC and other professional organizations have recommended the reporting of HIV infections to local health authorities as an integral part of AIDS surveillance activities. As part of ongoing, active HIV surveillance, state and local health departments educate providers on their reporting responsibilities, establish active surveillance sites, and establish liaisons with laboratories that perform HIV testing of samples. The Vermont HIV/AIDS Reporting System (HARS) provides a data set that includes information on sociodemographic variables (sex, age, race/ethnicity, county of residence), date of diagnosis, mode of exposure, laboratory and clinical findings (including viral load), vital status, and referrals for treatments or services. HIV reporting was implemented in Vermont in March of 2000 and is based on unique-identifiers. Only individuals who receive confidential tests are included in HARS

Population: All persons who test positive for the human immunodeficiency virus (HIV) by confidential testing (anonymous testers are not reported to the Vermont Department of Health).

Strengths: HIV surveillance data represent more recent infections, compared with AIDS surveillance data. HIV surveillance provides a minimum estimate of the number of persons known to be HIV infected and reported to the health department, identifies emerging patterns of transmission, and can be used to detect trends in HIV infections among populations of particular interest (e.g., children, adolescents, or women) that may not be evident from AIDS surveillance. Additionally, HIV surveillance provides a basis for establishing and evaluating linkages to the provision of prevention and early intervention services and can be used to anticipate unmet needs for HIV care. Vermont has worked with the CDC on assessments of the completeness and timeliness of HARS HIV data.

Limitations: HIV surveillance data may underestimate the level of recently infected persons for three reasons. First, some infected persons either do not know they are infected or have not sought testing. Second, persons who have tested positive at an anonymous test site and have not sought medical care, where they would be confidentially tested, are not included in HIV surveillance statistics. Third, reporting may not be complete. Also, consistent with national standards for the conduct of HIV surveillance, HIV cases are counted only in the state in which they resided at the time of their HIV diagnosis. Therefore, Vermont surveillance data include some individuals who no longer reside in Vermont, and do not include individuals who now live in Vermont but were diagnosed while living in other states.

Supplemental HIV/AIDS Surveillance

HIV Testing Survey (HITS)

Overview: HITS was conducted in Vermont 2001 in an effort to assess HIV testing patterns among persons at high risk for HIV, evaluate reasons for seeking or avoiding testing, and examine knowledge of state policies for HIV surveillance. In addition, HITS collected behavioral risk information from persons at high risk for infection. Two populations were surveyed, MSM (recruited from two gay bars in Vermont) and ID (recruited from street venues). All participants were 18 years of age or older and had been state residents for at least one year. Participants who reported testing positive for HIV were excluded from the analyses.

Population: Individuals 18 years of age or older who: were able to give informed consent, did not identify as HIV positive but did identify as MSM or IDU, had been Vermont residents for at least a year, and were at one of Vermont's two gay bars or at a street venue or needle exchange program when researchers were recruiting for this study in 2001. Additional behavioral criteria applied to each risk group. Men at gay bars were eligible if they had sex with a man within the past 12 months. Injection drug users must have injected drugs within the past 12 months.

Strengths: HITS collected public health information from groups at high risk for HIV; the information includes HIV testing attitudes, history and behaviors, as well as knowledge of testing and risk behaviors.

Limitations: There was a small number of participants (62 IDUs, 59 MSM) that may not be representative of their respective high-risk populations. It should also be noted that HITS data was collected over four year ago, in 2001 and thus may not represent recent trends. HITS relied on a convenience sample for participation. Information collected was self-reported and may have been subject to recall bias. Further, HITS data may not represent the entire high-risk population of an area. Also, data on MSM were collected only in gay bars; MSM who frequent gay bars may not be representative of the entire population of MSM.

Comprehensive Care Clinic (CCC) Questionnaires

Overview: CCC Patient Questionnaires are filled out by CCC patients at intake and during follow-up visits. These questionnaires address basic demographic information including insurance and employment information, participation in AMAP/DCAP, HIV exposure categories, and health status. During 2000 the Patient Questionnaire was updated to include housing status.

Population: All HIV or AIDS patients having at least one Comprehensive Care Clinic visit during a given year (2000-2004).

Strengths: Provides demographic, health, and housing information for all CCC patients. This represents a substantial number of the HIV positive individuals in Vermont; in 2001

there were 280 active CCC patients and there were 331 active patients in 2004. In 2004 there were 430 people in Vermont known to be living with HIV.

Limitations: Data is limited to those receiving care at a CCC and is not generalizable to all HIV positive individuals in the state. The data does not differentiate homeless from non-permanently housed.

Behavioral Surveys

Behavior Risk Factor Surveillance System (BRFSS)

Overview: The BRFSS is a state-based random digit-dialed telephone survey of adults that monitors state-level prevalence of the major behavioral risks associated with premature morbidity and mortality. Each month, a sample of households is contacted and one person in the household who is 18 years or older is randomly selected for an interview. Multiple attempts are made to contact the sampled household. A Spanish translation of the interview is available. Respondents to the BRFSS questionnaire are asked a variety of questions about their personal health behaviors and health experiences. Questions concerning sexual behavior, HIV/AIDS knowledge, beliefs and testing and STD/IDU related questions have been included in the Vermont surveys.

