2012 Rhode Island HIV/AIDS/Viral Hepatitis Epidemiologic Profile with Surrogate Data

Rhode Island Department of Health

Division of Infectious Disease and Epidemiology

Office of HIV/AIDS & Viral Hepatitis

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1) Introduction

The RI Department of Health's surveillance program has records on the HIV epidemic since it started in 1982. In RI 3,612 cases of HIV and AIDS and 1591 deaths from this virus have been reported in the last 30 years as of 2012. Major strides in prevention and treatment have altered the pace and reach of the epidemic, and after a plateau we are in a phase of decline. However, much work still needs to happen to get us to zero native transmission in RI. One of the major interventions will be to keep the estimated 2500 persons living with HIV and AIDS in RI connected to care and have their viral loads suppressed to prevent transmission. At the same time global and targeted prevention efforts in collaboration with community partners must continue.

This Epidemiologic Profile provides detailed surveillance data about the current status of the HIV/AIDS epidemic, and presents the last 5 years data trends (2008-2012). The profile focuses on data related to persons diagnosed with HIV, persons with HIV who have progressed to AIDS, HIV/AIDS related deaths, and those populations who are experiencing a disproportionate burden of illness from HIV. Included are epidemiologic profiles for Tuberculosis, Sexually Transmitted Diseases, Hepatitis C, behavioral survey data and descriptive data related to the needle exchange/harm reduction program and counseling/testing/referral programs. The last section provides a review of the socio-demographic profile of the population of RI.

2.) Surveillance Methods:

Surveillance authority:

Reporting is mandated in accordance with Rhode Island's General Laws, Chapter 23 Prevention and Suppression of Contagious Diseases – HIV/AIDS which can be accessed at http://webserver.rilin.state.ri.us/Statutes/TITLE23/23-6.3/INDEX.HTM and the "Rules and Regulations Pertaining to HIV Counseling, Testing and Reporting, and Confidentiality" which can be accessed at http://sos.ri.gov/documents/archives/regdocs/released/pdf/DOH/7132.pdf.

Name reporting of HIV cases has been required since July 2006.

Case definitions:

In its collection, assessment, and aggregation of HIV and AIDS reports, the Rhode Island HIV Surveillance Program conforms to surveillance case definitions of HIV and AIDS published by the Centers for Disease Control and Prevention (CDC). Case definitions have been nationally published in 1986, 1987, 1992, 1993, 1999 and most recently in 2008

- CDC. Classification system for human T-lymphotropic virus type III/lymphadenopathy-associated virus infections. MMWR 1986; 35:334. http://www.cdc.gov/mmwr/preview/mmwrhtml/00033677.htm
- CDC. Revision of the CDC surveillance case definition for acquired immunodeficiency syndrome. MMWR 1987; 36:1-15S. http://www.cdc.gov/mmwr/pdf/other/mmsu3601.pdf

- CDC. 1993 Revised Classification System for HIV Infection and Expanded Surveillance Case Definition for AIDS Among Adolescents and Adults. MMWR 1992; 41(RR-17). http://www.cdc.gov/mmwr/preview/mmwrhtml/00018871.htm
- CDC. Appendix: Revised Surveillance Case Definition for HIV Infection. MMWR 1999; 48(RR13); 29-31. http://www.cdc.gov/mmwr/preview/mmwrhtml/rr4813a2.htm
- 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. http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5710a1.htm

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.

Data Repositories

Case surveillance of AIDS was initiated in Rhode Island in 1983, and HIV surveillance began in 2000. These surveillance systems provide information on risk factors, patient demographics, laboratory tests, and the clinical manifestations of disease over time. The present Epidemiologic Profile relies primarily on these case surveillance data. However, the program 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.

***HARS*:** Implemented in 1983 this was a repository of all AIDS cases by name (from 1983) and in addition, HIV cases were first added to this system starting in 2000. HARS data was synthesized into a composite database called eHARS in 2008

***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 and it were stored in the Unique Identifier System Database. This provides an unduplicated count of cases from Jan 2000 to June 2006. Starting July 2006, HIV cases have been reported with names and are stored in the eHARS database described below.

***eHARS** (electronic HIV/AIDS Reporting System)*: Implemented in 2008 as an upgrade of HARS (HIV/AIDS Reporting System), and is a repository of all AIDS cases reported since 1983 and all HIV cases reported by name since 2006. This system has the capacity to store multiple case reports and laboratory reports for each person.

***Cerner*-** State Health Laboratory Information System (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 telephone survey which is conducted annually 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-MIS Database**:** A repository of STD reports of chlamydia, gonorrhea and syphilis reports, from the STD surveillance program.

NEDSS Tuberculosis Database**:** Reportable disease database of the TB surveillance program.

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

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

Data Limitations

The ideal HIV/AIDS surveillance system should be capable of detecting and accurately detailing all new HIV infections, to serve the purpose of providing information to HIV prevention programs so as to 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. This HIV positive test result was 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 an unique identifier code to maintain patient anonymity, but essentially eliminated case duplication and allowed for more complete, accurate and timely reporting and analysis. This new HIV reporting system greatly improved our ability to conduct HIV surveillance. Most recently, in 2006, HIV name reporting became a Federal requirement to obtain funds for prevention. RI therefore adopted name reporting and as a result, the accuracy and quality of our database has been enhanced and reflected from 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.cdcnpin.org/scripts/hiv/whatsnew.asp Since providers may see many cases in a period of time, creating the perception of rapidly increasing case numbers, that necessarily does not translate into a surveillance measure of increasing incident cases, as many of the cases are importations from prior care in other states or abroad, or are returning to care after a period of absence, and are already in our data base from prior years.

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. Considerable effort is put into de-duplicating cases already in the system, investigating whether the case has been counted as an incident case in another state using CDC's SOUNDEX methodology and also to cross match with the national death index registry to document deaths.

3) HIV/AIDS Surveillance Report

A) HIV in Rhode Island: 2012 Highlights

Between January 1, 2012 and December 31, 2012 there were total of 78 Rhode Island residents newly diagnosed with HIV and reported to the surveillance program. 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. (Table1).

Of the 78 cases diagnosed and reported to HEALTH during this year:

- Males accounted for 78% (n 61, incidence rate 12 per 100,000) of the cases and females accounted for 22% (n 17, incidence rate 3 cases per 100,000).
- Majority of cases were between the ages of 20-29 (29%, n 24) and 30-39 (27%, n 21).

- **By Race/Ethnicity:**
  - Among men, Whites accounted for the majority of cases (57%, n 35, incidence rate 8 cases per 100,000 population), followed by Hispanics (21%, n13, incidence rate 35 cases per 100,000 populations) and African Americans (18%, n11, incidence rate 29 cases per 100,000 population).
  - Among Women, African Americans (35%,n 6, incidence rate 15 cases per 100,000 population) and Hispanics (35%, n 6, incidence rate 9 cases per 100,000 population) accounted for the majority of cases, followed by Whites (17%, n <5, incidence rate less than 1 case per 100,000 population).

- **By mode of exposure to HIV:**
  - Among men, men who have sex with men (MSM) is the leading mode of exposure (62%, n 38), followed by 'Heterosexual Contact' (23%, n 14).
  - Among Women, 'Heterosexual Contact' is the leading mode of exposure (71%, n 12), followed by 'No Risk Reported' (18%, n <5).

- **By county of residence:**
  - The majority of the cases (88%, n 67) were from Providence County.

B) 5 Year Trend Data-HIV in Rhode Island: 2008-2012

Overall numbers of new HIV reports have trended downwards (Fig 1, below). These numbers include RI residents with a first positive test, foreign born nationals with known HIV establishing residency in RI for the first time and also cases of AIDS presenting for the first time in this period. Excluded are cases that were first diagnosed and reported in another state in the US and then moved to reside in RI, and excluded are all previously reported cases.

Figure 1. Rhode Island HIV Incidence 2008-2012

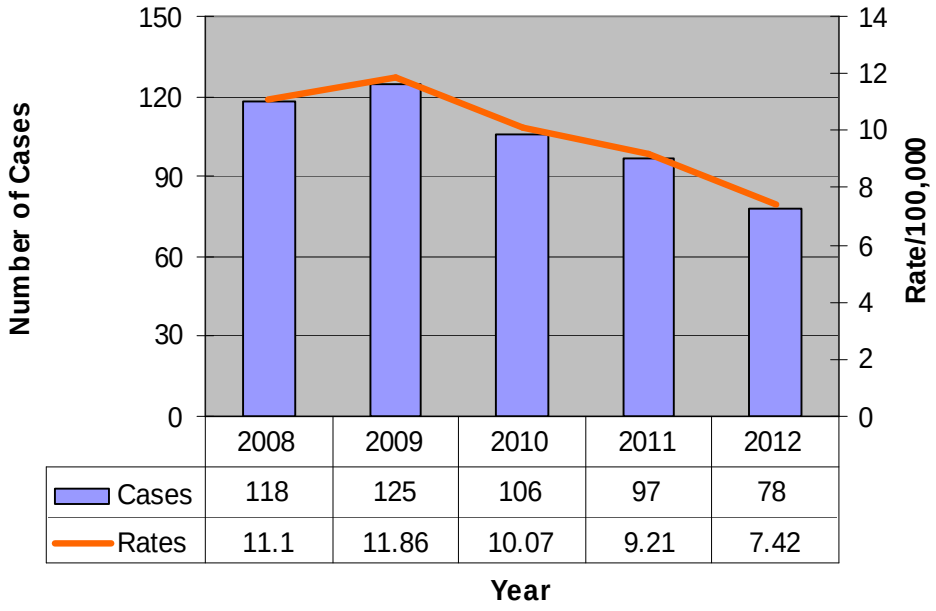


Table 1. HIV Cases, Demographics and Risk Factor Characteristics RI 2008 to 2012

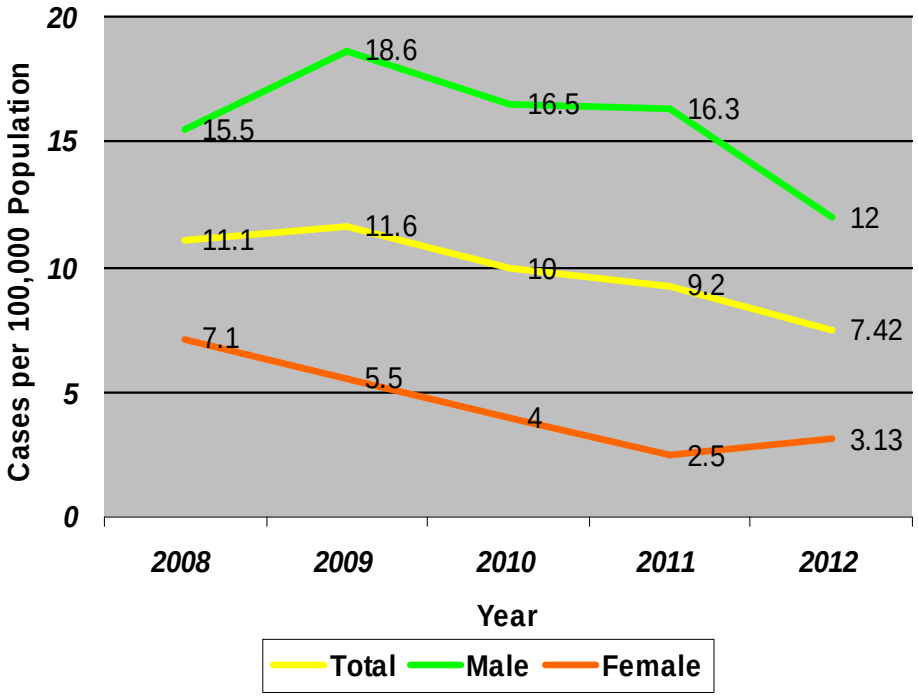
	2008	2009	2010	2011	2012
Gender					
Male	79 (67%)	95 (76%)	84 (79%)	83 (86%)	61 (78%)
Female	39 (33%)	30 (24%)	22 (21%)	14 (14%)	17 (22%)
Total	118 (100%)	125 (100%)	106 (100%)	97 (100%)	78 (100%)
Age Group					
<13	<5*	<5*	<5*	<5*	<5*
13-19	<5*	<5*	8 (7%)	<5*	<5*
20-29	21 (18%)	30 (24%)	20 (19%)	24 (25%)	23 (30%)
30-39	36 (31%)	29 (23%)	27 (25%)	30 (31%)	21 (27%)
40-49	42 (36%)	36 (29%)	27 (25%)	29 (30%)	18 (23%)
50+	17 (14%)	27 (22%)	24 (23%)	13 (13%)	15 (19%)
Total	118 (100%)	125 (100%)	106 (100%)	97 (100%)	78 (100%)
Race/Ethnicity					
White	48 (41%)	39 (31%)	47 (44%)	54 (56%)	38 (49%)
African American	33 (28%)	33 (26%)	26 (25%)	14 (14%)	17 (22%)
Hispanic	35 (30%)	50 (40%)	27 (26%)	22 (23%)	19 (24%)
Asian	<5 *	<5 *	<5*	<5*	<5*
Native American	<5 *	<5 *	<5*	<5*	<5*
Total	118 (100%)	125 (100%)	106 (100%)	97 (100%)	78 (100%)
Risk Factor					
MSM	48 (41%)	59 (47%)	54 (51%)	62 (64%)	38 (49%)
IDU	19 (16%)	8 (6%)	6 (6%)	<5*	<5*
MSM / IDU	<5 *	<5 *	<5*	<5*	<5*
Heterosexual Contact	22 (19%)	16 (13%)	13 (12%)	12 (12%)	26 (33%)
Transfusion	<5 *	<5 *	<5*	<5*	<5*
Mother with HIV/HIV Risk	<5 *	<5 *	<5*	<5*	<5*
No Risk Reported	26 (22%)	36 (29%)	32 (30%)	15 (15%)	9 (12%)
Total	118 (100%)	125 (100%)	106 (100%)	97 (100%)	78 (100%)
County of Residence					
Homeless	<5 *	<5 *	<5*	<5*	<5*
Bristol	9 (8%)	<5 *	<5*	<5*	<5*
Kent	<5 *	7 (5%)	9 (9%)	8 (9%)	6 (8%)
Newport	<5 *	8 (6%)	8 (8%)	6 (7%)	<5*
Providence	102 (86%)	100 (80%)	81 (77%)	69 (76%)	67 (88%)
Washington	<5 *	6 (5%)	6 (6%)	<5*	<5*
Total	118 (100%)	125 (100%)	106 (100%)	97 (100%)	78 (100%)

** Cell contained less than five cases*

C) Gender

More male cases continue to be diagnosed in Rhode Island than in females. Cases for both genders are generally trending downwards, there was however a marginal increase in female cases in 2012. The incidence rate for male HIV cases were 12 cases per 100,000 population compared to the female HIV incidence rate of 3 cases per 100,000 population, with an overall rate for 7 cases per 100,000 population for Rhode Island in 2012. MSM remains the greatest risk factor among males, whereas for females it is heterosexual exposure and in many cases "unknown" exposures (Table 2 and 3).

