



**2011 Rhode Island
HIV/AIDS
Epidemiologic Profile with Surrogate Data**



A publication of



**Rhode Island Department of Health
Division of Community Family Health and Equity
Office of HIV/AIDS & Viral Hepatitis
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Table of Contents

Preface	3
Acknowledgements	5
Introduction	
• Introduction.....	6
• Organization of the Epidemiologic Profile.....	7
• HIV/AIDS Surveillance in Rhode Island.....	7
• Data Sources.....	8
• Data Limitations.....	9
Core Epidemiologic Questions	
Core epidemiological questions.....	11
1) What are the socio-demographic characteristics of the population of Rhode Island?	12
2) What is the impact of the HIV/AIDS epidemic on Rhode Island?.....	15
• AIDS in Rhode Island.....	15
• Pediatric AIDS.....	23
• Summary of AIDS in Rhode Island.....	24
• HIV in Rhode Island.....	25
3) Who is experiencing differential impact from the HIV/AIDS epidemic?.....	32
• MSM ‘Men Who Have Sex With Men’.....	32
• IDU ‘Intravenous Drug Users’.....	35
• Minority Women.....	39
• Inmates of the Rhode Island ACI ‘Adult Correctional Institute’.....	41
• Persons unaware of their HIV status.....	42
• Youth and HIV.....	44
Appendices	
Surrogate Data in Rhode Island.....	46
• STDs in Rhode Island.....	47
• CTS: HIV Counseling Testing and Referral Sites in Rhode Island.....	56
• Encore: Rhode Island’s Needle Exchange Program.....	58
• Tuberculosis in Rhode Island.....	60
• Viral Hepatitis C in Rhode Island.....	61
• Behavior Risk Factor Surveillance System (BRFSS).....	65
• Youth Risk Behavior Survey (YRBS).....	66
List of Figures and Tables	69

Preface

We are pleased to present the 2011 HIV/AIDS Epidemiologic Report with Surrogate Data for your reading pleasure, with 2011 calendar year data. We hope this serves you well as we have attempted to capture the trends and the distribution of HIV/AIDS and tangential factors associated with the epidemic.

As you may be aware Rhode Island as well as other states must report both HIV and AIDS diagnoses by name. These names are recorded via physicians and other providers and only revealed to the states collecting the information. Names are never passed on to the Centers for Disease Control and Prevention (CDC). Data security and confidentiality is one of the top most priorities for the program which is bounded by the CDC data security guidance and requirements for HIV Surveillance programs. Our Rhode Island HIV/AIDS Surveillance Team is among the finest in the country and continues to receive praise from the community and CDC for the quality of data both upon input and report.

This profile is compliant with the CDC surveillance and epidemiologic reporting guidelines. Upon its release, it is immediately distributed to community partners through the department of health website and is disseminated to both the Rhode Island Community Planning Group for HIV Prevention (RICPG) as well as the HIV Provision of Care Committee. The data is primarily gathered by the Rhode Island Department of Health as part of our public health assurance and assessment functions and is also a mandate of our HIV Surveillance Grant with the CDC. As part of these responsibilities, the reportable diseases of HIV, AIDS and Viral Hepatitis (B & C) are diligently recorded, analyzed and monitored by our group of professionals so that we can continue to monitor trends and distribution of diseases.

It is important that we acknowledge the key contributors to this document. Let me begin by thanking our surveillance staff, Disease Intervention Specialists, Kathleen Barton and Linda Quattro deserve special thanks for their very hard work, passion and commitment. Investigating disease is both an art and a science and the staff needs to be commended for their attention to detail. As the primary author of this profile I have worked hand in hand with many staff as well as with community partners to produce this report. Of course Dr. Utpala Bandy, Dr. Peter Simon, Dr. Nicole Alexander and Samara Viner-Brown assisted in the review and editing of this document. We are grateful for their contributions and continued guidance.

In addition, I want to thank Ted Cooper for technical assistance and support for the HIV/AIDS surveillance database and server maintenance and upgrades. We appreciate his knowledge and guidance. Our appreciation also goes to Dr. Fine, the Director of Health, Ana Novais, Executive Director of Health, Patricia Raymond, Preventive Services and Community Practices Team Lead, Division of Community Family Health and Equity, and Seema Dixit, Chief Administrator, Office of HIV/AIDS & Viral Hepatitis for their leadership and support.

Finally, I wish to acknowledge the Rhode Island Community Planning Group and their efforts in making Epidemiology become more than just a report. They, as community partners, have endured through numerous presentations regarding data and information, and many have mastered the ability to understand the data herein. Most importantly they remind us each and

every day, there are faces behind the numbers. We thank them for their dedication and their help in making this document reader friendly and useful.

Please continue to share your comments and suggestions so we may continue to strive towards the highest of standards. Additional copies of this report are available through our website at www.health.ri.gov. Under Health Topics, click on “H” in the menu, and then click on HIV/AIDS, then Data, and you will find this report on upper right side of the page.

Sincerely,

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INTRODUCTION

Introduction

The Epidemiologic Profile provides detailed information about the current HIV/AIDS and Hepatitis C (HCV) epidemics in Rhode Island. The profile aims to describe the general population of Rhode Island, HIV infected persons, persons with AIDS, and those that are at risk of HIV infection. A similar analysis is done for HCV.

As mentioned within the preface, this report serves many different functions and is part of the commitment of the Rhode Island Department of Health to disseminate health related information to our partners.

Organization of the Epidemiologic Profile

This report is organized around three core epidemiological questions. Each question will be represented in a separate chapter, which will include relevant data and interpretations. The core epidemiologic questions are:

- 1) What are the socio-demographic characteristics of the population of Rhode Island?
This section provides information on the general demographic and socioeconomic characteristics of Rhode Island.
- 2) What is the impact of the HIV/AIDS epidemic on Rhode Island?
This section examines the scope of the HIV/AIDS epidemic in Rhode Island. It is divided into two parts; the first part addresses AIDS cases and the second part addresses HIV infected (not AIDS) individuals.
- 3) Who is experiencing differential impact from the HIV/AIDS epidemic in Rhode Island?
This section addresses certain populations that have been disproportionately affected by the epidemic. This section relies mostly on HIV surveillance data (not AIDS) as it aims to address current trends in HIV transmission.

HIV/AIDS Surveillance in Rhode Island

Surveillance mandate

In accordance with Rhode Island's General Laws, Chapter 23 and the "Rules and Regulations for the Reporting of Communicable Diseases" of the Rhode Island Department of Health, both HIV and AIDS are reportable to the Office of HIV/AIDS & Viral Hepatitis by hospitals, laboratories and licensed health care professionals. And as of July 2006, HIV is also reportable by name to the Health Department by the aforementioned entities.

Case definitions:

In its collection, assessment, and aggregation of HIV and AIDS reports, the Rhode Island Department of Health conforms to surveillance case definitions of HIV and AIDS promulgated by the Centers for Disease Control and Prevention (CDC) and revised over



time. Case definitions have been nationally published in 1986, 1987, 1992, 1993, 1999 and 2008.

- CDC. Classification system for human T-lymphotropic virus type III/lymphadenopathy-associated virus infections. MMWR 1986; 35:334.
- CDC. Revision of the CDC surveillance case definition for acquired immunodeficiency syndrome. MMWR 1987; 36:1-15S.
- CDC. 1993 Revised Classification System for HIV Infection and Expanded Surveillance Case Definition for AIDS Among Adolescents and Adults. MMWR 1992; 41(RR-17).
- CDC. Appendix: Revised Surveillance Case Definition for HIV Infection. MMWR 1999; 48(RR13); 29-31.
- CDC. Revised Surveillance Case Definitions for HIV Infection Among Adults, Adolescents, and Children Aged <18 Months and for HIV Infection and AIDS Among Children Aged 18 Months to <13 Years — United States, 2008. MMWR 2008; 57(RR 10); 1-12.

It is important to note that revisions in the CDC surveillance definitions of HIV and AIDS may cause discontinuities in trend data. For example, between 1992 and 1993, the number of AIDS cases in Rhode Island and in the United States as a whole increased dramatically because of CDC's expanded surveillance case definition for AIDS. The reader should keep these fluctuations in mind as they review and digest the information herein.

Data Sources

Case surveillance of AIDS was initiated in Rhode Island in 1983, and HIV surveillance began in 1989. These surveillance systems provide information on risk factors, patient demographics, and the clinical manifestations of disease over time. The present Epidemiologic Profile relies primarily on these case surveillance data. However, the Office of HIV/ AIDS & Viral Hepatitis utilizes an array of data sources to establish the most complete and accurate picture of HIV and AIDS in Rhode Island and the populations at highest risk for infection. The list below identifies many of the sources of information used by the Office of HIV/AIDS & Viral Hepatitis.

HARS: (HIV/AIDS Reporting System) Includes all reported cases of AIDS since 1983 and all HIV cases reported after July 2006.

HIV Unique-Identifier Reporting System: Implemented in 2000, providers were required to report all cases of HIV infection with a unique patient identifier and without names until June 2006. This provides an unduplicated count of cases from 2000-June 2006. HIV cases are reported with name since July 2006 and are stored in HARS database described above.

eHARS: (*enhanced HIV/AIDS Reporting System*) Implemented in 2008 as an upgrade of HARS, which includes all AIDS cases reported since 1983 and HIV cases reported with name since 2006. This system has the capacity to store multiple case reports for cases.



HIVSER: (HIV Serology Database) - Includes all positive and negative HIV test results submitted to the Rhode Island Department of Health State Laboratories.

CTR: (Counseling, Testing and Referral Database) - Provides information on all HIV tests and services provided at CTR sites funded by the Rhode Island Department of Health.

BRFSS: (Behavioral Risk Factor Surveillance System) – A randomized survey that occurs regularly focusing upon Rhode Islanders selected for the sample.

YRBSS: (Youth Risk Behavior Survey) – Focusing upon adolescent youth, this survey is administered at the school level.

STD Database: Reportable disease database from the Rhode Island Department of Health's Office of Communicable Diseases that is used for identifying at-risk populations and co-infection.

Tuberculosis Database: Reportable disease database from the TB Surveillance System is matched with HARS to identify missing cases of AIDS in the form of unreported co-infections (HIV-TB) as cases of AIDS.

Cancer Registry: This reportable disease database is used for identifying individuals with AIDS-defining malignancies.

Social Security Death Index / Rhode Island State Medical Examiner: Two sources used to identify deaths attributed to AIDS and also to follow-up on previously reported cases.

Hospital Medical Records: Patient medical records are utilized in AIDS validation studies and in the follow-up of previously reported cases.

ACI Medical Records: All convicted inmates are tested for HIV at intake in the ACI (Adult Correctional Institute). The system in place has provisions to eliminate duplicate HIV positive test results.

Community Needs Assessment: This rather new addition to the data is used to understand and track HIV in our community as part of tools utilized by the Rhode Island Community Planning Group for HIV Prevention's (RICPG) planning process. The assessment information found within this data set offers a resource inventory of available programs and provides gaps and needs regarding HIV prevention.

Data Limitations

The ideal HIV/AIDS surveillance system would be capable of detecting and accurately detailing all new HIV infections. To that end HIV prevention programs could accurately reflect the current factors causing people to be at risk. Since 1983, the Department of Health has required the reporting of all AIDS cases by name and since 1989 has required all HIV



positive test results to be reported. The HIV positive test results had been previously collected without names or other identifying information in order to protect the anonymity of patients. However, this "no names/no identifiers" system fostered duplication and incomplete information. As a result, a new HIV reporting system was implemented in 2000 which used a unique identifier code to maintain patient anonymity, but essentially eliminated case duplication and allowed for more effective follow-up. This new HIV reporting system greatly improved our ability to conduct HIV surveillance. Most recently, in 2006, HIV was federally required to be reported by name. As a result, the accuracy and quality of our database has been enhanced and reflected within the period representing 2006 forward.

An important notation regarding HIV incidence is relevant here, despite the recent changes in the reporting of HIV, it is important to note that a newly reported case of HIV (or in the past an HIV positive test) does not necessarily signify a recent infection with HIV. Many individuals are unaware or are unwilling to be tested for HIV, and therefore may be tested and diagnosed long after the initial infection occurred. Moreover, an individual infected with HIV may not progress to AIDS for many years, thereby making AIDS data potentially unreliable for the purpose of detailing current transmission patterns. For more information pertaining to the recently released HIV incidence data report from CDC go to <http://www.cdcnpi.org/scripts/hiv/whatsnew.asp>.

Third parties, most frequently health care providers, report much of the data needed by the Office of HIV/ AIDS & Viral Hepatitis. As a result, these reports rely on the patients and providers to accurately and completely disclose relevant information pertaining to risk factors, demographic characteristics and clinical history.

Core Epidemiologic Questions*

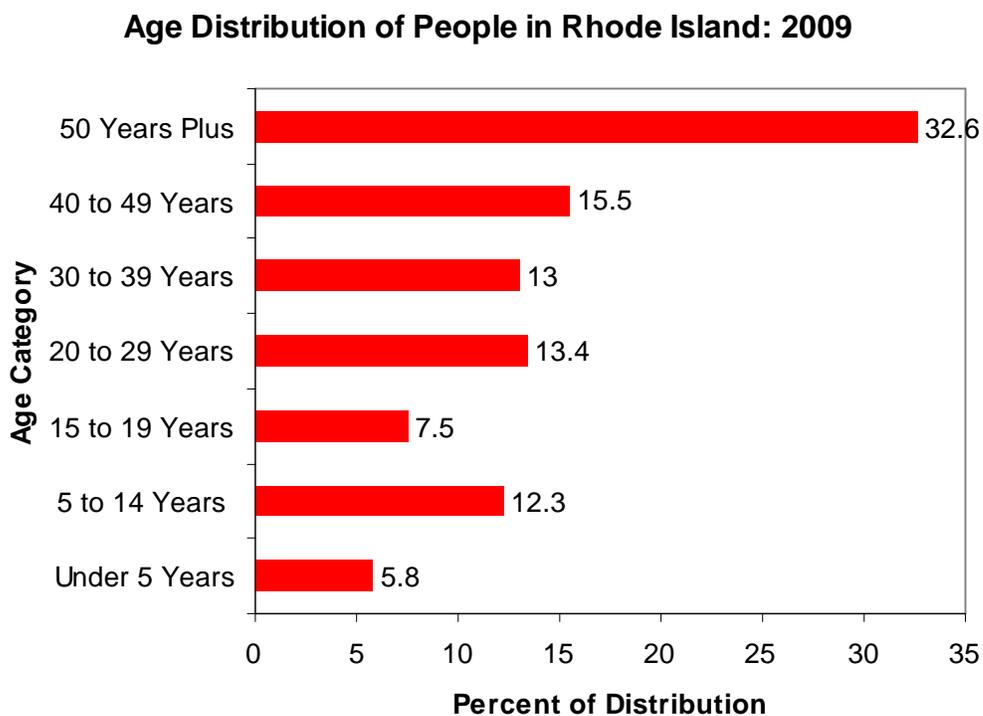
- 1) *What are the socio-demographic characteristics of the population of Rhode Island?*
- 2) *What is the impact of the HIV/AIDS epidemic on Rhode Island?*
- 3) *Who is experiencing differential impact from the HIV/AIDS epidemic?*

* Questions are based on Integrated Guidelines for Developing Epidemiologic Profiles by the CDC, and HRSA.

1) What are the socio-demographic characteristics of the population of Rhode Island?

Rhode Island is a small but densely populated state; it has the distinction of being the second most densely populated state in the United States. In 2010, Rhode Island had a total population of 1,052,567. Of these 544,167 (52 percent) were females and 508,400(48 percent) were males. The median age was 39 years old. Twenty one percent of the population were under 18 years of age and 14 percent were 65 years and older.

Figure 1. Age Distribution of People in Rhode Island in 2009

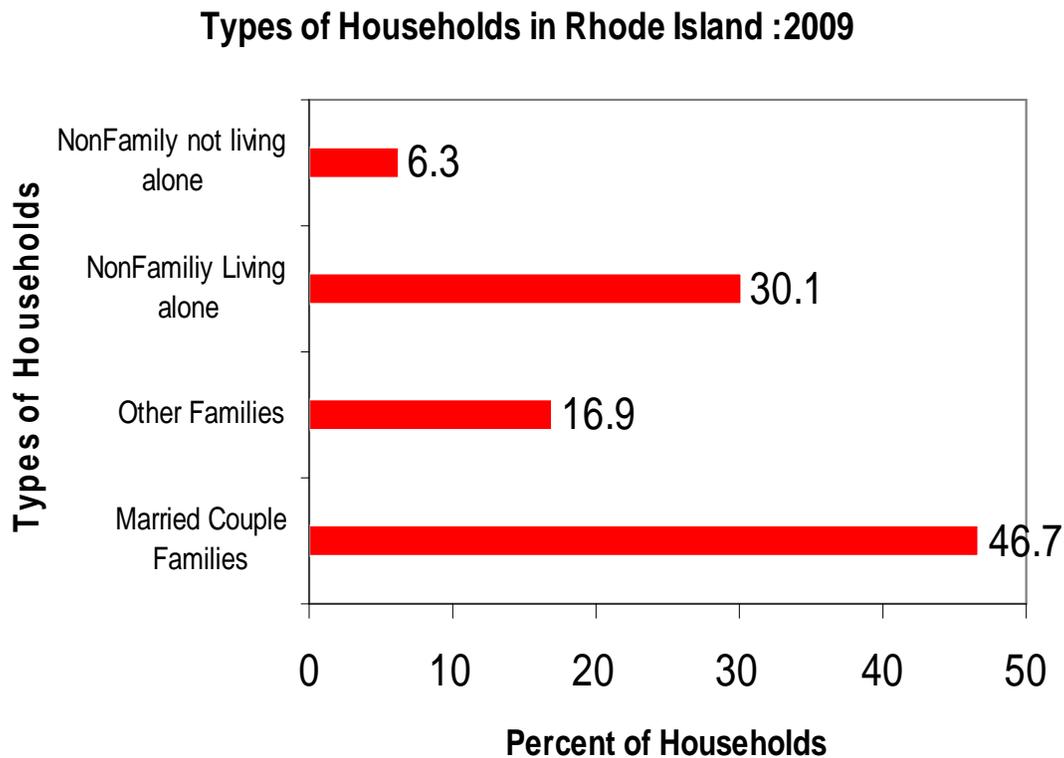


Source: US Census Bureau 2009 Supplemental Survey

For people reporting one race alone, 81 percent were White; 6 percent were Black or African American; less than 1 percent were American Indian and Alaska Native; 3 percent were Asian; less than 0.5 percent were Native Hawaiian and Other Pacific Islander and 6 percent were some other race. Three percent reported two or more races. Twelve percent of the people in Rhode Island were Hispanic.