Population: All noninstitutionalized adults, 18 years and older, who reside in a household with a telephone

Strengths: Data from the BRFSS survey are population-based. This means that the information gathered via the BRFSS can be generalized to the noninstitutionalized adult population of a state. BRFSS data is from a random sample of several thousand adult Vermont residents (6,700 respondents in 2004). Information collected from the BRFSS survey may be useful for planning communitywide education programs.

Limitations: BRFSS data are self-reported; thus, the information may be subject to recall bias. Because BRFSS respondents are contacted by telephone, the data are not representative of households that do not have telephones. In addition, BRFSS data are representative of the general noninstitutionalized adult population in an area, not just persons at highest risk for HIV/AIDS. In Vermont, sexual behavior questions have been limited to certain age groups (those younger than 50), so the sexual behavior data may be applicable only to residents ages 18 to 49.

Youth Risk Behavior Survey (YRBS)

Overview: The YRBS is part of the CDC's Youth Risk Behavior Surveillance System that was established to monitor six high-risk behaviors that contribute to the leading causes of mortality, morbidity, and social problems among youth and young adults in the United States. YRBS was developed to collect data that are comparable nationally, statewide, and locally. The YRBS is a self-administered questionnaire that is given to 8th through 12th grade students statewide. Every two years since 1985 the Department of

Health's Division of Alcohol and Drug Abuse Programs and the Department of Education's Comprehensive School Health Program have sponsored this survey. A random selection of schools in Vermont is invited to participate, but participation by both schools and individual students is voluntary. Information is gathered on the following topics: 1) sexual behavior (percent of sexually active students, sexual orientation, number of partners, condom use, pregnancy, drug use concurrent with sex, amount of education provided in school re: HIV/STD transmission), 2) use of alcohol, tobacco and other drugs, 3) attitudes and perceptions about alcohol, tobacco and other drugs, 4) injuries, violence and safety, 5) body weight and nutrition, 6) physical activity, and 7) youth assets.

Population: Responses represent the population of Vermont students in 8th through 12th grade who were attending schools that disseminated the survey. The term "young MSM" is used in this document to refer to male YRBS respondents who reported ever having had sex with males.

Strengths: In 2003, school staff administered the YRBS to 31,814 eighth to twelfth grade Vermont students in 153 schools representing 60 supervisory unions. Of those students surveyed, a representative sample of approximately 8,000-9,000 surveys is analyzed. On average 350 MSM are surveyed each year (based on the years 1999, 2001, 2003). This is a representative sample of 8th through 12th grade students in Vermont. This survey can indicate what risk behaviors students are, or are not, engaging in, and the survey allows comparisons amongst groups of students in terms of each behavior or asset. The YRBS was developed to collect data that are comparable on the local, state, and national levels. The survey is anonymous to encourage honest responses by students, and over 100 consistency checks are run on the data to exclude careless, invalid, or logically inconsistent answers.

Limitations: The YRBS relies on self-reported information, thus under- or over-reporting of information may occur. Because the survey is administered in school the data are representative only of young people enrolled in school and cannot be generalized to all young people in Vermont. (For example, youth at highest risk may be more likely to be absent from school or to drop out of school, and thus they may be underrepresented in this survey). Also, participation in the survey is voluntary so schools and/or individual students may have declined to participate. The YRBS describes what behaviors youth are engaging in but the survey does not address why they are engaging in these behaviors.

Person Environment Zone Project

Overview: Principal investigators on this project are Sondra Solomon, Carol Miller, and Rex Forehand (all professors in the psychology department at UVM). This is an NIMH-funded study that began in 2004. This project tests a theoretical model of how the stigma associated with HIV affects the risk behaviors of people with HIV/AIDS in rural settings.

Population: HIV positive residents of VT, NH, NY, MA and ME who chose to participate in this study.

Strengths: This study is NIMH approved and funded and has met the requirements of UVM's Institutional Review Board. This project is attempting to recruit 250 HIV positive individuals with the majority of individuals Vermont residents; this is an impressive number considering that there were 430 people in Vermont living with HIV or AIDS in 2004. This study provides a comprehensive profile of the experiences of being HIV positive in Vermont (stigma, psychological and physical health, risk-related behaviors). This is the only project focusing on the stigma and behavior of HIV positive individuals in Vermont, and one of the few projects in the U.S. addressing HIV/AIDS in rural areas.

Limitations: Participation in this study is voluntary and all participants are compensated for their time. This is not a random sample of all HIV positive Vermont residents, therefore the results are not generalizable to all HIV positive individuals in the state.