Figure 2. HIV Case Rates by Gender
RI 2008 to 2012



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

Table 2. Male HIV Cases: Demographic and Risk Factor Characteristics RI 2008 - 2012

	2008	2009	2010	2011	2012
Age Group					
<13	<5*	<5*	<5*	<5*	<5*
13-19	<5*	<5*	<5*	<5*	<5*
20-29	17 (22%)	23 (24%)	16 (19%)	22 (25%)	20 (33%)
30-39	21 (27%)	23 (24%)	25 (30%)	25 (30%)	14 (23%)
40-49	28 (35%)	27 (28%)	22 (26%)	25 (30%)	15 (25%)
50+	12 (15%)	20 (21%)	17 (20%)	11 (13%)	11 (17%)
Total	79 (100%)	95 (100%)	84 (100%)	83 (100%)	61 (100%)
Race/Ethnicity					
White	39 (49%)	35 (37%)	41 (48%)	50 (60%)	35 (57%)
African American	17 (22%)	21 (22%)	16 (19%)	11 (13%)	11 (18%)
Hispanic	21 (27%)	36 (38%)	21 (25%)	16 (13%)	13 (21%)
Asian/Pac Islander	<5*	<5*	<5*	<5*	<5*
Native American	<5*	<5*	<5*	<5*	<5*
Total	79 (100%)	95 (100%)	84 (100%)	83 (100%)	61 (100%)
Risk Factor					
MSM	48 (60%)	59 (62%)	54 (64%)	62 (75%)	38 (62%)
IDU	8 (10%)	5 (5%)	<5*	<5*	<5*
MSM / IDU	<5*	<5*	<5*	<5*	<5*
Heterosexual Contact	8 (10%)	<5*	<5*	5 (6%)	14 (23%)
Transfusion	<5 *	<5*	<5*	<5*	<5*
Mother with HIV/HIV Risk	<5 *	<5*		<5*	<5*
No Risk Reported	12 (15%)	23 (23%)	22 (26%)	9 (11%)	5 (8%)
Total	79 (100%)	95 (100%)	84 (100%)	83 (100%)	61 (100%)

** Cell contained less than five cases*

Table 3. Female HIV Cases: Demographic and Risk Factor Characteristics RI 2008 - 2012

	2008	2009	2010	2011	2012
Age Group					
<13	<5 *	<5 *	<5 *	<5 *	<5*
13-19	<5 *	<5 *	<5 *	<5 *	<5*
20-29	<5 *	5 (16%)	<5 *	<5 *	<5*
30-39	15 (38%)	8 (27%)	<5 *	<5 *	7 (41%)
40-49	14 (36%)	9 (30%)	5 (22%)	5 (36%)	<5*
50+	5 (13%)	7 (24%)	7 (31%)	<5 *	<5*
Total	39 (100%)	30 (100%)	22 (100%)	14 (100%)	17 (100%)
Race/Ethnicity					
White	9 (23%)	<5*	6 (27%)	<5 *	<5*
African American	16 (41%)	12 (40%)	10 (45%)	<5 *	6 (35%)
Hispanic	14 (36%)	14 (47%)	6 (27%)	6 (43%)	6 (35%)
Asian/Pacific Islander	<5 *	<5 *	<5 *	<5 *	<5*
Native American	<5 *	<5 *	<5 *	<5 *	<5*
Total	39 (100%)	30 (100%)	22 (100%)	14 (100%)	17 (100%)
Risk Factor					
IDU	11 (28%)	<5*	<5 *	<5 *	<5*
Heterosexual Contact	14 (36%)	12 (40%)	10 (45%)	7 (50%)	12 (71%)
Transfusion	<5 *	<5*	<5 *	<5 *	<5*
Mother with HIV/HIV Risk	<5*	<5*	<5 *	<5 *	<5*
No Risk Reported	11 (28%)	14 (46%)	10 (45%)	6 (43%)	<5*
Total	39 (100%)	30 (100%)	22 (100%)	14 (100%)	17 (100%)

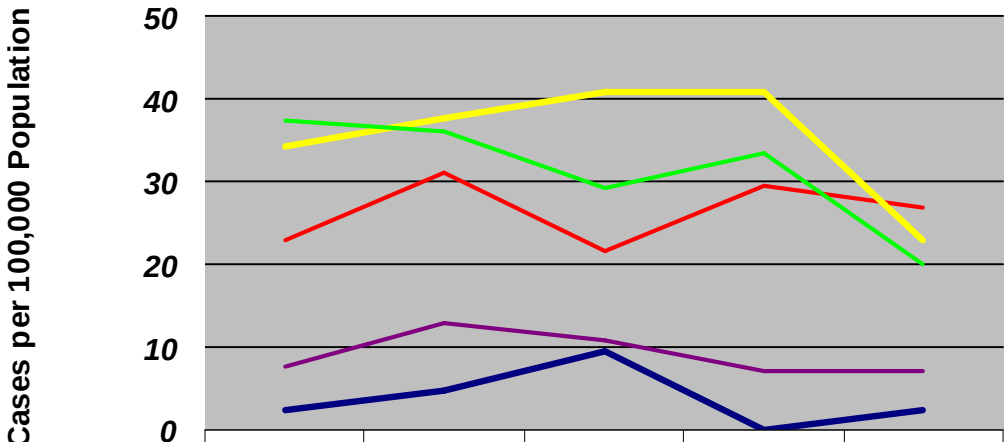
** Cell contained less than five cases*

D) Age

The age distribution of new HIV cases has changed significantly over the past five years. As seen in table 1, HIV cases diagnosed between 2008 and 2010 were predominantly in the 40-49 and 30-39 age group. However around the same time HIV cases in the younger age group of 20-29 showed a gradual increase. In 2010 the newly diagnosed HIV cases were evenly distributed in the three age-groups 20-29, 30-39 and 50+.

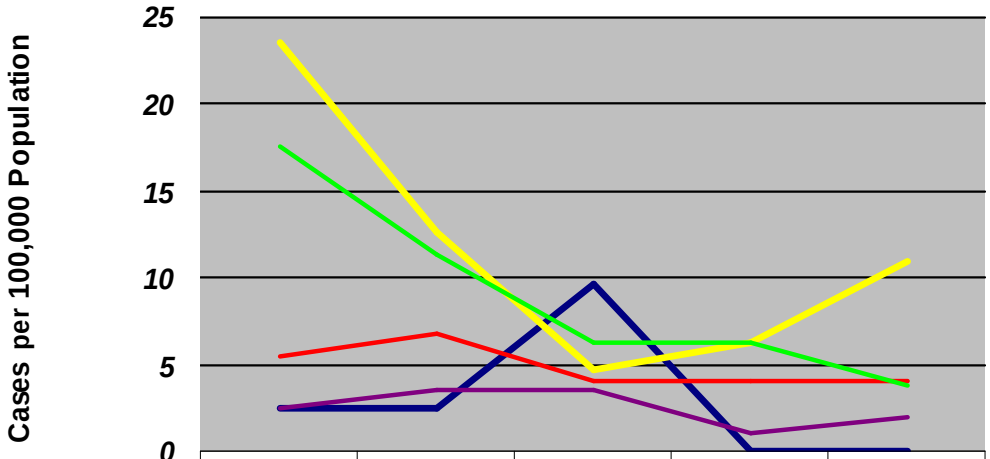
In 2011, the 20-29 age group continued to rise among newly diagnosed HIV cases and in 2012 it is the predominant age group among new cases (30%). This distribution of age group was more prominent among male HIV cases than females (tables 2, 3) when looking at the 2012 new cases by gender. The charts below show the rate of new HIV diagnosis among males and females by age group distribution for past five years.

Figure 3: Rate of HIV New Diagnosis by Age group among Males RI 2008-2012



	2008	2009	2010	2011	2012
13-19	2.40	4.80	9.60	0.00	2.40
20-29	22.86	30.93	21.52	29.59	26.90
30-39	34.29	37.56	40.82	40.82	22.86
40-49	37.30	35.97	29.31	33.30	19.98
50+	7.68	12.80	10.88	7.04	7.04

Figure 4: Rate of HIV New Diagnosis by Age group among Females RI 2008-2012



	2008	2009	2010	2011	2012
13-19	2.42	2.42	9.69	0.00	0.00
20-29	5.43	6.79	4.08	4.08	4.08
30-39	23.57	12.57	4.71	6.28	11.00
40-49	17.64	11.34	6.30	6.30	3.78
50+	2.51	3.52	3.52	1.00	2.01

Year

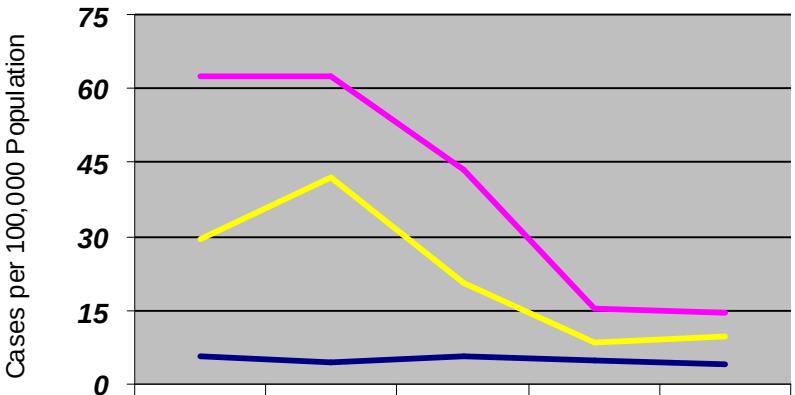
E) Race and Ethnicity

In the half decade from 2008 to 2012, the majority of HIV cases in Rhode Island have occurred in Whites (43%) followed by Hispanics (30%) and African American (22%).

Hispanics are disproportionately experiencing the highest impact of the disease in recent years, as they account for 30% of all HIV cases whereas only 13% of the total population of Rhode Island is Hispanic. The incidence rate for HIV is 17 cases per 100,000 populations among Hispanics.

African Americans experience the second highest rate of disease, they account for 22% of all HIV cases while they represent only 7% of the total population of Rhode Island (Census 2010). The incidence rate for HIV among African American is 14 cases per 100,000 populations.
In the past five years there has been a steady increase in the number of new HIV cases among these two populations. The figures below show rate of new HIV diagnosis by race and ethnicity for past five years.

Figure 5: Rate of HIV New Diagnosis by Race and Ethnicity RI 2008-2012



	2008	2009	2010	2011	2012
White	5.49	4.46	5.49	4.64	3.87
African American	62.6	62.6	43.4	15.14	14.35
Hispanic	29.38	42	20.69	8.63	9.67

Year

Figure 6: Male Rate of HIV New Diagnosis by Race and Ethnicity RI 2008-2012

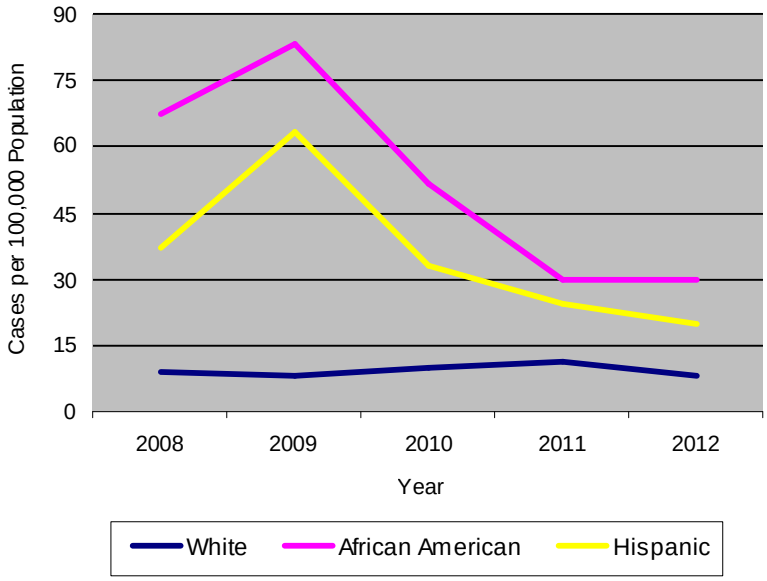
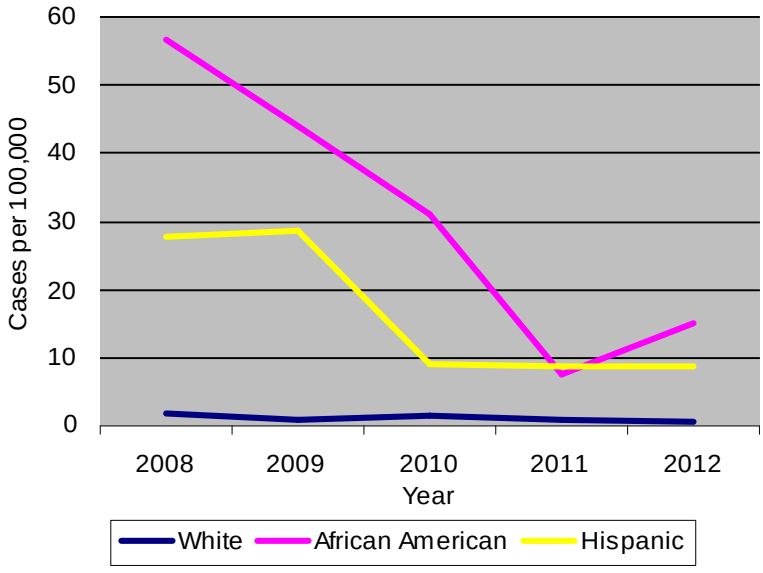


Figure 7: Female Rate of HIV New Diagnosis by Race and Ethnicity RI 2008-2012



F) Exposure Category

MSM and injecting drug use (IDU) have been the dominant risk behaviors since 2000. This pattern has changed over the years and more so in the past five years. IDU (7%) associated HIV incidence has shown a marked decrease, as has heterosexual contact (HSX-19%). MSM (48%) and No Risk Reported (NRR) at (22%) continue to increase as the predominant exposure category among all HIV cases between 2008 and 2012. Figures 9-14, shows the average distribution of exposure category by gender and race/ethnicity among HIV cases for 2008-2012.