Households and Families: Data on Households and families were obtained from the 2009 Supplemental Survey and 2010 American Community survey from the U.S. Census Bureau. In 2010 there were 463,388 households in Rhode Island. Families made up 64 percent of the households in Rhode Island. This figure includes both married-couple families (47 percent) and other families (17 percent). Non-family households made up 36 percent of all households in Rhode Island. Most of the non-family households were people living alone (30%), but some were comprised of people living in households in which no one was related to the householder.

Figure 2. Types of Households in Rhode Island 2009

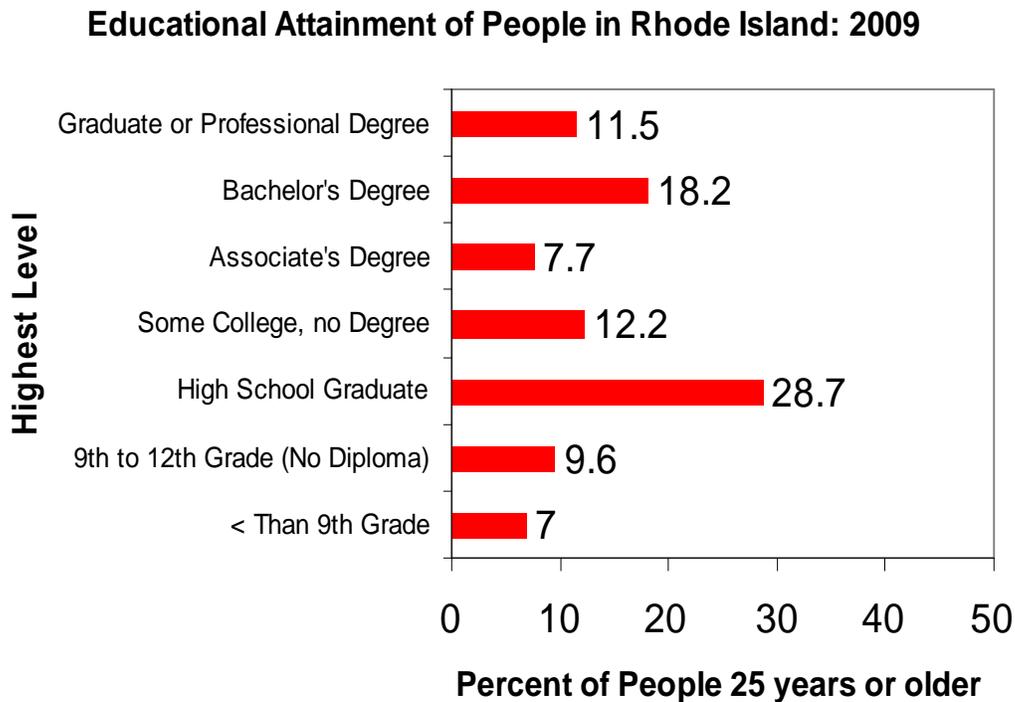


Source: US Census Bureau 2009 Supplemental Survey

Education: In 2009, more than 80 percent of people 25 years of age and over had at least graduated from high school and 29 percent had a bachelor's degree or higher. Among people 18 to 24 years old 58 percent had college or higher degrees.

According to the 2010 American Community survey findings, total school enrollment in Rhode Island was 279,157 in the same year. Pre-elementary school enrollment was 24,592 and elementary or high school enrollment was 152,506 children. College and Graduate school enrollment was 102,059.

Figure 3. The Educational Attainment of People in Rhode Island in 2009



Source: US Census Bureau 2009 Supplemental Survey

Income: The median income of households in Rhode Island in 2009 was \$55,569. Seventy-eight percent of the households received earnings and 28 percent received retirement income other than Social Security. Twenty-seven percent of the households received Social Security. The average income from Social Security was \$14,670. These income sources are not mutually exclusive; that is, some households received income from more than one source.

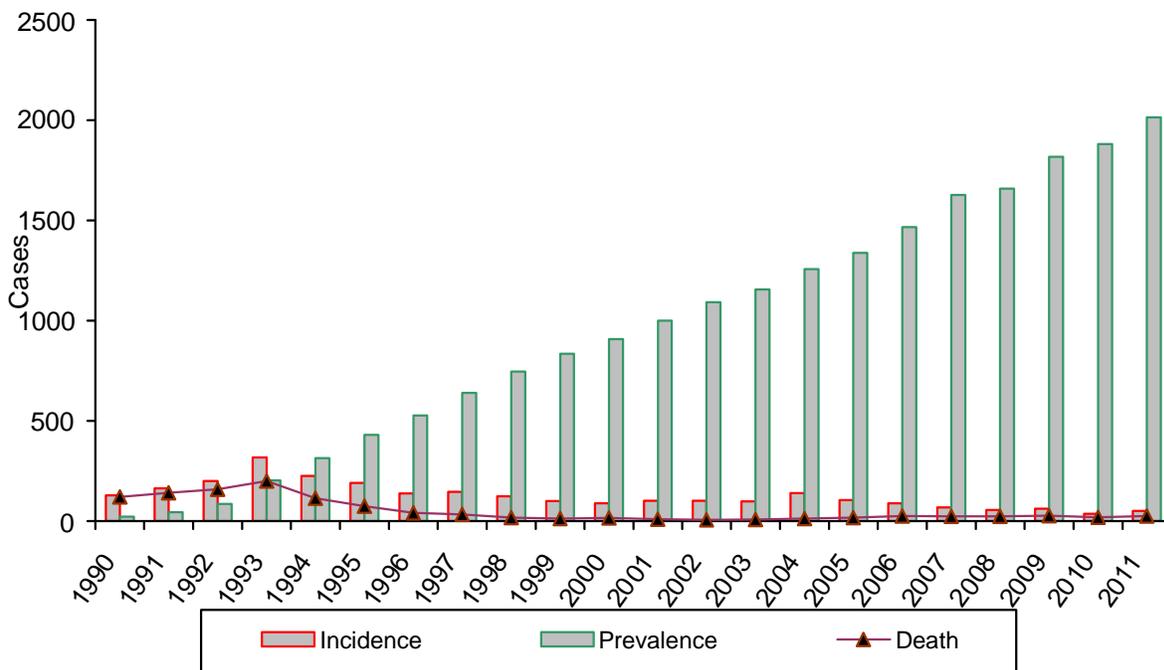
Poverty and participation in Government Program: In 2009, 12 percent of people were below poverty level. Sixteen percent of related children under 18 were below the poverty level, compared with 9 percent of people 65 years old and over. Eight percent of all families and 27 percent of families with a female householder and no husband present had incomes below the poverty level. Seven percent of the households in Rhode Island received means-tested public assistance or non-cash benefits.

2) What is the impact of the HIV/AIDS epidemic on Rhode Island?

AIDS in Rhode Island

As of **December 31, 2011**, a total of **3,131 cases of AIDS** have been diagnosed in Rhode Island residents. Since 1993 the incidence, which is the number of new cases of AIDS, and deaths among AIDS cases have decreased dramatically coinciding with the widespread use of more effective treatments strategy along with increased testing leading to early linkage to care. As seen in Figure 1, **AIDS incidence has decreased by 84%** (from 317 new cases in 1993 to 51 new cases in 2011). During the same time period the AIDS prevalence, or the total number of **AIDS cases living in Rhode Island each year, has increased 10 fold** (from 203 cases in 1993 to 2,014 cases in 2011). The number of newly diagnosed AIDS cases among RI residents has been steady over last few years, with the exception of a small decrease in 2010.

Figure 4. Rhode Island AIDS Incidence, Prevalence, and Deaths, 1990-2011



Of the 3,131 cases diagnosed, the majority were males (75%), between 30-39 (42%) years of age and White (54%). Collectively MSM and intravenous drug use (IDU) were the two most common modes of exposures. Table 1 shows a detailed demographic profile of all AIDS cases diagnosed since 1982 to 2011.

Table 1. Demographic Characteristics of RI AIDS Cases: Cumulative (1982-2011)

Demographic Characteristics	RI AIDS Cases 1982-2011
Gender	
Male	2,360 (75%)
Female	771 (25%)
Total	3,131 (100%)
Age Group	
<5	22 (1%)
5-12	6 (<1%)
13-19	39 (1%)
20-29	360 (11%)
30-39	1,306 (42%)
40-49	1,073 (34%)
50+	325 (10%)
Total	3,131 (100%)
Race/Ethnicity	
Hispanic-All Races	594 (19%)
American Indian/Alaska Native	24 (1%)
Asian	11 (<1)
Legacy Asian/Pacific Islander	13 (<1%)
African American	800 (26%)
Native Hawaiian/ Pacific Islander	<5 *
White	1,685 (54%)
Total	3,131 (100%)
Exposure Category	
MSM	1,087 (35%)
IDU	1,024 (33%)
MSM/IDU	154 (5%)
Hemophilia/Coagulation Disorder	38 (1%)
Heterosexual Contact	651 (21%)
Transfusion/Transplant	31 (1%)
**Mother with HIV	32 (1%)
No Risk Reported	114 (4%)
Total	3,131 (100%)
*Cell contained less than five cases	
**Pediatric Transmission Modes	

Epidemiological Trends of AIDS in Rhode Island

The demographic profile of those diagnosed with AIDS has steadily changed over time since the disease surveillance started in RI. Table 2 shows the demographic characteristics of AIDS cases by year of diagnosis from 2007 to 2011.

Table 2. Demographic characteristics of RI AIDS cases 2007-2011

Demographic Characteristics	2007	2008	2009	2010	2011
Gender					
Male	55(80%)	38 (68%)	46 (74%)	25 (69%)	45 (88%)
Female	14(20%)	18 (32%)	16 (26%)	11 (31%)	6 (12%)
Total	69 (100%)	56 (100%)	62 (100%)	36 (100%)	51 (100%)
Age Group					
<13	<5*	<5*	<5*	<5*	<5*
13-19	<5*	<5*	<5*	<5*	<5*
20-29	7(10%)	14 (25%)	9 (15%)	<5*	8 (15%)
30-39	24 (35%)	15 (27%)	15 (24%)	12 (33%)	12 (24%)
40-49	28 (41%)	17 (30%)	25 (40%)	8 (22%)	23 (45%)
50+	10 (14%)	9 (16%)	13 (21%)	13 (36%)	8 (15%)
Total	69 (100%)	56 (100%)	62 (100%)	36 (100%)	51 (100%)
Race/Ethnicity					
Hispanic-All Races	13 (19%)	15 (27%)	24 (40%)	8 (22%)	12 (23%)
American Indian/Alaska Native	<5 *	<5 *	<5 *	<5 *	<5*
Asian	<5 *	<5 *	<5 *	<5 *	<5*
African American	16 (23%)	19 (34%)	18 (29%)	8 (22%)	9 (18%)
Native Hawaiian/ Pacific Islander	<5*	<5 *	<5 *	<5 *	<5*
White	38 (55%)	21 (38%)	19 (31%)	18 (50%)	28 (54%)
Total	69 (100%)	56 (100%)	62 (100%)	36 (100%)	51 (100%)
Exposure Category					
MSM	28 (40%)	14 (25%)	23 (37%)	15 (41%)	24 (47%)
IDU	13 (19%)	21 (38%)	6 (10%)	<5*	<5*
MSM/IDU	<5*	<5*	<5*	<5*	<5*
Hemophilia/Coagulation Disorder	<5*	<5*	<5*	<5*	<5*
Heterosexual Contact	6 (9%)	9 (11%)	8 (13%)	<5*	5 (10%)
Transfusion/Transplant	<5 *	<5 *	<5 *	<5*	<5*
Mother with HIV	<5 *	<5 *	<5 *	<5*	<5*
No Risk Reported	19 (28%)	11 (20%)	23 (37%)	12 (33%)	17 (33%)
Total	69 (100%)	56 (100%)	62 (100%)	36 (100%)	51 (100%)

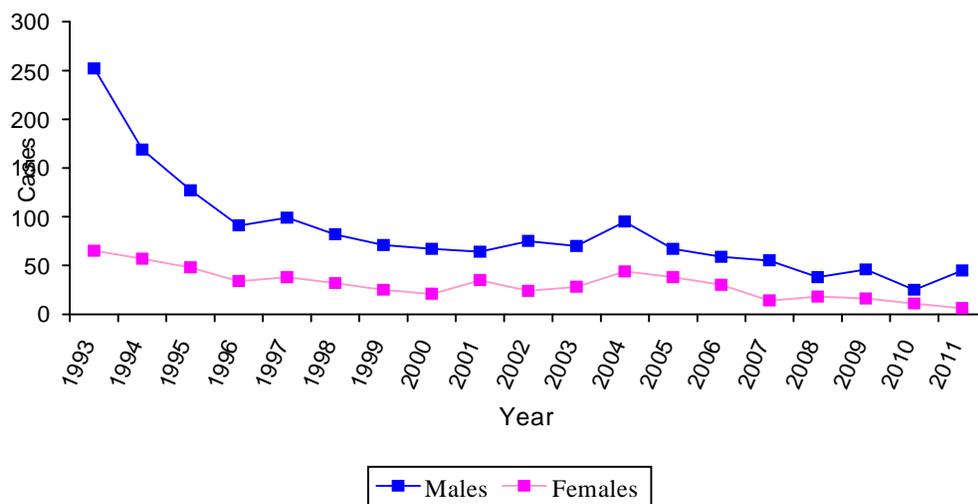
* Cell contained less than five cases

Gender

More male cases continue to be diagnosed in Rhode Island than female; however, the difference between genders in the number of AIDS cases has shown a steady decrease since 1993 with an increase in 2011. In 1993, there were 187 more cases in males than females in Rhode Island. Difference between reported male and female cases increased by due to a 14% decrease in the number of reported female cases for the year 2007 as compared to 2006. However in 2008 it narrowed by a 12% increase in female AIDS cases compared to 2007. In 2010 there was a 5% increase in female cases, which narrowed the difference between male and female cases in 2010 compared to 2009; in 2011 the difference widened by a 19% decrease among the number of female cases from 2010.

Explanations as to why this trend related to increasing AIDS diagnosis among women is occurring are not entirely evident. One reason may be that more symptomatic woman are being tested by providers and are found to have AIDS at the time of their initial HIV testing. With that said, it has been postulated that within this population of woman who find out they have AIDS when tested, their care providers may be more aggressive with testing woman regardless of their symptoms, or perceptions that they may be in a monogamous relationship.

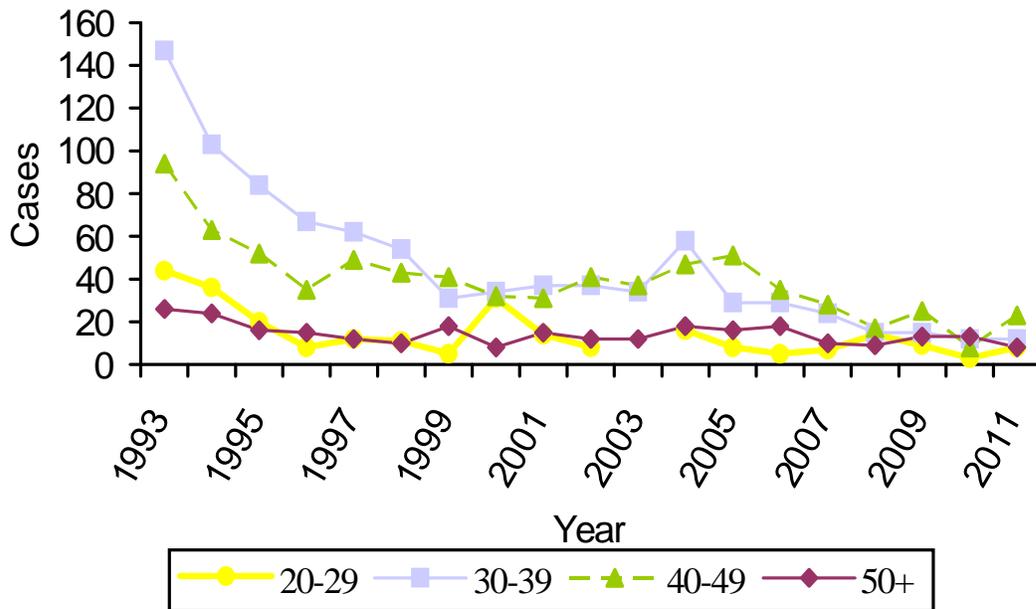
Figure 5. Rhode Island AIDS Incidence by Gender, 1993-2011



Age

The age distribution of new AIDS case has maintained a fairly stable trend over the past years. As seen in figure 6, the rate of AIDS incidence has been significantly higher in the age groups 30 to 39 and 40 to 49 years, however from 2005 to 2009 among the newly reported AIDS cases, 40 to 49 age-groups was predominant with an exception in 2010, when most cases were from 50+ (36%) age group. That trend was observed among 40-49 year olds in 2011. Predominance of newly diagnosed AIDS among 40-49 years and 50+ is probably an outcome of several synergistic factors such as unaware of status, and no testing history. Most importantly, not being in care due to not knowing about own risk, risk and status of the partner at an earlier age leading to delayed diagnosis.

Figure 6. Rhode Island AIDS Incidence by Age, 1993-2011



Race/Ethnicity and Origin

Figure 7 shows that the majority of AIDS cases in Rhode Island have occurred in Whites (54%). However, 45% of the AIDS cases have occurred in African Americans and Hispanics who account for 17% of Rhode Island's population, as shown in figure 8. **African Americans experience the highest impact of the disease, as they account for 26% of all AIDS cases when only 6% of the total population of Rhode Island are African American. Hispanics experience the second highest rate of disease, they account for 19% of all AIDS cases while they represent only 12% of the total population of Rhode Island (Census 2010).** However the difference between African American and Hispanic new AIDS cases, are gradually becoming narrower in recent years.

