

# STD, HIV/AIDS and Viral Hepatitis Surveillance Report 2010

Massachusetts Department of Public Health  
Bureau of Infectious Disease Prevention, Response and Services  
Division of STD Prevention and HIV/AIDS Surveillance  
Division of Epidemiology and Immunization

## Table of Contents

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1. Executive Summary	
2. Chlamydia.....	2
3. Gonorrhea.....	4
4. Syphilis.....	6
5. HIV/AIDS.....	8
6. Viral Hepatitis.....	10
6. STDs and HIV/AIDS in Adolescents and Young Adults.....	14
7. STDs and HIV/AIDS in Women.....	16
8. Racial/Ethnic Health Disparities in STDs and HIV/AIDS.....	18
9. STDs and HIV/AIDS in Men Who Have Sex With Men.....	20
10. Summary of Strengths and Limitations of Data.....	22
11. Interpreting STD and HIV/AIDS Data.....	23
12. STD and HIV/AIDS Contact Information.....	24
13. STD, HIV/AIDS and Viral Hepatitis Resources.....	25

# STD, HIV/AIDS and Viral Hepatitis Surveillance Summary – 2010

## Massachusetts Department of Public Health

### Executive Summary 2009

The Massachusetts STD, HIV/AIDS, and Viral Hepatitis Surveillance Report, an annual product of the MDPH Bureau of Infectious Disease, provides an occasion to reflect upon trends in these diseases within the Commonwealth of Massachusetts.

In 2010, the following trends existed with regard to the three most commonly reported bacterial STDs in Massachusetts:

- Infectious syphilis (primary, secondary, and early latent syphilis) incidence rates continued at higher than previous levels – a trend which began in the last quarter of 2007. Although infectious syphilis remains relatively rare overall, the disease has reached epidemic proportions within men who have sex with men.
- Gonorrhea incidence increased in 2010. Gonococcal disease primarily remains concentrated within non-white populations from major urban centers such as Boston and Springfield.
- Incident chlamydia infection continues to increase -- the more providers screen for it, the more infections they find. Questions remain as to whether increased case reporting is reflective of increased electronic laboratory reporting, and/or more access to screening with more sensitive laboratory testing. Moreover, recent research has revealed gaps in our understanding of what proportion of chlamydia cases will progress to complications such as epididymitis, pelvic inflammatory disease, ectopic pregnancy, infertility, or chronic pelvic pain.<sup>1</sup>

Regarding HIV/AIDS, notable trends in 2009 included the following:

- Newly diagnosed infections and deaths continued to decline but the actual number of persons known to be living with HIV/AIDS in Massachusetts increased to over 17,000 in 2009 because survival continued to improve.
- Similar to other sexually transmitted infections, blacks and Hispanics have higher rates of HIV infection.
- Male with male sex remains the single largest identified exposure mode among newly diagnosed HIV cases.

With regard to viral hepatitis, we observed the following trends in 2010:

- Chronic confirmed cases of hepatitis B continued to decline, a trend likely related to school required hepatitis B vaccination programs, many of which were phased in between 2002-05.
- Previous analyses had suggested a steady decline in the number of newly diagnosed hepatitis C cases reported in Massachusetts since 2004. Improvements in surveillance, however, have been associated with an increase in cases reported from 2006 through 2008. At approximately 61 cases per 100,000 population in 2010, hepatitis C remains one of the highest volume reportable infections.

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<sup>1</sup> Gottlieb et al. Summary: the natural history and immunobiology of *Chlamydia trachomatis* genital infection and implications for chlamydia control. *Journal of Infectious Diseases* 201:S190-204, 2010.

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Highlighted on pages 2-21 are the trends within special populations disproportionately affected by STDs, HIV/AIDS, and viral hepatitis. Health disparities exist across the nation, Massachusetts is no exception, and STDs, HIV/AIDS, and viral hepatitis disproportionately affect women, minorities (both sexual and racial/ethnic minorities), and youth and young adults, which is why we annually highlight specific disease trends within these populations. Massachusetts data are reflective of a number of national trends. Where we differ is in the fact that our surveillance has revealed some increasing gaps among certain racial/ethnic and sexual minorities in reported STDs. It remains to be determined whether this reflects improved access to care leading to more screening and identification of infection, or true increases in infection within certain minority populations. Improvements in reporting systems, which provide more complete information on other possible risk and protective associations, are critical for improving our understanding of disparities in reportable diseases.

The focus of this annual surveillance report is necessarily on diseases reportable to the state, not on health. However, it should be recognized that sexually transmitted infections, including HIV/AIDS and viral hepatitis, occur at the nexus of individual human behavior, community risk, clinical diagnosis and treatment, and public health prevention and control. The intended audience for this annual surveillance report includes the clinicians and the laboratory professionals who report these cases, as well as the community organizations, local public health departments, policymakers, and researchers who are interested in the sexual health and well-being of residents of the Commonwealth of Massachusetts. We welcome feedback, and invite you, the reader, to begin by thinking in terms of disease statistics, but end by acting in terms of health promotion.

Brenda Cole, MEd, Director, Division of STD Prevention and HIV/AIDS Surveillance  
Daniel Church, MPH, Coordinator, Viral Hepatitis Prevention  
Dawn Fukuda, MPH, Director, Office of HIV/AIDS  
Katherine Hsu, MD, MPH, Medical Director, Division of STD Prevention and HIV/AIDS Surveillance  
Alfred DeMaria, Jr., MD, State Epidemiologist and Medical Director, Bureau of Infectious Disease Prevention, Response and Services  
Kevin Cranston, MDiv, Director, Bureau of Infectious Disease Prevention, Response and Services

*Unless otherwise noted, all incidence calculations represent crude rates. The source for all denominator data is the U.S. Census, 2000. All data reported are current as of October 2010. All information on STD cases reflect year of report. Due to prolonged reporting delays related to transitioning from code-based to name-based reporting of HIV cases, all HIV/AIDS data reflect HIV diagnosed through 2009.*

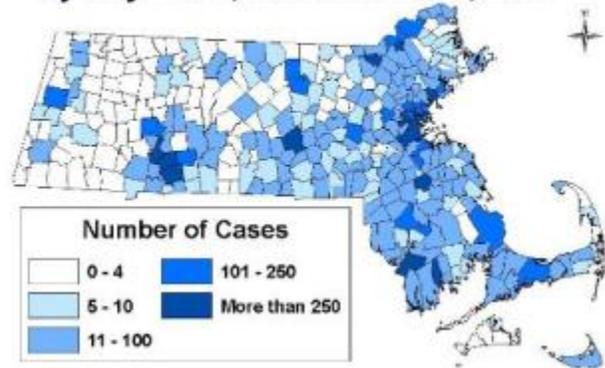
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**CHLAMYDIA**

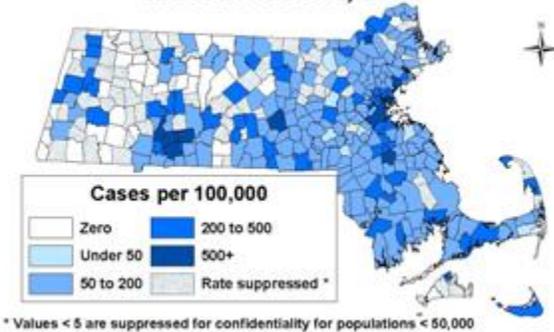
There were 21,236 reported chlamydia infections in Massachusetts in 2010. Chlamydia infection is widely distributed in Massachusetts.

Chlamydia case and incidence data by city and town are available online at [www.mass.gov/dph/cdc/std](http://www.mass.gov/dph/cdc/std).

**Reported Chlamydia Infection Cases by City/Town, Massachusetts, 2010**



**Chlamydia Incidence Rates by City/Town Massachusetts, 2010**



The highest incidence rates of reported chlamydia infections are in large urban areas around Boston and Springfield.

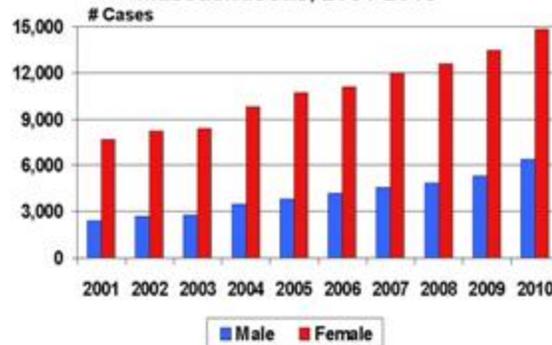
Throughout the state, the majority of cities and towns fall into the 50-200 cases per 100,000 population range.

The total number of reported chlamydia infection cases in Massachusetts has increased by 110% in the past ten years, from 10,121 in 2001 to 21,236 in 2010.

There was a 13% increase in the number of cases reported in 2010 compared to 2009.

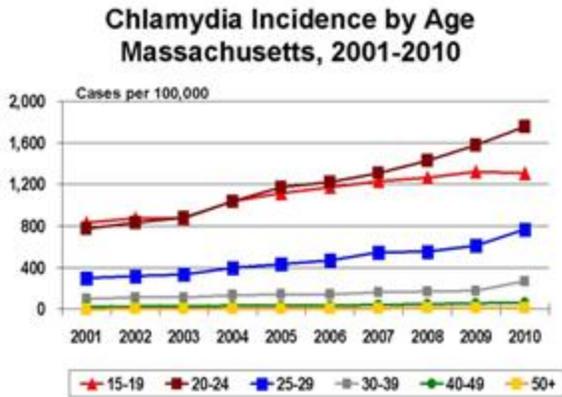
Of the total reported cases in 2010, 6,394 were among men and 14,817 were among women. The greater number of chlamydia cases among women is a combined effect of increased incidence and a higher level of screening as compared to men.