Figures 8 -13: HIV Cases by Gender, Race/Ethnicity and Risk Factor RI 2008-2012

Figure 8.
HIV Infected Hispanic Men By Mode of Exposure

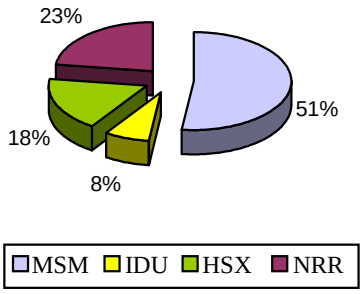


Figure 9.
HIV Infected Hispanic Women By Mode of Exposure

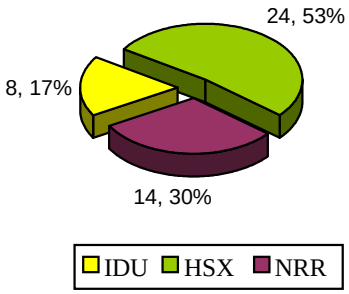


Figure 10.
HIV Infected African American Men By Mode of Exposure

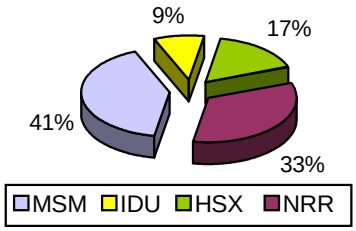


Figure 11.
HIV Infected African American Women By Mode of Exposure

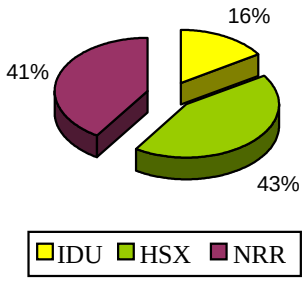


Figure 12.
HIV Infected White Men By Mode of Exposure

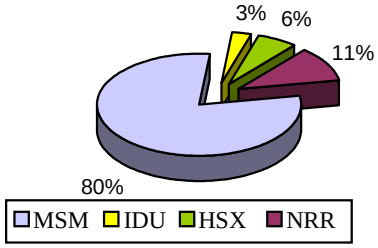
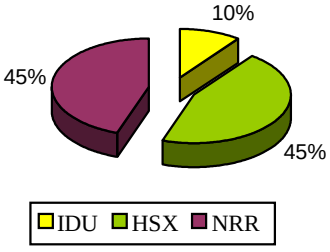


Figure 13.
HIV Infected White Women By Mode of Exposure, 2008-2012



G) Deaths

In Rhode Island, from 2008 to 2012, 161 deaths occurred among persons with HIV/AIDS and since 1983, a total of 1591 deaths have occurred among RI residents diagnosed with HIV/AIDS. Since the availability of Highly Active Anti-Retroviral Therapy (HAART) the number of HIV/AIDS related deaths has steadily declined in Rhode Island, and due to advances in clinical therapy and antiretroviral medications, the population living with HIV/AIDS has grown to a much larger size over the past several years. The number of deaths reported is influenced by a reporting delay in the number of actual reported deaths to the HIV Surveillance program. Currently death data is obtained from the State Vital records office, and the National Death Index. The death numbers change continuously as more data become available to the program. As the diagram below shows, there were a higher number of deaths from 2008-2010, compared to more recent years, 2011-2012. The demographic profiles of deaths among HIV/AIDS cases are similar to that of HIV/AIDS incidence with regard to gender, race/ethnicity, and exposure category distribution.

Figure 14: HIV/AIDS Deaths by Gender, RI 2008-2012

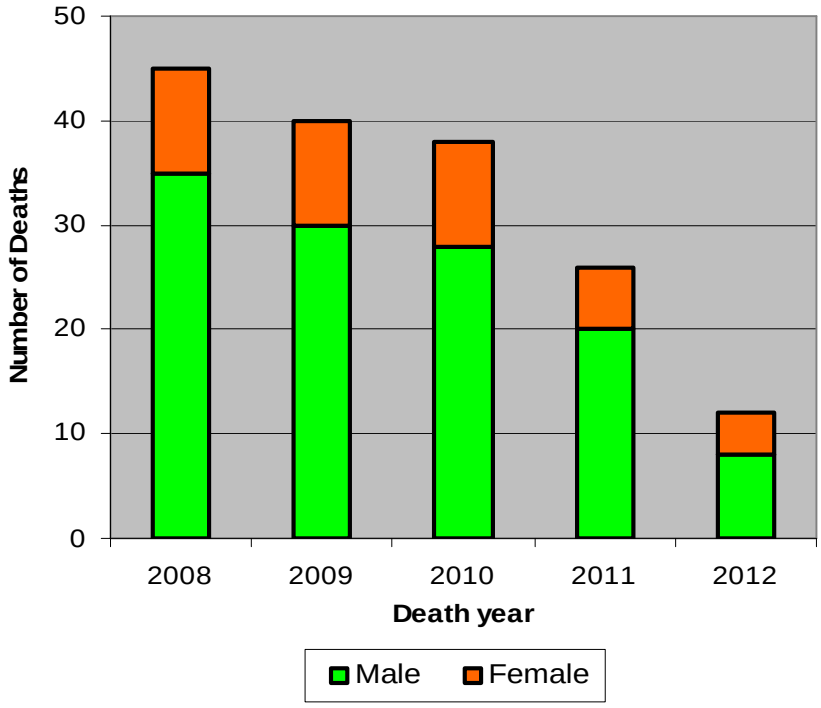


Table 4: RI HIV/AIDS Deaths by Demographic Characteristics: 2008-2012

Demographic Characteristics	Numbers, %
Gender	
Male	121 (75%)
Female	40 (25%)
Total	161 (100%)
Age Group	
20-29	<5 *
30-39	13 (8%)
40-49	49 (30%)
50-59	72 (45%)
60-69	20 (13%)
70+	<5*
Total	161 (100%)
Race/Ethnicity	
White	79 (49%)
African American	45 (28%)
Hispanic	31 (19%)
American In/ Alaska Native	<5*
Multiracial/Other	5 (3%)
Total	161 (100%)
Country of Birth	
US Born	126 (78%)
Non-US Born	35 (21%)
Total	161 (100%)

H) AIDS surveillance trends

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 15. AIDS Incidence and Deaths
RI 2008-2012

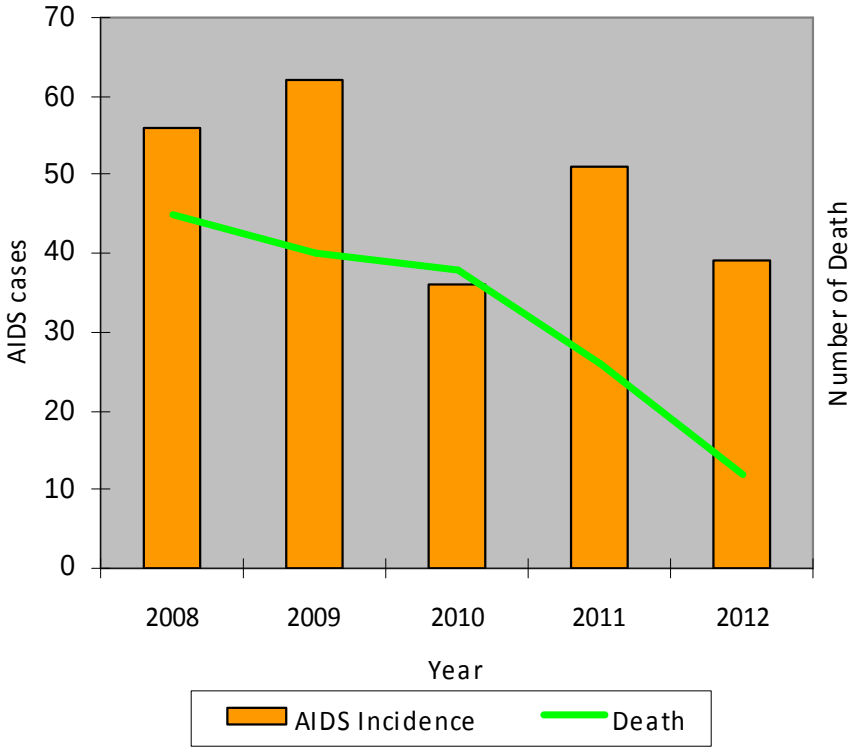


Table 5. AIDS Cases: Demographic and Risk Factor Characteristics RI 2008-2012

	2008	2009	2010	2011	2012
Gender					
Male	38 (68%)	46 (74%)	25 (69%)	45 (88%)	29 (74%)
Female	18 (32%)	16 (26%)	11 (31%)	6 (12%)	10 (26%)
Total	56 (100%)	62 (100%)	36 (100%)	51 (100%)	39 (100%)
Age Group					
<13	<5*	<5*	<5*	<5*	<5*
13-19	<5*	<5*	<5*	<5*	<5*
20-29	14 (25%)	9 (15%)	<5*	8 (15%)	<5*
30-39	15 (27%)	15 (24%)	12 (33%)	12 (24%)	13 (33%)
40-49	17 (30%)	25 (40%)	8 (22%)	23 (45%)	10 (26%)
50+	9 (16%)	13 (21%)	13 (36%)	8 (15%)	12 (31%)
Total	56 (100%)	62 (100%)	36 (100%)	51 (100%)	39 (100%)
Race/Ethnicity					
Hispanic-All Races	15 (27%)	24 (40%)	8 (22%)	12 (23%)	13 (33%)
American Indian/Alaska Native	<5 *	<5 *	<5 *	<5*	<5*
Asian	<5 *	<5 *	<5 *	<5*	<5*
African American	19 (34%)	18 (29%)	8 (22%)	9 (18%)	9 (23%)
Native Hawaiian/ Pacific Islander	<5 *	<5 *	<5 *	<5*	<5*
White	21 (38%)	19 (31%)	18 (50%)	28 (54%)	15 (38%)
Total	56 (100%)	62 (100%)	36 (100%)	51 (100%)	39 (100%)
Exposure Category					
MSM	14 (25%)	23 (37%)	15 (41%)	24 (47%)	14 (36%)
IDU	21 (38%)	6 (10%)	<5*	<5*	<5*
MSM/IDU	<5*	<5*	<5*	<5*	<5*
Hemophilia/Coagulation Disorder	<5*	<5*	<5*	<5*	<5*
Heterosexual Contact	9 (11%)	8 (13%)	<5*	5 (10%)	13 (33%)
Transfusion/Transplant	<5 *	<5 *	<5*	<5*	<5*
Mother with HIV/HIV Risk	<5 *	<5 *	<5*	<5*	<5*
No Risk Reported	11 (20%)	23 (37%)	12 (33%)	17 (33%)	5 (13%)
Total	56 (100%)	62 (100%)	36 (100%)	51 (100%)	39 (100%)

* Cell contained less than five cases

I) Pediatric HIV/AIDS Cases

Pediatric HIV/AIDS cases over the past 5 years have remained steady and low compared to previous years. Almost all of the RI pediatric cases are infected perinatally. The milestone of mandatory testing of pregnant women and babies with unknown status at pregnancy was achieved in 2009. That policy decision has ensured early detection of HIV positive status among pregnant women resulting in appropriate clinical management of the mother and the baby thus reducing chances of vertical (mother to baby) HIV transmission.

From 2008 to 2012 there were 7 cases of pediatric HIV diagnosed and reported to the HIV Surveillance program. Forty three percent of these cases were born outside U.S.A to an HIV infected mother who moved to RI. For some of these cases, the mother's HIV status was unknown at birth, and later was found. The age range of the 7 cases are from <1-9 years. Fifty seven percent, cases are male and 43% are female. Seventy one percent are African American. Among these 29% were also diagnosed with AIDS the same year they were diagnosed with HIV.

The RI reporting Regulations were revised in 2012 to require reporting of HIV positive pregnant women as well as all HIV virology testing results in infants, in order to identify perinatal exposure. The RI HIV Surveillance program works closely with the birthing hospitals to identify HIV positive pregnant women and assure they are in care. Being in care for HIV during pregnancy reduces the chance of vertical transmission.

J) MSM 'Men who have sex with men'

Despite the fact that the total number of new transmissions of HIV has steadily decreased over the past five years, MSM populations continue to experience a disproportionately high burden of new onset infection. Figure 16 illustrates this finding for the period 2008-2012. The second highest exposure category for males is No Risk Reported (NRR), except in 2012 the second leading exposure category among men was Heterosexual contact, (Fig 17). Cases reported without any risk information at the time of reporting are categorized as No Risk Reported and is a top priority for the program for follow-up in order to ascertain risk. The goal is to reduce the number of reports without proper risk exposure information on every newly diagnosed case, and the plan is to create educational opportunities for providers so they can appropriately complete case reports with completed risk factor fields. It is important to sort the NRR by attempting to understand 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 provider (e.g., IDU or MSM).

Figure 16. Proportion of Male HIV cases who are MSM
RI 2008-2012

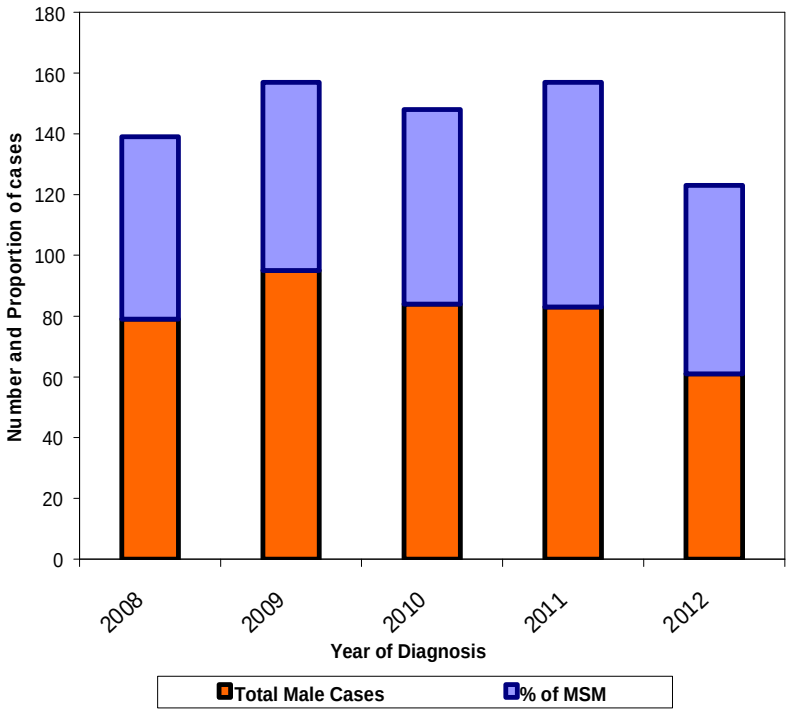
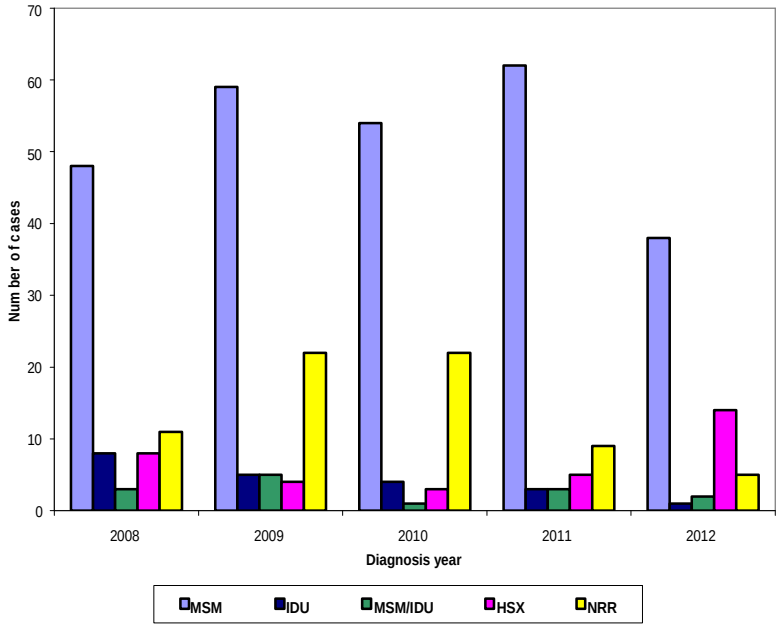


Figure 17. HIV Incidence among Men by Risk Factor
RI 2008-2012



As for the racial distribution of HIV infection among the MSM population, Whites account for the largest proportion of MSM infected with HIV, 61% compared to 22% in Hispanics and 10% in African Americans (Figure 18). However since 2008, the large disparity in disease rates between Whites and Hispanics and Whites and African Americans has narrowed (Figure 19).