Figure 7. Percentages of Cumulative AIDS Cases by Race in Rhode Island through Dec. 2011

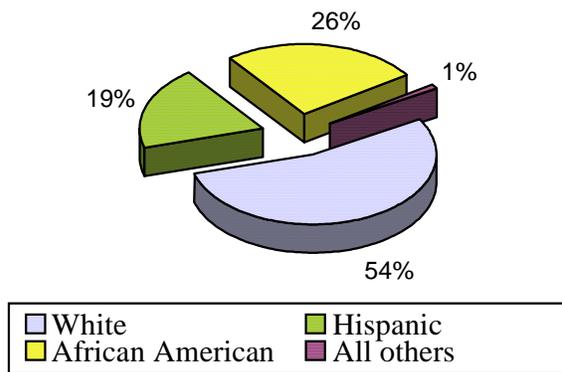
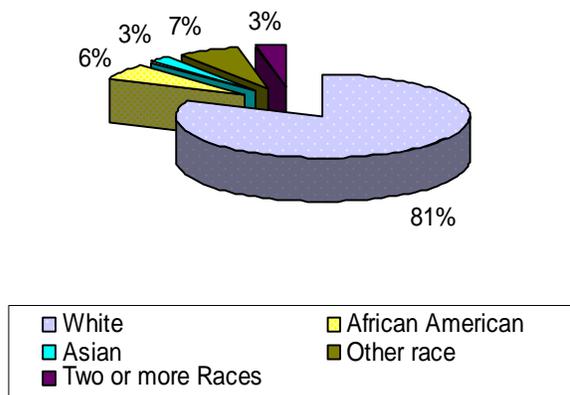


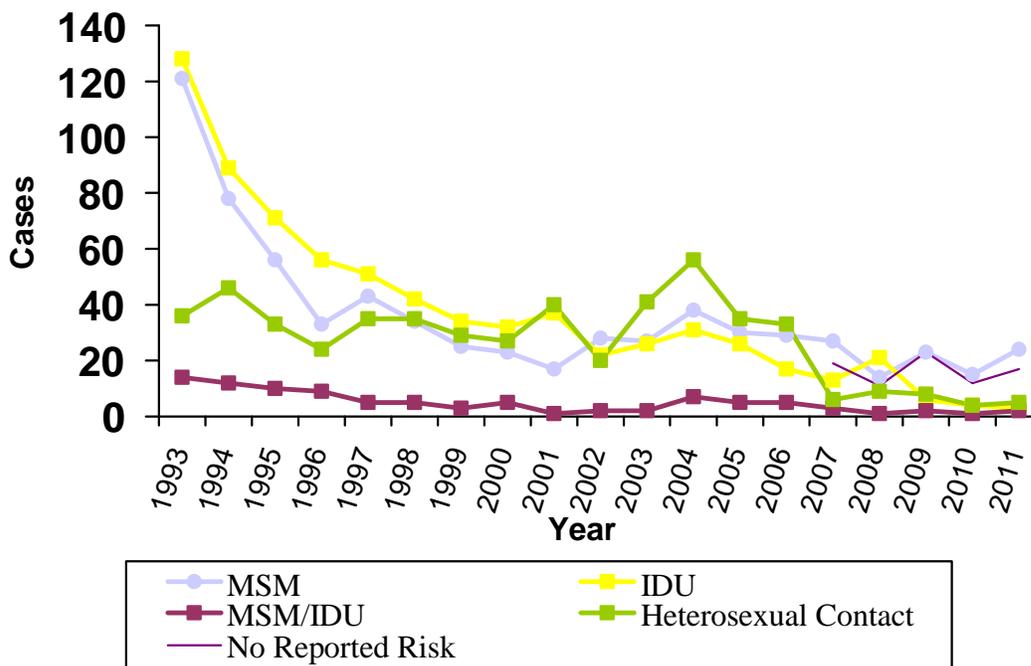
Figure 8. Percentages of Rhode Island Population by Race, 2010 Census



Exposure Category

While men who have sex with men (MSM) and injecting drug users (IDU) have been the dominant exposure categories since the beginning of the epidemic, this pattern is changing. Since 1993, IDU and MSM-associated AIDS incidence have shown a downward trend, with IDU-associated AIDS incidence dropping by 84% and MSM-associated AIDS incidence dropping by 88%, which is mostly attributable to decreasing incidence of AIDS in general. However these two groups, specifically MSM, continue to be the predominant ones among newly diagnosed AIDS cases in recent years. Number of AIDS cases associated with heterosexual contact did not vary much over the years, however since 2004 number of AIDS cases associated with heterosexual contact steadily decreased while AIDS cases among MSM increased along with cases without any reported risk. This could be due to multitude of factors such as unaware of partner's status; absence of knowledge regarding partners' risk behavior, reluctance to reveal own sexual risk behaviors and denial involving the population at risk for HIV/AIDS.

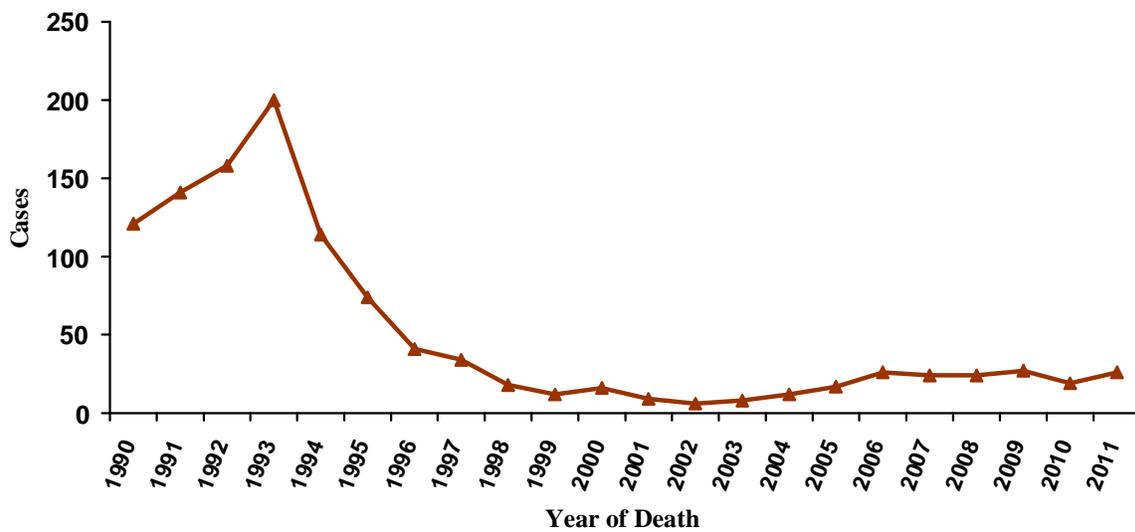
Figure 9. Rhode Island AIDS Incidence by Exposure Category, 1993-2011



Death among AIDS Cases

In Rhode Island from the beginning of the epidemic through 2011, **1,523 deaths occurred among persons with HIV/AIDS**. Consistently, since 1994, the number of AIDS deaths has steadily declined with a small increase in 2006, 2009 and 2011 (Figure 10); however, due to advances in clinical therapy and antiretroviral medications, the population living with HIV/AIDS is much larger now than what it was at the beginning of the epidemic. The demographic profile of deaths among AIDS cases is similar to that of AIDS incidence, regarding gender, race/ethnicity, and exposure category distribution.

Figure 10. AIDS Deaths, RI Residents, 1990-2011



Pediatric AIDS Cases

From 1982 to 2011, 29 children between the ages of zero and 12 years old were diagnosed with AIDS in Rhode Island. Most cases were male (69 %) and African American (52 %).

Transmission from a mother with HIV (86 %) was the most common risk factor, and pediatric transfusion accounted for 10 % of the documented cases.

Table 3. Percentage of children ages 0-12 years old reported with AIDS, RI residents, 1982-2011, by demographic characteristic

Demographic Characteristic (N=29)	%
Sex	
Male	69
Female	31
Total	100
Race/Ethnicity	
White	24
Black	52
Hispanic	21
Asian	*
Native American	*
Total	100
Risk Factor	
Mother w/ HIV	86
Pediatric Transfusion	10
Pediatric Other	3
Total	100
* Cell contained less than five cases	

Summary of AIDS in Rhode Island

Clearly downward epidemiologic trends have been evident in the number of diagnosed Rhode Island AIDS cases over the last five years. Since 2004 till 2011 it has been observed that there has been an overall decline in reportable Rhode Island AIDS cases by 63%.

While the aforementioned data is encouraging, we have noted significant increases among minority populations such as Hispanics and women who have their first HIV tests and are simultaneously deemed both positive for HIV, as well as having an AIDS diagnosis. Our consistent thoughts regarding the reason for this is related to the perception that women may not think they are at risk for HIV or AIDS due to the fact they believe they are in monogamous relationships and may not be aware about their partners risk pertaining to HIV. One solution we set forth is more assertive provider testing among women so as to decrease the simultaneous diagnosis of HIV and AIDS upon first test.

Death trends associated with those who have AIDS are decreasing steadily despite the small increases found in 2005, 2009 and recently in 2011 (Figure 10). This reminds us of the highly effective nature of antiretroviral therapy, and the critical role that the Rhode Island AIDS Drug Assistance Program (ADAP) has continued to play in making HIV drugs accessible and available to all who really need them.

HIV in Rhode Island

Overview

Between January 1, 2000 and December 31, 2011, there were 1,548 Rhode Island residents newly diagnosed HIV cases reported to the Rhode Island Department of Health. This number provides a minimum estimate of HIV infection, as it does not include those HIV infected individuals who have not been tested yet and those who get tested anonymously and are yet to be lined to care.

According to the Centers for Disease Control and Prevention (CDC) at the end of 2009, **490,275** people were living with AIDS and **1,128,350-1,228,500** people were living with HIV in the United States in 2008. Based on these numbers the estimated number of people living with HIV and AIDS in Rhode Island in 2011 is between **3,730-4,061** people.

The reporting of positive HIV test results has been mandatory in Rhode Island since 1989. From 1989 through 1999, reports purposely did not contain identifying information. Many people testing positive for HIV frequently received more than one test, and without name reporting it was difficult, if not impossible to determine duplicate counting of tests. Therefore, under these reporting conditions, the number of positive tests exceeded the numbers of persons with newly diagnosed HIV. For this reason, the number of positive HIV tests received annually during this period of observation was used only as a very rough indicator of the incidence of newly diagnosed HIV.

From the year 2000 onward, reports of positive HIV test results have contained unique personal identifiers with which duplicate test results may be culled from the aggregate with g certainty, allowing greater confidence in the interpretation of HIV data. In 2006 Rhode Island moved to name-based HIV reporting as a part of nationwide approach mandated by the CDC. Since July 2006 all HIV cases are being reported to the Rhode Island Department of Health with names. Both the CDC and the department of health are hopeful that in the long run this will overtime accurately capture the disease burden and risk of people affected by HIV in Rhode Island.

There were 1,548 new cases of HIV diagnosed in the period from January 1, 2000 to December 31, 2011. Table 4 represents a breakdown of the HIV cases by demographic characteristics reported in last five years and table 5 represents all HIV cases diagnosed and reported from 2000 to 2011 analyzed by demographic characteristics and risk factor.

Table 4. Demographic Characteristics of RI HIV Cases, Jan. 1, 2007 to Dec. 31, 2011

	2007	2008	2009	2010	2011
Gender					
Male	98 (81%)	79 (67%)	95 (76%)	84 (79%)	83 (86%)
Female	23 (19%)	39 (33%)	30 (24%)	22 (21%)	14 (14%)
Total	121 (100%)	118 (100%)	125 (100%)	106 (100%)	97 (100%)
Age Group					
<13	<5*	<5*	<5*	<5*	<5*
13-19	<5*	<5*	<5*	8 (7%)	<5*
20-29	6 (5%)	21 (18%)	30 (24%)	20 (19%)	24 (25%)
30-39	21 (17%)	36 (31%)	29 (23%)	27 (25%)	30 (31%)
40-49	37 (31%)	42 (36%)	36 (29%)	27 (25%)	29 (30%)
50+	34 (28%)	17 (14%)	27 (22%)	24 (23%)	13 (13%)
Total	121 (100%)	118 (100%)	125 (100%)	106 (100%)	97 (100%)
Race/Ethnicity					
White	62 (51%)	48 (41%)	39 (31%)	47 (44%)	54 (56%)
African American	30 (25%)	33 (28%)	33 (26%)	26 (25%)	14 (14%)
Hispanic	25 (21%)	35 (30%)	50 (40%)	27 (26%)	22 (23%)
Asian	<5 *	<5 *	<5 *	<5*	<5*
Native American	<5 *	<5 *	<5 *	<5*	<5*
Total	121 (100%)	118 (100%)	125 (100%)	106 (100%)	97 (100%)
Risk Factor					
MSM	47 (39%)	48 (41%)	59 (47%)	54 (51%)	62 (64%)
IDU	18 (15%)	19 (16%)	8 (6%)	6 (6%)	<5*
MSM / IDU	6(5%)	<5 *	<5 *	<5*	<5*
Heterosexual Contact	11 (9%)	22 (19%)	16 (13%)	13 (12%)	12 (12%)
Transfusion	<5*	<5 *	<5 *	<5*	<5*
Mother with HIV/HIV Risk	<5 *	<5 *	<5 *	<5*	<5*
No Risk Specified	35 (29%)	26 (22%)	36 (29%)	32 (30%)	15 (15%)
Total	121 (100%)	118 (100%)	125 (100%)	106 (100%)	97 (100%)
County of Residence					
Homeless	<5 *	<5 *	<5 *	<5*	<5*
Bristol	<5 *	9 (8%)	<5 *	<5*	<5*
Kent	6 (5%)	<5 *	7 (5%)	9 (9%)	8 (9%)
Newport	7 (6%)	<5 *	8 (6%)	8 (8%)	6 (7%)
Providence	99 (82%)	102 (86%)	100 (80%)	81 (77%)	69 (76%)
Washington	6 (5%)	<5 *	6 (5%)	6 (6%)	<5*
Total	121 (100%)	118 (100%)	125 (100%)	106 (100%)	97 (100%)

Table 5. Demographic Characteristics of RI HIV cases 2000-2011:

Demographic Characteristics	Numbers, %
Gender	
Male	1,136 (73%)
Female	412 (27%)
Total	1,548 (100%)
Age Group	
<13	7 (<1%)
13-19	43 (3%)
20-29	319 (21%)
30-39	545 (35%)
40-49	444 (29%)
50+	190 (12%)
Total	1,548 (100%)
Race/Ethnicity	
White	653 (42%)
African American	438 (28%)
Hispanic	415 (27%)
Asian	27 (2%)
Native American	15 (<1%)
Total	1,548 (100%)
Risk Factor	
MSM	599 (39%)
IDU	196 (13%)
MSM / IDU	39 (3%)
Heterosexual Contact	311 (20%)
Transfusion	17 (1%)
Mother with HIV/HIV Risk	<5*
No Risk Specified	379 (24%)
Total	1,548 (100%)
County of Residence	
Homeless	5(<1%)
Bristol	32 (2%)
Kent	92 (6%)
Newport	69 (4%)
Providence	1,294 (84%)
Washington	56 (4%)
Total	1,548 (100%)

Figure 11. Rhode Island HIV Incidence 2000-2011

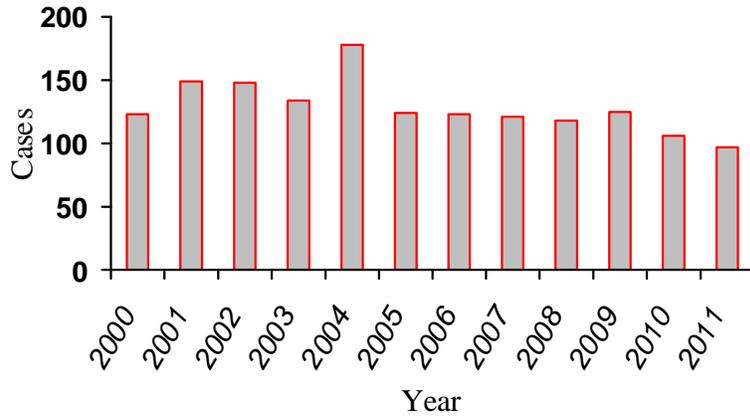


Figure 12. Rhode Island HIV Incidence by Gender 2000-2011

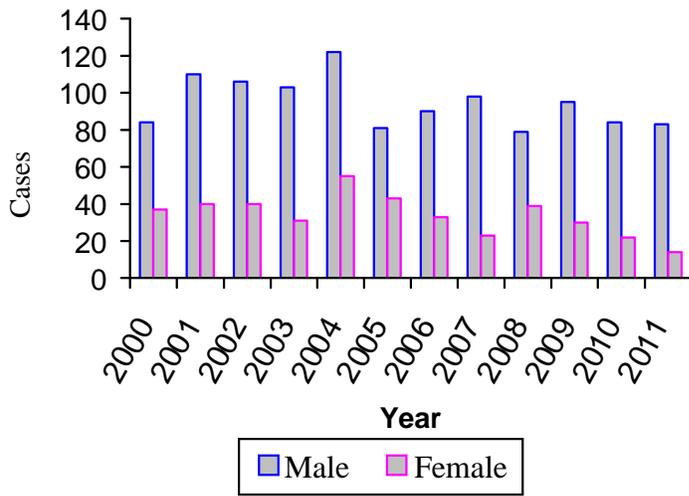
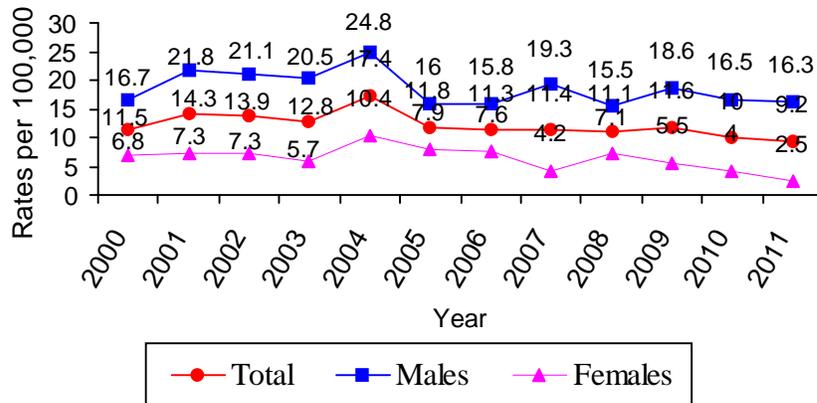


Figure 13. Rhode Island Reported HIV Cases per 100,000 Populations, 2000-2011



*Rates are based on the 2009 population projection as estimated by the U.S. Census Bureau

The mode of exposure and demographic characteristics of those infected with HIV differ significantly between both genders. Tables 6 and 7 illustrate these differences among males and females respectively.

Table 6. Demographic Characteristics of **Male HIV Cases**, January 1, 2006 to December 31, 2011.