National Survey on Drug Use and Health (NSDUH)

Overview: Formerly called the NHSDA, the NSDUH is the primary source of statistical information on the use of illegal drugs by the U.S. population 12 years of age or older. This survey has been conducted by the Federal Government since 1971; data is collected by administering questionnaires to a representative sample of the population through face-to-face computer assisted interviews at their places of residence. The survey is sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA) of the U.S. Department of Health and Human Services and is planned and managed by SAMHSA's Office of Applied Studies (OAS). Persons excluded from the survey include homeless persons who do not use shelters, military personnel on active duty, and residents of institutional group quarters, such as jails and hospitals. Consistent with the 2002 survey, the 2003 NSDUH employed a 50-State sample design with an independent, multistage area probability sample for each of the 50 States and the District of Columbia to facilitate State-level estimation. Youth and young adults were over-sampled so that each State's sample was approximately equally distributed among three major age groups: 12 to 17 years, 18 to 25 years, and 26 years or older. Information captured by the NSDUH questionnaire includes use of cocaine, receipt of treatment for illicit drugs, and need of treatment for illicit drugs during the past year; use of alcohol, tobacco, or marijuana during the past month; and perceived risk of binge drinking, marijuana use, or smoking.

Population: Noninstitutionalized, civilian population aged twelve years or older.

Strengths: Nationally, 67,784 completed interviews were obtained in 2003. NSDUH is national, standardized survey of drug use behaviors among the general population. Since 1999 information has been collected using a combination of computer-assisted interviewing methods in an effort to provide respondents with a more private and confidential means of answering questions about substance use and other sensitive behaviors.

Limitations: Due to changes in the survey instrument and the survey methodology, comparisons cannot be made between years prior to 2002 and more recent years (2002 to the present). Direct state-level estimates are available only for 8 states; other states (including Vermont) must rely on statistical estimates. NHSDA estimates represent behaviors in the general population, thus the survey may underestimate the level of substance use in the population at highest risk for HIV. Data for the NHSDA are self-reported and are subject to recall bias, which may result in under-reporting drug use behaviors.

STD Surveillance

Sexually Transmitted Disease (STD) Surveillance

Overview: Chlamydia, gonorrhea and syphilis infections are reportable under Vermont's Communicable Disease Regulations. The Vermont Department of Health STD Program conducts statewide surveillance to determine sexually transmitted disease (STD) incidence and to monitor trends. It also conducts partner counseling and makes referrals for examination and treatment in order to reduce the spread of STDs. Laboratories, hospitals, physicians, insurance companies and other health care providers are required to report all cases of Chlamydia, gonorrhea and syphilis to the Vermont Department of Health. Basic demographic information (age, sex and race/ethnicity) is available for Chlamydia and gonorrhea cases, but there is an extremely small number of syphilis cases (one case in 2004).

Population: All persons who are diagnosed with an infection that meets the CDC case definition for the infection and are reported to the Vermont Department of Health.

Strengths: STD surveillance data can serve as the surrogate marker for unsafe sexual practices and demonstrate the prevalence of STDs in the state. Because of shorter incubation times between exposure and infection, STDs can serve as a marker of recent unsafe sexual behavior. In addition, certain STDs (i.e., ulcerative STDs) can facilitate transmission and/or acquisition of HIV infection. Finally, changes in trends of STDs may indicate changes in community sexual norms, such as unprotected sex.

Limitations: STDs are reportable in every state (indicating that cross-state and national comparisons can be made), but requirements vary across states. Reporting of STDs from the private sector providers may be less complete. Although STD risk behaviors result from unsafe sexual behavior, they do not necessarily correlate with HIV risk. Trends in Chlamydia infections may reflect changes in reporting and screening practices rather than disease trends.

HIV Counseling and Testing Data

Counseling and Testing System (CTS)

Overview: Vermont's CTS was originally developed in 1988 to assist in collecting data on the population receiving counseling and testing services in the state. Funding from the CDC supports the Vermont Counseling, Testing, and Referral (CTR) system, which consists of anonymous and confidential voluntary HIV counseling, testing, and referral services with emphasis on a client-centered risk-reduction counseling model. There are currently 44 sites in Vermont that offer anonymous and/or confidential HIV testing, including AIDS Service Organizations (ASOs), service organizations that focus on youth or IDU populations, department of corrections, medical, and family planning organizations. The Vermont Department of Health collects information on counseling and testing services delivered, as well as the characteristics of clients receiving the services. The characteristics include demographics, insurance, risk information, and testing information (data, testing history, test result). No personal identifying information is collected.

Population: All clients who receive confidential or anonymous HIV testing services at a counseling and testing site funded through a CDC cooperative agreement.

Strengths: In 2004 2,764 HIV tests were conducted through CTS. CTS data can be examined across years to evaluate trends in the type of tests conducted (anonymous or confidential, blood-based or saliva), the type of testing site, or the demographic characteristics of the people being tested (including the mode of exposure to HIV). Testing data may highlight the effect of prevention programs focused on specific populations.

Limitations: CTS collects test-based, rather than person-based data. Information is collected only from people who seek counseling and testing services or agree to be tested after consultation with a counselor at a testing site. Therefore, estimation of HIV statewide prevalence is not possible with CTS data because the clients self-select for testing. Because a person can repeatedly seek testing, it is not possible to distinguish individuals who have been tested multiple times. Since the CTS system gathers data on HIV testing, changes in testing patterns may reflect changing program priorities rather than testing patterns of individuals.