**Chlamydia Cases by Gender Massachusetts, 2001-2010**



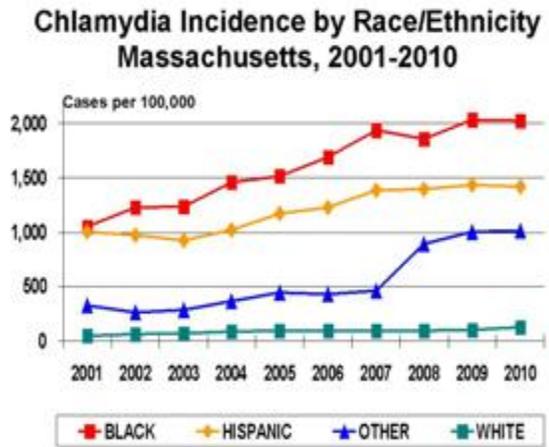
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**CHLAMYDIA**



In 2010, the incidence of reported chlamydia infection in Massachusetts among adolescents (ages 15-19) and young adults (ages 20-24) exceeded 1,300 and 1,700 per 100,000, respectively. The overall Massachusetts chlamydia infection rate is 324 per 100,000.

Historically, communities of color have been disproportionately affected by STDs. In 2010, compared to whites, the incidence rate of reported chlamydia infection in Massachusetts were 18 times higher in blacks and 13 times higher in Hispanics. Disparities in the rate of chlamydia infection in Massachusetts have grown in recent years.



In 2008, changes in electronic reporting of laboratory results indicating STD cases to MDPH resulted in an increased proportion of STD cases being categorized as “other” race. Thus, as of 2008, increases in the rate of STD infections in the “other” category may be related to electronic laboratory reporting.

**INFERTILITY PREVENTION PROJECT**

Since 1997, the Division of STD Prevention has participated in a Centers for Disease Control and Prevention (CDC)-funded Infertility Prevention Project. The goal of this project is to reduce infertility and other health consequences of chlamydia infection through increased screening and treatment of women who are at higher risk for infection.

In 2010, as part of the Infertility Prevention Project, 14,575 specimens were tested for chlamydia infection. Test results from participating sites have yielded the following:

<b>PERCENT POSITIVE FOR CHLAMYDIA INFECTION</b>			
<b>SITE TYPE(number tested)</b>		<b>Females</b>	<b>Males</b>
<b>School-Based Health Centers</b>	<b>(n =1.184)</b>	<b>9%</b>	<b>6%</b>
<b>Correctional Facilities</b>	<b>(n=3.280)</b>	<b>2%</b>	<b>7%</b>
<b>Family Planning Clinics</b>	<b>(n=6,827)</b>	<b>4%</b>	<b>15%</b>
<b>STD Clinics</b>	<b>(n=3.284)</b>	<b>4%</b>	<b>5%</b>

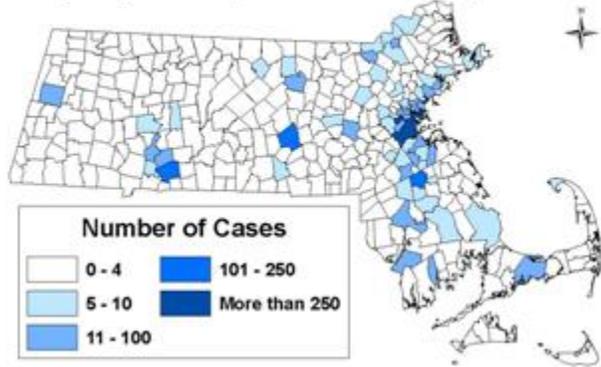
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**GONORRHEA**

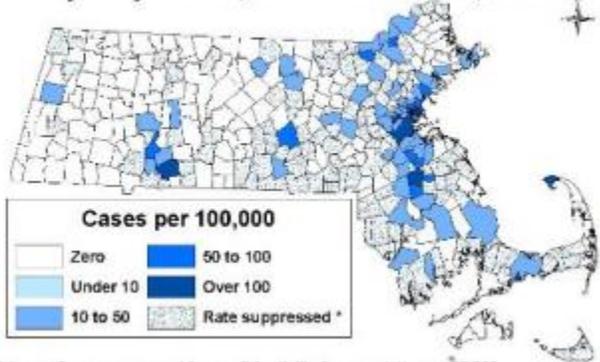
The number of reported cases of gonorrhea in Massachusetts in 2010 was 2,497, a 30% increase over the previous year. Although gonorrhea is widely distributed in Massachusetts, cases are more prevalent in urban locations.

Gonorrhea case and incidence data by city and town are available online at [www.mass.gov/dph/cdc/std](http://www.mass.gov/dph/cdc/std).

**Reported Gonorrhea Cases by City/Town, Massachusetts, 2010**



**Reported Gonorrhea Incidence Rates by City/Town, Massachusetts, 2010**

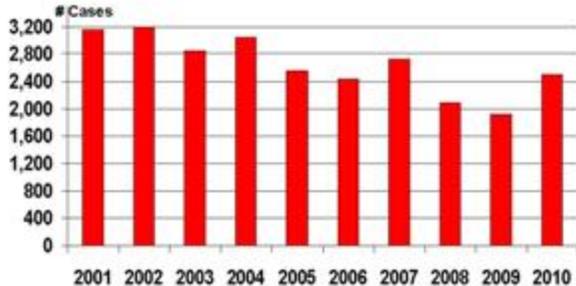


The highest incidence rates of reported gonorrhea are clustered in the large urban areas around Boston and Springfield.

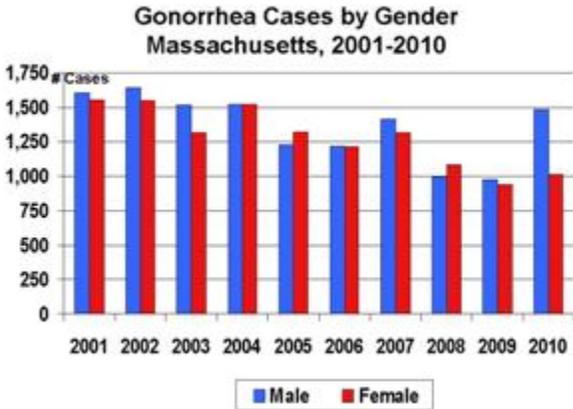
The highest concentration of cases is in the eastern part of the state.

Massachusetts experienced a slight decrease in reported gonorrhea cases from 2003–2006. After a 13% increase from 2006 to 2007, there was a 30% decrease in gonorrhea cases from 2007 to 2009 and a 31% increase from 2009 to 2010.

**Gonorrhea Cases Massachusetts, 2001-2010**

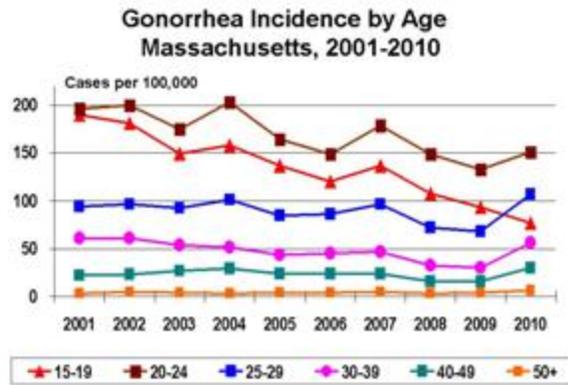


**GONORRHEA**

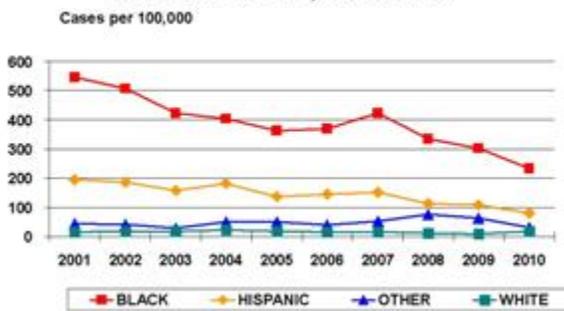


During 2001-2009 the number of gonorrhea cases reported in Massachusetts among males and females has overall remained the same. In 2010, more cases were reported in men rather than women.

The incidence of gonorrhea in Massachusetts is highest among young adults (ages 20-24 years), followed by adolescents (ages 15-19 years). Compared to the state-wide incidence rate of gonorrhea (38.1 per 100,000), the incidence rate was 2.0 times higher for adolescents and 3.3 times higher for young adults.



**Gonorrhea Incidence by Race/Ethnicity Massachusetts, 2001-2010**



In 2010, in Massachusetts, the reported gonorrhea incidence rate was 16 times higher in blacks and 7 times higher in Hispanics compared to whites.