Demographic Characteristics	2007	2008	2009	2010	2011
Age Group					
<13	<5*	<5*	<5*	<5*	<5*
13-19	<5*	<5*	<5*	<5*	<5*
20-29	17 (17%)	17 (22%)	23 (24%)	16 (19%)	22 (25%)
30-39	30 (31%)	21 (27%)	23 (24%)	25 (30%)	25 (30%)
40-49	29 (30%)	28 (35%)	27 (28%)	22 (26%)	25 (30%)
50+	17 (17%)	12 (15%)	20 (21%)	17 (20%)	11 (13%)
Total	98 (100%)	79 (100%)	95 (100%)	84 (100%)	83 (100%)
Race/Ethnicity					
White	53 (54%)	39 (49%)	35 (37%)	41 (48%)	50 (60%)
African American	22 (22%)	17 (22%)	21 (22%)	16 (19%)	11 (13%)
Hispanic	21 (21%)	21 (27%)	36 (38%)	21 (25%)	16 (13%)
Asian/Pac Islander	<5*	<5*	<5*	<5*	<5*
Native American	<5*	<5*	<5*	<5*	<5*
Total	98 (100%)	79 (100%)	95 (100%)	84 (100%)	83 (100%)
Risk Factor					
MSM	47 (48%)	48 (60%)	59 (62%)	54 (64%)	62 (75%)
IDU	16 (16%)	8 (10%)	5 (5%)	<5*	<5*
MSM / IDU	6 (6%)	<5*	<5*	<5*	<5*
Heterosexual Contact	<5*	8 (10%)	<5*	<5*	5 (6%)
Transfusion	<5 *	<5 *	<5*	<5*	<5*
Mother with HIV/HIV Risk	<5 *	<5 *	<5*	<5*	<5*
No Risk Specified	25 (26%)	12 (15%)	23 (23%)	22 (26%)	9 (11%)
Total	98 (100%)	79 (100%)	95 (100%)	84 (100%)	83 (100%)

Table 7. Demographic Characteristics of **Female HIV Cases**, January 1, 2006 to December 31, 2011.

Demographic Characteristics	2007	2008	2009	2010	2011
Age Group					
<13	<5 *	<5 *	<5 *	<5 *	<5 *
13-19	<5 *	<5 *	<5 *	<5 *	<5 *
20-29	<5 *	<5 *	<5 *	<5 *	<5 *
30-39	7 (30%)	15 (38%)	8 (27%)	<5 *	<5 *
40-49	5 (22%)	14 (36%)	9 (30%)	5 (22%)	5 (36%)
50+	<5 *	5 (13%)	7 (24%)	7 (31%)	<5 *
Total	23 (100%)	39 (100%)	30 (100%)	22 (100%)	14 (100%)
Race/Ethnicity					
White	9 (40%)	9 (23%)	<5*	6 (27%)	<5 *
African American	8 (35%)	16 (41%)	12 (40%)	10 (45%)	<5 *
Hispanic	<5 *	14 (36%)	14 (47%)	6 (27%)	6 (43%)
Asian/Pacific Islander	<5 *	<5 *	<5 *	<5 *	<5 *
Native American	<5 *	<5 *	<5 *	<5 *	<5 *
Total	23 (100%)	39 (100%)	30 (100%)	22 (100%)	14 (100%)
Risk Factor					
IDU	<5*	11 (28%)	<5*	<5 *	<5 *
Heterosexual Contact	9 (40%)	14 (36%)	12 (40%)	10 (45%)	7 (50%)
Transfusion	<5*	<5 *	<5*	<5 *	<5 *
Mother with HIV/HIV Risk	<5*	<5*	<5*	<5 *	<5 *
No Risk Specified	10 (43%)	11 (28%)	14 (46%)	10 (45%)	6 (43%)
Total	23 (100%)	39 (100%)	30 (100%)	22 (100%)	14 (100%)

HIV Highlights

Between January 1, 2000 and December 31, 2011 there were total of 1,548 Rhode Island residents newly diagnosed with HIV and reported to HEALTH-RI. This number provides a minimum estimate of HIV infection, as it does not include HIV infected individuals who have not been tested yet and those who get tested anonymously. (Table5).

Of the 1,548 HIV cases diagnosed and reported to HEALTH-RI from January 1, 2000 – December 31, 2011:

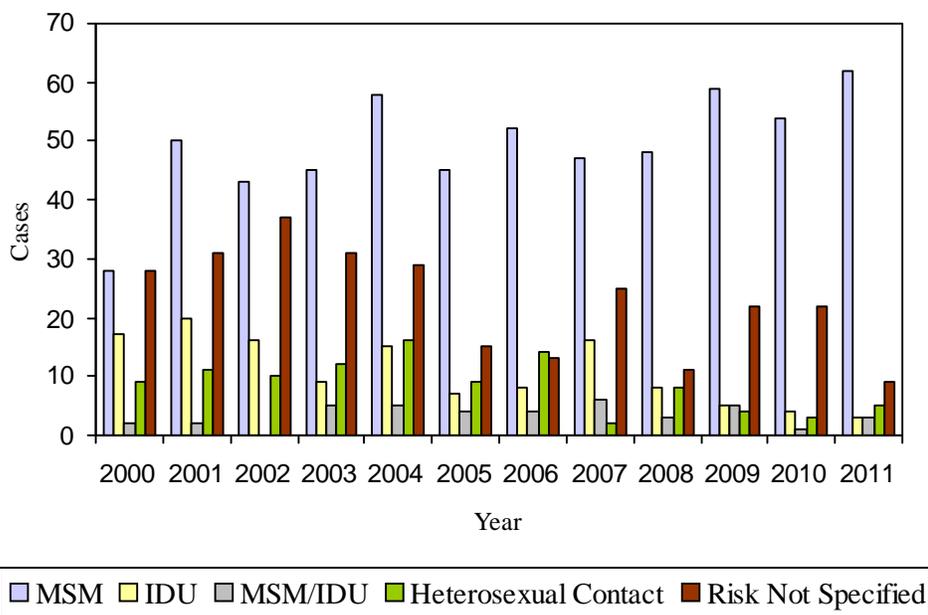
- ❑ Males accounted for 73% of the cases and females accounted for 27%.
- ❑ The majority of cases were between the ages of 30 and 39 (35%).
- ❑ ***By Race/Ethnicity:***
 - Among men, Whites accounted for the majority of case (48%), followed by African Americans (24%) and Hispanics (25%).
 - Among Women, African Americans accounted for the majority of cases (41%), followed by Hispanics (31%) and Whites (26%).
- ❑ ***By mode of exposure to HIV:***
 - Among men, 'MSM' is the leading mode of exposure (52% of cases), followed by 'No Risk Specified' (24%) and Intravenous Drug Use (11%).
 - Among Women, 'No Risk Specified' is the leading mode of exposure (42% of cases), followed 'Heterosexual Contact' (38%) and Intravenous Drug Use (16%).
- ❑ ***By county of residence:***
 - The majority of the cases (84%) were from Providence County.

3) Who is experiencing differential impact from the HIV/AIDS epidemic?

MSM ‘Men who have sex with men’

Despite an overall decrease in the rates of HIV and AIDS incidence, MSM continues to be the leading exposure category for HIV infection among men nationwide and also in Rhode Island in recent years. Figure 14 illustrates this finding over the period from January 1, 2000 to December 31, 2010. The second highest exposure category is Risk Not Specified. Cases reported without any risk information at the time of reporting are categorized as Risk Not Specified and is a top priority for the Office of HIV/AIDS & Viral Hepatitis for follow-up for risk ascertainment. Our goal is to reduce the number of reports without proper risk exposure information on newly diagnosed cases, and we plan to create educational opportunities for providers so they can appropriately complete case reports with risk factor identification. Whether this represents a provider’s need for further skills associated with gathering risk factors, a patient’s true lack of their risk factor information or a patient’s reluctance to reveal a risk factor to their providers (e.g., IDU or MSM) that requires further exploration.

Figure 14. HIV (not AIDS) Incidence among Men by Exposure Category 2000-2011



As for the racial distribution of HIV infection among the MSM population, Whites account for the vast majority of MSM infected with HIV, 72% compared to 15% Hispanics and 13% African Americans. Surveillance data shows how HIV

disproportionately affects African American and Hispanic MSM; they represent 18% of Rhode Island's population and account for 20% of the MSM infected with HIV in 2011. Looking at the rates per 100,000 illustrates a much clearer picture. Figures 15 and 16, illustrate these findings in the period from January 1, 2000 to December 31, 2011.

Figure 15. HIV Infected MSM by Race, 2000-2011

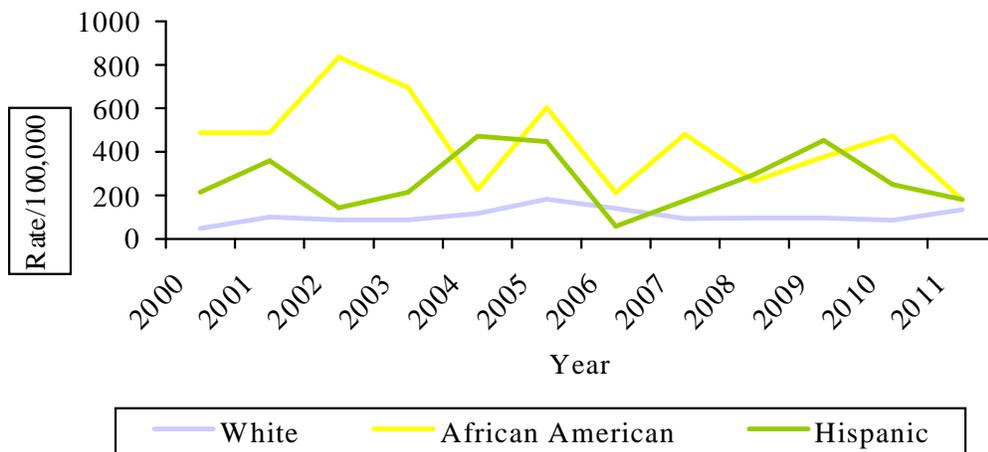
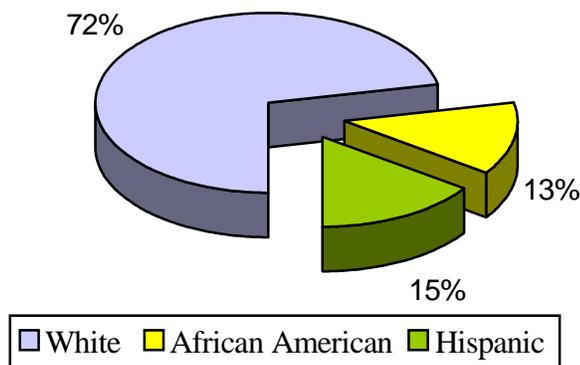


Figure 16. HIV Rates among MSM by Race and Ethnicity, 2000-2011

This graph was developed with the assumption that MSM comprise about 9% of the adult male population 13 years of age and older in Rhode Island. Rates are based on the 2010 RI population from the 2010 U.S. Census Data.

The age distribution of MSM infected with HIV, from January 1, 2000 to December 31, 2011, follows a similar pattern to the overall individuals infected with HIV, with the majority between 30 – 39 years of age. However in 2009 predominant age groups were 20-29 and 40-49 respectively and in 2011 20-29, 30-39, and 40-49 all three age groups were equally observed among newly diagnosed MSM.

Figure 17a. HIV Infected MSM by Age and Year of Diagnosis, 2000-2011

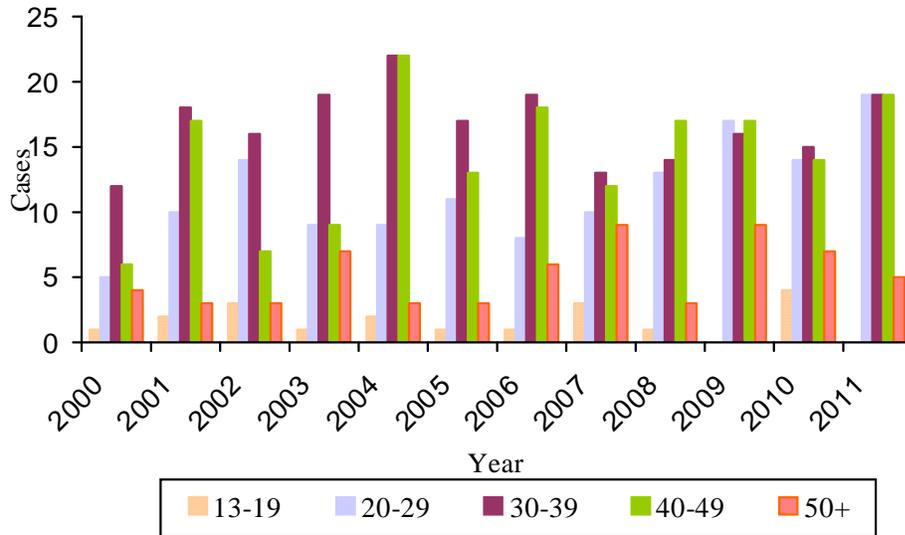
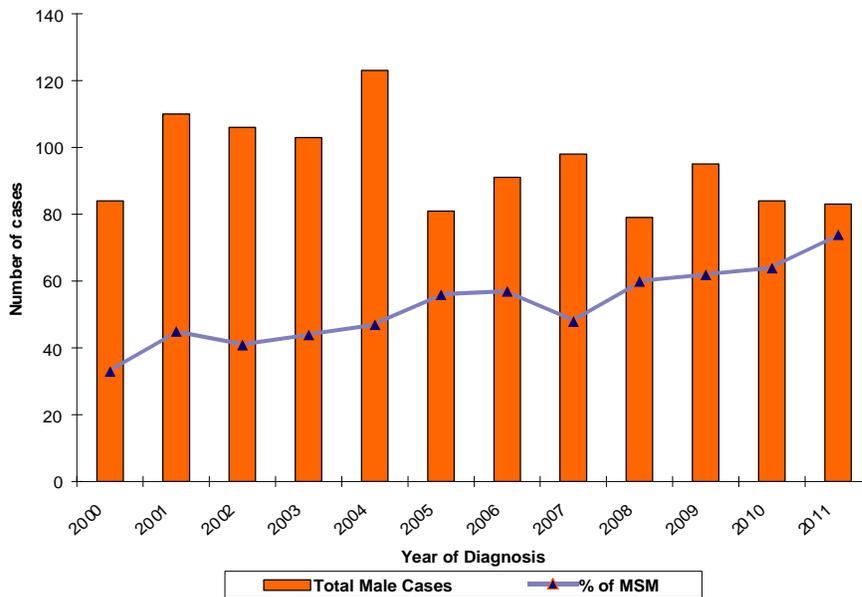


Figure 17b. Percentage of MSM HIV cases among all Male HIV Cases, 2000-2011



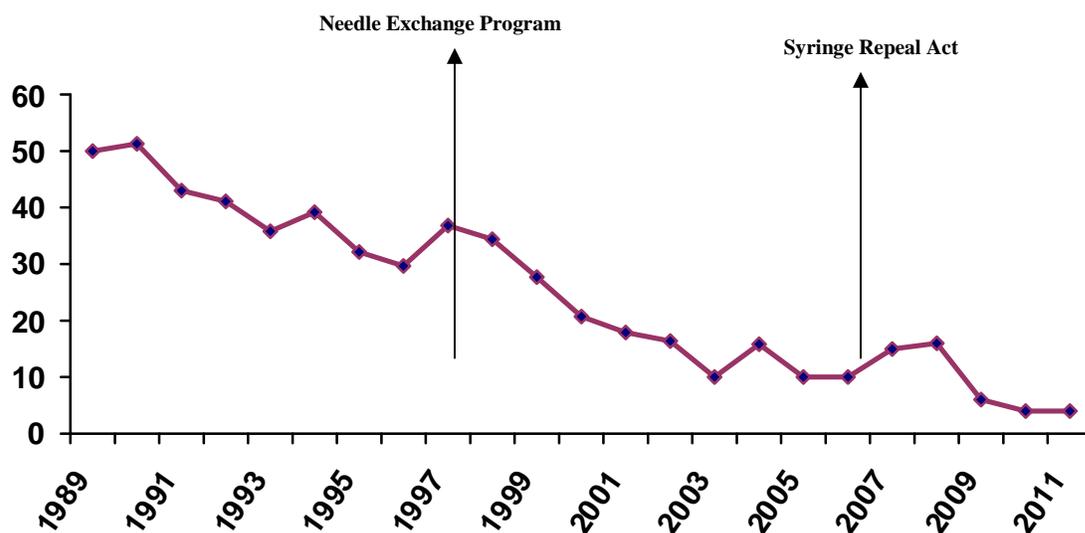
IDU ‘Intravenous Drug Users’

While Intravenous Drug Use remains a significant risk factor for HIV infection, there has been a steady decline in both HIV (not AIDS) and AIDS cases associated with IDU. HIV infection due to intravenous drug use as a risk factor dropped from 50% in 1989 to 6% in 2009 among all other risk factors. The decline in both AIDS and HIV cases associated with IDU follows a national trend.

We believe that a myriad of factors contributed to this decline. Education among IDU population regarding safer needle use practices, availability of clean needles and needle cleaning kits through needle exchange programs, the availability of non-prescription needle sales at pharmacies, as well as general shift away from parenteral drugs among illicit drug users in the past years all may account for the dramatic decrease of HIV among injecting drug users. The other factor is predominance of MSM, as risk among newly diagnosed cases in recent years.

Rhode Island is one of the states that have a Needle Exchange Program referred to as ENCORE, or Education, Needle Exchange, Counseling, Outreach and Referral. ENCORE was launched in 1995 and the Syringe Repeal Act was passed in Rhode Island in 2002. The latter allows individuals to purchase needles at pharmacies without the need of a prescription. The following chart shows the overall decline in HIV cases due to IDU in the period from 1989-2011.

Figure 18. Percentage of HIV Cases with IDU as their Identified Mode of Transmission: 1989-2011



Twenty nine percent (29%) of HIV infected Hispanic men and seventeen percent (17%) of HIV infected Hispanic women acquired their infection through IDU in the period from 2000-2011.

Figure 19.
HIV Infected Hispanic Men By
Mode of Exposure, 2000-2011

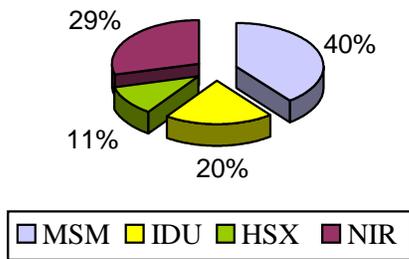
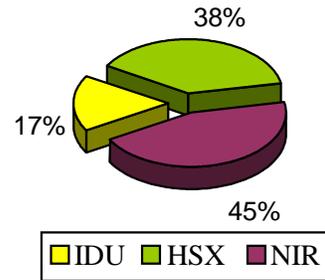


Figure 20.
HIV Infected Hispanic Women By
Mode of Exposure, 2000-2011



Ten percent (10%) of HIV infected African American men and sixteen (16%) percent of HIV infected African American women acquired their infection through IDU in the period from 2000-2011.