Figure 18. MSM HIV Proportions by Race/Ethnicity
RI 2008-2012

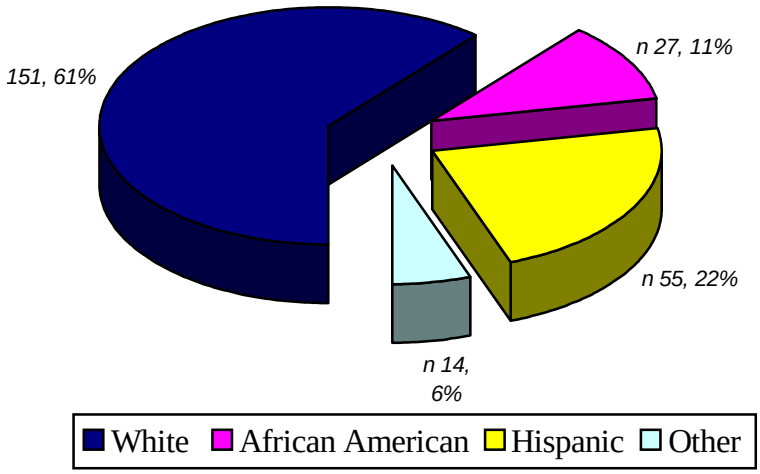
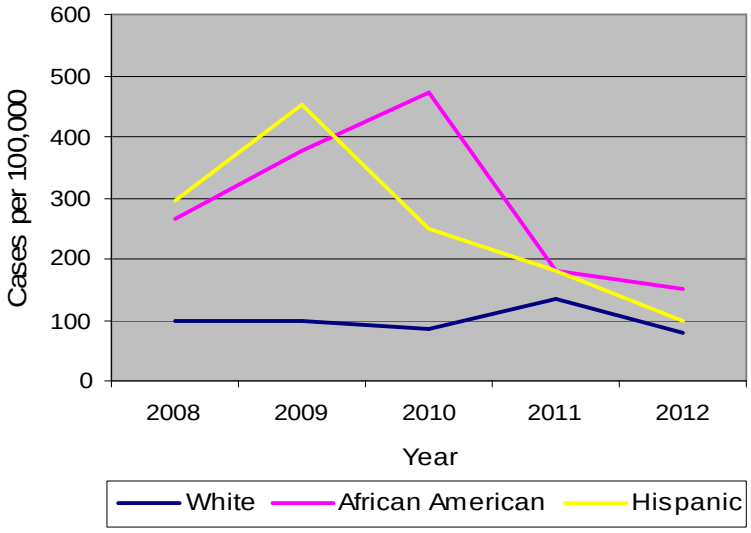


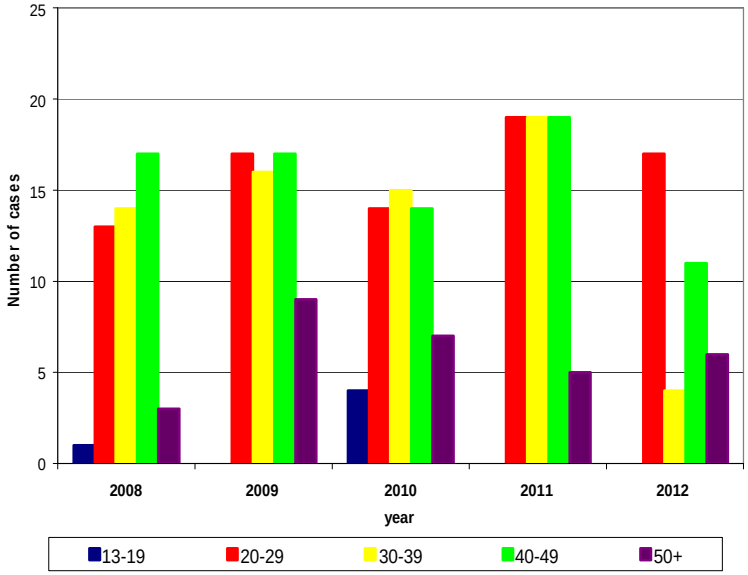
Figure 19. Rate of HIV New Diagnosis among MSM by Race/ Ethnicity RI 2008-2012



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 2012 RI population estimate available from the Census Data.

The age distribution of MSM infected with HIV, from 2008-2012, follows a similar pattern to the overall individuals infected with HIV, with the majority of cases being between 30–39 years of age. However in 2009 the 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. In past five years MSM cases in 20-29 age group has increased and in 2012 the predominant age group is 20-29.

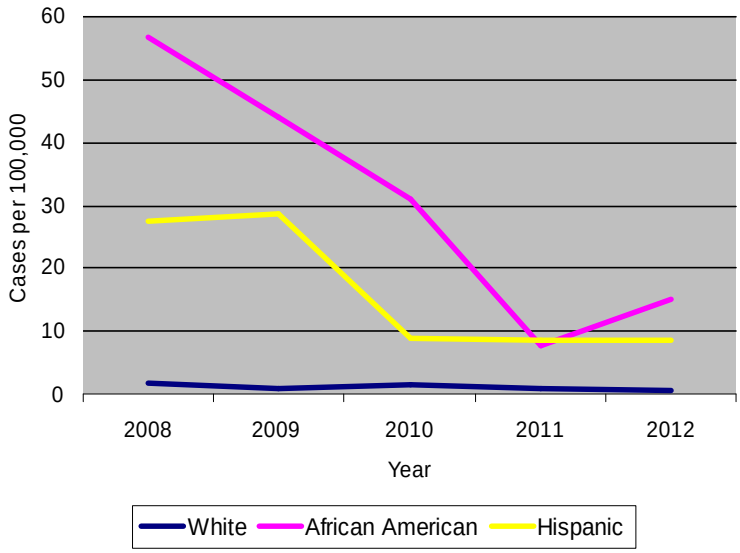
Figure 20. MSM HIV Cases by Age RI 2008-2012



K) Minority Women

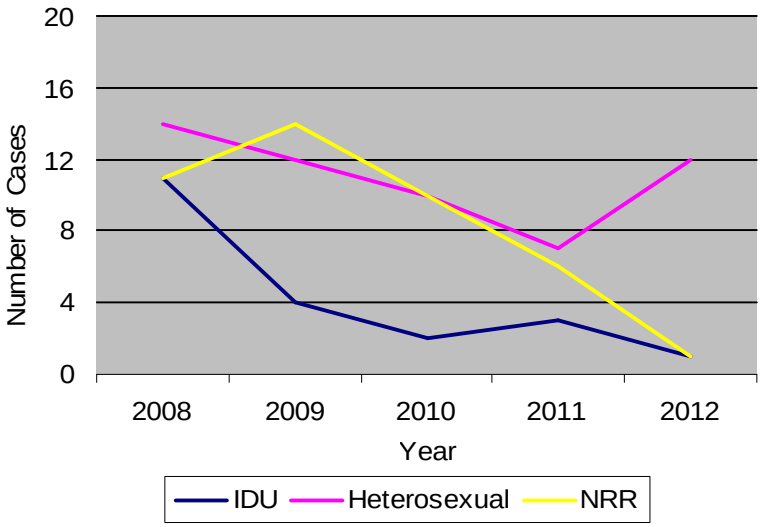
Between 2008 and 2012, 125 women were diagnosed with HIV in Rhode Island. The incidence rate for diagnosis of HIV among White women is less than 1 case per 100,000 populations, for Hispanics it 8 cases per 100,000 population and for African Americans it is 15 cases per 100,000 population. The disparity between White women and minority populations has narrowed over the past 5 years, however the rates of disease in minority populations continues to be high (Fig 21).

Figure 21. Female HIV Rates by Race/Ethnicity
RI 2008- 2012



Forty percent of African American and 30 percent Hispanic women diagnosed between 2008 and 2012 have No Risk Reported (NRR) as their exposure category. This represents a true lack of information as to how they were infected or not, requires further investigation.

Figure 22. Female HIV cases by Risk Factor
RI 2008- 2012



L) Persons Unaware of Their HIV Status

The Centers for Disease Control and Prevention (CDC) estimates that 18% of those infected with HIV are unaware of their status based on the national data reported through 2010. Local estimates of people infected with HIV who are unaware about their status, will vary from the national estimate as states differ in their population dynamics and risk behavior. Local estimates are not available currently through the CDC, and they recommend not applying the national estimate locally. However another way to gain awareness of this population is to see how many cases have already progressed to AIDS at the time of first HIV diagnosis. Individuals, who became aware of their positive HIV status, at the time when they were diagnosed with AIDS, are persons who were unaware of their infection and status for the most part and were diagnosed late in the course of their infection. Thus, they are representative of those that are infected but were unaware of their status. These may be individuals who do not seek medical treatment, and hence are unable to experience a healthcare provider offering the HIV test, still others may have the perception that they are not at risk for HIV

We have looked at our HIV cases reported in the past five years and identified those who were also diagnosed with AIDS at that time to give us an idea on the demographics of those who were unaware about their status. Many speculate that this group of undiagnosed individuals represents the hidden population.

One hundred and fifty six individuals became aware of their positive HIV status when diagnosed concurrently with AIDS during the period from 2008-2012, which is 30% of the total of 520 individuals who were diagnosed with HIV during the same time period.

Twenty four percent of the individuals who became aware of their HIV status when diagnosed with AIDS were females, 76% were males. The percentage of males increased during this five year period compared to the cases from 2000-2011 (74%). The majority of those who become aware of their HIV status when diagnosed with AIDS were Whites 41% (who represent 85% of the population), followed by African Americans 26% (who represent 7% of the population), and Hispanics 30% (who represent 13% 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. In the past five years the proportion of Hispanics increased who are unaware about their status. The primary risk factor among those who become aware of their HIV status when diagnosed with AIDS is MSM (33%), followed by No Specified Risk (32%) (Table 6).

Table 6. Characteristics of Individuals Diagnosed with HIV alone and Individuals diagnosed with HIV presenting with AIDS RI 2008-2012

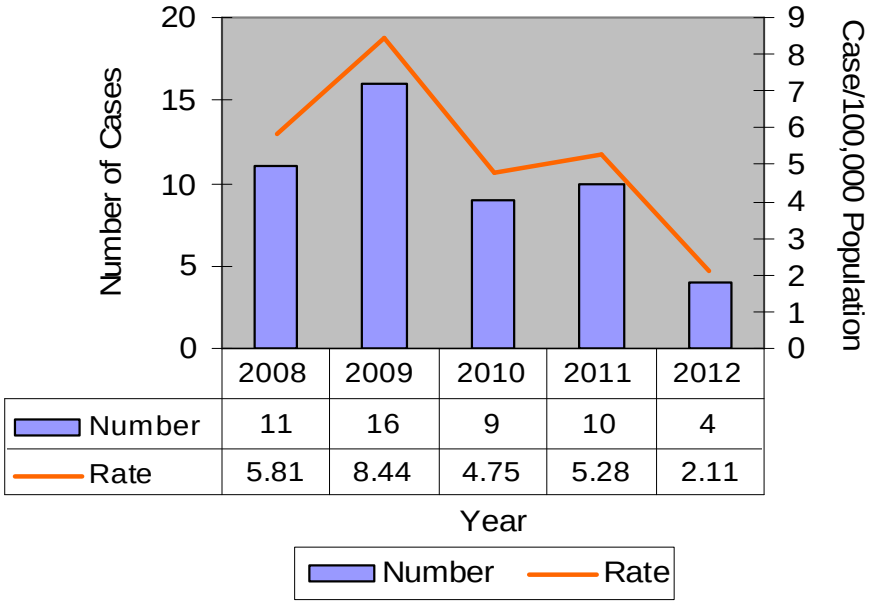
Demographic Characteristics	Individuals Diagnosed with HIV alone, 2008-2012	Individuals Diagnosed with HIV presenting with AIDS 2008-2012
Gender		
Male	276 (76%)	119 (76%)
Female	88 (24%)	37 (24%)
Total	364 (100%)	156 (100%)
Age Group		
<13	6(1%)	<5 *
13-19	13 (4%)	<5 *
20-29	98 (27%)	22 (14%)
30-39	96 (26%)	38 (24%)
40-49	97 (27%)	59 (38%)
50+	54 (15%)	36 (23%)
Total	364 (100%)	156 (100%)
Race/Ethnicity		
White	162 (44%)	64 (41%)
African American	75 (21%)	41 (26%)
Hispanic	107 (29%)	47 (30%)
Asian	7 (2%)	<5 *
Native American	<5 *	<5 *
Multi/Other	13 (4%)	
Total	364 (100%)	156 (100%)
Risk Factor		
MSM	196 (54%)	51 (33%)
IDU	21 (6%)	16 (10%)
MSM / IDU	6 (2%)	6 (4%)
Heterosexual Contact	69 (19%)	32 (20%)
Transfusion	<5 *	<5*
No Risk Reported	67 (18%)	50 (32%)
Mother with HIV/ HIV risk	5 (1%)	<5*
Total	364 (100%)	156 (100%)

* Cell contained less than five cases

M) Youth

Persons aged from 13 to 24 years of age at the time of HIV diagnosis are defined as HIV youth cases. About thirteen percent (65 out of 520) of all the HIV cases diagnosed in Rhode Island in the last 5 years were 13-24 years of age. Since 2009 the numbers have steadily declined to a low of 4 cases in 2012. In 2012 there were no cases among female youth reported.

Figure 23. HIV Cases among Youth (13-24 years old)
RI 2008-2012



Of the 65 cases diagnosed among youth during 2008-2012, 50 were males and 15 were females. Youth of racial and ethnic minorities were heavily impacted with 30% HIV cases occurring in African American youth, 26% occurring in Hispanic youth and 37% occurring in White youth among the new cases from 2008 to 2012.