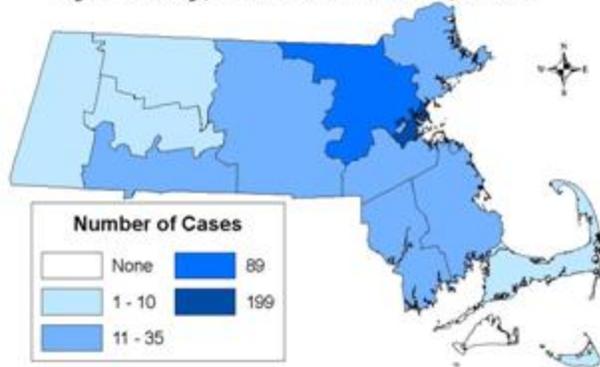
In 2008, changes in electronic reporting of laboratory results indicating STD cases to MDPH resulted in an increased proportion of STD cases being categorized as “other” race. Thus, as of 2008, increases in the rate of STD infections in the “other” category may be related to electronic reporting.

**SYPHILIS**

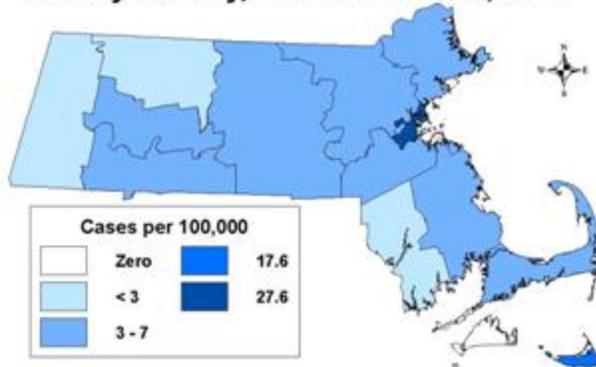
In 2010, there were 464 reported infectious syphilis cases (primary, secondary, and early latent) in Massachusetts; a 23% increase from 2009. Although infectious syphilis cases have been reported in almost all counties, 43% of cases (199) were reported in Suffolk County.

Infectious syphilis case and incidence data by city and town are available online at [www.mass.gov/dph/cdc/std](http://www.mass.gov/dph/cdc/std).

**Reported Infectious Syphilis Cases by County, Massachusetts, 2010**



**Reported Infectious Syphilis Incidence Rate by County, Massachusetts, 2010**

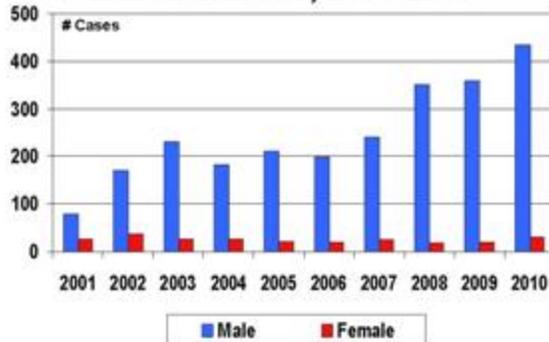


In 2010, three counties have a syphilis incidence rate of less than three cases per 100,000 population. Eight counties have a rate between three and seven cases per 100,000 population. Dukes County had no reported cases.

Suffolk county has the highest syphilis rate at 27.6 cases per 100,000 population

In Massachusetts, the male-to-female ratio of infectious syphilis cases changed from 2.9 to 1 in 2001, to 14.5 to 1 in 2010. This shift reflects an increase in the number of infectious syphilis cases diagnosed in men who have sex with men. This trend has also been observed in other regions of the United States.

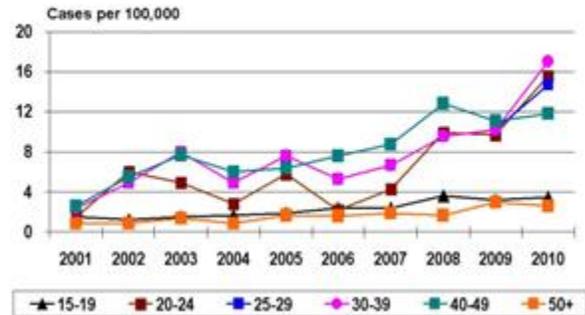
**Infectious Syphilis Cases by Gender Massachusetts, 2001-2010**



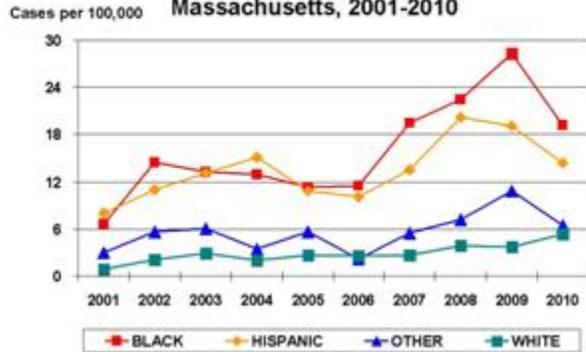
## SYPHILIS

In contrast to chlamydia infection and gonorrhea, which tend to occur more frequently among adolescents and young adults, infectious syphilis is more commonly reported in people over age 25 years.

Reported Infectious Syphilis Incidence by Age  
Massachusetts, 2001-2010



Reported Infectious Syphilis Incidence by  
Race/Ethnicity  
Massachusetts, 2001-2010



In 2010, in Massachusetts, the reported infectious syphilis incidence rate was 3.6 times higher in blacks and 2.7 times higher in Hispanics compared to whites.

## SYPHILLIS IN MEN WHO HAVE SEX WITH MEN (MSM)

In Massachusetts, MSM represent a higher-risk group for infectious syphilis. Of the 464 infectious syphilis cases in 2010, 382 (82.2%) were reported in MSM. Thirty-nine percent (149/382) of the MSM with infectious syphilis disclosed that they were co-infected with HIV. Forty-six percent (177/382) of the infectious syphilis cases in MSM were reported in Suffolk county.

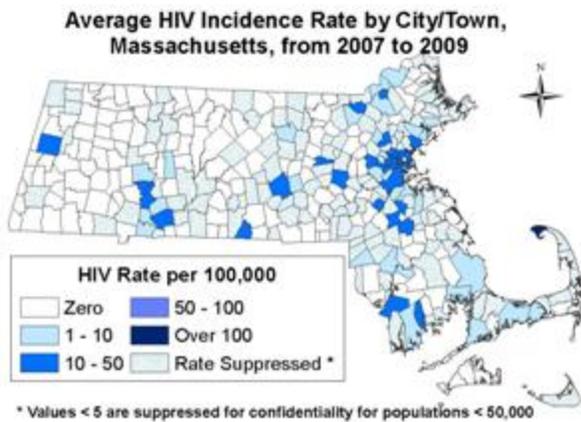
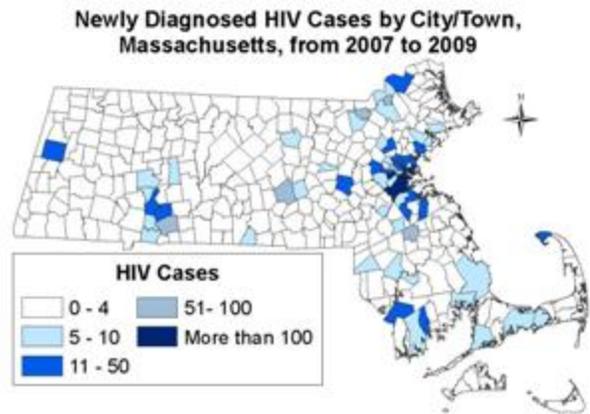
Transmission of syphilis can occur between men through unprotected oral and anal sex. Additional information and resources regarding MSM and STDs is available online at [www.mastdinfo.org](http://www.mastdinfo.org)

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**HIV/AIDS**

Of the 351 cities and towns in Massachusetts, 194 (54.1%) had at least one newly diagnosed HIV infection reported from 2007-2009. The majority of newly identified HIV infections were reported in large urban areas.

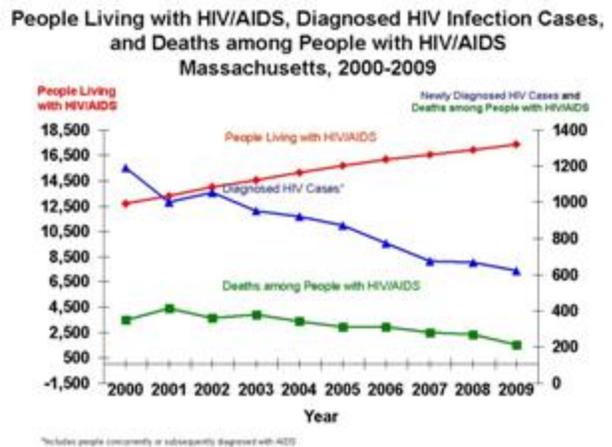
HIV infection case and incidence data by city and town are available online at [www.mass.gov/dph/cdc/aids](http://www.mass.gov/dph/cdc/aids). Additional information is available through the MDPH HIV/AIDS Epidemiologic Profile at the same weblink.



Of those cities and towns where HIV infections were diagnosed between 2007-2009, the majority had rates of under 10 per 100,000 population. Provincetown had the highest rate of HIV infection diagnosis at greater than 385 per 100,000 population.

In 2009, there were 622 reported newly diagnosed HIV infections and 214 deaths among people with HIV/AIDS in Massachusetts.

Newly diagnosed HIV infections and deaths among people with HIV/AIDS continue to decline each year, but because newly diagnosed infections continue to exceed the number of deaths annually, the number of people known to be living with HIV/AIDS in Massachusetts increased from 12,696 on December 31, 2000 to 17,358 on December 31, 2009.