Figure 21.
HIV Infected African American Men
By Mode of Exposure,
2000-2011

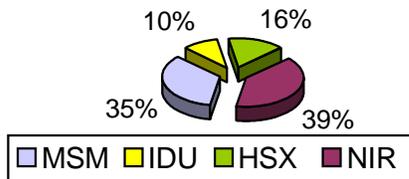
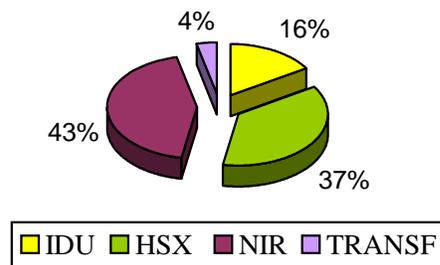


Figure 22.
HIV Infected African American
Women By Mode of Exposure,
2000-2011



Nine (9%) of HIV infected White men and nineteen percent (19%) of HIV infected White women acquired their infection through IDU in the period from 2000-2011.

Figure 23. HIV Infected White Men By Mode of Exposure, 2000-2011

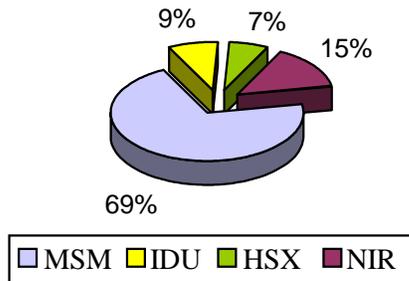
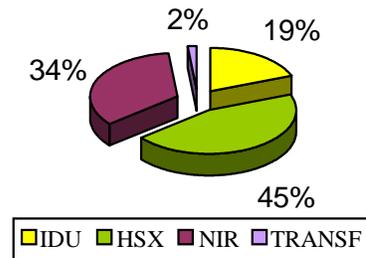


Figure 24. HIV Infected White Women By Mode of Exposure, 2000-2011



While IDU remains a major risk factor for HIV for both men and women, a greater proportion of women are infected with HIV through IDU. Among Rhode Island women, a greater proportion of minority women (African American and Hispanic) are infected through IDU when compared with their white counterparts. Tables 8 and 9 show the demographic characteristics of the HIV infected men and women with IDU as their mode of exposure.

Table 8. Demographic Characteristics of Cumulative HIV Infected Male IDU cases: 2000-2011

Demographic characteristics	Total
Race	
White	41 (34%)
Black	26 (21%)
Hispanic	54 (45%)
Asian/Pac Islander	<5*
Native American	<5*
Total	121(100%)
Age Group	
13-19	<5*
20-29	13 (11%)
30-39	35 (29%)
40-49	55 (45%)
50+	18 (12%)
Total	121 (100%)

Table 9. Demographic Characteristics of Cumulative HIV Infected Female IDU cases: 2000-2011

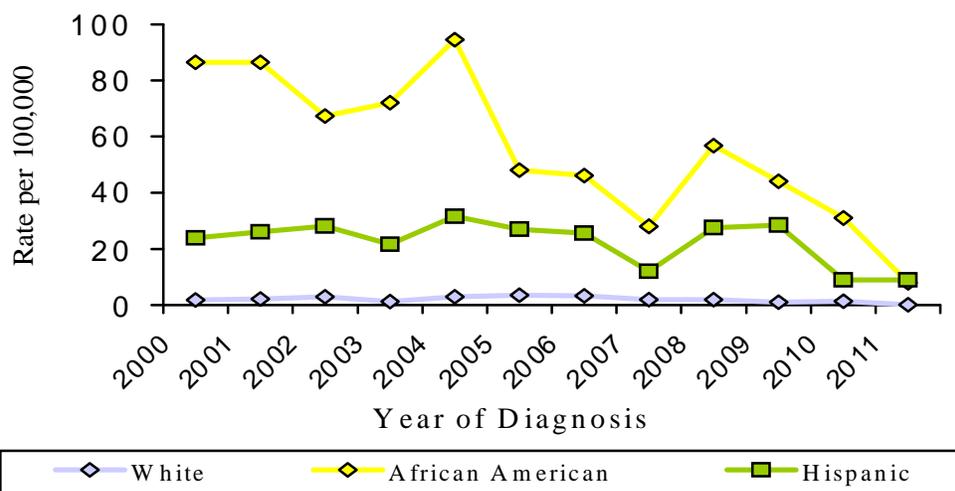
Demographic characteristics	Total
Race	
White	26 (37%)
Black	22 (31%)
Hispanic	22 (31%)
Asian/Pac Islander	<5 *
Native American	<5 *
Total	70 (100%)
Age Group	
13-19	<5*
20-29	13 (19%)
30-39	29 (41%)
40-49	20 (29%)
50+	7 (10%)
Total	70 (100%)

Minority Women

In the period between January 1, 2000 to December 31, 2011, 412 women were diagnosed with HIV (not AIDS) in Rhode Island. African American and Hispanic women who represent 18% of Rhode Island's female population accounted for 70% of those cases. The impact of HIV on African American and Hispanic women far exceeds that on African American and Hispanic men who account for 48% of all men diagnosed with HIV during the same time period.

While African Americans and Hispanics of both genders are disproportionately affected by the epidemic the impact on minority women is highly disproportionate. Figure 25 best illustrates the disproportionate impact of HIV on minority women as it shows the rate of HIV infection by race per 100,000 women.

Figure 25. HIV Rates among Women by Race/Ethnicity, Rhode Island, January 1, 2000-December 31, 2011

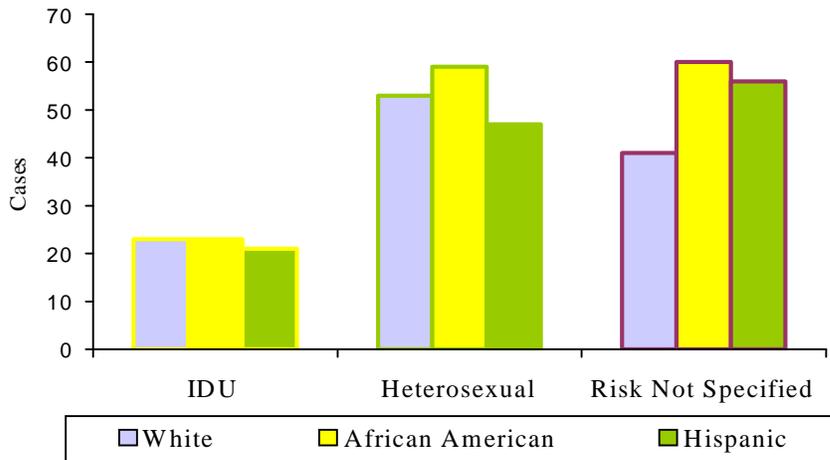


Rates are per 100,000 populations. Rates are based on 2011 projection as calculated by the U.S. Census Bureau.

As for the exposure category, White women have the highest number of cases with IDU as their mode of exposure to HIV, while African American and Hispanic women have highest number of cases with heterosexual contact and unknown risk factors as their mode of exposure to HIV.

It is worth mentioning that a large proportion of African American and Hispanic women have an unspecified risk of exposure. Whether this represents a true lack of knowledge as to how they were infected or not, requires further investigation. Figure 26 illustrates the aforementioned findings.

Figure 26. HIV cases Among Women by Exposure Category, Rhode Island, January 1, 2000-December 31, 2011



Inmates of the Rhode Island ACI: Adult Correctional Institution

Prison inmates accounted for four percent of newly diagnosed cases in 2009 and in 2010 there was not any new case reported from the prison, and in 2011 about 1% of cases were from ACI. In previous years it varied from 7% in 2008, and 17% in 2007. From 2008 the newly diagnosed cases from the ACI decreased by 3% in 2009. The demographic characteristics of prison inmates newly diagnosed with HIV were similar in most years. Most cases of HIV were diagnosed among persons between the ages of 30 and 39 and most were males. Among prison inmates newly diagnosed with HIV, most were African Americans, followed closely by Hispanics and then Whites. Risk Not Specified and IDU were more commonly associated with HIV infection among prison inmates than other risk factors. The table 10, shows all cases diagnosed from ACI from 2000-2011.

Table 10. Demographic Characteristics of RI HIV cases from Adult Correctional Institution: 2000-2011

Demographic Characteristics	Numbers (%)
Gender	
Male	180 (86%)
Female	30 (14%)
Total	210 (100%)
Race	
White	61 (29%)
African American	76 (36%)
Hispanic	69 (33%)
Asian/Pacific Islander	<5*
Native Am. /Alaska Native	<5*
Total	210 (100%)
Age Group	
13-19	<5*
20-29	43 (20%)
30-39	92 (44%)
40-49	63 (30%)
50+	11 (5%)
Total	210 (100%)
Exposure Category	
MSM	28 (13%)
IDU	54 (26%)
MSM/IDU	<5*
Heterosexual Contact	20 (10%)
Hemophilia	<5*
No Risk Specified	104 (50%)
Total	210 (100%)

- Cell contained less than 5 cases



Persons Unaware of Their HIV Status

The Centers for Disease Control and Prevention (CDC) estimates that 24% to 27% of those infected with HIV are unaware of their status. Many speculate that this group of undiagnosed individuals represents the hidden population. These may be individuals whom do not seek medical treatment, and hence are unable to experience a healthcare provider offering the HIV test. In addition, many of these individuals do not perceive they are at risk for HIV.

In post case interviews and focus groups this component reveals itself frequently, particularly within the subgroup of women who believe they are in monogamous sexual relationships, when only to find out later that they are HIV positive and unable to determine their risk. Finally those that are undiagnosed may be isolated from available and accessible health education or behavioral risk reduction programs. As a result this population does not readily receive messages regarding potential risk. Research CDC has done reveals that without the knowledge of HIV status individuals are more likely to transmit the disease.

Individuals who became aware of their positive HIV status, around the time when they were diagnosed with AIDS, are persons who were unaware of their infection for the most part and were diagnosed late in the course of their infection. Thus, they are representative of those that are infected but unaware of their status.

Four hundred and three individuals became aware of their positive HIV status when diagnosed with AIDS in the period from 2000-2011, which is 26% of the 1,548 individuals diagnosed with HIV in the same time period.

Twenty nine percent of the individuals who became aware of their HIV status when diagnosed with AIDS were females, 71% were males. The majority of those who become aware of their HIV status when diagnosed with AIDS were Whites 40% (who represent 85% of the population), followed by African Americans 31% (who represent 6% of the population), and Hispanics 27% (who represent 12% of the population). African Americans and Hispanics make up the vast majority of those who become aware of their HIV status when diagnosed with AIDS. The primary risk factor among those who become aware of their HIV status when diagnosed with AIDS is heterosexual contact (33%), followed by MSM (31%).

Table 11. Comparison of the Demographic Characteristics of Individuals Diagnosed with HIV Only and Individuals Who Become Aware of Their Positive HIV Status When Diagnosed with AIDS, January 1, 2000 to December 31, 2011.

Demographic Characteristics	Individuals Diagnosed with HIV (only), 2000-2011	Individuals Diagnosed with HIV and AIDS, 2000-2011
Gender		
Male	840 (74%)	293 (72%)
Female	292 (26%)	110 (27%)
Total	1132 (100%)	403 (100%)
Age Group		
<13	9(<1%)	<5 *
13-19	40 (4%)	<5 *
20-29	263 (23%)	41 (10%)
30-39	410 (36%)	136 (34%)
40-49	286 (25%)	158 (39%)
50+	124 (11%)	62 (15%)
Total	1132 (100%)	403 (100%)
Race/Ethnicity		
White	506 (45%)	166 (41%)
African American	297 (26%)	121 (30%)
Hispanic	297 (26%)	106 (26%)
Asian	17 (1%)	<5 *
Native American	10 (1%)	<5 *
Multi/Other	5 (<1%)	
Total	1132 (100%)	403 (100%)
Risk Factor		
MSM	452 (40%)	131 (33%)
IDU	136 (12%)	56 (14%)
MSM / IDU	28 (2%)	11 (3%)
Heterosexual Contact	150 (13%)	128 (32%)
Transfusion	<5 *	5(1%)
No Risk Specified	356 (31%)	68 (17%)
Mother w HIV/HIV risk	6(<1%)	<5*
Total	1132 (100%)	403 (100%)

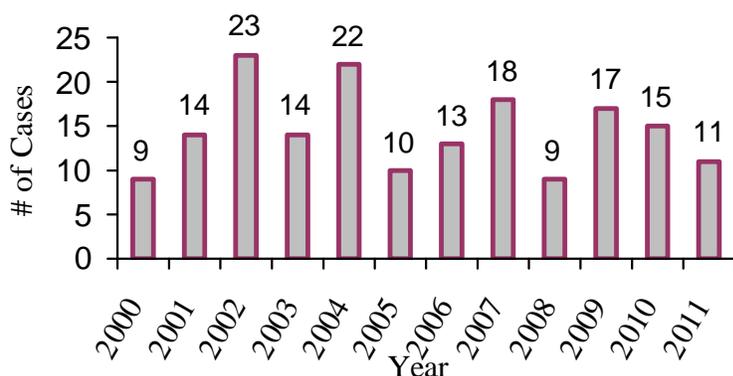
* Cell contained less than five cases

Youth and HIV

In the United States, HIV-related death has the greatest impact on young and middle-aged adults, particularly racial and ethnic minorities. In 1999, HIV was the fifth leading cause of death for Americans between the ages of 25-44. Among African American men in this age group, HIV has been the leading cause of death since 1991. In 1999, among black women 25-44 years old, HIV infection was the third leading cause of death. Many of these young adults likely were infected in their teens and twenties. It has been estimated that at least half of all new HIV infections in the United States are among people under 25, with the majority of young people being infected sexually (Rosenberg PS, Biggar RJ, Goedert JJ. Declining age at HIV infection in the United States [letter]. *New Engl J Med* 1994; 330:789-90)

About eleven percent (175 out of 1,548) of all the HIV cases diagnosed in Rhode Island in the period from January 1, 2000 to December 31, 2011 occurred in individuals 13 – 24 years of age. There has been a steady rise in the incidence of HIV among this age group in the past couple of years until 2009, with a decrease in 2005, 2008 and recently there was a slight decrease in 2010 and 2011. Figure 27 illustrates these findings.

Figure 27. HIV Incidence among Youth (13-24 years old), 2000-2011



Of the 175 cases diagnosed among youth 113 were males and 62 were females. Youth of racial and ethnic minorities were heavily impacted with 32% occurring in African American youth, 23% occurring in Hispanic youth and 42% occurring in White youth among the new cases from 2000 to 2011.

Among males, Men who Have Sex with Men (74%) was the most common risk category followed by No Specified Risk (18%). Among females Heterosexual Contact (44%) was the most common risk category closely followed by No Specified Risk (40%). Figures 28 and 29 illustrate these findings.

Figure 28. HIV Cases among Male Youth by Exposure Category, Rhode Island, 2000-2011

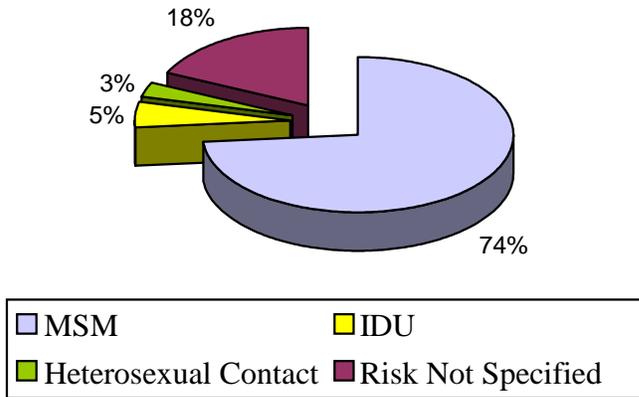
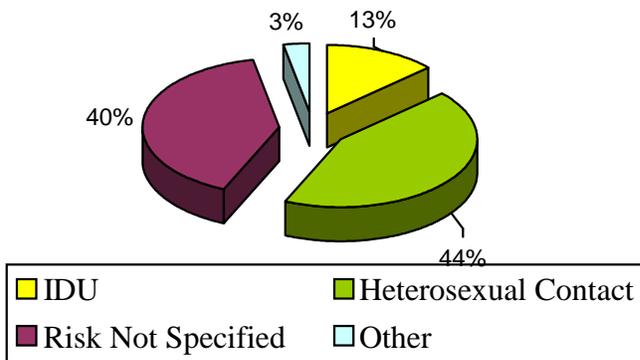


Figure 29. HIV Cases among Female Youth by Exposure Category, Rhode Island, 2000-2011



Surrogate Data in Rhode Island



STD Epidemiology Summary: Rhode Island, 2011

In 2011, reports of chlamydia, gonorrhea, and infectious syphilis increased when compared to 2010. Late syphilis reports held steady with 18 in 2010 and 18 cases reported in 2011. There were no congenital syphilis cases reported in 2011. Table 1 describes the demographic characteristics of reported chlamydia, gonorrhea, and syphilis cases in Rhode Island for the year 2011.