Among male youth, Men who Have Sex with Men (88%) was the most common risk category followed by No Risk Reported (10%). The proportion of youth cases who are MSM has increased over past few years. Among female youths Heterosexual Contact (66%) was the most common risk category closely followed by No Risk Reported (27%). Figures 28 and 29 illustrate these findings.

Figure 24. Male Youth HIV Cases by Risk Factor

RI 2008-2012 (N=50)

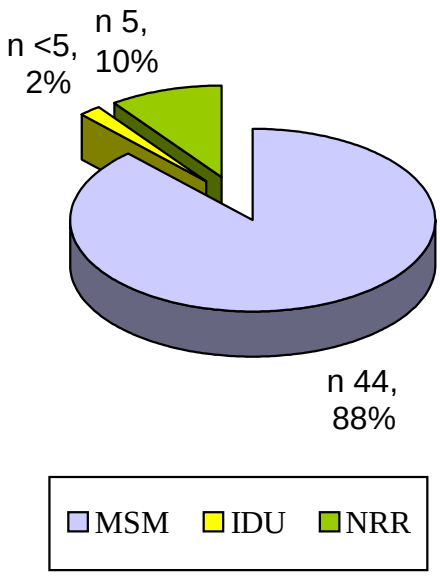
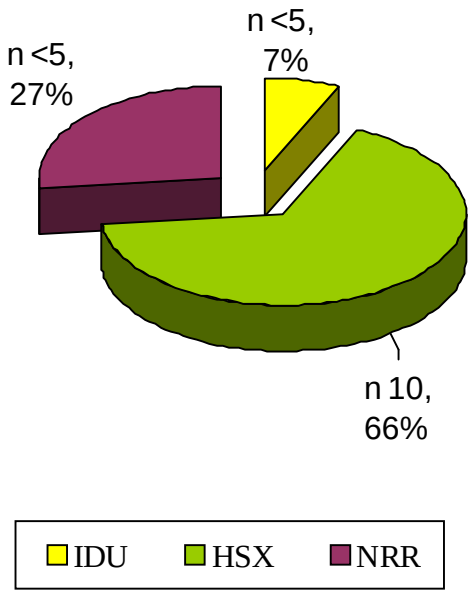


Figure 25. Female Youth HIV Cases by Risk Factor
RI 2008-2012 (N= 15)



4) Surrogate Data in Rhode Island

A) Rhode Island STD Epidemiology, 2012

In 2012, reports of chlamydia, gonorrhea, infectious syphilis, and late syphilis increased when compared 2011. There were no congenital syphilis cases reported in 2012.

Syphilis

In 2010, Rhode Island, like many other parts of the country, experienced a significant increase in the reports of infectious syphilis (primary, secondary, and early latent stages), with reports escalating from 34 cases in 2009 to 61 cases in 2010. Since then however, reports have remained fairly stable. There were 68 cases reported in 2012 compared to 66 cases reported in 2011. Cases reported in 2012 are distributed throughout the state with most among residents of Providence County (81%) and Newport County (10%). This is similar to 2011 when 80% of infectious syphilis cases were among Providence County residents. The Rhode Island Department of Health (HEALTH) STD Program Disease Intervention Specialists (DIS) continue to attempt interview for each case despite county of residence.

While non-Hispanic white males continue to account for the majority (65%) of infectious syphilis cases in Rhode Island, rates remain highest for non-Hispanic black males with 27 cases per 100,000 population reported in 2012. Of note, rates have increased among Hispanics from a rate of 9 cases per 100,000 in 2011 to 20 cases per 100,000 in 2012.

Sixty-six of the 68 (97%) infectious syphilis cases reported in 2012 were male, of which 62 (94%) were men who have sex with men (MSM). Of the 62 MSM, 32 (52%) self-reported as HIV-positive. Unlike gonorrhea and chlamydia, where infection is concentrated in the 15-24 year old population, this age group represents only 19% of the cases of infectious syphilis reported in Rhode Island. Infectious syphilis cases reported in 2012 had an average age of 35 years, with individuals older than 30 years of age accounting for 68% of reported cases.

Chlamydia

Reports of chlamydia in Rhode Island continue to increase. In 2012 there were 4,313 cases of chlamydia, increasing only slightly (4%) compared to the 4,146 cases reported in 2011. Reported cases of chlamydia remain concentrated in Providence County, which represents 78% of cases reported state-wide in 2012, a minor decrease from the reported 80% in 2011. The City of Providence accounted for 38% of chlamydia cases reported throughout the state, also decreased compared to 2011 data when 42% of reported chlamydia cases were among City of Providence residents.

There was no change in the distribution of chlamydia cases by sex when comparing the 2011 to 2012. In both time frames males accounted for 28% of reported chlamydia cases (1162 male cases in 2011 and 1222 male cases in 2012), while females accounted for the majority (72%) of reported chlamydia cases (2984 cases in 2011 and 3091 cases in 2012). Individuals age 15-24

continue to represent nearly two-thirds of chlamydia cases in Rhode Island, and 95% of all cases are less than 35 years of age. This trend held steady from 2011 to 2012.

Race

Race/ethnicity distribution of chlamydia cases in 2012 remained consistent with data seen previous five years. Non-Hispanic Whites accounted for 46% of reported cases, followed by Hispanics (32%) and Non-Hispanics Blacks (19%). In 2012, 19% of the cases were missing race and ethnicity data. Though this is an improvement from 2011, when 23% of the cases were missing this data. Race/ethnicity percentages reported in this section are estimated to adjust for unknown and missing data; assuming there is no bias in the reporting of cases for which race/ethnicity are known

From 2008 - 2012, surveillance data has shown that, on average 6% of males diagnosed with chlamydia each year are MSM. Data from 2012 shows that approximately 2% of male chlamydia cases were MSM. When reviewing these percentages it is important to note that, since the HEALTH STD Program does not routinely perform follow-up for chlamydia cases, data on sexual orientation of chlamydia cases is extremely limited and ascertained only from STD Case Report Forms (SCRFs) filled out by the provider rather than through interviews with DIS, as is standard for gonorrhea and infectious syphilis cases.

Gonorrhea

Reports of gonorrhea in Rhode Island began to increase in 2011. The increase continued in 2012 with reports increasing 40% from 360 cases in 2011 to 507 cases in 2012.

Since 2007, there has not been a consistent trend in the highest proportion of cases among any race/ethnic group, as it shifts year to year between non-Hispanic whites and non-Hispanic blacks. While the proportions have shifted among race/ethnic groups, the highest rates of gonorrhea are consistently seen among non-Hispanic blacks (273 cases per 100,000 in 2012).

Geographically, Providence County continues to account for the largest proportion of reported cases. From 2007-2011, an average of 88% of reported cases resided in Providence County. Cases reported in the 2012 have held to this trend with 87% of cases reported among Providence County residents. By city, trends are also stable, with 49% of cases residing in the City of Providence.

As previously mentioned, reports of gonorrhea in Rhode Island began to increase in 2011, jumping 24% from the 291 cases reported in 2010 to the 360 reported in 2011. Numbers rose another 40% from 2011 to 2012, with reports totaling at 507 cases. This increase was equal among both males and females, each sex increasing by about 40%. Overall, males accounted for 54% of cases, and 46% of cases reported were females. Age distribution among males was consistent from 2011 to 2012, with 52% of cases among males 20-29 years old, and 48% of reports among males 15-24 years old. Among females, however, age distribution has changed slightly. In 2012, females ages 15-24 accounted for 65% of female gonorrhea cases, compared to 75% seen among females of this age in 2011. Related to this decrease is the rise in number of reports among females 25-29 years of age. In 2012, females in this age group represented 19% of reported gonorrhea cases, compared to only 10% in 2011.

The STD Program has investigated the possibility that the rising number of gonorrhea cases in Rhode Island may be associated with the closing of the state-funded Whitmarsh STD Clinic on July 1, 2011. Initial review of data post-clinic closure has shown an increase in reports from ER/urgent care facilities, private physicians, and health centers, as well as Planned Parenthood of Southern New England (PPSNE), Providence. These findings may underscore that efforts to transition STD services from the Whitmarsh to PPSNE and other health centers were successful. Moreover, the push from the HEALTH STD Program to make the public aware of the clinic closure and the availability of alternate services when Whitmarsh closed, may have led to increased screening and case finding.

From 2006 - 2012, surveillance data has shown that on average, 30% of males diagnosed with gonorrhea are MSM. This trend has remained steady for 2012 with 32% of male gonorrhea cases identifying as MSM.

STD/HIV Co-infection

In order to estimate STD/HIV co-infection in Rhode Island, gonorrhea and infectious syphilis cases reported to the STD Program are cross-matched with HIV surveillance data on a yearly basis. On average, 4% of gonorrhea cases and 36% of infectious syphilis cases reported each year are confirmed co-infections based on cross-match of the HIV and STD surveillance data. See the table below for more detail.

Table 7. STD/HIV Co-infections, Rhode Island, 2010-2012

	2010	2011	2012
Percent of Gonorrhea Cases that are Co-infected with HIV	4.5%	3.9%	3.9%
Percent of Infectious Syphilis Cases that are Co-infected with HIV	36.7%	33.8%	36.7%

STD Surveillance Risk Factor Data

In 2012, the STD Program completed and analysis of risk factor data for STD cases reported in 2012. This analysis was completed for infectious syphilis and gonorrhea cases reported in 2011 that were interviewed by a DIS. Percentages are calculated based on the number of cases interviewed rather than the number of cases reported. In 2011, 53 of 66 (80%) reported infectious syphilis cases were interviewed, and 260 of 360 (72%) reported gonorrhea cases were interviewed. Risk factor data was also stratified for each disease by risk groups: females, MSM, and heterosexual males.

Infectious Syphilis:

Among all infectious syphilis cases, anonymous sex was the most commonly identified risk with 47% of interviewed cases indicating that they had engaged in the behavior. Sex while high, and

a history of non-injecting drug use was also commonly reported by 40% and 36% of infectious syphilis cases respectively. Of individuals reporting use of non-injecting drugs, the majority (89%) identified marijuana as their drug of use. Other drugs included cocaine, ecstasy, and methamphetamines. The most common venue for meeting partners was the internet (38%), followed by clubs and bars (25%). When reviewing this data it is important to note that MSM accounted for 73% of infectious syphilis cases reported in 2011.

Gonorrhea:
Stratification of the risk factor data on gonorrhea cases by risk groups revealed that 3 main risk factors (anonymous sex, sex while high, and non-injecting drug use) are common in each of these populations.

- Female gonorrhea risk factors most commonly reported were sex while high (30%), followed by non-injecting drug use (16%) and anonymous sex (10%)
- MSM gonorrhea cases most commonly reported sex while high (53%), followed by anonymous sex (34%) and non-injecting drug use (34%).
- Much like the MSM cases, heterosexual males reported sex while high (53%), followed by non-injecting drug use (44%) and anonymous sex (44%). Of note, 22% of heterosexual male gonorrhea cases reported they had been incarcerated compared to 4% of females and 6% of MSM.
- For all groups, those that reported non-injecting drug use most commonly identified marijuana as the drug of choice. Other drugs included crack, cocaine, ecstasy, and heroine

B) Integrated HIV/Viral Hepatitis Counseling, Testing, Referral (CTR) and Immunization Services

Publicly funded counseling and testing services provided by the Department of Health (HEALTH) in collaboration with the Centers for Disease Control 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 the HIV prevention program, and the HIV Counseling and Testing System was developed to monitor clients' use of program services. The Integrated HIV/Viral Hepatitis Counseling, Testing, and Referral System (CTR) now provides free confidential and anonymous voluntary HIV counseling, testing, and referral services as well as Hepatitis B testing, Hepatitis C testing, and immunization against Hepatitis A and B (Twinrix®). HEALTH's CTR system works with four funded agencies (AIDS Care Ocean State, AIDS Project Rhode Island, MAP Behavioral Healthcare, and The Miriam Hospital) to provide prevention services throughout the state. In addition to these agencies, HIV counseling and testing is offered through HEALTH's Partner Services program. All staff associated with the CTR program must participate in Integrated Communicable Diseases 101 (ICD 101) and demonstrate sufficient knowledge of HIV, STIs, and viral hepatitis so as to educate and counsel clients. Additionally, staff conducting HIV or viral hepatitis testing are required to attain licensure as a Qualified Professional Test Counselor prior to conducting testing. Our CTR system is funded by state and federal dollars.

In 2012, the CTR system provided 2,179 HIV tests across 29 fixed and mobile sites (Table 8.). Nineteen tests were preliminary positive, and 10 were confirmed to be HIV-positive (positive test rate=0.46). Of the 10 clients who tested positive, 9 were linked to care and confirmed to have attended their first appointment; one client was reported to be pending their first appointment. Most tests (99 percent) were conducted using OraSure OraQuick *ADVANCE*® Rapid HIV 1-2 Antibody test technology. Among all individuals utilizing the CTR program for HIV testing, 35 percent were female, 25 percent were Hispanic/Latino, 52 percent were white, 13 percent were black, and 35 percent were between the ages of 20 and 29. Men who have sex with men (MSM) was the most frequently reported risk group (34 percent), followed by high-risk heterosexual contact (26 percent). Injection drug use was reported by four percent of individuals. Twenty-eight percent reported other risks that prompted HIV testing (e.g. low-risk heterosexual contact or women who have sex with women).

Three funded sites (AIDS Care Ocean State, MAP Behavioral Health, and The Miriam Hospital) also provided Hepatitis B and C testing and Hepatitis A & B vaccination (Twinrix®). In 2012, the funded sites provided 33 Hepatitis B tests (0 positives identified), 654 Hepatitis C tests (43 positives identified), and 630 doses of Twinrix®. Of all clients who elected Hepatitis B testing, 64 percent were male, 46 percent were 20-29 years old, 27 percent were Hispanic/Latino, 33 percent were white, and 27 percent were black. Of the clients who elected Hepatitis C testing, 54 percent were male, 30 percent were between the ages of 20 and 29, 29 percent were between the ages of 30 and 39, 45 percent were

Hispanic/Latino, 39 percent were white, and 13 percent were black. When asked about their risks for Hepatitis C, the most frequently reported risk factor was sex with multiple partners (63 percent), followed by unprotected vaginal or anal sex (58 percent), tattoos and body piercings (32 percent), and intranasal drug use (22 percent). Ten percent of clients reported injection drug use as their risk factor. Finally, 260 clients received their first dose of Twinrix® (the remaining 370 doses were follow-up doses). Of these clients who were vaccinated, 45 percent were male, 30 percent were between of the ages of 30 and 39, 42 percent were Hispanic/Latino, 33 percent were white, and 17 percent were black.