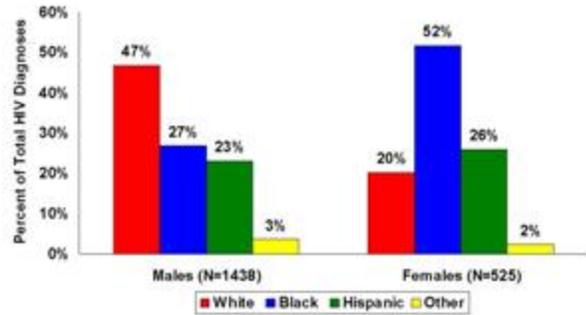


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Massachusetts Department of Public Health

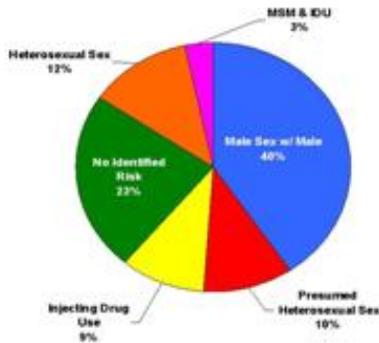
**HIV/AIDS**

From 2007-2009, of the 1,963 newly diagnosed HIV infections in Massachusetts, 1,438 (73%) were in men and 525 (27%) were in women. Most of the newly diagnosed HIV infections in men were in white men, whereas the majority of newly diagnosed HIV infections in women were in black women.

**Percent Distribution of Newly Diagnosed HIV Infection by Gender and Race/Ethnicity Massachusetts, 2007-2009**



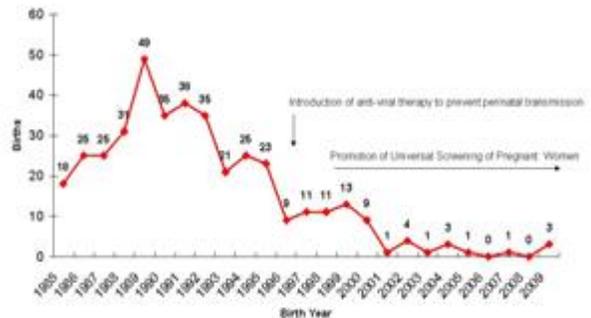
**Newly Diagnosed HIV Infection by Exposure Mode Massachusetts, 2007-2009  
N = 1,963**



From 2007-2009, the primary exposure modes reported among newly diagnosed cases of HIV infection in Massachusetts were male with male sex (40%), presumed heterosexual sex (10%), injection drug use (10%) and heterosexual sex (12%).

Since the mid-1990's, Massachusetts experienced a dramatic reduction in mother-to-child transmission of HIV infection, with no HIV-infected newborns identified in 2006 and one in 2007, none again in 2008 and three cases in 2009. The decline is attributed to improvements in HIV screening during pregnancy and the treatment of HIV-infected women with anti-retroviral therapy. However, every case of mother-to-child transmission remains a sentinel event mandating investigation to identify if new systems can be put in place to assure maximum efforts to prevent vertical transmission.

**Identified Mother-to-Child Transmission of HIV Infection By Year of Birth, Massachusetts, 1985-2009**

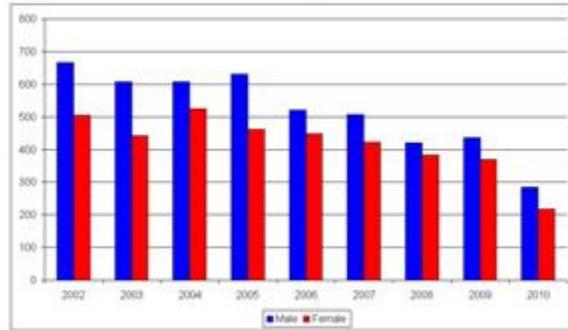


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**VIRAL HEPATITIS**

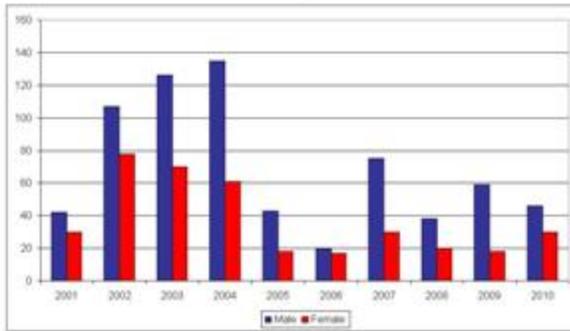
The number of confirmed cases of chronic hepatitis B reported to Massachusetts has been declining since 2005. In 2010, 503 cases were reported. This number is likely to increase due to continued processing of case reports and case confirmation. Even so, there is an overall downward trend to both confirmed and probable cases of hepatitis B infection (data not shown), due in large part to increasing levels of immunity against hepatitis B in adults at risk of infection and almost universal immunization of children against hepatitis B.

Confirmed Chronic Hepatitis B Cases by Gender and Year  
Massachusetts, 2001-2010



Net (20) excludes 25 missing gender and 1 transgender

Confirmed Acute Hepatitis B Cases by Gender and Year  
Massachusetts, 2001-2010

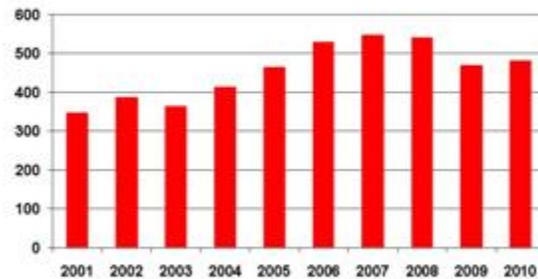


Net (20) excludes 5 missing gender

Seventy six confirmed cases of acute hepatitis B were identified in 2010. Confirmation of acute infection requires additional information, including specific laboratory test results and symptom information.

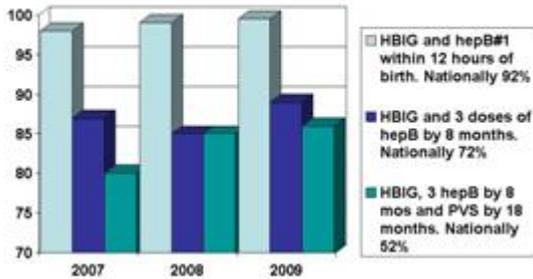
It is recommended that pregnant women be screened for hepatitis B during pregnancy to allow case management to begin early and prevent transmission of the virus to infants. Since 2007, the Perinatal Hepatitis B Program has partnered with local public health to increase identification of household and sexual contacts of hepatitis B surface antibody (HBsAg) positive pregnant women in an effort to reduce the risk of maternal-child transmission of hepatitis B as well.

Hepatitis B Positive Pregnant Females Identified in MA

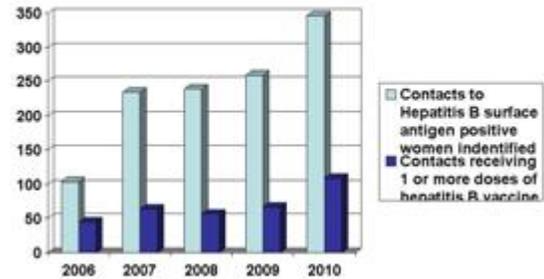


**VIRAL HEPATITIS**

**Infants Born to Hepatitis B Surface Antigen Positive Females in MA**

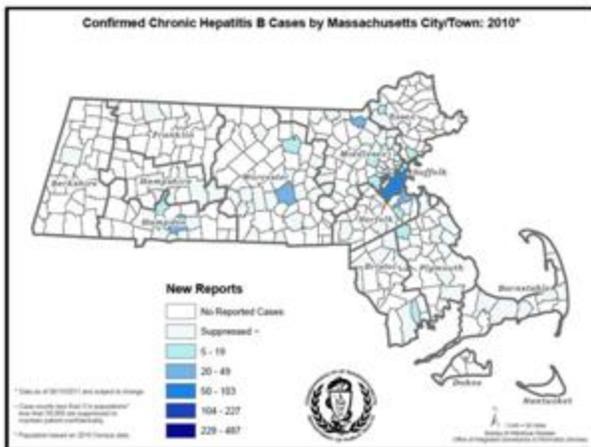
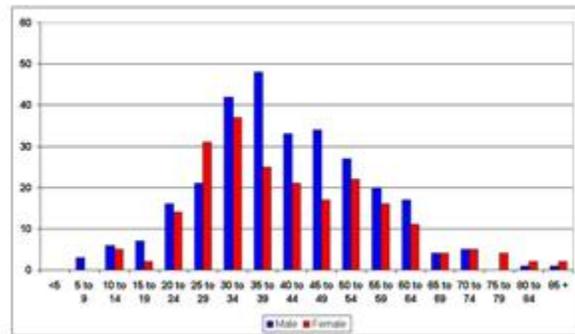


**Household and Sexual Contacts to Hepatitis B Surface Antigen Positive Pregnant Females in MA**



Due to enhanced surveillance focused on identifying pregnant women who are hepatitis B positive, a large number of the hepatitis B cases identified and reported in 2010 were in women between the ages of 25 and 44 years. While efforts are made to identify infection among the household and sexual contacts of these women, there are many barriers to getting those partners tested.