Table 12: Demographic Characteristics of Reported Chlamydia, Gonorrhea, and Syphilis Cases, Rhode Island, 2011

Disease	Chlamydia	Gonorrhea	Syphilis (Primary, Secondary)	Syphilis (Early Latent)	Syphilis (All Late Stages)
Characteristics:					
Total # of cases	4146	360	46	20	18
Case rate per 100,000 population (Rates are based on the 2010 RI population as determined by the U.S. Bureau of the Census)	393.9	34.2	4.4	1.9	1.7
Gender					
Male	1162	193	43	18	17
Female	2984	167	3	2	1
Unknown	0	0	0	0	0
Race/Ethnicity					
Non-Hispanic White	1381	123	30	9	5
Non-Hispanic Black	668	86	9	<5	<5
Hispanic (All races)	1031	67	<5	5	<5
Asian/Pacific Islander	88	6	<5	0	0
American Indian/Alaskan Native	25	<5	0	0	0
Other/Unknown	953	75	5	<5	7
Age (Years)					
< 10	<5	0	0	0	0
10 – 14	33	<5	0	0	0
15 – 19	1338	84	<5	0	<5
20 – 24	1724	133	<5	<5	<5
25 – 29	611	54	<5	<5	<5
30 – 34	230	36	10	<5	<5
35 – 39	111	16	5	5	<5
40 – 44	54	16	8	<5	<5
45 – 54	37	16	8	<5	5
55 – 64	5	<5	6	<5	<5
65 +	<5	<5	0	0	0
Unknown	0	0	0	0	0

Table 12. (cont.) Demographic characteristics of reported chlamydia, gonorrhea and syphilis cases, Rhode Island 2011

Disease	Chlamydia	Gonorrhea	Syphilis (Primary, Secondary)	Syphilis (Early latent)	Syphilis (All Late Stages)
Residence					
County					
Bristol	74	0	0	0	0
Kent	347	15	<5	0	<5
Newport	157	16	6	<5	<5
Providence	3307	310	34	19	15
Washington	259	19	<5	0	<5
Unknown	<5	0	0	0	0
City/Town					
Barrington	13	0	0	0	0
Bristol	47	0	0	0	0
Burrillville	27	<5	<5	0	0
Central Falls	139	8	0	0	0
Charlestown	6	0	0	0	0
Coventry	77	<5	0	0	0
Cranston	262	21	<5	<5	<5
Cumberland	58	<5	0	0	0
East Greenwich	19	<5	0	0	0
East Providence	144	19	<5	<5	0
Exeter	19	<5	0	0	0
Foster	5	0	0	0	0
Glocester	20	<5	0	<5	0
Hopkinton	9	0	0	0	0
Jamestown	<5	0	<5	0	0
Johnston	74	6	<5	0	0
Lincoln	47	<5	0	<5	0

Table 12. (cont.) Demographic characteristics of reported chlamydia, gonorrhea and syphilis cases, Rhode Island 2011

Disease	Chlamydia	Gonorrhea	Syphilis (Primary, Secondary)	Syphilis (Early latent)	Syphilis (All Late Stages)
Residence					
City/Town (cont.)					
Little Compton	<5	0	0	0	0
Middletown	28	<5	<5	0	0
Narragansett	24	<5	0	0	0
New Shoreham	<5	0	0	0	0
Newport	94	12	<5	<5	<5
North Kingstown	52	6	<5	0	0
North Providence	81	10	<5	0	<5
North Smithfield	14	0	0	0	0
Pawtucket	456	36	6	<5	<5
Portsmouth	13	<5	<5	0	0
Providence	1730	191	19	11	12
Richmond	5	<5	0	0	0
Scituate	17	<5	0	0	0
Smithfield	35	<5	0	0	0
South Kingstown	116	5	<5	0	0
Tiverton	16	0	<5	0	0
Warren	14	0	0	0	0
Warwick	138	6	<5	0	<5
West Greenwich	8	<5	0	0	0
West Warwick	105	<5	0	0	0
Westerly	26	<5	0	0	<5
Woonsocket	198	8	<5	0	0
Unknown	<5	0	0	0	0

Infectious Syphilis

Rhode Island, like many other parts of the country, has experienced an increase in the reports of infectious syphilis since 2001 when infectious syphilis was virtually eliminated from Rhode Island. For three of the four years from 2004 through 2007, Rhode Island ranked in the top 20 states with the highest rate of primary and secondary syphilis. In 2009, Rhode Island's rate of primary and secondary syphilis ranked 32nd in the nation at 1.9 cases/100,000 population. In 2010 reports of primary and secondary syphilis increased, placing Rhode Island 20th in the nation with a rate of 3.9 cases/100,000 population, compared to the national rate of 4.5 cases/ 100,000 population. The rate of primary and secondary syphilis slightly rose again in 2011 to 4.4 cases/100,000 population

From 2009 to 2010, reports of infectious syphilis (primary, secondary and early latent stages) increased 79% in Rhode Island with 61 cases of infectious syphilis statewide in 2010 as



compared to 34 cases seen in 2009. Reports in 2011 remained relatively steady compared to 2010 with 66 cases of infectious syphilis reported in Rhode Island. As shown in Figure 1 below, 61 of the 66 (92%) cases were male, and 48 of the 61 males (79%) were men who have sex with men. Of the 48 MSM, 23 (48%) were self-reported to be HIV positive (see Figure 2). There was one heterosexual male with infectious syphilis who self-reported as HIV positive. Unlike gonorrhea and chlamydia, where infection is distributed mostly among the 15-24 year old population, the cases of infectious syphilis reported in Rhode Island in 2011 had an average age of 39 years old, with individuals older than 30 accounting for 80% of reported cases.

Figure 30a.

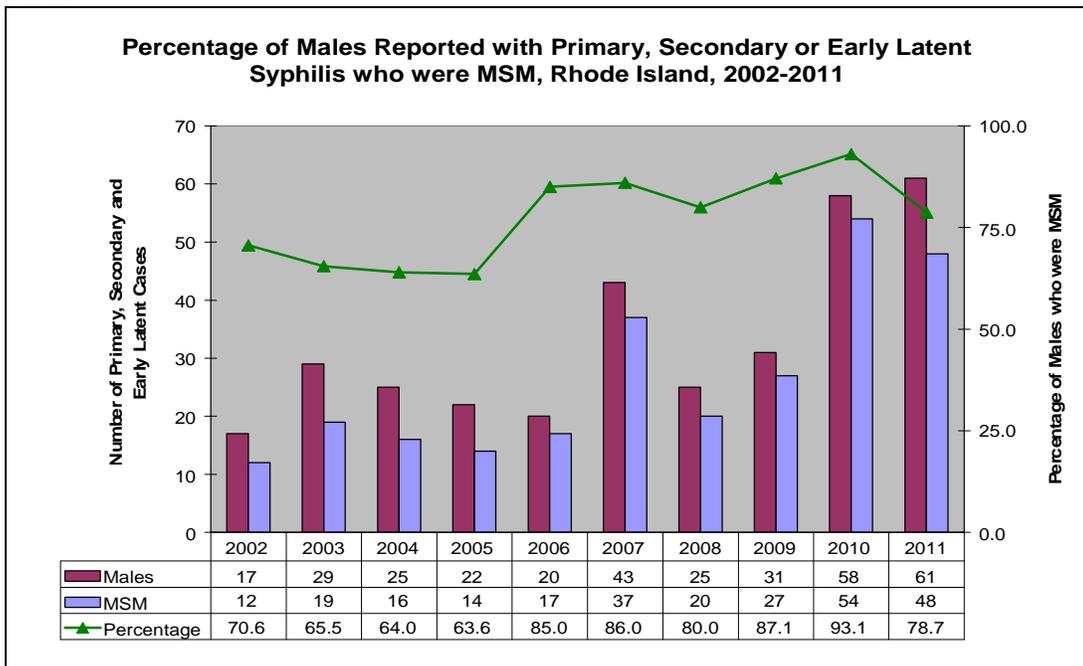
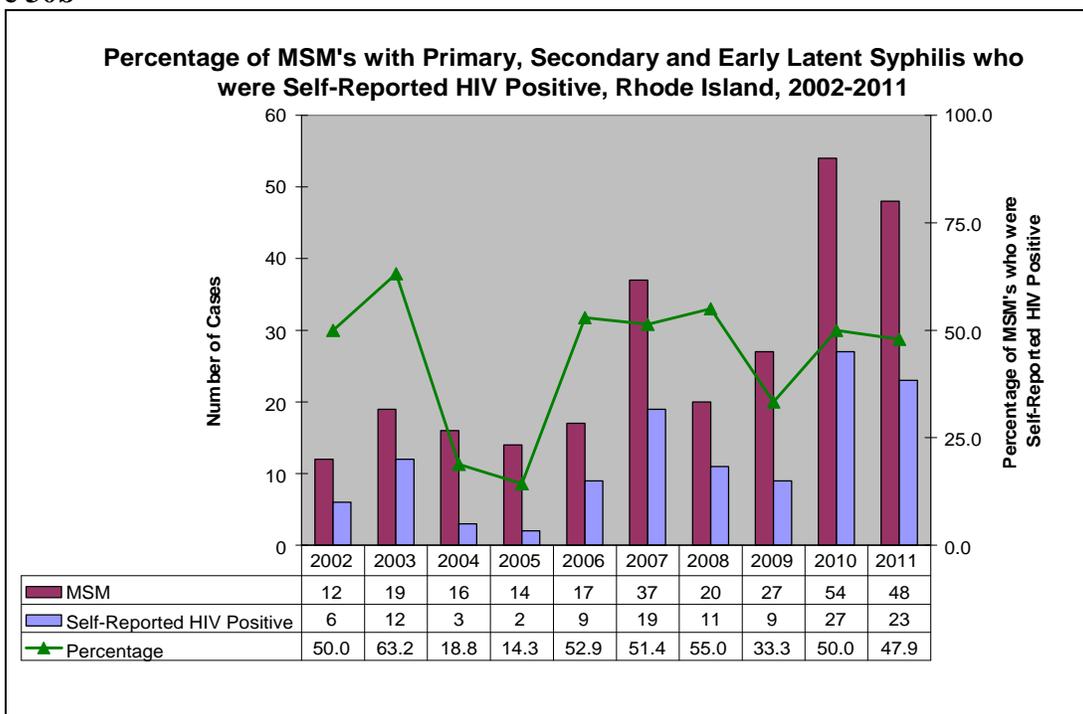


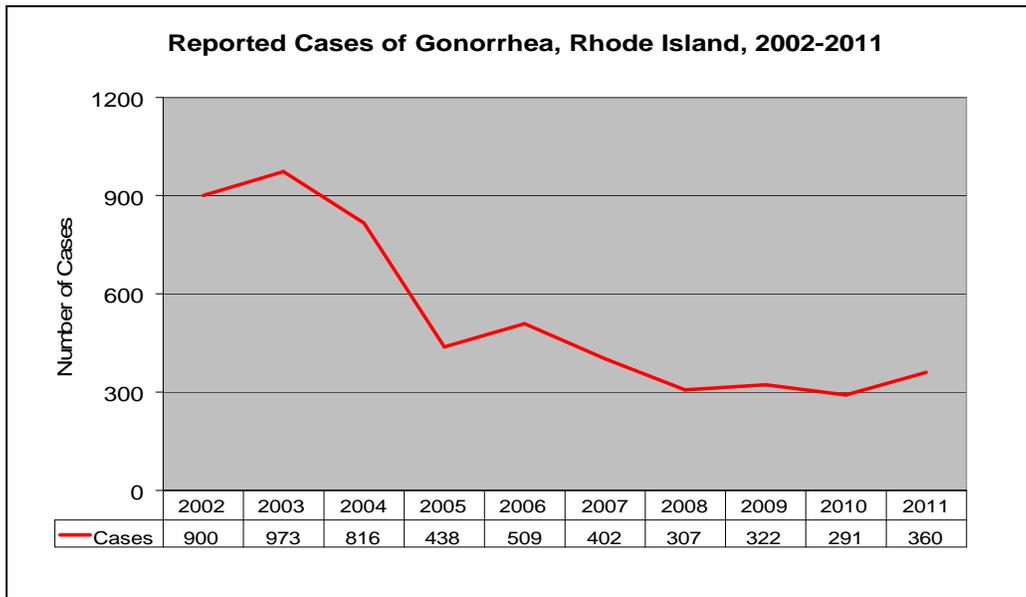
Figure 30b



Gonorrhea

In 2010, Rhode Island there were 291 reported cases of gonorrhea, representing the smallest number of cases reported in a year in Rhode Island since 1962. In 2011, however, reports of gonorrhea increased 24% compared to 2010 with 360 cases reported. This is the highest number of gonorrhea cases reported since 2007. The statewide incidence of gonorrhea increased from 28 cases per 100,000 in 2010 to 34 cases per 100,000 in 2011.

Figure 31a.



There have been some changes in the distribution of gonorrhea in Rhode Island in the last 10 years, especially with regard to the distribution of cases in the racial/ethnic populations. With the exception of 2003, from 2001 to 2004, more gonorrhea cases were diagnosed in the non-Hispanic black population than any other race/ethnicity. From 2005-2007, the distributions shifted and there were more gonorrhea cases diagnosed in the non-Hispanic white population during these years. Since then, there has not been a consistent trend in the highest proportion of cases among any race/ethnic group, as this trend has changed each year from non-Hispanic white to non-Hispanic black. While the proportions have shifted each of the last 4 years among race/ethnic groups, the highest rates of gonorrhea are consistently seen among non-Hispanic blacks. Table 2 further illustrates this trend.

Table 13: The Percentage and Rate of Gonorrhea cases by Race/Ethnicity, Rhode Island, 2007-2011

	2007		2008		2009		2010		2011	
	%	Rate *								
Non-Hispanic White	40.9	20	33.1	12	43.2	17	24.9	9	43.2	19
Non-Hispanic Black	39.2	299	47.3	274	36.3	221	46.7	253	30.2	211
Hispanic	18.2	62	18.5	47	18.5	49	25.8	59	23.5	65

*Rates are expressed as cases/100,000 people. Rates are based on the 2007-2009 RI population as estimated by the U.S. Bureau of the Census. The rates for 2010-2011 are based on the RI population as determined by the 2010 U.S. Census. The rates for 2006 - 2010 are estimates due to missing race/ethnicity data.

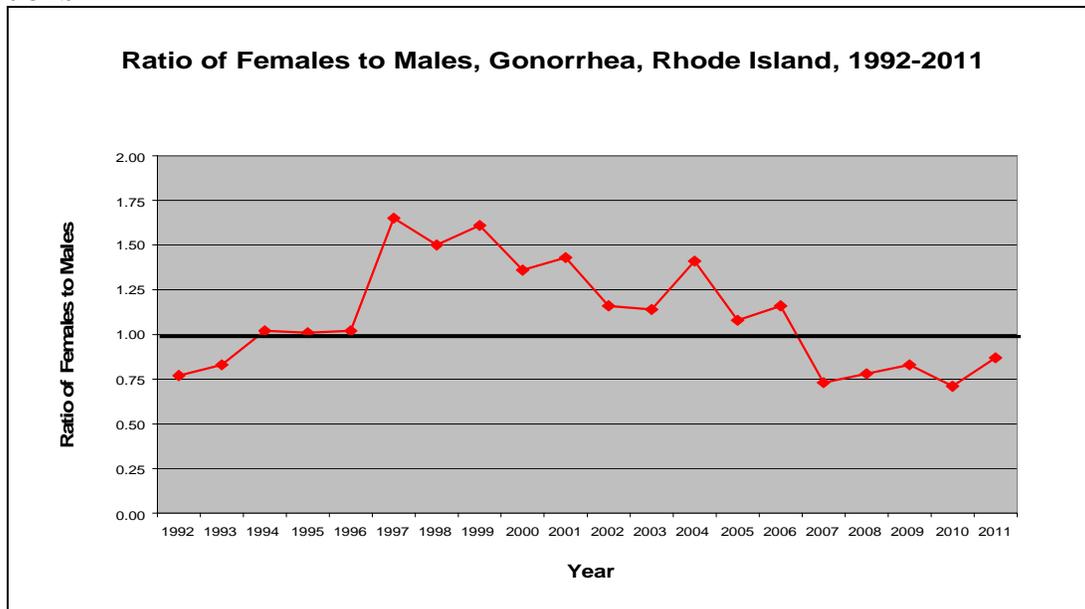
Over the six years encompassing 2001 through 2006, the percentage of gonorrhea cases residing in Providence County and the City of Providence had decreased. Since 2007, these percentages have increased to what was seen in the early 2000s. See Table 3 for this trend over the past 10 years.

Table 14: Reported Cases of Gonorrhea in Providence County and the City of Providence, Rhode Island, 2002-2011

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Providence County	798 88.7 %	864 88.8 %	701 85.9 %	386 84.0 %	418 82.3 %	359 89.3 %	268 87.3 %	288 89.4 %	266 91.4 %	310 86.1 %
City of Providence	469 52.1 %	517 53.1 %	430 52.7 %	188 42.9 %	201 39.6 %	179 44.5 %	153 49.8 %	167 51.9 %	161 55.3 %	191 53.1 %
Total Cases	900	973	816	438	508	402	307	322	291	360

In 2011, 193 (54%) gonorrhea cases were reported in males and 167 (46%) cases were reported in females. For a 13 year period from 1994-2006, more females were diagnosed with gonorrhea than males on a yearly basis. This changed in 2007, and there has been more gonorrhea cases reported in males than females in Rhode Island each year since. Figure 4 below illustrates the shift in female to male ratio over the last 20 years.

Figure 31b



As previously noted, reports of gonorrhea increased 24% from 2010 to 2011. Although there is an increase of reports among males and females, the most significant change is the increase of reports among females ages 15-24. By sex, the ratio of male to female cases decreased from 1.4 in 2010 (170 male cases, 121 female cases) to 1.15 in 2011 (193 male cases, 167 female cases). This translates to a 13.5% increase in the number of reported gonorrhea cases among males and a 38 % increase the number of reported gonorrhea cases among females.

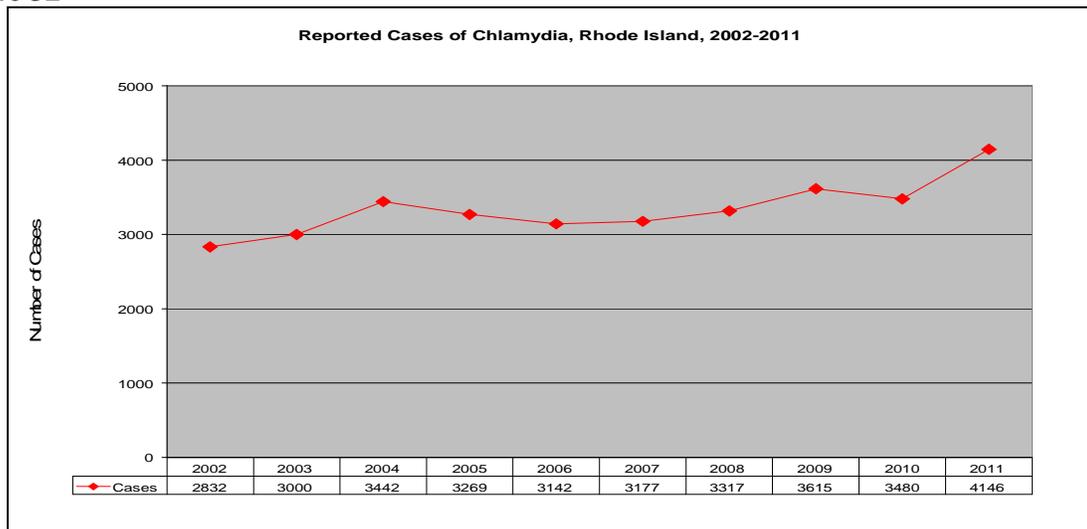
Approximately 60% of cases were in their late teens and early twenties (15-24 years of age), an increase from 2010 when 15-24 year olds accounted for 53% of gonorrhea reports. Overall, individuals less than 35 years of age represent nearly 86% of reported gonorrhea cases in 2011, remaining steady compared to the 85% of cases seen in this age group in 2010. Since peaking in 2004 when 88% of reported gonorrhea cases were seen in those less than 35 years old, the percentage of cases in this demographic began to decrease until reaching a low of 77% in 2007. In 2008 these numbers began to trend back upward with 84% in seen in 2008, followed by 85% seen in 2009.