Substance Abuse Data

Alcohol and Drug Abuse Program (ADAP)

Overview: The ADAP is located within the Vermont Department of Health and the program collects substance abuse treatment admissions data from facilities that receive state funding. All facilities receiving state funding are mandated to report sociodemographic information on all substance abuse treatment admissions, including the substance being abused. This data provides information on the sex, race/ethnicity and age

group of the people admitted to state-funded drug treatment programs for specific substances.

Population: People who receive drug treatment at facilities that receive state funding.

Strengths: ADAP data offer an indirect measure of the prevalence of injection drug abuse in Vermont. The data may also serve as indication of substance abuse trends in the state; for example, rises in the number of treatment admissions for crystal methamphetamine have been associated with increases in HIV transmission in other areas of the country.

Limitations: Admissions data is admissions-based rather than person-based, meaning that multiple treatment admissions for one individual may be included in the data. Data is only representative of individuals in drug treatment programs that receive state funding and does not include information for individuals seen only by private practitioners; therefore this data is not a complete snapshot of substance abuse treatment in Vermont.

Vermont Center for Justice Research (VCJR)

Overview: This data provides information on the number of drug charges filed in Vermont district court. Ideally, this data provides a snapshot of the number of charges filed for certain types of drugs. Data is limited to the number of charges filed for specific substances in each region, and the sex and age of the person charged.

Population: Those who entered the district system with a drug charge.

Strengths: This data may provide an indication of drug use trends statewide and may indicate rises in the use and abuse of certain substances (such as crystal methamphetamine or heroin) that are associated with increases in HIV transmission. In the future, it may be possible to compare substance use in different geographic areas of Vermont, perhaps indicating a need for prevention and/or intervention efforts.

Limitations: This data is charge-based, not person-based, meaning that one person may be represented more than once because s/he received multiple drug charges.

Vital Statistics Data

Vital Statistics Data

Overview: Federal law mandates the collection and publication of births and other vital statistics data. (The National Vital Statistics System is the federal compilation of this data, in cooperation with each state and the National Center for Health Statistics). Vermont's registration of vital statistics began in 1857; the current system gathers data on seven types of vital events: births, deaths, marriages, civil unions, divorces, fetal deaths, and abortions. Physicians must complete the cause of death information on death

certificates prior to the filing of these certificates with VDH, this includes indicating whether HIV was an underlying or contributing cause of death.

Population: All live births and all deaths occurring within Vermont.

Strengths: Vital records include all births and deaths in the state as well as all births and deaths occurring in other states; reporting is mandated, standardized procedures are used to collect this data, and the data is 100% complete. Data are available statewide and can be used to determine the number of HIV-related deaths in various service areas of the state. Comparing the characteristics of persons living with AIDS to deaths among persons with AIDS may provide some indication of service disparities among groups. The data can also be used to summarize group-specific trends in terms of HIV-related mortality.

Limitations: Birth certificate data may not be complete for data that is obtained from patient medical records (i.e., smoking history, morbidity; data that may be useful for focusing prevention efforts). HIV infection may be underreported in the death certificate data because the physician completing the certificate may be unaware of the deceased individual's HIV positive status.

Population Data

U.S. Bureau of the Census (Census Bureau)

Overview: The Census Bureau collects and provides information about the people and economy of the U.S. The Census Bureau's Web site (www.census.gov) includes data on demographic characteristics (e.g., age, race, Hispanic ethnicity, sex) of the population, family structure, educational attainment, income level, housing status, and the percentage of persons living at or below the poverty level. Tables and maps of census data are available for all geographic areas to the block level. Summaries of the most requested information for states and counties are provided, as well as analytical reports on population changes, race, age, family structure, and apportionment. The most recent decennial census was completed in 2000. The American Community Survey (ACS) is a mandatory survey of 3 million households per year (as of 2005) that is designed to replace the decennial survey. The ACS will eventually survey both residences and group quarters (nursing homes, prisons, college dorms, etc.) The ACS will be the largest household survey in the U.S. and will provide annual (or multi-year average) estimates of selected social, economic and housing characteristics of the population for geographic areas and subpopulations.

Population: U.S. population

Strengths: A wide range of online statistical data on the U.S. population is available in different formats (e.g., tables, maps). State- and county-specific data are easily accessible. Links to other census information Web sites are provided. Data on the number of non-white Vermont residents is important in gauging the impact of the HIV

epidemic on these populations (which have traditionally shown higher rates of infection). Information is also available on in- and out-migration of specific populations.

Limitations: 2003 ACS population estimates are more up to date than 2000 population estimates, but these numbers do not yet include individuals in group quarters (colleges, prisons, etc.); thus the people in these living situations in Vermont may be underrepresented in these population estimates.