**Confirmed Chronic Hepatitis B Cases Reported in 2010 by Five Year Age Groups and Gender**

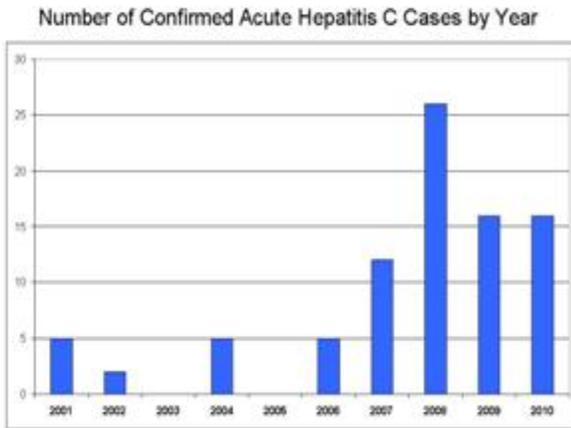
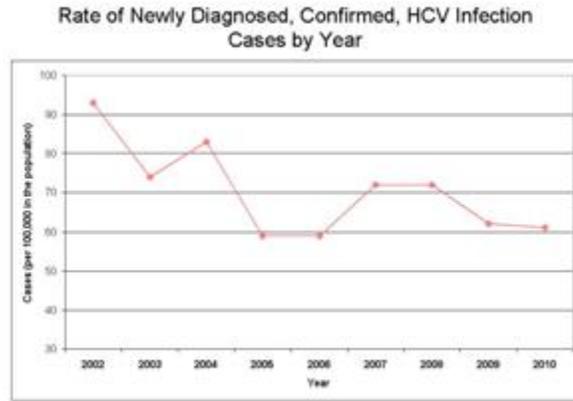


Most newly diagnosed cases of chronic hepatitis B are in people living in urban areas such as Boston, Worcester, Lowell and Springfield.

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 Massachusetts Department of Public Health

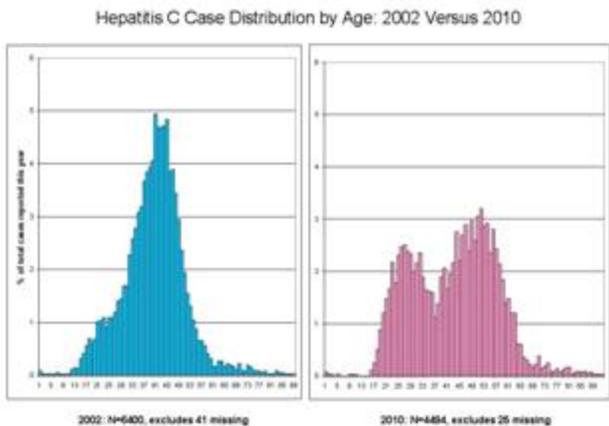
**VIRAL HEPATITIS**

There has been an overall decline in the number of newly diagnosed hepatitis C infection cases reported in Massachusetts since 2004. However, the overall number of cases reported remains very high with 7,000 to 10,000 newly diagnosed probable and confirmed cases reported to MDPH annually since 2002. There are hepatitis C cases reported to MDPH for 2010 that have yet to be fully processed, so this number is likely to increase. Hepatitis C remains one of the highest volume infectious diseases reported in Massachusetts.



Improvements in surveillance have also allowed for better identification of acute cases of hepatitis C. Sixteen acute cases were confirmed in 2010. Identification of acute cases requires information on hepatitis A and B test results, serum liver enzyme tests and symptoms. One hundred and fifty-eight cases of hepatitis C reported in 2010 matched the acute case definition, but hepatitis A or B laboratory results were not available to rule out other causes of viral hepatitis. Acute cases of hepatitis C are reported in CDC’s annual summary of notifiable diseases, while chronic hepatitis C is not.

The age distribution of hepatitis C cases reported in Massachusetts has changed between 2002 and 2010. In 2002 the reported cases were distributed in a bell-shaped curve with the age peak between the ages of 44 and 50 years. In 2010, the reported cases were distributed in a bi-modal curve with one peak at 27 years of age and a second at 52 years.

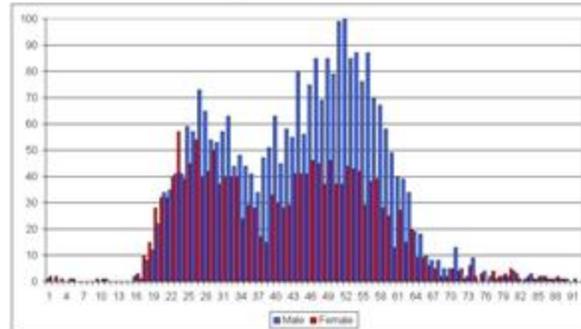


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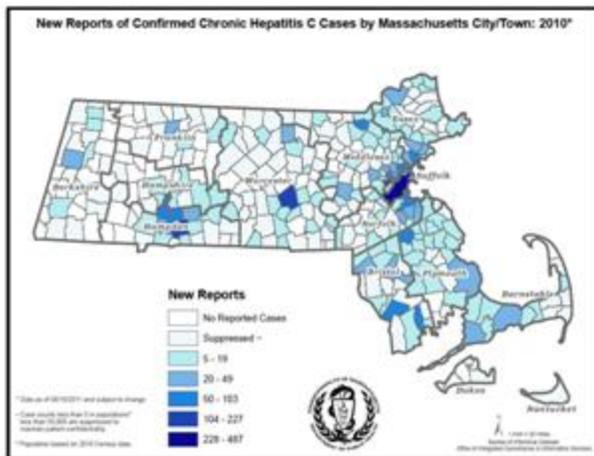
## VIRAL HEPATITIS

More hepatitis C cases are identified in males than in females in almost all age groups. However, the male to female ratio is closer to one in the 15-to-30 year age group than in the 40-to-60 year age group, with females even predominantly among the younger cases.

Confirmed Chronic Hepatitis C Cases Reported in 2010 by Age and Gender\*



\*N=482, excludes 35 missing gender at age and 2 transgender



Cases of hepatitis C are reported in communities across Massachusetts, with more cases being identified in people living the urban areas of Boston, Worcester, and Springfield.

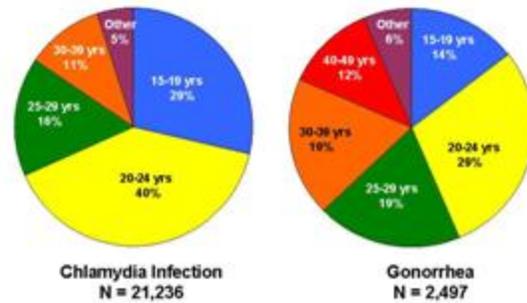
## ADOLESCENTS & YOUNG ADULTS

### STDs IN ADOLESCENTS AND YOUNG ADULTS

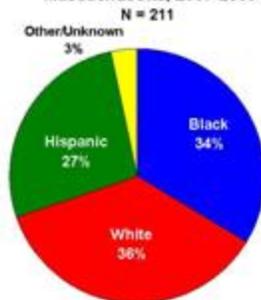
Compared to older adults, sexually active adolescents and young adults are at higher risk for acquiring STDs for a combination of behavioral, biological and cultural factors. The higher prevalence of STDs among adolescents also may reflect multiple barriers to accessing quality STD prevention services, including lack of insurance or other ability to pay, lack of transportation, discomfort with facilities and services designed for adults, and concerns about confidentiality. (Source: CDC. *Sexually Transmitted Disease Surveillance, 2009*. Atlanta, GA: U.S. Department of Health and Human Services, November 2010.)

In 2010, 69% of reported chlamydia infection cases and 43% of reported gonorrhea cases were in adolescents and young adults (ages 15-24).

Selected STDs by Age  
 Massachusetts, 2010



Percent Distribution of Newly Diagnosed HIV Infection Cases in Adolescents and Young Adults (ages 15-24) by Race/Ethnicity Massachusetts, 2007-2009

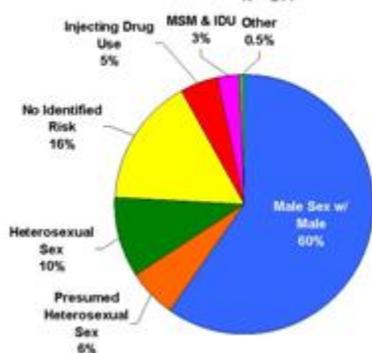


From 2007-2009, reported newly diagnosed HIV infections among adolescents and young adults in Massachusetts had the following racial/ethnic distribution: black (non-Hispanic) (34%), white (non-Hispanic) (36%), Hispanic (27%), and other (3%).

STD, HIV/AIDS and Viral Hepatitis Surveillance Summary – 2010  
Massachusetts Department of Public Health

**ADOLESCENTS & YOUNG ADULTS**

Percent Distribution of Newly Diagnosed HIV Cases in Adolescents and Young Adults (Ages 15-24) by Exposure Mode Massachusetts, 2007-2009  
N = 211



From 2007-2009, in Massachusetts, the primary modes of exposure for reported, newly diagnosed HIV infection cases in adolescents and young adults were male with male sex (60%), presumed heterosexual sex (6%), heterosexual sex (10%), and injecting drug use (5%).

The Youth Risk Behavior Survey (YRBS) is performed biennially among a national sample of 9th-12th grade students. A review of data provided from the Massachusetts YRBS over the past two decades indicates that three markers of risky youth sexual behavior (ever having had sex, first sex before age 13 years, and four or more lifetime sexual partners) reached all-time lows in 2003 (respectively 41%, 5%, and 10%), and have subsequently shown slight increases of potential concern (up to 46%, 5%, and 13% in 2009). In contrast, two markers of protective sexual behaviors, use of condoms at last sex and being taught about HIV/AIDS in school, have shown declines from previous gains (respectively 58% in 2009 down from 65% in 2005, and 87% in 2009 down from 94% in 2001).