Figure 26. Distribution of 2012 HIV CTR Clients by Age (N=2,179)

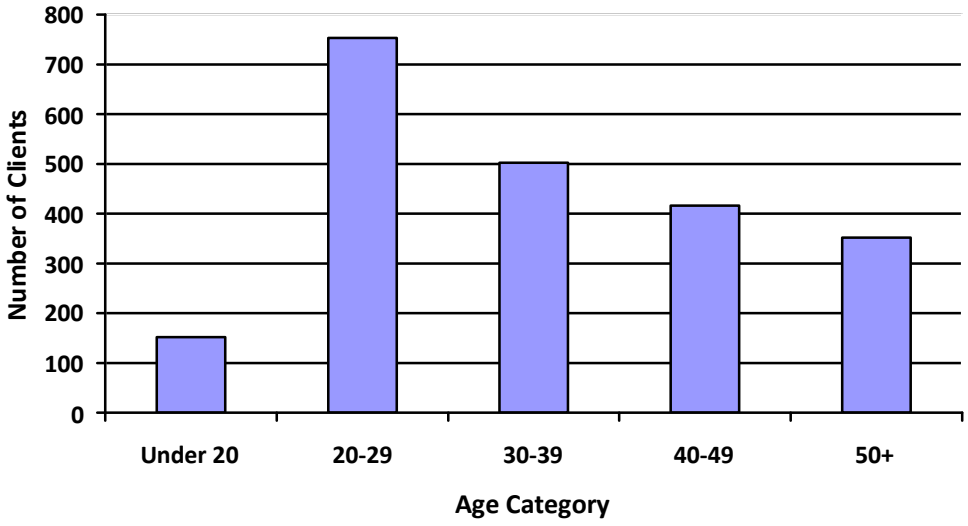


Figure 27. Distribution of 2012 HIV CTR Clients by Race (N=2,179)

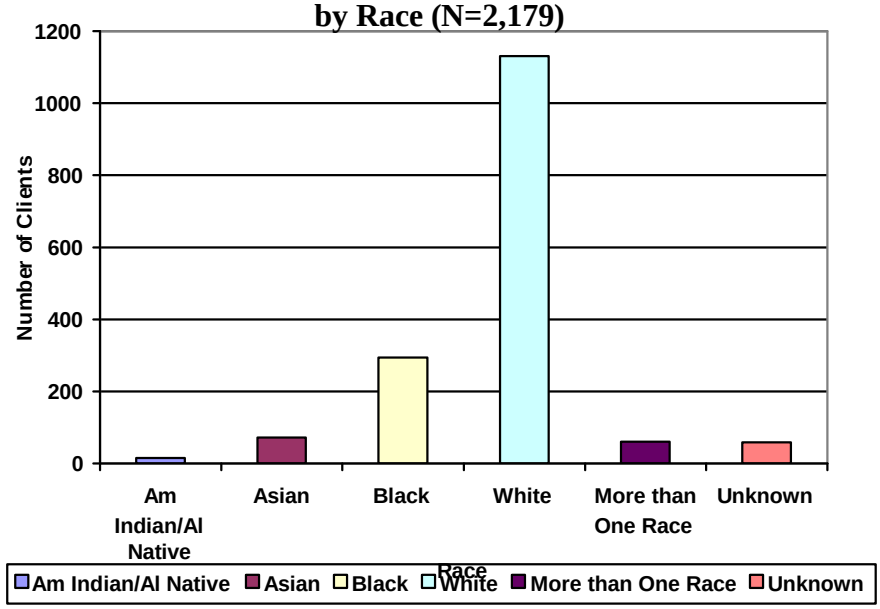
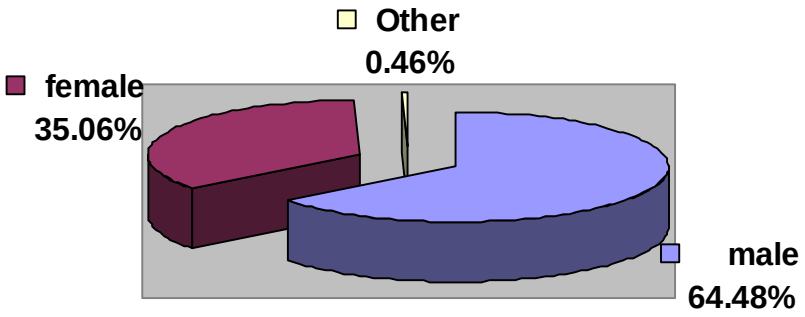


Figure 28. Distribution of 2012 HIV CTR Clients by Gender



AIDS Project Rhode Island: AIDS Project Rhode Island, an AIDS service organization in Providence, conducted 544 HIV tests at 10 satellite sites. Sites included six colleges, one gay bathhouse (the Mega-Plex), and three community organizations including Youth Pride, Inc, John Brown Settlement House, and the AIDS Project Rhode Island office. The majority of individuals who received an HIV test were male (77 percent), and 68 percent of individuals were white. Young adults aged 20-29 represented the largest age category (37 percent). Over half of individuals tested at APRI sites were MSM (52 percent).

AIDS Care Ocean State: AIDS Care Ocean State, an AIDS service organization located in Providence, conducted 1,169 tests at 10 satellite sites. Sites included one gay bathhouse (Club Body Center), one college, six community organizations including Caritas/Eastman House, CODAC Behavioral Health, the Providence Center, Gay Pride, Sojourner House, AIDS Care Ocean State's Broad Street location, and mobile sites in Newport and Pawtucket/Central Falls. The majority of individuals who received an HIV test were male (61 percent) and 54 percent were white. Young adults aged 20-29 represented the largest age category (38 percent). The largest risk groups were MSM (32 percent) and high-risk heterosexuals (25 percent).

MAP Behavioral Health: MAP Behavioral Health, an addiction treatment program in Providence, conducted 311 tests at six sites. Sites included one middle school, one church, one clinic (Hope Clinic/Clinic Esperanza), and three community organizations including Progreso Latino and two MAP Behavioral Health locations. The majority of individuals identified as Hispanic (67 percent) and 56 percent were male. Adults aged 40-49 represented the largest age category (29 percent). The largest risk category was high-risk heterosexuals (52 percent).

The Miriam Hospital: The Miriam Hospital, located in Providence, conducted 109 tests at two sites. Sites included the Immunology Center clinic and Community Access (an overdose prevention project serving injecting drug users). Sixty-one percent were male and 44 percent were white. Adults aged 30-39 represented the largest age category (33 percent). Half (50 percent) reported low-risk heterosexual contact as their risk, 20 percent were MSM, and 16 percent were IDU.

HEATLH Partner Services: HEALTH's Partner Services staff conducted 46 tests across the state, reaching partners of newly diagnosed HIV-positive individuals. The majority of individuals tested were male (72 percent) and 46 percent were white. Young adults aged 20-29 comprised the largest age category (44 percent). Forty-one percent were MSM and 35 percent were high-risk heterosexuals.

Table 8. 2012 HIV Counseling, Testing and Referral Sites Client Characteristics

	Total	AIDS Project Rhode Island	AIDS Care Ocean State	MAP Behavioral Health Care	The Miriam Hospital	HEALTH Partner Services
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
Tests						
Number of Tests	2179 (100)	544 (25%)	1169 (53%)	311 (14%)	109 (5%)	46 (2%)
Gender						
Male	1405 (64%)	418 (77%)	715 (61%)	173 (56%)	66 (61%)	33 (72%)
Female	764 (35%)	125 (23%)	446 (38%)	138 (44%)	43 (40%)	12 (26%)
Transgender (M to F)	5 (<1%)	<5*	<5*	<5*	<5*	<5*
Unknown	5 (<1%)	<5*	<5*	<5*	<5*	<5*
Total	2179 (100%)	544 (100%)	1169 (100%)	311 (100%)	109 (100%)	46 (100%)
Race/Ethnicity						
American Indian/Alaskan Native	15 (<1%)	<5*	7 (<1%)	<5*	<5*	<5*
Asian	72 (3%)	27 (5%)	39 (3%)	<5*	<5*	<5*
Black/African American	294 (13%)	59 (11%)	188 (16%)	22 (7%)	18 (17%)	7 (15%)
Hispanic or Latino	545 (25%)	63 (12%)	239 (20%)	209 (67%)	25 (23%)	9 (20%)
Native Hawaiian/Other Pacific Islander	<5*	<5*	<5*	<5*	<5*	<5*
White	1131 (52%)	371 (68%)	629 (54%)	62 (20%)	48 (44%)	21 (46%)
More than One Race	60 (3%)	12 (2%)	31 (3%)	<5*	12 (11%)	<5*
Unknown	59 (3%)	7 (1%)	34 (3%)	12 (4%)	<5*	<5*
Total	2179 (100%)	544 (100%)	1169 (100%)	311 (100%)	109 (100%)	46 (100%)
Age						
Age <13	<5*	<5*	<5*	<5*	<5*	<5*
Age 13-19	152 (7%)	40 (7%)	97 (8%)	9 (3%)	<5*	<5*
Age 20-29	753 (35%)	203 (37%)	441 (38%)	61 (20%)	28 (26%)	20 (44%)
Age 30-39	502 (23%)	109 (20%)	259 (22%)	88 (28%)	36 (33%)	10 (22%)
Age 40-49	416 (19%)	87 (16%)	207 (18%)	89 (29%)	24 (22%)	9 (20%)
Age 50+	352 (16%)	103 (19%)	164 (14%)	63 (20%)	19 (17%)	<5*
Total	2179 (100%)	544 (100%)	1169 (100%)	311 (100%)	109 (100%)	46 (100%)
Risk Category						
High Risk Heterosexual	563 (26%)	82 (15%)	294 (25%)	161 (52%)	10 (9%)	16 (35%)
IDU**	85 (4%)	<5*	60 (5%)	7 (2%)	17 (16%)	<5*
MSM***	739 (34%)	283 (52%)	376 (32%)	39 (13%)	22 (20%)	19 (41%)
MSM-IDU****	11 (<1%)	<5*	9 (<1%)	<5*	<5*	<5*
Other	599 (28%)	105 (19%)	338 (29%)	98 (32%)	49 (50%)	9 (20%)
Unknown	182 (8%)	73 (13%)	92 (8%)	5 (2%)	11 (10%)	<5*
Total	2179 (100%)	544 (100%)	1169 (100%)	311 (100%)	109 (100%)	46 (100%)

*cell contained less than 5 cases

**injection drug use

***men who have sex with men

****men who have sex with men and injection drug use

C) 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 a current IDU sample in Rhode Island (see Table 9). In 2012, ENCORE enrolled 336 new clients. This is a three-fold increase in new clients since last year. ENCORE program activities occurred across five sites in Providence, Central Falls, and Woonsocket. In 2012, a total of over 36,000 used syringes were turned into the ENCORE program, and more than 80,000 new syringes were distributed.

Of new clients, the majority were male (73 percent) and the majority were white (63 percent). Adults aged 30-39 represented the largest age category (32 percent). Approximately one-third (34 percent) reported they were homeless. Most (82 percent) had been in a drug treatment program at some point in their lifetime. When asked about their primary injecting drug, 76 percent reported heroin and 16 percent reported cocaine/crack. Risk for HIV and viral hepatitis varied among new enrollees. For example, most clients (82 percent) reported they did not share a syringe/works in the past 7 days. More enrollees reported using condoms (56 percent) than not using condoms (40 percent), although 73 percent of people who used condoms did not use them consistently. About half (51 percent) of new enrollees self-reported themselves to be infected with Hepatitis C, and 11 percent self-reported themselves to be HIV-positive. Of new clients who were asked if they would want to be tested for Hepatitis or HIV, most (77 percent) declined. The following figures on the next page present number and demographic characteristics of the ENCORE enrollees.

Figure 29. New ENCORE Enrolment
RI 2008-2012

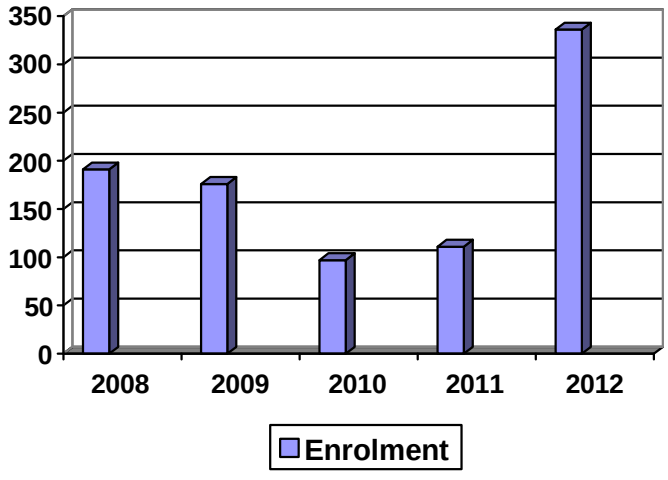


Figure 30. New ENCORE Enrolment by Gender
RI 2008-2012

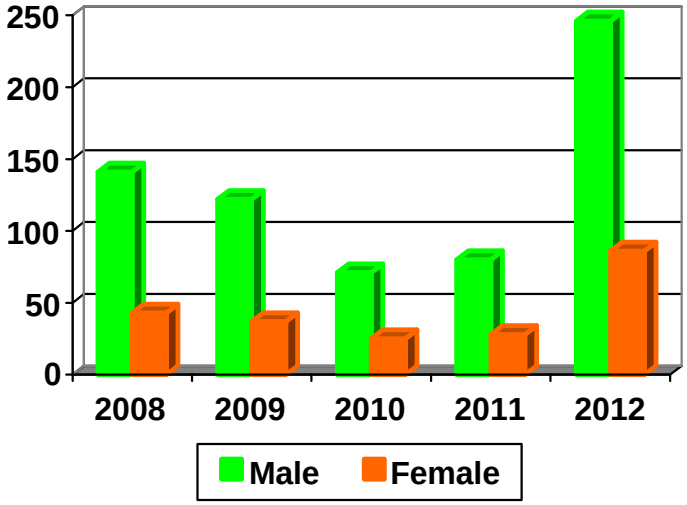


Figure 31. New ENOCRE Enrolment by Race/Ethnicity
RI 2008-2012

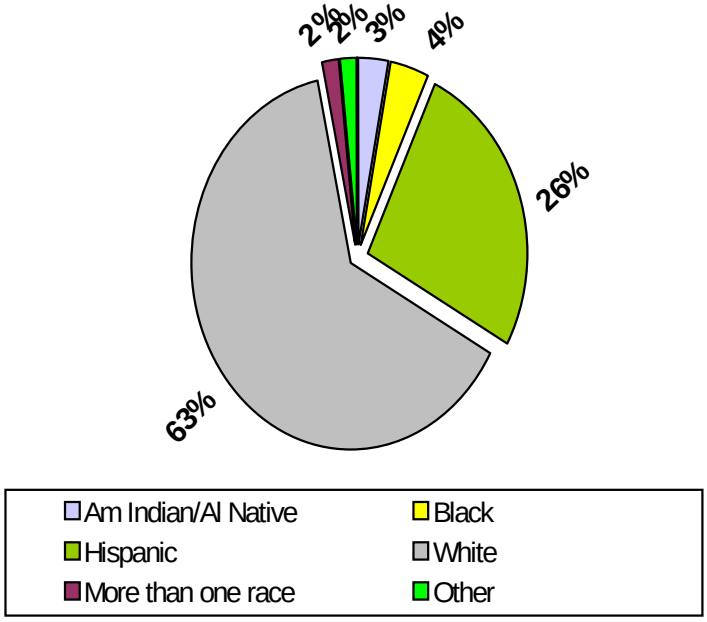


Table 9. 2012 ENCORE Syringe Exchange Enrollment (n 336)