Vermont Department of Health Population Estimates

Overview: For the most recent years (2003 and 2004) the Vermont Department of Health has used estimates that are a modification of the estimates produced by the Bureau of the Census for the National Center for Health Statistics (NCHS). The Census/NCHS data provides us with town total population estimates and population by age/race/sex for Vermont Counties. These data however, do not accurately estimate the numbers of very young Vermonters (age < 5) when compared to the numbers of VT resident births. So VDH produces our own estimates for the under 5 population by county, then makes adjustments to Census/NCHS data so that the state and county totals match those sources. Some minor adjustments are made to the town estimates to account for round off error in the production of the county age/race/sex estimates, and to account for instances where the Census Bureau has estimated populations for what are believed to be uninhabited places (Lewis, Avery's Gore and Warner's Grant).

Strengths: The Census/NCHS utilize detailed administrative records data in producing their estimates, making them the most accurate available source for population estimates (particularly for the over 65 age group which are estimated using Medicare enrollment data). Use of locally available data (birth records) to enhance the Census/NCHS numbers ensures we are getting the most accurate possible estimates of the under 5 population. Since young children are the focus of many VDH programs, it is critical that we have a solid estimate of how many young children there are in Vermont.

Weaknesses: The major cost of using the more accurate VDH modification of the Census/NCHS estimates is that timeliness suffers. Less accurate estimates are available much sooner than these numbers are available to us. The Census/NCHS estimates as of July 1 for a given year are not available until August or September of the following year. Then VDH staff time is required to perform the calculations necessary for the in-house modifications.

Robert Wood Johnson and Kaiser Family Foundations

Overview: The Robert Wood Johnson Foundation and the Kaiser Family Foundation are both private, non-profit organizations focusing on issues of health and health care. Both foundations contract with outside organizations. During 2004, the Robert Wood Johnson Foundation made 823 grants and contracts, totaling \$249.3 million in support of programs and projects to improve health and health care in the United States. The Robert Wood Johnson Foundation and the Henry J. Kaiser Family Foundation provide independent analyses of health and healthcare issues.

Population: Depends on the specific project. See web pages cited in text for information regarding specific projects referenced in this document.

Strengths: Specific strengths depend on the data source, although generally speaking, this data provides an indication of access to care for various populations and can be used to compare access across geographic areas. This data is indicative of the overall state of health care.

Limitations: Depends on the specific project. See web pages cited in text for information regarding specific projects referenced in this document.

Geographic Information System (GIS) Data

Overview: The Vermont Department of Health utilizes ESRI ArcView/ArcGIS mapping software. The Vermont Center for Geographic Information is the state data warehouse and source for most of the base data used to produce the maps in this document.

Population: Depends on the data being mapped.

Strengths: The GIS system provides easy to access, visual depiction of HIV-related information for readers.

Limitations: Maps can become confusing if too much information is provided on a single map. Someone must be trained to use and access this system.

Ryan White CARE Act Data

Unmet Needs Project

Overview: This project represents an effort to identify gaps in care for Vermonters living with HIV. The measure of unmet need used for this project is based on analysis of two HIPAA compliant data sets. One data set (HARS) includes basic demographic information regarding Vermont residents with HIV/AIDS. The other data set includes basic demographic information regarding individuals who receive HIV related medical services in Vermont. Because these data sets do not include unique person identifiers, the analysis uses the method of statistical Probabilistic Population Estimation. Probabilistic Population Estimation provides valid and reliable estimates of the number of unique individuals shared across data sets. These estimates are based on the distribution of date of birth and gender in the data sets.

Population: Data on individuals currently identified as HIV positive in the Vermont Department of Health surveillance system (HARS) and individuals receiving medical care for HIV in the state are utilized to estimate the number of people who are not currently receiving medical care for their HIV.

Strengths: Probabilistic Population Estimation has been used in multiple studies to measure the amount of overlap in populations that do not have a unique identifier. This is one of the only sources of information regarding unmet need for people living with HIV in Vermont.

Limitations: The data are based on estimates, not on an actual census of need.

Ryan White Comprehensive AIDS Resources Emergency (CARE) Act

Overview: The federal Ryan White CARE Act provides health care for people with HIV disease. Enacted in 1990, it fills gaps in care faced by those with low-incomes and little or no insurance. Vermont receives federal funding under Titles II and III of the Ryan White CARE Act. Title II provides money to states for primary health care and support services for people living with HIV and their families (\$883,059 for Vermont organizations in fiscal year 2004). Title III monies support early intervention and outpatient primary medical care services by directly funding private and non-profit organizations (\$514,896 to Vermont in 2004). Vermont does not receive Title I funds which provide emergency assistance to localities disproportionately affected by the HIV/AIDS epidemic. Although Vermont does not receive Title IV funds, 54 Vermont residents do access Title IV funds through services provided by the state of New Hampshire (\$32,336 of New Hampshire's 2004 Title IV funds went to Vermont residents). Title IV funds support coordinated services and access to research for children, youth and women with HIV and their families.