<b>Sexual Behaviors Among Massachusetts High School Students by Gender, 2010</b>		
	<b>Affirmative Responses</b>	
	<b>Males</b>	<b>Females</b>
<b>Respondents: All Students</b>		
Lifetime sexual intercourse	<b>48.0%</b>	<b>44.6%</b>
Sexual intercourse before age 13	<b>8.0%</b>	<b>3.0%</b>
Four or more lifetime sexual partners	<b>15.2%</b>	<b>10.6%</b>
<b>Respondents: Students having sexual intercourse in past three months</b>		
Condom use at last sexual intercourse	<b>65.7%</b>	<b>50.6%</b>
Substance use at last sexual intercourse	<b>27.6%</b>	<b>20.0%</b>
Taught in school about AIDS or HIV	<b>87.2%</b>	<b>87.6%</b>

*Source: Youth Risk Behavior Surveillance System. MMWR 2010 59(NoSS-5)*

## WOMEN

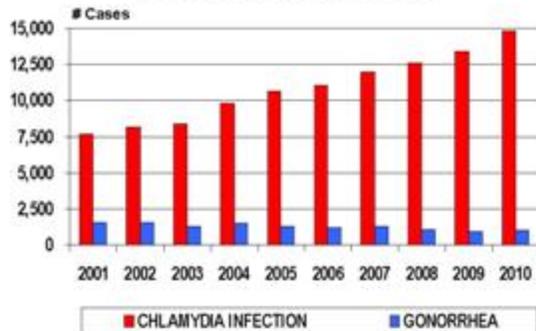
### STDs AND WOMEN

Complications of STDs are greater and more frequent among women than men due to two primary factors. First, biologically, women are more likely than men to become infected if exposed to an STD. Second, STDs are more likely to remain undetected in women, resulting in delayed diagnosis and treatment, and ultimately more untreated infections leading to complications. (Source: *The Hidden Epidemic*, Institute of Medicine, National Academy Press, Washington, D.C., 1997.)

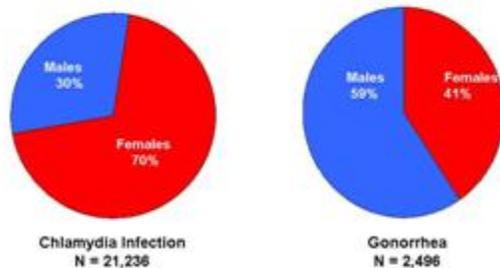
Untreated STDs in women can lead to serious health consequences, including pelvic inflammatory disease, infertility, ectopic pregnancy and cervical cancer.

Unlike gonorrhea, reported chlamydia infection in Massachusetts is more common in women and has been increasing in the past ten years, in part due to increased adoption of recommended routine screening by healthcare providers.

Chlamydia and Gonorrhea Cases in Females  
Massachusetts, 2001-2010



Distribution of Reported STDs by Gender  
Massachusetts, 2010



While the male-to-female ratio of gonorrhea cases is about 3 to 2, women are overrepresented among chlamydia cases by a ratio of 2.3 to 1.

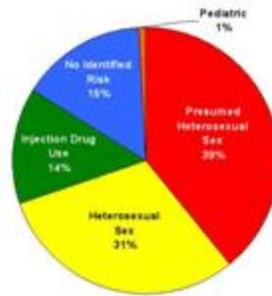
The greater number of chlamydia cases in women is attributable to increased screening of women as compared to men.

STD, HIV/AIDS and Viral Hepatitis Surveillance Summary – 2010  
 Massachusetts Department of Public Health

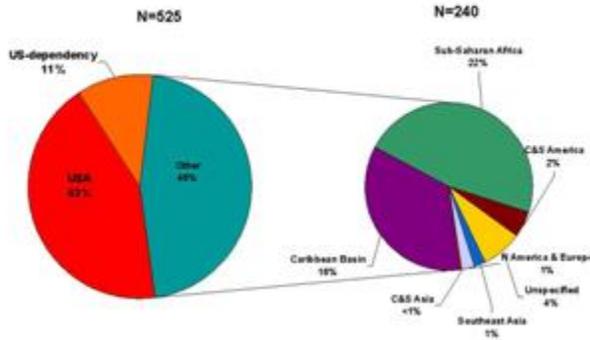
**WOMEN**

From 2007-2009, the exposure modes for the 525 newly diagnosed HIV cases reported in women in Massachusetts was attributed to presumed heterosexual sex (39%), heterosexual sex (31%), injection drug use (14%), and pediatric exposure (1%).

Newly Diagnosed HIV Infection Cases in Females by Exposure Mode  
 Massachusetts, 2007-2009  
 N = 525



Newly Diagnosed HIV Infection Cases in Females by Place of Birth Massachusetts, 2007-2009



From 2007-2009, 46% of women reported with HIV infection diagnoses were born outside of the U.S. For men diagnosed from 2007 -2009, only 25% were born outside of the U.S.

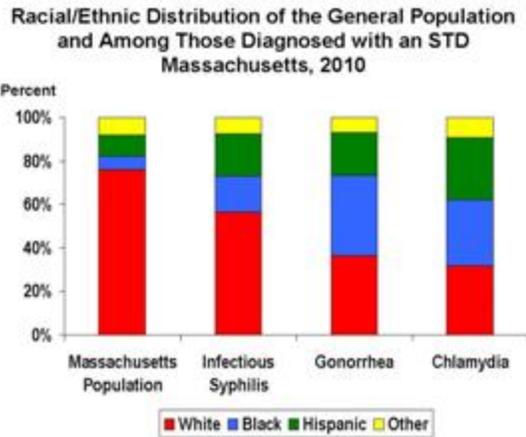
Eighty-two percent of women diagnosed with HIV infection, who were born outside of the U.S., were born in regions of the world where heterosexual sex is the predominant mode of transmission of HIV infection.

## RACIAL/ETHNIC DISPARITIES

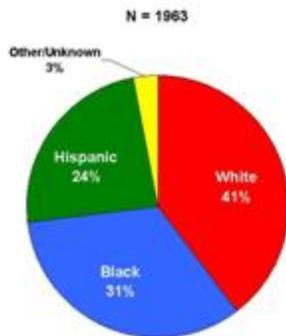
### RACIAL/ETHNIC DISPARITIES IN STD RATES

As stated in the 2009 Sexually Transmitted Disease Surveillance Report from the Centers for Disease Control and Prevention (CDC), national surveillance data show higher rates of reported STDs among some racial or ethnic minority groups when compared with rates among whites. Race and ethnicity in the United States are risk markers that correlate with other more fundamental determinants of health status such as poverty, access to quality health care, health care seeking behavior, illicit drug use, and living in communities with high prevalence of STDs. Acknowledging the disparity in STD rates by race or ethnicity is one of the first steps in empowering affected communities to organize and focus on this problem.” (Source: CDC. *Sexually Transmitted Disease Surveillance, 2009*. Atlanta, GA: U.S. Department of Health and Human Services; November 2010.

Although communities of color represent only 24% of the total Massachusetts population, these communities have a disproportionate burden of STDs. In 2010, 43% of the reported infectious syphilis cases, 63% of the reported gonorrhea cases, and 68% of the reported chlamydia infection cases occurred in individuals from communities of color.



Newly Diagnosed HIV Infection Cases by Race/Ethnicity Massachusetts, 2007-2009

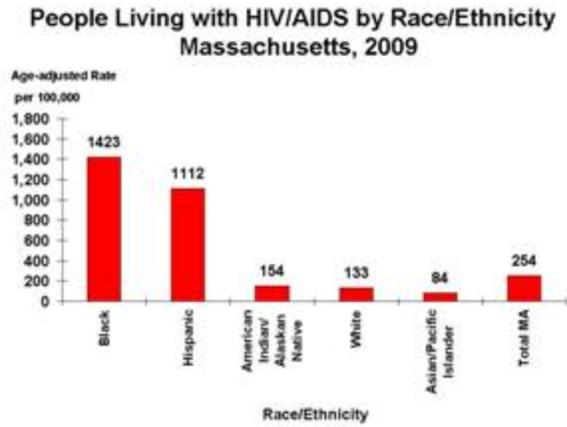


From 2007-2009, the racial/ethnic distribution of reported newly diagnosed HIV infections in Massachusetts was as follows: white (non-Hispanic) (40%), black (non-Hispanic) (33%), Hispanic (24%), and other/unknown (3%)

## RACIAL/ETHNIC DISPARITIES

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In Massachusetts, in 2009, the prevalence rate of people living with HIV/AIDS was highest among black (non-Hispanic) and Hispanics. As compared to whites (non-Hispanic), the rate of people living with HIV/AIDS was 10 times higher among blacks and 7 times higher among Hispanics.