Characteristic	n	%
Gender		
Female	86	25.6
Male	246	73.2
Transgender	<5*	
Unknown	<5*	
Race/Ethnicity		
Hispanic/Latino	87	25.8
White	213	63.4
African-American/Black	13	3.9
American Indian/Alaskan Native	10	3.0
Asian/Pacific Islander	<5*	
More than one race	5	1.5
Other	6	1.8
Age		
Under 20	<5	
20 to 29	73	21.7
30 to 39	107	31.8
40 to 49	95	28.3
50 plus	61	18.2
Sexual Orientation		
Bisexual	25	7.4
Gay or Lesbian	21	6.3
Heterosexual or Straight	290	86.3
City		
Providence	211	62.8
Cranston	12	3.6
Central Falls	11	3.3
Pawtucket	11	3.3
Warwick	11	3.3
Woonsocket	10	3.0
Other	70	20.8

D) Active Tuberculosis in Rhode Island

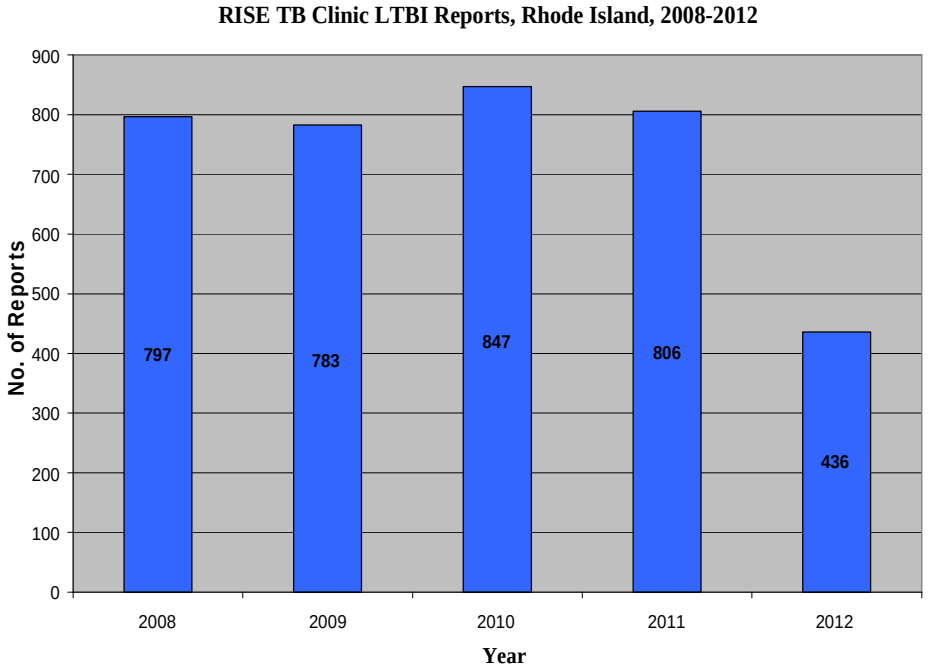
Tuberculosis (TB) is a disease that is spread from person-to-person through the air, and it is particularly dangerous for people infected with HIV. Worldwide, TB is the leading cause of death among people infected with HIV.

- 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).

TB Care in Rhode Island - The RISE Clinic is a state-funded, referral-only TB clinic in Rhode Island where patients with suspected or confirmed TB disease or LTBI can be referred for specialty care. The RISE Clinic receives approximately 1,100 patient referrals each year. The clinic manages care for the majority of active TB cases in RI, and has reported an average of over 700 cases of LTBI each year from 2008-2012 (see Figure 32). Due to length of treatment and follow-up appointments required for active TB and LTBI care, patient visits for RISE clients can total near 8,500 visits for one year. Though the clinic utilizes an opt-out policy for HIV testing, it continues to offer and encourage HIV testing for all active TB cases and LTBI patients.

Figure 32. RISE TB Clinic LTBI Reports

RI 2008-2012



Epidemiology of Active TB Cases, Rhode Island, 2012

In 2012, there were 23 cases of active tuberculosis reported in Rhode Island and 15 suspected cases investigated for TB and active disease ruled out. These numbers are a decrease from the 27 cases reported in 2011, and represent the lowest number of TB cases ever reported in Rhode Island.

Of the 23 cases of active tuberculosis reported in 2012, 87% were residents of Providence County, 9% from Kent County, and 4% from Bristol County. This proportion for Providence County is comparable to previous years, and aligns with what can be expected considering that Providence County is home to over half of the population of Rhode Island, with the City of Providence accounting for 16% of the state's population. In addition, 92% of the total Hispanic population, 87% of the total black population and 76% of the total Asian population of Rhode Island reside in Providence County, making it the most culturally diverse area, and home to a majority of the state's foreign-born population.

In 2012, the race/ethnicity of active cases was distributed as follows: nine Hispanic (39%), six Asian (26%), four non-Hispanic black (17%), and four non-Hispanic white (17%). All 23 cases had country of origin information. Rhode Island has historically had more cases in the foreign-born population than the U.S. born population, however, in 2012, only slightly more than half (57%) of cases were foreign-born compared to 78% foreign-born in 2011. The 13 foreign-born individuals originated from nine different countries. There were two cases each from Cambodia and the Dominican Republic; three cases from Guatemala; and one case each from Honduras, Laos, Liberia, Nepal, Portugal, and Saudi Arabia. By region, Asia and Central America are most significant for cases reported in 2012, accounting for 22% and 17% (respectively) of foreign-born individuals.

Table 10 below compares the demographic distribution of active cases of tuberculosis between 2011 and 2012.

Table 10. Demographics of Reported Cases of Tuberculosis
RI 2011-2012

	2011		2012	
	No. of Cases	**Percent of Cases**	**No. of Cases**	**Percent of Cases**
Total No. Confirmed Cases	**27**		**23**	
Race/Ethnicity				
Non-Hispanic White	4	14.8%	4	17.4%
Non-Hispanic Black	7	25.9%	4	17.4%
Hispanic	6	22.2%	9	39.1%
Asian/Pacific Islander	10	37.0%	6	26.1%
Am. Indian/Native American	0	0.0%	0	0.0%
Sex				
Female	16	59.3%	10	43.5%
Male	11	40.7%	13	56.5%
County of Residence				
Bristol	0	0.0%	1	4.3%
Kent	4	14.8%	2	8.7%
Newport	1	3.7%	0	0.0%
Providence	22	81.5%	20	87.0%
Washington	0	0.0%	0	0.0%
Country of Origin				
United States	6	22.2%	10	43.5%
Not U.S.	21	77.8%	13	56.5%
Unknown	0	0.0%	0	0.0%
Age Group				
0-4	2	7.4%	2	8.7%
5-14	0	0.0%	0	0.0%
15-24	3	11.1%	4	17.4%
25-44	12	44.4%	5	21.7%
45-64	8	29.6%	4	17.4%
65 +	2	7.4%	8	34.8%

Among cases reported in 2012, the major site of disease was exclusively pulmonary in 48% of the cases and 30% had extra pulmonary involvement exclusively. Cases with both sites of disease represented 22% of cases reported in 2012. The percentage of cases with any pulmonary involvement in 2012 (70%) is slightly higher than seen in 2011 (60%). Clinically, 20 cases reported in 2012 (87%) had an abnormal chest X-ray or chest CT, with 45% (9 of 20) showing cavitary disease.

Contact investigation has had a significant impact on active TB case finding in 2012. Of the 23 cases reported, four of the cases (17%) were secondary cases found through contact investigations. Aside from contact with an infectious TB patient, other TB risk factors reported among 2012 cases included diabetes (22%), excess alcohol use (13%), and non-injecting drug use (9%). Incomplete LTBI therapy and TNF-α antagonist therapy were also reported as risk factors (one case each), and there was one HIV/TB co-infected case reported in 2012.

HIV/TB Co-infection

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)

Since HIV testing in an integral part of active TB case management, it has been incorporated into the TB Elimination National TB Program Objectives and Performance Targets that the Rhode Island TB Program strives to achieve. The TB Program's 2014 target is for 85% of active TB cases in Rhode Island to have a known HIV status at time of TB diagnosis. As can be seen in Table 11 below, the TB Program has consistently met this objective for the last three years.

Table 11. RI TB Program Progress on HIV Co-infection Testing

Objective: Increase the proportion of TB cases with positive or negative HIV test result reported to 85%.					
Year	**2010**	**2011**	**2012**	**2013**	**2014**
Goal	65%	70%	75%	80%	85%
Results	88%	96%	91%		

In order to identify areas for further improvement of HIV testing among diagnosed TB cases, each year the TB Program investigates any cases for which an HIV status was unknown. Review of data from 2007 and 2008 indicated that many cases did not have a known status simply because HIV testing was not offered. Close partnership between the TB Program and physicians at the RISE Clinic where most active TB cases are seen has aided in improving testing percentages. The clinic utilizes an opt-out policy for HIV testing, however the clinic continues to offer and encourage HIV testing for all active cases. The Medical Director of the RISE Clinic

advocates for the HIV test to be offered after the client is acclimated to their DOT therapy and routine clinical visits. Table 12 below demonstrates improvement in this area over the last 5 years, from 20% (9 cases) of cases not being offered testing in 2007 to just 4% (1 case) in 2011.

Table 12. Reasons for Not Obtaining HIV Status in TB Cases, RI 2007-2011

	2007		2008		2009		2010		2011	
	#	%	#	%	#	%	#	%	#	%
Total Cases	45	--	36	--	24	--	26	--	27	--
Known HIV Status	**31**	**69%**	**25**	**69%**	**22**	**92%**	**23**	**88%**	**26**	**96%**
Expired before Testing	3	7%	1	3%	0	0%	1	4%	0	0%
Moved before testing	1	2%	1	3%	0	0%	0	0%	0	0%
Under the care of private provider, unable to obtain information	0	0%	1	3%	1	4%	1	4%	0	0%
No HIV Testing Offered	**9**	**20%**	**8**	**22%**	**1**	**4%**	**0**	**0%**	**1**	**4%**
Refused	1	2%	0	0%	0	0%	1	4%	0	0%

HIV/TB Co-Infection Trends, Rhode Island

Rhode Island follows the national AIDS/TB co-infection trends. On average, less than 8% of all TB infections diagnosed in the past five years in Rhode Island were AIDS related except in 2010, when none of the TB case had HIV/AIDS diagnosis.

Table 13. HIV/TB Co-infection, Rhode Island, 2008-2012

	2008	2009	2010	2011	2012
Number of TB Cases	36	24	26	27	23
Number HIV Positive	<5	<5	0	<5	<5
Percent HIV Positive	6%	13%	0%	7%	4%

E) Viral Hepatitis C in Rhode Island

This section duplicates what was reported in the 2011 report. No surveillance data have been analyzed since 2009 because of the complete absence of state or Federal resources to conduct such activities.

The US 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 33. Hepatitis C Lab Reports by Year
RI 1992-2006(September)

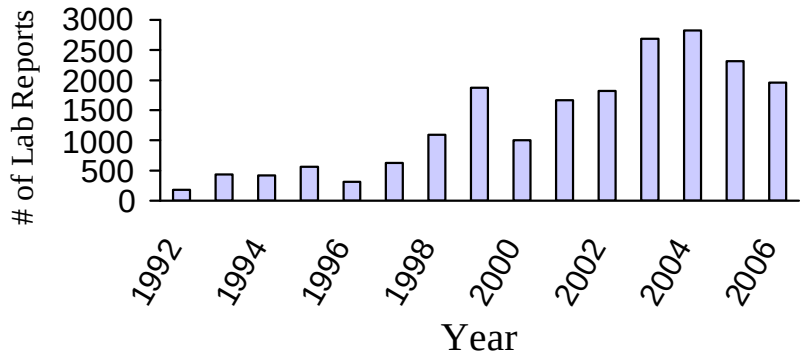


Figure 34. Positive Hepatitis C Test Results
RI 1992-2002

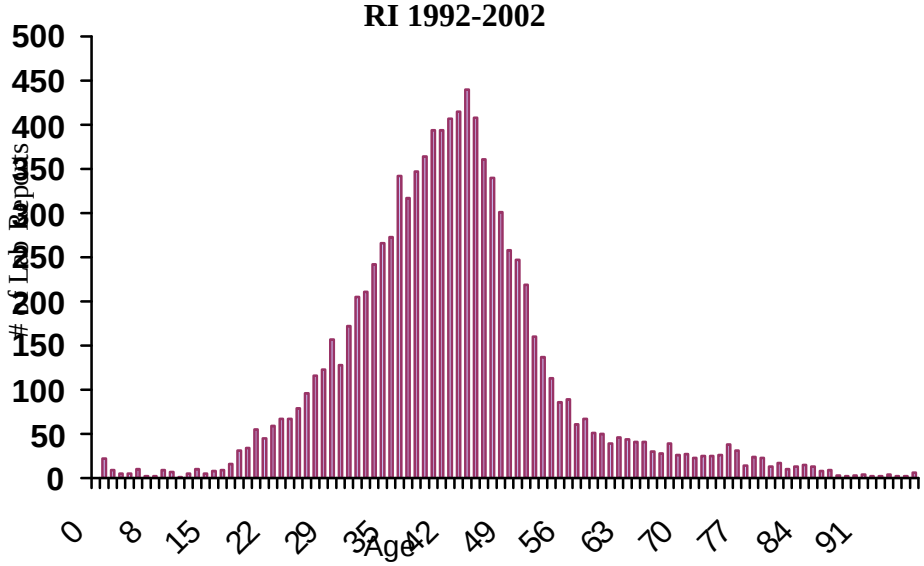


Figure 35. Positive HCV Lab Reports
RI 1992-2006

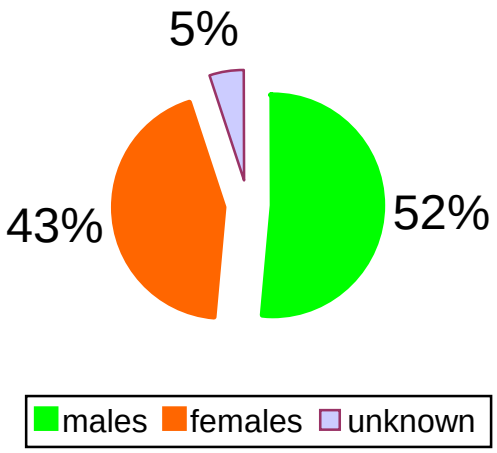
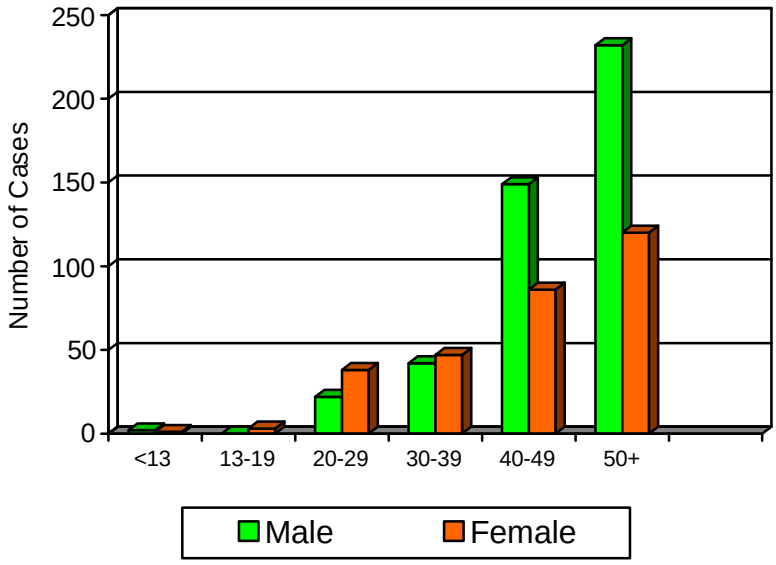


Figure 36. Confirmed Chronic Hepatitis C cases by sex and age,

RI 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.