Reports by the HIV/AIDS program's Title II Administrator are made to the federal Health Resources and Services Administration (HRSA) on a yearly basis. These CARE Act Data Reports (CADR) are provider-based reports with aggregate client, provider, and service data for all CARE Act programs. Reports include information on all clients who receive at least one service during the reporting period. CADR data includes information on the demographics of all clients (sex, age, race/ethnicity), exposure category, and the number of clients receiving each type of service.

In 2005 Vermont began instituting HRSA's mandate to give priority funding to six core services: primary medical care, substance use treatment, mental health therapy, oral health, HIV medications and case management. Only if funding for these services is paid for through other sources can Title II dollars be used for "non-core services" such as food assistance, transportation, rent, etc.

Population: People who know their HIV serostatus, who are currently seeking care and treatment services through Ryan White Title II- funded providers, and who are financially eligible to receive AMAP or DCAP services are included in this data.

Strengths: The program database is a comprehensive database that includes information on all persons receiving Ryan White Title II services. The database is important for monitoring which Ryan White resources are being utilized, how often and by whom. In 2002 the HIV/AIDS Program established a standardized unique identifier reporting system with the six state- and federally-funded AIDS Service Organizations and the

Comprehensive Care Clinics in order to reduce duplication of services and to determine the number of persons receiving services from these organizations. This provides a more accurate picture of how many people are truly seeking care through services provided by Ryan White Title II.

Limitations: This data cannot be generalized to all HIV- infected persons living in this state, since the data is collected only on persons who know their HIV serostatus, who are currently seeking care and treatment services through Ryan White Title II- funded providers, and who are financially eligible to receive services.

HIV/AIDS Medication Assistance Program (AMAP)/ HIV Dental Care Assistance Program (DCAP)

Overview: Both AMAP and DCAP are funded by Ryan White CARE Act Title II funds (described above). Title II funds may be used to provide a variety of health care and support services. The AMAP provides financial assistance for the purchase of prescription medications to Vermonters living with HIV disease who meet certain income guidelines. AMAP allows uninsured and underinsured individuals to access anti-retroviral and related therapies. DCAP provides financial assistance to meet the dental needs of underinsured and uninsured Vermonters living with HIV/AIDS. The services in this program include: diagnostic procedures including x-rays and evaluations; preventive care including cleanings; restorative treatments including silver fillings, tooth colored fillings and root canals; removable prostheses including complete and partial dentures and necessary oral surgery including extractions.

Population: People who know their HIV serostatus, who are currently seeking care and treatment services through Ryan White Title II- funded providers, and who are financially eligible to receive AMAP or DCAP services are included in this data.

Strengths: Data is collected on 100% of the people who receive services via AMAP/DCAP.

Limitations: This data cannot be generalized to all HIV- infected persons living in this state, since data is collected only on persons who know their HIV serostatus, who are currently seeking care and treatment services through Ryan White Title II- funded providers, and who are financially eligible to receive services.

Assessing Barriers to Prevention and Care Services

Overview: This study was carried out in 2004 in an effort assess barriers to HIV/AIDS prevention, support and medical services for Vermont communities of color. This study was sponsored by the Office of Minority Health and the HIV/AIDS Program and was carried out under the guidance of HASAC. Three groups were studied: 1) members of communities of color not already connected to HIV/AIDS service 2) persons incarcerated in Vermont institutions, and 3) providers of HIV/AIDS prevention, support or medical care. Data were gathered via focus groups, individual interviews and surveys.

Population: Members of certain communities of color (Native Americans, African Americans, Hispanic-Latino individuals, African Refugees and Vietnamese refugees) living in northwestern Vermont (Chittenden & Franklin Counties). Individuals incarcerated in Vermont during May and June of 2004 in one of the six participating institutions. Providers of HIV/AIDS prevention, support or medical care services at one of seven sites statewide.

Strengths: This study provides much-needed data on the barriers to prevention and care services that are experienced by minority populations in Vermont. Data were collected from four focus groups (all held in Chittenden County), 48 structured interviews with members of communities of color from Chittenden and Franklin Counties, 934 completed surveys from incarcerated individuals in Vermont (including 220 persons of color), and structured telephone interviews with seven providers of HIV/AIDS prevention, support or medical care services (providers located throughout the state). An effort was made to collect data in a culturally sensitive manner, meaning that members of communities of color were directly involved in data gathering.

Limitations: The study encountered multiple challenges, including difficulty in guaranteeing anonymity and confidentiality due to the fact that Vermont's communities of color are relatively small so members know one another. The plan to recruit participants via CBOs was unsuccessful and the interviewers had to directly recruit participants. There were also issues with standardization of interview and focus group protocols for members of communities of color (this was not an issue with the provider interviews). Data gathered from these focus groups and individual structured interviews was limited to participants in the northwestern part of the state and should not be generalized beyond this area. The original study plan had to be modified due to difficulty accessing people who were not already known to the Vermont HIV community network.

Appendix B: Glossary

AIDS: AIDS stands for acquired immunodeficiency syndrome. An HIV-infected person receives a diagnosis of AIDS after developing one of the CDC-defined AIDS indicator illnesses (see *opportunistic infection*) or on the basis of certain blood tests (i.e., having a CD4 count of less than 200 or a CD4 percent of less than 14). A positive HIV test result does not mean that a person has AIDS.