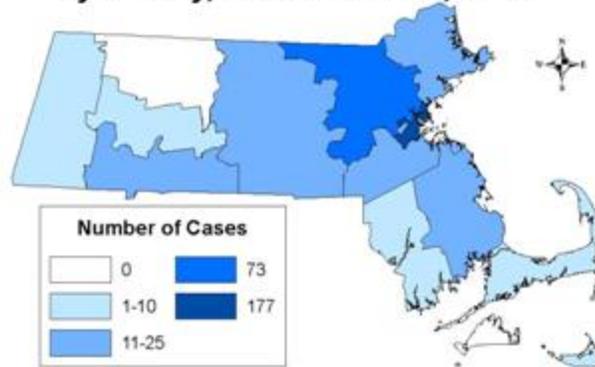
## MEN WHO HAVE SEX WITH MEN

### STDs IN MEN WHO HAVE SEX WITH MEN

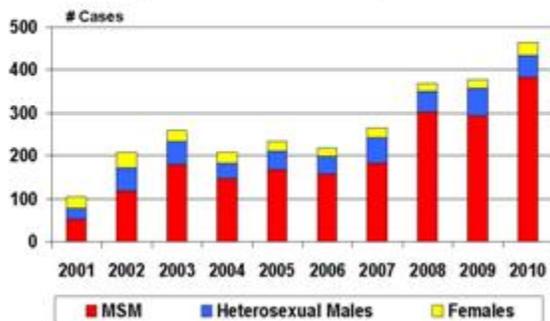
Notifiable disease surveillance data on syphilis and data from the National Gonococcal Isolate Surveillance Project suggest that some STDs in MSM including men who have sex with both men and women, are increasing. Because STDs and the behaviors associated with acquiring them increase the likelihood of acquiring and transmitting HIV infection, the rise in STDs among MSM may be associated with the increase in HIV diagnosis among MSM. (Source: CDC. *Sexually Transmitted Disease Surveillance*, 2008. Atlanta, GA: U.S. Department of Health and Human Services, November 2010.)

In 2010, 382 infectious syphilis cases were reported in MSM in Massachusetts, of which 177 (46%) were in Suffolk County.

Reported Infectious Syphilis in MSM by County, Massachusetts, 2010



Infectious Syphilis Cases, Massachusetts, 2001-2010  
 MSM, Heterosexual Males, Females

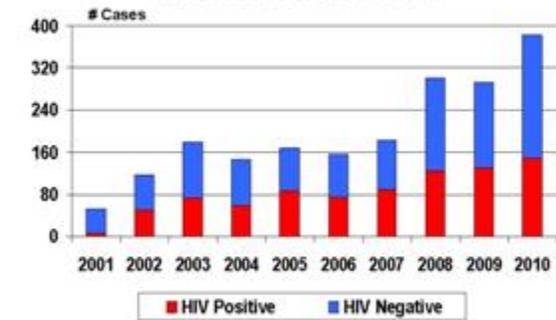


In the past eight years, MSM accounted for the majority of infectious syphilis cases in Massachusetts, ranging from 50% in 2001 to 82% in 2010.

In 2010, the racial/ethnic breakdown of reported infectious syphilis cases in MSM was white (61%), black (14%), Hispanic (19%), other (6%), and unknown (6%). The median age of the cases was 36 years, three years younger than that of the year before.

## MEN WHO HAVE SEX WITH MEN

**Infectious Syphilis Cases in MSM by HIV Status\*  
 Massachusetts, 2001-2010**

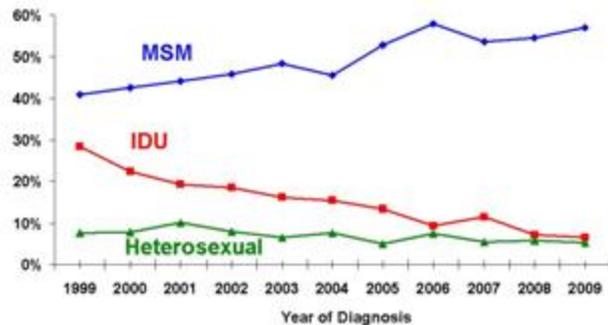


\*Self reported status

In 2010, 39% of the reported infectious syphilis cases in MSM occurred in individuals reported to be HIV-positive and 61% self-reported to be HIV negative.

Among males, the proportion of reported HIV infection cases with male to male sex as the reported mode of exposure increased from 40% in 1999 to a high of 58% in 2006, declined slightly to 54% in 2007 and then increased to 57% in 2009.

**Percentage Distribution of Newly Diagnosed HIV Infection Cases in Males by Exposure Mode  
 Massachusetts, 1999-2009**



STD, HIV/AIDS and Viral Hepatitis Surveillance Summary – 2010  
 Massachusetts Department of Public Health  
**Summary of Strengths and Limitations of Data**

	HIV/AIDS Case Data	STD Case Data	Viral Hepatitis Case Data
<b>Description</b>	<ul style="list-style-type: none"> <li>Collected by MDPH Bureau of Infectious Disease Prevention, Response &amp; Services, HIV/AIDS Surveillance Program.</li> <li>Reportable statewide.</li> <li>All licensed healthcare providers are required by law to report.</li> <li>HIV infection and AIDS cases are reported by name.</li> <li>Individuals diagnosed out of state have been excluded in analysis.</li> </ul>	<ul style="list-style-type: none"> <li>Collected by MDPH Bureau of Infectious Disease Prevention, Response &amp; Services, Division of STD Prevention.</li> <li>Reportable statewide.</li> <li>All healthcare providers are required by law to report nine STDs, including syphilis, gonorrhea, Chlamydia infection, and lymphoma granuloma venereum</li> </ul>	<ul style="list-style-type: none"> <li>Collected by MDPH Bureau of Infectious Disease Prevention, Response &amp; Services, Office of Integrated Surveillance and Informatics Services.</li> <li>Reportable statewide.</li> <li>All laboratories and healthcare providers are required to report laboratory indicators of hepatitis B and C infection.</li> </ul>
<b>Strengths</b>	<ul style="list-style-type: none"> <li>Statewide reporting, population-based.</li> <li>Risk information is available.</li> <li>Completeness of reporting is high.</li> <li>Comparable with other states.</li> </ul>	<ul style="list-style-type: none"> <li>Statewide reporting, population-based.</li> <li>Comparable with other states.</li> <li>Enhanced reporting of positive laboratory results.</li> </ul>	<ul style="list-style-type: none"> <li>Statewide reporting, population-based.</li> <li>Enhanced reporting of acute cases, hepatitis B cases in child-bearing aged women and children and hepatitis C cases among youth ages 15-25.</li> </ul>
<b>Limitations</b>	<ul style="list-style-type: none"> <li>Under-reporting (10%-15%) hampers interpretation of AIDS case data.</li> <li>Not all AIDS cases are reported at time of diagnosis (reporting lag).</li> <li>HIV data may be incomplete because some HIV-infected people may not have been tested or have entered care.</li> </ul>	<ul style="list-style-type: none"> <li>Under-reporting of up to 10% of STD cases.</li> <li>Race/ethnicity is missing in 30% of gonorrhea cases and 30% of Chlamydia infection cases.</li> <li>Reports are not received on those not seeking care or screening.</li> <li>Bias is introduced for some STDs, such as Chlamydia infection, where screening of asymptomatic persons occurs more frequently in women than in men.</li> </ul>	<ul style="list-style-type: none"> <li>Race data are missing in 56% of confirmed acute hepatitis B and 80% of confirmed hepatitis C cases; ethnicity data are missing in 58% of acute hepatitis B and 75% of confirmed hepatitis C cases.</li> <li>Risk history data is missing in a majority of reported hepatitis B and C cases.</li> <li>Reports not received on those not seeking care.</li> </ul>

## Interpreting STD, HIV/AIDS and Viral Hepatitis Data

### **I. HIV/AIDS Exposure Mode Definitions**

The HIV/AIDS exposure mode indicates the most probable risk behavior associated with HIV infection. Assignment of exposure mode is done in accordance with Centers for Disease Control and Prevention guidelines when multiple exposure modes are reported. Following is a description of the exposure mode categories:

- **MSM (Male to Male Sex):** Includes men who report sexual contact with other men, and men who report sexual contact with both men and women.
- **IDU (Injection Drug use):** Cases in persons who report injection drug use.
- **MSM/IDU:** Cases in men who report both injection drug use and sexual contact with other men.
- **Heterosexual Sex:** Cases in persons who report specific heterosexual sex with a person with, or at increased risk for, HIV infection (e.g. an injection drug user). The sub-categories for this mode of transmission are listed below.
  - *Heterosexual Sex w/ an Injection Drug User*
  - *Heterosexual Sex w/ a person w/ HIV infection or AIDS*
  - *Heterosexual Sex w/ Bisexual male*
  - *Other Heterosexual Sex:* Includes all other sub-categories of risk, such as heterosexual contact with a person infected through a blood transfusion.
- **Presumed Heterosexual:** Cases in persons who report heterosexual sex but do not report any other personal risk nor any knowledge of specific risk in their sex partners. Presumed Heterosexual is an exposure mode category used by the Massachusetts HIV/AIDS Surveillance Program. The Centers for Disease Control and Prevention (CDC) categorizes these cases as No Identified Risk.
- **Pediatric:** Infection before the age of 13 years, including mother to child transmission through pregnancy, childbirth or breastfeeding and blood transfusions to children.
- **NIR (No Identified Risk):** Cases in persons with no reported history of exposure to HIV through any of the listed exposure categories. Follow-up is conducted to determine risk for those cases that are initially reported without a risk identified.

### **II. Race/Ethnicity of STD and HIV/AIDS Cases**

Race/ethnicity references to whites and blacks represent persons who are white non-Hispanics and black non-Hispanics, respectively. All references to Hispanic for race/ethnicity represent persons of Hispanic heritage regardless of race.

### **III. References to Newly Diagnosed HIV Infections**

Newly diagnosed HIV infections/cases include all persons diagnosed with HIV in 2008, including those who were concurrently or subsequently diagnosed with AIDS.