When analyzing data by sex and age, reports in the number of gonorrhea among 15-24 year olds have increased in females and males by 60% and 20%, respectively. In 2011, females ages 15-24 accounted for 125 cases (75% of females) of gonorrhea, compared to 78 cases (65% of females) seen among females of this age in 2010. Although not as dramatic of a shift as seen in females 15-24, this percentage also increased among 15-24 year old males, from 45% (76 cases) in 2010, to 48% (92 cases) in 2011. While the 15-24 year old individuals account for most female gonorrhea cases, male cases are instead most commonly reported in individuals in their twenties. For example, 54% of male gonorrhea cases were ages 20-29 in both 2010 and 2011, while 15-19 year old males accounted for 14% of male gonorrhea cases in both 2010 and 2011.

Chlamydia

In 2011, there were 4,146 reported cases of chlamydia, representing a 19% increase from the 3,480 cases of chlamydia reported in 2010. This is the highest number of chlamydia cases ever reported in Rhode Island. Prior to 2011, the highest number of cases reported was 3,615 cases reported in 2009.

Figure 32



Over the past seven years there has been no drastic change in the distribution of chlamydia by race, ethnicity, or age, but there has been a slight change in the distribution of cases by city/town of residence. As can be seen in Table 4, from 2003-2007, the percentage of chlamydia cases residing in Providence County and the City of Providence had decreased. Since 2008 this decline has seemed to stabilize. Reported cases of chlamydia remain concentrated in Providence County where 3,307 cases (80%) were reported in 2011. This percentage is only a slight decrease compared to 2010. Within the City of Providence reports of chlamydia increased from 40% in 2010 to 42% in 2011.

Table 15: Reported Cases of Chlamydia in Providence County and the City of Providence, Rhode Island, 2001-2011

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
City of Providence	1,367 48.6%	1,334 44.5%	1,563 45.4%	1,426 43.6%	1,337 42.6%	1,253 39.4%	1,317 39.7%	1,430 39.6%	1,390 39.9%	1,730 41.7%
Providence County	2,475 87.4%	2,509 83.6%	2,886 83.9%	2,886 81.2%	2,573 81.9%	2,562 80.6%	2,663 80.3%	2,939 81.3%	2,828 81.3%	3,307 79.7%
Total Cases	2,832	3,000	3,442	3,269	3,142	3,177	3,317	3,615	3,480	4,146

In 2011, cases reported among females numbered at 2,984 (72%). This was a 20% increase over the number of female chlamydia cases reported in 2010. There were 1162 chlamydia cases (28%) among males in 2011, representing an increase of 16% when compared to the number of chlamydia cases reported among males in 2010. Seventy-four percent of cases were reported in persons in the late teens and early twenties, slightly higher than what was observed in 2010 (72%). Additionally, ninety-five percent of reported cases were less than 35 years of age, which is a slight increase than what was observed in 2010 (94%).

Twenty-three percent of the race/ethnicity data was missing in 2011. This is a slight increase from the 22% of cases that were missing race/ethnicity in 2010. Although there was a significant percentage of data missing for race/ethnicity in 2011, the STD Program has no reason to believe that there would be any reporting bias in the race/ethnicity data from those providers who do report STD infection to HEALTH via Surveillance Case Report Forms. If this holds true, then the percentages of race/ethnicity can be compared from year to year for those cases that HEALTH has race/ethnicity data. Table 5 below shows a comparison of 2007- 2011

Table 16. The Percentage and Rates of Chlamydia cases by Race/Ethnicity, Rhode Island, 2007-2011

	2007		2008		2009		2010		2011	
	%	Rate*								
Non-Hispanic White	38.5	147	40.4	162	43.3	189	39.0	169	43.2	223
Non-Hispanic Black	25.3	1522	22.3	1500	21.6	1481	22.5	1520	21.0	1686
Hispanic	32.7	875	33.2	903	32.0	946	35.4	942	32.3	1024

*Rates are expressed as cases/100,000 people. Rates are based on the 2007-2009 RI population as estimated by the U.S. Bureau of the Census. The rates for 2010-2011 are based on the RI population as determined by the 2010 U.S. Census. The rates for 2006 - 2010 are estimates due to missing race/ethnicity data.

CTS (Counseling Testing and Referral Sites) in Rhode Island

Publicly funded counseling and testing services provided by the Department of Health in collaboration with the CDC (Centers for Disease Control and Prevention) were initiated in 1985 to provide alternatives to blood donation as a means for high risk persons to determine their HIV status. These services became an integral part of HIV prevention programs and the HIV Counseling and Testing System (CTS) was developed to monitor client's use of program services. CTS provide anonymous (no identifying information recorded) and confidential (identifying information recorded) voluntary HIV counseling, testing, and referral services.

In 2011, there were a total of 2,191 clients tested for HIV and a total of 2,315 HIV tests administered at publicly funded CTS in Rhode Island. Of these 2,315 tests 34 were positive and 2281 were negative. Out of all tests 1,567 (67.7%) were anonymously tested (no names are taken at the time of the test and a code is used for purposes of record keeping), 748 (32.3%) were confidentially tested (names are exchanged and the patient is known to the testing site). And 1,383 (63.1%) of the individuals tested at CTS were males, 797 (36.4%) were females, 7 (<1%) were transgender (M to F), 2 (<1%) were transgender (F to M), and 2 (<1%) declined answering the question. Regarding race, 54.1% of those utilizing CTS services in 2011 were White, 15.9% were African American, 2.8% were Asian, 2.1% were American Indian/Alaska Native, 0.7% were Native Hawaiian/Pacific Islander, and 26.6% declined or did not know. And regarding ethnicity about 29.6% were Hispanic or Latino, 69.2% were not Hispanic and 1.1% declined or did not know. The majority of CTS clients were in the 20 to 29 years old age group (33.4%).

Figure 33. Distribution of 2011 CTS Clients by race

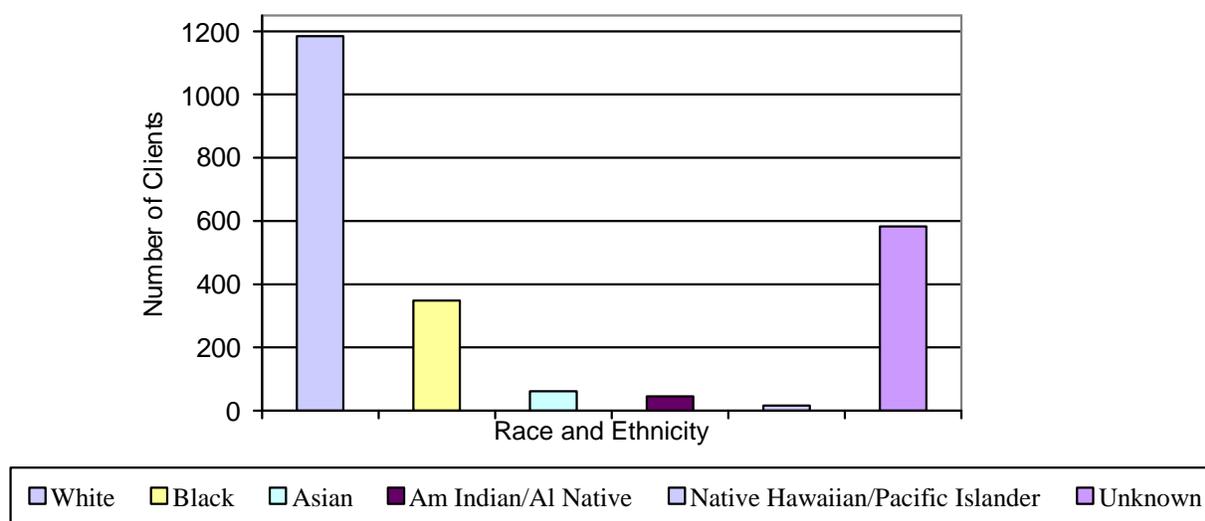
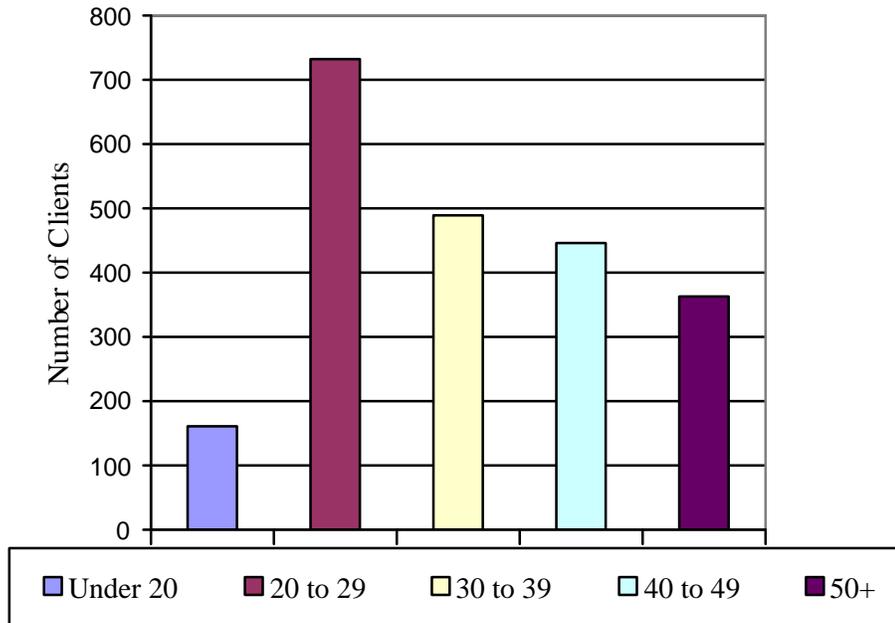


Figure 34. Age distribution of 2011 Clients



ENCORE: Rhode Island's Needle Exchange Program

ENCORE (Education, Needle Exchange, Counseling, Outreach and Referral) is an anonymous and confidential harm reduction program, coordinated by the Office of HIV/AIDS & Viral Hepatitis in Rhode Island since April 1995. The purpose of the needle exchange program is to prevent HIV transmission by giving injection drug users the tools (such as new syringes, bleach, clean cotton, alcohol swabs, condoms, information on skin care, and counseling and/or referrals) to protect themselves from acquiring blood-borne pathogens from contaminated needles and other drug paraphernalia. The information provided in the mandatory enrollment interview is helpful in identifying the risk behaviors of current IDU population in Rhode Island.

The following figures present number and demographic characteristics of the ENCORE enrollees.

Figure 35. New ENCORE Enrollments by Year:
1995-2011

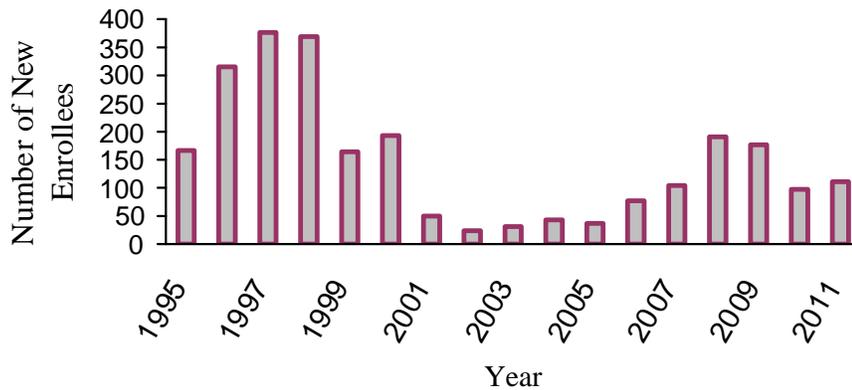


Figure 36. Gender Distribution of New ENCORE Enrollees 1995-2011

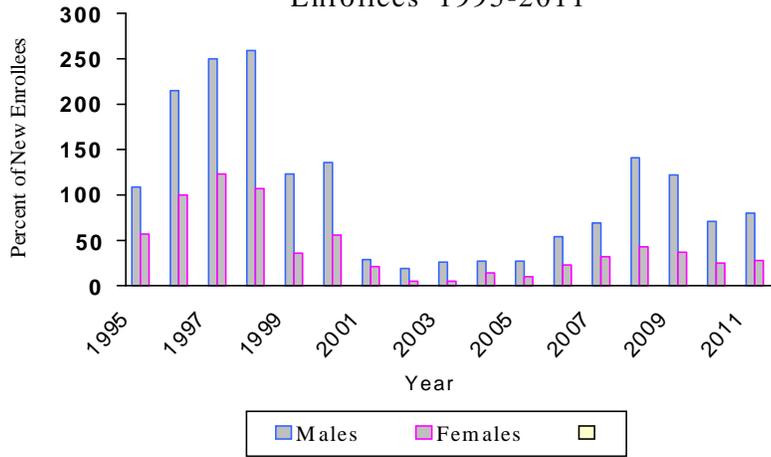
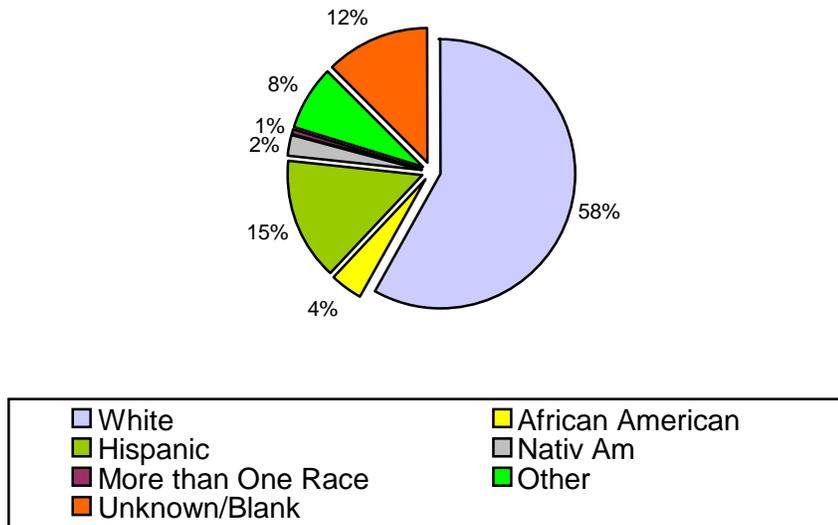


Figure 37 New ENCORE Enrollees by Race/Ethnicity 2011



Tuberculosis (TB) in Rhode Island

Tuberculosis (TB) is a disease that is spread from person-to-person through the air, and it is particularly dangerous for people infected with HIV. Worldwide, TB is the leading cause of death among people infected with HIV.

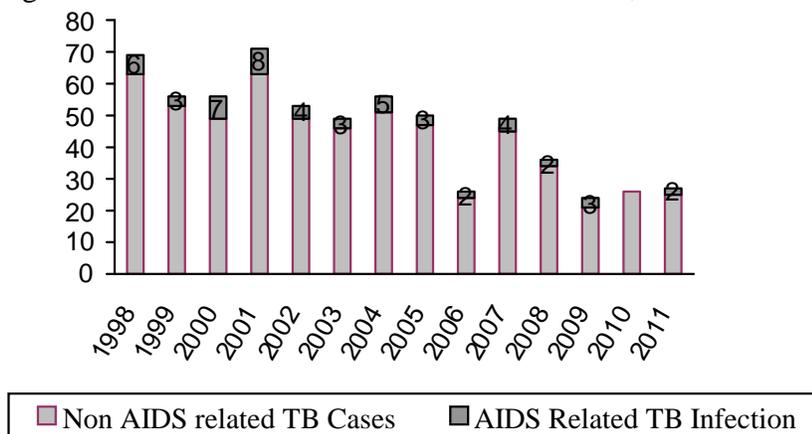
- Approximately 2 billion people (one-third of the world's population) are infected with *Mycobacterium tuberculosis*, the cause of TB.
- TB is the cause of death for one out of every three people with AIDS worldwide.
- The spread of the HIV epidemic has significantly impacted the TB epidemic - one-third of the increase in TB cases over the last five years can be attributed to the HIV epidemic (Source: UNAIDS).

An estimated 10-15 million Americans are infected with TB bacteria, with the potential to develop active TB disease in the future. About 10 percent of these infected individuals will develop TB at some point in their lives. However, the risk of developing TB disease is much greater for those infected with HIV and living with AIDS. Because HIV infection so severely weakens the immune system, people dually infected with HIV and latent TB have a 100% lifetime probability of developing active TB disease and becoming infectious compared to people not infected with HIV. CDC estimates that 10 to 15 percent of all TB cases and nearly 30 percent of cases among people ages 25 to 44 are occurring in HIV-infected individuals.

This high level of risk underscores the critical need for targeted TB screening and preventive treatment programs for HIV-infected people and those at greatest risk for HIV infection. All people infected with HIV should be tested for TB, and, if infected, complete preventive therapy as soon as possible to prevent TB disease. (Source: <http://www.cdc.gov/hiv/pubs/facts/hivtb.htm>)

Rhode Island follows the national AIDS/TB co-infection trends. On average, 9% of all TB infections diagnosed in the past five years were AIDS related except in 2010, when none of the TB case had HIV/AIDS diagnosis. Figure 33, illustrates these findings.

Figure 38. AIDS/Non AIDS related TB Infections, 1998-2011



Viral Hepatitis C in Rhode Island

The national prevalence rate of hepatitis C was estimated at 1.6% in 2005. However, actual national prevalence is likely to be considerably higher due to variances associated with surveillance of the disease such as low levels of public knowledge and understanding of HCV, and lack of surveillance and programmatic funding for testing and referral resources for the high risk, increase the likelihood that current prevalence rates are highly underestimated. *Based on this estimate RI is likely to have as many as 17,000 prevalent cases of hepatitis C.* This is a huge burden of disease, in recognition of which RI in 1998 launched a provider and public education campaign and started systematic surveillance to the extent feasible by limited resources.

Data obtained from laboratory reporting is subject to limitations. On some reports information is missing from certain fields. Also, this reporting system depends upon the cooperation and willingness of the laboratories to report, and it is therefore possible that underreporting occurs. Blood work ordered to labs from drug treatment facilities are without names and have codes instead, and often are lost to the system because of inadequate follow up for transcription. Duplicates are removed from the yearly positive report totals. A limited number of duplications may not be detectable if patients concerned about the sensitivity of the information use aliases. The data received also provides strongly limited information regarding race and ethnicity due to the high percentage of "unknown" entries in this field.

From a clinical perspective, approximately 15% of individuals tested HCV positive will spontaneously resolve, and in the absence of serial viral load testing, and in the absence of an easy to perform antigen marker test, cannot be recognized as resolved cases, and remain in the registry. Another shortcoming is that until a second confirmatory test (such as RIBA or PCR) received for some cases, most of them remain in the system in suspect status; and may also represent false positives.

To address these issues and also to move onto the nationwide system used for reporting of communicable diseases to the CDC, Rhode Island Hepatitis surveillance program started using the NEDSS (National Electronic Disease Surveillance System) Based System late 2006. This is a case based surveillance system, which reduces the issue of duplicity significantly and also allows proper follow-up of cases to determine their status (suspect/confirmed).