Bias: Bias occurs when there is a systematic error in data that leads to results that do not represent the true findings. For example, if individuals feel uncomfortable about reporting that they have engaged in high-risk behaviors, then these behaviors will be systematically under-reported. Consequently, conclusions about the occurrence of such behaviors would be considered “biased.”

CDC: The Centers for Disease Control and Prevention (CDC), within the U.S. Department of Health and Human Services, is the lead federal agency for protecting the health and safety of the people of the United States. CDC accomplishes its mission through developing and applying disease prevention and control, environmental health, and health promotion and education activities designed to improve public health in the U.S. The CDC provides the majority of funding for HIV prevention, and all of the funding for HIV surveillance activities in Vermont.

Exposure Category: This term is used to summarize multiple risk factors that an individual may have had by including combination categories of the three most common ones (MSM, IDU, heterosexual contact); risk factors other than these three groups (e.g., receipt of a blood transfusion) appear only in single categories that are ranked lower than the combinations of MSM, IDU and heterosexual contact. This differs from transmission category which lists only the one risk factor through which HIV was most likely to have been transmitted.

HASAC: HIV/AIDS Services Advisory Council

HAART: Highly Active Antiretroviral Therapy (HAART) refers to aggressive anti- HIV treatments that usually include a combination of protease and reverse transcriptase inhibitors, which interrupt the HIV life cycle, and whose purpose is to reduce a person’s viral load to undetectable levels.

HIPAA: The Health Insurance Portability and Accountability Act required the Department of Health and Human Services (HHS) to establish national standards for electronic health care transactions and national identifiers for providers, health plans, and employers. It also addressed the security and privacy of health data.

HIV: HIV is an acronym for “Human Immunodeficiency Virus,” which is the virus that causes AIDS. A person who has contracted the virus is said to be HIV-positive or HIV- infected.

HIV Disease: HIV disease describes both individuals who have been diagnosed as HIV positive only and those diagnosed with AIDS. Individuals with either carry the HIV virus.

Incidence: Incidence refers to the number of new cases of disease that occur in a population during a specified time period, usually a year. Even though HIV data are often presented as “new cases of HIV,” these data do not represent new infections (true HIV incidence), because a person may not be tested for HIV in the same time period that he or she became infected. On the other hand, incidence can be presented for diseases (e.g., some STDs). These diseases have clear symptoms that are detectable when a person becomes infected, and which cause a person to be tested or to seek treatment shortly after infection.

Median: The middle value in a data set. Usually, approximately half the values will be higher and half will lower.

N: total number of people in a sample

n: a subgroup within a sample

Opportunistic infection (OI): Infection with HIV can weaken a person’s immune system to the point that it has difficulty fighting off certain infections. These types of infections are known as “opportunistic” infections because they take the opportunity a weakened immune system gives to cause illness. Some examples of opportunistic infections are *Pneumocystis carinii* pneumonia (PCP) and Kaposi’s sarcoma (KS). Opportunistic infections (OIs) are considered to be CDC-defined AIDS indicator illnesses, which means that an HIV- infected person receives a diagnosis of AIDS after developing them.

Perinatal: The word “Perinatal” means “around birth” and is used to describe events that occur during labor and birth, and immediately following delivery. When “perinatal” is used to describe HIV transmission, however, this word applies more broadly and describes any time that a mother may pass HIV to her child – either while she is pregnant, during birth, or through breast-feeding.

Prevalence: Prevalence refers to the total number of persons with a specific disease or condition at any given time. HIV prevalence data are generally presented as “persons living with HIV.” HIV prevalence data provided by HIV surveillance programs will underestimate the true HIV prevalence because HIV- infected persons who have not yet been tested or reported to the health department are not included.

Proportion (percentage): A proportion is a type of ratio in which the numerator is included in the denominator. Because the numerator is a subset of the denominator, a proportion can be thought of as a ratio of a “part” of the “whole.” A proportion is usually expressed as a percentage.

Rate: A rate is a special type of ratio that includes a specification on time. In epidemiology, rates express the probability or risk of disease or other events in a defined population over a specified period of time, often one year. For Vital Records, rates are not based on probabilities, but are calculations based on verified or repeatable counts.

Reporting Delay: The period of time between documentation of an infection or diagnosis of an illness, and the report of that infection or illness to authorities.

Risk Factor: Refers to the individual routes of exposure to HIV (before the person found out that s/he was HIV positive) for which data are routinely collected for surveillance of HIV/AIDS cases.