STD, HIV/AIDS and Viral Hepatitis Surveillance Summary – 2010  
Massachusetts Department of Public Health

**Division of STD Prevention, HIV/AIDS Surveillance, and Ratelle STD/HIV Prevention Training Centers**

Topic	Contact	E-Mail	Phone
Policy Development and Administration	Brenda Cole ( <b>Division Director</b> )	<a href="mailto:BrendaCole@state.ma.us">BrendaCole@state.ma.us</a>	617-983-6941
Sylvie Ratelle STD/HIV Prevention Training Center	Katherine Hsu ( <b>Medical Director</b> ) Janine Dyer ( <b>Deputy Director</b> )	<a href="mailto:Katherine.Hsu@state.ma.us">Katherine.Hsu@state.ma.us</a> <a href="mailto:Janine.Dyer@state.ma.us">Janine.Dyer@state.ma.us</a>	617-983-6948 617-983-6964
STD/HIV/AIDS Surveillance and Epidemiology	Yuren Tang ( <b>STD Epidemiologist</b> ) Betsey John ( <b>Director, HIV/AIDS Surveillance</b> )	<a href="mailto:Yuren.Tang@state.ma.us">Yuren.Tang@state.ma.us</a> <a href="mailto:Betsey.John@state.ma.us">Betsey.John@state.ma.us</a>	617-983-6554 617-983-6570
STD Clinical Services	Katherine Hsu ( <b>Medical Director</b> ) Barbara Coughlin ( <b>Public Health Nurse</b> )	<a href="mailto:Katherine.Hsu@state.ma.us">Katherine.Hsu@state.ma.us</a> <a href="mailto:Barbara.coughlin@state.ma.us">Barbara.coughlin@state.ma.us</a>	617-983-6948 413-586-7525
STD Disease Intervention Field Services and STD Partner Notification	Hillary Johnson ( <b>Director of Field Services</b> )	<a href="mailto:Hillary.Johnson@state.ma.us">Hillary.Johnson@state.ma.us</a>	617-983-6951
STD Health Education, Training, and Prevention	David Goudreau ( <b>Special Projects Coordinator</b> ) Laura Smock ( <b>IPP Coordinator</b> )	<a href="mailto:David.Goudreau@state.ma.us">David.Goudreau@state.ma.us</a> <a href="mailto:Laura.smock@state.ma.us">Laura.smock@state.ma.us</a>	617-983-6835 617-983-6961
<b>Office of HIV/AIDS</b>			
Policy, Planning, Resource Allocation, Research, and Evaluation	Dawn Fukuda ( <b>OHA Director</b> ) Maura Driscoll Miminis ( <b>Interim Director of Research and Evaluation</b> ) Tammy Goodhue ( <b>Director of Training and Health Communication</b> )	<a href="mailto:Dawn.Fukuda@state.ma.us">Dawn.Fukuda@state.ma.us</a> <a href="mailto:Maura.Driscoll@state.ma.us">Maura.Driscoll@state.ma.us</a> <a href="mailto:Tammy.Goodhue@state.ma.us">Tammy.Goodhue@state.ma.us</a>	617-624-5303 617-624-5328 617-624-5338
Administration and Finance, Personnel, Contracts and Procurement, Budget	Bob Carr ( <b>Deputy Bureau Director</b> ) Ceci Dunn ( <b>Director of Operations</b> )	<a href="mailto:Bob.Carr@state.ma.us">Bob.Carr@state.ma.us</a> <a href="mailto:Ceci.Dunn@state.ma.us">Ceci.Dunn@state.ma.us</a>	617-624-5317 617-624-5370
Consumer Office	Paul Goulet ( <b>Consumer Office Coordinator</b> )	<a href="mailto:Paul.b.Goulet@state.ma.us">Paul.b.Goulet@state.ma.us</a>	617-624-5389
Prevention and Education	Barry Callis ( <b>Director of Prevention and Screening</b> )	<a href="mailto:Barry.Callis@state.ma.us">Barry.Callis@state.ma.us</a>	617-624-5316
HIV Client Services, Case Management, Peer Support Services, Housing Support Services, Service Coordination Collaboratives	Linda Goldman ( <b>Director of Client Services</b> )	<a href="mailto:Linda.Goldman@state.ma.us">Linda.Goldman@state.ma.us</a>	617-624-5347
<b>Viral Hepatitis Program</b>			
Viral Hepatitis Programming	Daniel Church ( <b>Viral Hepatitis Prevention Coordinator</b> )	<a href="mailto:Daniel.Church@state.ma.us">Daniel.Church@state.ma.us</a> <a href="mailto:mailto:Claire.ODonoghue@state.ma.us">mailto:Claire.ODonoghue@state.ma.us</a>	617-983-6800
Viral Hepatitis Surveillance and Epidemiology	Franny Elson ( <b>Epidemiologist</b> ) Shauna Onofrey ( <b>Epidemiologist</b> ) Keri Barton ( <b>Epidemiologist</b> )	<a href="mailto:Franny.Elson@state.ma.us">Franny.Elson@state.ma.us</a> <a href="mailto:Shauna.Onofrey@state.ma.us">Shauna.Onofrey@state.ma.us</a> <a href="mailto:Kerri.barton@state.ma.us">Kerri.barton@state.ma.us</a>	617-983-4382 617-983-6776 617-983-6876

**STD, HIV/AIDS and Viral Hepatitis Surveillance Summary – 2010**  
**Massachusetts Department of Public Health**  
**STD, HIV/AIDS and Viral Hepatitis Resources**

## **Training**

**Professional training to community based organizations, local public health departments, and medical providers can be requested and is free of charge.**

### **Type of Training**

### **Contact Information and Website**

STD Education, STD Partner Notification, and  
STD Reporting

**617-983-6940**  
[www.mass.gov/dph/cdc/std](http://www.mass.gov/dph/cdc/std)

HIV/AIDS Reporting and  
Surveillance Projects

**617-983-6560**  
[www.mass.gov/dph/cdc/aids](http://www.mass.gov/dph/cdc/aids)

HIV/AIDS Provider Trainings

**508-752-7313**  
[www.mass.gov/Eeohhs2/docs/dph/aids/prov\\_training\\_calendar.pdf](http://www.mass.gov/Eeohhs2/docs/dph/aids/prov_training_calendar.pdf)

Viral Hepatitis Education

**617-983-6800**  
<http://www.mass.gov/dph/cdc/epii/imm/imm.htm>

STD/HIV Diagnosis, Treatment, and Management

**617-983-6945**  
[www.RatellePTC.org](http://www.RatellePTC.org)

## **Material and Clinical Toolkits**

**Health education materials and clinical toolkits can be requested free of charge.**

STD, HIV, Viral Hepatitis Fact Sheets

**617-983-6940 or 617-624-5338**  
[www.mass.gov/dph/cdc/factsheets/factsheets.htm](http://www.mass.gov/dph/cdc/factsheets/factsheets.htm)

HIV/AIDS Reporting for Health Care  
Providers Brochure

**617-983-6560**  
[www.mass.gov/dph/cdc/aids/hiv\\_report\\_for\\_health\\_care\\_providers.htm](http://www.mass.gov/dph/cdc/aids/hiv_report_for_health_care_providers.htm)

Viral Hepatitis Posters and Brochures

**617-983-6800**  
[www.mass.gov/dph/cdc/epii/hepatitis/hepa.htm](http://www.mass.gov/dph/cdc/epii/hepatitis/hepa.htm) or  
[www.mass.gov/hepc](http://www.mass.gov/hepc)

STD/HIV Diagnosis, Treatment, and  
Management Toolkits

**617-983-9645**  
[www.RatellePTC.org](http://www.RatellePTC.org)

## **MDPH and MDPH Funded Websites**

Division of STD Prevention  
HIV/AIDS Bureau  
HIV/AIDS Surveillance  
Viral Hepatitis Program  
Hepatitis C  
Hepatitis A  
Sylvie Ratelle STD/HIV  
Prevention Training Center  
GetTested Mass (for MSM)  
STD 411 (for young adults/adults)

[www.mass.gov/dph/cdc/std](http://www.mass.gov/dph/cdc/std)  
[www.mass.gov/dph/aids](http://www.mass.gov/dph/aids)  
[www.mass.gov/dph/cdc/aids](http://www.mass.gov/dph/cdc/aids)  
[www.mass.gov/hepc](http://www.mass.gov/hepc)  
[www.mass.gov/dph/cdc/epii/hepatitis/hepa.htm](http://www.mass.gov/dph/cdc/epii/hepatitis/hepa.htm)  
[www.RatellePTC.org](http://www.RatellePTC.org)  
[www.mastdinfo.org](http://www.mastdinfo.org)  
[www.STD411.org](http://www.STD411.org)

## **National Websites**

Center for Disease Control and Prevention  
Division of STD Prevention  
Division of HIV/AIDS Prevention  
Division of Viral Hepatitis  
National Network of STD/HIV  
Prevention Training Centers

[www.cdc.gov](http://www.cdc.gov)  
[www.cdc.gov/std](http://www.cdc.gov/std)  
[www.cdc.gov/hiv](http://www.cdc.gov/hiv)  
[www.cdc.gov/ncidod/diseases/hepatitis](http://www.cdc.gov/ncidod/diseases/hepatitis)  
[www.stdhivpreventiontraining.org](http://www.stdhivpreventiontraining.org)