Laboratory reports from the years 1992-2006 (September) give an indication of trends over this time period. The number of positive reports increased significantly from 182 reports in 1992 to 1,962 reports in 2006 (9 months). Increased provider and public knowledge regarding HCV can account for a significant percentage of this increase; however, this percentage cannot be determined. The increase may be due to the tendency of positive cases to be identified years after the exposure, and disease trends have suggested that the greatest number of new cases were

contracted 10-30 years ago. The following charts show a basic overview of the number of positive lab reports in Rhode Island from 1992 to 2006 (Jan-Sep) and also the number of new cases by sex and age-group (Oct.-Dec).

Figure 39. Hepatitis C Lab Reports in RI by Year 1992-2006(September)

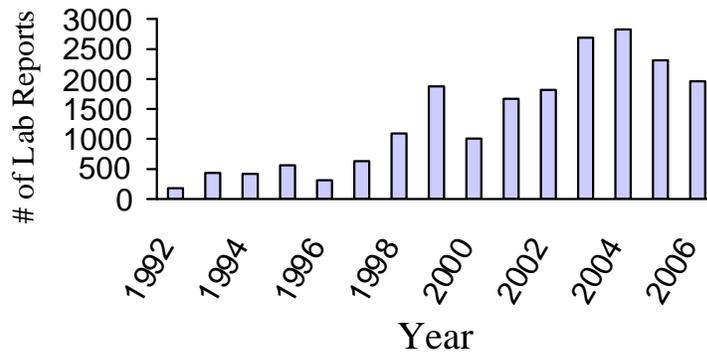


Figure 40. The Age Distribution of Individuals with Positive Hepatitis C Test Results 1992-2002

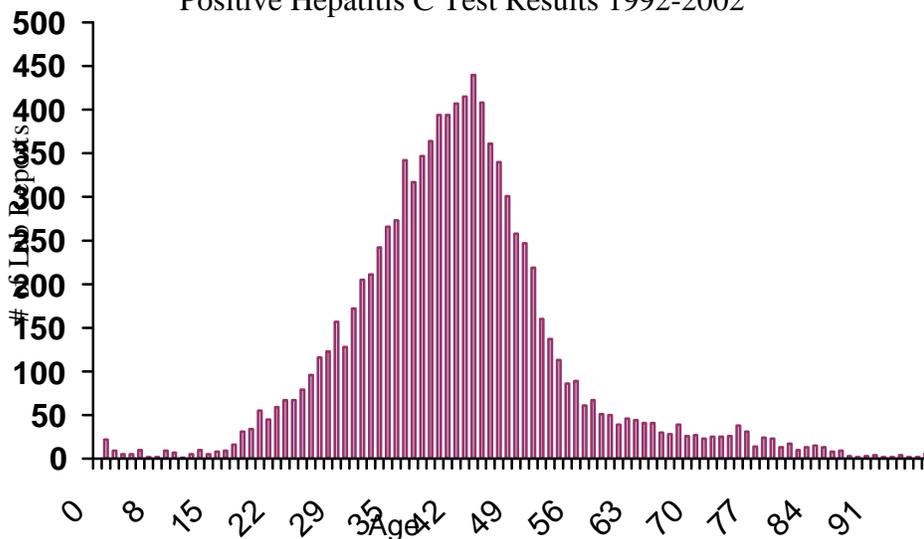


Figure 41. Gender Distribution of Positive HCV Lab Reports (1992-2006 September)

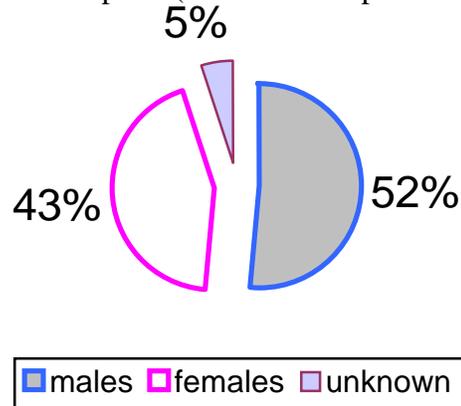
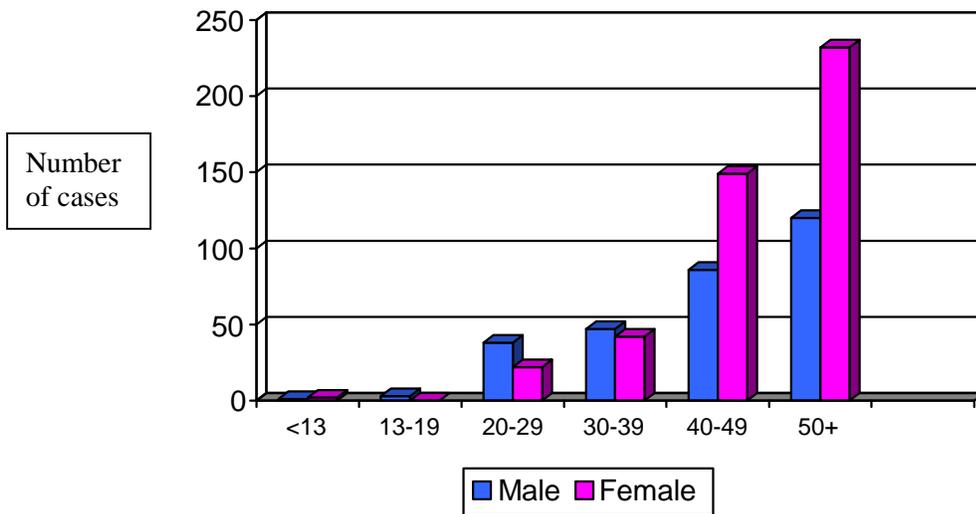


Figure 42. Confirmed Chronic Hepatitis C cases by sex and age, 2008



About one quarter of HIV-infected persons in the United States are also infected with hepatitis C virus (HCV). HCV is one of the most important causes of chronic liver disease in the United States and HCV infection progresses more rapidly to liver damage in HIV-infected persons. HCV infection may also impact the course and management of HIV infection. (Source: http://www.cdc.gov/hiv/pubs/facts/HIV-HCV_Coinfection.htm)

The Rhode Island Department of Health has responded over the course of the past few years to the high prevalence of hepatitis C, by systematic inclusion of hepatitis C prevention and control

strategies in all HIV/AIDS related programming. Rhode Island's ENCORE program consists of education, needle exchange, counseling, outreach, and referrals. Because IDU is currently the most significant mode of HCV transmission, the ENCORE program captures a portion of the highest risk population. ENCORE was designed for and has traditionally focused on HIV and AIDS. However, HIV and HCV are transmitted comparably through IDU, and integration of HCV prevention and referrals (for testing and treatment services with providers who have agreed to participate) into the ENCORE program is therefore logical and efficient.

Vendors providing HIV counseling and testing receive thorough HIV education and certification. Hepatitis C information has been integrated into the education, which is conducted by a public health nurse. The goal is to encourage these vendors to educate their clients about hepatitis C by integrating HCV into HIV prevention materials, trainings, and staff development. The vendors subsequently make referrals to HCV testing services as appropriate. Public education materials and HCV screening and treatment guidelines have been distributed to providers.

Behavioral Risk Factor Surveillance System (BRFSS)

The BRFSS is an on-going data collection program, administered and supported by the CDC's National Center for Chronic Disease Prevention and Health Promotion. Surveys were developed and conducted to monitor state-level prevalence of the major behavioral risks among adults associated with premature morbidity and mortality. The information attained from the BRFSS is useful in describing the populations at risk for contracting HIV through their behaviors.

According to the 2009 BRFSS in Rhode Island, 39% of those surveyed indicated that they have been tested for HIV at some point in their life aside from routine screening when donating blood; nationally that number was 36% of those surveyed. The BRFSS also revealed that 46% of those surveyed in Rhode Island were tested at a private doctor's office or HMO, nationally 42% of those tested got the test at a private doctor's office or HMO. Both in Rhode Island and nationally 96% of those who responded that they were not at risk for HIV based on the listed risk behaviors on the survey (e.g. IDU, STD diagnosis, drug/money for sex, anal sex without a condom).

Nationwide in 2010, 34% of those surveyed said they have been tested for HIV at some point in their life aside from routine screening when donating blood. Majority of those tested, about 42% were tested at a private doctor or HMO. Of those tested, 21% was rapid test and 72% said it was not a rapid test.

The latest BRFSS data is from 2011 survey, and 33% of those surveyed in Rhode Island indicated that they were ever tested for HIV, at some point in their life aside from routine screening when donating blood; nationally that number was 36% of those surveyed in 2011. Among RI residents 97% of those surveyed responded that they were not at risk for HIV based on the listed risk behaviors on the survey (e.g. IDU, STD diagnosis, drug/money for sex, anal sex without a condom) compared to 94% nationwide in 2011.

Youth Risk Behavior Survey (YRBS)

The Youth Risk Behavior Survey (YRBS) is an anonymous and voluntary survey conducted on alternate years among randomly selected middle and high schools students nationwide. It was developed by the Division of Adolescent and School Health at the Centers for Disease Control and Prevention (CDC). The CDC sponsored YRBS in 44 states and 23 cities nationwide in 2005. Total number of sites participating in 2005 survey was 71. The YRBS monitors six categories of priority health risk behaviors that contribute to the major causes of mortality, disease, injury, and other health and social problems among youth in the United States. In 2007 it was conducted in 50 states across the United States. Summary findings of the 2005 and 2007 survey on national and Rhode Island level are described below.

Nationwide in 2005, 46.8% of surveyed students had had sexual intercourse during their life; prevalence of which was higher among Black and Hispanic male than Black and Hispanic women students. Overall 87.9% of students were taught about HIV/AIDS in school. 11.9% of students nationwide had been tested for HIV, and prevalence of HIV testing was higher among female (13.2%) than male (10.6%). In 2005, 14.3% of high school students had had sexual intercourse with four or more persons during their life nationwide. In general, the prevalence of having had sexual intercourse with four or more persons was higher among male than female students, higher among Black than white and Hispanic students, and higher among Hispanic than white students. About 33.9% of the students nationwide were currently sexually active and among those, 62.8% reported that either they or their partner had used a condom during last sexual intercourse; prevalence of having condom used was higher among male than female.

In Rhode Island high schools in 2005 46.7% students had sexual intercourse, an increase from 44% in 2003. 87.4% of high school students were taught about AIDS or HIV infection in school, a decrease from 91% in 2003. 13% of the students reported having sexual intercourse with four or more people during their life. Overall 36.5% of the students were currently sexually active and of them 34% did not use a condom in their previous sexual intercourse, a significant decrease from 47% reported in 2003; prevalence of having condom used was higher among male than female. 22% of the students were taught about AIDS/HIV in school and drank alcohol or used drug before last sexual intercourse, and the prevalence was higher in male than female.

In 2005 42.7% of Rhode Island high school students had a drink of alcohol in the past thirty days compared to 45% in 2003. 42.6% students reported ever using marijuana in 2005, a decrease from 44% in 2003. About 3% of the students reported ever having illegal injection drug.

Nationwide in 2007, 47.8% of the surveyed students ever had sexual intercourse, while 7.1% had sexual intercourse for the first time before age 13. During their life 14.9% students had sexual intercourse with four or more persons. About 35% were currently sexually active and 61.5% of those had used a condom during last sexual intercourse.

Among Rhode Island youths these numbers in 2007 were comparable, 45.5% students ever had sexual intercourse; 10.9% students had sexual intercourse with four or more persons; 33.1%

were currently sexually active and 66% those had used a condom during last sexual intercourse. Moreover 10% of the RI youth identified themselves as LGBU (Lesbian, Gay, Bisexual, and Unsure). It was observed that female students and students with emotional/learning disabilities were more likely to be LGBU. LGBU students were found to be more likely to engage in risky safety and violent behaviors, to skip schools and to be forced to have sexual intercourse and use marijuana. LGBU students were found to be sexually active, to initiate sex at early age, have multiple partners and did not have HIV/AIDS education.

In 2011 nationwide, 47.4% the surveyed students ever had sexual intercourse, while 6.2% had sexual intercourse for the first time before age 13. During their life 15.3% students had sexual intercourse with four or more persons. About 22% had alcohol or used drugs before last sexual intercourse and 39.8% of those who are sexually active did not use a condom during last sexual intercourse.

In 2011 41.7% of Rhode Island high school students reported ever having sexual intercourse compared to 45.5% in 2007. And 40.9% among those who are sexually active did not use condoms during last intercourse, which decreased from 66% in 2007. Ten percent of the students had sexual intercourse with four or more partners in 2011, which was similar to 2007. And 20.8% had alcohol or used drugs before last sexual intercourse among those who were sexually active compared to 17.5% in 2007. About 10.5% of RI youth identified themselves as LGBU, which is also similar to 2007. Moreover it was also observed similar to 2007 that LGBU students were found more to be forced to have sexual intercourse and have intercourse before 13 years of age, bullied at schools, and not use condoms compared to those students who identified themselves as heterosexuals or straight.

List of Figures and Tables

Figures:

- Figure 1. Age Distribution of People in Rhode Island in 2009
- Figure 2. Types of Households in Rhode Island 2009
- Figure 3. The Educational Attainment of People in Rhode Island in 2009
- Figure 4. Rhode Island AIDS Incidence, Prevalence, and Deaths, 1990-2011
- Figure 5. Rhode Island AIDS Incidence by Gender, 1993-2011
- Figure 6. Rhode Island AIDS Incidence by Age, 1993-2011
- Figure 7. Percentages of Cumulative AIDS Cases by Race in Rhode Island through Dec. 2011
- Figure 8. Percentages of Rhode Island Population by Race, 2010 Census
- Figure 9. Rhode Island AIDS Incidence by Exposure Category, 1993-2011
- Figure 10. AIDS Deaths, RI Residents, 1990-2011
- Figure 11. Rhode Island HIV Incidence 2000-2011
- Figure 12. Rhode Island HIV Incidence by Gender 2000-2011
- Figure 13. Rhode Island HIV Cases per 100,000 Populations, 2000-2011
- Figure 14. HIV (not AIDS) Incidence among Men by Exposure Category 2000-2011
- Figure 15. HIV Infected MSM by Race, 2000-2011
- Figure 16. HIV Rates among MSM by Race, 2000-2011
- Figure 17a. HIV Infected MSM by Age and Year of Diagnosis, 2000-2011
- Figure 17b. Percentage of MSM HIV cases among all Male HIV Cases, 2000-2011
- Figure 18. Percentage of HIV Cases with IDU as their Identified Mode of Transmission: 1989-2011
- Figure 19. HIV Infected Hispanic Men by Mode of Exposure, 2000-2011
- Figure 20. HIV Infected Hispanic Women by Mode of Exposure, 2000-2011
- Figure 21. HIV Infected African American Men by Mode of Exposure, 2000-2011
- Figure 22. HIV Infected African American Women by Mode of Exposure, 2000-2011
- Figure 23. HIV Infected White Men by Mode of Exposure, 2000-2011
- Figure 24. HIV Infected White Women by Mode of Exposure, 2000-2011

Figure 25. HIV Rates among Women by Race/Ethnicity, Rhode Island, January 1, 2000-December 31, 2011

Figure 26. HIV Cases among Women by Exposure Category, Rhode Island, January 1, 2000-December 31, 2011

Figure 27. HIV Incidence among Youth (13-24 years old), January 1, 2000 to December 31, 2011

Figure 28. HIV Cases among Male Youth by Exposure Category, Rhode Island, 2000-2011

Figure 29. HIV Cases among Female Youth by Exposure Category, Rhode Island, 2000-2011

Figure 30a. Percentage of Males Reported with Primary, Secondary or Early Latent Syphilis who were MSM, Rhode Island, 2002-2011

Figure 30b: Percentage of MSM's with Primary, Secondary and Early Latent Syphilis who were Self-Reported HIV Positive, Rhode Island, 2002-2011

Figure 31a. Reported Cases of Gonorrhea, Rhode Island, 2002-2011

Figure 31b. Ratio of Females to male Gonorrhea, Rhode Island, 1992-2011

Figure 32. Reported cases of Chlamydia Rhode Island, 2002-2011

Figure 33. Distribution of 2011 CTS Clients by race

Figure 34. Age distribution of 2011 CTS Clients

Figure 35. New Encore Enrollments by year 1995-2011

Figure 36. Gender Distribution of New ENCORE Enrollees 1995-2011

Figure 37. New ENCORE Enrollees by Race/Ethnicity 1995-2011

Figure 38. AIDS/Non AIDS Related TB Cases 1998-2011

Figure 39. Hepatitis C Lab Reports in Rhode Island, 1992-2006 (Sep)

Figure 40. Age Distribution of Individuals with Positive Hepatitis C Test Results

Figure 41. Gender Distribution of HCV Positive Lab Reports, 1992-2006 (Sep)

Figure 42. Confirmed Chronic Hepatitis C cases by sex and age, 2008

Tables:

Table 1. Demographic Characteristics of RI AIDS Cases 1982-2011

Table 2. Demographic Characteristics of RI AIDS Cases by Year of Diagnosis 2007-2011

Table 3. Percentage of children ages 0-12 reported with AIDS, RI residents, 1982-2011, by demographic characteristics.

Table 4. Demographic Characteristics of HIV Cases, January 1, 2007 to December 31, 2011

Table 5. Demographic Characteristics of RI HIV cases 2000-2011

Table 6. Demographic Characteristics of Male HIV Cases, January 1, 2007 to December 31, 2011

Table 7. Demographic Characteristics of Female HIV Cases, January 1, 2007 to December 31, 2011

Table 8. Demographic Characteristics of Cumulative HIV Infected Male IDU cases: 2000-2011

Table 9. Demographic Characteristics of Cumulative HIV Infected Female IDU cases: 2000-2011

Table 10. Demographic Characteristics of RI HIV cases from Adult Correctional Institution: 2000-2011

Table 11. Comparison of the Demographic Characteristics of Individuals Diagnosed with HIV Only and Individuals Who Become Aware of Their Positive HIV Status When Diagnosed with AIDS, January 1, 2000 to December 31, 2011

Table 12. Demographic characteristics of reported Chlamydia, gonorrhea and syphilis cases, Rhode Island 2011

Table 13. The Percentage and Rate of Gonorrhea cases by Race/Ethnicity, Rhode Island, 2007-2011

Table 14. Reported Cases of Gonorrhea in Providence County and the City of Providence, Rhode Island, 2002-2011

Table 15. Reported Cases of Chlamydia in Providence County and the City of Providence, Rhode Island, 2001-2011



Table 16. The Percentage and Rates of Chlamydia cases by Race/Ethnicity, Rhode Island, 2007-2011