Ryan White CARE Act: The Ryan White Comprehensive AIDS Resources Emergency Act was created to provide federal assistance to increase the availability of primary health care and support services for persons living with HIV disease, to increase access to care for underserved populations, and to improve the quality of life for those affected by HIV. The CARE Act was first enacted by Congress in 1990 and was reauthorized in 1996 and 2000. HRSA implements the CARE Act and directs assistance through the following channels:

- Title I provides support to Eligible Metropolitan Areas (EMAs) with the largest numbers of reported AIDS cases, to meet emergency service needs of persons living with HIV;
- Title II provides support to all states and territories to improve the quality, availability, and organization of health care and support services for persons living with HIV and their families;
- Title III supports outpatient early intervention HIV services through funding to public and private nonprofit entities;
- Title IV funds public and private nonprofit entities to conduct projects to coordinate services to children, youth, women, and families with HIV/AIDS;
- Part F provides support for Special Projects of National Significance (SPNS) to develop and evaluate innovative models of HIV/AIDS care, for AIDS Education and Training Centers (AETC) to conduct education and training for health care providers, and for the HIV/AIDS Dental Reimbursement Program to assist with providing oral health services to HIV- infected patients.

Sample: A group selected from a total population with the expectation that studying this group will provide relevant information about the total population.

Surveillance: In a public health context, surveillance refers to the collection and analysis of data concerning a certain disease that is monitored over time.

Testing (anonymous, confidential): In Vermont, an individual can choose to be tested anonymously or confidentially for HIV in a publicly funded testing site. Both anonymous and confidential HIV-positive test results are reported to the health department where information is maintained under the strictest security and confidentiality measures. Persons who are tested anonymously do not provide their names when taking the HIV test. Persons who are tested confidentially do provide their names when taking the HIV test. Only persons who are tested confidentially are included in the HIV surveillance data.

Transmission category: In order to monitor trends in HIV transmission, HIV/AIDS cases are classified into one of several transmission categories developed by the CDC. The transmission category indicates the risk factor through which HIV was most likely to have been transmitted.

- *Men who have sex with men (MSM)* refers to men who report having had sexual contact with other men, i.e., homosexual or bisexual contact.
- *Injection drug user (IDU)* cases are those who report ever using drugs that require injection. While it may be valuable to know that a person has used illicit drugs through other routes, this information would not be enough to classify a case as IDU.
- *MSM/IDU* refers to men who report having sexual contact with other men and who also report ever using non-prescribed drugs intravenously.
- *High-risk heterosexual contact (HRH)* cases have reported heterosexual contact with a partner who is at increased risk for HIV infection, i.e., a homosexual or bisexual man or an IDU, or a partner with documented HIV infection.
- *Hemophilia/Transfusion/Transplant* cases are those who report having received a transfusion of blood or blood products prior to 1985.
- *Perinatal* cases are cases of HIV infection in children resulting in transmission from an HIV positive mother.
- *Unspecified or “no identified risk” (NIR)* cases are those cases who have no reported history of exposure at the time of publication. This category includes persons for whom the surveillance protocols to document risk information have not yet been completed, persons whose exposure history is incomplete because they have died, persons who have declined to disclose their risk behavior or who deny any risk behavior, and persons who do not know the HIV status or risk behaviors of their sexual partners.

Trend: A long-term change in frequency, usually an increase or a decrease.

Young MSM: For the purposes of this document, young MSM are defined as male youth in 8th - 12th grades who ever reported on the YRBS that they had ever had sex with a male.

Appendix C: Abbreviations

ACS: American Community Survey (designed to replace the decennial census long form)

ADAP: AIDS Drug Assistance Program (this is known as **AMAP in Vermont** – HIV/AIDS Medication Assistance Program); within the Vermont Department of Health the division of Alcohol and Drug Abuse Programs is also referred to as ADAP

AMAP: HIV/AIDS Medication Assistance Program

ASO: AIDS Service Organization

BRFSS: Behavioral Risk Factor Surveillance System

Ryan White CARE Act: Ryan White Comprehensive AIDS Resources Emergency Act

CBO: Community Based Organization

CCC: Comprehensive Care Clinic

CDC/CDCP: Centers for Disease control and Prevention

CPG: Community Planning Group

CPS: Current Population Survey

CTR: Counseling, Testing and Referral System

DCAP: Dental Care Assistance Program

FDA: Food and Drug Administration

GIS: Geographic Information Systems

HAART: Highly Active Antiretroviral Therapies

HARS: HIV/AIDS Reporting System

HASAC: HIV/AIDS Services Advisory Council

HIPPA: Health Insurance Portability and Accountability Act

HITS: HIV Testing Surveys

HMO: Health Maintenance Organization

HRSA: Health Resources and Services Administration

IDU: Injection Drug User

MSA: Metropolitan Statistical Area

MSM: Men who Have Sex with Men

N: total number of people in a sample

n: a subgroup within a sample

NSDUH: National Survey on Drug Use and Health (*Formerly known as the **NHSDA**, the National Household Survey of Drug Abuse*)

PEZ: Person Environment Zone

PLWHA: People Living with HIV or AIDS

PRAMS: Pregnancy Risk Assessment Monitoring System

SAMHSA: Substance Abuse and Mental health Services Administration

STD: Sexually Transmitted Disease

VCJR: Vermont Center for Justice Research

VDH: Vermont Department of Health

YRBS: Youth Risk Behavior Survey