F) Behavioral Risk Factor Surveillance System (BRFSS)

The BRFSS is an on-going population based telephone interview survey, 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.

BRFSS surveys are conducted annually and the BRFSS data from 2011 survey shows 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.

The most recent BRFSS data are from 2012. Several questions were asked about HIV testing. Nationwide in 2012, 35 percent of individuals surveyed reported that they had received an HIV test at some point in their lives, not including routine screening associated with blood donation. Of those tested, 96 percent responded that they were not at risk for HIV based on the listed behaviors on the survey (e.g. intravenous drug use, diagnosed with a sexually transmitted infection, exchanged sex for drugs or money, or had anal sex without a condom).

Among Rhode Island residents, 34 percent of those surveyed responded that they had received an HIV test at some point in their lives, not including routine screening associated with blood donation. Of those tested in Rhode Island, 97 percent of those responded that they were not at risk for HIV based on the listed risk behaviors on the survey. There has been no significant change between the 2011 and 2012 survey results.

G) 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.

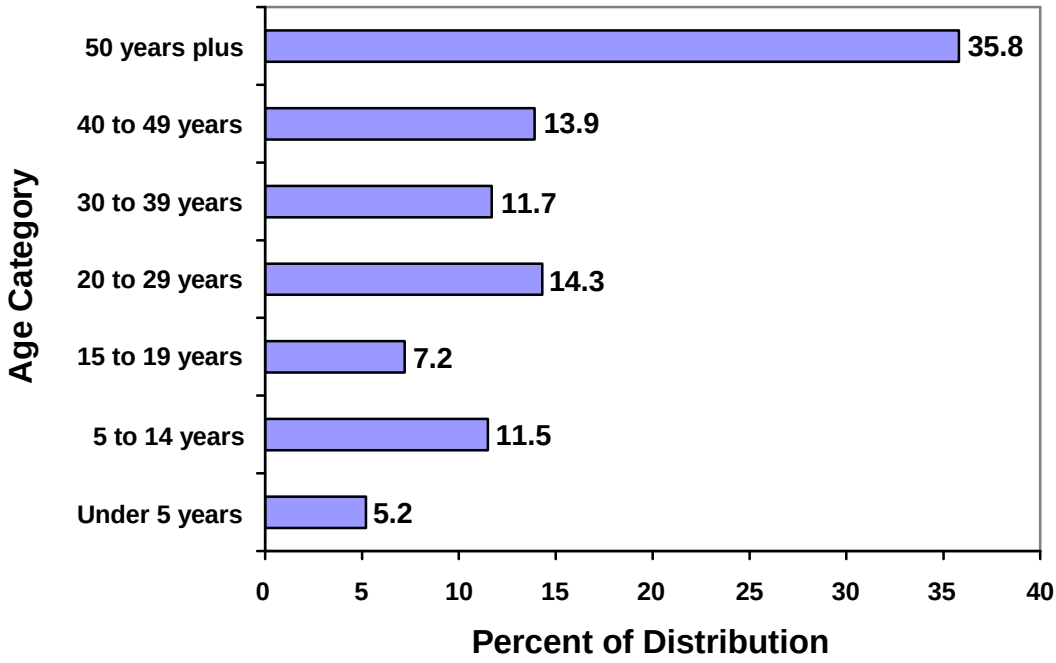
In 2011 nationwide, 47.4% the surveyed students ever had sexual intercourse, while 6.2% had sexual intercourse for the first time before age 13. During their life 15.3% students had sexual intercourse with four or more persons. About 22% had alcohol or used drugs before last sexual intercourse and 39.8% 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.

5) 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 fourth most densely populated state in the United States. Data to describe the population of Rhode Island were obtained from the 2012 Population Estimates and 2011 American Community Survey of the U.S. Census Bureau. In 2012, Rhode Island had a total population of 1,050,292. Of these 541,950 (52 percent) were females and 508,341 (48 percent) were males. The median age was 39.8 years old. Twenty one percent of the population were under 18 years of age and 15 percent were 65 years and older.

Figure 37. Age Distribution of People in Rhode Island in 2012



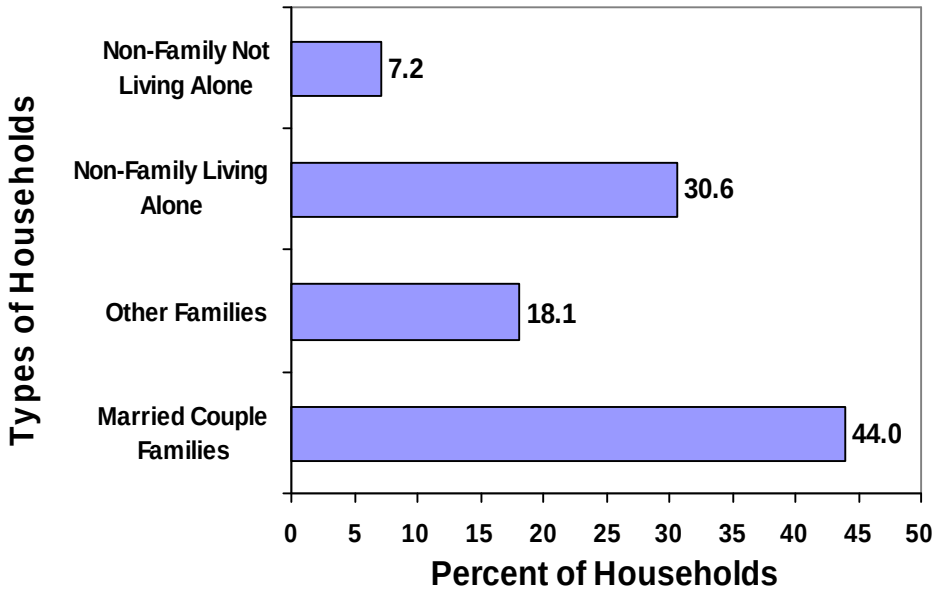
Source: US Census Bureau, 2012 Population Estimates

Race and Ethnicity: Data on Race and Ethnicity were obtained from the 2012 Population Estimates from the U.S. Census Bureau. In 2012, for people reporting one race alone, 86 percent were White; 7 percent were Black or African American; less than 1 percent were American Indian and Alaskan Native; 3 percent were Asian; less than 0.5 percent were Native Hawaiian and Other Pacific Islander. Three percent (2.5%) reported two or more races. Thirteen percent of the people in Rhode Island were Hispanic or Latino.

Households and Families: Data on Households and families were obtained from the 2011 American Community Survey from the U.S. Census Bureau. In 2011, there were 412,259

households in Rhode Island. Families made up 62 percent of the households in Rhode Island. This figure includes both married-couple families (44 percent) and other families (18 percent). Non-family households made up 38 percent of all households in Rhode Island. Most of the non-family households were people living alone (80 percent), but some were comprised of people living in households in which no one was related to the householder. Twenty-one percent of people over five years old spoke a language other than English at home.

Figure 38. Types of Households in Rhode Island 2011

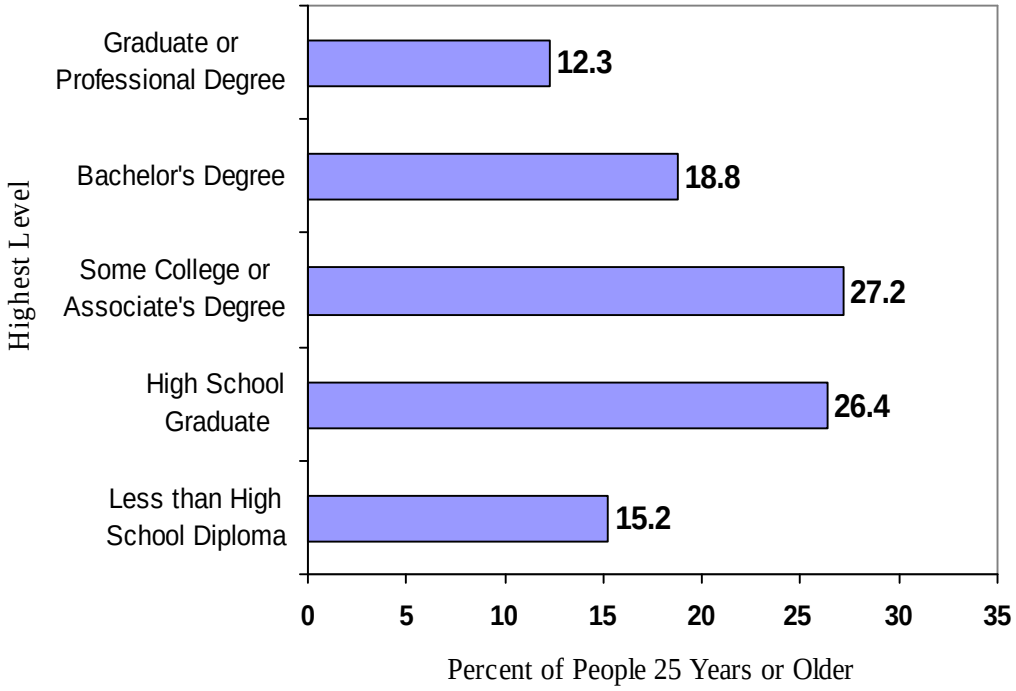


Source: U.S. Census Bureau, 2011 American Community Survey

Place of Birth and Citizenship Status: Data on these variables were obtained from the 2011 American Community Survey. Thirteen percent of people were foreign born, and 50 percent of foreign-born people were naturalized U.S. citizens. Of foreign born people, 46 percent were born in Latin America, 23 percent were born in Europe, 17 percent were born in Asia, 11 percent were born in Africa, 3 percent were born in Northern America, and less than 0.5 percent were born in Oceania (Islands of the tropical Pacific Ocean).

Education: Data on Education were obtained from the 2012 Population Estimates and the 2011 American Community Survey. In 2012, eighty-four percent of people 25 years of age and over had at least graduated from high school and 31 percent had a bachelor's degree or higher. The 2011 American Community Survey reports that total school enrollment in Rhode Island was 277,923. Pre-elementary school enrollment was 26,680 and elementary or high school enrollment was 151,190 children. College and Graduate school enrollment was 99,774.

Figure 39. The Educational Attainment of People in Rhode Island in 2011



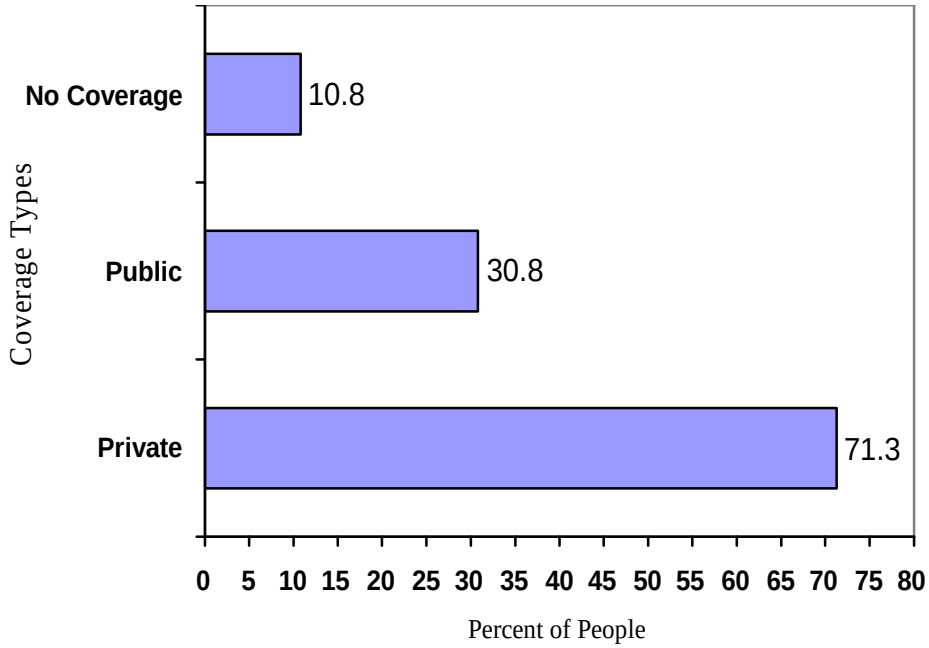
Source: U.S. Census Bureau, 2011 American Community Survey

Income: Data on Income were obtained from the 2011 American Community Survey. In 2011, the median income of households in Rhode Island was $53,636. Seventy-six percent of the households received earnings and 17 percent received retirement income other than Social Security. Thirty percent of the households received Social Security. The average income from Social Security was $16,619. These income sources are not mutually exclusive; that is, some households received income from more than one source.

Poverty and participation in Government Program: Data on Poverty were obtained from the 2011 American Community Survey. In 2011, 15 percent of people were below poverty level. Twenty-two percent of related children under 18 were below the poverty level, compared with 10 percent of people 65 years old and over. Eleven percent of all families and 30 percent of families with a female householder and no husband present had incomes below the poverty level.

Health Insurance Coverage: Data on Health Insurance Coverage were obtained from the 2011 American Community Survey. In 2011, seventy-one percent of people had private health insurance and thirty-one percent had public health coverage. Eleven percent of people had no health insurance coverage.

Figure 40. Health Insurance Coverage Rhode Island in 2011



Source: US Census Bureau, 2011 American Community Survey

Employment Status: Data on employment status from obtained from the 2011 American Community Survey. Of people over 16 years of age, 66 percent were in the civilian labor force and ten percent of the civilian labor force were unemployed. Of females over 16 years of age, 62 percent were in the civilian labor force and 10 percent were unemployed.

6) List of Figures and Tables

Figures:

Tables:

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